

Unmaking and Remaking the Coast in Southwestern India: A Political Ecology of Erosions and Accretions

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Abstract

The coast of southwestern India is at the crossroads of several social, economic and environmental long-term processes: the modernisation of artisanal fishing techniques, a port-led development strategy, Blue Growth and increasingly severe coastal erosion. The purpose of this thesis is to make analytical sense of these different transformations and their interplay, to understand what they tell us about the evolution of the coast, a space so far characterised as a geographic, social and economic margin in various academic and media accounts.

Using a multi-sited design, I look at two different and seemingly unrelated areas in a southern district. First, I focus on a “bottom-up” project, i.e. a small fishing harbour constructed upon the demands of the local fish-workers. Second, I look at an international Seaport project. Initiated by the state government and implemented through a public-private partnership, I see this massive infrastructure as a “top-down” project.

My overarching argument contends that the coast of the district is being assembled into a frontier for “development”, understood as technological/infrastructural modernisation and capitalist expansion, of which these two sites actually represent two variegated and complementary “sub-processes”. Throughout this thesis, I therefore characterise the frontier, a notion better understood in terms of effects than in terms of essence. First, I argue that the frontier both results from, and coheres into, new imaginations and discourses. Secondly and most centrally, I argue that the dynamics of coastal erosion and accretion, i.e. the biophysical transformations that result from the construction of infrastructure such as the ones I study, are a key pillar of the frontiers assembled around my two sites. Third, I argue that these socio-environmental processes contribute to shift the boundaries between three key actors of the nature and society interactions around my fieldsites.

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List of Recurring Abbreviations

CRZ: Coastal Regulation Zone

GBP: British Pound

GoK: Government of Kerala

GoI: Government of India

INR: Indian Rupee; where INR 100 = approx. GBP 1 as per January 2022

INP: Indo-Norwegian Project

KSCZMA: Kerala State Coastal Zone Management Authority

KSMTF: Kerala Swatantra Matsya Thozhilali Federation

MoEF: Ministry of Environment and Forests

NGT: National Green Tribunal

Glossary

Cent: a unit of land used in south India, which corresponds to 1/100 of an acre, or 40.46 squared meters.

Crore: unit of measure, where 1 crore = 100 lakh = 10,000,000

Kambavala: shore-operated nets

Lakhs: unit of measure, where 1 lakh = 100,000

***Matsyabhavan* Officer:** Fisheries Department local officer

General Introduction

Fishing has always been a prominent economic activity in Kerala, due to its coastal situation, as well as the fertile marine environment along its shores (Quentin Grafton et al. 2010). The coast of Kerala is also home to major social, economic and ecological transformations, which the present thesis aims at further unpacking and understanding. The purpose of this General Introduction is to sketch a non-specialist snapshot of what this thesis is about. Hence, I first situate my work at the crossing, and overlapping, of three different but largely intertwined economic moments: capitalist expansions at sea and on the land in Kerala, blue growth, and the wider economic liberalisation of India. Secondly, I present an overview of the present thesis by introducing my fieldsites, research objectives and overarching argument.

GI.1 The Historical Constitution of the Coast as a Margin

Being conceptually relative, margins presuppose the idea of a core, in contrast with which they come into being. Not too surprisingly, this core has been academically framed as the agricultural inland which, in addition to being spatially central, remained the reference in terms of socio-economic development over the centuries (Subramanian 2009; Sundar 2011). Here, I lean on secondary literature to summarise the historical processes leading the coast and of the fish-working community to the contemporary times.

Pre-Independence

Even though other fishing castes exist along the southwestern coast of India, Nagaram district is quasi exclusively peopled by Mukkuvars, a caste of fishworkers¹ (Ram 1992; Subramanian 2009; Sundar 2010; Mathew 2020). As mentioned by Sundar (2011), fishing villages tend to be homogeneous in terms of caste and religion and this was certainly the case during my fieldwork (cf. chapter 2 for methodology, and chapter 4 for the only non-Christian village in my study). Having originally migrated from Sri Lanka (Saraswathi 1998), the Mukkuvars have always been involved in different kinds of fishing. As such, they have always had an intimate and multi-faceted relationship to the sea and the coast, which is further explored in the second section of this chapter, where I also reflect on some of the markers of the notion of ‘community’ in this context. Socially, Subramanian leans on the very few sources available to show that in pre-colonial times, the Mukkuvars were consistently perceived as ‘untouchables’ (Ram 1992 in Subramanian 2009: 41), ‘who formed the lowest rung of the regions social hierarchy’ (Subramanian 2009: 39).

Quite significantly to their own lives and to the dynamics upon which this thesis builds, the Mukkuvars were among the very first Indian populations converted to ‘Roman’ Catholicism² following the Portuguese invasion (1498 onwards). Used as part of a deal between the Portuguese and their ruler until then, the Raja (Prince) of Venad, which became part of

¹ Castes are originally occupational categories

² Some Christian communities claim to exist in Kerala since the 4th Century AD, and to have been converted directly by St Thomas (Neill 1984). They are generally referred to as ‘Syrian Christians’ or Catholics of ‘Syro-Malabar rite’ and although they share the same obedience to the Pope of Rome, they live very separated lives from the Catholics of Roman rite, or Latin Catholics, that my thesis looks at.

Travancore, the Mukkuvars were converted *en masse* by the missionary Francis Xavier, from 1544 onwards (Sundar 2011). In this transaction, the Raja emphasised clearly that these converted subjects were to obey the Roman Catholic Church as they would obey the Raja, effectively instating the temporal authority of the Church on the coastal populations. This manifested in criminal, civil and moral matters being transferred to the Church's governance (Sundar 2011), but did not change much to the low social status of the coastal populations. In this pyramidal structure, the priest would delegate authority to judges and policemen he named, but would also remain the supreme authority for more serious cases (Sundar 2011). Likewise, to support the funding of the churches they erected, the Catholic de facto rulers instated a taxation structure, based on the revenue from fish catches, called *kuthagai* (Subramanian 2009; Sundar 2011). In the last section of chapter 3, I delve further into the place and role of the Church and the state in the contemporary, daily life of the coastal villages.

If there seemed to have been more fluidity of physical movement prior to the entry of the Church, it is likely that this line of religious divide further confined the Mukkuvars to the coast, which they were seen to 'occupy' exclusively and to also never leave in reports of the early 19th century (Subramanian 2009). From then onwards, Subramanian argues that the spatial, cultural, economic and political marginalization of the coast became even more salient, reflecting the 'increasing separation of the "democratic inland" from the "primitive coast," where fishers are now thought to exist as free savages or cowed subordinates of religious authority' (2009: 4). The increased spatial dimension of this marginalization is of course fundamental to my subsequent analysis. Where Subramanian follows established academic literature in arguing that capitalism is a project of space-making (Goswami 2004; Harvey 1996, 2001, 2006; D. Mitchell 1996, 2003; Smith 1984), I stay true to my co-productive approach

(cf. chapter 1)--taking Swyngedouw's (1999; 2014; 2015a; 2015c) or Perreault's (2013) cue—in consistently emphasizing that space (and, more widely, 'nature') shapes and makes capitalism too.

The colonial fisheries policy's main addition was to set the rudiments of the bureaucratic structure of the post-Independence fisheries administration (Reeves et al 1996: 34 in Sundar 2011: 73).

In concrete terms, Sundar (2011) documents that the first administrators had loosely considered exploring the option of turning to "industrial" fishing (understood as large-scale fishing for profit, rather than smaller-scale fishing for food). Yet, this concerned the deep sea more than the near shore (called "inshore"). Moreover, she explained that such transformations required investments that the colonial state was unwilling to make. Altogether then, Sundar (2011) concludes that, in terms of impact and legacy, the colonial fisheries administration had a rather negligible role in countering the marginalisation process outlined above.

The marginalisation of the coast also manifested intellectually, as Subramanian (2009) contends that much more attention was given to the South-western inland in the historical literature throughout the 19th and 20th centuries, making it even more difficult than was already the case to see the dynamism and complexity of the coast, with 'fishing and fishers [being] conspicuously absent, marking with their absence their insignificance to the coffers of the powerful' (2009: 37). Likewise, even when attention was given to the coast, she adds, it went to merchants and military rather than to fish-workers.

Post-independence

The post-independence history has contributed to make the artisanal fishing communities more visible, but also to collaterally reinforce their multi-dimensionally marginal status since it further crystallised them as a socio-technologically distinct group and, economically impoverished them.

Specialists of the fisheries in Kerala agree on the fact that the transformations in the fisheries speeded up exponentially after 1947 (Subramanian 2009; Sundar 2011). Sundar (2011) for instance notes how from the mid-1950s onwards, i.e. the end of the first Five Year Plan (1951-1956), the introduction of mechanised craft became increasingly more important. She illustrates this by showing that from 16.5% in the Second Plan, the percentage of fisheries budget allocated to mechanisation increased to 40% in the annual plans of 1966-69. Concretely, mechanised fishing boats, i.e. boats who operate their nets mechanically and thus proactively (cf. General Introduction and chapter 4) as opposed to manually and passively, were thus being built with substantial technical and financial help from the Central Government. This is the time where, through cooperatives (cf. last section of this chapter), the Central Government also started implementing different schemes to subsidise nets, housing, harbours and storing/transportation facilities (Sundar 2011). Keeping the influence of the Church mentioned above in mind, we thus see the postcolonial state also gradually increasing its role in the lives of the fishworkers, via “development”—here understood as the provision of technological and infrastructural upgrades. As I explain in the last part of Chapter 3, these institutional influences sometimes clash, and sometimes reinforce each other

instead. In Chapter 7, I then focus on their interplay in the light of the specific transformations studied in this thesis.

Even though it was in fact part of a wider and systematic effort by the Central Government at modernising the fisheries, the most significantly remembered turning point in the development of the southwestern fisheries of India, was the Indo-Norwegian Project (INP). Co-funded between the Government of India, the Government of Norway and the Food and Agriculture Organisation (FAO) of the United Nations (UN), this project started in 1953 in Kerala and represented a foreign input in terms of funds, expertise, technology and peripheral facilities (storage/transport) (Kurien 1985; Sundar 2011).

Different academic sources note that this project, in a context of increased international demand for marine catches, incurred a polarisation between two types of fishing. The modern/mechanised sector, on one hand, is understood to be the one using ‘operated trawl nets’ (Baviskar et al. 2006: 221), which are used to make large catches that are often subsequently exported. The traditional/artisanal sector, on the other hand, is the focus of this thesis and is defined in opposition to the modern one. It uses ‘a variety of “passive” gear’ (Sundar 2011: 1), which can include small motors but no mechanised gear³ (Subramanian 2009), predominantly catching fish for local consumption.

As the US and Japanese markets for lobster and prawns opened around the same time, the Government of India increased its subsidies for the mechanized sector, with the intention of reaping the prospects offered by these new commercial openings (Kurien 1985; Baviskar et al. 2006; Sundar 2011). This mechanized sector, operating mostly large mechanized craft

³ Mechanised refers to the gear/nets, and is thus different from motorised craft.

commonly referred to as trawlers⁴, became referred to as the ‘modern sector’ (Kurien 1985; Platteau 1989; Baviskar et al. 2006), a term in opposition to which the ‘artisanal/traditional’ sector was then framed. The general agreement is that this loose latter category hosts small craft and manual gear, typically operated by the descendants of the Mukkuvars referred to above, who form the core of this thesis.

In this context of planned ‘growth-oriented modernisation’ (Kurien and Achari 1990), Sundar (2011) points a few essential elements of contradiction which, two decades later, would result in the most well-known part of the recent history of the fisheries in southwestern India. First, she notes that this mechanization campaign was mostly geared at increased production for export. This was often done at the cost of domestic consumption, which is the market that ‘traditional’ fishing communities mostly cater to. Relatedly then, of course, investing in production does not equate with investing in the marginal fishing communities evoked above. As Kurien and Achari (1990) even argue, the latter were seen as a hindrance to this capital-intensive expansion. By putting much stress on the fish stocks, it is indeed quite the opposite that started happening. In consequence, the reaction of the artisanal fish-workers was double-layered. On one hand, they came together through a strong social movement. On the other, they motorised their craft and kept enhancing their gear.

⁴ Technically, trawlers are one kind of mechanized boat, designed originally to fish prawns but who are known for sweeping the seabed in shallow waters. The two other kinds found in Kerala in the 1950s were gillnetters and purse-seiners. The technical specifications of these different types of boat are available in Kurien and Willmann (1982) or D’Cruz (1999) for instance. For this General Introduction, it suffices to say that they are far bigger, more powerful and more expensive than the craft used by the ‘artisanal’ sector, and use proportionately potent gear too.

The Fishworkers' Movement

By the 1970s⁵, a widespread opposition to trawlers started rising across the country. Framed in terms of moral economy (i.e. the immorality of having such big boats operated by industrialists—who came from outside the community—earning so much), social justice (the right to livelihood for artisanal communities), ecological sustainability (the rapid depletion of fish stocks) and the fishing communities' ancestral stewardship over marine resources, the claims of the artisanal fishworkers coagulated into, and were further carried through, a social movement which has drawn much attention in the academic literature (Kurien 1991; Baviskar et al. 2006; Subramanian 2011; Sundar 2011; Sinha 2012 and references therein): the Kerala fishworkers' movement. Even though these boundaries shifted later again (Platteau 1989, as well chapter 4), the economic polarisation between the two sectors was clear-cut by the early 1980s (Kurien 1991; Baviskar et al. 2006), with the shares of artisanal fishers steeply decreasing and those of the trawling sector symmetrically increasing (ibid).

While initiatives of the Catholic Church had already emerged since the 1950s and while different collectives started shaping-up towards the late 1970s⁶, the secular Kerala Independent Fish Workers Federation (Kerala Swantantra Matsya Thozhilali Federation, KSMTF henceforth) was created in 1980. Organised in districts to allow for a clear focus on local concerns, the KSMTF became notorious for its militancy through the numerous sit-ins,

⁵ Baviskar et al. (2006: 222) specify that the shrimp boom, which drove the prices and quantities of exports high, was the trigger of the conflict that was latent thus far. Indeed, since shrimps tend to concentrate in shallow waters and that trawling boats indiscriminately trawl the entire surface up to the seabed, other varieties of fish were also caught in their nets and increasingly less was left to the artisanal fish-workers. The situation further deteriorated towards the late 1970s, when after a severe depletion of the shrimp stock the trawlers started directly targeting the species normally caught by artisanal fish-workers, thereby instating a direct competition between the two types of fishing.

⁶ Cf. Baviskar et al. 2006

pickets, fasts, roadblocks and demonstrations of all kinds that it regularly organised (Kurien 1991). Relying on a broad and mobilized base, the union emphasised a switch of denomination from 'fisherfolk' to 'fishworkers', which clearly reflected a shift from object (of charity) to claim-making subjects (Kurien 1991; Baviskar et al. 2006), who were also labouring workers rather than a mass, homogenized folk.

Politically, this switch was also translated into the evolution of the fishing community from a taken-for-granted votebank of one of the dominant political parties, who was allegedly closer to the Catholic Church (Kurien 1991; Baviskar et al. 2006), into highly sought after tie-breakers in the context of Kerala's regular political alternance⁷ whose claims needed to be integrated into any political platform aspiring to be elected (Kurien 1991; Baviskar et al., 2006). As such, the KSMTF put an end to the political marginality of the fishing communities (ibid.). In addition, with this increased momentum and following an initial national guideline (Marine Fishing Regulations of 1978), Kerala started regulating its fisheries by passing the Marine Fishing Regulation Act in 1980. Under this act, which keeps being updated, comes the regulation of mesh sizes, gear, restriction on species etc. (Baviskar et al. 2006; Sundar 2011). Up to this day, the most memorable victory included in this Act concerns the trawling bans, which pushed large trawlers 22km off the coast, smaller ones and any other mechanized boat 10km off the coast, and also imposed a ban on any mechanized fishing during the spawning season, which corresponds to the monsoon (cf. chapter 4).

By the 1990s however, the influence of the movement significantly decreased, owing to several competing reasons which alternatively point to greater influence of the political

⁷ Since the first Legislative Assembly elections of Kerala in 1957, two political alliances or 'fronts' take turns at the head of the state.

parties, or of the Catholic Church (Baviskar et al. 2006; Subramanian 2009; Sundar 2011). These dynamics are not of central interest to this thesis, but picked up upon wherever relevant.

GI.2 A Thesis at the Confluence of Three Economic Moments

My thesis picks up the social, economic and environmental life of the coast about a decade after major ethnographies on the topic (cf. literature review in the next chapter). Here, I therefore summarise the big economic moments at the crossroads of which this thesis is anchored.

At sea, we have just seen that an increasingly rapid modernisation had been taking place in Kerala since 1953 and the advent of the Indo-Norwegian Project (“INP” hereinafter)⁸. Simultaneously to their social struggles, the artisanal fish-workers reacted by keeping their gear passive, but by nevertheless constantly seeking to improve its technology. I come back to the socio-economic effects of this reaction in chapters 3 and 4, which are of paramount importance since Nagaram district is known to be an exclusively artisanal district, in the sense that owing to its particular ecology, it is only home to passive—but rapidly evolving—fishing techniques. This use of increasingly heterogeneous fishing techniques has contributed to blur the boundaries of ‘traditional’ or ‘artisanal’ fishing, as I show in chapter 4. For now, the important point is this context of sustained technological improvements.

⁸ Under the UN-banner, motorised the fishing boats of selected fish-workers in Kerala (Kurien 1985; Baviskar et al. 2006; Hoeppe 2007; Subramanian 2009; Sundar 2011)

In this context and as I further illustrate in the next chapter, the academic literature has largely focused on different aspects of fishing and the socio-economic benefits resulting from technological improvements (Platteau 1984, 1989; Kurien 1985; Jensen 2007; Sabari Rajan and Chandreskar 2014; Xavier 2014a, 2014b), leading to a growing '[n]eoliberal valuations of resources [which] brought a pure market logic to fishing' (Baviskar et al. 2006: 230). As the term "neoliberal" is widely contested in its definition (Castree 2006) and effects (Castree 2008a; Castree 2008b), it is important to specify here that it is to be understood, for now, through its features 'privatisation and marketization' (Castree 2006: 1), and thus particularly commodification too, of goods, human/natural resources and/or activities. This has prompted work on the artisanal fishers' resistance to these processes of capital accumulation and of spatial expansion (Bavinck 2001), often through a focus on the Kerala Matsyathozhilali Federation (Kerala Independent Fishworkers Federation, KSMTF) mentioned above⁹.

Simultaneously to the above-mentioned ongoing changes in their fishing activity, artisanal fish-working communities also witness increased transformations on the coast, where they usually reside. Both Rowe (2008) and Malekar (2010) point to land-grabbing by tourist lobbies, forcing fish-workers to sell their land. Land-grabbing, here, is to be understood as the endeavour to 'fix or consolidate forms of access to land-based wealth.' (McCarthy et al. 2012: 523). The parallel transformations at sea and on the coastal land lead John to conclude that 'the sea and the coast are being removed from the traditional fishing community slowly' (John 2014). Bavinck et al. (2016) provide a compact review on the political ecology of fisheries, from which they conclude that their common point is to show the circuitous nature of capital

⁹ Cf. Baviskar et al. (2006) or Sinha (2012) for more comprehensive reviews.

accumulation or, in other words, the ‘element of indeterminacy about the form accumulation takes’ (2016: 395) so that the ‘agents and processes of transformation ... are far from clear’ (Sneddon 2007: 169). This therefore opens the research agenda of characterising modernisation/commodification around my fieldsites, so as to add to this body literature.

These dynamics also take place in a wider context of ‘blue growth’ (Barbesgaard 2018; Voyer et al. 2018; Foley and Maher 2018), a term best summarised in a prediction from *The Economist*: ‘Talk of the ocean as a new frontier, of a new phase of industrialization of the seas, will become widespread in 2016’ (*The Economist* 2015 in Barbesgaard 2018: 130). As many actors are involved, the scope of blue growth ‘goes beyond the question of fisheries and extends to dynamics about the management of all maritime and coastal resources’ (ibid.: 131). As parallels were drawn to the global land rush (McMichael 2012) or to green growth (Silver et al. 2015), blue growth has fuelled fears of ocean-grabbing for the sake of various industrial and commercial projects (Barbesgaard 2018). Despite a growing attention (e.g. Sud 2020b), Mills (2017) and Barbesgaard (2018) contend that fish-workers’ resistance to climate change and resource exclusion on one hand, and the rush to control oceanic resources on the other, remain relatively less studied than parallel issues in agrarian settings (e.g. land grabs). Mills (2017) notes that artisanal fish-workers witness increased exclusion/dispossession from resources as a result from both climate change and industrialisation/privatization in the fisheries sector. Barbesgaard (2018) focuses on blue growth, arguing that policies that ‘align the needs of the poor with profit interest and climate change concerns’ (2018: 130) are in general nothing more than a disguised form of hegemonic discourse aimed at, or at least resulting in, ocean grabbing. As such, they represent a new form of the neoliberalisation of nature, which raises crucial questions in activist and academic circles. They also trigger the need for updated research, since some the most comprehensive studies of coastal life to date

(Subramanian 2009; Sundar 2011) are anterior to this phenomenon framed as such. In this thesis I therefore look at who tries to capture these new horizons, how and with what effects on the coast of Kerala.

The context of blue growth further feeds into the even wider dynamics of neoliberalisation in India. As much as I ventured into a generic definition of the term above, Fray draws our attention on the fact that neoliberalism 'is a term that easily risks being reified, ambiguous, polyvalent and imprecise' (2013: 171). For this reason, under the generic umbrella laid out above, one way to escape such reification is to look at the set of effects that characterise it. Here then, it is worth noting that since the economic reforms of 1991 (Pedersen 2000), the Indian state has been promoting a 'pro-business tilt' (Kohli 2006: 1368) which contributed to a high economic growth and enabled financial and business elites in the country to 'renegotiate the state's relationship to private capital and the process of accumulation' (Corbridge and Harriss 2000: 146). Important debates, as we see in this thesis, entail the role of the state in the nexus of development projects that often see private capital strengthened too (Sud 2009; Levien 2012, 2013b).

The most direct connection between blue growth and the ongoing economic liberalisation of India probably lies in the country's port-led development. The Hindu (2021) for instance explains that in a context where China's Belt and Road initiative directly targets a control of the seas, India's 7500km coastline represents a unique opportunity to develop shipping, itself thus being key to economic growth under the blue growth paradigm. For this reason, the Government of India (GoI) launched a port-led development initiative called Sagarmala in 2016. In the words of the GoI, the vision behind Sagarmala is to boost port modernisation and connectivity, as well as to encourage a port-linked industrialisation which, in its theoretical

vision, ties with coastal community development (Gol: SagarMala). Besides the Sagarmala project, The Hindu (2021) adds that the country ought to increase the capacity and functionality of regional cargo-specific ports. Sud (2012; 2014) further shows that different states, while competing to attract private investment and thus all playing a role in the liberalizing economy, display different ways of doing so, e.g. opening up land markets to attract investment, reducing pollution/financial regulations or tax incentives. My study, then, shall attempt at shedding some light on the specific case of the state Government of Kerala (GoK), since delving into ‘what is both specific and general to the political economies of dispossession in different regions’ (Levien 2013b: 402) is part of the most obvious research agendas prompted by this context. This is particularly interesting in the case of Kerala, since this south-western Indian state is notorious for a unique development experience centred around human development (health, education, housing) rather than around economic growth and infrastructure (George 1993; Korakandy 2000; Lieten 2002; Ravi Raman 2010; Chaudhuri 2017). Looking into the specifics of Kerala in the general context of economic liberalisation in India is thus important at several levels, and provides insight into the possibility of a ‘new’ development model (Chaudhuri 2017). However, within the finite scope of this thesis, I set the foundations for this argument rather than make it my central one. In my General Conclusion, I therefore acknowledge it as a possible direction for future research.

GI.3 Environmental Change and Coastal Erosion

In addition to these economic moments, environmental change was becoming increasingly visible in the region. A highly unusual phenomenon at the time of its occurrence, cyclone

Ockhi devastated the coast of Nagaram in November 2017. It took the lives of 143 fishermen in Kerala, traumatised many others, and raised heated debates around compensation, prevention and the involvement of the state and the Catholic Church (Ameerudheen 2018). Less than a year later, albeit further north, the state was again devastated. This time it was floods, but they also brought various salient social and economic issues to the forefront. In this thesis, I bring light on yet another destructive environmental phenomenon which has been growing in severity on the coast of southern Kerala: coastal erosion.

A fluid space--ecologically and spatially, between sea and land (Kurien 2018)--the shore has been very much taken for granted, and thus overlooked, in the academic literature focusing on the fisheries of Kerala.

Yet, one of the most visually striking phenomena during my fieldwork was the way in which the beach around Cheriya Pozhi harbour, my first fieldsite which I introduce in chapter 4, seemed to have disappeared (eroded) on the northern side of the breakwaters, and how wide (accreted) it was on its southern side. It seemed impossible to imagine that such dramatic tangible disparities in the landscape could not be tied to wider social and economic processes, in terms of both causes and effects. This observation and conjecture are the starting point of this thesis, and would turn to be much more fertile analytically than initially imagined.

What I noticed near Cheriya Pozhi was also gradually becoming more noticeable in the accounts of the local media. Writing on *Scroll.in*, Ameerudheen (2017) focuses on a village where erosion is severe. There, he narrates the story of Alphonsa, whose house was located 500m from the sea when she bought it in 2007, and was, during the monsoon of summer 2017, only two meters away from it. Despite the presence of a sea wall, the sea water enters her house, and cracks have appeared. Ameerudheen (2017) further reports that according to

the ward councilor of the village ‘the beach erosion has destroyed more than 100 homes in June and July in the village ... Another 100 homes in the nearby fishing villages ... have also been damaged.’ (Ibid.) While coastal erosion and accretion are normal phenomena, particularly during the monsoons (cf. chapter 4), Ameerudheen (2017) reports that the residents of Valiyathura attribute this particularly violent erosion to the construction of infrastructure not far from the village, which started a few months before¹⁰--a fear already raised by Venugopal (2012). By 2021, i.e. as this thesis was coming to completion, the prevalence of coastal erosion was starting to reach the realm of the international media with, for instance, Thiagarajan writing for the BBC that ‘in South India, many of its much-loved beaches are anything but secure’ (Thiagarajan 2021).

Reflecting these empirical developments, the shore is one of the backbones of the present research. First, it is made visible through its symmetrical, permanent and increasing erosion north, and accretion south (cf. chapters 3, 4, 6, 7) of manmade infrastructural interventions. Second, I also unpack the processes leading to and resulting from this phenomenon, thereby hoping to make a substantial analytical and empirical contribution to which the shore is the centre.

I must thus also make clear that, being a finite project with limited time and resources, this thesis is not about water. Because water is nevertheless omnipresent and intimately linked with the process of erosion explained here, it presents an obvious possible avenue for future research as explained in my General Conclusion.

¹⁰ I come back to these mechanisms in chapter 4 when looking into their effects near Cheriyaipozhi.

GI.4 Fieldsites, Research Objectives and Overarching Arguments

The present thesis is thus situated at the confluence of:

- the three overlapping economic moments briefly outlined so far (blue growth, economic liberalisation of India and port-led development in particular);
- capitalist expansion at sea and on the land in coastal southern Kerala characterised by its non-mechanised fishing methods; and
- increasingly dramatic environmental change.

In a nutshell, the academic literature on the coast of southwest India that I survey in detail in the next chapter has left three key gaps that this thesis is filling. First, it doesn't much address the more recent transformations on the land (as opposed to at sea), some of which the above journalistic sources refer to. Second and more fundamentally, these accounts also lack a thorough focus on the role(s) of the 'environment', a loaded term which is unpacked throughout this thesis, in the socio-economic transformations that they analyse. Third, they would likely benefit from drawing more central connections between transformations in the fishing villages and the development of infrastructure projects. This owes more to the rapidly evolving context than to their own shortcomings, but remains nonetheless equally important.

Conceptually and empirically, then, this thesis is about coastal pathways or trajectories, i.e. processes and potentialities¹¹. My overarching research question seeks to understand how environmental and socio-economic transformations are linked, and with what effects, on the

¹¹ In the next chapter, I put emphasis on the indeterminacy that underlies frontier assemblages (Knott and Mather 2021). In this thesis, the words 'pathway' or 'trajectory' are thus understood as contingent processes—not pre-traced ones. The path makes itself as events unfold, and is only looked as such in retrospect. In this sense, my work fundamentally differs from Marxist uses of the term "trajectory" (e.g. Wright and Shin 1988; Wright 2010) which are inherently deterministic, and must thus be disambiguated from them.

coast of Kerala. To answer this question, one of the subsidiary questions (cf. end of chapter 1) that I ask looks at the role of the shore in these transformations. Doing so further allows me to take-up the complementary calls for the qualification of processes of capital accumulation (Menon et al. 2016) and of dispossession on the coast, as well as the contingent role of nature in these processes (Sneddon 2007; Perreault 2013). Having seen above that institutions, especially the state and the Catholic Church, have been intertwined with the life of the coast, I also naturally turn to asking what the role of these institutions is in the contexts outlined above and how they are transformed by them. It is important to make clear that even if undoubtedly important, the role of water in the socio-ecological relations (Goodwin 2018) that I study is therefore, except for its direct relation with coastal erosion, beyond the scope of the present project.

Concretely, I base my research around two fieldsites in Nagaram district. First, I look at the vicinity of Cheriya Pozhi mini fishing-harbour, which I characterise as a ‘bottom-up’ development in Chapter 4, in the sense that it was constructed upon the demands of the artisanal fish-workers in the area. Second, I look at the massive Thuramukham International Seaport, a huge infrastructure project worth hundreds of millions of GBP at the time, 40km south. I characterise this project as a ‘top-down’ development, since it was initiated by the State Government of Kerala in a Public-Private Partnership (PPP) with Agarwal Ltd (pseudonym since it is not a thesis about them), a major industrial group.

Through extensive fieldwork, my overarching argument is that beyond their specificities (scale, impetus, purpose), these simultaneous transformations and the heterogeneous elements that they *assemble*¹² (shore, fish-workers, institutions, technology,

¹² I explain this term in the analytical framework of this thesis – cf. chapter 1

aspirations/imagination) cohere in effects which, folding into each other, reveal the assembling of the coast of southern Kerala into one, variegated *frontier*. This term, which I further clarify in the analytical framework of this thesis (cf. section 1.4.2.2 in Chapter 1), thus refers to a heterogeneous and dynamic space which opens new avenues for capitalist expansion. The latter is wrapped in terms and imaginaries denoting “development” and “progress” whose meanings I unpack in my empirical work, as well as in technological and infrastructural upgrades with consequences, both envisaged and concrete, that I analyse too.

Within this argument, the main original contribution of this thesis lies in showing that, in variegated ways, the geomorphological changes to the shore—a space which I show in the next chapter to have been overlooked by academic inquiry—are the backbone of the multi-dimensional capitalist expansion taking place along the coast of Kerala. Empirically, this is a new take for Kerala, since at the time of writing I am not aware of other studies using a comparable approach. Analytically, as explained in the next section where I lay down my relational and co-productive framework, I also move beyond unidirectional approaches—generally of Marxian inspiration—that essentially argue that capitalism metabolises nature, by turning the gaze to the contingent roles of nature in the transformations that I study.

As the shore physically erodes and accretes, different social, economic and institutional trajectories are set in motion, so that erosion and accretion become a metaphor for the political ecology of the region as the coast is unmade and re-made.

1. Literature Review and Theoretical Framework

In Chapter 1, I review the literature on the socio-economic transformations taking place on the coast. I highlight a double analytical need: moving beyond universalistic and deterministic approaches, and giving more analytical importance to the (non-human) environment and the shore in particular. I then review different streams of literature on the relations between nature and society, before introducing my analytical framework: frontier assemblages. I conclude by introducing my three subsidiary research questions, which rest on three predominant features of frontiers as found in the academic literature: discursive/imaginative elements, material elements and institutions.

2. Methodology

In chapter 2, I present the methodology that I use to tackle the questions laid down just above. I therefore justify the use of a fully qualitative methodology, and insist on the originality and added value of my research design. The latter is indeed based on the empirical evidence from the ground, and more precisely the occurrence of coastal erosion and accretion around my two fieldsites. As such, this multi-sited approach echoes the analytical mesoscale of the frontier assemblage lens (Knott and Mather 2020), and proposes a very different perspective to the past works on the coast of southwestern India that I reviewed in chapter 1. In this chapter, I also discuss my data, positionality and ethical considerations. I further outline some

key characteristics of my respondents, showing that they are socio-economically marginalised on several key indicators.

3. The Contemporary Artisanal Fishery

This chapter is contextual and empirical at the same time. First, I seek to characterise the contemporary artisanal fishery, a term often seen in academic literature, but which needs clarification for the purposes of the rest of the thesis, especially in order to understand what is unmade in the frontierisation processes unpacked subsequently. I rely on qualitative fieldwork in Onnu, on secondary literature and on the work of Gudeman (2001; 2008) to push Sundar's (2011) insights of social commons, and argue that shore, sea and fishing community share a certain co-productive fluidity which delineate the everyday livelihood of my informants. In line with my overarching logic throughout this thesis, the artisanal fishery is thus conceptualised as an effect of these co-productive relations more than as an essence. I then introduce the two main institutional actors, the state and the Catholic Church, who have a key importance in shaping these livelihoods too. Altogether, the idea of the chapter is to set the ground for the following ones, where these co-productive relations get reshuffled and result in the very different effect(s) conceptualised under the frontier assemblage lens adopted in this thesis. In doing so, I set the ground for further chapters by reflecting on the shore as land, sea, people and, increasingly, as the chapters progress, institutions. This assemblage is indeed augmented by the predominant role of the Catholic church (Sundar 2011) and of the state.

4. Making the Shore Visible

Building upon chapter 3, I turn to the disruptive transformations which reconfigure my first fieldsite. I first characterise Cheriya Pozhi fishing harbour as a ‘bottom-up’ development project, by retracing the role of the artisanal fishers in prompting its construction. North of the harbour, the shore disappeared and triggers a process of differentiation, more familiar in agrarian settings, through the introduction of a new fishing technique. The prospect of displacements further dislocates the fish-workers relationship to the sea. South of the harbour, the shore accretes and changes dimension to become land. There, the Agarwal group spends its CSR fund on making the harbour safer—a crucial need for the local residents. In doing so, it also encloses the accreted shore to store rocks quarried nearby and destined to be transported by sea to Thuramukham, my second fieldsite. Analytically, I show how this manifold unwiring and re-wiring of the coastal margin, and the aspirations it enlivens, form a newly assembled frontier for capital and “development”. I further insist on the central role of the shore’s materiality in this assemblage—both at sea and on the ‘land’— and show how this frontier folds into a bigger one, which is the object of the two following chapters.

5. The Dream of Kerala

I turn to my second fieldsite, the ‘top down’ massive international Seaport currently under construction. I introduce the Seaport project by focusing on its imaginative dimension, which corresponds to the unfolding a “development mystique”¹³ (Hetherington 2014; Cross 2015

¹³ Albeit focusing on the multi-layered promissory character of ‘development’, this basic insight can be traced back to Ferguson (1991) through the discursive dimension of the term

among many others). Concretely, this first involves stretching the imaginary from the local fishing village into the international realm of globalised capitalism. There, I argue that the seaport is important to India not least because it participates in its strategic bid to be internationally competitive in terms of trade and transport, and thus in its nation branding effort too. I then turn to the content of the dreamwork (Appadurai 2015) surrounding the Seaport. Predominantly of economic nature, this imagination leans on the specifics of transshipment and on the local natural conditions around Thuramukham in order to promise a hyper-modern future resembling Dubai or Singapore. These promises then trickle down to the village level, where they mirror the new aspirations of a better future seen in chapter 4. In the last section of this chapter however, I show competing financial predictions and show that the dream started fading away on the ground.

6. Back to the Shore

This chapter looks at the socio-environmental shadow of the predominantly economic ‘development mystique’ pictured above. Digging into the Environmental Clearance documents, I show that they also crystallise the unmaking and re-making of the shore. More precisely, I argue that the previously ongoing shore erosion and accretion around Thuramukham, which are expected to increase exponentially as the Seaport gets constructed, sit well with the project’s expansion. North, the delineation of the project area allows the project to clear a regulatory hurdle that could have otherwise turned complicated to overcome. South, the accretion of land is expected to offer a prime location to land-based activities allied to the port (e.g. real estate, tourism). I then turn to the ground to document

these processes and their effects in the lived experiences of my informants, by conducting fieldwork in Vadakku (north) and Tekku (south). I first show that these phenomena have had strong impacts on their livelihoods over time. I then look at the ways in which they have shaped the people's perception of the project. I conclude by re-asserting that the shore's materiality is, once again, central to assembling the frontier around the Seaport.

7. Institutional Erosions and Accretions

Throughout the previous chapters, I have touched upon the role of the state in assembling the frontier. Here, I put institutional dynamics at the centre of my analysis, and reflect on the other side of this co-productive relationship, i.e. how the state and the Church are influenced by the socio-environmental processes pertaining to the frontierisation. In a nutshell, I show an accreting socio-environmental state effect (Mitchell 1991)—i.e. increasingly marked boundaries with other actors of society—on one hand, which is then mobilised to further neoliberal economic agendas in the name of the public good. In the meantime, these processes also trigger a wave of reactions within the Church. While they see a gradual sidelining of some socially-minded priests, their overall effect is nevertheless to consolidate the Church's balancing act with the state and the fishing community. I finally look at these dynamics on the ground, by focusing on a re-settlement programme which mobilises the CRZ framework in order to mitigate the effects of severe coastal erosion. I highlight contradictory dynamics in terms of state boundaries but consistent ones at the Church level. Altogether, this chapter therefore also illustrates a gradually evolving state idea (Abrams 1988), which contrasts with a very stable Church idea.

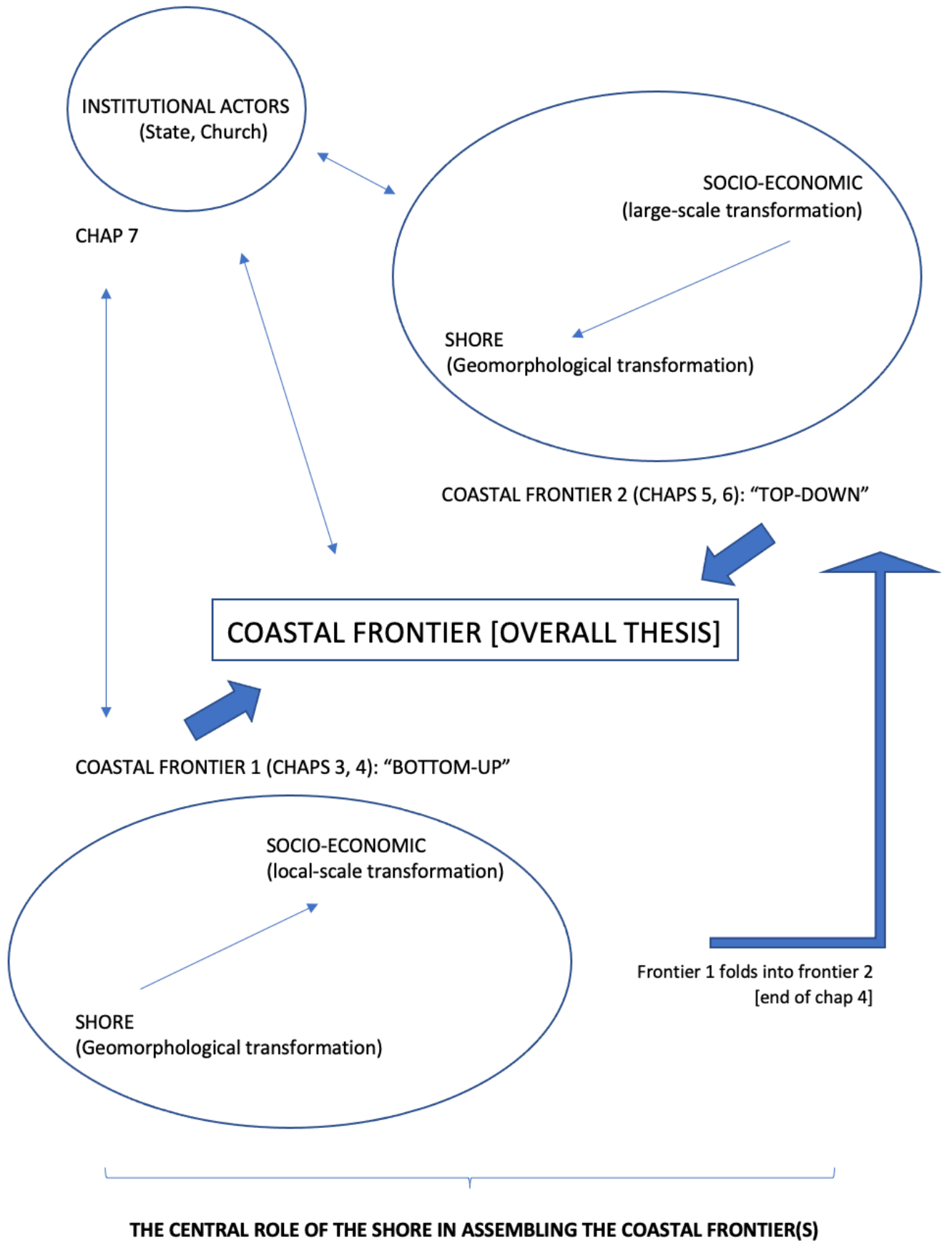


Fig 0.a – Chapters' Map

Chapter 1: Literature Review and Analytical Framework

1.0 Introduction

In order to delve into the themes flagged in the previous chapter, I now survey the relevant literature in a thematic way. First, I introduce universalistic and deterministic approaches to the transformations at sea and on the coast. This leads me to advocate for going beyond ‘one-size fits all’ approaches. I then look at more fine-grained ethnographic work, to highlight the need for a stronger analytical focus on the environment, and on the shore in particular.

At this point, I am able to start delineating the contour of my analytical framework. I first do so by reviewing theoretical contributions on the relations between society and the environment in a purposive way, i.e. by selectively and gradually narrowing them down with a view to tackle the empirical contexts laid down in the General Introduction. From this vast literature, I identify caveats and set boundaries that lead me to justify my adoption of a relational approach, where a minimum of ontological realism—mainly in the form of recognising the existence of an objective, non-human nature--nevertheless subsists.

Having laid the foundations for my framework, I then delve into it. I first explain that I root my work in the broad context of political ecology, before successively introducing the analytics of assemblages and frontiers in order to reach a dynamic, contingent and eclectic framework. In doing so, I highlight three anchors of frontier assemblages that stem from the literature and guide my subsidiary research questions. I conclude by presenting a brief

chapters' outline, which gives a bird-eye view of the way in which my argumentation unfolds throughout this thesis.

1.1 Universalist and Deterministic Approaches

In this section, I review early academic literature on the various transformations taking place in the fisheries. The objective here is to start gradually pruning through the vast literature on the coast and its transformations, so as to eventually identify analytical needs emerging at different levels. These analytical needs, put together, eventually delineate my analytical framework rooted in political ecology. In this section then, the first step identifies fairly universalistic and deterministic analytical lenses underpinning many studies of the key transformations outlined in my General Introduction.

Although it identifies neo-classical economics and Marxist underpinnings in these various works, this section does therefore not aim to engage in a critical analysis of these major conceptual streams themselves here.

Rather, taking good note of their empirical contributions and insights, I end the section by recommending to move beyond such 'one-size-fits-all' approaches, in search of more nuance and less rigidity.

1.1.1 Pro-Transformations: A Neo-Classical Economic Perspective

A substantial part of the literature addressing the on-going transformations at the sea and on the coast is rooted in a neoclassical or "orthodox" reading of economic events. In this view, micro and macroeconomic phenomena are mainly analysed through the lens of "utility", itself

a widely discussed concept which, in purportedly simplistic terms, can here be equated to economic/monetary benefit. This inclination is neither neutral ideologically nor normatively, since it rests on the premise that maximising utility is good and desirable. As such, it often sits comfortably with the neoliberalist paradigm discussed in the General Introduction of this thesis. Below, I review examples that apply to different facets of “development” around the coast.

Sabari Rajan and Chandrasekar (2014) argue that the motorisation and mechanisation of fishing techniques have greatly contributed to a steady growth of fish catches, and hence export volumes and value since 1980, hereby suggesting positive developments for the economy of Kerala, as they increase economic growth.

Xavier (2014a) argues that ‘trawlers play a decisive role in the economy of Kerala through production, export and employment’. (Xavier 2014a: 69) Xavier (2014b) explains that the trawlers sector is nowadays characterised by high levels of technology, requiring high investments and delivering high potential for catches in return: ‘now these boats can fish ten to fifteen days at a stretch’ (Xavier 2014b: 46).

Concerned by a decreasing profitability of these trawlers over time resulting from their uncontrolled proliferation, Xavier (2014a and 2014b) recommends the development of ‘non fishing employment opportunities for the trawler owners and the fishworkers to move into.’ (Xavier 2014a: 78) This view implies that economic efficiency (profit maximisation) is the goal to pursue and further suggests the economic impacts of modernisation are seen as beneficial in direct terms (increase in exports), and as a source of assumedly positive further transformation in the direction of a tertiarisation of the economy (i.e. a switch towards the development of the services sector).

In a much-cited study, Jensen (2007) contends that the introduction of mobile phone networks by the Government of Kerala in 1997 has resulted in increased market efficiency. More precisely, where fishing markets were segregated and hence displayed different prices for the same fish at a similar moment, the introduction of this information-enhancing device allowed prices in different places to converge¹⁴. Behind Jensen's (2007) economic argument contending that higher market efficiency leads to higher welfare, one can read the same – even if less direct – assumption than the one at the root of much literature rooted in orthodox economics, such as De Soto's (2000). However innovative their approaches claim to be, such works ultimately converge analytically in that they essentially suggest different and uncritical ways of “better embracing” the same ongoing neoliberal globalization. This approach, in turn, holds strong assumptions about the willingness of everyone to participate in the market economy, which are debatable and often more nuanced on the ground.

Beyond convergences in market prices illustrated by Jensen (2007), various accounts reveal that the use of heterogeneous fishing techniques increasingly blurred the boundaries around the delimitations of ‘traditional’ or ‘artisanal’ fishing, further defined in chapter 4. Platteau (1989) argues that instead of having been ‘wiped out by the so-called forces of modernization’ (Platteau 1989: 641), the small-sector has been ‘incorporated into the world market system’ (ibid). These socio-economic convergences could be seen to correspond to instances of

¹⁴ This convergence of prices in turn enabled a wider-scale competitive equilibrium itself inducing welfare increases, as postulated by the First Fundamental Theorem of Welfare Economics. This theorem states that any competitive equilibrium results in a Pareto-efficient allocation of resources (that is, an allocation characterised by the fact that any change which incurs any utility increase for an agent must also incur a decrease in utility for another agent). Obviously, and although not the direct object of Jensen's (2007) analysis, in this line of reasoning, any modernisation in the fishing techniques also enables to increase the utility levels at which such equilibria can be achieved.

flattening in Friedman's (2005) framework. If this framework was perfectly accurate, however, the future of the fishing sector would be expected to become fully homogenized technologically, and to send the inefficient surplus of fishworkers into other professions, thereby further feeding the tertiarisation discussed above.

Along the same analytical lines but on the land, Aggarwal (2010) argues that Special Economic Zones¹⁵ (SEZs) play an active role in 'bringing about economic transformation from a resource-led economy to a skill and technology-led economy' (Aggarwal 2010: 1). This, in addition to increased employment and investment, also contributes to further economic growth. In the case of tourism, Sreekumar and Parayil (2002) highlight the focus usually put by scholar and policy-makers on the economic growth incurred in the regional economy, and on increases local populations' incomes.

Besides structural barriers that neo-classical economists would see as undesirable frictions, I directly witnessed the reluctance of fish-workers using outboard engines to opt for ring-seine boats when given a chance, as further discussed in chapter 4 of the present thesis. In addition, the sustained occurrence of social interactions based on reciprocity rather than on economic rationality (Sundar 2011; Mulvany 2012) seem to show evidence of a certain resistance to the market economy, and thus limitations to the above line of reasoning (Jayaraman 2021). In simple terms, this brief section tells us that there is more to the picture than the however insightful neo-classical thinking.

¹⁵ My thesis does not look directly at SEZs, but they are an important feature of coastal transformations in India.

1.1.2 Critiques: A (Neo-)Marxist Perspective

Another stream of literature can be situated analytically in opposition to the above. Quite often, even if they are not confined to it, critiques of the ongoing transformations at sea and on the coast borrow an approach rooted in (neo-) Marxist or “heterodox economic” thought to the reading of economic events.

According to social activist K. P. Sasi (2011), tourism and other industrial sectors are making an attempt to convert the coastal regions of Kerala into a resource for making quick profits. Malekar notes that Mararikulam’s beach, for instance, had nearly been entirely privatised by 2010, ‘with almost 90% of it now in the hands of private entrepreneurs’ (Malekar 2010).

A major analytical lens which tends to be critical of the consequences of globalisation derives from the Accumulation by Dispossession (AbD) framework proposed by David Harvey (2003; 2004). In Sneddon’s (2007) words, this framework models systematic instances in which ‘indigenous forms of production and the resources on which they depend are (violently) appropriated in the name of jumpstarting more “advanced” forms of capital accumulation’ (Sneddon 2007: 168).

My work in the subsequent chapters 5 and 7 and Sundar’s (2011) thesis in neighbouring Tamil Nadu, for instance, show clear evidence of practices described by Sneddon (2007) in the case of Cambodia: ‘state and market interventions promoting a logic of capitalist economic development treat “nature” simply as resource subject to commodification and privatization’ (Sneddon 2007: 186). Land-grabbing issues often accompany narratives of primitive accumulation both directly, through the creation of industrial and touristic complexes, and

indirectly, through the government's creation of sociopolitical preconditions therefore (Brenner 2006). In an already dated mediatic piece which illustrates that these trends have been around for some time, Rowe (2008) indeed retranscribes the words of the then Tourism Secretary for Kerala: '[p]rivate dealers are certainly aggregating land, but the main reason for the fishermen deciding to sell is that the scale of the sums on offer is unheard of in the region' (Rowe 2008).

The same reasoning applies to the support given to mechanisation techniques as the result of an effort to boost exports. Malm and Esmailian, in the case of fisheries in Egypt, converge in this direction by affirming that governments are 'often absolutely instrumental in establishing the rule of private property ... and enforcing the rules of the market' (2012: 409). Empirically, even though they use a more nuanced framework (cf. below), Baviskar et al. (2006) and Sundar (2001) In Kerala and Tamil Nadu, point out the often ambiguous role of the State Government (Baviskar et al. 2006; Sundar 2011), both in its openly pro-modernisation stances, and through the poor enforcement of, for instance, the legislation regulating the activity of mechanised trawlers.

The conjunction of transformations at sea and on the land thus also strengthens the potential relevance of the AbD framework in identifying a similar impetus. This said, the AbD framework is not exempt of critiques either. De Angelis (2004) insists that the features of AbD discussed above, especially in the case of natural resources, are continuous, as postulated by Harvey (2003), rather than transitory as would be the case in a more traditional Marxist reading of primitive accumulation. His framework also implies the existence of counter-movements that aim at offering alternatives by actively resisting enclosures.

However, according to Baviskar et al. (2006), Subramanian (2009) or Sundar (2011), these movements—among which the KSMTF mentioned in the introduction is certainly the flagship—which were strong in the 1970s or 1980s, have witnessed a gradual dilution of their claims for various reasons. One of them appears to be a new landscape where enclosures are dealt with through a re-organisation of labour relations such as artisanal fish-workers becoming employees on trawlers (Sundar 2006: 107). This evolution suggests that is important to consider more processual, dynamic and fluid boundaries of, and interactions between, enclosures and resistance to them. Where the literature surveyed in the previous section would see an incremental “flattening” (Friedman 2005) here, other critics such as Woodward (2004) push in the other direction by calling for a more fine-grained examination of this economic imperialism ‘on the ground, on bodies, and on everyday social life’ (Woodward 2004: 154).

In short, while there is certainly much to this approach (cf. chapter 6), it too must be nuanced and fine-tuned to capture more complex realities.

1.1.3 Analytical Need 1: Move Beyond One-Size-Fits-All Approaches

I have tried to highlight that a first range of literature on the ongoing transformations on the coast and at sea could be classified in two camps, which seemingly oppose each other (but do in fact not need to as we see in my analytical framework). I have shown that both provide insights into how to read these changes, but also many blind spots. I have thus also tried to illustrate their limitations through concrete examples drawn from more nuanced ethnographies and popular media. These limitations point to the fact that the two major

intellectual lineages underlying these analyses claim a relatively strong universalism, i.e. that their analyses apply to all situations, which also bears the risk of resulting in fairly deterministic analyses.

1.2 Ethnographic Studies of the Coast

Of course, not all the literature adopts 'one-size-fits-all' approaches. Ethnographies for instance are typically geared at overcoming these in order to offer a more fine-grained picture of the sites or issues they study. In the case of the south-western coast of India and of its artisanal fish-workers, a few key studies all offer complementary insights onto specific aspects of the wider socio-economic transformations of the coast over the years. Their specific focus also open other questions, which help further delineating my distinctive project.

1.2.1 Socio-Economic Lens

The two studies with which I engage the most when it comes to life and transformations in the villages both came out very close in time. They were also both conducted in Kanyakumari district. Although Kanyakumari is located in Tamil Nadu, around 90km south of Nagaram, its coast is populated by fishermen from same the socio-ethnic community and which use similar fishing techniques as my respondents¹⁶. For this reason, much of their work is closely related to one another, as well as to the socio-economic life on my fieldsites. As I show below,

¹⁶ Cf. General Introduction

although their specific focuses are of course different, they crucially trace the many complexities underlying processes of capitalist transformations by highlighting their contingent—as opposed to universal and deterministic as seen above—character too.

Subramanian's project traces 'how spatial imaginaries and practices affect power and politics through a close look at how Catholic fishing communities in south-western India have defended their role as custodians of the local sea and expressed their rights in relation to church and state.' (2009: overview¹⁷). As I further clarify in chapters 3 and 4, these spatial imaginaries are mostly related to the inshore sea – a notable difference with the focus of my own study as outlined below.

Subramanian's three main and interrelated arguments are the following. First, she insists on the 'importance of prior histories of claim makings as the grounds for postcolonial democracy' (2009: 250). Then, she establishes 'space making as an instrument of both rule and rights' (ibid: 252), through the 'spatial unfolding of a Gramscian notion of hegemony' (ibid) which I come back to in chapter 4 of this thesis. Third, she asserts the importance of seeing 'subalternity in relational processual terms' (ibid: 253), which more concretely implies the 'need to understand state and community as mutually implicated and postcolonial citizenship not as a derivative, juridical construct that is a less authentic expression of cultural subjectivity but as a dynamic, locally constituted process through which people understand their relationship to territory, community, nation, and state' (ibid: 254). These arguments are directly relevant for my work since they speak to the relational and processual lens that

¹⁷ <https://www.degruyter.com/document/doi/10.1515/9780804786850/html>

underlies my analytical framework too.

Sundar (2011), on the other hand, rather focuses on the complex relationship between society and market by examining the evolution of the counter-movement to the capitalist transformations mentioned in the introduction of this thesis, from confrontation in the 1980s to adaptation by the time of her fieldwork. To do so, she starts from a Polanyian framework but seeks to go deeper into the 'social or political complexities of constructing such a movement' (Sundar 2011: ii). Her thorough work takes us through many aspects, both historical and contemporary, of the transformations discussed so far which include technology, social movements or capital among others. In doing so, she also thickly documents key aspects of the everyday life in the village and their political economy, be it through various self-help groups, religious life and political life, without omitting the areas where gendered distinctions are important. In her own words, the main argument of her thesis contradicts P. Chatterjee's view that civil society is a concept specific to the sociological and historical trajectories/contexts of Europe, and which implies that 'the large majority of India's population seek representation as members of communities through a political society' (Sundar 2011: 16). Rather, she thus contends, 'it is precisely by locating the counter-movement of fish-workers within civil society that one can map the multiple negotiations that take place as subaltern classes are integrated into the market, and into liberal democracy, and explain the difficulties of extending and sustaining the counter-movement itself' (Sundar 2011: ii-iii). In her own words too, Sundar summarises the differences between her work and Subramanian's (2009) as follows: '[d]espite our obvious commonalities in focus and interpretation, there are key differences: in the more systematic empirical basis of my methodology; and in our conceptual frameworks. Subramanian's preoccupations are with

concepts of identity, “space,” citizenship, and modernity, whereas mine have to do with associational life, publicity, social movements in place, and the dynamics of popular resistance’ (2011: 40). In the section on this thesis’ contributions (cf. end of this chapter), in turn, I delve into what differentiates my work from both of theirs more precisely.

Both Subramanian’s (2009) and Sundar’s (2011) works represent pillars on which this thesis leans. As explained further in the next chapter, they performed ethnographies of a depth that my project’s different focus cannot claim, but is nevertheless constantly informed by. While providing an updated analysis of the transformations taking place on the coast, I critically mobilise the aspects that they cover when they are relevant to my work, and discuss them more in detail in the relevant chapters of the present thesis. A central aspect where my work complements theirs, however, is by strengthening the analytical importance of the non-human environment which, albeit obviously present, is a far less direct explanatory realm in their studies.

1.2.2 Environmental and Religious Lenses

Along a different line of inquiry, Hoeppe’s (2007) ethnography uses a lens rooted in cultural anthropology to look into the environmental knowledge of artisanal fish-workers in central Kerala. His work is centered around their relation to the sea, and its evolution in a context where overfishing results from the technological transformations mentioned earlier. In this ethnography, which is the only one in this review centered around the environment, Hoeppe seeks to understand and convey ‘the ways in which knowledge is expressed and its transformation debated, [paying particular attention] to the fishermen’s everyday speech and

their use of figurative language' (2007: ix). However, as Hoeppe (2007) emphasises himself, his focus is largely cultural and interpretative and in this way differs largely from my own project in the sense that it doesn't address questions that my work, and the wider social sciences, tend to focus on. By looking at knowledge, perceptions and rituals, his work does not centrally address socioeconomic dynamics. This said, I do rely on his insights when discussing the relationship of my informants to the sea in chapter 3, for instance.

Less connected to the ongoing socio-economic transformations but very informative nevertheless, PT Mathew (2020)—a Jesuit scholar—explores the religiosity of the Mukkuvars and the ways in which their particular occupational history and identity shapes their theology. Like Subramanian's (2009), Sundar's (2011) and Hoeppe's (2007) work, PT Mathew (2020) ethnography offers insights into yet another realm: the religiosity of the artisanal fishworkers along the coast of southern Kerala. For instance, he notes that they 'live their religion at the intersection between the sea and the land' (2020: 139), which means that concrete and symbolic aspects related to the sea deeply permeate their perception and lived experience of Roman Catholicism. Such insights are thus helpful to keep in mind when reflecting on different aspects of the everyday life of my informants. For the rest however, the main scope of this ethnography is very different from my own work, so that I call upon it when needed to complement my own analyses. I refer to other studies which are either less comprehensive or less directly related to my work when relevant in the dedicated chapters. These studies include Baviskar et al.'s (2006) reflection on environmentalism, Sinha's (2012) focus on the transnational character of the Fishworkers' movement, Ram's (1992) and Devika's (2017) attention to the role of Mukkuvar women or Sundar's (2018) emphasis on transforming skills as technologies evolve.

These different studies certainly transcend the polarisations seen in the previous section, and bring a fine-grained picture of various aspects of everyday life that very much enriches my work. However, their depth of focus on a few particular empirical and analytical points inevitably means that they leave others open. In all of these works, except Hoeppe's (2007), the common missing point is the role of the environment in the different processes studied. Surely, they all refer to the depletion of fish resources and to the special relationship between the sea and the fish-workers, but they do not put the environment at the centre of their analyses. Moreover, infrastructure is also not very present, since it is by and large missing from the fieldsites at the time those studies were conducted. Yet, as I sketch in the next section, the specific environmental transformations that I study are directly linked to infrastructure. Hence, in contrast with the region-specific literature surveyed above, this nexus must be taken into account too.

In Hoeppe's (2007) ethnography, the deep focus on links between fish-workers and environment beyond the socioeconomic realms necessarily results in the latter being overlooked. Granted, this was not the objective of his study and is therefore not a shortcoming of his work. But the above literature review combined with the fact that, when I tried to visit it in late 2018, his fieldsite has no more fish-workers, certainly calls for tying environmental knowledge with material processes and their socioeconomic causes and consequences more forcefully.

1.2.3 Analytical need 2: Greening of the Literature by Adding Emphasis on the Shore

In sum, by their nature, these ethnographies tend to also be polarised albeit not along the same lines as the studies reviewed in the previous section. Here thus, they either lean towards

the socioeconomic/cultural side or, in the case of Hoeppe's (2007) exception, towards the environmental and cultural one. As I show in the next section when introducing the empirical situation along my chosen fieldsites, the gap to fill appears quite neatly: linking environment and socio-economic processes in a more direct and balanced way.

When they do look at the environment, the works that I surveyed above tend to focus on the sea and the availability of fish. The shore is acknowledged as a base from where fish-workers venture into the sea when fishing or into the land for selling part of their catches, but bears no analytical role in the socio-economic transformations that they analyse. Yet, the empirical reality presented in the General Introduction feeds perfectly into the wider gaps identified above, by opening an avenue for an analytical focus where the shore matters. Chapters 3, 4, 6 and 7 of the present thesis deal with this central aspect.

To summarise, this review of literature has so far identified the need for going past universalistic approaches, for a better balance between socioeconomic and environmental processes, as well as for making the shore visible. In the sections that follow, I delve into the academic literature in order to put together this thesis' analytical framework.

1.3 Society and ‘the Environment’

The undebatable common feature of the different transformations briefly introduced above is the impact that they have on the environment (understood broadly for now). Indeed, they do have physically tangible effects on the coastal land, the sea and the fish, as well as significant effects in terms of access to these same coastal land, sea and fish. Yet, as I also showed afterwards, the academic literature on the coast of Kerala also lacks an analytically integrated and balanced treatment of these (anthropocentric) socioeconomic processes with environmental ones. For this reason, I continue my analytical literature review by delving into how the relations between these two realms have been conceptualised in academic work. This helps me identifying further anchors for the analytical framework that I present below.

Much of Western social science (particularly anthropology) has for long considered nature and culture, understood very loosely here as respectively the realms of non-human and human life, in dichotomic terms (Castree 2002). Here however, building upon the intuition according to which the sea, coastal land and fishing community were intimately related and permeable with one another, I survey theoretical works which substantiate this insight and aim at moving past this dualism (Castree 2002). Showing that a relational approach to the question of nature and society is indispensable, I nevertheless argue that fully blurring their conceptual boundaries would not be the most suited approach to my line of inquiry.

1.3.1 Relational Approach

In much anthropological work, the in-depth nature of the ethnographic method enables to incorporate relations between (non-human) nature and society.

Insisting on the analytical trade-off one faces between studying units themselves or relationships among units, Hoeppe (2007) argues that his informants, '[r]ather than dwelling on the unit of symbolisation, the 'sea as person', ... dwell on their relationship to it' (2007: 124). Ingold (1995; 2000) focuses on the 'practice of landscape (on landscaping as a process/verb rather than landscape as an artefact/noun)' (Whatmore and Hinchliffe 2010: 444) to explain that the relationship of people to their environment is a living process, in which humans dwell in their environment rather than building it, which suggest an constant and reciprocal relationship of making and remaking. Khan (2014 and especially 2015) also expands at length on how environmental change (decay) 'produces the conditions of possibility' (2015: 390) for transformations in social relations (their corruption in the latter case), thereby clearly showing that the environment also makes the community, so that relational approaches seem much more fruitful than more static ones building up on the nature/culture divide. In the context of environmental disputes in Latin America, Ulloa contends that '[e]verything happens in a space, but this space changes due to the fact that there is a vertical and horizontal geopolitics in what is conceived of as territory' (2015: 321). Very much like Escobar (2016), then, she points to the existence of multiple notions of nature, where the nature/culture divide makes little to no sense and where, instead, relational ontologies are the best suited starting point in order to subsequently analyse the interactions between living entities.

While it is clear that approaching (non-human) nature and society from a relational viewpoint is thus beneficial if not necessary, it remains to be seen how to delineate these realms. In the section below, I reflect on streams of literature that merge them. Doing so enables me to identify key reasons why I do not adopt a similar approach.

1.3.2 The Ontological Turn

The most extreme transcendence of the nature-culture divide is found in the works of Viveiros de Castro (2004) and more generally of the scholars of the Ontological Turn (OT hereinafter). Viveiros de Castro is notorious for his work on Amerindian perspectivism, in which one can more broadly discern a multi-naturalist approach, which shares close ontological ties with eminent scholars such as Latour (Hage 2012) or Haraway (Hornborg 2017b). In this approach, the researcher does not shed light on a perspective among many possible perspectives of the *same* reality, but rather acknowledges that it is a 'multiplicity of bodily engagements which in turn produces a multiplicity of realities' (Hage 2012: 299). If Hage (2012) means this in terms of possible "alternative" futures (the title of his review article clearly stresses the critical and political dimensions he praises in social anthropology), this also means, then, that multi-naturalism is an approach for which competing projects in the social and economic realms, such as the ones my study intends to look at, could be suited.

1.3.3 Actor Network Theory (ANT) as a Methodology to Study Multiple Realities:

Promises and Limitations

Keeping in mind the need for a relational approach between nature and society, Latour (2005) offers a resolutely empirical approach which offers a way out from these controversies without firmly neglecting their insights either. Below, I examine the relevance of some of its promises to my work below to further refine the scope of my own framework.

Description and Actors

By focusing on the local(s) and the connections between the different instances of the local, ANT aims at shedding light on how to study the social rather than at being a theory of the social (Czarniawska 2006), and is in this sense quite useful. More specifically, as Latour (2005) analyses five controversies/uncertainties about the social world, he stresses that agency is most often multiple (and thus takes the shape of networks), which tends to be absent of most accounts of social life. This implies that objects or fish too may have agency, for instance, in the case of my project. Czarniawska usefully specifies that '[t]he purpose here is not, however, to anthropomorphize insentient beings,... it is [rather] to point out the special role that objects play in associations: they stabilize ... making users behave in a prescribed way' (2006: 1554). Regarding power relations, ANT posits that rather than seeing power and domination as explanatory variables to social phenomena, the researcher should try to explain them as well. Latour's (2005) sociology of associations focuses on the actors being defined by actions and on description as a methodology, the latter being 'explanatory (or performative) of the

connection that form the (social?) world.’ (Bruni and Teli 2007: 123). Latour’s (2005) constructivism is thus rooted in empiricism (Taufen Wessels 2007), which makes it radically different from, and critical of, ‘social constructivism’ as understood in more traditional anthropology, for instance.

The Importance of Theory

While these elements are certainly promising, they also need to be nuanced for the approach of my own study to continue emerging. For instance, Krarup and Blok’s (2011) criticism of Latour (2005) is related to his rejection of theory in order to explain the social. The authors indeed ‘call attention to the irreplaceable role of empirical obscurity, encountered when describing ephemeral social phenomena such as moral codes, group identities, and desires that constitutively ‘erase their traces’ while acting on the social’ (Krarup and Blok 2011: 57). When facing such empirical obscurities, the researcher would therefore still need to—or simply benefit from—appeal to theoretical interpretation(s), to the contrary of Latour’s (2005) predicament, by the use of what the authors term ‘virtual theory’ (Krarup and Blok 2011: 58). The function of the latter is to ‘provide just enough conceptual mobility for the sociologist to ‘go on describing’, in the face of inerasable empirical obscurity in the social landscape’ (Ibid.). Its ideal is ‘to explicate the grid of uncertain possibilities [emphasis in text] – not to act as a synthetic surrogate for silencing the multiplicity of empirical voices’ (ibid.). ‘Virtual theory cannot tell us ‘what we are looking for’, but it can structure the evaluation of possibilities and uncertainties: ‘what actually happened here?’ is the meta-question that renders our reconstructed sociology of associations accountable [emphasis in text]’ (ibid.: 59). I take this point on board in my own framework, which I lay down in the next section.

1.3.4 The Case for (Some) Ontological Realism

Whether one follows or rejects the above OT position, the use of land and sea (and more broadly the 'environment') as anchors to analyse the dynamics of "modernisation" in this thesis highlights that the latter are, at the very least, the nodes of commensuration between different realities without which it is simply impossible to say anything otherwise. As I will argue now, having made the case for the use of a relational approach between nature and society, it is the limitations of the Ontological Turn that help to carefully position my work within the greater academic debates.

According to Graeber, proponents of the Ontological Turn (OT) rely on a specific (if not flawed) understanding of the words "ontology", "epistemology" and "semiology" themselves. Ontology is understood among philosophers to 'refer to a discourse (logos) about the nature of being, (Graeber 2015: 15) To OTers however, in Graeber's critique, 'ontology corresponds to "way of being" or "manner of being" (ibid.: 15-16). Graeber expands at length on how the original conceptions of ontology and semiotics end up being conflated by OTers to their conception of epistemology, and concludes that their take is a very idealistic (in the philosophical sense) one: '[i]deas [or concepts] generate [are] realities' (Graeber 2015: 21). To push his point further, Graeber affirms that a major implication of the OT and people living in their conceptualisation of ontology is that 'out of respect for their otherness, we are obliged to act as if their command of their environment were so absolute that there were no difference whatever between their ideas about, say, trees, and trees themselves' (ibid.: 22).

In this context, the anthropologist (or, by extension, social scientist) faces a crucial choice. Indeed, s/he is compelled to choose between trying to understand as well as possible a given

group of people and their ‘radical alterity’ (ibid.: 6) or, to the contrary, trying to show the ways in which this alterity is not as radical as initially thought, so as to be able to ‘reexamine our own everyday assumptions and to say something new about human beings in general’ (ibid.) Where the intellectual project of the OT is the former, Graeber portrays himself as a proponent of the latter¹⁸.

If my simplification work is accurate and faithful, an important question of particular interest to my study, lies in the treatment of the political agency of humans. Indeed, it is unclear how the researcher can expand their inquiry beyond the characterization of the different ontologies they perform. In a (critical) realist stance, however, the researcher has conceptual latitude to push their investigation further. Beyond the mapping of different perspectives, the researcher can indeed delve into how they engage with one another, since the existence of an objective, not fully-knowable, unique reality provides a minimal but common ground for conceptual engagement between these perspectives. In this sense, it thus becomes clear that it is at least more suited to the sort of inquiry that my research aims at conducting. In the analytical framework that I lay down in the next section, I therefore take a form of ontological realism as a given, especially as far as the non-human environment is concerned.

¹⁸ He insists it is still perfectly possible for a world to exist without the philosopher (and by extension the anthropologist, the social scientist etc.) being able to prove it. Confining the existence of a single reality to the existence of a single transcendental point of view (as the OT does, according to Graeber) is an “epistemic fallacy”, as it confines the question of whether the world exists to the ways in which one would prove it exists or to one’s possibility of having a definitive knowledge of it. Reflecting on the possibility of different and incommensurable perspectives on reality, Graeber asserts that ‘without a realist ontology [in the traditional sense] and without some way to anchor values in it, one would have no solid basis on which to argue *either* that all contain truth, *or* that a diversity of incommensurable perspectives is in any way desirable’ (2015: 27).

1.3.5 Human Responsibility

Hornborg (2017b) is also very critical of most scholars who blur the boundaries between the natural and social realms, and in turn of their dealings with environmental issues and transformations too¹⁹.

Reviewing Haraway (2016), Tsing (2015) and Moore (ed. 2016), Hornborg (2017b) lays down his critique of the OT along what he sees as a dilution of human responsibility in environmental transformations and thus, in turn, as a dilution of human agency in curbing them. In this sense, albeit from a different angle, he rejoins Graeber (2015) in pointing out one of the possible blind spots of the OT-driven and OT-implied politics. Thus, to Latour's (1993; 2004) endeavour to collapse the society/nature binomial thinking by conferring agency to the non-human (which Haraway largely supports in her own work too), Hornborg (2017b) strongly objects that the responsibility of humans in environmental transformations (/degradation) is unique and prominent, and should therefore not be put at par with the supposed agency of, say, animals or rivers. To him, then, OT proponents are merely 'dithering while the planet burns' (2017b: 61).

At a more meta-theoretical level, Hornborg (2017a; 2017b), who does not disagree with the emphasis Latour puts on artifacts as black boxes of the social, argues that Latour (2014) 'tends to conflate the distinction between society and nature with the distinction between subject and object, and the latter with the distinction between a calamity and its victims' (2017b: 73).

¹⁹ Hornborg, a historian and anthropologist, indeed bases his thought (2015; 2017a), on Georgescu-Roegen's (1971) conceptualisation of the relation between economics and thermodynamics. In other words, human economic activity actively prepares the destruction of the entire ecosystem, its own destruction, and ultimately the destruction of mankind too.

Where he does argue that nature and society are indispensable to account for respectively technological and economic progress, his response against this conflating is nevertheless quite clear: '[t]here are *social objects* (artifacts) and *natural subjects* (nonhuman organisms), and only the latter have purposes and agency' (ibid.). Using the work of two environmental historians (Bonneuil and Fressoz 2015), he argues that interactions between nature and society have been documented throughout the industrial revolution, and that fully erasing this divide ultimately results in depoliticizing environmental issues as well as in 'endorsing the technological domination of nature' (ibid.).

Taking this cue of argument at a more general level, Lave argues in favour of dismissing ANT altogether, for its denial of structural inequalities, the 'uncertain political implications of treating humans and non-humans symmetrically' (2015: 216) and what she considers to be a neoliberal treatment of actors. This outlook echoes Spash (2015), who adds that ANT attempts to 'totally dismiss the concept of Nature as distinct from human society have failed' (Pollini 2013 in Spash 2015: 37) and that after all, since there was a world before humans, a non-human reality must exist. All in all, Sud (2020c) reminds us that if we are to consider nature to matter, we are invited to see stories of entwinement. And yet, to make these entwinements visible and without even entering endless ontological debates, there seems to be a case for not abandoning the *analytical* binary between nature and society. By construction indeed, a world where nature is fully subsumed under culture—i.e. a full human domination over non-human nature—is also one where this binary does not exist anymore.

In this context, Lave (2015) argues that, instead, political ecologists can resort to simpler methods which address the relational aspect of nature and society while not overlooking

structural inequalities – something I very much try to do in the framework that I put together in the next section.

1.3.6 Upshot: Towards an Analytical Framework

In this section, I have tried to show the importance of adopting a relational approach between society and nature. In this light, the first imperative point of my research agenda is try characterising the land- (or sea-) scape (here understood as the integrated world between environment and society) in which the artisanal fish-workers who are my primary informants live. This is the task of much of chapter 3, in which I aim at shedding light on how they value their environment and relate to it, with particular reference to the shore, the Sea and the fish. Understanding what is being transformed is indeed a necessary first step in understanding how these transformations are perceived and engaged with.

However, by delving into the works of some of the most radical proponents of approaches that fully conflate environment and society, I have identified some of their limitations, which in turn help me refine the contours of my own project. First, I have thus argued for keeping some theoretical anchor (to the contrary of ANT). I have also made a case for looking at this relationship between nature and society from a human viewpoint in my own thesis.

Keeping these latter points in mind and adding them to the analytical needs identified up to this point, I am now able to turn to my analytical framework.

1.4 Analytical Framework

In the previous section, I gradually and purposively narrowed down the immense literature on environment and society in order to delineate some key features of my analytical framework. In this section, I move to the core of this analytical framework. I first locate it within the broad field of political ecology. I then turn to the specifics of assemblages and frontiers, in order to argue that a frontier assemblage lens helps constituting a processual, dynamic, contingent and eclectic framework. By virtue of these characteristics, my framework is thus also adapted to the multiple dynamics taking place on the ground and outlined in my General Introduction.

1.4.1 Political Ecology: the Overarching Framework

Put in the simplest possible terms, my research seeks to elucidate the connections between a biophysical and metabolic reality— ontologically independent of human cognition (Tacconi 1998; Forsyth 2011; Spash 2015)—and its socio-economic and institutional/political effects, which involve subjectivities, perceptions and valuations shaped by multiple socio-historical factors (Forsyth 2011; 2015).

Because of its manifold eclectism (theory, methods, disciplinary lens, geographical focus), political ecology is difficult to delineate (Perreault and al. 2015) and regularly pulled towards being more political (Swyngedouw 2015a; 2015c) or more ecological (Walker 2005), depending on one's understanding of these contested terms (Bassett and Peimer 2015).

In this context, letting my empirical work refine my own take on these concepts (Castree 2003a), I start from a simple and open lens of political ecology, meant to focus on ‘how the distribution of power...determines the use of the natural environment between categories of humans and with regard to other species’ (Rodriguez-Labajos and Martinez-Alier 2015: 202) and vice versa.

1.4.1.1 Towards Integrating Economy, Society and the Biosphere

Having argued for keeping a certain analytical distinction between nature and society anchors my work in intellectual lineages that have in fact pre-dated most of the more recent theoretical developments reviewed above.

Inspired by Polanyi (1944), the substantivist view of the economy argues, in a nutshell, that economic processes should be understood as embedded into social institutions. The economy, in other words, is a subset of society and not some sort of self-sufficient realm with its own life. Much of the economic anthropology referred to in this thesis draws on this insight, including Gudeman (2001; 2008). His work, which we encounter in chapter 3, pushes it further by adopting a culturalist approach (a refinement of substantivism by emphasising the importance of economic cultural constructions, and thus variations within a Substantivist umbrella).

Polanyi and his followers most certainly acknowledge the necessity of seeing economic processes embedded in ‘nature’ too. Polanyi for instance affirmed that ‘the substantive meaning of economics derives from man’s dependence for his living upon nature and his fellows. It refers to the interchange with his natural and social environment, insofar as this

results in supplying him with the means of material want satisfaction' (Polanyi 1968: 139).

Nevertheless, it is not very clear how this is systematically done in their accounts of economic life, where the substantive aspect seems to have first and foremost been focused on social institutions. Polanyi's (1944) main insight was that the economy had to be analysed through its embeddedness in society, as counter-movements would keep indicating. Georgescu-Roegen's (1971) adds one layer of analysis so that his main insight, in turn, is that both should be analysed through their embeddedness within the ecosystem, as thermodynamics would command (due to the entropic nature of economic activity). There is no apparent contradiction between Polanyi (1944) and Georgescu-Roegen (1971), and many researchers more or less explicitly accept these insights (M. O'Connor 1994; J. O'Connor 1998; Gerber et al. 2009; Martinez-Alier 2012). Yet, many possible ways of integrating them still exist in the academic literature.

Ecological Economics, for instance--a recent academic field made of heterogeneous approaches and methodologies (Spash 2015)--proposes to see the economy as embedded in society (so far, a substantivist view), and society itself embedded in the biosphere (Martinez-Alier and Muradian 2015b). While ecological economics is 'necessarily eclectic and pluralistic' (Costanza et al 1997: xiii), the premise that allows drawing such a hierarchy simply comes from chronology: 'there was nature before human society, and human society preceded the generalized market system by many generations' (Martinez-Alier and Muradian 2015b: 2). Without myself adopting a framework which directly pertains to Ecological Economics, my work clearly accepts these principles and takes them as starting point. This includes implicitly leaning on an ontology that is predominantly realist (i.e. there is a reality beyond the one constructed by our cognition), but which can nevertheless take into account ignorance and

social indeterminacy (Spash 2002; 2015).

1.4.1.2 Towards a Co-Productive Relationship between Nature and Society

Some founders of eco-Marxism such as O'Connor (1998), Altvater (1993) and Benton (1989; 1991a; 1991b; 1992) rested on a dualistic approach to analyse the external contradictions, whether absolute or historical, between a proactive (constructionist) capitalism and a reactive (naturalist) nature (Castree 2002). However, numerous authors from different intellectual lineages look at the human-environment relationship in more fluid terms. Within Marxism, relational eco-Marxism looks at the internal (relative and contingent) contradictions between partly intertwined (constructionist) capital and (naturalist) nature. As "first nature" (untouched by capitalism) is shrinking as a result of expanding commodification, the study of capital-nature relations show that nature can be internal to capitalism and be transformed both intentionally and unintentionally. Its main authors are Harvey (1996), Smith (1984, 1996, 1998), whose works nevertheless tend to remain quite uni-directional, i.e. to frame a subject-object relationship where, even if dialectics exist, humans/society essentially shape nature to better fit the never-ending expansion of capitalism. Even though he doesn't deny a partial drawing on exo-Marxist ideas, Swyngedouw (1999) also leans on Latour (Castree 2002) to propose a more balanced, two-way approach where environment and society are more co-productive of one another. Swyngedouw (2014) thus validates this relational character of "environment making" (originally proposed by Smith in 1984, and since then used by many including Whatmore (2008)), but in a more integrated fashion when he explains that in Spain, 'socio-environmental modernisation implied the making and remaking of both physical and

socio-political landscapes on the one hand and the reorganisation of scalar spatial relations on the other' (2014: 92). Because the shore, at which I look extensively in this thesis, has an important spatial role, it is worthwhile specifying that both Lefebvre (1991) and Smith (1990) tie the notions of space and nature together, just like Li (2014b) or Sud (2020c; 2021) do at later points when analysing land as—among other dimensions--nature. Indeed, space 'might serve as a more general boundary discourse that problematizes the complex divisions and interactions between nature and society' (Janzen 2002).

1.4.1.3 Which Political Ecology?

It is clear by now that my analytical framework seeks to echo the broad objectives of political ecology, namely to bridge 'the social/human and the natural sciences' (Biersack 2006: 28). The field of political ecology itself has however been marked by different theoretical and methodological pushes and pulls. The main distinction within political ecology opposes the so called first- and second-generation political ecologies (Biersack 2006). This distinction is relevant here because as it witnesses the evolution(s) of the discipline, it also highlights paradigmatic shifts in these underlying approaches. These shifts also reflect various parameters of the nature and society nexus which I have touched upon in the previous section. As I try to ground my own analytical framework within the broad field of political ecology, briefly outlining this opposition is relevant here to further situate my own work within the discipline itself and its overarching debates.

The first-generation political ecology 'wedded ecology to world system theory' (Biersack 2006: 4) and further found its roots in dependency theories and peasant studies (Tetreault

2017: 5). These approaches were highly structural, and entailed a class system at the scale of the world (Biersack 2006). First-generation political ecology was furthermore dualistic, separating nature and culture, subject and object, and leaving little room for subjectivities in its predominant ontological, epistemological and practical materialism (Tetreault 2017) and realism. Examples include Blaikie (1985), Hetch (1985), Blaikie and Brookfield (1987) and Redclift (1987) among others. From the early 1990s onwards, this structural approach came under heavy criticism for 'being too rigid and deterministic, for not allowing enough room for agency, for not paying enough attention to gender, race and culture' (Tetreault 2017: 6). These criticisms echo the analytical need that I highlighted in section 1.1, albeit in the academic study of the transformations surrounding the coast in my case, for going beyond one-size-fits-all approaches.

Gradually, second-generation political ecology thus emerged in reaction to these shortcomings. Resolutely post-structuralist, this stream proceeded to a partial deconstruction of the above structural approach, to liberate space for the 'indeterminacies of agency and events' (Biersack 2006: 4). Thinking beyond class, it also incorporates a feminist inspiration and recognises that 'differences of "race" and ethnicity, among others, are also crucial in theorizing human-nature relations' (Biersack 2006: 5). Where first-generation political ecology had essentialist characteristics, second-generation political ecology is rather constructivist. Indeed, postmodernism and post-structuralism propose that discourse does not only reflect reality but in fact constructs it (Biersack 2006: 13; Tetreault 2017: 7). Crucially, this outlook implies that unlike with first-generation political ecology, the distinction between symbolic and material approaches and rigid dichotomies resulting thereof, needed no longer exist (ibid.). In this context and despite the Marxian lineage of the term 'second nature',

eminent post-structuralist scholars like Escobar (1999) have argued that nature was constructed by discursive processes and meaning assignments (Tetreault 2017). Along this way, first-generation political ecology's epistemological realism shifted towards ontological pluralism. Hence Biersack summarises this second-generation political ecology as one that 'abandons the dualisms of the past and the reductions that binaristic thinking encouraged and focuses instead on the interchanges between nature and culture, the symbolic and the material, and ... the local and the global' (2006: 15).

Of course, these two streams of political ecology have many ramifications too. Moreover, Tetreault (2017) importantly notes that materialism doesn't necessarily imply structuralism (or vice versa) and that idealism doesn't necessarily imply post-structuralism (or vice versa). This remark is important to highlight that scholars have also sought middle-grounds between the 'purest' forms of these two approaches to political ecology. As Tetreault (2017) illustrates, various eclectic attempts have indeed been burgeoning to bridge the two generations' insights and offer a third path.

As the previous sections and my own eclectic use of authors have tried to make clear, this thesis too seeks to reconcile these two approaches. Throughout the thesis, I deploy a framework emanating from Deleuze's assemblage thinking (although already filtered by its application to the social sciences in the works I cite in section 1.4.2), which is strongly post-structuralist. However, in doing so, I recognise instances of technological change, accumulation, dispossession and the possible beginning of small-scale social differentiation (cf. Chapter 4). These are clearly Marxian themes, thereby contrasting with the post-structuralist overarching framework of this thesis. This however doesn't mean that they contradict it since, as I try to show in the empirical chapters that follow, these themes help

characterise the assemblage processes without ever structurally determining them.

1.4.1.4 Unmaking and Re-making the Coast

I thus start from a relational framework (Castree 2003b) which evolved from—but is by no means dictated by, as explained below—eco-Marxian insights (Castree 2002, 2015; Bakker and Bridge 2006; Bassett and Peimer 2015; Loftus 2017 among many other for comprehensive literature reviews). Often called the ‘production of nature’ following Smith’s (1984; 1996) initial framing which ties together nature and space (Prudham and Heynen 2011), this approach sees socio-economically produced nature shaping ‘the uneven character of capitalist development’ (Bakker and Bridge 2006: 9). This dialectical approach helps taking into account the ‘bottom-up’ and ‘top-down’ impetuses that drive the developments around my fieldsites. It is further suited to the sequential character of shoreline dynamics and the associated upstream/downstream socio-economic transformations.

Just as we saw in the case of various analyses of the transformations taking place at sea and on the coast, this framework too nonetheless suffers from deterministic and essentialist tendencies (Castree 2015). As a corollary, the role(s) of nature in shaping society is underspecified, since the biophysical ‘processes and capacities that constitute ‘nature’ frequently resist or confound its production in ways that enable accumulation’ (Bakker and Bridge 2006: 10). For this reason and as hinted at the end of the introduction, my research takes up the call of authors such as Castree (2015), Sneddon (2007) or Perreault (2013) among many others for a careful examination of the *contingent* role of nature in processes of

dispossession, which they argue need to be qualitatively investigated. This is crucial in order to avoid falling back into uni-directional analyses.

1.4.2 Assembling Frontiers

In this sub-section, I delve further into the characteristics of my specific analytical framework. I first introduce the logic of assemblage which underlies it, before turning to the concept of frontier. While delving into the concept of frontier, I propose three axes that emerge from the literature and shape my subsidiary research questions. Together, frontier assemblages make the lens which, throughout the thesis, I show to be particularly adapted to the manifold transformations I study in this thesis.

1.4.2.1 Assemblage logic

To further escape determinisms and confusions, I refine my framework by leaning on relevant parts of assemblage thinking, initially introduced by Deleuze and Guattari (1980; 1983; 1994). Being ‘notoriously open-ended’ (Cons and Eilenberg 2019: 5), this approach has been used fairly eclectically and selectively in the social sciences (ibid. for a thorough literature review). It is also, to the best of my awareness, a new approach to the study of the coast of Kerala.

Put simply, an assemblage can be viewed as ‘an arrangement or layout of heterogeneous elements’ (Nail 2017: 22). As an alternative to the logics of unities and/or essences, the logic of assemblage instead carries us to the plane of multiplicities, events and

possibilities/contingencies (Nail 2017). Since ‘the elements of an assemblage are defined only by their *external relations* [emphasis added], then it is possible that they can be added, subtracted, and recombined with one another ad infinitum without ever creating or destroying an organic unity’ (ibid.: 23). Its uncompromisingly processual character further fits the nature of the events that I look at empirically: shore, sea, fishing, infrastructure, aspirations shed their conceptual heaviness and isolation to instead come together in contingent ways, cohering in the effects that these dynamics produce rather than in rigid essences.

This assemblage logic is thus also resolutely empirical, and while it is looser than ANT in being more malleable to theoretical inputs, it allows at the same time for sufficient freedom from these theories to avoid being driven or determined by them. As I will show below, this logic enables me to make otherwise eclectic theories cohere, around my field research and driven by it, into analytically unpacking *effects* (cf. below) rather than essences.

As processes of construction, all assemblages share three essential features.

First, conditions are ‘something that lay out a set of relations wherein concrete elements and agencies appear’ (ibid: 24). Instead of having an independent existence, these conditions are embodied here in the impetuses behind the ‘bottom-up’ and ‘top-down’ projects I look at.

Second, elements—the shore, crucially, but also technologies, regulations, valuations/discourses/promises among many others (Li 2014b)—can change, which naturally modifies the set of relations constituting the assemblage.

Third, agents—individual and institutional actors such as the State, the Church, or the Agarwal group—, are ‘the mobile operators that connect the concrete elements together according to

their abstract relations' (ibid: 27). Clearly then, assembling is also an eminently political act (chapter 5). Different people and groups have different interests and power, which very much impact some of the various transformation this thesis looks at.

In a very insightful comparison between assemblage thinking and the ANT framework described above, Mueller and Schurr (2016) add two points to my observations. First, they contend that assemblage thinking is better suited to change that entails rupture and events (as opposed to continuous change). Given that my two fieldsites share in common the disruptive construction of an infrastructure, assemblage thinking seems indeed more appropriate. Second, they emphasise the 'productive role of affect in bringing socio-material relations into being through the production of desire/wish' (ibid.: 217). As I briefly explain below and then expand on at length in chapters 4 and 5 in particular, the imaginative and aspirational realms are of fundamental empirical importance in the context of the transformations I study.

Unlike Deleuze and Guattari's seminal work or DeLanda's (2006) attempt at condensing it into one body of theory may suggest, assemblage thinking need not be overly abstract and complex. This approach has been used in a good number of recent works in the social sciences which tend to be eclectic and to draw on geography, political ecology/economy, and/or anthropology. Assemblage thinking helps transcending the artificial macro/micro divide (DeLanda 2006), and thereby resonates with some of the endeavours of ANT geared towards fluidifying the analysis of social phenomena as exposed before. It further helps embracing the *more-than-human* turn adopted by political ecology (Tsing 2013; Moore 2015; Robbins 2019) and briefly referred to above, without succumbing to Hornborg's (2017a) critique according to which human agency is relegated to a second plane. Indeed, by focusing on what non-

human elements (i.e. not necessarily endowed with agency) ‘make humans do’ (Jakobsen and Westengen 2021: 2), a more nuanced picture can emerge.

As an illustration on which I draw in chapter 4, Li (2014b) draws on this framework to explain how land is assembled into a resource for global investment. Concretely, this means showing that ‘[i]ts very ‘resourceness’ is not an intrinsic or a natural quality. It is an assemblage of materialities, relations, technologies and discourses that have to be pulled together and made to align’ (ibid.: 589).

Without strictly guiding my work, the logic of assemblage nevertheless refines it. Indeed, I am now able to speak of a richer—i.e. more dynamic and reciprocal-- ‘(re-)making and unmaking’ of the coast than the still fairly rigid ‘production of nature’ coined by Smith (1984; 1996; 2007). Before turning to the specific contributions of this thesis, the last remaining step is to further contextualise the conceptual setting in which studying the unmaking and remaking of the coast is particularly fertile.

1.4.2.2 Frontier(s)

While assemblage thinking thus proves to be conceptually promising, further specification is required in order to lift the blur that might still remain about its exact relevance in this thesis. Assemblages are inherently relational, and they allow for very heterogeneous elements to cohere through the effects that their specific arrangement produce (Nail 2017). The next and final step towards refining my framework is thus a word on the analytical lens under which these effects cohere. Throughout the introduction and this literature review, I delved into the main socioeconomic transformations taking place around the artisanal fisheries of Kerala at

sea and on the coast. I also referred to the Blue Growth context which, although it mainly applies to ocean resources (fishing, minerals etc.), clearly surrounds these transformations (Barbesgaard 2018; Voyer et al. 2018; Foley and Maher 2018).

To fully reflect these complementary dynamics, I look at the assembling of coastal *frontiers* (Cons and Eilenberg 2019) around my two fieldsites, i.e. ‘complex and dynamic physical and social spaces’ (Turner et al. 2020: 162) where material and ideational transformations (Peluso 2019) are key to the variegated expansion of both capital and “development”²⁰ (Cons and Eilenberg 2019). Knott and Maher note that this lens provides a ‘mesoscale, complementary set of sensibilities to research on commodity frontiers and the marine environment’ (2021: 810), which is even more salient in the case of the different research streams and approaches that I mobilised thus far in this chapter and the General Introduction. This conceptual mesoscale viewpoint demarcates my work from other studies of the coast of southwestern India by enabling me to bring together impetuses arising from, precisely, different scales (cf. Chapters 4 and 5). And as carefully spelled out so far, this approach indeed softens the different ones surveyed in this chapter by introducing analytical flexibility.

Because there is a wealth of literature reviews that trace the genealogy of the concept of frontier from Turner (1894) to Cleary (1993) (see Rasmussen and Lund 2018; Cons and Eilenberg 2019; Turner et al. 2020 among many others), there is not much point in reproducing them. Rather, in what follows, I thus focus on the major analytical angles that they open for my project. More concretely, I explain that frontiers are indeterminate/contingent, discursive and material (Cons and Eilenberg 2019; Knott and Mather 2021), so that these three characteristics represent the foundations of my inquiry.

²⁰ Understood here in the ways different actors conceive it throughout the empirical chapters that follow.

1.4.2.3 A Focus on Effects: Capitalist/Neoliberal Expansion

As seen above, thinking in terms of frontier assemblages helps overcome the rigidities of more fundamentally deterministic and universalistic approaches (cf. chapter 1) to the ongoing processes of capitalist/neoliberal expansion, in which this thesis falls.

In line with this endeavour and building upon the long genealogies evoked above, Cons and Eilenberg (2019) propose the term *frontier assemblage* and its use as an analytical lens. Taking up an intellectual endeavour that is very close to mine but in different contexts—i.e. making sense of highly variegated processes involving multiple actors and non-human elements—contributions in the volume edited by Cons and Eilenberg reflect on how, ‘map[ing] historically contingent convergences...coalesce[s] in objects, spaces, and landscapes’ (2019: 5). Because of the underlying assemblage logic, these objects, spaces and landscapes are conceptualised as effects and processes, rather than as essences (Li 2014b; Rasmussen and Lund 2018; Cons and Eilenberg 2019; Knott and Mather 2021).

In this context, frontier assemblages are characterised as ‘the intertwined materialities, actors, cultural logics, spatial dynamics, ecologies and political economic processes that produce particular places’ (Cons and Eilenberg 2019: 2) as frontiers. In much of the literature then, the purpose of these frontiers is to facilitate the extraction of a new—or newly (re-)valued—resource (Rasmussen and Lund 2018; Cons and Eilenberg 2019; Knott and Mather 2021), itself facilitating capitalist survival (Cons and Eilenberg 2019) or expansion (Moore 2015). In the present thesis however, increased extraction (of fish) is but one of the several purposes that fall under the effects of the frontier. More generally indeed, the lens that I

adopt helps examining how the coast 'is currently being configured as an untapped [space] ready for capital investment and accumulation' (Knott and Mather 2021: 810).

1.4.2.4 Indeterminacy and the Need to Characterise Frontiers

As Knott and Mather (2021) crucially stress, one of the key implications of assemblages—and by extension frontier assemblages—is indeterminacy. Cons and Eilenberg emphasise that frontiers 'do not have fixed boundaries. From any one place, a 'frontier' can bleed out, expand, and contract. The frontier can move on and return' (2019: 11). As 'sites that are made rather than discovered' (Knott and Mather 2021: 801), several rounds of frontier making can perfectly well take place at the same geographical location. In this sense, my thesis looks at the last iteration of such processes, thereby avoiding rigid essentialisms too.

While there is agreement on the effects of a frontier, namely enabling the expansion of capitalism and neoliberalism, the emphasis on contingency, heterogeneity and context make it an absurdity to imagine that all frontiers are the same. It follows, as a corollary to the avoidance of overdetermination and essentialisms, that characterising the frontier(s) that one studies is a research imperative in itself (Cons and Eilenberg 2019; Knott and Mather 2021). Doing so is indispensable to add perspective to the research agenda that seeks to understand what is similar and different, continuous and disjunct in different processes of frontier assemblage, how and why (Cons and Eilenberg 2019).

So far, I explained that the overarching objective of this thesis was to make analytical sense of processes of social, economic and environmental change. I also indicated that they involve fish-workers, activists, the state at various levels, the Catholic church at various levels too,

infrastructure, technology, the changing materiality of the shore and aspirations—without anything precluding some of these elements, identities or functions from overlapping either. Beyond its obvious informative function, unpacking who/what these actors, materialities, or processes actually are, and how they come together thus becomes a fully analytical objective in and of itself (Li 2014b; Cons and Eilenberg 2019). The framework of frontier assemblage enables me to not leave these various elements hang in a vacuum. It also allows me to look past essentialisms and tunnel visions, by putting the gaze on how the relations between these different entities change and make them cohere into certain *effects* (DeLanda 2006; Li 2014b; Nail 2017), namely the expansion of capitalism/neoliberalism on the coast.

Having insisted on the necessity and analytical value of characterising processes of frontier assemblage and on the watermark of indeterminacy underlying them, I now draw attention on three recurring anchors or dimensions which help doing so, and which are the roots for my subsidiary research questions (cf. next section and chapter 2).

1.4.2.5 Imagination and Discourse

For Cons and Eilenberg (2019), frontiers are first of all imaginative—an aspect that I investigate in chapters 4 and 5 in particular, but that remains throughout this thesis. As a direct effect of the broad context of capitalist expansion that frontier assemblages investigate, frontiers are of course ‘imagined as integral to broader economic activity’ (Cons and Eilenberg 2019: 7) as both ‘space of entrepreneurial opportunity [and as a zone] fundamental to the survival of capitalism itself’ (ibid.)

Following Moore (2000; 2015), frontiers are often taken to represent ‘non-commodified spaces that have an abundance of cheap labour, land, food and natural resources’ (Nolan 2019: 1). Looking at it less linearly, Knott and Mather nevertheless specify that ‘frontierisation happens at indeterminate sites, including those that have undergone earlier rounds of capitalist resource extraction’ (2021: 796).

Beyond looking at frontiers as mere functions of capital however, Knott and Mather lean on Moore (2015) to call for further investigation into the ‘strategies that are critical to the production of frontiers “that cannot be reduced to economic relations but are enabled by a mix of power, science and culture” [Moore 2015: 63]’ (2021: 797). This is where the lens of frontier assemblage is helpful to broaden the scope of inquiry.

While they certainly induce social, economic and ecological disruptions, frontiers are also ‘sites of creative, if often ruinous, production’ (Cons and Eilenberg 2019: 2) and ‘crucial spaces that hold the key to economic expansion, development and growth’ (ibid.: 7). Various contributors in Cons and Eilenberg (2019), as well as Knott and Mather (2021), therefore draw attention to the extent to which the discursive component(s) of the frontier(s) tends to aim at making it attractive to various economic forces and actors. They also tend to entail a promissory dimension of either inclusion or compensation to local groups or communities (ibid), which is not unfamiliar in the literature on modernisation and development (e.g. Escobar 1995 or, more recently, Cross 2015).

Because imagination, discourse and promises are so inherently tied to frontiers, documenting and unpacking them also represent research agendas in themselves (Cons and Eilenberg 2019; Knott and Mather 2021). The first subsidiary research endeavour of my thesis is therefore to unpack the imaginative and discursive dimensions of the frontier(s) assembled.

1.4.2.6 Material Transformations

Since much of the literature focuses on resource frontiers, and even though it is no theoretical imperative, it follows that material transformations are most often part of frontier dynamics (Lund and Rasmussen 2018; Cons and Eilenberg 2019; Knott and Maher 2021). Here, even though Knott and Maher draw on Bakker and Bridge (2006), Valdivia et al. (2012) and Moore (2015) to emphasise that this framework ‘helps to denaturalise resource extraction by revealing the socio-material practices that allow resource extraction to happen’ (2021: 5), indeterminacy still most certainly prevails too. This is true empirically, but inevitably reflects in the ways material transformations are treated analytically in the academic literature too. My second subsidiary research question thus seeks to understand the role of material transformations—here in the form of coastal erosion and accretion—of the frontiers being assembled along the coast. As I discuss in chapters 4 and 6 predominantly, they prove to be one of the cornerstones of the frontier assemblages that I study. But how exactly should this heavily-loaded word be understood here?

The notion of materiality—fundamentally important here since I look at a shore that erodes and accretes physically—can indeed remain confused, and thus confusing, in this framework. It has been trapped between the Marxist roots of the framework (socio-ecological conditions of production) and a more literal understanding as ‘the empirical stuff of nature’ (Bakker and Bridge 2006: 10). In this thesis, I clearly lean towards the latter, more literal and looser conceptualisation. As just evoked, I use this word to denote shorelines which shift according to a pattern that keeps reinforcing itself, as the result of sand being moved by the sea currents, and blocked by infrastructure.

Without falling into the complete rejection of theory advocated by many ANT authors (cf. above), I still retain their aversion to over-theorising and over-determining material phenomena, so as to instead treat them as repositories of a raw, pragmatic reality (Taufen Wessels 2007).

Materiality and infrastructure are much interlinked too, both academically and on the ground. Around both of my fieldsites, infrastructure is indeed central to making the shore and the importance of its materiality visible. Yet, my thesis is not a thesis on infrastructure: infrastructures are assemblages which are themselves part of the frontiers being assembled along the coast of southern Kerala. For this reason, I lean on the resurgence of interest in infrastructure among anthropologists (cf. Larkin 2013; Venkatesan et al. 2018; P. Harvey et al. 2017) to anchor my work where relevant. This further helps bringing forward the relational character of the manifold transformations I study (P. Harvey et al. 2017).

1.4.2.7 Institutional Dynamics

If frontiers tend to be imagined as marginal spaces, and to thus represent new or rediscovered territories that are institutionally unchartered, this need not be the case either (Rasmussen and Lund 2018; Cons and Eilenberg 2019; Turner et al. 2020; Knott and Mather 2021). In a much-cited quote, Rasmussen and Lund assert that '[a] frontier is not space itself. It is something that happens in and to space' (2018: 388, emphasis erased). In other words, it is an active process and one whose indeterminacy is thus also shaped by power dynamics (Knott and Mather 2021).

Whether they take place at the margin of state control or ‘in the midst of state space’ (Rasmussen and Lund 2018: 390), frontiers are tightly linked with institutional dynamics that have drawn much academic attention too (Peluso and Lund 2011; Kennedy-Lazar 2019; Lund 2019; Sultana 2021). They are at the centre of research agendas that consist in discussing ‘the concrete manoeuvres to secure resource control by governing access, policing boundaries, and defining space’ (ibid.) As we see in chapter 4, they also ‘involve erasures that render frontiers as vacant, ungoverned and ready for exploitation’ (Knott and Mather 2021: 799).

In this context, Rasmussen and Lund (2018) make a double argument. They assert that territorialisation—or the establishment of new territorial order—establishes authority, rather than the other way round. They also argue that frontiers are ‘dynamics of spatial control that fundamentally challenge existing institutional arrangements in a non-linear fashion’ (ibid: 389). Of course, these dynamics too are linked with various ambitions and imaginations (Rasmussen and Lund 2018) and thus promissory politics too (Knott and Mather 2021).

In various capacities, institutions are also omnipresent in the different frontiers studied by contributors in Cons and Eilenberg (2019). Keeping in mind the imperative for a co-productive approach to nature and society in the literature above, my project is compelled to ask how the state and the Catholic church—the most present institutions around my fieldsites, which I further delineate and characterise in chapter 3—engage with the transformations I study.

Hence, my third subsidiary research axis asks how the state and the Church contribute to, and are transformed in turn, by the frontier assemblages. I tackle this question throughout the thesis when looking at the effects of institutions on the frontiers (especially chapters 5 and 6), as well as in chapter 7 when turning the gaze around and reflecting on the effects of the frontier being assembled on the same institutions. Similarly to how I deal with infrastructure,

rather than engaging in lengthy literature reviews on institutions here, I draw on the relevant literature in the dedicated chapters. In a nutshell, it is however important to signal that this literature is coherent with my overall framework in that it looks at institutions as effects (Mitchell 1991) rather than as essences. My contribution, following the cue of Swyngedouw (2015b) or Sud (2020c; 2021) recently, is to document the analytical ways in which these effects are co-productive with the socio-environmental dynamics around which this thesis is centred (Harris 2012; Meehan 2014; Nightingale 2018; Angel and Loftus 2019; Loftus 2020). As these processes cast different stakeholders against each other in an adversarial way, they pit two different visions of the relations between economy and environment in an agonistic fashion (Mouffe 2013; Sud 2020a). Concretely, this means focusing on the boundaries—as produced effects—between state, Church and fish-workers that shift as the result of socio-environmental processes linked with coastal erosion.

1.4.3 Upshot: Research Questions

To summarise the outcomes of the above review, my overarching project asks how the environmental and socio-economic transformations taking place on the coast of southern Kerala linked, and with what effects, on the coast of Southern Kerala. Put in other words, it amounts to asking what forces, processes and elements are being assembled to turn the coast into a frontier?

In doing so, I also ask whether the overarching process of frontier assemblage is homogeneous, i.e. the same everywhere along the coast. This question is almost rhetorical, since we saw that frontiers are highly indeterminate and unbounded. It nevertheless serves

my research agenda in that it helps characterising the frontier dynamics taking place on the coast, itself being a research imperative in the loose framework of frontiers. As such, this question is addressed throughout the thesis, rather than in a particular chapter. It is the heterogeneous elements, places and dynamics studied throughout the chapters that answer this question in a holistic manner. Overall, I therefore try to characterise these processes, since they are highly indeterminate and contingent.

While reviewing the literature and laying down my analytical framework, I have also refined the research objectives spelled out in the General Introduction.

Furthermore, to tackle this agenda more conveniently, I break it down into three subsidiary research questions:

- Having seen above that frontiers are discursive and material, my first subsidiary research question seeks to unpack the discursive, and especially imaginative, features of the frontier.
- Second, I ask what the specific role of the geomorphological transformations of the shore—i.e. dynamics of coastal erosion and accretion resulting from manmade infrastructural projects—are in the dynamics unpacked through the first subsidiary question. The answer, in a nutshell, is that they are central to the assembling of the variegated frontier. I show this in chapters 4, 6 and 7 in particular.
- Third, I inquire into the institutional ramifications of these processes. Having posited a co-productive framework between institutions, nature and society in this chapter, I delve into it to unearth what it precisely means for the context that I study. Logically, this involves two directions. The first, i.e. the role of institutions on shaping the

frontiers, is tackled in chapters 5 and 6. The second, i.e. the role of the frontier being assembled on re-shaping these institutions in turn, is dealt with in chapter 7.

Chapter 2: Methodology

2.1 Introduction: General Approach and Chapter Outline

In this chapter, I turn to the practical arm of the analytical gaps and framework introduced in the previous chapter. In order to answer the complementary questions that I laid down in the previous chapter, I use an exclusively qualitative approach.

Sharing fundamental characteristics with the frontier assemblage framework outlined in the previous chapter, qualitative research is intrinsically processual and iterative (Janesick 2000). Janesick (2000) indeed speaks of research design as a choreography, a metaphor chosen to illustrate both her own life experience as a dancer and the similarities in dynamics. As I further illustrate below in the case of the present thesis, she contends that it crucially entails ‘situating and recontextualising the research project within the shared experience of the researcher and the participants in the study’ (Janesick 2000: 380), as well as in a constant discussion with the academic literature read along the way. Inevitably, doing so is thus the intersection of the stories that matter to my informants, to the ongoing academic debates highlighted above, and to myself as the researcher (Sud 2021). Much like a long pilgrimage—an image closer to my own lived experience than choreography—designing this research was a long and living process. There is a beginning and a (very) far end, but in-between, as the poet Antonio Machado powerfully reminds the hypothetical pilgrim, ‘there is no path, the path makes itself as you walk’. Concretely then, this path that makes itself is an ever-shifting

assemblage of countless crossroads, of big and small decisions, of introspection and reflexivity, of unforeseen events, of hurdles and of unexpected allies. Inevitably, because the beginning and the end of the process are nothing more than arbitrary dots on a web of endlessly wider processes, the delineation and meanings of the final objective kept being reshaped through these constant iterative and indeterminate processes. In the remainder of this chapter, then, I map the key anchors to this process of qualitative inquiry.

This starts, in the next section, with a look in the back mirror. There, I explain the early steps of the current project.

In section 2.3, I turn to the specific research design of this DPhil project. I then delve into the selection of my fieldsites, before turning to the characteristics of my respondents, questions of positionality and access, and methods and data.

2.2 Building a DPhil Project

Just as predicted by Janesick (2000), this DPhil thesis too has seen its underlying questions evolve over time. The earlier versions of what led to this work turned out to draw heavily on the framework laid down by S. Gudeman (2001; 2008), and to try tackling questions relevant to the field of economic anthropology. In a nutshell, I first sought to inquire into the ways in which economic relations based on reciprocity, as opposed to economic rationality, contributed to preserving the sea resources as well as the coast from a market logic.

As time passed, I was challenged by a sense of confusion resulting from not being able to do so for various reasons including, as discussed with various scholars more senior than me, a

lack of scope (i.e. not enough time and no language skills) to do a deep ethnography. In reaction, I decided that I should instead take a step back, and first look at the perceptions of the local economy, as well as the relationship between its different constitutive elements, that coastal communities would have. This is the foundation of chapter 3 in the present DPhil thesis. The co-constitutive relations between sea, shore and community that I conceptualise in chapter 3 are important for two reasons. First, they contextualise my work for non-specialists in a dynamic, analytical way. And second, they represent a foundation for the frontier assemblages (Cons and Eilenberg 2019; Knott and Mather 2021) that I analyse in subsequent chapters, since the formation of the latter precisely and crucially rests on altering these constitutive relations. Analytically, as I explain further in chapter 1, doing so helped giving concrete substance to Gudeman's (2001; 2008) concept of base, which very much like frontiers, is otherwise very indeterminate and all-encompassing (Hornborg 2005).

Secondly, still using Gudeman's (2001; 2008) framework, I was initially interested in the shifts of value from community to market—a recurring and fundamental question in economic anthropology ever since Mauss (1925). However, the final framework used for the present DPhil thesis is too different from Gudeman's work, which implied that I would not be able build up on these insights. For this reason, I only minimally rely on them. Where I do, I also subsume them into an entirely new framework itself relying on primary data collected in 2018 and 2019 during my fieldwork.

As I was not sure how to build my current project, several elements came together into laying the foundations for the present DPhil. In line with much qualitative research (Janesick 2020), these elements are by and large empirical: they result from bringing back to theory what I saw and learned on the ground.

With the above in mind, I set out to the field with an initially very open research interest: better understanding processes of modernisation on the coast. Gradually, as they were taught to me by my informant, the axes laid down below emerged as important ones for my research.

First, a few years before I started my DPhil, the final agreement for the Thuramukham International Seaport (cf. below section on fieldsites and chapters 3-6) was signed after decades of speculation over this mega-infrastructure project, often called the ‘dream of Kerala’ (cf. chapter 5). Over the years, it became a big topic of conversation surrounding the development of the coast. As explained further below, however, I was not certain about whether this site would be accessible. My current research design is therefore also crafted in a way that respects access constraints and avoids sensitive areas, so as to not stir animosity, controversy or discomfort at any stage.

Secondly and as explained in the General Introduction, coastal erosion (/ accretion) is a phenomenon that had been affecting many livelihoods on the coast. Upon seeing it with my own eyes and hearing about it in the spontaneous worries of my informants, I developed the intuition that this phenomenon could not be so striking visually without being connected with fundamental social and economic consequences. However, unlike my informants and local environmentalists, no academic in the social/human sciences had focused on coastal erosion²¹ by the time I designed and started my DPhil research. Doing so thus appeared as a very salient gap to be filled. At a more analytical level, in parallel, I started feeling a growing urge for more directly looking at the (non-human) environment, a key aspect of Hornborg’s

²¹ This remark obviously excludes physical geographers, who regularly conduct various metric studies on erosion/accretion (cf. chapter 6).

(2005) critique of Gudeman's work. Giving more empirical importance and analytical substance to environmental change in the form of coastal erosion/accretion is thus a key expansion into the current project too.

Thirdly, even though the DPhil timeline allows for substantial fieldwork, the time allocated for it still meant that I would require solid language skills and good connections to 'participat[e], overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said' (Hammersley and Atkinson, 2007: 3). I therefore had to keep in mind that I was always at risk of a certain loss of ethnographic depth. I decided to make up for it by resorting to a version of multi-sited ethnography (Marcus 1995) on which I further elaborate below. This different method, which contrasts with all the literature surveyed in the previous chapter, quite naturally yielded very different insights too.

The combination of these three parameters led me to formulate the design that I adopt in the present thesis and on which I expand below.

2.3 Research Design and Site Selection

In this section, I first introduce my research design, which took this final shape after reaching the field only. I then turn to the sites selection which, given my research objectives and their firm empirical grounding, are a fully constitutive part of this design too.

2.3.1 Multi Site-based Research Design

In order to address the three parameters laid out in the previous section, themselves resulting from a blend of empirical realities and analytical considerations, I created and implemented a tailor-made design. The main premises of my research partially feed into Burawoy's (1998) extended case study, i.e. taking context as a point of departure and 'applying reflexive science to ethnographic fieldwork in order to extract the general from the unique, to move from the micro to the macro, and to connect the present to the past in anticipation of the future, all by building on pre-existing theory' (Burawoy 1998: 5). In my study, extracting the general from the unique means characterising the frontiers that I look at or, more concretely, the similar and complementary effects arising from different local contexts. I do not attempt at making further generalisations, because they are contrary to the spirit of frontiers as conceptualised in the previous chapter.

Even if these premises are followed by numerous scholars, they are bound to materialise in different ways by the very fact that context is taken to mean reality (ibid). In what follows, I therefore expand on what these principles mean in my study and how they connect with my research objectives as outlined above. Here, at the most general level, they smoothly echo the theoretical framework that I laid down in the previous chapter, in the sense that they help capturing the processual and multi-scalar dynamics at play in the assemblage logic (DeLanda 2016; Nail 2017) that I follow.

In a nutshell, my research design is anchored around fieldsites where coastal erosion and accretion were the most prevalent in the district. This allowed me to centre my subsequent inductive inquiries around environmental aspects as a starting point. Moreover, as we see in

the next chapters, coastal erosion and accretion are associated with manmade interventions in the form of coastal infrastructure. Infrastructure, in turn, is often connected with socio-economic transformations (Hetherington 2014; Harvey et al. 2017). In this sense, my research design naturally maximised the chance of capturing the linkages between economy and environment. The gist of my research design thus consists in the choice of these fieldsites, from where I apprehend the socio-economic and institutional dynamics that both cause, and result from, coastal erosion and accretion through the methods deployed further in this chapter.

Empirically too, choosing two sites rather than only one was necessary to capture the fact that these infrastructures result from very different socio-economic dynamics but are both qualitatively connected with coastal erosion and accretion, albeit in different quantitative magnitudes. Marcus (1995: 95) indeed insists that multi-sited ethnography enables the cross-cutting of various dichotomies--local/global and lifeworld/system--, to which I would add deep/broad. He adds that it is 'an exercise in mapping terrain' (ibid: 99), which should not be mistaken for holistic claims of representation. Rather, he asserts that cultural formation (the traditional focus of cultural anthropology) is increasingly 'produced in different locales' (ibid.). My work takes the same line of thinking, and applies it to the co-productive framework between nature, society and institutions in which this thesis takes place. Crucially, even if it accepts the idea of a total world system, multi-sited ethnography does not accept 'the terms of any particular macro-construct of that system to stand for the context of ethnographic work that becomes opportunistically constituted by the path or trajectory it takes in its design of sites' (Marcus 1995: 99). By this token, this design is fully coherent with the assemblage logic that I follow in avoiding essentialisms and generalisations (Nail 2017), as well as with the notion of frontier as conceptualised in the previous chapter. In simpler words, my work

remains inductive in the sense that this notion of frontier is not taken for granted and applied to my fieldsites, but rather constructed—or assembled—through my purposive selection of sites and the insights that arise from conducting fieldwork in them.

In order to complement my findings from the villages with wider institutional aspects, I also conducted fieldwork in the state capital—Nagaram—where different administrations, both governmental and ecclesiastic, as well as academic institutions are based.

My research design also further distinguishes my study from the works reviewed above, in the sense that it is based on two fieldsites, with several villages visited on each site (cf. below). Hence, it provides a more transversal picture of the dynamics unfolding along the coast than the in-depth one-sited ethnographies of Subramanian (2009), Sundar (2011) or Hoeppe (2007). This different design necessarily yields very different outcomes too, since it is better equipped at not only capturing the wider environmental and socio-economic dynamics that unfold beyond the one village, but also crucially their interrelations and processual character.

2.3.2 Sites Selection

My fieldwork spreads over two areas (“fieldsites”), made of three villages/sub-areas each, and selected to illustrate the complementary trajectories of frontier making on the coast. They are all pseudonymised. As explained in detail the chapters concerned with each site I have characterised these dynamics as ‘bottom-up’ and ‘top-down’. These terms are meant to signal different and contrasting impetuses behind the frontierisation instances studied here, as I gradually understood them from my discussions on the field, rather than rigid essences.

Chapters 4 and 5 discuss the respective formations of these impetuses studied on each site, and justify the use of these terms further. More importantly, as the empirical chapters show and the overarching thesis contends, these impetuses in fact blend into each other by producing comparable effects, albeit with different amplitudes. In this sense, this thesis also destabilises this particular binary.

In empirical terms, the two fieldsites that I chose represent the areas where the most salient occurrences of coastal erosion and accretion were observable along the coast of Nagaram District. In the logic outlined just above, this purposive sampling is of crucial importance since it gives a central role to these dynamics of coastal erosion and accretion.

As I further explain in chapters 4 and 6, this coincides with their proximity from, respectively, Cheriyaipozhi mini fishing-harbour (fieldsite 1: chapters 3, 4) and Thuramukham Seaport (fieldsite 2: chapters 5, 6). In more analytical terms, I show in the subsequent chapters that these sites also respectively illustrate the 'bottom up' and 'top down' dynamics of frontierisation that take place simultaneously. Their careful examination leads me to formulate the overarching argument of this thesis. This argument, in short, contends that the variegated processes and impetuses pertaining to each site lean on the changing materiality of the shore to produce qualitatively coherent effects. Hence, they can themselves be conceptualised as different parts of the same assemblage (Nail 2017), itself displaying the most salient effects of a frontier (Cons and Eilenberg 2019 and contributions therein).

Within each fieldsite, the 'sampling' of villages was determined by the erosion/accretion of their shores. More specifically, once I had selected the two areas where I wanted to conduct research, the next step was to settle on specific villages within these zones. At this stage, the

main driver of this purposive sampling (Emmel 2014) was therefore the salience of this phenomenon.

Around my first fieldsite, this was quite straightforward since the magnitude of erosion/accretion was the strongest on both immediate sides of Cheriya Pozhi harbour, and kept expanding north and south. I therefore selected Moonu on the immediate south of the harbour, since it is the area with the most visible coastal accretion. On the northern side, I selected two villages, which I pseudonymise as Onnu and Randu.

Randu is in fact made of two small fishing villages—who share the same fishing technology (cf. chapter 4) and experience of erosion, are one next to another without any clear demarcation. Although their parishes are different, the residents see the two villages as one ‘space’ for the purposes of fishing. Onnu is also located along the same coast, being the next village further north. Due to their location, these villages thus represented the most obvious choices. However, I decided to select more than one village for two reasons: Randu’s shoreline entirely disappeared, while Onnu’s was undergoing severe erosion at the time of my fieldwork. It was important to capture the time lag here. Moreover and directly related, as we see in chapter 4, they use different fishing technologies over which they clash, itself an indicator of the frontierisation taking place (Cons and Eilenberg 2019). I provide more detailed background on these villages in chapter 4, since these characteristics are more relevant to the subsequent analysis unfolding in the same chapter than in the design of this research.

In terms of my second fieldsite, the situation was more complicated for two reasons. First, the immediate vicinity of the seaport was difficult to access, for reasons that I explain further in the section dedicated to access below. Unlike Cheriya Pozhi harbour, which is located in the

middle of two villages which are part of my sample, the Thuramukham Seaport is located right next to the fishing village of the same name.

This village was not subject to erosion/accretion. Indeed, unlike on my first fieldsite where it is straight and sandy, the immediate coastline around Thuramukham is made of rocky promontories. Erosion and accretion do happen *around* Thuramukham, but beyond the rocky promontories. Concretely, the first fishing village inhabited by artisanal fishworkers on the southern side was Tekku, about 2km away from the construction site. As such, it was the nearest area to Thuramukham experiencing coastal accretion and thus an obvious choice too. On the northern side, the geomorphology²² of the coast was even more complex. The first village north of Thuramukham is a very touristy one. However, it is not a fishing village and is anyway surrounded by rocky promontories too. Beyond these promontories, the first village actively witnessing erosion was Vadakku, about 13km from the construction site.

When invited to do so to get a better understanding of other 'sub-'dynamics, I made brief visits to Thuramukham for specific matters only. I give further background about Tekku and Vadakku in chapter 6. In addition to the villages, I conducted fieldwork in Nagaram, the district capital, for the institutional facet of my thesis (chapters 3, 5 and especially 7).

This purposive sampling (Emmel 2014) of fieldsites is thus crucial in delivering the biggest chunk of the intellectual approach outlined in my theoretical framework. Indeed, it allows to investigate the role of the shore's geomorphological transformations—the most striking and visible feature to any stranger like I was in the beginning! – in the socio-economic

²² The British Society for Geomorphology defines geomorphology as 'the study of landforms, their processes, form and sediments at the surface of the earth' (<https://www.geomorphology.org.uk/what-geomorphology-0>). In this thesis, like is commonly done with the word 'geography', I use this word to refer to the objects of this study, i.e. here the processes and form (of the coast) themselves rather than their mere study.

transformations along the coast. This in turn allows to delve into the material pre-conditions to institutional and political developments often taken for granted in the academic literature (chapters 4, 6) before turning to these institutional dynamics themselves (chapter 7).

2.4 Access

The very first step, when speaking of access, was to secure the appropriate research visa in order to be able to conduct academic research in the country. For this purpose, I became affiliated with a renowned post-graduate and research-oriented academic institution in the region²³. I was then assigned a local supervisor, who generously helped me with questions of access and with better understanding my surroundings.

My background as a white man 'from Oxford' locally affiliated to a prestigious institution, was helpful in accessing scholars and bureaucrats. This category of informants seemed to give credit to these brands, and were in turn quite generous with their time despite being often very busy. Because several government agencies asked for a specific letter from my host-institution prior to talking to me, my local supervisor kindly signed them off when needed.

As far as the Agarwal groups is concerned, I could meet their CSR executives, who were very courteous and shared information about their local initiatives.

My time in the villages was divided in a roughly equal manner, and I decided to proceed from north to south both in terms of fieldsites, and of villages within them.

²³ Many prominent scholars and high-ranking bureaucrats in Kerala, including the then Finance Minister of Kerala, have followed a world-class education at this institution (cf. below).

2.4.1 Fieldsite 1: July 2018 – November 2019

Once my access to India and Kerala secured, it was time to secure access in the villages. I started with fieldsite 1, i.e. the vicinity of Cheriya Pozhi harbour.

Initially, access to Onnu was invaluable facilitated by my main host, who at the time of my fieldwork was the director of a local NGO involved in different areas of social action and in extracurricular tuition activities for local children. Through his connections with local fishworkers, I started my “snowballing” sampling of interviewees, as described above. Despite his precious help, it would be exaggerated to call him a gatekeeper.

The fact that my main host was a Catholic priest may raise concerns in terms of positionality and influence.

Yet, I should emphasise that while Subramanian (2009) or Sundar (2011) highlight the power of parish priests over the everyday life of the villages (cf. chapters 3 and 7), my host did not belong to the parish and did not have official pastoral responsibilities in the village. Indeed, the parish priests’ hierarchy lies within the Archdiocese of Nagaram. My host, on the other hand, was part of a religious order which, while officially belonging to the Catholic Church, also has a tradition of independence within it and, most critically, has its own hierarchy. As a result, I believe that my host’s identity did not induce the sort of biases that being the regular Parish priest obviously would, since his power in the village was confined to his role in the NGO mentioned above. This of course doesn’t mean he didn’t have a specific positionality by the virtue of being an ordained priest, albeit independent from the temporal power referred to above. Indeed, his position still carries spiritual power, i.e. sacramental ‘prestige’/respect, which themselves can induce claims or deference from the fishworkers and thus result in

power dynamics nonetheless. However, as I explain below, I was conducting interviews with my main Research Assistant (who was Hindu and from a different part of Kerala) rather than with my host, which helped me mitigate this potential bias through his natural critical thinking and our daily conversations before and after interviews.

Moreover, while Onnu was a first natural starting point during my DPhil, my host was busy with many projects and not always available either. Hence, I kept some independence during the process too.

Even though Moonu is a Muslim village, i.e. from a different religion and caste as the vast majority of my Mukkuvar informants, it is the only place where the contacts of my host in Onnu were helpful. As the local NGO was working with local neighbourhood contacts on various awareness campaigns, I obtained the contact details of Saleem, a shore-fisherman and local Panchayat Committee member and ex-fisherman whom we meet further in chapter 4. More than opening up many contacts, Saleem became a sort of local anchor, whom I met quite a few times to discuss various ideas. While hanging out on the beach, Varun (my main Research Assistant, cf. section 2.4.3 below) and I also met Sultan, who occasionally worked on ring seine boats. He also became a regular contact, who introduced us to various fishworkers residing on the row nearest to the sea. As discussed in section 2.5 below, such encounters awaken questions of positionality which are important to reflect on. Why people like Sultan would proactively agree or insist to be regular contacts is certainly one.

2.4.2 Fieldsite 2: December 2018 – April 2019

My second fieldsite was completely new to me, and too far away from the first one by public transport to imagine daily commutes. Hence, I moved to my host institution located in the outskirts of Nagaram, where the Director's invaluable help was decisive in securing a room.

As the practicalities were being sorted out, I also needed an approach-strategy to these villages. Having noted that the idea of having two key informants in Moonu had worked quite well in practice, I tried to replicate a similar pattern in Vadakku and Tekku. For this reason, I approached an NGO formed a few years before my fieldwork, which aims at empowering the coastal youth and who is very active locally through various mentoring, cultural, academic and action-oriented initiatives. I had met several of its core student-members in various events since the beginning of my doctoral fieldwork. One of their founders and leaders therefore generously helped me find contacts in these villages.

2.4.3 Research Assistants

A further step was thus to rely on the help of Varun (pseudonym), a young post-graduate in economics, as my research assistant and interpreter for most of this journey. His role as a Research Assistant was loosely defined, and could best be summarised as a "companion" who later became a dear friend too. Concretely, this involved helping me think about contacts to make in government institutions, setting up interviews with non-English speaking contacts,

translating interviews while I was conducting them, and also alerting my attention to various things that I could not catch due to my lack of command of Malayalam.

Hailing from central Kerala, he had no prior connection with the fishing communities. However, his social intelligence/curiosity were helpful in building relationships, and in striking informal conversations to generate complementary insights which he would share with me later. His critical nature—including of me, since he would not hesitate to tell me off when he believed I was not reading the atmosphere correctly, or more concretely not be assertive enough or too much self-deprecating while interacting with some informants—allowed for frequent brainstorming which constantly helped debunking my initial naivety, and raise further questions in turn.

In Vadakku, Aparna, then a researcher in marine biology who is now a doctoral candidate, became my main contact and research assistant alongside Varun. Through Aparna, her now husband Vipin, and their families' acquaintances, I was able to quickly sample a variety of interviewees with various roles in the village: fishermen, auctioneers, fish-vending women, students, local councillors, and parish committee members among others. The fact that Aparna was a woman helped facilitate access to women. However, even in her absence, I was most often able to secure access to women through other Research Assistants or through snowballing. The one precaution to take was to ensure that the interview happened in an open setting, so that rumours or later accusations would not take place.

Throughout this time, Aparna and Varun's different background and personalities were very fruitful in triangulating information and opinions.

Varun had to prematurely leave his role, in early March 2019, following a terrible accident in his family. At this moment, I also asked for help to the coastal students' organisation

mentioned above, and had the chance of working with Suresh. Suresh comes from a fishworking family based in a village south of Tekku, and therefore out of the scope of my research. As a UK post-graduate degree holder in marine biology and the holder of a prestigious scholarship, he is often referred to as a model among the coastal youth. He came in at the time of my work in Tekku, and was certainly very helpful in securing contacts there. As I met him daily, I also got many insights into the coastal life which were not in the form of formal interviews, but greatly enhanced my understanding of the field.

Since my research was not particularly sensitive or intrusive, we managed to quickly gain a certain level of trust in these different places. Systematically, we further ensured the support of at least one reference person locally—through contacts made elsewhere, or by ‘hanging out’ and building a sustained rapport—in order to facilitate our access, particularly to female respondents, and our general understanding. This three-layers system was designed to constantly remain reflexive on each of our subjectivities (Geiger 1986; White 2000) at different stages of the project (Hoppe 1993). I further remained careful to Edwards’ (1998) recommendations, especially in terms of appropriate induction and behaviour to adopt in triangular situations.

2.5 Positionality

In addition to being reflexive on my Research Assistants’ positionality, I had to obviously reflect on mine too. As mentioned above, being a scholar associated with Oxford and ‘England’ was generally helpful in securing access to many places.

The combination of these names and their connotations of prestige with my identity as a Caucasian male however also resulted in a general tendency for interlocutors to project an ideal, sometimes truncated, image of their institution/village. They would also sometimes expect financial or political contributions from me. Although it becomes data in itself (White 2000) because telling of their image of me, this could also potentially skew the pictures portrayed by some of my informants. In such contexts, my Research Assistants always did a fantastic job at constantly making me aware of such possibilities, as well as at clarifying my objectives and the absence of hidden motives to my informants. This was only possible because we had built much trust through our repeated daily interactions, and kept improving with time.

Varun's input, in particular, was also always very helpful because of the mix of his bluntness and 'street-smartness'. He quickly explained to me that in his opinion, people like Sultan (cf. above) who would come forward to hang out with us and explain us every possible thing in their area were certainly being very nice (and he did insist on this too, since they did go out of their way on many occasions), but could also get some validation from other villagers by being seen interacting with us. In his words, people observing us from afar could believe that we 'must be talking something important', and that whoever was seen talking with us 'must know more [and] there must be something about them', since the foreigner (me) would repeatedly engage with them. This is not to say that there was any calculative motive behind this, but more that here too I cannot be oblivious to the dynamics resulting from my positionality—and what they yielded in terms of access.

Indeed, as a Caucasian male who does not speak Malayalam, I would draw much attention from everybody. While very helpful in triggering friendly curiosity and engagement, this

would in turn make it difficult to observe scenes of daily life without disrupting them. This attention was however not hostile as long as I did not intrude anybody's privacy, but set a limit on my ability to wander freely on the shore for instance, since it is occupied by fish-workers' settlements and would not be favourably looked upon.

My Catholic upbringing facilitated interactions with clergymen. It allowed me to master gestures that signal deference to some priests, and to share spiritual discussions with others. Of course, this did not mean that the ecclesial institutions would open all their secrets to me and trust me at face value either. My religious affiliation was simply often facilitating first approaches and rapport building. As we see in chapters 3 and 7 in particular, the Roman Catholic church is all but a homogeneous block. For this reason, a large part of my interactions still boiled down to the personal connection that I could or not establish with my interlocutors, like anywhere else.

The fact that I was a man and assumed to be heterosexual necessitated to avoid any ambiguity in my interactions with women. Well-aware of this fact, I never encountered issues on this front. I was also made to notice that my gender also possibly helped me when I met a then-prominent statesperson. As he was busy preparing important deadlines and I had made countless attempts at contacting him, he told me on the phone to join him at a hotel that was about 60km north of Nagaram. After he failed to find time for me that evening, I stayed overnight at the hotel and finally got a call from him at 5am to go on a morning walk, during which we finally had our long-awaited chat. In such a setting, which I took for granted given that there was never any discomfort, it was pointed out to me by external commentators that being a male (and assuming that both he and I were heterosexual) certainly flattened gendered power equations that could have felt more difficult to navigate for people with a

different identification than mine. Aware of my privilege, I must emphasise that at no point did I feel anything else than very generously, genuinely and warmly welcomed by him.

2.6 Methods and Data

My data was collected over 10 months from July 2018 to April 2019.

Although the notion of ethnography can seem blurry because of its all-encompassing character (Hammersley and Atkinson 2007) or because of practical shifts such as having more than a single research-site, my data-collection approach still follows a logic that comes close to that of an ethnography. While I do not seek to investigate the deep cultural constructs that drive much of the discipline of social anthropology, my approach rooted in political ecology equally involved ‘asking questions through informal and formal interviews, collecting documents and artefacts – in fact, gathering whatever data are available to throw light on the issues that are the emerging focus of inquiry’ (Hammersley and Atkinson, 2007: 3).

Methodologically, I also opted for an exclusively qualitative methodology since it intends to locate ‘the meanings people place on the events, processes, and structures of their lives’ (Miles and Huberman, 1994:10). Driven by the transversal approach that underlies my work’s originality (i.e. two fieldsites and several villages within them rather than one, in-depth ethnography), my methodology involved gathering heterogeneous data from heterogeneous places, without forcing on them an organic unity that doesn’t exist in assemblage thinking (Nail 2017).

2.6.1 Oral sources

This first involved focus groups and informal chats for exploratory and refinement purposes (Pratt and Loizos 1992; Fontana and Frey 2013). Then, I resorted to both in-depth interviews and further informal chats or ‘unsolicited oral accounts’ (Hammersley and Atkinson 2007: 99). These accounts helped refining my questions in the case of focus groups (Rubin and Rubin 2012), and further acknowledging the character of my respondents as full subjects (Hammersley and Atkinson 2007), rather than as mere data points, when it comes to interviews. This implies remaining aware that both interviewer and interviewee shape the interview process and the data resulting thereof (Rapley 2001). These interviews were semi-structured at most, meaning that I would only have a list of big themes to discuss but leave as much freedom to my interviewee to address them.

My aim was to allow the discussion to revolve around the themes addressed by my research questions (Leech 2002). More precisely, I designed ‘nonstandardized interviews’ (Denzin 1988: 126) since by not imposing any schedule, set or order of questions, they give ‘the interviewer a great deal of freedom to probe various areas, and to raise and test specific hypotheses’ (Denzin 1988: 126) during the interviews. Follow-up questions (Spradley 1979; Rubin and Rubin 2012) were regularly needed, but I always made sure they would not push my informants into uncomfortable zones (cf Ethics section). I therefore constantly paid utmost attention to not inducing researcher biases through this process by ensuring they only echoed spontaneous responses from my interviewees (King 1994; Maxwell 2012: 124).

In order to capture the processual character of shoreline transformations and their consequences, but also to retrace local history documented nowhere else (chapter 4) and

everyday relationships between fish-workers, nature and institutions (chapter 3), I relied on selected aspects of life-history studies (Mandelbaum 1989). Beyond interviews, this involved using participatory map-drawing methods with selected respondents (Powell 2016; Antona 2018), so as to enter times (as opposed to places in Antona 2018) which were inaccessible to me since long gone and undocumented. Although I note in the General Conclusion of this thesis that future research could benefit from doing so more substantially than I have had the chance to, participatory mapping expands 'the interpretive possibilities of multimodal ethnography as an epistemological and ontological lens involving the entanglement of place, body, and experience with knowing and becoming' (Powell 2016: 402)

The main tension, throughout my fieldwork, lied between having enough structure to ensure focus around the main themes (Leech 2002), and avoiding imposing agendas, projections and other biases on my interviewees (Denzin 1988; King 1994; Maxwell 2012). As such, my research design was always guided by reflexivity and flexibility. In the write-up, I remain aware that where empirical facts may be inaccurate, they reveal 'psychological truths' (Eppel 2009: 73) which are analytically telling.

As noted by Hammersley and Atkinson (2007), the question of whom to interview is also a crucial and tricky one. As I was inquiring into the effects of erosion and accretion on different aspects of my respondents' livelihoods, I decided to use occupational and demographic markers (cf. below) as my first anchor. Imagining linkages of possible causes and effects, as well as changes over time, this seemed to be the most thorough way to avoid blind spots. Within these categories, I would know where to stop when reaching saturation. While this task seemed daunting at first, saturation occurred much quicker than expected, making my

task manageable. In both local and state-level as well as clerical administrations, saturation was not necessary since most informants had a specific area of specialization.

2.6.2 Transcribed interviews

The use of real-time interpreters was indispensable to conduct my interviews in the villages, since most of my informants there only spoke Malayalam. For this reason, the Research Assistants mentioned in the dedicated section acted as interpreters during interviews. In every case, I scrupulously followed Edwards' (1998) recommendations on the use of interpreters, carefully explaining my research to them. I also did what I could to make them visible as subjects with their own positionality, always trying to use the necessary critical reflexivity called for by Edwards (1998).

As indispensable as it was, this practice can nevertheless also result in important information either not being translated or being—most often involuntarily of course—translated in a different manner than intended by the interviewee. In order to try to mitigate these possible biases, I relied on the help of a few engineering students—selected for their direct closeness to a trusted friend of mine and trained to confidentiality procedures by me—to transcribe some of my interviews. These interviews were anonymized and purposively selected to not be intrinsically sensitive on the basis of the positionality and personality of the interviewee, their consent and the notes I took during the interview on its content. In most cases, these students did not find discrepancies between the Malayalam content of the interviews and

their English translation by my different interpreters. In the rare cases where they did, they were minor and did not challenge the pertinence of the interview in question.

2.6.3 Documents

Although she comes from an ANT (cf. previous chapter) perspective, Tauffen Wessels emphasizes that documents help ‘to capture a more pragmatic reality—empirically, common understandings only exist at the level of practice. Practice is carried forward by things, such as texts’ (2007: 355) too. In the case of my study, then, another major bulk of data is made from documentary sources of all sorts, collected from activists, bureaucrats and scholars throughout our interactions. I refer more specifically to those I used in the relevant chapters.

In terms of analysis, I have mostly relied on news articles (cf. chapter 5), administrative/regulatory documents pertaining to the environmental and economic aspects of the Seaport (cf. chapter 6), Government Orders, and a final judgement for a case submitted to the National Green Tribunal (cf. chapter 7). I use most of these documents either to substantiate factual points, or as the backbones of my analyses (chapter 6 and 7).

In chapter 5, I do however use news articles as an important source to shed light on the leading discourses and imagination leading up to the construction of Thuramukham Seaport. Some of these articles were not digitalised, and were handed to me by a pro-seaport activist, in the form of paper cuttings. Varun and I took pictures of these cuttings, and had them translated from Malayalam into English. Because of their pro-port source, one could argue that they involve a possible gatekeeping bias. However, this is not a shortcoming here in the

sense that I precisely read them *along the grain* (Stoler 2009), trying to extract what they tell us in terms of 'future imaginings, and sentiment' (Engel 2010: 136).

2.6.4 Data Collected

In total, I gathered about 300 formal interviews and informal chats/observations, as well as daunting amounts of documents.

With so much data collected, it was obviously necessary to prioritise some data over other (Saldanha 2020). To do so, however, I was guided by the shape that my thesis started to take as I progressed through fieldwork. Big themes and patterns were emerging and being refined: coastal erosion/accretion, new socio-economic trajectories and aspirations, institutional dealings. Hence, it was easier to identify the data that spoke best to these themes and to leave aside the more tangent sub-themes.

I mostly use narrative analysis as a privileged data analysis method for my interviews, since it 'uses stories to describe human experience and action' (Oliver 1998: 244). Indeed, this method allows to 'exhibit human activity as purposeful engagement in the world' (Polkinghorne, 1995: 5), as well as to shed light on the construction of meaning (Silverman 2004). I use my accounts of observations and informal conversations to complement my interviews where appropriate. In a second stage of analysis, spread out throughout the chapters, I use my combined data in the perspective of developing 'inductive theoretical analyses' (Charmaz and Bryant 2011 in Silverman 2004: 67).

2.7 Characteristics of My Respondents

Below, I briefly stop on some socio-economic and demographic characteristics of my respondents.

I provide deeper and more analytically-oriented context about coastal Kerala in chapter 3, where I reflect on my informants' perception of the fundamental pillars that constitute their economic livelihoods from a relational perspective.

2.7.1 Religion

In Nagaram district, most fish-workers are Roman Catholics, even though some Muslim and Hindu villages exist too. Along the coast, fishing villages are indeed very homogeneous in terms of religious make up. Even though I sampled my villages according to their experiences of coastal erosion and accretion, which implied their proximity to the two infrastructures outlined above, most of these villages were also exclusively Latin Catholic. In my sample, only Moonu, as explained in chapter 4, was a Muslim village. While this necessarily implies a different social organization, this element was not directly relevant to the questions tackled in this thesis. Indeed, the transformations highlighted in chapter 4 were not connected to religious institutions, and nothing during my time there indicated that overly stressing the religious identity of my respondents was significant in their dealings with coastal accretion. Besides Moonu, Thuramukham village was the only village with both Roman Catholic and Muslim fish-workers. These two communities live on separate areas of the bay around which

the village is built. However, as briefly explained above, I only made very punctual incursions in Thuramukham. As such, it does not represent one of my main fieldsites. Indeed, due to its morphology as a bay delineated by rocky promontories, Thuramukham itself is not subject to coastal erosion and accretion. The main theme of discussion there was the livelihood of local fish-workers, and as part of it their outlook on the international Seaport being built south of the village, since it arguably represented the biggest “modernisation” taking place around these livelihoods. Here too, nothing of my primary and secondary inquiries on the matter suggested any difference of outlook on the basis of religious identity.

The coast of Nagaram also has much smaller pockets of Hindu fish-workers, which were not part of my sampling for the reason that they did not fall in areas directly relevant to my research design (cf. above), as they were not experiencing erosion/accretion since they were located on top of rocky promontories. North of Thuramukham, there was only one small Hindu village located about 10km of the Seaport site. However, its coast had been entirely ramped up by a seawall, and there was no sign of ongoing fishing activity. For this reason, this village was less relevant to my purposive sampling than Vadakku, which is the next village northwards.

To avoid blind spots in terms of empirical dynamics, I still conducted preliminary interviews in these pockets, which reinforced the robustness of my design.

2.7.2 Occupation, Gender and Age

Nagaram district is considered exclusively ‘artisanal’ (cf. chapters 1, 3 and 4), even if this category itself is increasingly heterogeneous as I further show in this thesis (cf. chapters 1 and

4). Concretely, this means that none of my informants were mainly employed on trawlers, even though some had made brief stints on them, in other parts of the state, at different points of their lives.

My fish-workers interviewees were males and females in roughly equal numbers. This said, fishing communities display a strict division of economic roles along gender lines. Whether in Christian or Muslim villages, only men go fishing. The major difference is that in Christian villages, fish vendors are women²⁴ (but auctioneers are men) whereas they are also only men in Muslim villages. For this reason, I did not interview Muslim female fish-workers, since this category does simply not exist in Nagaram district. However, since women would run small shops or hold local political roles, I did manage to keep a gender balance among my interviewees in Moonu too. This division of labour, in both religious communities despite their differences, inevitably implied that testimonies about life at sea and fishing would come from men. Rather than a dichotomy, the perspective of women would thus bring a very necessary complement since when they work it is further down the economic chain of the fishing economy, and when they don't it nevertheless remains land-based. In other words, ensuring a gender balance not only implied not overlooking gendered subjectivities when relevant, but also enriching both economic and geographic understandings of the processes related to the transformations studied in this thesis. Yet, as I reflect upon in the General Conclusion, my work could certainly do with stronger and more visible female representation. I briefly discuss this aspect in the section on ethical considerations below.

²⁴ It must be noted that families where women sell fish tend to be the least affluent ones economically, as this exhausting activity is generally seen by my respondents as a complement when the husband either does not bring/share enough income, or has passed away.

For the same reason, I tried to be careful to include respondents of all age categories²⁵. Older respondents—male or female—could narrate stories of transformations over time which could bring a complementary perspective to the different perceptions and aspirations found across the lifecycle.

In terms of occupation, my respondents in the fishing villages include fishermen, fish-vending women, ice factories owners, auctioneers and cooperative administrators. I also interviewed parish priests as well as local government members, all of whom hail from active fish-working families.

2.7.3 Socio-Economic Marginality: Education, Income and Debt

Kerala is notorious in India and beyond for its particular ‘development experience’ (Parayil 2000), characterised by a relatively low economic growth but high indicators of human development (Rani 2000). However, there remain pockets of stark socio-economic inequality in Kerala. The fishing community is one of them. As argued by Kurien (1995), the fishing community—which represents about 3.5% of the population (GoK 2009)—has however been left aside and represents, in this respect, a socio-economic margin in Kerala. Fishing communities indeed rank low on socio-economic and human development indicators within Kerala (GoK 2009).

Most of my fish-working informants achieved education levels between the 3rd and 10th standard, with over 55% of them having completed Upper Primary school at most (GoK 2009).

²⁵ For ethical reasons, I only interviewed or conducted informal conversations with adults (CUREC).

In general, they start fishing either to earn quick money as early teenagers, or to help their families who struggle financially. In terms of health too, medical doctors in the coastal areas explain to me that life expectancy was lower, and the prevalence of various illnesses was higher than in the mainland.

It is extremely difficult to account for their income due to its variable nature (Sundar 2011). Indeed, income is still dictated by the 'volatility of marine fishing, subject to the wind, the swell of the ocean, and the unpredictability of a fugitive resource, makes for an unreliable harvest' (Subramanian 2009: 44).

As a are attempt, GoK (2009) found that 49.3% of the fish-working population earned Rs 2500 to Rs 5000 per month, and 49.3% earned less. Only the marginal remainder earned more than this. As a loose comparison, this means that over 98% of the fish-workers of Nagaram earned less than the Indian (PBPB 2012) or Keralan (PPRI 2019) averages. They earned on average a third of the state per capita income (ibid.). When I tried to probe them during fieldwork, one of my informants very tentatively estimated that the average monthly income could be around Rs 6,000 or Rs 7,000 (roughly 60 – 70 GBP) per fisherman²⁶. Looking at poverty relationally, i.e. considering an account of poverty which 'analyses not only the absolute condition of different population groups but also their relative position vis-a-vis other groups in society' (Roy 2018: 17), these numbers speak for themselves when it comes to assert the economic marginality of the artisanal fish-workers of Nagaram district.

Within this context, indebtedness is a salient economic feature of the fish-working communities (Subramanian 2009; Sundar 2011). A substantial part of debt comes from

²⁶ Interview with James, fisherman in Randu.

expenditures related to fishing, but not only. Mercy Alexander, one of the historical female leaders of the Fishworkers movement, explained to me that dowry was significantly higher in coastal areas than in the inland in Kerala²⁷. As an illustration, Rosy, a fish-vending woman from Vadakku, told me that for her daughter's wedding, she put together the following elements as dowry; '3 cents of land, half a kilogram of gold, and 500,000 Rs.'²⁸ The disproportionate character of this dowry in comparison with the income estimates reported is striking, and meant 'a lot of debt that I have to pay back [over years/decades]²⁹' for Rosy. As discussed at length by Gerber (2014), credit and debt in rural economies are an essential factor shaping the expansion of capitalism. Beyond facilitating social differentiation, they also often undermine community bonds and environmental conditions, as we see further in chapters 4 and 6.

2.7.4 Language

In the villages, most informants only spoke Malayalam, which meant that my Research Assistants acted as interpreters too (cf. above).

In Nagaram, I met with bureaucrats from the various wings of the Fisheries ministry, scholars and senior activists, who, like the village-priests, all spoke English.

Everywhere, the sampling was done by saturation and access constraints, rather than by imposing strict numbers.

²⁷ Interview with Mercy Alexander, prominent activist in Nagaram on 13 February 2019

²⁸ Interview with Rosy, fish-vending woman in Vadakku on 28 December 2018

²⁹ Ibid.

2.8 Ethical considerations

Traianou notes that ‘research ethics has come to be treated as much more central to the research process than it was in the past, particularly in the case of qualitative inquiry’ (2020: 86). My work too constantly tried to be as ethical as possible. Beyond the compliance procedures referred to below, this concretely meant keeping in mind fundamental principles such as ‘minimizing harm’ (ibid.), ‘respecting [the] autonomy’ (ibid: 88) of my informants and their privacy (ibid: 89), as well as being guided by them should any tricky situation arise.

I remember one instance where I clearly felt that I was hitting an ethical boundary. During an interview, some of my respondents were alluding to financial malpractices by some local leaders. When I once probed and asked who they were referring to, there was a silence and a clear discomfort. At this point, it was clear that it would be unethical to insist, because it could harm my respondents emotionally by exposing them to various fears. Overall, I relied on my training as a Peer Supporter³⁰ when it came to think ethically too, since it helped me paying attention to non-verbal communication and to prioritise the feelings of my respondents. Having interpreters and always at least one Research Assistant with me also helped raising doubts about the suitability of a specific question to them first before they translated it.

When it comes to the themes it addresses, my project did not encompass sensitive topics or vulnerable respondents requiring particular coping measures. In official documents, the purpose of my study was formulated in fairly generic terms, such as ‘the development of the

³⁰ A welfare role within the collegiate system at the University of Oxford. The training for this role entails much work around various aspects of reflexivity in human interactions, which were also very useful on fieldwork.

coast'. I stuck to it faithfully when initiating any conversation, and always made sure to ask whether my probing questions were anyhow uncomfortable or sensitive. As naïve as it may look, this approach fitted the double purpose of not stirring unnecessary suspicions from the administrative authorities, as well as leaving enough space for the inductive character of my work. It also helped building a rapport of trust with informants, since the word of mouth can be quite quick in villages too.

Representation and the uptake of this research also represent wider ethical challenges that have often perturbed me. I conducted many more interviews than I reference in the following chapters, which necessarily means that some voices take predominant importance where others get silenced. There is of course no intent to do so on my behalf, but in a thesis which is predominantly focused on effects, it would be dishonest to claim that there is none. Mapping out all these effects would probably result in a fully-fledged doctoral thesis in itself, but I offer avenues to mitigate the ones I consider the most salient in the General Conclusion of this thesis. Besides the above considerations, I still obeyed to the CUREC guidelines set by the University of Oxford in all circumstances. This implied asking for explicit consent before conducting any of the activities mentioned above, and protecting the data to the best of my ability. It also implied ensuring that my respondents were legally adults. Because my informants' names are not essential to my work, and despite asking and recording each of their consents on the use of direct quotes including their names, I have pseudonymised all these names as well as my research assistants'.

Chapter 3: The Contemporary

Artisanal Fishery

3.0 Introduction

As explained at length in chapters 1 and 2, the remaining chapters of this thesis address the multi-scalar assembling of a frontier along the coast of southern Kerala. As a first step in this direction, this chapter mixes analysis and further contextualisation. In doing so, it echoes the title of this thesis by outlining what, in the various bundles relations that characterise the contemporary artisanal fishery, is gradually unmade by the transformations tackled in the subsequent chapters.

Frontiers are 'zones where sedimented histories of marginality (Moore, 2005), relations of distance and remoteness, and diverse forms of materiality come together with new politics and techniques of sovereignty and capital' (Eilenberg and Cons 2019: 229). In this perspective, I have reflected on core aspects characterising the marginal character of the coast, and how this manifold marginality crystalized throughout several big historical moments, in the General Introduction to this thesis. In chapter 2, I further illustrated the contemporary socio-economic marginality of my informants through various indicators of relative poverty. Kurien's assessment is probably the most straightforward, when he claims that '[f]isherfolk in

Kerala state, as in every other part of India, have been at the margins of society - geographically, economically, socio-culturally and politically' (1991: 17). The starting point of this chapter and thesis is therefore that even though it is in constant evolution as we will be seeing, the artisanal fishery of Kerala still represents a distinct positionality by the tokens enounced so far (Hoeppe 2007; Subramanian 2009; Sundar 2011).

Bearing this and the indeterminate character of frontiers in mind (cf. chapter 1), merely stating that margins turn into frontiers can easily become analytically tautological without characterising these margins further. In other words and remaining loyal to my analytical framework, the artisanal fishery as we know it through secondary literature can be seen as an effect of various social, economic and environmental processes which give it a somewhat distinct character. Therefore, it is crucial to further dig into what produces this effect.

In this chapter, I therefore propose to look at five anchors around which co-constitutive relations which produce the artisanal fishery as an effect are structured. I break them down into two categories.

In the first section, I thus delve into this margin and echo one of Hoeppe's (2007) leading questions by reflecting on how fish-workers conceive of the main aspects of their livelihoods and of their relation to them. Framing them around Gudeman's (2001; 2008) concept of base, which I also explain in the relevant section, I focus on three pillars that co-produce one another as well as structure the socio-economic life of artisanal fishing villages: the community, the sea and the shore. Analytically, laying out these co-productive relations is helpful in order to examine how central altering them is to assembling frontiers.

Moreover, institutions matter too when it comes to structuring and shaping these livelihoods. In the second section, I therefore introduce the two main institutional actors present in the daily lives of my respondents, namely the state and the Church. In doing so, I insist on the need to keep in mind the fluidities underlying these institutions and to therefore not only treat them analytically as external and homogeneous blocks. I thus focus on the main effects of these institutions, and on their interactions to augment the context sketched in the first section.

3.1 Artisanal Fishing Livelihoods: A Bundle of Co-Productive Relations

We have seen above that frontiers emerge from margins, and that artisanal fish-workers along the coast had reached, through historical processes, a distinct—albeit environmentally and economically fragile—positionality. I also outlined the historical processes that led to crystallise that marginality.

In this section and the next, I delve into the contemporary economic life of my informants. This term is understood in its broad sense here. It starts from ‘the activities through which people produce...things, the ways that people and societies secure their subsistence or provision themselves’ (Carrier 2012: 4). As Carrier notes, it is important to remember that ‘things’ is an expansive term that can include ‘material objects, but also includes the immaterial: labour, services, knowledge and myth, names and charms, and so on’ (ibid.) Narotzky adds that economic activity ‘presupposes the existence of a given “natural” context, an environment, where human groups dwell, which is there to be acted upon and from which

they can extract what is needed for a living' (1997: 8). Clearly then, social and environmental realms must be included in this characterisation.

Because '[i]n different times and places, different ones of these will be important resources in social life' (ibid.), I adopt an emic approach, i.e. I focus on how my informants themselves refer to their everyday livelihoods (Creswell 1998) to sketch a picture of the most important of these things in the context that I study. This endeavor serves the double purpose of furthering my contextual work, as well as of laying the analytical ground for the discussion of frontierisation(s) in the subsequent chapters.

In order to further characterise the core axes that structure the livelihoods of my informants, I lean on conceptual insights from economic anthropology, since they help highlighting the relational and co-constitutive character of these axes. Stephen Gudeman (2001; 2008), argues that although every economy is culturally constructed and therefore unique, they stem from/rest on a value domain that he calls 'the base' (2001: 7). Because of the culturalist approach of Gudeman (2001; 2008), this domain can only be loosely delineated, since it will be different from one place to another, and possibly from one time to another too. In generic terms however, the base of an economy is 'the social and material space that a community or association of people make in the world' (Gudeman 2012: 95). It consists of 'skills, knowledge and practices' (ibid: 99) and '[a]bove all, persons in a community are connected to one another through and in relation to the base that lends them an identity' (ibid.). Through complex social relationships, the base is 'created, allotted, and apportioned to people in the community' (ibid.: 8). For the humans living around this environment, '[m]aking and keeping the base is a central concern in community, for the base makes a community as it is made.' (ibid.: 38) Even though its loose definition has been criticized (Hornborg 2005), the idea of

base remains useful precisely because it forces to delve into contingent contexts and thus keep us away from essentialisms. To be sure, the base does not exist as remote from market influences (Gudeman 2012: 106). Rather, as we see in the next chapter too, it is constantly shaped and re-shaped by these relations too.

In this section then, more concretely, I lean on my fieldwork to look at the people ('community'), the sea and the shore, and show the most striking ways in which these three pillars co-produce one another. The picture that emerges is thus one where material nature and community, economy and sociality are intertwined (Castree 2002; Bakker and Bridge 2006; Swyngedouw 2015b; Sud 2020c). In addition to shaping one another, these elements can be seen as forming an assemblage too, in the sense that cohere—albeit in a fragile way as we see in the next chapters—in a key effect (Nail 2017): delineating the relations that underlie what is often referred to as artisanal fishery, but obviously encompasses much more than the activity around which it is structured. Highlighting these relations is in turn necessary to enable further analysis, in the following chapters, of the consequences of altering these co-productive relations.

3.1.1 The Community: Fishing with Non-Mechanised Techniques and Allied Activities

The community is a fundamental element of the base (cf. above citations), since without it this base as I delineated it conceptually does not exist (Gudeman 2001; 2008; 2012). In this section, I delve into the predominant markers of this community.

In all of my villages, the fish-workers belong to what they perceive as being the same exclusive community. When asked about the community they perceive belonging to, they indeed all³¹ respond that they are ‘Latin Catholic Mukkuvar’, which is a combination of their religious and original caste affiliations³². Although there is clear evidence that the concept of ‘local community’ can blur many dynamics and heterogeneities subsumed under this label (Subramanian 2009; Sundar 2011; POLLEN 2020), and that this is taken for granted in this thesis, this doesn’t mean that the whole notion of ‘community’ is to be discarded at once.

While Anderson (1991, 2006) refers to communities as imagined, Smith (1996a) puts emphasis on the ethnic and territorial aspects of this notion. Massey (1991) however nuances that place and community may not need to overlap, especially in current contexts characterised by mobility and connections through electronic (social) media. In the case of my fieldwork, I show that the self-perception of community identity is largely defined occupationally, and thus influenced by technology as well as by the providing character of the

³¹ Except in Moonu where they are Muslim but still identify as fish-workers – cf. chapter 4.

³² In this thesis, I do not explore the cultural or spiritual contents of the religious dimension mentioned above, since it is beyond the scope of the research questions that I aim at addressing and does not significantly interfere with the centrality of the occupational dimension put forward by all. I also do not engage with the literature on caste politics for the same reason, further noting that this aspect is amply covered in Subramanian (2009) or Mathew (2020). I do however delve into the importance of the Catholic Church—the predominant religious institution in all my villages except Moonu—at the end of this chapter, as well as in chapter 7.

sea. Occupationally, the UNDP-led report commissioned by the Government of Kerala (GoK 2009 henceforth) and which is the most recent and comprehensive socio-economic picture of the fishing communities of Kerala, counts that the main occupation of 79.9% of the coastal population in Nagaram district was fishing, followed by 17.4% fish-vending. The marginal remainder is filled by manual occupations such as construction work.

In terms of technology, as we saw above, the term 'artisanal' or 'traditional' is defined both locally and in the academic literature in opposition to trawling. In short, fish-workers who do not use trawlers are considered 'artisanal'. Such boundaries of course become blurry with the increase of technological equipment and power on artisanal craft, as well as with the participation of artisanal fish-workers in the workforce on trawlers (Platteau 1984, 1989; Sundar 2011). This said, in all the villages where I did extensive fieldwork, the overwhelming majority of fish-workers fish all-year round using craft that is not comparable to trawlers.

The majority of these fish-workers use small plywood boats, where an external engine or two have been added (cf. previous section). The gear that they use, which is the main object of contention in the conflict depicted in the next chapter, is exclusively manual, as opposed to mechanised. The most famous techniques are the hook and line, traps as well as different manually operated nets such as the gill net with different mesh sizes according to the season and the fish that they try to catch. In contrast with mechanized gear, these gears can be called 'passive' (Sundar 2011: 58). This is significantly different from mechanised trawling, compared by one of my informants to 'using a tractor in a paddyfield'³³.

³³ Interview with Fr. Albert, Catholic priest hailing from the fishing community in Nagaram, August 2018.

The remaining minority of artisanal fish-workers operates shore-seines, i.e. large nets cast from the shore and pulled by 30-40 fishermen who remain on the shore (cf. chapters 4 and 6). This set of techniques, most generally used for many generations if we discount the technological increments, are one of the core pillars that make the notion of 'artisanal fishing' up to this day. Artisanal fishing, in sum, 'refers to the craft-like nature of production that relies more on specialized skills and experiential knowledge than on formal training and complex technological systems; the producer has control over the entire labour process' (Sundar 2011: 58).

When asking my informants more detail about what being a Latin Catholic Mukkuvar meant to them, they would refer to fishing either directly or indirectly, mentioning for instance how life was before and after the introduction of motorised fishing³⁴. As explained by the parish priest of Onnu, the word Mukkuvar is 'very much [associated with] an occupation³⁵' and since people in the locality live from fishing, this occupational aspect shapes their perceptions of the community to which they feel belonging. According to the director of a centre focusing on livelihood issues among artisanal fishworkers in Nagaram, fishermen in Onnu fish 'for their livelihood'³⁶, which further hints to the centrality of their occupation in their lives and, in consequence, in their perceived community identity. Subramanian too notes that '[i]t is something of a truism to say that the lives of Mukkuvars are oriented around the sea' (2009: 35). This, she explains, is the case culturally but also socially and economically (cf. below), as further discussed throughout this chapter. The centrality of this occupational dimension

³⁴ Interview with Jose, fisherman and boat owner in Onnu, August 2018.

³⁵ Interview with Fr John Paul, former parish priest in Onnu, August 2018.

³⁶ Interview with Fr. Albert, Catholic priest hailing from the fishing community in Nagaram, August 2018.

further suggests a strong relation with the sea, another key element of the base, which I explore in the next subsection.

In conclusion, in this section, I have furthered the insight developed towards the end of the previous section by showing that the occupational dominance of fishing, performed with a certain set of techniques and in a context of both objective and relational deprivations represent one angle that clearly sets the artisanal fishing community as a category. Obviously, this analysis comes on top of the previous section, where I discussed the capitalist impulses and logics developing within it the artisanal fishing communities too (Subramanian 2009; Sundar 2011). Hence, while it is a community that is marginal in relational terms (Roy 2017), it should certainly not be seen as a pristine community “spared” by capitalism. Quite to the contrary, I show in chapter 4 that this equilibrium is fragile and indeterminate.

3.1.2 The Sea: Ultimate Provider

If the occupational dimension is a key aspect of how my informants perceive their own community, it is equally obvious that this occupation cannot be dissociated from the sea. ‘We have a close relationship to the sea³⁷’ is indeed a very spontaneous and frequent comment made by most of my informants. Here, I therefore explore this relationship, highlighting the importance of the sea as a provider of livelihood³⁸.

Here too, the base analytic is helpful as an anchor. Gudeman (2001; 2008; 2012) indeed explains that the base is often formed around a resource, which can either be bounded or,

³⁷ Interview with Jacob, fisherman in Onnu, August 2018.

³⁸ Other studies have for example focused on its sacred character, associating the sea with notions of Purity and Truth (e.g. Hoeppe 2007).

like the air and the ocean, be seemingly unlimited (but subject to deterioration, as we see below). He adds that '[t]hrough making and using the base, people affect, influence and communicate with one another, because it is a product and constituent of persons' (Gudeman 2012: 104).

Irrespective of their religious affiliation³⁹, many fish-workers in Kerala call the sea 'kaddamma' (lit. 'Mother Sea'). As explained by Hoeppe (2007) and clearly emphasised in all my interviews, this is directly related to its providing character: 'the sea is a mother because she is here all the time. It is a mother because whatever we get, it is from the sea. So we pray to the Mother Sea to ask for a good catch⁴⁰'.

To be clear and to nuance Hoeppe's (2007) account, not everybody sees a 'mother' in the unconditional, nurturing, and sometimes divine way that the archetype behind the word might suggest. The key point on which everybody does agree, however, is that the sea has a providing function which, starting from fish, quickly expands into entire individual and collective livelihoods.

Every single of my informants indeed stressed the importance of this providing function, regardless of their enthusiasm about the potentially sacred character of the sea. A 67 years old fisherman and boat owner for instance told me that in his view, the 'mother-sea' was an outdated myth associated with ignorance: '[p]eople don't think about the sea as a mother anymore, but used to ... it was only in vain that they were talking like this in the past. People even used to say that there were people with tails in the bottom of the sea [note: to illustrate

³⁹ Hoeppe's (2007) respondents are Hindus located in a coastal district that is distant from my fieldsites by about 300 km

⁴⁰ Interview with Robert, fisherman in Onnu, August 2018.

they had no education, in his perception]⁴¹. However, as the rest of the interview but also a quick look at his life and livelihood would affirm without a doubt, it is nevertheless quite clear that the sea represents his entire livelihood. Having fished ever since his teenage and later become a boat owner, he had spent over 40 years living from his labour at sea, as he emphasised throughout the remainder of the interview. While denying a metaphysical dimension to the motherly character of the sea, this man still took the providing character of the sea as a given.

Indeed, the sea provides fish, which in turn provides income and hence livelihood to the fish-working households. In its fish-providing function, the sea is also believed by some to have a replenishing character⁴². This aspect was mentioned by Onnu's parish priest⁴³ to be crucial, since he attributed the indebtedness of many fishermen, as described above, to a lack of inclination towards saving, itself coming from the belief that the sea, as a mother, can always be asked for what is needed in terms of livelihood⁴⁴.

A striking metaphor that stayed with me came up in an informal discussion with a fairly regular informant of mine in Onnu over my fieldwork, who is a fisherman in his thirties. Indeed, he directly compared the sea to an Automated Teller Machine (ATM). While the reverence to a sacred mother was clearly absent of his discourse, he did specify--when probed--that his use of the ATM metaphor meant that whenever he – and others – needed something, they would go to the sea and take it from there. Beyond the sea appearing as the most natural provider of livelihood in his eyes, we must thus add a connotation of infinity or limitlessness, which

⁴¹ Interview with Jose, fisherman in Onnu, August 2018.

⁴² Interview with James, fisherman in Randu, August 2018.

⁴³ I will focus on the next section on the influence that the Church still retains in the fishing villages and on how certain discourses contribute to reinforce a certain marginality of the fish-workers.

⁴⁴ Interview with Fr. John Paul, ex-parish priest of Onnu, August 2018.

plays a role in the conflict over fishing techniques taking place around Onnu and analysed in chapter 4.

Knowledge and skills too are very telling of the centrality of the Sea since whenever I sought 'knowledgeable' people in the fishing villages I ventured into, I was introduced to senior fishermen. In addition, their knowledge was first and foremost centered around the sea, the fish and the conditions around them. Analytically, the base is 'a people's heritage of knowledge and skills, often in relation to the material space they occupy' (Gudeman 2012: 99). They mediate the relationship(s) between the community and the material resource. Here, then, the knowledge that is so crucial to 'producing and reproducing a locality and an environment' (Hoeppe 2007: 11) is directly related to fishing skills and to the Sea in the villages that I visited. To illustrate this, it wasn't uncommon for fishermen to claim that in their village '[we] have the most catches, we have lots of expertise and are the best fishermen along the whole stretch⁴⁵'. By directly relating knowledge with a practical expertise resulting in the volume and quality of catches, this comment gives clear indication that to a very significant extent, much of this knowledge is centred not only on the sea, but very much on different aspects pertaining to its providing character.

In light of the above, it is not surprising that when openly asked about the biggest recent changes in their area, most of my interviewees would mention the decrease of their catches over time. Different informants attribute these decreases to different causes, as varied as the 2004 Tsunami, the change of parish priest, foreign trawlers or neighbouring villages' different

⁴⁵ Interview with Robert, fisherman in Onnu, August 2018.

techniques (cf. chapter 4). In all cases however, biggest changes would be framed around the sea and its provision of livelihood or 'sea wealth'⁴⁶.

Sundar (2011) too points to a context where the progressive entry of capitalism in the artisanal fisheries fuels growing tensions on the fishing commons (Hardin 1968). Much work has focused on the linkages between social movements and the protection of the commons, as reviewed by Villamayor-Tomas and Garcia-Lopez (2021). In the case of the artisanal fisheries of Kerala, as mentioned elsewhere, much work has also traced the contributions of the Fishworkers' movement to ensuring that trawlers would be banned during the monsoon and not be allowed in the inshore sea (cf. Baviskar et al. 2006; Subramanian 2009; Sundar 2011; Sinha 2012 among others). Within the legal provisions enacted as a result of the Fishworkers' Movement repeated pressures, the inshore sea is thus predominantly 'managed' by the fishing community as also studied extensively in the works cited just above. In chapter 4, as I look at a conflict over fishing techniques which potentially threatens this equilibrium, I sketch avenues for a refined focus on the commons in future iterations of my work.

At the current stage of this thesis, the important point to note is that in a context where gradual technological innovations and a logic of profit at larger scale (Platteau 1989) were expanding, this direct access that the artisanal fishworkers still retain over the inshore sea (St Martin 2007) also provided them with the potential to mitigate these transformations and their effects.

⁴⁶ Ibid.

This also echoes the point made at the end of the previous section. Their position of intermediacy (Subramanian 2009; cf chapter 4) implies that my informants undergo and enact a tension between an increasingly more profit-oriented practice of fishing (cf. previous section and chapter 4) and the stewardship that they keep enforcing over the inshore sea since the victories of the Fishworkers' Movement.

The proximity to the sea and its providing character as well as the use of passive techniques as explained above clearly point to not only an exclusive access, but also imply that the artisanal fishworkers set and enforce the rules over the use of this sea. Access to and protection of the providing character of the sea indeed go hand in hand (Subramanian 2009; Sundar 2011; Bavinck 2011). This implied stewardship of the fish-workers over a sea that directly influences occupations, technology, income, lifestyle and livelihood are the set of relations that make the current artisanal fishery in the eyes of my informants.

This inter-relatedness and co-constitutive character is fundamental for the analyses that follow. As we see in chapter 4 when discussing frontierisation (Cons and Eilenberg 2019), technological and socio-metabolic changes considered too brutal indeed lead to conflicts. They do so because they disrupt the fragile equilibrium that I characterised so far, and which leans on Subramanian's (2009) idea of intermediacy. I discuss this idea, and challenge it in light of my fieldwork, in section 4.1.1.2.2 (Chapter 4).

3.1.3 The Multi-Dimensional Shore

If having insisted on the central character of the sea is important as an element of both contextualization and analytical foregrounding, it nevertheless remains a quite intuitive and very widely discussed one in the academic literature. As emphasised in chapter 1, all the work related to the transformations around the fisheries of Southwest India always focuses either on fishing/the sea or/and on the fishing communities. A key element of the coastal assemblages, taken for granted by all but somehow never receiving dedicated analytical attention, is the shore. Here, I therefore emphasise the multi-dimensional importance of the shore in the wider commons characterised so far, highlighting its centrality to the transformations I discuss in the following empirical chapters (especially chapters 4 and 6).

3.1.3.1 Fluidity between Land and Sea

Visually, it is difficult to fully ascribe the shore to the land or to the sea. There is an impression of 'in-between' which gives to the coast its intrinsic spatially marginal character, at the edge between land and sea and thus at the margin of both.

In Nagaram district, the shore is made of white sand (as opposed to seashells or rocky beaches in other places around the world for example). As we will see below, the shore has many different occupational and recreation uses for the fishing community. But beyond their purely instrumental and anthropocentric roles, '[b]eaches are alive' (Cartwright and Wilson 2017). Indeed, they are home to all sorts of living creatures, which feed the shallow-sea ecosystems, i.e. its biodiversity by for instance 'providing a nursery for juvenile fishes' (Defeo et al. 2009)

as well as a place for many invertebrates and smaller creatures which are part of the food chain to dwell, or by mineralising and recycling nutrients.

There are also several important ecosystem services (Kull et al. 2015) associated with a shore made of sand or, in other words, the multiple ecological roles that it fulfills. First, in connection with the above ecosystems, the shore is necessary for the storage and transportation of sediments. As we see in chapter 4, the shore accretes and erodes seasonally. The disruption of this cyclical movement, often resulting from human construction such as breakwaters for harbours/ports, leads to permanent accretion and erosion as we see in chapters 2 and 4. As is quite intuitive, sandy shores also play a vital role in dissipating waves (absorbing and scatter their energy). As such, they also represent a good buffer against extreme weather events such as, typically, 'sea attacks' or tsunamis, thereby protecting the coastal villages. This is particularly important in a context of global warming, where the global rise of sea-levels is a direct consequence. (Defeo et al. 2009).

Kurien (2018) explains in terms accessible to non-specialists that beaches are formed by the interplay of three processes. First, particles are brought from the mountains by rivers, to the sea. Second, as a result of the varied near-shore wave activity, the sea sets this sand in the form of beaches. Because the rhythm of these waves changes seasonally, 'in one season the beach is large and expansive; in another it is small and narrow [note: monsoon season]' (Kurien 2018). This unfixed aspect starkly contrasts with 'fixed land' (Li 2014b), and I will argue in subsequent chapters that it is a key element of the assemblage of new development frontiers (Nail 2017; Cons and Eilenberg 2019).

Third, because the waves ‘strike the shore at an angle they tend to transport the sand in a lateral direction as well, thus preventing excessive accumulation at any particular point’ (Defeo et al. 2009), which is why when unaltered by human activity beaches tend to be relatively even in their width. This dynamic process makes him conclude that the beach is ‘the playground of the sea’ (ibid.) and that it must therefore be seen as such rather than managed from a terrestrial perspective where ‘boundaries are fixed and immovable, and assigning of rights is relatively easy and straightforward’ (ibid.) Kurien (2018) recalls a conversation with a fisherman in the 1970s, where the latter told him that ‘[o]nly if you allow the sea to play with the sand will you get to closely know its true behaviour.’

In order to prevent the manifold consequences resulting from disturbing the equilibrium between sea and shore, two distinct measures have been taken in the last decades.

First, since the first Coastal Regulation Zone (CRZ) Notification in 1991 (cf. next sub-section), the shore is a space protected by a strict regulatory framework⁴⁷, which much construction activity. More recently however, it was proposed to relax these rules in order to facilitate different development projects, which sparked much anxiety from the artisanal fish-working communities.

In parallel, since the 1970s, seawalls have been constructed where there was not enough buffer between the sea and the shore. Always advocated by politicians when they seek votes from the coastal belt, seawalls remain problematic at several levels as an academic expert told me during one of our encounters in October 2018. First, with a price of 7 crore Rs per

⁴⁷ The CRZ Notification, issued in 1991, stipulates that ‘beaches [should] be kept clear of all activities within 500 m of the high tide line’ (Nayak and Vijayan 2006: 59). Even though it was poorly enforced if at all on my fieldsites, one of the consequence of this notification is that no new building, including housing, should be constructed within the CRZ.

kilometer, they are costly. Second, their maintenance is costly too, at around 2-3 additional crore Rs every two years. Indeed, they otherwise tend to collapse under the pressure of the sea, which defeats their purpose. Lastly, they are ecologically unsustainable since they are made of rocks, often granite, quarried in regions such as the Western Ghats in the inland of Kerala, which are directly instrumental in the prevention of floods such as the ones witnessed in 2018 (WGEEP 2011).

3.1.3.2 Housing: Fluidity between Legality and Tenure

Subramanian mentions that the 'shoreline is crowded with fisher huts and cement homes that open out to the' sea (2009: 35). As I witnessed too, the houses are open during the daytime. Fishing boats occupy much of the space between the shoreline and when they are not working, fishermen are usually in groups, near the boats or in front of the houses.

As reported by GoK (2009) and confirmed during my fieldwork, fishworkers own little to no land. When they do, this land is small and solely used for the purpose of building a house. When they own no land at all, which was the case of 68% of them in this survey (GoK 2009), many dwell either on the shore itself, or in any case far within the current limits of the CRZ. Yet, residence is one of the shared practices and conceptions, alongside kinship, that makes up the connections underlying community identity (Gudeman 2012). In this sense, the residential dimension of the shore is in direct flux with the occupational dimension of the community's own perception, as well as with the centrality of the sea.

In Onnu, the village where I started my fieldwork, a significant proportion of fish-workers (about 3 rows; cf. chapter 4) and their families live in houses/huts located on a narrow stripe

between the sea and the road. In contrast, those who settled earlier live on the eastern side of the road and sometimes own land (typically 5 to 10 cents⁴⁸ at most; often less).

On the shore, the oldest and most destitute dwellings are thatched huts made of straws. Some others are made of concrete. All are small, with one to three rooms for households that most often count three generations under one roof. Many were built far after 1991—the date of the first CRZ notification (cf. above)—to accommodate growing families. Generally, the later they were erected, the closer to the sea they are located, and the most basic they are in terms of infrastructure. In addition to the proximity with their relatives, the reason why fish-working households may choose to live on the shore is that it allows them to stay near their gear, and to go to work easily too (Hoeppe 2007; Subramanian 2009; Sundar 2011) .

3.1.3.3 Tenure: Access Mediated by Social Identity

Given their location, these settlements represent obvious encroachments into the CRZ, even though it should be noted that the CRZ regulations have only started being enforced in Nagaram district since about 2017, according to the Fisheries Department Officer in Onnu. From a purely formal point of view, the settlements described above are therefore illegal. They are indeed ‘a form of direct access defined against those based on the sanctions of ... law’ (Ribot and Peluso 2003: 164), even if seemingly not against the sanctions of customs, as my fieldwork allowed me to understand that such settlements have ‘always existed this way⁴⁹’.

⁴⁸ 1 cent of land = 40.46 square meters

⁴⁹ Interview with Robert, fisherman in Onnu, August 2018.

Like in the case of land, behind a ‘supposed fixity ... lies a powerful fluidity – in the varied forms of tenure’ (Benjamin 2005: 251). Even though most residents on the shore do not have landownership deeds or building authorisations, most of them however openly receive electric supply—either directly or through friends and neighbours—which shows that the public administrations do tolerate them despite their official illegality (Benjamin 2005). These practices are widespread in India, where they frequently take place in urban slums as well, and represent ‘*de facto* tenures – even if absolute titles have not been conferred.’ (Benjamin 2005: 248) Analysing the political contents of such phenomena, Benjamin argues that ‘reshuffling property claims can lead to serious political crises and consequences.’ (2005: 248). As a result, public administrations such as the Grama Panchayat or the Revenue Department ‘usually intervene with regularization and incremental upgrading that improves *de facto* tenure over time’ (ibid.) This, in turn, is expected to make land ‘generally more secure against evictions’ (Benjamin 2005: 251), an aspect which of course becomes much more fragile when this very land--or shore here--disappears (coastal erosion) and re-appears (coastal accretion) elsewhere, as I discuss in chapter 4.

If the legality of tenure is less important than the *de facto* tenure, the latter is granted on a clear criterion. During my first round of fieldwork, each of my informant living in the CRZ of Onnu told me that, in their view, anybody could come and settle on the coast, provided they are from the Mukkuvar ‘fishing community’.

One of my informants, the daughter of a fisherman not involved in fishing-related activities herself, shared her experience of living on the shore with me. Referring to problems of sanitation and, generally, intimacy, she nonetheless mentioned that people do have a strong attachment to this area and do not want to leave it, ‘because [most of them] know it from

birth⁵⁰. She further explained that because boats and nets are kept in the same area, the people who live on it have strict implicit rules regarding who is allowed to set a hut on the shore. Overall, she explained that it only happens through matrimonial relationships, i.e. that outsiders would only be allowed when they marry somebody living in this zone which, in the case of men, additionally implied being a fisherman⁵¹.

Here again, similarly to the fishing activity discussed above, the use of the shore further contributes to clarifying the contours of the notion of community. While it cannot be said that the community is confined to the shore, everybody who settles on it does belong to the same perceived community. Access is therefore first of all explained, spontaneously by informants, in terms of social identity (Ribot and Peluso 2003). This, as we saw above, ties tightly with a livelihood oriented towards the sea and fishing, and the use of a certain bundle of techniques.

3.1.3.4 Non-Residential Uses

Just like land (Li 2014b; Sud 2020c and references therein), the shore has multiple uses and meanings. The attachment to the shore reported by my informants is thus closely related to their livelihood, which is oriented towards the sea. And just like land (Benjamin 2005), the shore thus also has non-residential uses. Many are still connected to the sea, and also highlight a web of relations that further make up community identity (Gudeman 2012). When they are not at sea, the sea remains in the conversations of my informants. In front of some

⁵⁰ Interview with Daisy, daughter of a fisherman and teacher of extra-scholar tutorials in Onnu, August 2018.

⁵¹ Religious affiliation matters here too, since inter-religious marriages are extremely rare.

houses, one can see fish being dried. Fishermen also spend their time on the shore either selling their catch, or repairing nets and arranging crafts and gears.

Susan, an undergraduate student hailing from the coastal community and active with the coastal students NGO mentioned in chapter 2, once spoke to me very emotionally about the sea. The sea, she said, was ‘the rhythm of life.’ And she continued: ‘we listen to the sea since we are born. It is everything for us. We watch it, wondering if [our] father will come back and with what [fish catch].’ A boy who was sitting with us that day added that the shore ‘is in our blood’. As far as the shore is concerned, Lily--another student active in the same network--and Susan told me quite simply that ‘we sleep on it, we play on it, we sit. We do everything there’. It is also important noting that for them, there was no clear distinction between the sea and the shore. Rather, it is me who kept imposing this artificial distinction to them, to capture something that they clearly saw as much more fluid than I initially imagined. The shore also has recreational uses, for children as well as for groups of fishermen who play cards and drink together at night.

The shore is also linked to the sea in less directly tangible ways. I was once told about an old myth according to which the behaviour of a woman on the shore would directly affect the safety and luck of her husband at sea. Less patriarchally, some contend that it is ‘only if you let the sea play with the sand that you will know its true behaviour’ (Kurien 2018) and yet others affirm that by observing the sea as it hits the shore, one can predict storms (cf. Jayaraman 2021 for similar insights). A long time leader of the National Fishworkers Forum who later tragically died from Covid-19 told me about the many benefits of sleeping on the shore when we met in November 2018. According to him, not only did the sand help straighten one’s back, but the shore is also full of regenerating energies that one should be in

closer touch with. Seeing that I seemed to be tense about my work, he recommended that I try sleeping on the shore myself.

The common point between these different views and anecdotes is that in the experience of those who live on it, the shore and the sea are very much interlinked. Their intertwined materialities and uses yield the various effects enumerated above. In this sense and keeping the centrality of the fishing activity, community, sea and shore are very much co-constitutive of one another. These bundles of interrelations⁵² cohere together into characterising the everyday experience of the artisanal fishery, understood here as the livelihoods revolving around artisanal fishing.

3.2 Institutions

We have seen in the previous section that community, sea and shore were co-productive of one another through webs of relations on which I tried to shed light. Just as much as these relations should not be understood to cohere in a “pristine” independence from ongoing capitalist expansion, they do not exist in an institutional vacuum either. Rather, institutional relations further supplement the picture sketched so far, which thus benefits from my delving into them.

In this section, I therefore follow a similar approach to the previous one in contextualising the most salient involvements of the state and the Catholic Church, which are the most important

⁵² And all their ramifications that are less central here but intimately related too, such as the allied activities to fishing, e.g. auctions, fish-vending etc.

institutions on and around my fieldsites, in and around the lives of my informants. In addition to the informative context that this exercise lays down, I highlight the relational and co-productive character of these institutions with the surrounding environment (Das and Poole 2004; Bakker 2020; Swyngedouw 2015b; Sud 2020c), as well as with the community (Subramanian 2009; Sundar 2011). To do so, I lean on conceptualisations of the state that I briefly introduce in the first sub-section and then extend to the Catholic Church.

Keeping in mind the overarching focus of this thesis, it is important to note that institutional actors are one of the obvious vehicles through which the politics and ‘techniques of sovereignty and capital’ (Eilenberg and Cons 2019: 229) that underlie the frontierisation of marginal spaces are deployed. Rasmussen and Lund (2018) further explain that as frontiers take place, institutional, spatial and informal authority orders ‘are sometimes undermined or erased, and sometimes reinterpreted, reinvented, and recycled’ (2018: 388) as new uses of resources emerge with new users too.

Clearly, in the co-productive framework that this thesis uses, a first step is thus to look at these institutional orders prior to the transformations that I focus on in the following chapters.

Here, I therefore shed light on what some of the predominant aspects of this order is around the livelihoods of my informants. This thus lays the ground for the analyses of chapter 7, where I reflect on how this co-productive order changes as the frontier takes place along the coast of southern Kerala. In other words, which more directly echo the title of this thesis, this step is necessary to look, in chapter 7, at what is being unmade and remade at the institutional level.

3.2.1 The State

The state is notoriously difficult to delineate and thus to study (Abrams 1988, Mitchell 1991). Abrams however proposes a simple yet insightful departure point from which to do so. Rather than a reality hidden by political practice, the state starts its life as an implicit construct which is then reified (ibid.). As this structuration takes place through political practice, Abrams distinguishes the state-system—or ‘palpable nexus of practice and institutional structure centred in government and more or less extensive, unified and dominant in any given society’ (1988: 58; cf. also Evans 1995)—and the state-idea, which is ‘projected, purveyed and variously believed in in different societies at different times’ (ibid.).

As these two facets also suggest, the state’s boundary with society ‘appears elusive, porous and mobile’ (Mitchell 1991: 77). In an approach which is very much aligned with assemblage thinking (Nail 2017), Mitchell suggests analysing the state as a structural effect rather than actual structure, i.e. ‘as the powerful, metaphysical effect of practices that make such structures appear to exist’ (1991: 94). Migdal (2001) too suggests looking at the practices of the state and its effects in order to further understand its complex relation with society.

3.2.1.1 Local/Everyday

In light of the overarching objective of this thesis, processes of everyday life are important to understand how the state is ‘reconfigured at the margins’ (Das and Poole 2004: 19).

We have also just seen that it is helpful to think of the state in terms of effects (Mitchell 1991) and that this can be disaggregated decomposed into state-system and state-idea (Abrams 1988). We have further seen that the boundaries between state and society resulted from these effects rather than existed as independent essences. At a more ethnographic level, Subramanian (2009) and Sundar (2011) insist that communities and the state must be seen as entangled at many levels too. Below, I concisely explain what this entails along several axes stemming from my fieldwork.

Panchayat and Community

An obvious way in which state and society overlap in the fishing villages and co-produce one another is through local governance. At the everyday level, the Panchayati Raj system was designed with the aim of increasing grassroots participation in a framework of ‘self governance’. The lowest tier of this system, the Grama Panchayat, is run by an elected Committee in charge of different districts. While their main mandate is framed in grand terms of furthering ‘economic development and social justice’ (Bandhyopadhyay et al.: 2003), this for instance concretely materialized during my fieldwork in the construction of a small stretch of road⁵³. Importantly however, Grama Panchayats have local offices which ensure a visible presence of the state locally (Sundar 2011). As such, this three-tiered system whose highest level is the district, also contributes—in theory and *de jure*--to the integration of various areas under the state system (Abrams 1988; Evans 1995).

⁵³ Interview with Smitha, ex-councilor in Vadakku on 14 December 2018.

Members of the Panchayat Committee are villagers too, and can thus belong to the community I reflected on above. However, this is not necessarily always the case, since it depends on how the Panchayat is delineated geographically. In Onnu Panchayat, the majority of wards are coastal, so that their elected members belong to the fishing community. In other villages (e.g. Moonu, Tekku), the coastal wards are a minority since the Panchayat stretches towards the land rather than along the coast. The same applies to the coastal wards of Nagaram Corporation⁵⁴, which represent only 16 of the 100 wards. For this reason, there is no 'breaching of the state' (Sud 2020c: 1187) in the form of policy agendas driven by coastal wards⁵⁵ through political demands (Rudolph and Rudolph 1987; Damodaran 2008).

This position of minority also meant that many of my interviewees at the higher levels knew very little about coastal areas, and did not mention specific plans directed at them. If perhaps not deliberately, the coastal interests found themselves de facto marginalised as a result, since their specificities were drowned in larger ensembles.

During my fieldwork, the then President of Onnu Panchayat explained to me that their main source of funding was a yearly budget allocated by the Government of Kerala (GoK) and the Central Government of India (GoI). With this amount the Panchayat Office looks after kindergartens and local hospitals⁵⁶, for instance. Also equipped with an independent but attached Secretariat run by local civil servants, the Panchayat Office is also responsible for various everyday transactions such as the handling of applications for (food) ration cards, or the administrative issues related to housing (e.g. electricity etc.).

⁵⁴ In cities, the self-governance system is slightly different. Nagaram (capital city of Kerala), for instance, is called a Municipal Corporation. Headed by a Mayor, this Corporation has an assembly of 100 councillors, who are elected in their respective wards, which are the most basic administrative areas.

⁵⁵ Interview with Simon, then-councillor in Vadakku on 29 November 2018.

⁵⁶ Interview with Sunida, then-Panchayat President in Onnu on 18 September 2018.

Ambivalent Relations with Villagers

In addition to having local offices, Grama Panchayats run assemblies (Sabhas) which, in theory, meet at regular intervals⁵⁷ and hold the Panchayat Committee answerable for its governance. They consist of persons whose names are included in the electoral rolls for the Panchayat at the village level (PESA section 4 (c); KPRA chap. II section 3 (2)), i.e. most adults. In theory and spirit then, the Panchayat system enables state and society to be fully intertwined in terms of local governance. However, echoing remarks made by Subramanian (2009) in her own fieldwork context, an expert told me that the participation of coastal villagers in these institutions of self- governance tended to remain significantly lower than hoped for⁵⁸. When probing this aspect with my informants, they did not seem to be very interested in these assemblies and did not have much to say about them.

Indeed, even though this system enables constituents to express their claims through assemblies (grama sabha), my informants did not seem to believe in this channel as a possible way of improving their livelihoods. An informant in Vadakku, who preferred to remain anonymous, explained to me that even though they are supposed to be regular, ward sabhas had only been happening regularly since the election of the incumbent councillor. However, in late January 2019, he also explained that the most recent meeting had been poorly attended, since the assembly took place during the usual fishing hours. Overall, he also said that most people felt no use in attending these meetings since they believed that the councillor would 'work for his people only', along the lines of party affiliations and that there

⁵⁷ At least once in three months in theory (KPRA chap. II section 3 (3))

⁵⁸ Interview with Dr. Marcos, academic expert in Nagaram, 16 January 2019.

was therefore little to expect for others. Besides the lack of interest in Gram Sabhas, a rampant complaint of my informants was related to clientelism (Roy 2017), in the form of local politicians only catering to their voters and vice versa when involved in various welfare programmes. I explore this further in chapter 8.

These wedges do however not mean that there is a vacuum between the state and the villagers at the local level. They only point to an ambivalent, but nonetheless very much existing, relationship between my informants and the state. Indeed, Subramanian (2009) shows that throughout recent history, fish-workers make various and contingent claims at various levels of the state and of the Church (cf. below), so that fine grained ethnographic inquiries are better suited at unveiling these complex dynamics (Hansen and Stepputat 2001; Das and Poole 2004; Sharma and Gupta 2006).

The Importance of the Fisheries Department

I explained in the previous section that the fishing occupation was central to the community identity of my informants, and that by extension this activity took most of their time and focus. For the very same reason, the Fisheries Department often seemed to be the first point of contact for most issues that my respondents considered essential when discussing their livelihoods.

The Fisheries Department comes under the political authority of the (state) Minister of Fisheries, and is administratively headed by the Director of Fisheries, appointed by the State

Government, and who is most often an Indian Administrative Services⁵⁹ (IAS) bureaucrat. The Department of Fisheries' official mission is to 'serve this sector' (official website), a vague formulation which nevertheless reflects the situation on the ground, namely the involvement of the Department in nearly all the affairs pertaining to the fishing community. In addition, the Fisheries Department heads 9 agencies dedicated to specific issues, ranging from welfare schemes to infrastructure for fishing, and including the MatsyaFED, the state-run and most widespread co-operative along the coast.

To carry their wide responsibilities on the ground, the Department of Fisheries has divided the coast of Kerala into 5 districts and, within these districts, 222 administrative units informally called 'fishing villages'. At the grassroot level, one Fisheries Office (Matsya Bhavan) is in charge of several fishing villages, with the number varying according to their prominence (in terms of people, and boats). This Fisheries Office is in charge of implementing the schemes run through the Fisheries Department on the ground, as well as of managing the day-to-day affairs of the fishing community related to their occupation.

Sherly, the Fisheries Officer of Onnu during my fieldwork, explained that this would typically mean keeping the records of active fishermen up-to-date (through a card allowing for various subsidies), monitoring the registration of boats or enforcing sanctions when regulations are broken even though⁶⁰. In general, the Fisheries Officer is first in line for all problems related to the wider livelihood around the sea, and represents a daily point of contact for many.

⁵⁹ National-level bureaucrat, a competitive and prestigious professional title.

⁶⁰ Higher-ranking officials at the district level however regretted that the Department lacks manpower to enforce most of their regulations

Understanding the basic role and central presence of the Fisheries Office in the everyday lives of the fishing villages is important for two reasons. First as background, since we meet the Fisheries Officer of Onnu in chapter 7, as their office was responsible for the implementation of a re-settlement scheme that is directly connected to coastal erosion. Second and as unpacked in chapter 7 too, in the village, this programme feeds into allegations of involvement of local politicians related to the Panchayat (i.e. either in office or formerly so) and of resulting clientelism and corruption. For this reason, it gives us a window into the effects of the frontierisation analysed in the next chapters on the state as an effect (Mitchell 1991).

3.2.1.2 Supra-Local

The local and everyday context evoked so far also obviously exists within wider and longer-term institutional dynamics and contexts. Because they are wider, they are also less directly palpable, and cannot possibly be thoroughly comprehended either.

In the daily lives of my informants, the most directly visible effects of these wider institutions have already been explained. They concern—when relevant—the implementation of programmes decided at the level of the GoK, and which trickle down to the coastal villages through the local Fisheries Department Office. In this sense they give us further insights into the state effects that this thesis seeks to explicit (Sharma and Gupta 2006; Hansen and Stepputat 2011).

They also concern the CRZ, which is a framework that emanates from the Central Government, but whose application falls into the remit of the states, thereby also trickling down to local administrations. Through the CRZ framework, the state regulates coastal zones and restricts construction on them (Sundar 2014). Even though this framework was not always and uniformly enforced, it equips the state with a regulatory tool that is seriously significant in the context of frontier assemblages, as I further explain in chapters 6 and 7 in particular. The main state effect (Mitchell 1991) here, i.e. the production of a boundary between state and society, thus results from an ordering of nature (Scott 1998). I further highlight the important role of the state in setting processes of frontierisation in motion from chapter 5 onwards, not least through the impetus that ideas—in the form of new political and economic agendas—bring about (Sud 2014; Rasmussen and Lund 2018; Cons and Eilenberg 2019; Knott and Mather 2020). Altogether, the important takeaway is that at the apparatus-level, the state too is entwined in co-productive relations with nature (Bakker 2010; Swyngedouw 2015b; Sud 2020c). These must therefore be specified in the following chapters. These two specific arms of the state system (Abrams 1998), through which state ideas (ibid.) percolate, are obviously a starting point only. They meet in chapter 7, where I examine a re-settlement project triggered by environmental change (sea attacks causing erosion), based on an enforcement of the CRZ and implemented by the Fisheries Department.

To this end, two contextual elements must be reminded here. Firstly and as briefly explained in the General Introduction, this thesis takes place in India, where the Central Government is the highest level of the state. I also explained that since 1991, India had been following an

agenda of liberalization which resulted in strong economic growth⁶¹. I also referred to the context of SagarMala which, even if it does not formally include the Thuramukham seaport, puts emphasis on port-led development throughout the country. In the meantime, I alluded to the specific development experience of Kerala—driven by human development indexes rather than by economic growth and infrastructure--and to the fact that the fish-working communities had been predominantly left aside this experience (Kurien 1995).

From chapter 5 onwards, I show how the different elements evoked in the present chapter come to blend. As state ideas and systems evolve as part of the frontierisation, socio-environmental processes shed light on how the boundaries of the state shift by looking at the ‘producing and reproducing of [the] line of difference between state and society’ (Mitchell 1991: 95), both at the level of government apparatus and at the everyday level. By the same token, they feed scholarly debates on the role and boundaries of the state in promoting an environment favourable to large businesses (Harvey 2005; Sud 2009; Wacquant 2012; Sud 2012).

3.2.2 The Catholic Church

I explained in the previous section that my informants saw themselves as Latin Catholic Mukkuvars, and then reflected on how important the occupational dimension underlying this denomination was. As this name indicates however, the other institution that is omnipresent

⁶¹ There is a vast literature on Indian liberalization, e.g. Byres (1998), Pedersen (2000) Kohli (2006), Sud (2012), Sen and Kar (2014) among many others.

in the daily lives of most⁶² of my informants and in the transformations that I study in the next chapters, is the Catholic Church.

A Key Actor on the Coast

Just like the state, the Catholic Church is a complex apparatus with many ramifications too. Very pyramidal and hierarchical in its structure, the Catholic Church is headed by the Pope, in the Vatican. Below him, come (Arch-)Bishops⁶³, who head Dioceses, the name for Church provinces.

In order for this structure to have a presence on the ground, the diocese is further divided into foranes, which are smaller areas made of several parishes. In this structure, the parish, which often corresponds to a village but can be a section of it if the village is too densely populated, is the most significantly important unit for the daily life of the faithful⁶⁴. The parish is headed by the parish priest who presides over a secular body called Parish Council⁶⁵ since the 1990s, and is assisted by a separate financial committee (Sundar 2011: 193).

⁶² All but one of the villages I looked at were exclusively Catholic, cf. methodology; chapter 4 and General Conclusion.

⁶³ Archbishop is an honorific title in comparison with bishop, but their prerogatives are the same. At the time of writing, the Archdiocese counts about 250,000 faithful, among which 90% 'hails from the community of fisher folk' in the words of its official website.

⁶⁴ The parish is then subdivided into Basic Christian Communities (BCCs) which are composed of about 10 families and represent the lowest level of 'decentralisation' within the Church (Sundar 2011). These BCCs are also instrumental in electing the members of the parish council (cf. above).

⁶⁵ In theory, both the BCCs and the Parish Councils add a democratic component to the otherwise rigid top-down hierarchy of the Church (Sundar 2011). In practice however, this is not always the case. As different testimonies from my fieldwork show and echo Sundar's (2011) and Subramanian's (2009) work, a lot depends on the Parish Priest's style of management, which can be collegial, authoritarian, or completely subjugated by 'powerful' members of his council.

In the everyday life of the villages, the parish priest also cumulates the following roles at the same time: 'leader, judge, problem solver, liaison with government, protector, and sole representative of the village, preacher, counsellor, and guide' (Ram 1992: 40 in Sundar 2011). As the parish priest of Onnu summarised about his parishioners during my fieldwork, 'they are much dependent on the Church for anything, they even consult the Church for solving issues like family, fishing or social issues before going to the police station and the church is also able to solve many of their problems⁶⁶'. Where the fishing activity is concerned, the involvement of the Church can take the form of a tax on catches/sales, the blessing of boats and mediation in various conflicts related to fishing. As we see in chapter 7, this implies co-productive relations between the Church and the environment in which fishing takes place too.

This discourse of dependency is reinforced by the fact that in its official documents and in various interviews, in contrast with the movement of the 1980s referred to in the first section of this chapter, the Church refers to the fish-workers as 'fisher folk'. Priests often emphasise that fish-workers are 'uneducated' and more or less implicitly suggest that they are not capable of handling many of the above tasks, making the patronage of the priest and the wider church indispensable to their protection. In a way then, as seen in the first section of this chapter too, the Church contributes to a certain marginality of the fishing communities through its patronage and discourse. Subramanian (2009) however shows that the patronage of the Church is consciously mobilized by fish-workers who are also fully able to stand against this institution and make increased claims on it, such as for instance recognizing the authority

⁶⁶ Interview with Fr Joseph, Parish Priest in Onnu on 9 October 2018.

of the priest only when he is seen to be involved in delivering a social justice from which they can benefit.

We see in chapters 6 and 7 that this sometimes leads to populist endeavours by priests (Subramanian 2009), which nevertheless shape the indeterminate outcomes of the frontiers being assembled along the coast. Two corollaries must be stressed here. First, the pyramidal structure of the Church implies that issues susceptible of involving the fishing community on a wider scale are generally taken up by the Archdiocese too. We see in the following chapters that this is the case with the Thuramukham seaport. Second, I propose that just as it was the case with the state, the Church too must be part of co-productive processes which involve nature. These relations must thus be clarified, and the frontierisation taking place along the coast gives an opportunity of doing so in chapter 7.

Church, State and Community

Sundar summarises the Church as having evolved at different levels and along different axes: universal and local, social and cultural. As such, the Church 'embodies a variety of meanings including faith, identity, and governance' (2011: 172), and constantly needs to navigate them in order to both cooperate with the state and assert its own authority as an institution. In doing so, the Church also has been needing to navigate its own tensions between centrality (around Rome) and indigeneity, as well as between the spiritual and secular needs of the faithful, all in a context of secularization and increase defiance against its legitimacy (Subramanian 2009; Sundar 2011). These different axes represent as many discourses

mobilised by the Church at different moments (ibid.), which must be analysed according to the specific context (cf. chapter 7). For instance, the parish priests see their authority as the result of a mix of moral economy and tradition stemming from the village community (Sundar 2011), and from divine right. As such, the tension between the temporal and spiritual powers of the Church and its representatives is quite crucial to the understanding of the institution's ambivalent positions vis-a-vis the secular state. On one hand, they often parallel the grassroots levels of state institutions that I discussed in the previous subsections, but also overlap them since these are the very same villagers. On the other hand however, they distinguish themselves from the state by mobilising a discourse based on their spiritual powers.

With this in mind, Sundar describes the role of the Church as a 'quasi state' (2011: 141) in the villages since it governs the villages in many of the day-to-day affairs, but is also part of them. During my fieldwork indeed, every diocesan priest that I interacted with came from the fishing villages of Nagaram district. Similarly, members of the parish councils are villagers who can exchange or cumulate hats over time, sometimes being elected in the Panchayat too. Sundar notes that the Church has at times 'embraced the market, or attempted to restrain it' (2011: 175) and has likewise sided with the state or taken over its role in various functions. The relationship between the state and the Church is all but straightforward.

Subramanian (2009) indeed agrees with Sundar that 'the alliances between the state, the institutional Church, and its members, continue to be tactical and frequently shifting' (2011: 173). It follows that, when state and Church look in different directions as it was the case during parts of the Thuramukham seaport project, various stakes and interests are embedded into the communities that make up these institutional actors and which most often overlap at the village level. As Sundar (2011) insists, 'the changed content, interests and alliances are

negotiated in the public sphere of civil society, or in relation to the state and political parties, and not simply within the private lifeworld of family and social life' (2011: 174).

The relationship between the villagers and, respectively, the Church and the state, thus illustrate the complex entanglement of a history of claims-making with its own vernacular forms, one of which is the seeking of alternative patrons (Subramanian 2009: 250-252 in Sundar 2011: 209), and the 'establishment of liberal democratic institutions and processes under the postcolonial state as having enormous consequence for a new vocabulary of claims-making, as well as for new technologies of governance' (Sundar 2011: 210). Practically however 'conditions at the village level...determine [the] reception, functioning, and very survival [of these institutions]' (Sundar 2011: 209). Subramanian (2009) adds that fish-workers consciously mobilise the Church and the state at different moments, according to the nature of the claims they are making, so that this indeterminate equation must be investigated contingently too. Lastly, within the Church, different priests and officials have also embraced different positions, at different levels and time, and not always in harmony with each other. This implies that the Church must be analysed at multiple levels, and that greater room must be given to contingencies and local situations rather than to the Church as a merely homogeneous block.

Chapter 7 takes up the task of looking at how the socio-environmental processes associated with the frontierisation of the coast of southern Kerala, namely coastal erosion and the CRZ framework, contribute to reinforce the production of new boundaries between Church, state and community.

3.3 Conclusion

As stated by Eilenberg and Cons, 'emergent frontiers are but the current iteration of a longer historical process: the incorporation of marginal spaces under rubrics of capital, security, and territorial rule' (2019: 233). In this chapter, I have taken the artisanal fisheries as a manifold margin as a starting point.

I then ventured within these boundaries, to unpack prominent constituents of the socio-economic life of my informants, which I framed as co-productive relations. The sea provides their livelihoods and shapes the technologies that artisanal fish-workers use to conduct their main occupation. This set of technologies, which evolves over time as shown by its motorisation in the 1980s, is regulated by the community and becomes a strong element of identity. This identity, in turn, determines who can access the inshore sea as well as the shore, another space of multi-dimensional importance to both the sea and the community. Here, I again insist on the fact that these inter-relations should not be understood as constitutive of essences. In line with the logic outlined in chapter 1, they rather make up processes and effects (Nail 2017). These relations and their effects are also by no means closed and remote from capitalist dynamics, as we see in the next chapter. There, I show that the frontier gets assembled by ordering these same elements differently, which implies the disruption of these co-constitutive relations and their re-wiring into new effects.

In the second section, I began to look at the main feature and effects of the presence of the state and of the Catholic Church in the everyday lives of my informants. These institutions too form co-productive relations with the community and with the environment.

Rather than being 'self-evident', socio-economic life in the artisanal fisheries of southern Kerala can thus be seen as a dynamic mix of relations between environment, humans, technology, and institutions. Together, they cohere into delineating the contemporary artisanal fishery. These relations are thus not relations of essence, but of rather of exteriority (Nail 2017). In other words, elements can be taken in and out of these assemblages to fundamentally transform them, as becomes clear when focusing on the shore in the subsequent empirical chapters. In the bigger picture of this thesis, these bundle of relations thus also constitute what is being unmade by the transformations that I introduce from the next chapter onwards.

Chapter 4: Making the Shore Visible

4.0 Introduction

While I carefully laid out the processual logic of assemblage thinking in the Comprehensive Outline, the notion of frontier remains contested and relatively ambiguous. Following Cons and Eilenberg's generic definition, I use this term to denote a physical space that holds 'the key to economic expansion, development, and growth' (2019: 7). A space of opportunities, as the lived experiences of my respondents are often intertwined with the word "development", or of threats by being 'the condition of possibility for capitalist expansion' (Patel and Moore 2017 in Cons and Eilenberg 2019: 7), they are best understood as spatio-temporally dynamic trajectories.

This chapter looks at the becoming of one of these frontiers, around Cheriya Pozhi harbour by focusing on the ecological, social and economic transformations in the area since the early 2000s. Chronologically, I pick up the multi-dimensional transformations taking place on south-western coast where other major works on the fisheries (especially Subramanian 2009 and Sundar 2011) have left them. The angle that I adopt is however different in that it adds a crucially missing environmental dimension by focusing on the shore.

Here, I thus endeavour to answer Perreault's (2013) call for devoting more attention to the contingent role of nature in processes of multi-dimensional accumulation and dispossession.

Following the construction of Cheriya Pozhi harbour, the shore increasingly and permanently eroded north and, symmetrically, accreted south.

In the first section, I lay down the essential pre-conditions (Nail 2017), and qualify this harbour as a 'bottom-up' development, i.e. one whose first and main impetus was the fishing community. A key takeaway from this section, to which I also draw attention in the previous chapter, is that artisanal fisher(ie)s too have been engaging with capitalist expansion. This was most significantly the case since the 1970s, as they motorised their craft.

In the second section, I turn to the sea to show how the traditional shore-fishers reacted to the loss of their shore by adopting ring-seine nets, a gear banned in Nagaram district. Along with shifting economic and environmental valuations, this triggered a process of *differentiation* familiar in agrarian contexts but much less in the fisheries. Displaying similarities with Li's (2014a) scenario of "organic" dispossession, my data in turn undermines narratives of a relatively stable and homogeneous socio-economic intermediacy achieved by the artisanal fish-workers after their organised struggles of the 1980s-1990s (Subramanian 2009).

In the third section, I show how re-appearing and accreting south of the harbour, the shore substantially changes dimensions and meanings to become *land*. Spending some of its CSR budget on making the harbour safer (an urgent need for the local fishermen, given the life-threatening accidents that regularly occur in the harbour), the Agarwal group also encloses a part of the new land to store rocks for the Thuramukham International Seaport that they are currently constructing about 40km south, and which is my second fieldsite (cf. outline;

chapters 3, 4). At this juncture, this local assemblage thus folds into a greater, inversely symmetrical, 'top-down' one and rejoins more common patterns of infrastructure development to establish wider coastal frontiers.

Analytically, this chapter serves three purposes. First, using a processual lens, it traces the assemblage of this frontier on the coast around Cheriya Pozhi. Secondly, this chapter characterizes salient features of this frontier, since every assemblage is unique (Nail 2017). Third and most importantly, I insist that what is at the origin of all the transformations evoked above—and ties them together too—are the geomorphological changes undergone by the shore. In other words, this suggests that materiality is a crucial foundation of this assemblage formation. As a result, this chapter makes the deliberate choice of minimally engaging with politics and institutions, and to leave them for chapter 7 instead, where they can fully unfold analytically by benefitting from the insights from my second fieldsite (chapters 5, 6).

4.1 Heterogeneous Pre-Conditions to the Frontier

In this section, I trace the ecological, socio-economic and technological historical pre-conditions to the assemblage of the coast from a margin into a frontier (Nail 2017; Cons and Eilenberg 2019) through the mini-harbour and the subsequent shore erosion and accretion that form the core of my argument. Resulting from primary research through oral history and

participatory methods⁶⁷, the exercise conducted in this chapter represents an empirical contribution in itself.

4.1.1. Prior to the harbour

4.1.1.1 *Ecological Conditions: The “pozhi” (sea mouth)*

In Chapter 3, I reflected on the importance of the shore to the villagers of Onnu, on its multiple uses and meanings to them, as well as on its crucial role—not as a resource to be assembled into a trading commodity (e.g. in Li 2014b or Cons and Eilenberg 2019), but as a cement to the socio-ecological assemblages in place before the geomorphological changes that irreversibly transformed the area. In doing so, I have warned against taking the shore for granted, as is done in much of the academic literature on socio-economic transformations in the fisheries (e.g. Subramanian 2009; Sundar 2011) where it is invisible. Here, I therefore start by briefly retracing the ecological situation of the place that would become the harbour. Analytically, focusing on the particular materiality of the shore here indeed helps us understand the specificities of the frontier assembled through the coastal erosion and accretion that followed the harbour’s construction (Bakker and Bridge 2006; Li 2014b; Cons and Eilenberg 2019), and to therefore further qualify the contingent role of nature in the processes of dispossession that accompanied these transformations (Sneddon 2007; Perreault 2013).

⁶⁷ Participatory maps drawn through repeated interactions with selected respondents from both sides of the harbour, October 2018.

Before the harbour and at its very place, a sea-mouth (“pozhi” in Malayalam) was linking the sea to the backwater. Its width would shift according to the season. During the monsoon (roughly April to May), it would widen. During the remainder of the year, it would tighten and eventually be fully closed at the peak of summer, which would *loosely* correspond to the end of March. Importantly, the monsoon season also corresponds to the period of **beach erosion** on the shore of Kerala. In plain English, this seasonal phenomenon consists of strong south-west currents taking the sand away from the shore. As a result, the shore obviously becomes narrower. The time span of this season is short, but the intensity of erosion is strong. As the monsoon ends, around August, the currents change to a softer intensity and are headed towards the north-east. As a result, the shore slowly rebuilds during the remainder of the year and the shore is at its widest at the peak of the summer too.

In sum, prior to the harbour, the shore was literally unfixed, as it kept changing geomorphologically on a seasonal basis and evenly across the surrounding villages. As I will show in sections 2 and 3 of this chapter, it is once these seasonal patterns are broken and this unfixity unevenly “fixed” that new patterns of access, exclusion and financial opportunities characterising the new frontier arise. The analysis of this situation thus builds directly on Li’s recognition of materiality as essential to socio-natural assemblages, but crucially contrasts with its claim that ‘land stays in place’ (2014b: 591) in speaking very literally of an unfixed materiality (Sud 2020c).

4.1.1.2 Socio-economic situation of the surrounding villages

In addition to Onnu, two different fishing villages have seen new (and increasingly entangled) socio-economic trajectories arising from the erosion and accretion that followed the construction of the harbour. Here, I lay out a very brief profile of these villages prior to the transformations of the shore. As pointed out by Li (2014b) in her study of assembled land, shedding light on these contingent factors is key to understanding why the frontier characterised in the subsequent sections takes the forms it takes and not another.

South of the then sea-mouth and now harbour, Moonu is a fishing village with a predominantly Muslim population. More “developed” than the two villages I refer to later, Moonu benefited from a bustling coir industry due to the presence of a marshy hinterland. As such, fishing is not the only activity in Moonu, but one that co-existed with the coir industry until its demise (late 1990s) and with various small trades. Most residents of the wider area also describe the migration to the (Persian) Gulf as having started in Moonu as early as the 1960s, i.e. much earlier than even on the other side of the harbour, possibly facilitated by the various historical (essentially of commercial nature) linkages between Muslim communities in Kerala and the Gulf. These two factors explain a relatively higher and more diversified income, which is visible in the presence of shops, in high contrast with the other side of the harbour which is residential and exclusively devoted to fishing.

On the northern side then, I look at two fishing villages, both exclusively peopled by Roman Catholics. In Randu, adjacent to the harbour, the main activity undertaken by families until the 1990s was fishing from the shore, also described as ‘throwing and pulling’ and called *kaddamadi* or *kambavala* in Malayalam. It consists in thirty to fifty people stretching large

nets from the shore and yields significantly less income than boats venturing at sea such as the ones used in the northern neighbouring Onnu, whether motorised or not. Because of the relative poverty on this stretch, more people had migrated to the Gulf than in, say, Onnu.

The important points here are thus a relative “Gulf connection”, and the reliance on a fishing technique to which the shore was indispensable⁶⁸.

In contrast then, and as seen in chapter 2, the two villages further north, which are located in the continuum of Randu and whom I pseudonymise as Onnu, are peopled by fishermen who initially migrated from the border between Tamil Nadu and Kerala (some 50-70km south)⁶⁹. As they were venturing to the sea like most of the fishermen of this stretch about whom academic studies have been made, they were also part of the motorization of artisanal fishing boats in the 1980s. On one hand, this motorization helped increase the catches and soon gave a stronger political position to these fishermen⁷⁰ (Bavinck 1997; Subramanian 2009; Sundar 2011). They were indeed the core of the notorious “fish-workers movement” which defined itself against trawling and achieved considerable political and regulatory victories in the late 1980s and 1990s⁷¹. On the other, as also first noted by Platteau (1989) and, two decades later, by Subramanian, the motorization of artisanal boats was already illustrative of the ‘incorporative logic of capitalism’ (2009: 202-3), which suggests that we must not forget this

⁶⁸ In terms of local dynamics, the interaction with the Muslim communities south were always limited. Moreover, many informants reported that villagers from Randu, albeit more indigenous to the place than their northern neighbours who migrated from the southern tip of India a few generations back, were always looked down upon by the latter due to their relative poverty and the fact that they were not venturing to the sea in order to catch fish. Informants half-worriedly admitted that it is not until recently that villagers of Randu and Onnu would accept inter-marriages, a key indicator of mutual social perceptions

⁶⁹ Called ‘gladiators of the sea’ by one of my informants, these fishermen are known to be brave, skilled, and to therefore have always ventured to the sea under any circumstances to catch their fish.

⁷⁰ Interview with an academic expert on the fisheries of Kerala in Nagaram, 16 October 2018

⁷¹ Ibid.

trajectory when writing the recent socio-environmental history of the locality and, more broadly, of the coast.

Backing the claim that there was little interaction between these villages, the decades-long activist B. Jacob⁷² shows that the increase of motorised boats in Onnu did not reduce the shore-seine fishing in other villages. These two techniques did therefore also not compete with each other (Bavinck 2001).

Analytically, this lack of interactions, the different fishing practices and wider socio-economic trajectories shed light on the heterogeneity of the different elements which would be assembled into a frontier subsequently (Nail 2017; Cons and Eilenberg 2019).

4.1.1.3 Technological Pre-conditions: Capitalist Expansion and 'Intermediacy'

In terms of technological pre-conditions, an 'already well-developed artisanal fishery' (Devaraj and Smita 1988: 283) has historically made Nagaram district a 'non-trawling' zone (cf. chapters 1 and 3). This is the result of a mix between ecological conditions (fertile seabed and high biodiversity, cf. Sinha (2012)) and the activism of the Kerala 'fish-workers movement' in the 1980s and 1990s (cf. General Introduction; cf. next sub-section; and cf. Baviskar et al 2006; Nayak and Vijayan 2006; Sinha 2012), which was particularly strong in and around Nagaram.

In the district then, any form of mechanised fishing is prohibited within 30 metres-depth off the shore (G.O. (P) no. 18/2018/F&PD para. 3 (3) for the latest official regulation), versus 20

⁷² Unpublished study.

metres in other districts of the state. No trawler is docked in any harbour of the district. This study therefore takes place in an exclusively 'artisanal' setting which spreads throughout the entire district, but which should however not be romanticised.

4.1.1.3.1 The Motorisation of Artisanal Craft: Economic Emancipation and Increased Stress on the Environment

In the General Introduction, I explained that the artisanal fish-workers developed a twofold reaction to the trawlers threatening their livelihoods. The first was a social movement, the KSMTF, which I introduced in the General Introduction and to which I come back below in the specific context of this chapter.

The second and parallel reaction took the form of a milder, more controlled and bounded, technological innovation: the gradual motorisation of their craft (Kurien and Achari 1990). For this development to make sense to the general reader, it is highly important to distinguish motorisation from the mechanization mentioned above. As the name indicates, motorisation essentially consisted in adding small outboard engines on the wooden, and later plywood from the mid-1980s onwards⁷³⁷⁴, boats used by the artisanal fishermen to allow them venturing further into the sea. The fishing gear however remained manual and passive, as is still the case nowadays, and the horsepower of these motors as well as the size of the boats bears no comparison with the mechanized boats mentioned above (Kurien and Willmann 1982; Gulbrandsen and Andersen 1992; D'Cruz 1999 among many others).

⁷³ Interview with Albert, fisherman in Onnu, 9 November 2018.

⁷⁴ Focus group discussion with three experienced fishermen involved in mechanization at the time in Onnu, 15 November 2018.

In an interview we had in person in October 2018, a prominent academic expert of the fisheries came back on this phase of motorisation and its effects. In his words, this phase, which comes as the Fishworkers' movement was gaining political momentum (cf. above) contributed to democratize modernisation, making it affordable to everybody. Obtaining outboard engines had taken a dimension of 'struggle', as was perceived by the most academic leaders of the movement to be a *weapon of the weak* (Scott 1985). For some of the more militant fishermen, a feeling of now being able to 'go after trawlers'⁷⁵ and, in some cases, harming their workers and burning the craft, was growing too. Having personally tested the first four outboard engines (OBM henceforth) implemented in Kerala, the eminent academic referred to just above recalls not being convinced about the future of these engines and confronting Fr Kocherry⁷⁶ about it, as he feared that they would 'enslave' (sic) the other forms of artisanal fishing, such as *kattumarams* typically, which are operated by rowing manually. Ideally, he contends, artisanal fishing should have relied on multiple sources of energy. Instead, by seeing a rapid expansion of OBMs owing to their affordability and potency, he notes that the EROI (Energy Return on Investment, or energy used per kg of fish caught) has kept evolving towards a negative energy balance, i.e. increasingly more energy used to catch less fish.

The plywood boat, which allowed for the same qualities of the *kattumaram* but are unsinkable, and especially the OBMs were later complemented by the use of increasingly powerful lights and of artificial reefs (cf. chapter 4), but these represent increments rather than fundamental technological shifts. As the trawlers continued their activities further off

⁷⁵ Interview with an academic expert on the fisheries of Kerala in Nagaram, 16 October 2018

⁷⁶ Fr Thomas Kocherry was the emblematic leader of the KSMTF—the Fishworkers' movement introduced in the General Introduction.

the coast and the artisanal boats were getting motorised, the stress on the fishing commons became heavier too and arose as an increasingly prominent source of concern on the ground, as well as among academic and activist circles⁷⁷. In parallel, the economic situation of fishworkers was improving along some indicators (especially increased and more regular catches) but deteriorating along others, pointing to doubts over its sustainability over time. Indeed, a prominent scholar of the fisheries insisted during our interview that the credit-to-income ratios of the artisanal fishworkers increased from representing half of a yearly income before motorisation, to as much as five years of annual income nowadays⁷⁸. In addition to commons being overly stressed and thus increasing the likelihood of future depletion, fishworkers were thus getting increasingly indebted too.

The increased stress on the fishing commons and the questions over the sustainability of the economic improvements that are intimately tied to it are very important to keep in mind, since they represent the context in which the subsequent empirical analyses below and in chapter 6 unfold.

As the stress over the fishing commons became heavier, the catches scarcer and the technology increasingly ‘modernised’, many authors started insisting that the boundaries between ‘modern’ and ‘artisanal’ were becoming artificial and blurry, an impression compounded by the fact that artisanal fishworkers had also started working as labourers on trawlers during their lean season (Platteau 1984; 1989). Despite undeniable convergences, I showed in chapter 3 that we can still think of the ‘artisanal’ sector as a relevant analytical category. The next section leans on this understanding.

⁷⁷ Ibid.

⁷⁸ See Kurien (1981) for more data.

4.1.1.3.2 The Resulting Multi-Dimensional Intermediacy of the Artisanal Fishing Community

Subramanian (2009) argues that as a result of the Fishworkers' movement and of the motorisation of their craft, the artisanal fishing communities had achieved a position of manifold—or multi-dimensional, i.e. manifesting across different analytical planes--*intermediacy*, that I unpack below.

This notion of intermediacy is built on three pillars. First, the embrace of regional politics (by voting for parties with a clear Dravidian identity rather than for the more traditional parties). While her fieldwork took place in neighbouring Tamil Nadu where the political scene is very different, this pillar is rather irrelevant in the case of Kerala. Here indeed, the coast was traditionally a votebank of one of the two dominant parties and has since then become fiercely competed for by its rival. At the scale of Kerala, these parties tend to alternate in power, each party defeating the other every five years. During my fieldwork, I did not see any sign of identarian political parties rising on the coast. The two other pillars of her notion of intermediacy are however directly relevant at several levels.

Secondly, then, the motorization of craft achieved in the 1980s and referred to above, is seen as a form of technological intermediacy, since it belongs 'between the capital-intensive advanced technologies of the "West", driven by large scale production and profit, and the traditional subsistence technologies of developing countries' (2009: 173). The important part here is that it brings a recognition that artisanal fishing communities use a distinct set of technologies, which sets them apart from the mechanised sector. As heterogeneous as it may be, this set of techniques thus represents one facet that enables the distinction of a certain

category of fishers. Subramanian (2009) further adds that innovations in terms of craft and gear which would have failed to pass official regulations set by the Fisheries Department (e.g. lamps and artificial reef, cf. chapter 4) would be more likely to be allowed in these in-shore waters. As a corollary of this community-based setting and management of local customs, any technology refused by the community would be abandoned, thereby preserving a form of homogeneity. In the next section, I delve into these techniques and their connection with the complex identity of the contemporary artisanal fishing community. In the next chapter however, I show that this categorization of 'technological intermediacy' breaks apart around my first fieldsite when significantly more powerful techniques are introduced, dismantling this impression of a unified artisanal fishing community and pointing—along other events—to the assembling of a frontier (Cons and Eilenberg 2019).

Third, Subramanian (2009) shows how the artisanal fishers delineated a 3 nautical miles zone in which no trawler would be able to come, and managed to become its *de facto* rulers. Under the pressure of the Fishworkers' Movement, the state later came to legally back their enforcement of this territoriality, without ever taking it over either. As such, 'artisanal territoriality became a weapon in the trawler wars, the absolute distinction between artisanship and trawling made access to the inshore sea contingent on only a single factor: no trawling' (Subramanian 2009: 188).

From this manifold position of intermediacy, Subramanian (2009) contends that artisanal fishworkers actively make claims, through shifting alliances with different institutions like the Church and the state in particular. Analytically however, the important point for the overarching argument developed in this thesis is that Subramanian's (2009) overtly processual lens leads her to demonstrate that the artisanal fishers carved a distinct and multi-

dimensional positionality of intermediacy by the end of the 20th century. If they do not use this terminology, scholars like Sundar (2011), Hoeppe (2007), Baviskar et al. (2006) point to similar conclusions. In light of chapter 3, it is important to note that this manifold intermediacy also contributes to strengthen the effect of a distinct artisanal fishing community.

While this notion which aptly dispels any romanticising, I however challenge it in the next sections, on the basis of the two following foundations it assigns to this intermediacy. First, the motorization of craft achieved in the 1980s, as a technology that blurs the boundaries between tradition and modernity (Platteau 1989) since it belongs 'between the capital-intensive advanced technologies of the "West", driven by large scale production and profit, and the traditional subsistence technologies of developing countries' (Subramanian 2009: 173). Second, a territorial control over the inshore sea which—as seen above—effectively enforced a certain technological homogeneity and strictly kept trawlers outside.

This concept of intermediacy is also questionable because while not romantic, it tends towards essentialism in that it assumes a socio-technological homogeneity that, as the above village-portraits show, never truly existed. Unnoticed so far, this point becomes important in the post-harbour trajectories analysed later in this chapter, where I further show that this position of intermediacy itself is also unmade as these transformations take place.

4.1.2 Cheriya Pozhi Harbour: a “Bottom-Up” Development

In outlining my theoretical framework, I have explained the importance of going beyond the *production of nature's* (Smith 1984) fundamental rigidities. Albeit implicitly, this framework and its neo-Marxian ramifications often assume the intervention of major actors such as the state or private corporations in processes of accumulation and dispossession (Harvey 2003; Smith 2007 but also Perreault 2013). As I show below, the impetus for the construction of Cheriya Pozhi harbour, which in turn makes visible the contingent role of nature (Perreault 2013) in assembling the frontier (Li 2014b; Cons and Eilenberg 2019) I refer to in this chapter, comes from the artisanal fishermen themselves, from “within”. In this sense, the scenario around Cheriya Pozhi and its subsequent development rather resembles a trajectory a la Li (2014a), where the main agents at the nodal point of the chain of subsequent transformations (Nail 2017) are the local people themselves.

In the above context, the central preoccupation at the time was indeed for Onnu fishermen to increase the safety of their outings at sea, especially during the rough monsoon season (June-August), and thus partly driven by contingent natural conditions too. In this sense, I see the harbour as being “from the people, for the people” or, in comparison to the Thuramukham International Seaport (cf. chapters 5, 6), a “bottom-up development”, even though it was of course subsequently built by the State Government of Kerala and is yet to be commissioned by the latter. The harbour was thus not imposed on the local fishing community, but rather demanded by it. As mentioned above, the role of the state is not left uninterrogated, but rather tackled in chapter 7. This separation is deliberate, as it aims to

reflect both the heterogeneous features of the assemblages—as well as the sequential character of the processes—analysed in this thesis.

As briefly restated in the previous sub-section as well as explained in a more detailed manner in the General Introduction, the (artisanal) Fishworkers' Movement (KSMTF) was benefitting from a momentum, materialised in legal victories over mechanised fishing (e.g. a seasonal trawling ban throughout the state), in the 1980s and 1990s (Baviskar et al 2006; Sundar 2011; Sinha 2012). B. Jacob, one of the most experienced environmental activists in the district (cf Baviskar et al. 2006), explains that the initial demands for the harbour therefore stem in this context of relatively favourable bargaining power highlighted elsewhere by Subramanian (2009). They also stem from the nearest fishing harbours being over 30 km away from Onnu, and the difficulties that come with this situation during the monsoon, such as over-crowded harbours (and resulting conflicts) as well as expensive (im)practical arrangements. In short, the pre-condition of collective power through the KSMTF as well as of the use of motorised boats for which safety is essential since they venture to the sea were both key to set things in movement.

Anthony, a fisherman from Onnu and KSMTF district coordinator, recalls that the protests and picketing for the harbour started in 1987, under the leadership Father Kocherry, widely considered to be the leading figure of the KSMTF: '[we] started picketing railway stations, then [we] started picketing State and Central Government offices, then started picketing State highways, National highways and all like that [we] started picketing and protesting against all

these government for [our] harbour⁷⁹. The initial response of the state was coercion, as Anthony continues recollecting his memories: ‘many of us got attacked with *lathi* [stick] and all other things in a very bad manner ... many got injured and most of [us],...about around hundreds of fishermen and fisher women even with children, got arrested and jailed in sub-jails of Trivandrum district’. However, at a time which was the apogee of the KSMTF, the latter gained traction. Eventually, the state government indeed declared that a harbour would be constructed. Happy with this outcome, the artisanal fish-workers nevertheless wanted to ensure that the harbour would not be hijacked by trawlers coming from outside of the district. B. Jacob adds that despite a few voices raising the prospect of possible erosion and accretion, which was nevertheless much less studied or documented at the time (cf. chapter 6 for the case of Thuramukham), the fish-workers’ satisfaction in seeing the harbour as a result of their strikes dominated and relegated such suspicion in the backdrop⁸⁰.

Despite this victory, the movement remained opposed to trawling boats and therefore saw the construction of a harbour which could have the capacity to accommodate them with much suspicion. ‘And so, after several rounds of negotiations with the government, Father Kocherry obtained that it is a mini-harbour that would be constructed instead.’ According to Anthony, ‘we did not know what plan they are going to execute. We only knew that the Government Order sanctioned an amount of 13.7 crore Rupees [+/- 1,450,000 GBP] for this project, which was then build by sub-contractors working for a local company who had obtained the tender⁸¹’.

⁷⁹ Interview with Anthony, fisherman and local KSMTF coordinator, 10 November 2018

⁸⁰ Unpublished study

⁸¹ Interview with Anthony, fisherman and local KSMTF coordinator, 10 November 2018

Initially, the harbour was first constructed following a certain alignment, which was subsequently rectified in 2013, as a Harbour Engineering Department (HED) official told me that ‘severe sand deposition was happening for 4 to 5 months every year⁸²’. The deposit of sand in the harbour has made it unsafe, and thus paradoxically failing to its initial mission. By the time of my fieldwork, in July 2018, over 60 fishermen had already lost their lives in the harbour. As I will show at the very end of this chapter, this is the reason why Agarwal group, aided by an accreted shore at the south of the harbour, entered the area. Anthropologists have long argued that it is quite common for infrastructure to become visible through its failures (Larkin 2013; P. Harvey et al. 2017 for reviews), and the tragic deaths in its uneven sea-mouth make Cheriya Pozhi harbour no exception if we are to look at the relatively rare instances in which the harbour gets attention from the local media (e.g. Mathrubhumi 12.09.2017).

Permanent Erosion and Accretion

When they refer to the faulty construction of the harbour, my informants however also mean to refer to another phenomenon that started occurring as soon as the breakwaters were being constructed: the northern beach erosion and southern beach accretion.

I have briefly explained the seasonal cycles of beach formation and erosion in the first subsection of this chapter. The result of the construction of two breakwaters perpendicular to the shoreline has not only had the effect of “fixing” the *pozhi* (cf. above), but also resulted in

⁸² Interview with Cheriya Pozhi Harbour Engineer, 8 October 2018.

the permanent interruption of the seasonal cycle of beach formation. Indeed, as the strong currents during the monsoon take the sand away in a South-Western direction, the breakwaters prevent them from returning where they came from after the monsoon season. Concretely, as a reminder, this means that year after year on an always longer stretch, the shore shrinks north of the harbour and expands to its south. Having shown that the shore was part of various co-productive relations in the previous chapter, I therefore delve into the consequences of their dismantling below.

4.2 The Marine Consequences of Shore Erosion and Accretion

In this section, I look at the first consequence of the erosion of the shore north of the harbour by focusing on the sea and the fishing activity. At sea indeed, the conjunction of the loss of the shore with the specific ecological (backwaters) and socio-economic (migration and networks) contexts outlined above resulted in the adoption of a fishing technique (essentially gear, but which requires larger craft too) which, even to date, is not used anywhere else in the ecologically unique district of Nagaram (cf. previous section).

As also announced in the introduction, the main analytical contribution of this section thus lies in taking up Perreault's (2013) call for greater attention to the role of nature in processes of accumulation, but thus also in shedding light on the 'extra-economic means through which dispossession occurs' (ibid: 1054).

4.2.1 Introduction of the Ring Seine and Initial Suspicion

As explained in the first section of this chapter, the first two villages on the northern side were fully dependent on shore-fishing, and were thus also the very first to be hit by the erosion of the beach. As I had learned early on, in the experience of the fish-workers from Randu, the abrupt disappearance of the shore led to an equally abrupt and total occupational loss for these fishers. In this context, the already ongoing migration to the Gulf intensified exponentially, as many were searching for better income. Meanwhile, some migrated to the north of Kerala, where they got a first exposure to ring-seine nets (ibid.). Ring-seine nets, in short, are nets which are used to indiscriminately circle schools of fish (D’Cruz 1999). Much bigger and heavier than the ones operated by artisanal boats, they also require the purchase of far more powerful craft (inboard or outboard engines) and had not been operated in Nagaram district until they were introduced in Randu.

Not as big as trawling boats and, unlike them, not operating their nets mechanically either, they still qualify as ‘artisanal’ and required an investment which was *collectively* affordable. Because of their much bigger capacity than those used on motorised boats, they allow for exponential catches and, as seen below, for much more income too. They however still fit Subramanian’s (2009) wide-encompassing definition of the technological intermediacy laid out in the previous section, and by the same token highlight its essentialist flavour. As this section shows, technological differentiation leads to further socio-economic differentiation within an already heterogeneous artisanal fishing community, and shows that any inference deriving from her concept of ‘intermediacy’ is therefore time-bound and contingent.

Analytically, once it was triggered by alterations to the shore's materiality, the contingent trajectory that the adoption of ring seine fishing represents took this form and not another (Li 2014b) for two reasons. Ecologically, the backwaters⁸³ right behind the village and whose access to the sea is mediated by the harbour, made it possible to dock these boats. Socio-economically, migrations brought ideas and capital. These pre-conditions are thus fundamental to the assemblage of this frontier in this particular fashion (Nail 2017).

Johnny, who was allegedly the first person to bring a ring-seine boat in the area, recalls that when he and his friends brought the first boat to Randu, 'no one supported [it/us]⁸⁴'. This means that within the village too, initially, these boats were seen with much suspicion: 'the whole *kambavala* natives were against us. But we don't give up'. Putting bits and pieces of conversations together, I understood the fear of disruptive novelty that drove this opposition. Mostly, and against Johnny's own initial assessment, the brutality of the disruption seemed at odds with a struggle against trawlers (cf. previous section for brief context; cf. General Introduction) and the practice of quasi-manual fishing. After all, others had earlier reminded me the leader of the KSMTF had been the priest of Randu's main parish in the mid-1980s. This place had been, in a way, the heartland of the resistance to trawling. This overall suspicion was further compounded by the fear, held by many, of being excluded from the suddenly available "unfair" money. This discourse—mixing fear and morals—however seemed to witness the early stages of a new pace and magnitude in the economic realm taking precedence over the environmental one (Polanyi 1944; Gudeman 2001, 2008; Sud 2020a; 2021).

⁸³ Inland lagoons, which are parallel to the sea

⁸⁴ Interview with Johnny, ring-seine boat owner in Randu, 4 October 2018.

4.2.2 Proliferation of the Ring Seine and Increased Monetary Gains

4.2.2.1 From Coping to Prospering

Quickly enough, the opinions changed. In a fashion seen in Li's (2014a) account of the formation of capitalist relations in Indonesia, the advent of ring-seine fishing has given rise to an enthusiastic discourse on *freedom* and *hard-work* in Randu.

Indeed, Johnny insists that 'in this boat, anyone can work. In Nagaram only, people are using small boats [like those used in Onnu] and living like this [precariously]...See, in small boats only the experienced or technically good [fishermen] can work, but in big boats anyone can [work], even the blind. It is good for more people⁸⁵'. For a village that lost its entire shore and an already precarious livelihood (cf. chapters 2 and 3; Dhanuraj 2004) in turn, this argument was of course powerful.

The monetary gains however quickly went beyond basic needs, and saw the rise of new standards of living. As an illustration Mary, the daughter of a ring-seine fisherman, estimated that her father had multiplied his monthly income by approximately twenty since he started working on these boats. Johnny quite confidently adds that 'people even left their job from [the] Gulf and joined us due to high income. Income is approximately 2 lakhs⁸⁶ which is a huge amount to them - even they can't earn it from [the] Gulf⁸⁷'. According to him and many others,

⁸⁵ Interview with Johnny, ring-seine boat owner in Randu, 4 October 2018.

⁸⁶ 1 lakh = 100,000. Moreover, 1 GBP = 100.64 INR (as per 25 January 2021). Hence, INR 2 lakhs equals slightly less than GBP 2,000 (yearly).

⁸⁷ Follow-up interview with Johnny, 26 November 2018.

these boats did not guarantee employment to most villagers, but they indeed helped owners raise their standards of living far beyond what they had ever been.

These new income ranges in turn alters ways of life, and aspirations. Bringing 'new versions of the future into the present' (Bennike et al. 2020), these aspirations, I argue, form an essential part of the frontier assemblage itself and further reinforce its dynamics. In other words and as we see in the next chapters too, they are both an effect and a driver, both mutually reinforcing each other as the frontier unfolds.

In addition to the visibly nicer houses and sometimes cars or clothes that it has allowed for, it is important to stress that the increase in income referred to by everybody in Randu goes along with a *landward shift* in the outlook on the future that my interviewees were holding. More concretely, through education, my respondents were actively shifting towards what they and the wider society saw as "mainstream" occupations. This was the case of Johnny's daughter studying medicine in Georgia (former USSR), Charles the young architect or Robert's children who were all attending English-medium schools and were confidently chatting in English with me to the pride of their father.

In an early presentation of this work at a conference, a reputed Marxian scholar suggested that the financial gains and improvement in living standards could point to the beginning of a process of class differentiation. This differentiation, however small its scale would be in the present context, is a byproduct of the expansion of capitalism (Levien et al. 2018). As such, it would first manifest through new income ranges, as witnessed here. However, increased income in itself is not sufficient to signal either the emergence of a capitalist class in the strict academic sense in which this concept has been studied. Indeed, Patnaik (1976) among others

insists on the importance of ownership patterns (especially the concentration of ownership of land—in agrarian settings—and technology) and changes therein. The division of labour, or labour relations, are also key parameter to scrutinise when looking at social differentiation (Bernstein 2010). Moreover, credit/debt relations are crucial too since they shape the control of land, labour and capital and, in this sense, significantly contribute to determining processes of social differentiation (Gerber 2014).

In the present thesis, although I have gathered testimonies about increased income and witnessed nice houses, clothes and cars, I lack data on ownership patterns, labour relations and credit/debt. These themes were not at the centre of my inquiries or methodology, and were also not themes that informants would bring up spontaneously. I am therefore unable to convincingly conclude as to the actual emergence of a capitalist class within the artisanal fishworkers.

This question would nevertheless be worth following over time, since this process—the emergence of a capitalistic class, in caricatural terms—has been long studied in inland agrarian settings (Patnaik 1976; Levien et al. 2018), but is much less talked about in the fisheries. Sundar, for instance, prefers to use a Polanyian lens to socio-economic transformations which ‘eschews the Marxist teleology’ (2011: 10) and looks at counter-movements instead. As discussed in chapter 1 too, potential considerations over class differentiation should not suggest that a class-lens determines either my empirical data, or the conceptual orientation of my work as first-generation political ecology could have suggested at times. Yet, in the reconciling and eclectic perspective which this thesis tries to follow, it would be equally counter-productive to fail to recognise such phenomena if they were to be backed by further data.

4.2.2.2 New Entrants and Increased Dissociation from the Sea

With time, the differentiation amplified with the entry of investors external to the fishing communities into the fishery. Venturing into ring seine fishing appealed to both people who had amassed wealth elsewhere, and to others who were hoping to recover losses made in the coir business.

Indeed, in light of the obvious qualitative improvement in many life indicators of the local population, the number of ring seine boats started expanding both in Randu, but also subsequently on the southern side of the harbour, in Moonu. Even though there is no official record, my informants estimated them to 50-odd⁸⁸ in total as of October 2018⁸⁹⁹⁰. In Moonu however, these new entrants came with much money but no prior connection to fishing.

Adeel, who lives in a big and well-decorated house far away from the shore, is one of these new entrants. Crucially, he is also mostly involved in some construction business which has nothing to do with either fishing or the shore. As he explains, the relationship between owners and workers is even more distinct in Moonu than in Randu. Unlike on the northern side where the owners also lead the boats and the workers at sea, it is the workers who operate the boats in Moonu: 'they are working as if it is their boat, so I never interfere in their internal things or internal boat problems. I will never interfere. Everything is up to the workers. Workers only are managing everything⁹¹'. But this is only possible when the workers are local fishers who know the sea, and/or have some technical notion of ring seine fishing also acquired elsewhere, before the boats came to the area. This is why some owners in

⁸⁸ Spread as about 30/20 on the northern/southern sides.

⁸⁹ Informal chat with Melvin, fisherman in Onnu, 1 September 2018.

⁹⁰ Interview with Albert, fisherman in Onnu, 9 November 2018.

⁹¹ Interview with Adeel, ring-seine boat owner in Moonu, 18 October 2018.

Moonu, unable to recruit knowledgeable fishers, lost everything due to their inability to operate their boats like Nasr, a man who was not very willing to expand on his failure⁹².

In this setting, it is also not surprising that the owners' appraisal of ring seine fishing also clearly reflects a purely monetary language of valuation (Martinez Alier 2012), which reflects a progressing estrangement from 'nature' (Hailwood 2012) on which I further reflect in chapter 6.

Analytically, the concept of a gradually assembled frontier (Cons and Eilenberg 2019) thus aptly reflects the transformation taking place around the harbour. Investment opportunities and the expansion of capital transformed the socio-economic landscape in the villages surrounding the harbour, and illustrate a shift from environmental to economic valuations (Martinez-Alier 2002; 2012) as aspirations shift towards the land and towards the longer term. Crucially to the central argument of this chapter, the changing materiality of the shore pre-dates institutional arrangements (hence complementing with Lund and Rasmussen 2018 or even Li 2014b) since it is the element which, once moved, enables the shift from margin (cf. General Introduction; chapter 3) to frontier.

4.2.2.3 Opposition from Onnu: Environmentalism?

The assembling of the frontier on the coast surrounding Cheriya Pozhi should however not be seen as a trajectory embraced by all. Indeed, the introduction of ring seine boats obviously raises concerns in ecological terms. These have mostly materialised in the conflicts with the

⁹² Interview with Nasr, recent investor in ring-seine boats in Moonu, 21 October 2018.

northern neighbouring village of Onnu, whose fishers were economically and technologically “dominant” prior to these transformations.

As explained briefly above, fishermen in Onnu very majoritarily operate small boats with outboard engines. As such, they oppose ring-seine fishing on the grounds that it puts an irreversible stress on the fish resources. More concretely, ring-seine nets and their supporting crafts allow for an intensified (by their size) and indiscriminate (by the small mesh and the “circling” technique they involve) extraction of the fish. Instead of the 5-6 people’s crew used in Onnu, their crews can be 30-50 men strong. The monetary gains on which I expanded at length above thus come from larger and fresher catches, in proportions considered excessive by the residents of Onnu. There is no aggregated objective data over time on the number of fish caught, but the lived experiences of Onnu fishers sheds some light on the stress caused by this increased social metabolism⁹³ (Martinez-Alier and Muradian 2015b).

To date, David’s testimony, best summarises the dominant concern in Onnu, namely that “[w]hen Randu people come, they take almost all the fish and there is no fish left for the next generations. In the next 10-20 years, there will be no more fish here⁹⁴. Resonating with features of an underlying moral economy⁹⁵, the word that was the most associated with ring-seine fishing, during my two rounds of fieldwork in Onnu, was “greed”. The exponential growth of catches, according to them, is justified by nothing. And besides permanently depleting the sea of its precious fish resource by taking juvenile fish in their indiscriminate small mesh nets, they also push the prices down by flooding the market with their catches. This, of course, puts a double financial—and opportunity—stress on Onnu fishermen. Over

⁹³ Here, the increased consumption of energy through more powerful boats

⁹⁴ Interview with David, fisherman in Onnu, August 2018

⁹⁵ Carrier (2018) for an extended and updated discussion

time, it is further likely that the pressure put on the fishing commons results in their full collapse⁹⁶, with in turn all the major fluidities associated with it as seen in chapter 1 (the community especially, however heterogeneous).

Alongside their economic enthusiasm, my informants in Randu moved their response into a very different realm altogether: God would first of all reward honest workers like them⁹⁷, but also ensure the sufficient reproduction of fish. Conveniently, the divine realm would therefore fix the growing imbalances between the goals of humans and those of the biosphere (Milukak 2008).

Romanticising Onnu's environmentalist discourse, equally framed in terms of future generations but along more environmental lines than in Randu, is however dangerous too. Indeed, it does not solely reflect an essentialized 'environmentalism of the poor' (Martinez-Alier 2002) or a 'cultural difference' (Escobar 2008) with other communities less entwined with nature. Rather, as argued by Baviskar et al., the fishers from both sides 'make nuanced claims about which environmental values need to be prioritized' (2006: 247). This said, even in Onnu, they increasingly incorporate economic opportunity too. As a matter of fact, the motorised techniques from Onnu also keep increasing their social metabolism. The use of more and more powerful lamps, artificial reefs and bag seines end up increasing the pressure on the commons too, as many have argued regardless of the technique they use themselves. Conjugated with the fact that Onnu has at least five to ten times more fishermen than Randu, the combined effect of their slower but nevertheless real technological expansion nuances

⁹⁶ This has been witnessed in Alapuzha, where the ring-seine boats were purchased second-hand from, according to my interview with the managing director of a federation of fishing cooperatives in Nagaram, on 6 September 2018

⁹⁷ Interview with Johnny, ring-seine boat owner in Randu, 4 October 2018

their dominant environmentalist discourse. To further illustrate this ongoing shift, I noticed in 2018 that a few fishermen from Onnu had started periodically helping on ring-seine boats of their supposed enemy in Randu⁹⁸. Others, while still condemning ring-seine fishing as a whole, had started adopting a more compassionate discourse. By acknowledging the ‘right of these fishermen to live from fishing⁹⁹’, they were effectively also relativising the analytical implications of their environmental discourse.

Moving beyond discourse, these material practices have conceptual consequences too. As the territorial control on the inshore sea—characterised by Subramanian (2009) as exclusive to a technologically homogeneous artisanal fishing community—is now disputed, an outcome resembling the tragic fate of Li’s (2014a) fieldsites and informants, whose capitalist expansion precipitated their own socio-economic collapse, becomes a growing possibility. Along with an increasing estrangement (Hailwood 2012), new ‘modes of appropriating’ (Baviskar et al. 2006: 247) the (marine) nature result from its transformed materiality (the shore), and new patterns of opportunity, valuations and exclusions therefore characterise and expand the newly assembled frontier here. In other words that tie directly with the overarching argument of this thesis, the co-productive relations between sea, shore and community laid down in the previous chapter thus emerge as altered, or re-wired, as a result of the material changes to the shore.

⁹⁸ Interview with Suresh, fisherman in Onnu, 11 September 2018

⁹⁹ Interview Francis, fisherman in Onnu, 1 September 2018

4.2.2.4 Towards a Closer look at Consequences on the Commons

Because they catch more fish and more indiscriminately, the ring seine nets add pressure to the commons by making the fish scarcer, and thus the management of the commons by the community (cf. chapter 3) more tense, as the conflict above reflects. When thinking about the commons in the context of fisheries, it is useful to remember that the latter are often more specifically characterised as an open-access resource (Bulte et al. 1995), since property rights are incomplete and access to the fish is open (Benjamin 2001). This latter characterisation of course stresses the vulnerability of this specific type of commons, which are vulnerable to new entrants seeking profit (Bulte et al. 1995). In the case at hand, the situation is particularly interesting since Subramanian (2009) had shown that despite the open character of the inshore sea in legal terms, intermediacy had meant that the artisanal fishing community effectively managed it to the exclusion of external potential entrants. How are we then to think about the entry of ring-seine nets in terms of commons in a case such as the one evoked just above?

Here, my thesis reaches a point of junction between this thesis and the vast literature on the commons (cf. Vilamayar-Tomas and Garcia-Lopez 2021 for a review of the linkages between social movements and commons).

At this early and isolated stage (ring seine nets are not used in other parts of the district), it is however difficult to draw assertive conclusions related to the institution of property. Indeed, potential changes in terms of institutional arrangements were not clear-cut at the time of my visit, even at the informal level some stability had been reached, temporarily at least. It appeared that an understanding had been found according to which the ring-seine boats,

much like trawlers at the height of the Fishworker's Movement, would only be tolerated by the less technology-intensive fishers of Onnu if they stayed beyond a certain limit in terms of sea-depth. Informants in the village sometimes mentioned 3 Nautical Miles, and sometimes 5 or even 12. In an embarrassing display of my cultural biases and blind spots, I tried to understand this in rigid metric terms, but never really succeeded. More than an explicit rule, the takeaway seemed to be that ways had been found to avoid repeated clashes by having ring-seine boats fish further at sea. Some distance, away from the main fishing zones of mechanised boats to avoid direct competition over the same 'ecological niche' (Bavinck 2001: 134), seemed to be the idea. In practice, the direct clashes of the past about which I had been told seemed much less salient. I don't remember being told of any such direct fight during my time spent on this fieldsite.

Yet, there was no guarantee that these arrangements would either crystallise or change, since they didn't seem very clearly spelled out either (even informally). Even though the ring-seine was condemned outside of the villages where it was used, I was not aware of any organised process emerging from fishing cooperatives or other local actors had (yet?) materialised to contain the use of ring seine nets as has been the case elsewhere in India (e.g. resistance to the expansion of the prawn industry in Nayak and Berkes 2011). At this stage, I was only aware that the parish priests of the involved villages had sometimes had to step-in to calm incidents when they occurred, which means that they may also have contributed informally to temporary settlements meant at avoiding further incidents (cf chapters 3 and 7 for the role of parish priests in the life of my informants).

This relative indeterminacy at the time of my visit thus also implies that it would be important to keep track of possible institutional changes (both formal and informal) here, or resistance

thereto, to further characterise the transformations studied here, given how central they are to the expansion of a capitalist economy. In looking at the dynamics of capitalist transformation of the commons in an Indian context, Patnaik further insists that ownership of the commons (and patterns of exclusion) are but one side of the picture. Commoditisation is, according to him, the other aspect to which joint attention must be paid in order to fully understand the emergence of capitalism (2021: 39). This crucially implies that institutional mechanisms geared at maintaining the control ('management') of the artisanal fishworkers on the inshore sea would not suffice to preserve the commons. Rather, the sale of fish as a commodity would imply being caught in (neoliberal) dynamics of competition with transnational linkages, which would eventually anyway undermine the commons. In this sense, the race of Onnu fishworkers towards more efficient engines and lights could reflect such dynamics too. It appears, then, that preserving the commons would also imply 'breaking out of a regime of commodity production' (Patnaik 2021: 45) which presupposes deeper-ranging changes that my fieldwork did not (yet?) hint to. Looking ahead, Jeffrey Immanuel and Narayanan (2022) thus also draw attention to the risks that Blue Growth Initiatives and aquaculture in particular, even if not present or envisaged around this area at the time of my fieldwork, could entail for small-scale fishers in India as it threatens their social capital, itself also inherent to the 'base' (a form of commons) of their livelihood as characterised in chapter 3.

4.3 Erosion and Accretion of the *Shore as Land*

In the previous section, I have shown how the disappearance of the shore led to the assemblage of a new frontier on the marine side of the coast. In this section, I turn to the "land" side of things.

Fundamentally, through the consequences of coastal erosion and accretion, this section makes a powerful case for the analytical use of an assemblage lens, since it illustrates—as tangibly as it can get—how elements (the shore) of an assemblage can be ‘recombined with one another ad infinitum without ever creating or destroying an organic unity’ (Nail 2017: 23). Eschewing essentialisms, the transformation of the *margin* (chapter 1) into a *frontier* is best explained in processual terms that highlight the transformations of extrinsic relations between heterogeneous elements, among which aspirations have a particular place.

More concretely, I first look at the continuing loss of the shore north of the harbour, as it now threatens Onnu. Severing the relationship between community and sea that I qualified in chapter 3, I reiterate its paramount importance in terms of access by critically reflecting on both Ribot and Peluso (2003) and Subramanian (2009). In the second half of this section, I then move on to look at the accretion of the shore on the southern side of the harbour, in Moonu. Through an upcoming touristic project as well as, more crucially, its use for an Agarwal group facility, the shore becomes *land*. There, this frontier folds empirically and conceptually into a bigger one, the Thuramukham International Seaport, which is my second fieldsite and the object of the two chapters that follow.

Analytically, this section completes the sketch started in the previous one in further showing that it is the changing materiality of the shore that creates new patterns of exclusion, opportunity and aspirations, which are at the core of this frontier’s unfolding. This contrasts with a land that ‘stays in place’ (Li 2014b: 591) and, more broadly, further informs studies focusing on the emerging institutional arrangements around frontier spaces (Rasmussen and Lund 2018; Lund 2019).

4.3.1 Shore Erosion in Onnu

The pattern of coastal erosion evoked above keeps expanding northwards, year after year. It had thus started affecting Onnu by the time I was conducting fieldwork in the area, as over 200 houses had already been washed away.

When asked about the biggest problems in his locality, Roger, an Onnu Panchayat¹⁰⁰ ward member, responds without hesitation that ‘the main problem is with the sea only. When the monsoon season starts, that problem starts and we have storms and the water comes¹⁰¹’. By this, Roger means erosion. And even more specifically, he means that the water comes and lashes on the houses built on the shore, which then either destroys them, or at least makes them improper for being inhabited.

In this situation, the State Government of Kerala¹⁰² decided to initiate a large-scale resettlement process. In essence, this re-settlement project entails moving all the houses on the shore beyond the CRZ¹⁰³, which in practice means at least 200 meters away from the high-tide line. However, given the particular situation of Onnu (caught between a backwater and the sea), this amounts to relocating the households outside of the village, in the hinterlands,

¹⁰⁰ The village level (smallest scale) of self-governance in the three-tier Indian Panchayat Raj system

¹⁰¹ Interview with Roger, Panchayat ward member in Onnu, 15 September 2018

¹⁰² Note the entry of a major institutional actor here, the State Government. While this chapter focuses on the effects of erosion/accretion on the lives of the villagers, the role of the State and the transformations it undergoes is of course crucial to this thesis. As such, I deal with institutions in a comprehensive manner in Chapter 7 of this thesis

¹⁰³ Coastal Regulation Zone, the area right next to the shore and subject to Central Government regulations, cf. chapters 6 and 7

and supporting them with a package worth 10 lakh Rupees [+/- 10,500 GBP], where 6 lakhs are granted towards the acquisition of new land and 4 lakhs towards the construction of the house. According to several local officials, when the Government approaches the fish-workers through its Fisheries Officer, 'they [are] not ready¹⁰⁴' to move for a variety of reasons. Consistently with the rest of this chapter, in this sub-section, I focus on the perspective of the fish-workers about moving away from the shore, and on what tensions this abrupt estrangement¹⁰⁵ from nature (Hailwood 2012) entails for them.

First of all, my respondents criticised the package for being financially insufficient. As a result, it increases indebtedness with private lenders—another feature of expanding capitalism (Gerber 2014)—and thus differentiation (Levien et al. 2018) too.

Besides the financial matters, though, Sharon—the wife of a fisherman—raised another concern: 'we were born and brought up here! The background is always the sea for us, so we feel that if we go farther away, we might not feel happy. We might miss the sea, that is the reason¹⁰⁶'. This estrangement (Hailwood 2012) touches directly upon the different meanings of the sea to the people living on the shore.

I have shown in chapter 3 how, like land in other contexts (Li 2014b; Rocheleau 2015; Sud 2020c), the shore is seen and lived multi-dimensionally by most fish-workers and their families. As seen in chapter 3, the fishing community also has exclusive access (Ribot and

¹⁰⁴ Interview with Roger, Panchayat ward member in Onnu, 15 September 2018

¹⁰⁵ Hailwood (2012) distinguishes this term from alienation, emphasising that the latter suggests the "taking over" by somebody else—possibly a later stage in the frontier formation

¹⁰⁶ Interview with Sharon, housewife living on the shore of Onnu, 11 September 2018

Peluso 2003) to the shore and, through this, to the inshore sea. I further explained early in this chapter that the latter was characterised by Subramanian (2009) as the territorial facet of the manifold (territorial, technological and political) intermediacy achieved by the artisanal fish-workers by the 1990s.

This forces us to reflect on materiality itself as a key determinant of Ribot and Peluso's (2003) theory of access, rather than on the various aspects pertaining to the surrounding human actors. More precisely, here, the materiality of the shore is described by the fishers as a *sine qua non* condition for their access to the fishing resources, as an informant summarised in the following words: '[t]he nets, the boats, ... Everything is stored here on the beach. We cannot carry it to the place of settlement, there [pointing towards the east, i.e. the land]¹⁰⁷'. If access is a bundle of powers (Ribot and Peluso 2003), this bundle of powers has very little significance without an underlying materiality which then becomes a pre-condition for such theories of accesses. Hence, when the latter changes, nothing guarantees that these bundles of powers remain relevant or unaltered. Consequently, like the technological one in the previous section, the territorial dimension of Subramanian's (2009) intermediacy gets undermined too. On the northern side of the harbour, as the shore erodes physically, the fish-working households of Onnu who reside on it are thus facing an irreconcilable tension between eroding access (Ribot and Peluso 2003) to equally eroding broader commons¹⁰⁸ on one hand, and safety on the other. Below, I delve into this tension to show the possibilities that it opens in terms of assemblage formation (Nail 2017; Cons and Eilenberg 2019).

¹⁰⁷ Interview with Melvin, fisherman in Onnu, 18 September 2018

¹⁰⁸ Cf. chapter 3 of this thesis for a longer discussion on their conceptualisation

For some, the hierarchy is clear. Sharon¹⁰⁹ indeed asserts that ‘safety is more important...unless you are safe, you cannot work in the sea’. This hierarchy has further implications in terms of trajectories. Indeed, some of my informants intuitively linked the re-settlement process with greater inter-generational transformations in the community. Indeed, ‘those who are resettled will go in search of other jobs. Once resettled they move on to the city, so one generation is losing out. Due to resettlement, they don’t come back for fishing¹¹⁰. She was referring to how, very often, children first fish to help their parents punctually. They would then be staying in the activity later, by choice, lack of other prospects, or a combination of both. In short, the broken link between the shore and the people was likely to further precipitate the dissolution of the fishing activity and community. The counterpart, which would be a better integration with the rest of society and thus a reduction of the marginality of the coast (Subramanian 2009; Sundar 2011; Cons and Eilenberg 2019) as illustrated in chapter 3 and in the General Introduction, was in her eyes all but guaranteed. In other words, this estrangement from nature (Hailwood 2012) was thus lived by many as a *de facto* exclusion. Unlike more institutional approaches (Li 2014b; Rasmussen and Lund 2018) which assume a stable materiality, the fact that the shore would continue eroding with or without re-settlement project clearly indicates that the ‘regimes of exclusion’ (Li 2014b: 589) are contingent on biophysical processes. First, the shore erodes/accretes. Then only, these regimes of exclusion become about delineating between different claims to legitimacy (ibid.; Hall, Hirsch and Li 2011).

¹⁰⁹ This argument is held by most women in the households and highlights a gendered, occupational difference in the relative importance of the multiple dimensions of the shore (cf. chapter 3)

¹¹⁰ Interview with Sharon, housewife living on the shore of Onnu, 11 September 2018

Despite most people's reservations, the arising opportunities for better integration were precisely what Roger, the Panchayat ward member, advocated¹¹¹. When detailing the merits he saw in the Government's initiative, he explained what he was telling people to this effect: 'it is good for your future ... if you are going somewhere else than this sea-shore, then your world [becomes] somewhat wide. You can get into touch with many other people...So that will change even your lifestyle. So, if you go somewhere else your children will get good education or some other things also¹¹²'. This aspirational argument neatly parallels the aspirational changes brought about by the ring-seine technique, as seen in the previous section. Once again, then, it becomes apparent that the *landwards* aspirations that emerge from (or, following Sundar 2011, are enhanced by) the changing materiality of the shore are an integral part of the frontier being assembled too.

Here thus, the re-settlement project strikingly highlights the growing tension between access to an eroding way of life on one hand and safety on the other. More fundamentally, from an assemblage viewpoint, it shows that subtracting the shore (Nail 2017)—a connection between sea and fish-workers as shown in chapter 3— from this coastal assemblage leads to the same broad outcome as the one pursued by Randu's ring-seine fishers: a livelihood increasingly disconnected from the sea. In both cases, I have shown the forceful extent to which the materiality of the shore is at the centre of these valuations and trajectories.

¹¹¹ In chapter 7, I show that because of alleged practices of financial abuse, this project also paradoxically illustrates an evolving and increasingly skeptical political subjectivity

¹¹² Interview with Roger, Panchayat ward member in Onnu, 15 September 2018

4.3.2 Towards a New Dimension: the Shore as Land in Moonu

As explained in the first section of this chapter, Moonu is witnessing an accretion of sand on its shore due to its location to the immediate south of the harbour. In discussion with the assemblage logic that I have been loosely pursuing so far, this shore accretion—the addition of an element—also leads to socio-economic transformations, whose trajectories I unpack in this sub-section as they further characterise the frontier being assembled along the coast of Onnu.

First, as seen above, patterns of exclusion, access and opportunity are primordially mediated by the materiality of the shore directly. They obviously have institutional consequences (tackled in chapter 7 and in much of the literature e.g. Rasmussen and Lund 2018; Cons and Eilenberg 2019; Lund 2019), but these come in a subsequent moment.

Therefore, in a situation of inverted symmetry with the northern side, the increased width of the shore has led people to build new houses. As seen in chapter 3, just like in Onnu in the past, the legal status of these houses is however, to say the least, quite ambiguous. Formally, these houses are encroachments, and no house has any land ownership certificate. In theory they are thus occupying Government owned-land, often referred to locally as *Poromboku* or, literally, ‘waste-land’.

Beyond easing livelihoods, the new accretion of sand has further prompted two projects that reflect change of dimension taken by the shore as it re-appears south of the harbour. Despite the support of the local residents, as shown below, contrasts with the resistance generally

expected (Levien 2013b) from such enclosures (Harvey 2003). Analytically, if these enclosures can indeed technically only be made through regulatory mechanisms (i.e. the right of the State Government to dispose of this “land”) as in Hall, Hirsch and Li (2011) or Li (2014b), these can only be activated because the shore accreted, and thus depend on the contingent role of nature called into greater scrutiny by Perreault (2013).

First of all, the accreted land is scheduled to be home to a touristic project.

According to Saleem, a local Panchayat ward member, ‘[the] government [is] supposed to do 30 crore¹¹³ project work. Now they gave 3 crores, so with that they are making one road [note: closer to the shore] and children’s park and all. After this project is over, they will use the other 27 crores. Like that now the project is going on¹¹⁴’.

Qassem, an ex-ward member, further explained that ‘recently only in our society this tourism awareness came. After that some people started to come here, but when the bridge came [in September 2015, The Hindu (2015)], that time only more people started to come¹¹⁵’. This of course increases the prospects of employment in allied activities, as well as the feeling the people have about their own place: ‘many people are excited that all development is going to come this side. And later the new wharf area will be the biggest tourism spot¹¹⁶¹¹⁷’.

Whenever I asked anybody about it in the locality, they would all support it regardless of their political affiliation or occupation. All their testimonies displayed an enthusiasm¹¹⁸ and hope,

¹¹³ Slightly more than GBP 3m

¹¹⁴ Follow-up interview with Saleem, shore-fisherman and Panchayat ward member for the first northernmost coastal ward in Moonu, 5 October 2018

¹¹⁵ Interview with Qassem, ex-Panchayat ward member, 8 October 2018

¹¹⁶ During my fieldwork, the southern breakwater was home to different stalls, where the vendors all showed great enthusiasm about the upcoming project

¹¹⁷ Interview with Qassem, ex-Panchayat ward member, 8 October 2018

¹¹⁸ Note that the local media report 3 crores as the total of the project instead of the 30 mentioned by my interviewees (Tourism News Live 4/10/2018)

no matter how vague the project or their knowledge of it was, which highlights the anticipations (Cross 2015) that come along with the assemblage of new frontiers (Li 2014b; Cons and Eilenberg 2019) and, in fact, are part of it.

Second and most significantly to the overarching picture, Agarwal Group Ltd, the major industrial group in charge of building the Thuramukham International Seaport 40km south (cf chapters 5, 6) is currently building a wharf on the southern tip of the harbour. While many people have different explanations as to how Agarwal group arrived in the locality, the conjunction of a few factors was at play.

First, the management and arousal of local expectation. Indeed, the group aimed at taming the anger of fishermen, particularly from Onnu, regarding the deaths that have taken place in the harbour due to the deposit of sand during the rough season. Increasingly, fishermen from the Onnu side had been angry and picketed the Executive Engineer's office. As a consequence, Saleem explained that 'the minister called one meeting and in that they came with [Agarwal] group and said okay we will start dredging but we are giving this to [Agarwal]¹¹⁹'.

As Saleem affirms, the process was simple: '[t]hey said they have a CSR fund, [and] since they are helping in Thuramukham project, they will do something here' [ibid]. He then added that many in Moonu 'think they are ready to do something' [ibid], by which he typically meant that they had expectations of Agarwal building schools as an old man once told me. It could

¹¹⁹ Follow-up interview with Saleem, shore-fisherman and Panchayat ward member for the first northernmost coastal ward in Moonu, 5 October 2018

also mean infrastructure, like the coastal road hoped for by Nabeela, another ward member¹²⁰. Clearly, institutional actors and politics start gaining more visible importance here. In line with the objective of this chapter (cf. introduction, conclusion) they are however tackled in chapter 7, after having laid out the complementary frontier assembling dynamics around Thuramukham (chapters 5, 6).

Secondly, though, it is not a mere coincidence that the Agarwal group was chosen for this task. According to an official of the Harbour Engineering Department, only Agarwal has a dredger available locally. Since it is an expensive and technically complicated operation, they were obviously in the best position to help. From Agarwal's side, there was an interest in the transaction too. Indeed, the industrial group has been facing difficulties to gather enough stones for the construction of the gigantic breakwaters in Thuramukham. The proximity of a quarrying site therefore prompted them in the area of Cheriya Pozhi too. In order to transport these stones, Agarwal group would be given the right to build a wharf, from where a barge would take the stones to Thuramukham via sea, which would be faster and more cost efficient than doing so by road. In order to facilitate the acceptance of the people, they were also told that Agarwal would 'use this land for only 2 and half years, after that [which we would be] ready to give it to the government'¹²¹. Saleem explains how the operation was considered a win-win situation: 'we can cut some cost which is good for us, and you can also use this in the future like tourism purpose like that and cruise ships can come here directly, that will help you people, in that way, you can also, get benefit' [ibid]. The mini fishing-harbour and the

¹²⁰ Interview with Nabeela, Panchayat ward member for the second northernmost coastal ward in Moonu, 19 October 2018

¹²¹ Follow-up interview with Saleem, shore-fisherman and Panchayat ward member for the first northernmost coastal ward in Moonu, 5 October 2018

gigantic Seaport thus meet where the correlative disorders of the two structures encounter each other (Serres 1991 in Harvey et al. 2017).

Keeping in mind the shore and its multi-dimensionality (of use, meanings, lived experiences) as described in chapter 3, it is clear that its accretion south of the harbour also changed something fundamental about it.

Its changing materiality, as well as the new affordances (Li 2014b) which reflect and influence institutional shifts as analysed in chapter 7, have indeed turned the shore in the area of Cheriya Pozhi from intermediary space belonging to the sea (Kurien 2018; chapter 3) into land. This land is now geared towards the economic activities that underlie the bigger, 'top-down' frontier that this one folds into, and which is assembled around the Thuramukham International Seaport massive infrastructural project (chapters 5, 6).

4.4 Conclusion

Much work focuses on the institutional dynamics emerging with new frontiers (e.g. Rasmussen and Lund 2018; Lund 2019 or various contributions in Cons and Eilenberg 2019), and such consequences are mapped out in chapter 7 of this thesis.

Before discussing institutions, however, it was essential to reflect on pre-conditions, fundamentally material here and often taken for granted in the literature, to the formation of such frontiers.

What this chapter has shown in detail, then, is that the geomorphological changes of the shore are the true cornerstone of the transformations studied here. The use of an assemblage logic (Li 2014b; Nail 2017) has analytically enabled me to highlight how the subtraction and re-addition of the shore, one element pertaining to the socio-economic and ecological coastal marginality (cf. General Introduction and chapter 3), was key to its transformation into a *frontier* (Cons and Eilenberg 2019).

This chapter has then also fleshed out the most salient characteristics of this frontier, as well as the historical pre-conditions (socio-economic and environmental; *ibid.*; Nail 2017) to the transformation of the shore. First, it brings together villages that were living quite separately until the construction of the harbour. Second, it does so through the use of new technologies which themselves see new patterns of income and social metabolism arising. Third and as a direct consequence, it does so through transformed aspirations which, resulting from environmental transformations on the coast, find themselves in the economic realm and away from it.

Not only set in motion by it, this assemblage also holds together (Li 2014b, Nail 2017) through the materiality of the shore, as the enclosure of accreted land in the last section has shown. Altogether, using a purely processual approach has also enabled me to look at the effects of this assemblage—one of the few key conceptual points which help characterising an assemblage, since the latter is not an organic unity (Nail 2017). The overarching one, I have argued, was to accelerate a “bottom-up” form of capitalist expansion (Perreault 2013; Li 2014a), and its folding into a complementary, larger scale, “top-down” one as studied in the next two chapters.

By making the shore visible, I have therefore brought a much needed ecological and material dimension to otherwise fully socio-economic angles of analyses (e.g. Subramanian 2009; Sundar 2011), and answered Perreault’s (2013) call for greater attention to the contingent role of nature in processes of capital accumulation and multi-dimensional dispossession.

Unsurprisingly then, the increasing estrangement of “culture” from “nature”, in the sense of the respective goals of humans and the biosphere (Mikulak 2008; Hailwood 2012), is also an essential feature of this assemblage.

Chapter 5: The Dream of Kerala

5.0 Introduction

The previous chapter concludes with the space given to the Agarwal group on the shore accreted south of Cheriya Pozhi harbour, in order to anchor a barge that would deliver rocks to the Thuramukham seaport being constructed about 40km south. Here, I follow this barge to its destination and shift the gaze to my second fieldsite.

Located in the southern coastal suburbs Nagaram, the Thuramukham International Seaport is a massive infrastructure which, at the time of my fieldwork (2018-19) and of this thesis' completion (2021) was under construction. Analytically, this is also the second site of the frontierisation that I argue is taking place on the coast of southern Kerala. The frontier studied in the previous chapter folds into this one, which has its own flows, dynamics, imaginations and materialities. The present chapter and the next one unpack these heterogeneous elements and processes, which are then augmented by a look at the resulting institutional dynamics in chapter 7. At the overarching analytical level of this thesis, this second site of frontier assemblage produces both similar and complementary effects to the ones studied in the previous chapters. In addition to providing an original empirical take in a context where most academic work is either theoretical or focusing on one specific site, linking these two frontiers and their effects reinforces my overall argument according to which the coast of the district is being assembled as a frontier.

At this point, my work also branches away from the ethnographies of the coast of Kerala surveyed in chapter 1 by directly engaging with wider-scale dynamics. More precisely, Campling and Havice remind us that for centuries already, ‘pressure to define ocean-use rights, territory and ownership were deeply entangled with the development of emerging production practices, trade patterns, shipping lanes and geopolitics in the world market’ (2014: 714 in Barbesgaard 2018: 134). The contexts of blue growth and port-led development outlined in the General Introduction of this thesis mark an acceleration of these dynamics, under the impetus of states who compete in a context of global capitalism (Barbesgaard 2018).

Although the seaport is under construction as I write these words, much of the history of this project happened prior to the start of this construction. I look at the imaginative dimension of the Seaport here, as it pre-dates its concrete developments. This chapter thus speaks to the dreamwork of capitalism (Appadurai 2015), which brings together ‘the space of fantasy, speculation, and the unbridled imagination’—or the notion of dreaming—with ‘the space of productivity, discipline, and instrumentality’ (ibid.) which characterise contemporary conceptions of work. At the overarching level of this thesis, the fundamental point is that this complex imaginative dimension mirrors the aspirations that we saw emerging in the previous chapter. These variegated effects thus pertain to the same realm. They are one of the realms that, as an effect, make the frontier cohere across the two sites discussed in this thesis.

Echoing the theoretical foundations laid down in chapter 1, Peluso (2019) stresses that (resource) frontiers are ‘sites made up of and representing material and ideational transformations’ (2019: 77). She adds that understanding the role of the state in bringing these together is crucial. Authors like Günel (2019), Woodworth (2019) and McDuie-Ra (2019)

all focus in different ways on the strong influence of imagination in shaping new frontiers (Cons and Eilenberg 2019). In different geographical and political contexts, authors like Hetherington (2014) or Cross (2015) reflect on the promises that come with infrastructure. Hetherington (2014) reminds us indeed that '[i]nfrastructural investments ... materialise the promise of future benefit' (2014: 196).

In this chapter, I therefore start by re-tracing the big milestones of this convoluted history in the first section. This enables me to highlight the Government of Kerala's (GoK) leading role in starting the project and bringing it about, and to therefore qualify my characterization of this project as a 'top-down' one, in contrast with the harbour in the previous chapter. I then show how this project abruptly stretches the spatial imagination from the local village of Thuramukham to the plane of globalized capital through a blend of national and economic stakes. As this project is important to the nation branding era characterising the 21st Century in general and thus also India (Kaur 2020), it also contributes to further delineating a state effect, i.e. a produced boundary distinguishing the state from other actors of society (Mitchell 1991; Nightingale 2018).

In the second section, I delve into the reasons making this project the 'dream of Kerala', as most supporters called it. They are predominantly economic. I first show that the seaport is important to the country. In the context of globalisation laid out in the General Introduction, it also fits into its wider nation branding. More concretely, I therefore unpack how the seaport is branded as a site of hope and should thus contribute to strengthen 'the nation state as a dominant player in global capital' (Kaur 2020: 13). I then look at the trickling down of these dreams on the ground, showing how villagers dreamt of a new Singapore. To many of them,

the seaport means an opportunity to break away from the manifold marginality analysed in chapter 3.

In the third section, I show how the key financial predictions that underlie this dream have been challenged by opponents to the project. It is of course not the aim of this thesis to comment on these figures and enter such debates. Analytically, rather, these contested visions and assessments help me emphasising the imaginative dimension of the frontier (Günel 2019; Woodworth 2019; McDuie-Ra 2019). I then speak with local fishworkers, to show how their initially high anticipations gradually faded. This analysis helps me furthering the point that frontiers can be exclusionary too (Cons and Eilenberg 2019), when this aspect is not attended to.

At the overarching level of this thesis, this chapter therefore stresses the importance of the imaginary realm in the assembling of the frontier by unpacking the 'dream of Kerala' under these different facets. As such, it further lays the ground for the next chapter, in which I return to the shore to look at the role of coastal erosion and accretion in the assemblage of this frontier too.

5.1 History and Context: A Top-Down Project

In this section, I lay down the big milestones of the Thuramukham Seaport project. Doing so sheds light on the fact that in its various iterations, the project was initiated by the state government. The nature of this impetus and the imaginative dynamics that it sets in motion thus contrast with the case of Cheriya Pozhi harbour examined in the previous chapter. In this sense, rather than ‘organic/inductive’ unfoldings a la Li (2014a), this project comes closer to those commonly found in much critical academic literature (Harvey 2003; Levien 2013b; Perreault 2013). For the sake of my analysis, I lean on these characteristics and this contrast to call the Thuramukham seaport a ‘top-down’ project.

As the next sections and chapters will show, this conceptual contrast also reflects a different processual order. Unlike in the previous chapter, the top-down impetus gives rise to new imaginations, which themselves give rise to the material transformations studied in the next chapter.

5.1.1 Early Attempts

In the General Introduction of this thesis, I succinctly traced the historical dynamics which resulted in the multi-dimensional marginalization of the coast of southern Kerala and of the fish-working communities who inhabit it.

If fishing seems to have consistently marginalized those who practiced it due to the impurity attached to this occupation in the traditional sacred texts of Hinduism, Thuramukham—the

place—was not always a margin. Rather, it was believed to be the administrative capital of a south-Indian kingdom in the 900s-1100s AD (George 2015). It is also believed to have been a centre of maritime trade between the 7th and the 12th centuries, before a decline due to wars with neighbouring kingdoms from the 10th century onwards (ibid). From the 15th century onwards, Thuramukham was part of the dynamics of marginalization outlined in chapter 3.

The dynamics of frontierisation and marginalization can in some places operate like ebbs and flows over centuries (Cons and Eilenberg 2019). This thesis comes at a moment of ‘re-incorporation’ (ibid: 2) for Thuramukham, during which this history was remixed (Kaur 2020) in order to create the fable of the Seaport.

The Thuramukham Port (the ‘Seaport’) has been present in the collective and political imagination of Kerala for quite some time. First pitched in the early 1960s, this project has been supported by the two alliances who keep alternating at the head of the state government since the state’s creation in 1951, albeit in different ideal forms at times.

After nearly three decades of hopes and conjectures, it is in 1991 that the state government ‘took the initiative to develop [Thuramukham] into a seaport’ (Radhakrishnan 2020). In practice, this meant that the GoK decided to be more proactive in making the ‘dream of Kerala’, as supporters call the seaport (cf. next section), happen. And so, coming in different waves, the project iterated a few times before taking its current shape.

For about two decades since then, the GoK explored various possibilities about the scope of this project and its possible partners in operating it. In 1995, for instance, it signed a Memorandum of Understanding with a corporation, but the project was subsequently dropped. According to Issac—a pro-seaport activist—and local newspapers of the time, this

early version of the seaport project was centred around the transportation of coal. It would therefore also have implied the construction of coal plants near the port site¹²².

5.1.2 Gaining Traction: The Creation of TISL and First Land Acquisitions

A renewed drive took place in the early 2000s. During this phase, an important milestone was reached when Thuramukham International Seaport Limited (TISL) was created in 2004, as a government company. The aim behind this move was for the new government-owned company to work full-time on the search for a private partner to run the project jointly. If the 1995 tender had already hinted towards the fact that the project would be a Public Private Partnership (PPP), the creation of TISL dissipated any remaining doubt on this issue.

Further tenders were floated in 2005 and 2007, but they both failed. In the former case, the bidders failed to obtain the required security clearance (Mathrubhumi 20/6/2015). The latter case was tanked due to a legal conflict within the bidding consortium (Ibid.). Finding a private partner remained a struggle for the Government of Kerala (GoK), who since 2007 floated three additional tenders for this project (Projects Monitor 2015).

Another sign that the project was nevertheless gradually gaining traction was the acquisition of the first plots of land by TISL between 2006 and 2011, in the vicinity of the current site¹²³. As this purchasing process continued during the subsequent tenure (2011-2016), informants told me that about 40 hectares of land were acquired at very generous prices, to the greatest

¹²² Interview with Issac, pro-Seaport activist in Nagaram, 23 January 2019

¹²³ The total area needed for the construction of the seaport is 142 ha of land (Radhakrishnan 2020), among which 53ha were reclaimed from the sea. Unlike many infrastructure projects, land was never one of the central issues around the project area. The only resistance came from local tourist resorts who were eventually closed and compensated.

joy of the sellers. I was never able to formally verify this information, but it did not seem unreasonable. Counter-intuitively to abundant narratives of land-grabbing, no resistance from the 46 families who sold their land was ever recorded, and this series of acquisitions took place during a general context of shared enthusiasm about the seaport project (cf. next section). In June 2011, the Terms of Reference (ToR) for conducting the official study that would lead to the Environmental Clearance (EC) were agreed between the GoK and the Union Ministry of Environment and Forests (MoEF).

5.1.3 Getting Concrete: Environmental Clearance, VGF and Deal

Following a lengthy process during which supporters lauded the merit of the project and opponents tried to object (cf. subsequent sections and next chapter), the Thuramukham seaport was given Environmental Clearance by the Union Ministry of Environment and Forests (MoEF, Central Government) in early 2014. From then onwards, the GoK's focus exclusively shifted on finding a private partner to implement the project as it had been sanctioned. Obviously, the GoK had already started prospecting long before. Unlike in previous attempts however, this time the Environmental Clearance preceded the floating of tenders, making the project much more concrete for potential partners. The timing was also important. In the context of the then-very-fresh Belt and Road Initiative¹²⁴ (BRI) launched by the Chinese government, India's port-led development (cf. General Introduction) was even more crucial

¹²⁴ Foreign and economic policy programme which 'aims to strengthen Beijing's economic leadership through a vast program of infrastructure building throughout China's neighbouring regions' (Cai 2017).

to remain competitive in terms of commercial routes, and to therefore hold ground on the plane of global capital (Kaur 2020).

In this process, the international dimension of the seaport was also mentioned in the local media. In late 2013, when it was clear that the EC would be granted, Metro reported that tender documents had been sent to foreign embassies in the hope of attracting 'major port contractors and investors from around the world' (Metro 6/12/2013).

Moving forward, the GoK applied for the Viability Gap Fund (VGF) scheme in 2014, which consists in financial support for the private partner, and is directly funded by the Central Government. The VGF was granted in early 2015, and was a first both in Kerala and for a seaport. Driven by India's drive to compete globally (Kaur 2020), the VGF gave another dimension to the project. On one hand, the Central Government's tangible support was supposed to represent a guarantee of reliability for potential private partners. It was also supposed to relieve the GoK whose financial situation was tense. On the other, the Central Government imposed a reduction of the lease period from 40 years to 30 years as well as a rigid tariff structure on the handling of freight for these coming 30 years. According to some observers at the time, these new elements raised fears that potential private partners would find the deal less attractive than it had initially been (Kerala Kaumudi 6/10/2014). Either way, these modifications did not impact the nature of the project and did therefore not necessitate a new tender process (Malayala Manorama 4/10/2014). Despite the Rs. 800 crore granted through the VGF, i.e. slightly over 10 percent of the total cost of the project, the last tender was far shakier than promised too. Indeed, its opening date was postponed no less than six times (Kerala Kaumudi 6/10/2014).

Eventually, the deadline for bids also had to be extended from February to March 2015. Among three companies who had manifested interest, the GoK would have ideally selected the one with the best offer. Ultimately, Agarwal Ltd, a leading industrial group, formulated a concrete and comprehensive bid. To the relief of the supporters of the project, the GoK and the Agarwal group finally signed the seaport agreement in mid-2015.

5.1.4 Projection into Wider Imaginaries

It is quite intuitive and common to think about infrastructure in spatial terms (Hetherington 2014). After all, infrastructure transforms landscapes and the bigger an infrastructure is, the more visible the transformation also becomes. But the word ‘transformation’ also entails a temporal dimension—a set of ‘temporal priorities to be slotted into a promising narrative of progress’ (ibid.: 196). Before delving further into the features of the ‘dream of Kerala’—i.e. imagined development(s) associated with the seaport and their resonance with promises of progress over time—it is worthwhile briefly stopping on another key aspect of the frontierisation set in motion with this project.

5.1.4.1 International Consultants

In chapter 3, I have reflected on the manifold marginalities experienced by the coastal areas of southern Kerala. But with the announced advent of the seaport, Thuramukham became propelled to the national and international scenes. Of course, transshipment, the seaport’s

predominant activity is intrinsically international (cf. next section). But beyond this platitude, the intervention of international actors added to this international character.

On one hand, an international actor becomes directly connected with an area which, in recent history, was mostly known for artisanal and local fishing. And symmetrically, the Thuramukham seaport project gained a new legitimacy which fed, in a context of quasi-unanimous support, a sense of belonging to an international community and imaginary associated with modernity and 'development' (Escobar 1995; Kaur 2020). In 2010 indeed, the state government appointed the International Financial Corporation (IFC)—the private sector arm of the World Bank—as a consultant. Keeping in mind that the exact nature of the seaport project remained to be clearly defined by then, the role of the IFC was first and foremost a scoping one. Put simply, the consultants were mandated to refine the precise location, project structure and nature of activity of the proposed seaport, by conducting comprehensive studies and evaluating possible alternatives. Focusing on sustainable urbanism, Rapoport and Hult (2017) emphasise that international consultants tend to be norm-setters. Mitchell (2002) adds that they produce generic and generalized ideas, resting on generally applicable rationalities (Craig and Porter 2006), which occupy 'a transcendent realm 'standing above' particular contexts, and a globalized 'present' that compresses historical time' (Mosse 2011: 3). Because these experts mobilise a transnational register of knowledge and practices, they also enable a convergence between the projects that derive from this expertise (Woods 2006) into a distinct plane (Ferguson 1990). Kaur (2020) further argues that these experts are in fact the core makers of what she terms the brand new nation. In short, she contends that 'twentieth-century *nation building* is increasingly being replaced by twenty-first century *nation branding*' (2020: 10). This entails, among other things, an alliance between state, economy and publicity, where a hypercapitalist (in terms of scales) imagination is central.

And crucially, it also unfolds in a wider and interconnected global space, where the nation-state emerges reinforced when it gains in international competitiveness.

This was reflected on the ground, in the expectations and appraisals formulated by my informants. Regardless of whether they supported the project or not, the international character of this consultant and the ones that followed conferred an image of seriousness and professionalism to the seaport project. In all these interviews, they would draw my attention to the fact that this was an 'international project', which meant that it was serious. This legitimacy propelled the project to another dimension in terms of expectations too, and was instrumental in giving credibility to dreams of Thuramukham becoming like Singapore or Dubai as a result of the seaport (cf. next section).

As seen in chapter 1, assemblage thinking invites us to think about events and their effects more than about questions of essence (Nail 2017). This is analytically helpful because it tells us that Thuramukham, as a place, was entering a plane with different actors and stakes than the ones of the multi-dimensionally marginal coast portrayed in chapter 3. Clearly too, the manifold imaginative dimension is in setting a dynamic of frontierisation into motion and in shaping it in its contingent ways (Cons and Eilenberg 2019; Günel 2019; Woodworth 2019; McDuire-Ra 2019) was of primordial importance.

To be sure, the use of the international imaginary was not only used to bolster promises of a shiny future, as most large development projects do (Escobar 1995; Mosse 2011; Hetherington 2014). Along with this new tag indeed, fears of the project being sabotaged by ill-intentioned competitors emerged times and again in the local media. I am not equipped to discuss the credibility of these scenarios and neither do I intend to, as it would be besides and beyond the scope of this thesis. Rather, what matters is that the international character of

these perceived threats directly bears witness to the stretched imaginary surrounding the project, from local to global. As it propelled the area into a more international realm, traditional lines of national competition and suspicion naturally manifested too.

At different stages in the project, reference was indeed made by the media to ‘international lobbies’ which would actively try to derail the project, allegedly to the benefit of competing locations such as Singapore, Colombo or Dubai (Kerala Kaumudi 30/10/2014; Malayala Manorama 30/4/2015).

5.1.4.2 National Interests and Globalisation

On the flip side of the same coin, national elements were attached to the project’s imaginary too, precisely to strengthen the national character of this branding (Kaur 2020). The Thuramukham seaport project has in fact always been endowed with a dimension going far beyond its location and the sole state of Kerala, in terms of both economic and territorial imaginaries and impact.

In early 2013, Madhyamam reported that the Port minister announced that demands had been made for the Coast Guard and the Navy to use the upcoming seaport as a base for their operations (3/4/2013). The subsequent Comprehensive Environmental Impact Assessment (CEIA), the official document submitted in order to obtain the central government’s EC, indeed mentions such plans. The document justifies them by the fact that ‘[t]he proposed port also caters to the security needs of the country considering the strategic location along the south Kerala coast’ (CEIA: 1-10). The report continues by explaining that the ‘[Indian] Navy

plans to utilize the berth mainly for loading of amphibious troops, transports and armoured vehicles for joint operation with the Indian Army base at [Nagaram] (where the amphibian infantry brigade in the Country is stationed) and the Indian Air Force Base at [Nagaram]' (ibid).

A few months later, in autumn 2013, information was collected by opponents to the seaport through the Right to Information Act. At that time, the newspaper Kerala Kaumudi flagged the security concerns around this news, stating that 'information of strategic importance with regard to the [Thuramukham] International Seaport project including that of those which would affect the national security has leaked. The maps and documents which include the details about the bases of Navy and Coast Guard were also leaked' (1/12/2013). In line with the perceived threat from competing interests referred to above, the article goes on to '[suspect] that the Colombo port which is one of the strong competitors of the Thuramukham port has received this leaked information' (ibid), before specifying that 'China's presence in Colombo complicates the leak of the pertinent information about the Thuramukham port' (ibid). This presence started with a partnership between the government of Sri Lanka and China Harbor Engineering Company, a large state-owned company. In the context of the Belt and Road initiative (BRI) mentioned above and as the port was failing to attract ships despite being located on one of the world's busiest shipping routes, the port and 15,000 acres of land around it were handed over to China in December 2015 (NYT 25/6/2018).

Again, rather than focusing on the content of these claims, assemblage thinking invites us to consider their effect (Nail 2017). Here and as shown throughout this section, the effect is again to put Thuramukham at the crossroads of concerns which go spatially far beyond the coastal areas until recently, as seen in chapter 3. In a discourse analysis of the BRI, Xiao et al. (2019) show that the words 'world', 'development', 'international' and 'infrastructure',

among others, come respectively at the 12th, 6th, 15th and 19th position in terms of the frequency of their use in China Daily—a leading Chinese media—between 20 January 2017 and 1 November 2018. On the same period, they do not appear a single time in the New York Times except for ‘world’, which comes 9th.

This hints to a very comparable globalizing imagination to the one outlined so far, in a similar context of international competition where such narratives become very important. As Appadurai (2015) or, more recently, Kaur emphasizes when she conceptualizes the nation as now being branded, the basic assumption is that ‘[i]ts territory, people, natural resources, and cultural identity can be capitalizes to enhance its competitiveness in the global economy’ (2020: 26). This competitive global economy is the plane onto which the stretched imagination associated with the seaport transposes both the project and the village. As for the resulting nation branding, it contributes to reinforcing a specific state effect (Mitchell 1991), i.e. the production of boundaries between the state and other actors at different levels: the world, the country and the locality. In this way, this section and the next contributes to fill the gap identified by Nightingale (2018), who calls for a more careful conceptualisation of the boundary-making process between state, society and infrastructure. I come back to this in chapter 7.

In this section, I have started showing that the Thuramukham seaport can be characterised as a ‘top-down’ project. Besides the incommensurability of scales between the two projects, the Thuramukham seaport was initiated by the GoK rather than emerging from the nearby villagers in a more ‘organic’ fashion like the harbour in the previous chapter. It is in this contrast, co-existence and relatedness that the main analytical point lies. In echo with the overarching objective of my thesis, it shows the emergence of another frontier near the one

analysed in the previous chapter, and into which the latter falls. The open and indeterminate character of frontiers and their analysis in the literature (Rasmussen and Lund 2018; Cons and Eilenberg 2019; Knott and Mather 2020) implies that this characterisation does not contradict any pre-set “model” or thesis, but it certainly furthers the literature by shedding light on dynamics that are unique by the very intrinsic characteristics of the frontier as an analytical lens.

By focusing on some of the national and international ramifications of the project, I have also highlighted expansion of imaginary that is constitutive of the frontierisation at hand. The next step is thus to delve into the core of what constitutes the imaginary of the frontier, which is first and foremost the promise of progress and development.

5.2 An Economic Dream

Building on the previous section, I highlight the underlying arguments whose effect was to project the Seaport as a Dream Zone, i.e. a project that represented ‘an isolated and autonomous arena for market activity, free from the frictions of politics and culture’ (Cross 2015) on one hand, and contributed to branding the state and the nation on the other.

Surely enough, for many of its supporters across the ideological spectrum and throughout the decades, the Thuramukham seaport was nothing less than the ‘Dream (project) of Kerala’. As we see in this section, this dream is first and foremost indeed an economic one. It first rests on the conjunction of the merits associated with Thuramukham’s location. It also rests on the commercial promises attached to transshipment—the core activity of the seaport in its final

version. Different official documents, ranging from consultants' reports to the CEIA, mention various economic advantages linked to the transshipment activity (IFC; CEIA 8: 4). Even though publicly available, these documents remain fairly complex and only accessible to a very informed public. Instead of digging into them, I try here to give a rendition of the public discourses and arguments about the economic advantages of the seaport. Analytically, this helps showing how and to which extent the 'Dream of Kerala' was being assembled in the run-up to the project agreement's signature in August 2015. In the fashion of Russian dolls, this assemblage took a life of its own to become a key element of the frontier being assembled through the seaport (Nail 2017; Cons and Eilenberg 2019).

5.2.1 An Ideal Location and the Infinite Potential of Transshipment

In the previous section, I have explained the global context in which the seaport was being built, and the stakes surrounding it. As the country was competing on the global scene, the Thuramukham seaport sat well with its branding as a competitive player on the same international scene. It is one of the infrastructure projects that is deployed to achieve the mix of economic competitiveness of the country on this plane, and is as such of primordial importance. With more infrastructure of Thuramukham's kind, the more the country becomes competitive and attractive to potential further investments. In turn, '[t]he more attractive the country is as an investment, the more robust it is as a nation' (Roy 2021).

For this reason, unpacking the branding of the seaport itself is equally important. Kaur reminds us that in India, 'the project of branding national territories as investment destinations began evolving into a governmental practice in the 1990s on the premise that

companies and nations share similar corporate features and can be imagined, branded, and capitalised likewise' (2020: 21). In the case of Thuramukham, this branding was articulated around two axes: the location of the seaport and the economic potential and suitability of its proposed activity, namely transshipment—a term I clarify below.

In terms of location, Thuramukham only lies 10 nautical miles away from the East-West international shipping route, which is one of the world's busiest shipping channels. This location is of strategic importance in commercial terms, because it means that ships would not need to make serious detours to offload their cargo in Thuramukham. In this sense, despite the competition from Colombo (cf. next section) very near this route, Thuramukham offers an edge. In addition, the coast off Thuramukham presents a highly desirable feature for a seaport: natural depth. As near as 1km off the shore, the natural depth of the sea already comes to about 18m near Thuramukham. This starkly contrasts with the 5-6m near an older seaport in the state¹²⁵, for instance. According to the advocates of the project, the important implication of this feature is that there would be little to no dredging required in order to accommodate the massive cargo ships that Thuramukham would aim at attracting. This in turn implies significant financial savings on the costs of the dredging operations, as well as avoiding the environmental damage that result thereof. Furthermore, as I show in chapter 7, socio-environmental factors would become central to influence the constant unmaking and remaking of institutional boundaries around the frontier.

¹²⁵ Skeptics of the Thuramukham seaport project keep in mind the highly unsuccessful story of another port in the same state, about 200km north of Thuramukham. In a 2015 article, the newspaper Malayala Manorama explains that this port, built in 1973, was meant to challenge Singapore, Dubai and Colombo. It was supposed to be a 'new avenue for development in Kerala' (Varghese 2015) For various reasons however the port never saw enough traffic and accumulated losses and debts instead. As of today, it is still vastly under-utilised. Up to the choice of comparisons, the resemblance with the dreams around Thuramukham is very uncanny. For this reason, the contrast in natural settings was often put forward as a game changer.

While it had always been clear that Thuramukham was ideally located for a seaport, we saw in the previous section that it took more time to decide what this seaport would exactly be about. Nevertheless, the idea of a transshipment seaport seems to have accompanied the new momentum found by the project in the early 2000s (cf. previous section). In 2007 for instance, i.e. when the scope of the seaport was still not settled, newspapers started referring to the possibility of Thuramukham as a container transshipment seaport. In 2008, local media pointed out that smaller vessels were coming to India from competing seaports like Dubai, Singapore or Colombo—i.e after the transshipment activity had been performed elsewhere. Because the transshipment of as much as 70% of the Indian container freight was happening from these ports, it was implied that this cost would be entirely saved by having a transshipment seaport in Thuramukham (Mathrubhumi, 4/1/2007 and Deshabhimani 6/8/2008). In the backdrop, the container freight transportation in India had achieved an annual growth rate of 15 % in 2007 (Mathrubhumi, 4/1/2007). In short, the economic side of the dream rested on the simple reasoning according to which a domestic container transshipment port would allow to significantly reduce the price of significantly growing overseas trade. As such, this rationale perfectly fits into Kaur's (2020) emphasis on nation branding being underpinned by a need to enhance its competitiveness in the global economy. And as Appadurai adds, this competitiveness rests on a common compulsion towards growth, which 'always involves the pursuit of the periphery of the known markets' (2015: 482).

The transshipment option then became more official when the GoK's consultants started advocating in its favour too, for essentially the same reasons. On the very first page of its 'background' section, the Strategic Options report prepared by the IFC in 2010 explains that Kerala is lacking Foreign Direct Investment, and that '[a]s Kerala is located in a strategic

position close to international shipping routes, the government seeks to tap this potential for a multi-purpose container transshipment hub port in the state' (IFC 2010: 125).

The main role of a transshipment seaport is to transfer the containers from large (most often foreign) ships onto smaller ones, which are then dispatched to the final destination of the merchandise. In contrast with gateway ports, the transshipment goods do not cross the custom line, so that it is less essential to have a privileged access to industrial or consumption hotspots for the respective export and import of these goods. In this sense, transshipment fits well with the economic and infrastructural situation of Kerala. Indeed, as briefly explained earlier, Kerala's particular development experience resulted in an economy driven by high human development and remittances from abroad, but (very) little infrastructure. According to some observers, it is precisely 'the absence of basic infrastructure and lack of land' (Mathrubhumi 4/1/2007) which deterred potential investors and made many early tender rounds unsuccessful before it was decided that Thuramukham would be a container transshipment port. Official documents like Drewry's consulting report (IFC 2010: 3) also cite the small hinterland as a reason for privileging transshipment, since it wasn't prone to the development of allied industries.

The benefits of transshipment were also used to draw parallels with cities like Dubai and Singapore—i.e. hyper-modern cities with an important seaport, and thus a brand model too (Kaur 2020)—, so as to project what Thuramukham could become in the future. Highlighting the collective enthusiasm about the seaport, most sections of society would anticipate Thuramukham to become another Singapore or Dubai, specifying that 'the fortune of the Singapore port was proved when the freight transportation started taking place through containers and the huge mother ships which carry these containers took over the whole

scene'. Who speaks of 'huge ships' generally speaks of transshipment too, and this narrative further tied into the international imaginary discussed in the previous section.

5.2.2 Widening the Scope of Enthusiasm

Generally supporting such arguments and sometimes adding their own, notorious public figures stepped into the public arena and passionately advocated for the seaport, calling it for example 'a port with infinite potential'. Outside of the political realm, famous actors such as Madhu also participated in protests in favour of accelerating the project (Madhyamam 3/6/2015). With time, the dream did not only get more vivid. It also kept widening. Indeed, besides the direct benefits of transshipment, the seaport's supporters saw many positive economic spillovers too. A good illustration is an opinion-piece by an activist who argues that India will follow China's industrial success, shares his hopes that Thuramukham will become what he calls a 'Marine Mall', i.e. an all-encompassing facility that fulfills all the needs of the shipping sector, i.e. 'bunkering, repairing, maintenance, Shipping fitness, insurance' [undated].

Likewise, tourism was expected to flourish from the cruise ship terminal mentioned in the seaport's masterplan (CEIA). Because of Thuramukham's geographical proximity to a famous tourist resort, the newspaper Kerala Kaumudi also ventured into enthusiastic scenarios. The media claims that if 'luxurious [tourist/cruising] ships' (Kerala Kaumudi 6/12/2013) were to dock in Thuramukham, each passenger would spend a minimum of USD 100 per day in the region. Estimating therefore that each ship would carry 1,000 tourists and that about 30 of them would dock in Thuramukham every year upon the completion of the first phase, they

estimate a yearly gain of Rs 15 crores for Kerala on a yearly basis. They further estimate that this amount would double after the completion of the second phase and further double to 120 ships per year upon the completion of the third and final phase of the project.

Even though by the time of my fieldwork a few years had passed the general opinion was more nuanced (cf. next chapter), I could witness this enthusiasm first hand when, approaching real estate developers with the explicit aim of trying to understand 'development' from an academic viewpoint, I was instead promised to be sent promotional documents and received friendly phone calls as I had been mistaken for a prospective international investor.

5.2.3 The Trickling Down of Speculation

With the location of Thuramukham and the idea of transshipment combined, there was no limit to the dream of 'development' that the seaport represented. In the discourse of the media, this combination was going to 'open the doors of comprehensive development before us' (Kerala Kaumudi 19/10/2013). This dream of development was fuelled by a constant inflation of numbers and scenarios (Appadurai 2015) in the local media. Inevitably, it also trickled down to the local residents of the area.

Much literature on capitalist expansion has focused on the stimulation of the imaginary that capitalism induces. Tsing (2003) highlights the speculative aspect of capitalism, understood as the devising of future scenarios. Bear (2015) further postulates that capitalism could in fact rest on technologies of imagination, which in turn generate this sort of speculation. Simpson

(2013) speaks of a hyperbolic capitalistic imaginary, i.e. one where proportions are always bigger. Besides the fact that they are highly imaginative, the features mentioned above all speak of far-reaching transformations, all at a rather 'macro' level. But if, as Hetherington argues, infrastructure 'divides the built landscape into temporal priorities to be slotted into a promising narrative of progress' (2014: 196), then the immediate question that arises concerns the intermediary steps. In an earlier study of Nigeria, Larkin (2008) explains that infrastructure also transformed minds and subjectivities (Hetherington 2014). Looking at a Special Economic Zone (SEZ) in southern India, Cross argues that 'economic zones also encourage dreams of profit and improvement' (2015: 426), which extend into upwards aspirations in the social and symbolic realms, among those who would be the most threatened by it. As mentioned above, there were very few displacements touching the fishing community, and none of them was conflictual or controversial. The site of the seaport is located right next to the village—not in front of it. As such, there is no competition of space between the village and the seaport. Cross' (2015) argument, especially in the absence of immediate threats to the villagers, implies that if Thuramukham was to turn into Dubai or Singapore, surely, the road to development and modernity opened by infrastructure (Larkin 2013; Hetherington 2014) would be paved with more immediate and accessible milestones too. Here, I thus look at the extent to which this was the case at the more local level of the village.

Unlike in more distant villages (cf. next chapter), the population of Thuramukham was very enthusiastic about the project for a long time, before gradually changing their view. As explained in my methodology section, conducting an in-depth study of the Thuramukham port itself was not the objective of my research or fieldwork. Rather, it was part of the bigger picture that I was trying to grasp. Through brief incursions in Thuramukham village when

invited to do so, I could nevertheless get a sense of the residents' feelings towards the seaport and its promises.

Throughout my fieldwork in the capital of Kerala and in the surrounding fishing villages, I had always been told that in the early days of the project, the villagers of Thuramukham had stood out by eagerly supporting the construction of the seaport. These stories were consistently reporting much enthusiasm from the villagers at the idea of seeing Thuramukham become like Singapore or Dubai. Since jobs had been promised (cf. above), the villagers expected to be first in line in reaping these new, more stable and more lucrative—but never defined—occupations.

In Thuramukham, Binod, a local businessman, accepted to answer some of my questions. In addition to owning 7 trucks, whose use could thus be leveraged with new transport opportunities arising from the Seaport, he also employed 'a total of 25-30 people¹²⁶'. His company transports fish to local markets in neighbouring areas of Kerala and Tamil Nadu (the border lies about 20km south of Thuramukham). He first explained to me that despite the Church's more ambivalent attitude towards the project, Thuramukham's then parish council (of which he was not part) had also distinguished itself by its strong support. According to one of my interviewees who preferred to remain anonymous, this was the result of the influence of '2-3 business people were handling fish transportation, storage and wholesale, who saw opportunities for enrichment through the seaport'. Jacob—another informant in Thuramukham who owned a truck and was involved in the transport of fish to other markets—also told me that in the beginning, even though other villages and parishes would oppose the seaport project, Thuramukham stood apart in adamantly supporting it.

¹²⁶ Interview with Binod, local businessman in Thuramukham, 22 February 2019

According to Binod, the main reason behind their general support was the promises that had been made to the population: ‘they made the people dream about Singapore and they said, this place will be like this in future, if it comes. Like that. They set up Singapore pictures and all, all over here and said always Singapore, Singapore, Singapore. So people fell in that illusion.¹²⁷’ They even conducted collective demonstrations supporting the project and pushing for its speeding-up. Clearly, the dreams of Dubai and Singapore led people to ‘reimagine themselves, their lives, and their livelihoods as better’ (Cross 2015: 427).

Jacob summarised the prevailing logic of the early years as follows: ‘if [the seaport] comes, then many businesses will develop here and that will include the port itself, they will get some job. So they can go for work in that port¹²⁸’. Cross stresses that ‘[f]or many people, of course, it was the promise of stable, secure employment that lay at the heart of their hopes of the future’ (2015: 430). Like he stresses, a stable job (in the economic zone in his case, on the seaport-site or in allied activities in mine) implied the beginning of a new social, economic and symbolic cycle for those pursuing them. For most people—who unlike Jacob are only engaged in fishing (cf. chapter 3)—the tangible and accessible aspect of the big dreams unpacked above was thus more stable jobs.

Beyond the village itself, the best representative of this phenomenon is undoubtedly Issac, a former journalist hailing from the fishing community and who turned into a fervent proponent of the seaport and helped me understand the beneficial sides of the project. By the time I visited him in early 2019, he was collecting stones from all over the world to help the construction—often delayed by a lack of rocks—proceed faster. When I interviewed Issac,

¹²⁷ Ibid.

¹²⁸ Interview with Jacob, businessman in Thuramukham, 24 February 2019

he explained to me why the seaport was a unique opportunity in his view. Directly tied to the manifold marginality outlined in the General Introduction and chapter 3, he essentially sees in the Seaport the one-time chance to lift-up the community socially and economically, as well as to break its dependency from the Church (cf. chapter 3): ‘we are not getting/giving any employment, so people suffer like anything. After 50 years or 60 years of hard work outside Kerala, they will come back here and they will be vegetables. The whole life is spoiled! So, in that angle, why can’t we create investment and employment here?’¹²⁹.

At the height of the general enthusiasm, another renowned supporter explained in the media that ‘India handled 1 crore containers in [the previous year], and that 40% of this amount would transit through transshipment ports’ (Madhyamam Weekly, undated). Taking the example of a garments manufacturer who claimed that he must pay Rs 20,000 for shipping a container, Issac argues that half of this amount must have accrued to whichever transshipment port dealt with this container. According to him, having this transshipment container in Thuramukham would have avoided this cost. By the same logic, claiming that Thuramukham could handle 40 lakh containers, he asserts that the revenue of the seaport in its first year of operations would have amounted to Rs 4000 crores, i.e. the total cost of the project’s first phase. It is not very clear how these estimates were made, but they are quite telling of the narratives that made the Dream of Kerala.

Issac’s enthusiasm did not stop there. When confronted with the possibility that the seaport might not be profitable after all (cf. next section), he compared a seaport to a network of roads to argue that infrastructure’s economic gains are far more widespread and holistic than the sole direct profit it makes. Indeed, according to him, infrastructure should bring ‘indirect

¹²⁹ Interview with Issac, pro-seaport activist in Nagaram, 23 January 2019

benefits to a region' (ibid.) As such, he is convinced that the seaport would 'improve the overall wealth and material standards of the region more than any profit it can generate directly' (ibid.).

All in all, I have shown above that a general and limitless enthusiasm for 'development' was heralded by various media, politicians and stakeholders of all sorts. By flowing into the public realm of the local non-specialist media, this 'narrative of progress' (Hetherington 2014: 196) inevitably entailed a major part of promise, to a wide audience. I have further shown that this Seaport meant much for the state, since although it was initiated several decades ago, it folded into the logic of nation branding that has been following the economic liberalisation of the early 1990s. In a context of fierce capitalist competition at the global level and with China in particular, the relevance of this project kept growing beyond Thuramukham and Kerala, to meet some of the geopolitical and economic priorities of India.

As the enthusiasm trickled down, I have also highlighted that it opened speculation of a more prosperous future. To the enthusiasts from the fishing community, the Seaport predominantly meant a way out of the socio-economic marginality analysed in chapter 3.

5.3 Contested Financial Forecasts

Appadurai contends that '[c]apitalist calculation is an endless effort to make the (invisible) future in the numerical symptoms of the present' (2015: 483). In this section, I delve into the numerical facet of the imaginary unpacked so far, to show that although capitalist dreamwork brings together both 'unbridled imagination...and the space of productivity, discipline, and instrumentality' (ibid.), the latter part fails by its own standards in the case of the Thuramukham Seaport. In other words, I show here that the Seaport's proponents and supporters economic forecasts are quite shaky.

While many opponents to the seaport have focused their resistance around environmental reasons (i.e. a different realm; cf. next chapter), they have always also disputed the economic optimism around the project. Below, I briefly delve into the main criticisms against the Thuramukham seaport on basic economic grounds. Analytically, given their nature, these criticisms reinforce the imaginative (and imaginary) character of the dream that I sketched above, and thus the importance of this aspect in the frontier being assembled around Thuramukham (Rasmussen and Lund 2018; Cons and Eilenberg 2019; Knott and Mather 2020).

5.3.1 Disputed Financial Estimates

In this section, I predominantly refer to the work of the Research Activists (2017), which is a collective of critical researchers (pseudonymised here) who are part of a wider organisation

which claims a ‘vision of the world based upon principles of economic equality, social justice and sustainable co-existence’ which, they insist, ‘can only be achieved through the assertion and rights of traditional natural resource-based communities’. Within this philosophy, the Research Activists regularly publish critical research on issues related to ‘detrimental growth... economic, political, environmental and cultural problems’. Quite clearly, then, their open positionality shapes their outlook towards projects like the Thuramukham seaport (and many more subsequently). Nevertheless, this is not to mean, as I illustrate below, that their analyses are not diligent. Since their output not only summarises critical points but substantiates them much more thoroughly than other sources (mostly oral or from the media) encountered throughout my fieldwork, I predominantly lean on it below.

As they note, all the dreams about economic growth resulting from the seaport (cf. previous sub-section) are based on a single assumption—that the Seaport will attract the existing transshipment traffic away from its main competitors in Colombo, Oman, Dubai and Singapore. Nevertheless, they consider this assumption to be ‘unsubstantiated’ (Research Activists 2017: 3). In the context mentioned above where the three major shipping companies made a strategic alliance, existing seaports like Colombo and Singapore evidently benefit from privileged relations with them. To attract these companies, Thuramukham should therefore offer services of very high quality.

Back in 2010, a specialized maritime consultant conducted a commercial analysis of the upcoming Seaport on behalf of the International Finance Corporation (the financial arm of the World Bank), which had itself been commissioned by TISL to explore strategic options. In this report, the consultants rank seven competitors along the following criteria: container handling infrastructure, rail/road connectivity, draft, mainline services, turnaround time for

vessels, location and average parcel size. These different criteria are then assigned different weights and marked on a 1-to-5 scale. The striking element here is that Singapore scores perfectly on each item. Dubai, the close second, is scores 5 on all items except on location, where it gets a 4. Colombo scores 3 on infrastructure and connectivity, 4 on the turnaround time and 5 on all the rest. All the other competitors are domestic one, and none scores above a 2.9 weighted average.

If we leave aside that the report contains no explanation for the weights, the optimists would argue that there is strategic room on the domestic market. But Thuramukham aims at directly defying the three international competitors mentioned above. There, Research Activists (2017) points that this competitive analysis essentially implies that since they all have such high scores, these three competitors would be extremely difficult to outcompete. Just like most informed opponents to the project would imply during my fieldwork, this raises the serious question of why would Thuramukham—which is anyway located so close to Colombo—have to offer that these other ports do not already have? In terms of economic competition, it looks as though cost becomes the best bet.

This brings the second economic aspect challenged by Research Activists (2017)—the tariff structure. Relying on a 2015 feasibility report commissioned by TISL to international consultants, Research Activists (2017) shows that for the project to remain economically viable, the costs at Thuramukham would have to be significantly lower than at Colombo.

Even with a further 35% discount over Colombo's tariffs recommended by the Ernst and Young (2015) report, 'the tariffs [still] do not come close enough to pose a serious threat to Colombo, which is incidentally planning to expand its capacity' (Research Activists 2017: 4).

If neither the features of the port nor the cost estimates pass basic robustness tests, this is not all. As briefly emphasised above, many enthusiasts in the early years of the project relied on the ever-expanding growth of cargo traffic around the world. Research Activists (2017) notes that the economic reports are based on 8-10% compounded annual growth (CAGR) of this traffic. As of May 2019, i.e. before the slowdown caused by the covid-19 pandemic, the British International Freight Association (BIFA) estimated that the sea freight market was expected to grow at a 2-2.5% CAGR until 2025 (BIFA 2019). Whether deliberate—as claimed by Research Activists (2017) and various opponents to the project—or conjunctural, divergent estimates seem to arise here.

Lastly, Research Activists (2017) highlights that in the terms of the IFC itself ‘large investments in greenfield ports are rarely planned based primarily on transshipment traffic, because transshipment traffic is very unpredictable and shipping lines are known to switch from one port to another at the slightest of reasons’ (IFC in Research Activists 2017: 4). According to the same report, the nature of transshipment, if anything, further casts doubt on the ability of the seaport to really benefit Kerala. In contrast with the argument made above according to which transshipment was a good fit for a state without much industry and infrastructure like Kerala, the lack of connections to the rest of the economy is seen by the international consultant as a crucial vulnerability. The report goes as far as concluding that the seaport would ‘[run the] risk of creating a white elephant with poorer economic and financial results in the medium to long term.’ (ibid: 5)

While these general concerns reflect the recurring critiques made by the main opponents to the seaport whose accuracy are beyond the scope and intention of my work, they are quite

telling analytically. They indeed stress the imaginative dimension underlying the ‘dream of Kerala’.

5.3.2 Growing Disillusion on the Ground

I have showed in the previous section that speculations over the future had resulted in neighbouring villager hoping for a Singapore-like transformation and expecting better jobs as a result. Cross is conscious of the fact that in this context of an ‘abundance of futures’ (2015: 435), many large infrastructure projects ‘have failed to realize many of the futures invested in them’ (ibid.). Although it is too early at the time of writing to speak of success or failure in such absolute terms, I look below at the gradual disillusion that seemed to be replacing the initial enthusiasm.

Even though I had been told that local business owners were in favour of the seaport, Binod’s opinion was different. Instead of Singapore with stable jobs for everybody, Binod’s appraisal of the situation a few years down the line did not leave much room for ambiguity: ‘now the construction is going on. Only 15 local workers are working. They are giving this contract to others. Around 1000 people are working there but only 15 are our people. When we are going for asking job, many people are going daily, they are saying, “we need only technical people”. Who knows technical work and others are not needed. Now they are taking all people from far-away areas [of India]. So they are giving this to other contractors and they are taking cheap labours from elsewhere. So the same thing going to happen in future.’¹³⁰ Although it could

¹³⁰ Ibid.

change over time, the seaport had so far either failed to ‘create employment[;] or the kinds of opportunities for waged labor [failed] to meet expectations’ (Cross 2015: 435).

Jacob’s assessment of the business prospects was not very different. He did not foresee allied activities like transport developing along with the seaport either: ‘whatever the labour or business they want, they are just giving all these things as a tender and they are looking for the cheapest people from everywhere. So they can find the cheapest thing from anywhere. So like that it’s happening. So in future also, if they want drivers, they want trucks, they will go for these tenders and they will go for the cheapest ones from some other places. So it’s very difficult to compete with that tender and all¹³¹.’

I also interviewed Alfred, a 57-years old fisherman. According to him, as of the time of my fieldwork (February 2019), there were no tensions about the seaport in the village. Although the initial enthusiasm had weakened, people were now essentially lukewarm about the project. They neither opposed it, not expected much from it anymore either.

Larkin (2008) argues that infrastructure is directed at a public, and that in Nigeria it aimed at bringing peasants into a specific idea of modernity. In Thuramukham, these accounts show that the fishing community—to whom businesspeople like Jacob and Benny also belong and identify ancestrally—did not believe to be this intended public.

According to Alfred, this loss of enthusiasm was the result of the promises of a bright future not materialising. Jacob’s opinion is not different. He told me that the minds started changing when the construction started. At this time, people started paying more attention to the opposing voices that came from activists and from the church, since they felt let down. He

¹³¹ Interview with Jacob, businessman in Thuramukham, 24 February 2019

continued by explaining that '[w]hat [we were told] in the beginning is they will give to the local people work like they have other ports in the country and all. They have institutes and all. So, they will take students from here to there and they will teach them the work and all. So, the local people can engage with the port. But till today, they didn't take 1 person for this kind of education purpose or classes from teaching these things. From that thing only we can understand how things are going to be¹³².'

Paul—an early supporter who later became actively anti-seaport—believed that the only few people who got jobs on the seaport site did so through personal connections, so that there was no way these opportunities would even be advertised publicly in the first place. According to Jacob, this was instead the result of an intense pressure from the Church and local politicians. Either way, they both separately emphasised that these jobs were 'support jobs', i.e. jobs that do not require higher education anyway. By their nature and scarcity, these jobs had nothing to do with the Singaporean dream mentioned above. For the villagers, the hope of gain (Cross 2015) was thus decreasing.

Besides the job promises, the fishermen that I met did not seem to be under any sense of illusion regarding the impact of the seaport on their own lives. According to Alfred, the project was good for India and Kerala even if he couldn't really see what it would change for local people in the immediate run. He did however say that once the final phase of the project would be completed (ca. 2040), there would a bigger risk of the entire village being turned into real estate projects and that the fishing community could then need to vacate. But this seemed too far away to be worth worrying about now. Vipin's testimony was not very different. Also a fisherman nearing his 50s at the time, he was sitting with a few friends when

¹³² Ibid.

we met on the village's small shore. Vipin and his friends told me that due to what they call 'a lack of awareness', they used to be in favour of the seaport and expect good benefits from it. Upon reflection, they however concluded that the seaport would not bring anything to fishermen. Concurring with Alfred's opinion, they told me that the seaport would obstruct their fishing activity in the longer run and bring no positive aspect whatsoever. When the seaport is in full operation, Vipin told me that 'we will have to sit only all day', i.e. to be unable to do any kind of work. He also asserted that while it is true that the land prices had increased exponentially 'here common fishermen don't even have houses, so it doesn't concern us'. This wasn't said with any bitterness, but rather on the tone of distant fatalism. If this tone did not indicate any sense of revolt, it contrasted heavily with the enthusiasm mentioned above. This disillusioned and lucid tone echoes Cross' (2015) recognition about the fact that not everybody would profit equally (if at all) from the new mega project. However, where he argues that these projects open 'a new arena in which they could imagine and pursue new kinds of economic and social subjectivity' (Cross 2015: 435), by the time of my fieldwork in 2019, this arena seemed closed again. Cross' economy of anticipation, which 'is made with the hope of gain and the risk of loss' (2015: 426) was slowly collapsing for my interviewees, since the latter was now perceived to increase in the long run.

In the minds of those who had once strongly supported the economic dream associated with the seaport, this was finally going to happen without them. In the long run, they feared that it could even harm them. The most illustrative conclusion of this growing fear was certainly Paul's: '[w]e people called [this seaport] the 'dream of ports'. The community said that so many times, repeating slogans about the dream port of Thuramukham. But this port will not

be a dream, I think it is dangerous. It will be a nightmare¹³³.' In Jacob's view too, the conjunction of the absence of job prospects and the likely future obstructions to fishing pointed to the fact that 'now, for the local fisherman this project will like a nightmare¹³⁴.'

As it helps unpacking what the path to progress and modernity (Hetherington 2014) entailed and not, showing how the dream faded out in the village of Thuramukham thus also informs us by the same token on the potentially exclusionary character of the frontier (Cons and Eilenberg 2019).

5.4 Conclusion

In this chapter, I have characterised some of the essential features and effects of the frontierisation taking place through and around the Thuramukham seaport project. As a first step, this chapter unpacked the impetus of the project and its imaginative dimension, as well as what critical analysts framed as its contradictions.

While outlining the big historical milestones of the project, I stressed the top-down character of its impetus, itself backed by hopes and hyperbolic visions of the future.

As such, imagination not only shaped the frontier, but was a defining part of the assemblage.

Both in terms of scale and of direction, the seaport comes in contrast with the harbour studied in the previous chapter. Yet, they both form different moments and contingencies of a

¹³³ Interview with Paul, fisherman in Thuramukham, 23 February 2019

¹³⁴ Interview with Jacob, local businessman in Thuramukham, 24 February 2019

frontier assemblage taking place along the coast of southern Kerala. In the case of the seaport, whether it was through the intervention of foreign consultants, the fear of foreign threats or the importance of the project in terms of national interests, I showed that the spatial imagination had started to stretch far beyond Thuramukham and Kerala, into the national and international realms. Likewise, among adopters of the ring-seine boats in Randu, this imagination of a more prosperous future stretched away from the sea and the coast. While this coherence in terms of effects corresponds to one of the key features of assemblages (Nail 2017), their venturing into new territories echoes the characterisation of frontiers made in chapter 1 of this thesis.

Having shown the imagination around the seaport was stretching, a next step was to delve into the arguments fuelling it. Hence, in the second section, I then focused on the economic side of the 'Dream of Kerala', as it is often called by its supporters. Through a discursive review, I unpacked the narrative of progress associated with the project. I first focused on the promises of economic growth induced by the seaport's transshipment activity. I then showed how the dreamworks of capitalism (Appadurai 2015) trickled down to the village of Thuramukham.

Yet, in the third section, I turn to the inherent frictions that such dreams inevitably carry. Based on secondary material, I showed that critical analysts had challenged the financial predictions that sustained dreams of a new Singapore on several accounts. Doing so enabled me to further assert the imaginative character of this dream. I thereby tried to echo the works of other scholars who stressed the importance of imagination(s) as a full, constitutive part of frontier assemblages (Günel 2019; Woodworth 2019; McDuié-Ra 2019). Lastly, I followed the flow of these imaginations down to the neighbouring village. There, I showed that as time

passed, the economy of anticipations (Cross 2015) gradually faded away, leaving space for a narrative of fatalism. Fears of detrimental effects over the long run had also started growing, even if they seemed relatively distant in time. Analytically, this trajectory further helped pointing to the potentially exclusionary character of the frontier being assembled, if such concerns are not attended to.

Continuing to draw a parallel with chapter 4, I turn to dynamics of coastal erosion and accretion in the next chapter, to show that they are just as crucial to assembling this part of the frontier as it is to the area surrounding Cheriya Pozhi harbour.

Chapter 6: Back to the Shore

6.0 Introduction

The previous chapter looked at the promises of Thuramukham International Seaport as a massive project, whether it is in terms of finances, expectations or construction. Set into motion by the impetus of the state government, I have characterised this project as a “top-down” development, more familiar in the academic literature (Harvey 2003; Levien 2013b; Perreault 2013). This contrasts with the “bottom-up” process of infrastructural development around Cheriya Pozhi Harbour, as addressed in chapter 4. The project further takes place in a context of Blue Growth, itself often portrayed as new enclosures (Barbesgaard 2018; Mills 2018) in an increasingly neoliberalised nature (Castree 2008a, 2008b; Bakker 2009). Empirically and conceptually incorporating the frontier assembled around Cheriya Pozhi as its own needs grow, the Seaport is undoubtedly a key event in the assembling of the coast as a wider frontier.

In this chapter, I return to the shore to argue that it represents an essential ‘zone of opacity’ (Harvey et al. 2017: 13) of the Seaport. More precisely, by looking at the processes that underlie the project (Bowker 1995), I argue that the shore may appear as the (environmental) shadow of the Seaport’s ‘development mystique’ (Hetherington 2014), that I qualified in the previous chapter.

Building on the insights from chapter 4, I examine the centrality of the shore's materiality in assembling (Nail 2017) a coastal frontier (Cons and Eilenberg 2019). Like in Chapter 4, I take up Sneddon's (2007) and Perreault's call for 'greater attention to the contingent role of nature's materiality in processes of dispossession and accumulation' (2013: 1050). Unlike chapter 4 however, due to the incomparability of scale and because of the top-down impetus, the conceptual setting is closer to the production of nature (Smith 1984; 2007) familiar in much of the academic literature loosely tied to Harvey's (2003) AbD framework, i.e. 'the alteration of the form of received nature' (Smith 2007: 22) for the expansion of large-scale capital. The aim of this chapter is therefore quite intuitively to understand the precise mechanisms by which this is done in the case of the Thuramukham International Seaport. The main argument, in turn, is that an important aspect of the subsumption of nature (Smith 2007) necessary to the construction of the Seaport is realised through the lack of clarity around coastal erosion and accretion dynamics around the site. These dynamics however both pre-date the Seaport—probably because of the existing fishing harbour, even though no study can assert this formally—, and are expected to be exponentially amplified by it once the construction is complete. Analytically, this empirical chapter therefore once again establishes the important role of the shore's materiality in assembling the frontier. Indirectly, it also furthers our understanding, which starts developing from chapter 5, of 'how and under what conditions state actors' actual controls [on the geomorphology of the coast] are established, realized, or abandoned' (Peluso 2019: 77) and with what consequences. In this sense, it continues documenting the socio-environmental and administrative processes producing boundaries between the state and other actors of society, as called for in the case of infrastructure by Nightingale (2018).

To support my argument, in the first section, I dig into the Comprehensive Environmental Impact Assessment (CEIA) to show how coastal erosion/accretion patterns, that could have blocked the project on regulatory grounds, were not considered as salient as people on the ground claim them to be. The CEIA is crucial because it is the mandatory and final step in the pursuit of the Environmental Clearance for such big infrastructural projects.

Because the studies on which the CEIA relies are all secondary and (hard-)‘scientific’, I then move to the ground to speak with the people about their perceptions of these patterns of erosion/accretion and how, if at all, they tie them with the notion of development brought about by the project.

In section two, I therefore go to Vadakku, a village located slightly above 10km north of the Seaport. There, I establish that erosion was indeed real and severe in the experience of my informants. I also show that even if not intended, erosion may turn out to be helpful to clear the way for the Seaport project in the classic fashion of an enclosure (Levien 2013b; Perreault 2013).

In the third section, I go to Tekku, the first village south of the Seaport. There, the opposite phenomenon of land accretion is taking place. Again, I show that this pattern is likely to be instrumental to the Seaport’s blossoming. To do so, I reflect on a manifestation of this enclosure (*ibid.*): the compensation of shore-seine workers in exchange for them renouncing their activity. I then turn to an unexpected resistance from the local parish, building houses without any permission but thereby also hindering the intended clearance of the shore.

6.1 The Administrative Ordering of the Shore

Given the top-down nature of the Seaport project and its scale, showing how the socio-economic trajectories it pursues interacts with the changing geomorphology of the shore necessarily starts at an administrative/legal level, where plans are made and where nature is read and organized (Scott 1998). In this section, I show how the administrative treatment may be seen to reflect the subsumption of nature¹³⁵ (Smith 2007), i.e. its intensified use at the service of capital expansion.

I thus narrow-down the scope of my analysis to the final documents submitted to be granted the Environmental Clearance, which are all gathered in the Comprehensive Environmental Impact Assessment (CEIA). Being over 1,000 pages long, the CEIA contains all the anticipated impacts of the Seaport on the environment, to inform the EAC's¹³⁶ decision to grant the Environmental Clearance or not.

Analytically, doing so gives access to an essential part of the black-box of the Seaport as a major infrastructure project (Larkin 2013). While this thesis is not a thesis on infrastructure, the Seaport indirectly remains an important part of it. For this reason, in what follows, I occasionally draw on academic literature in the anthropology of infrastructure where needed. By its very nature, the CEIA ideally illustrates Morita and Jensen's (2016) claim according to which infrastructure is a means to both know and control environments (Harvey et al. 2017). Through its Public Hearing component, it is also the administrative terrain for different

¹³⁵ Hence also of space (Lefebvre 1991).

¹³⁶ Environmental Appraisal Committee, part of the then Ministry of Environment and Forests (MoEF)

stakeholders to cast their objections and concerns¹³⁷. Among these different stakeholders, Heart-of-the-Sea ('HS' henceforth) stands out as one of the most enlightening ones in terms of the extent to which shoreline dynamics are contested in the case of the Seaport. The group defines itself as an organization of people from the coast who have 'the privilege of being educated' (sic.) Under this modest denomination, we find the usual suspects of social and environmental activism in the region, interviewed in various academic studies over the past decades. In short, HS gathers a long and wide expertise on coastal matters, built through a mix of formal studies and an intimate mastery of the local knowledge pertaining to coastal environments and the livelihoods of fish-working communities. In their submission to the Public Hearing ('submission' or 'HS' henceforth), HS raise essential points with regards to the shoreline dynamics.

While natural shoreline dynamics involve a flow of sediments that follows a seasonal pattern (cf. chapter 4), manmade interventions in the form of breakwaters typically interrupt them. Unlike Castells (1997) who proposed to see infrastructure as facilitating (systemic) flows, then, their claims point to the (biophysical) flows that it disrupts.

6.1.1 Coastal Erosion

In Scott's view the 'administrative ordering of nature and society' (1998: 4) is the first of the four elements which are combined in state-initiated "development" (i.e. top-down) endeavours, a broad analytical category under which the Seaport can fall as seen in the

¹³⁷ As per Indian law, the CEIA, just before its final submission to the MoEF for Environmental Clearance, must be submitted to a "Public Hearing"—at stage at which various stakeholders can voice their opinions, themselves included in the final CEIA.

previous chapter. Fed by the ‘high-modernist ideology’ (ibid) which we have seen permeating the project in the previous chapter, this ordering is thus a simplification which enables the project proponents to implement their vision of development. Below, I delve in depth into this ordering process, with emphasis on the past and future shoreline erosion dynamics.

The Coastal Regulation Zone¹³⁸ (CRZ) Notification of 2011, issued by the Central Government, regulates all the constraints applying to construction activities in coastal areas. Provision 3.viii of this Notification reads as follow: ‘The following are declared as prohibited activities within the CRZ: (...) Port and harbour projects in high eroding stretches of the coast’, unless these projects are of strategic/defense importance (which was arguably put forward too in the case of this however predominantly commercial project, cf. chapter 5). This aspect being a potential deal-breaker, the ToR¹³⁹ issued by the EAC¹⁴⁰ after its 101st meeting clearly required the project proponent to study the shoreline changes around the project site to assess them against the regulatory provisions.

In order to comply with this non-negotiable point, the CEIA, compiled by an external consultant on behalf of TISL¹⁴¹, leans on a study commissioned for the project and performed by the a government agency under the MoEF responsible for advisory expertise on matters related to the sea. In essence, the study looks at satellite images of shorelines in a 30km radius around the port, i.e. 15km to the north and 15km to the south, on a period spanning 1992 to 2011. After summarizing the geomorphology of the area and the pattern of currents around

¹³⁸ Different categories of CRZ exist, but what is important to remember here is that the entire shoreline of the country is subjected to the CRZ legal framework

¹³⁹ A set of mandatory and customized guidelines set by the Ministry of Environment and Forests (MoEF) at the level of the Central Government, to establish the CEIA

¹⁴⁰ Environmental Appraisal Committee, a committee under the MoEF in charge of the supervision of the different steps of, as well as for finally granting, the Environmental Clearance

¹⁴¹ The company set up and owned by the State Government to manage its side of the PPP

it¹⁴² in more technical terms than I have above, the report concludes that ‘the shoreline at the proposed port development area undergoes negligible changes’ (CEIA: 5; 7). The focus is particularly put on the immediate vicinity of the Seaport, as the description in the CEIA clearly delineates ‘the project area’ from ‘its study area of 10km radius’ (fig. 1.3).

As for the critical area studied in the second section of this chapter and located about 12km north, three phrases only mention that the coast near Vadakku ‘is experiencing erosion’ (CEIA 5:12), which is attributed to possible (but not proven) causes that have nothing to do with the earlier fishing harbour in Thuramukham.

When it looks north of the Seaport, the CEIA stops after the first village to the north distant of about 1km: a famous tourist destination. Because this village is surrounded by rocky promontories to its north and south, the CEIA asserts that ‘the headlands prevent the littoral transport of the sediments from the pocket beaches.’ And so, it concludes that ‘it is anticipated that the construction of the proposed port ... may not have major impact on the littoral movement’ (CEIA 5; 10). This closes the discussion when it comes to erosion in the view of the project proponent.

Hence, as expected, the project proponent found no conflict with the CRZ Notification of 2011, and asserted its right to go ahead. And to display transparency, the CEIA lists every point of the ToR in a table, along with the ways in which it dealt with it. For shoreline changes thus, and in particular erosion, point 3 is accompanied by a reference to the study referred to above. In this table, which requires a concise format, TISL adds three points. First, a reference to ‘maximum accretion’ from 1997 to 2001, suggesting that rather than only not eroding, the

¹⁴² Also cf. Sanjeev et al. (1997)

project area actually fell in a zone of accretion. Second, it mentions a reference to a secondary study by another agency of the Central Government directly under the MoEF, without highlighting any of its conclusions. Third, the project proponent makes the link with the CRZ Notification of 2011 through a third study this time done by a third government agency, this time under the Ministry of Earth Science (MoES). Unrelated to shoreline dynamics per se, this study assesses that 'the project area does not have any sensitive ecosystems such as mangroves' and that the construction of breakwaters is thus permissible as per the CRZ Notification of 2011.

According to Menon and Kohli (2007; 2008) however, EIA procedures may facilitate speedy clearance rather than holistic environmental assessment. Being under the impression that this was the case here, HS picked on these points one by one in their submission to the Public Hearing. Invoking 'the permissibility of the Project' being at stake, they point to an alternative study. According to a prior study indeed, which is also included in the CEIA, '[i]n the project stretch, over the period of 38 years, the shoreline has eroded approximately 80-160 m.' (CEIA 1: 4.39). Referring to the secondary data in the second government-commissioned study mentioned above, the collective underscores the erosion that it highlights and, in light of its longer timespan, suggests that it provides a more accurate (and independent) picture than the one provided by the first above-mentioned study. It is noteworthy to mention here that according to the second study, 'the major stretch of Kerala's coastline (63%) is eroding (including artificial coast).' The agency who supervised this study further states that based on their observations, 'it is advised that proper precautions be taken prior to erecting any further structures along the eroding and vulnerable coastal stretches of Kerala' (HS: 5). More critically, the same study reveals that one of the high erosion zones (only two zones with such

levels of erosion were highlighted in the study for the entire state) falls 10km north of the project (note: this zone starts about 2-3km south of Vadakku, cf. next section).

HS further pointed out that since the study is based secondary data, the project proponent should seek their official opinion, in the form of a “scientific study”. This study should clarify the expected effect of a breakwater longer than 3km (as per the Seaport design), and the impacts of the fishing harbour constructed in the 1970s in Thuramukham. They moreover ask the agency to revise their statement according to which the construction of breakwaters is permissible ‘in light of the shoreline dynamics’, in order to dispel the amalgamation of CRZ permissibility and the absence of mangroves leaned on in the CEIA.

6.1.2 Coastal Accretion

When it comes to accretion, as seen in Chapter 4, the consequences cause much less stress to the local communities than erosion, and are thus less contentious in the sense that they do not represent emergencies that can wipe houses away in a short time. Accretion is also not a rationale for stalling a project under the CRZ framework. With respect to this aspect, the CEIA thus indicates that sediments are ‘trapped at [Tekku] due to the presence of headland, rocky outcrops’ (CEIA 5; 10). Being the first village to the south of the rocky stretch that surrounds the direct vicinity of the Seaport, at a distance of about 2-3km, Tekku is thus not a source of concern in the CEIA (CEIA 5).

In its 14th point, asserting instead that a ‘large scale accretion’ has been taking place in Tekku and further south, the submission of HS therefore asks for a study of the social and ecological impacts of this accretion to be included in the application for Environmental Clearance. While

it does so on the ground of health issues¹⁴³, the experience of Cheriya Pozhi in chapter 4 shows that the stakes with an accreting shore are also, if not predominantly, located around the entry of new actors in the area, motivated by its use and its control. In the case of the Seaport, the general feeling in the area is that with its entry facing south, the accreted shore in Tekku is bound to become a target for Real Estate projects of all sorts (hotels, corporate etc.). Clearly, this falls out of scope of the CEIA. However, the Master Plan of the port shows that when the third and last phase will have been completed (due in 2040), the breakwater will stretch all the way to the headland that delineates the north of Tekku. By then, the coast of Tekku will be the first and closest stretch of land available, and is thus also likely to change dimensions as witnessed in Cheriya Pozhi.

6.1.3 Analytical Upshot

All in all, the divergence between project proponents and opponents seemed to be irreconcilable. The CRZ 2011 Notification makes no mention of the radius distance within which the danger of a high erosion zone must be cleared. By focusing on the immediate vicinity of the Seaport, the project proponent is thus within its rights and being truthful. But doing so overlooks a high-erosion zone located slightly over 10km north, which could potentially have compromised the project according to its opponents.

Scott's (1998) ordering of nature thus materialises in how patterns of erosion and accretion are approached here. Analytically, not unlike the assembling of land into a commodity in Li (2014b), this regulatory framework emerges as an important facet of the processes through

¹⁴³ Akin to those reported by Devika (2017) in a coastal village.

which this infrastructural project—and the frontier that it characterises—comes into being. If this is important empirically, it is however hardly surprising conceptually. Secondly, the geomorphological materiality of the shore proves again to be a key pillar of the frontier making in the area. Whether it is from the top or from the bottom, through unforeseen side-effects or through heavy administrative planning, the contingent role of nature (Smith 2007; Perreault 2013) remains strikingly similar, which drives home the overarching argument that this thesis makes.

As the Environmental Clearance process went ahead, the project proponents were subsequently asked by the MoEF to monitor the shoreline changes as a mitigating measure, which likely indicates that the concerns around these shoreline dynamics were credible.

Many questions thus remain open as to the very existence, but also meanings and effects, of shoreline erosion and accretion were thus highly contested. As different stakeholders pointed out, there was first and foremost no study on the ground to critically evaluate these conclusions that were drawn on the sole basis of satellite images. The remainder of this chapter therefore fills this gap by focusing on the situation in Vadakku first, and Tekku second, to assess the extent of shoreline erosion and accretion in the perception of the villagers I encountered in these two locations, as well as to understand their social implications and meanings in their lived experience¹⁴⁴.

¹⁴⁴ In this sense, my study does of course not claim to provide ‘scientific’ proofs of shoreline dynamics as found in physical geography, since this is a highly technical discipline.

6.2 Into a High-Erosion Zone

Vadakku is one of the most populated fishing villages in Nagaram district, with over 90% of the people being involved in fishing or allied activities and about 1000-1500 boats of the same type as Onnu's. The village is located about 13km north from Thuramukham, and is the first major fishing village to the north of the port site if we exclude Thuramukham itself.

More importantly to this thesis, Vadakku is the centre of the high-erosion zone mentioned in the previous section. Here, I show with my primary data how my informants associate the loss of the shore with overpopulation, reduced income from fishing, and in emotional distress. Bearing in mind these specific consequences' differences with the case of Cheriyaipozhi (chapter 4), they certainly share with it a general sense of multi-dimensional loss and disintegration, or *de-territorialisation* in assemblage terms (Nail 2017). Their lived experiences, in turn, shape the villagers' attitudes towards the Seaport and its splintering effects (Graham and Marvin 2001 in Harvey et al. 2017), i.e. that it will first permanently estrange them from the sea (Hailwood 2012), and that erosion will eventually erase their village from the map of Kerala, making way for the Seaport and the associated maritime traffic.

6.2.1 Erosion in Vadakku

I spent over six weeks of quasi-daily fieldwork in Vadakku, supplemented by periodic visits throughout the remainder of my stay. During that time, "erosion!" very often came first

among the list of problems spontaneously listed by my informants. And when not directly erosion, my informants would mention issues which, as we will see throughout this section, are in fact largely related to it.

Robin, an ex-Councilor¹⁴⁵ from Vadakku who hails from a family of fish-workers, and Jacob, one of the fishermen most respected in the village for his courage and his knowledge of the sea, separately recalled that the sea attacks started to be more frequent after the construction of the fishing-harbour in the 1970s: 'we had more than 500 meters of shore in my childhood'. He adds that '[from then onwards] we would not get the sand back [unlike before, when the beach would slowly rebuild after the monsoon]¹⁴⁶'. And so, '[from that moment] the erosion started here and day-by-day, year-by-year, we lost this shore¹⁴⁷'.

By the early 2000s however, the entire shore had eroded so that the sea attacks would directly hit the houses that were built behind the shore. 'People did not have anywhere to go anymore', he explains with a shrug, estimating the total of houses washed away to a huge twenty rows in total. According to all my informants, including the current councilor, erosion has again become more threatening in the past two years, which coincides with the beginning of the Seaport's construction.

Erosion thus appears as a tangible phenomenon in Vadakku. Even though the 2011 CRZ Notification does not specify a recommended radius to assess whether an area is prone to

¹⁴⁵ Unlike the villages around Cheriyaipozhi, Vadakku belongs to the same administrative unit as the state capital, Nagaram: the Municipal Corporation. The Corporation Council, its governing body, is made of 100 Councilors (this informant being one).

¹⁴⁶ Interview with Robin, ex-Councilor in Vadakku, 28 November 2018

¹⁴⁷ Interview with Jason, fisherman in Vadakku, 28 December 2018

high-erosion (and thus unfit to host the construction of a Seaport like Thuramukham's), I will show in the remainder of this section that it remains a key preoccupation of my informants. If nature, in the form of shore erosion here, might not be an *intentional*¹⁴⁸ vehicle/strategy for capital accumulation as Smith's (1984, 2009) production of nature framework suggests, it certainly contingently shapes it (Sneddon 2007; Perreault 2013). By this very fact, the materiality of the shore remains one of the backbones of the frontier assembled through the Seaport (Li 2014b; Cons and Eilenberg 2019). In the remainder of this section, I therefore first look at the lived experiences of my informants with respect to this erosion. This enables me, in the second sub-section, to shed light on how they shape the expectations about the Seaport.

6.2.2 The Lived Experience of Coastal Erosion: from Environmental to Systemic Loss

In Chapter 4, I show at length how coastal erosion and accretion accelerated a 'modernisation' from below. In Vadakku, owing to different socio-natural pre-conditions, there was no brutal loss of livelihood like the shore-fishers experienced in Randu. The erosion is severe, but it progressed gradually over time rather than all-of-a-sudden. Shore-fishing inevitably vanished but Vadakku shore-fishers, who were already a minority, reacted by joining their peers (often family members, friends) who were already fishing on small motorised boats at sea. Socio-metabolically (Martinez-Alier and Muradian 2015b), the

¹⁴⁸ It is simply impossible, in good faith, to ascribe intentions in such contexts. Environmental damage as a lesser evil, for instance, would reveal a different sort of intentionality than the one assumed in many neo-Marxist accounts such as the above.

practices of Vadakku fishers are thus very similar to those in Onnu, and to those more widely described by Subramanian (2009) or Sundar (2011).

6.2.2.1 Environmental and Economic Loss

Because of erosion, near-shore fishing has nearly vanished according to Jacob, an informant considered among the most knowledgeable fishermen of the village. Because there is no more shore, it is less easy to observe the movements of near-shore fish such as *natholi* [anchovy] or *chala* [sardine]. The loss of shore further makes it impossible to dry any surplus, which then incurs losses. Beyond this, according to Edgar, an auctioneer, '[when the shore was wide] we could sell fishes, and more companies, businessmen etc would come here to buy fishes. But now because we lost all that land nobody is coming here. If we get more fishes also, we don't get enough earning from that¹⁴⁹'.

In addition, the loss of shore has made the Vadakku fishermen rely increasingly on the Turamukham fishing harbour, at their detriment. According to Edgar and Vinod, a friend of my local interpreter's parents, their use of Vizhnjam's fishing harbour used to last for a maximum of two months per year¹⁵⁰, but this quickly became four to six months, i.e. a third to half of the year. According to Vinod, then, in addition to facing the risk of being beaten up by the Thuramukham fishermen who request priority access to "their" harbour at all times, about 50%-55% of the income is lost in the mix of transportation, fuel costs, vending at unfavourable hours and the various commissions paid to different intermediaries. And so,

¹⁴⁹ Interview with Edgar, fish auctioneer in Vadakku, 24 November 2018

¹⁵⁰ In search of safety during the peak of the monsoon, i.e. the same reason for which Cheriyaipozhi harbour was initially constructed in chapter 4.

what is supposed to be a lucrative season in terms of fishing ends up being crippled with expenses which, according to all, are burdensome and unfair¹⁵¹.

6.2.1.2 Towards a Systemic loss

Beyond the tangible aspects listed above, coastal erosion was becoming the root cause of all problems in the perception of my informants. While erosion was thus not new to the post-seaport period, what it evolved to represent with time is therefore analytically telling.

For example, it is interesting to note that even experienced fishers like Jacob, respected for their knowledge of the marine environment, link erosion with the wider trend of decreasing fish stocks. Following this reasoning, fishers are forced to go always deeper at sea, which requires more powerful engines and fuel expenses, and puts further stress on their safety. Inevitably, as seen in chapter 4, the race to more engines and more allied technology such as always more powerful lights also puts more pressure on the fishing commons. In the lived experiences of Vadakku villagers, the narrative of has started superseding the more classical one according to which foreign trawlers are the cause of fish scarcity, as seen in Subramanian (2009) or Sundar (2011) among many others.

The objective causal connection with erosion, on the other hand, is indeed less straightforward. Hoeppe (2007), in his ethnography of a fishing village from central Kerala, highlights several examples of 'eclectic statements' (Tsing 2005: 113) in which fishers

¹⁵¹ Interview with Virgil, land-owner from a fishing family in Vadakku, 14 December 2018

associate various and unrelated phenomena with the 2004 tsunami. Analytically, this crucially shows that erosion is lived, beyond what is directly expressed, as an irremediable and overarching loss, which spans much more than its individual consequences.

Many other informants made the same connections as Jacob, but with different aspects of their deteriorating livelihoods. Population density and the mushrooming of ‘colonies¹⁵²’ was one of these aspects. Weather calamities, another. Suneetha, a fish-vending woman, for instance, directly linked erosion with less people going at sea as a result of ‘danger’—which in fact could come from cyclones or weather conditions unrelated to erosion—and decreasing catches¹⁵³. Albert, a co-operative administrator, adds that the combination of erosion and congestion means that in practice, the youth has no more playground as it used to have on the shore. For girls, the effects are even worse since their parents would not let them hang out on the street like the boys do. Albert links this absence of space to a wider phenomenon that he observes aggravating in the village, namely that with nowhere to go, people’s minds get ‘boxed in a square’. This imaged expression summarises the general lived experience of erosion in Vadakku.

¹⁵² Colony is a generic term used in the village but also in many other places, originally referring to a group of houses built with the help of the State government or of the Church (cf. Chapter 6). In the estimation of my informants, 15,000 families live in about 3000 houses spread over 2 square-kilometres. Density increases as there is nowhere to expand physically, and creates issues of intimacy, sanitation and overall well-being. As is the case for many in chapter 2, refuse to relocate out of fear of disconnection from the sea and from the City Corporation.

¹⁵³ Interview with Suneetha, fish-vending women in Vadakku, 30 November 2018

6.2.3 Expectations about the Seaport

Clearly, coastal erosion has led to multi-dimensional dispossession. First spatio-environmentally, it permeated the economic and emotional realms. The contingent role of nature takes its full dimension here, since it sets the ground for a subsequent accumulation (Sneddon 2007; Perreault 2013) which is essentially extra-economic (Glassman 2006; Levien 2012). This continuum materialises in the villagers' fears about the upcoming Seaport.

To use Hickey and du Toit's (2007) terminology and apply it more locally, the attitudes towards the Seaport largely reflect an expected exclusion (from any benefit that may come from it) and/or adverse incorporation (i.e. being engulfed by the socio-economic order brought about by the Seaport without (m)any benefits or alternatives), as well as an expected deterioration of the already precarious environment outlined above.

Like Anthony, an active elderly fisherman¹⁵⁴, some of my informants in Vadakku, spontaneously displayed a loose awareness about the absence of Vadakku from the zone that would supposedly be affected by the Seaport. When they would do so, it would be with a certain fatalism, linking the Seaport to an increased erosion in the village, but also to the lack of compensations and to being excluded from the economy of anticipation (Cross 2015) around the Seaport, often materialised in the jobs it would create (cf previous chapter). To Joseph, the direct consequence thereof is that 'we don't have any rights to get any job [on

¹⁵⁴ Interview with Anthony, fisherman in Vadakku, 10 December 2018

the Seaport site]¹⁵⁵. And no compensation of any kind. So, directly, we are not getting anything¹⁵⁶.

Furthermore, summarizing what I heard from many, he added that once the Seaport is operational, 'ships will be coming very near and every half an hour' [ibid]. Leonard, another fisherman, even mentioned that ships would come within 2km from the shore. 'So, Joseph continued, it will be very difficult [for us] to come and go into the sea. And we are using nets, which is another difficulty. If this net is placed one or two kilometers wide in the sea, when the ship comes it is not possible to remove that within minutes¹⁵⁷'. All in all then, as Leonard concluded in our interview, 'it will be very harmful to fishing¹⁵⁸'. Another informant angrily added that 'who knows in the future some oil tank or oil ship will make some kind of accidents like oil spills etc. If oil comes with water in this area, it will destroy everything¹⁵⁹', by which he meant the ecosystem and thus the fish resource.

To my interviewees, the link between these expected phenomena and the current erosion is evident: they represent a continuity of the same, holistic and multi-dimensional experience of contraction described above. It is not surprising then that Leonard puts the sizes of the existing fishing harbour and of the upcoming Seaport in perspective, to conclude that if half a kilometer of shore had been lost to such a small harbour as Thuramukham fishing harbour, 'then after the construction of this Seaport [note: whose breakwater will be over 3km long],

¹⁵⁵ As Chapter 4 will be discussing, and in line with Cross (2015), one of the promises of the Seaport is that it will grant many jobs to the local people, and particularly to those from the neighbouring fishing villages.

¹⁵⁶ Interview with Joseph, fisherman in Vadakku, 28 January 2019

¹⁵⁷ Interview with Joseph, fisherman in Vadakku, 28 January 2019

¹⁵⁸ Interview with Leonard, ex shore-fisher in Vadakku, 10 December 2018

¹⁵⁹ Informal conversation with David, fisherman in Vadakku, 29 January 2019

our Vadakku village will not be anymore in the map, even in the map!¹⁶⁰ This last reiteration makes his quote the most powerful, but this fear that the village will simply and literally disappear was shared by most of my informants, as reinforced by the Councilor at the time of my fieldwork: ‘even if this is one of the places where most of the fishermen are still fishing in Kerala, one of the first 5 places in fact (...) fishing will fully disappear here¹⁶¹’.

Analytically, erosion in Vadakku thus fits a classic scenario of increasing dispossession, where the growing enclosure (Harvey 2003) is facilitated by an initial disruption in the materiality of the shore (Sneddon 2007; Perreault 2013). The Seaport, by downplaying it in the Environmental Clearance documents, first managed to avoid being stalled on regulatory grounds (cf. Sud 2009 for similarities in different contexts). As we just saw, it will benefit from its socio-economic effects too, which were ignored by the same token.

Note again that unlike suggested in Martinez-Alier (2002), Escobar (2006) or Baviskar et al. (2006) but similarly to chapter 4, this fatalistic lucidity has not (yet?) materialised into any organised ‘environmentalism of the poor’. In the growing disembbdedness of nature (the shore especially) and society (the socio-economic prospects) (Smith 2007), these informants anticipate being alienated from both nature (Hailwood 2012) and the new economic conditions deriving thereof (Li 2009; Li 2014a). In a more classic land-grabbing context, Hall et al. (2015) explore the different possible reactions from the ground, stressing that there is not always a direct line between trampled interests and organised resistance. Open resistance is but one of the many possibilities that they survey. Here, leaning on what I explained in the

¹⁶⁰ Interview with Leonard, ex shore-fisher in Vadakku, 10 December 2018

¹⁶¹ Interview with the then Councilor in Vadakku, 29 November 2018

General Introduction, the gradual dilution of the Fishworkers' Movement over the past decades seems to have dissolved the potential energy for frontal struggles. As a famous activist told me during fieldwork, it is unlikely that there will be such direct confrontation until the effects of the Seaport cripple the daily lives of fishworkers to such an extent that they feel no other choice. If resistance is thus not the clearly favoured option of Vadakku's fishworkers (yet at least), does it mean that acquiescence or incorporation (Hall et al. 2015) anyhow reflect the situation better? The rather indeterminate situation at hand is not sufficiently crystallised to suggest acquiescence either, which would be a symmetrical counterpart to resistance here. As for incorporation (into the Seaport's project here) I showed in the previous chapter that even right next to the Seaport site, there was in fact nearly no incorporation in the form of jobs. Vadakku being some 13km further north, there is even less such incorporation at this stage.

In sum, the absence of overt resistance at this point can merely raise questions and loose hypotheses, which will need to be answered as empirical developments continue to unfold and uncertainty gradually settles.

What is however already certain at this point, albeit from a different angle than in chapter 4 since there is no technological push here, is that Subramanian's (2009) notion of intermediacy as a fairly stable socio-economic and political position achieved by the artisanal fish-workers erodes seriously here too. As this distinct position is challenged and that potential futures appear increasingly precarious, they nevertheless remain indeterminate. All in all, before being institutional, the regimes of exclusion and opportunity seen here seem to arise from the shifting features—here disappearance--of the shore. The frontier being assembled

through the financial resources, promises and expectations as shown in the previous chapter, thus primarily leans on coastal erosion too.

6.3 Accretion and Defiance in Tekku

In geographical contrast with Vadakku, Tekku is the first major fishing village located south of Thuramukham. Its distance from the Seaport site is about 2-3km. Because the sea-entry to the Seaport is on its South, and because the third phase of the breakwater's construction is supposed to extend all the way down to Tekku, it represents a prime location at the very entry of the Seaport complex.

Geomorphologically, Tekku is characterised by a big promontory, vertical to the shore, which delineates its northern limit, and which acts as a natural trigger for beach accretion. This village is home to somewhere between 1,134 households in 2014 (Devika 2017) and 1,600 households in 2018 (one of my informants), for a population of about 17,000 inhabitants. Tekku's history as a village is recent, as villagers from the southern neighbouring village of Pulluvila started settling there, possibly in the 1920s or 1930s. In 1971, Tekku became an independent parish from Pulluvila.

Despite being considered one of the most deprived villages on the coast of Nagaram, Tekku feels less congested than any of the villages mentioned in this thesis so far. For decades and in an inversely symmetrical fashion to Vadakku, sand has been accreting south of the promontory and west of the hills that border the village on its west. Like in Vadakku, the

causes of this accretion are largely attributed by my informants to the fishing-harbour in Thuramukham. Both visually and in the way villagers describe their village, one can picture Tekku in terms of vertical layers going from East to West. The western border is thus the tall hills referred to just above. Then come two rows of houses, with some space/garden around them, and a first road to their east. After this road, two to three rows of house, again fairly spaced, are built on a stretch that is about 100m wide and ends east with the second road, which links Tekku to Pulluvila through the shore. And after this road, there are easily 250m to 300m of shore before reaching the sea. According to one of my key informants in the village, these vertical layers came progressively, as more and more sand was accreting, making Tekku's shore wider and wider.

If the Environmental Clearance documents of the Seaport acknowledge a stable shore in Tekku, this is only to prove that there is no erosion and thus no risk of compromising the project as per the CRZ Notification (cf. section 1). Accretion however has a strategic value for the Seaport project, in that it provides a prime location for future activities allied to the Seaport, such as warehouses, real estate or hotels. While there is of course no open proof of this, I lean on the insights developed in chapter 4, where I showed that the accreted shore changed dimension to become land and allow new entrants and activities in the area, to show the importance of accretion to the Seaport project by focusing on two proxies. More specifically, I first look at the compensation of shore-seine fishers as the first of a gradual enclosure, and then at the resistance from the parish in the form of a housing project. Looking at very local politics 'at [the] point of enclosure' (Levien 2013b: 362) allows me to conclude that once again, the shifting shore is thus the backbone of the frontier being assembled around Thuramukham International Seaport. Whether the impetus setting the frontier in

motion comes from above (this chapter) or from below (chapter 4), the same conclusion arises as to the predominant role of the shore.

6.3.1 Gradual Enclosure and the Compensation of Shore-Seine Fishermen

I have referred elsewhere in this thesis (cf. chapters 3, 4) to a wide shore being an essential condition for the successful operation of shore-seine nets, called *kambavala* in Malayalam (chapter 4). In Tekku, the wide and constantly accreting shore is of course suited to the practice of *kambavala* fishing. This practice, however, stands in the way of the intended developments of and around the Seaport. As such, a solution had to be found by the parties to the PPP. This was eventually implemented through a compensation scheme, implemented by various arms of the state government. It is important to note here that this scheme could not possibly apply in the case of Vadakku above since, as shown, the village is not considered to be part of the impact-zone of the seaport in the CEIA.

Compensating the *kambavala* workers of Tekku implies, obviously, that they stop their activity. The Government Order which sanctions their compensation first mentions a loss of livelihood and a decrease of fish since the start of the Seaport's construction, but then indicates that 'once the region is declared as a ship channel fishing in this region will be prohibited' (translated from Malayalam) and that '[a]s soon as the fishermen in Tekku region are given compensation, the [Thuramukham] International Seaport should take actions to declare the region a non-fishing zone' (ibid). The compensation, which amounts to 5.6 lakh rupees (about 6,000 GBP) is thus an enclosure of the inshore sea, since it buys off the 'bundle of powers' (Ribot and Peluso 2003), in terms of access, that these fishers have over (cf.

chapter 3) it and hands it over to private interests (Swyngedouw 2015b; Perreault 2013). Quite classically, capital expands 'extra-economically' (here thus, territorially) by resorting to this type of dispossession (Harvey 2003; Glassman 2006; Smith 2009; Levien 2012; Perreault 2013).

Unsurprisingly, then, the general view among directly concerned fishermen was that this compensation was not enough. 'We have been doing this since the time of our father's forefathers¹⁶²', Suresh, a 40-years old *kambavala* fisherman told me. Clearly, the compensation would never be able to make up for this. 'Where will we go and what will we do?' [ibid], he kept repeating. The money would be used to repay some debt (often contracted in the case of their children's weddings), or for the education of the children. Some would be spent on house construction expenses if applicable (cf. below), but many people would anonymously denounce the fact that quite frequently, the money was spent in a 'splash', on a motorbike or clothes. And then the beneficiaries would be left with neither money, nor the right to use their ancestral technique, thus facing a multi-dimensional dispossession (Perreault 2013): losing income, occupation, connection to the sea and to their ancestors' traditions.

The reaction of the impacted community can be divided into two, temporally sequential phases.

¹⁶² Interview with Suresh, kambavala fisherman in Tekku, 7 March 2019

6.3.1.1 Short-run Transgression

In the short and medium-run, the reaction has nothing to do with any form of environmentalism of the poor, whether theoretical (Martinez-Alier 2002; Escobar 2006, 2008; Baviskar et al. 2006) or more empirical like in Veuthey and Gerber (2012), where coastal populations openly clashed with shrimp-farmers in Ecuador, among many examples. It rather resembled Scott's (1985) *weapons of the weak*, a wide term encompassing techniques of everyday resistance without necessarily declaring it as such. A major difference nevertheless lies in the absence of any class-struggle framing by my informants, who seemed to be taking advantage of the lack of enforcement so far, rather than trying to actively defy the new order or add any ideology to their struggle as they would in Scott (1976). This could come across as surprising to readers who remember strong influence of the political "Left" in the post-colonial history of Kerala. Would situations such as the one I analyse here not represent a natural ground for the formulation and expression of such politics, organised around political parties or the unions close to them? Much like in the other villages, I did not witness any open resistance around political parties here. Unable to find further evidence as to why this was the case, I imagined unlikely that any of these parties would start stirring any organised resistance under their banner since they had both supported the project in one form or the other.

Like Sud (2021) in other contexts, then, these specific fishers' everyday politics appear to be predominantly shaped by their specific relationship to the shore (cf. chapter 3), itself tying to their occupation.

Indeed, as I was once expecting A.S., a 50 years-old beneficiary of the compensation package, I was stuck with his family waiting for him to return from, indeed, fishing. If some transitioned to small boats like in Vadakku (cf. previous section), others, like Francis, have bought second hand *kambavala* gear with friends, from other villages, for an amount slightly inferior to 5 lakhs. According to him, 8 *kambavala* are back since the compensation campaign had supposedly removed them all¹⁶³. Conscious that they may be snatched and destroyed if/when some enforcement crews were to see them, Francis did not seem particularly afraid. According to him, the Seaport 'will take another 3 to 4 years to be in full swing, so we can continue until then¹⁶⁴'. In a way, this is also what the Government Order cited above states. In this time of transition, some leniency could prevail. There would however of course not be any further compensation. Not sure of what would happen after this, he seemed to find this time horizon more than sufficient to avoid worrying about the upcoming Seaport.

As I show in section 6.3.2, the importance of these fishworkers' relationship to the shore and to their occupation does of course not preclude these relationships from weaving through local politics.

6.3.1.2 Longer-run Powerlessness

In the longer run, most villagers are however deeply negative about the upcoming Seaport. To Martin, a shore-fisher in his thirties, the disappearance of *kambavala* fishing involves the death of the community, since 'we will have to move as a result of the Port'. Nobody expects the promised jobs (chapter 3), and like in Vadakku (cf. previous section) most do not even feel

¹⁶³ Interview with A.S., *kambavala* fisherman in Tekku, 4 April 2019

¹⁶⁴ Interview with Francis, *kambavala* fisherman in Tekku, 7 March 2019

part of the economy of anticipation (Cross 2015) that comes with such large projects, as best illustrated by Augustine fatalistically laughing that prospect away. ‘The construction will cause more scarcity of fish’, he continued, ‘and this will affect not only fishermen but fish-vending women and all related jobs too¹⁶⁵’. Martin indeed expects a chain of negative events, and urges women and ‘all these people’ to be included in the compensation too, quickly adding that ‘their budget [for compensations] would be quite different then’ hinting hopelessly that it could make them think twice before carrying on with the Port project. His personal case is a good example of the looming doom, since he invested his compensation in a shop for fishing equipment. ‘But if there is no fishing anymore, who will buy these hooks and nets?’¹⁶⁶ The final nail on the coffin, to him, lies in the fact that they ‘won’t be able to move anywhere, since the Real Estate people [related to the Port] will have bought it all already [so that] if we need 1 cent of land, we will need lakhs and lakhs and not even be in this village’ [ibid].

Whichever stance on the situation they reflect, these different testimonies from Tekku again all speak to a growing enclosure of the sea and the shore by the Seaport project, of which the compensation of the *kambavala* workers is only a first step. The removal of shore-fishing rights precedes a wider, multi-dimensional and extra-economic form of dispossession in the fashion of those studied by Harvey (2003), Levien (2013b) or Perreault (2013), where the only difference may be its more gradual character. Either way, access to the shore and thus to the bundle of powers (Ribot and Peluso 2003) that it confers to those monopolizing it is the main stake.

¹⁶⁵ Interview with Augustine, co-operative administrator in Tekku, 4 March 2019

¹⁶⁶ Interview with Max, ex-kambavala fisherman and shopkeeper in Tekku, 4 April 2019

In echo to Perreault's (2013) call, then, the contingent role of nature in processes of accumulation and dispossession thus becomes apparent once more too, again in the form of the accreting geomorphology of the shore which facilitates them here. This reinforces the main argument of this thesis, according to which the backbone of coastal frontier assemblages in Southern Kerala is the materiality of the shore. The other elements of the assemblage, especially the nature and power of capital, but also the big actors behind the Seaport project (cf. chapters 5, 7) indeed lean on this particular materiality to shape the frontier in this particular way.

6.3.2 An Unexpected Resistance Initiative

When I first visited Tekku, I chanced upon an entire row of houses being built closer than the seafront. This was quite surprising to me, since I knew from my fieldwork around Cheriya Pozhi (cf. chapters 3 and 4) that authorisations were becoming increasingly scarce. Yet, they were too numerous to simply be individual initiatives. I thus enquired about them, and was quickly told that these constructions had been initiated by the local Parish, rather than by the local authorities. This was rather surprising too, and so was the fact that they were located on shore space that had accreted in the past.

Chapter 4 sheds light on the new dimensions taken by the accreted shore around Cheriya Pozhi harbour, and hints to the importance that control over its access could give. I also established above that the accreted shore represents one of the 'points of enclosure' (Levien 2013b: 362)—essential nodes in the assembling of the frontier—needed by the Seaport to fully unfold. In this context then, which weaves with the lack of organised resistance that

also refer to above, I call the present form of resistance an anti-dispossession *initiative* in contrast with Levien's (2013b) anti-dispossession movements, for its scale is much smaller and its purpose much less openly avowed. In sum, below, I tell the story of a micro assertion against upcoming macro changes. While the aim of such movements/initiatives is to maintain a land-based (shore-based here, cf. chapter 3 but also Subramanian 2009 and Sundar 2011) livelihood, Levien (2013b) recognises that their expressions are socially and politically contingent.

Although Tekku is the least densely populated of the villages studied in this thesis, many houses are still occupied by two to three families, and most people told me that what their village needed the most, was housing. The contention, here, is more about who should remedy to this, and how. After an attempt by the State Government, who proposed flats that the local residents refused, the Parish¹⁶⁷ came up with a plan. The way Father R—the parish priest of Tekku—puts it, living together in flats is 'not possible in village life¹⁶⁸', so that he would build houses himself if the government didn't¹⁶⁹.

Given the layout of the village (cf. section introduction), shore accretion means that the available space is expanding South-Westwards. Consequently, Fr R's housing project entails the construction of three parallel rows of houses after the second road, i.e. on the shore that had been accreting, on a length of about 1.5km-2km. Importantly, the project takes place in

¹⁶⁷ It is important to distinguish this from "the Church" as a homogeneous whole, since it is a local initiative. I reflect on what it means to the Church as an institution that retains significant influence (Sundar 2011) in the next chapter.

¹⁶⁸ Interview with Fr R, Parish priest of Tekku, 13 April 2019

¹⁶⁹ Fieldnotes from informal discussions, 22 March 2019

breach of any legal framework, since the accreted land is public, and thus belongs to the State government.

According to his opponents, this plan entails its fair amount of populism. Subramanian explains that, in other villages, priests increasingly draw their legitimacy from being perceived as actively working in favour of ‘the poor’ (2009: 243) rather than from their sole priestly status—a gradual change from their strong top-down (Sundar 2011), intemporal and spiritual power accumulated over centuries, towards a more tangible and temporal one where accountability towards the community is increasingly important.

Fully embracing this logic, Fr R, a young and short man with a tattooed cross on the inside of his right forearm, thus believed to be in his right. During our brief interactions, he reminded me several times that it was ‘the people’s request’, which my fieldwork does not disprove. Indeed, the project met strong support among my interviewees. Focus groups conducted in the village revealed that this included the “youth”, which otherwise tends to be more skeptical of religious leaders¹⁷⁰. Furthermore, this support is backed by the fact that the housing project is linked to the construction of a community hall. As seen at length in the previous chapter, infrastructure—big or small—comes with its promises, which structure not only space but also time, in moments of different importance (Hetherington 2014). In structuring the space and time of his parishioners in this way, the priest effectively resists any possible expansion of the Seaport here. Fr R and his parish council ask for 1 lakh Rs (approximately 1,300 GBP at the time) from each household who is to occupy one of the 175 plots of land scheduled in this phase of the new settlement¹⁷¹. Given the size of the plot (3

¹⁷⁰ Focus group with Tekku youth, 24 march 2019

¹⁷¹ Eventually, the priest would have intended for the project to expand further.

cents), this price comes to at least six times cheaper than the baseline market rate for a plot of land near the shore, and has the advantage, for the fish-working households, to not cut them from the shore (cf. chapter 4). This money is channeled towards the community hall, of a size of about 15,000sqft, whose construction is also supervised by Fr R. Trained in engineering before entering religious life, the priest thus used to spend a good amount of his time on the construction site, a few hundred meters away from the Church.

The community hall is thus the cornerstone of the housing project, and the material guarantee behind the priest's initiative. According to Aneetha, a Panchayat ward member, the community hall serves multiple purposes. First, of course, "functions" like marriages, religious feasts, or village events. Indeed, until the completion of the hall, 'we need to go to the Panchayat hall or Poovar or Veli [note: all at least 15km away, in different directions from Tekku]¹⁷²'. Secondly, she insists, 'we have no place here if there is rain for one week, or a tsunami, or something like that' [ibid]. The community hall, then, provides a feeling of safety and a first recourse in case of natural calamity. Added to the extra housing, it also crystalises a feeling of community (Gudeman 2001) and anchors the claims of the villagers—or at least of their priest—to the accreted land. More or less directly, this coming together of community—of a certain type—thus represents another facet of the defiance arising from the all-encompassing changes from the Seaport.

In addition, the promises of the community hall structure time for the local residents in an anticipatory way which comes at complete odds with the dispossession that they may feel

¹⁷² Interview with Aneetha, Panchayat ward member in Tekku, 22 March 2019

looming with the Seaport. By the same token, anticipations of an alienation from nature (Hailwood 2012), i.e. an estrangement followed by its takeover by the Seaport or allied activities as well as of a dislocation of the socio-environmental commons (Gudeman 2001, 2008; Sundar 2011 + chapter 3) of the artisanal fishing livelihoods are thus tamed in intensity and immediacy.

Eventually, more than a year after my fieldwork, I was informed that an inspection had been conducted by the District Collector and a police case registered against Fr R. A few months later, possibly an effort to pacify the Church's relationship with the state (cf. chapter 3 and next chapter), the Archbishop moved Fr R to a non-coastal parish. As far as I am aware however, in this indeterminate institutional arm-wrestling, the houses remained. And while I turn to a dedicated analysis of institutional dynamics in the next chapter, this section has showed that the materiality of the shore again preceded these institutional dynamics. In the form of accretion here, the shore is again the backbone of the frontier being assembled around the Seaport.

6.4 Conclusion

In an inverted situation to chapter 4 where the changing materiality of the shore was the main driver of sub-sequent socio-economic trajectories, I have shown throughout this chapter how the socio-economic objectives pursued through the Seaport project sit well with the changing geomorphology of the shore, whose feature appear as ‘extra-economic means’ (Perreault 2013: 1054) for the assembling of the frontier in accordance with these priorities.

Whether this is conscious and deliberate—as many (neo-)Marxists would argue—or not, nature appears as an ‘accumulation strategy’ (Smith 2007) in the sense that it is at the core of this project of massive accumulation. Whether it is from the bottom or from the top, the shore is the backbone of frontier *becoming*—a Deleuzian term which highlights its processual nature as a change between the different elements of an assemblage—in the coastal setting of Nagaram district.

Triggering the assemblage of the frontier in chapter 4, coastal erosion and accretion are both consequences of the frontier being assembled here, as well as pre-conditions for its further expansion. In both cases however, these dynamics play a central role in the unfolding of both capitalist dreamworks (Appadurai 2015) and their concrete manifestations.

Having characterised the paramount role of the shore’s shifting morphology in the assembling of frontiers along the coast, I have shown how this particular directionality—in contrast with the reverse one often taking academic precedence—also shapes the reworking of ‘ideas [of

the coast and shore], as well as [of] the rules that govern their use and control' (Rasmussen and Lund 2018: 389). I am thus ready, at this point, to turn to the complementary and more researched institutional facet thereof in the next chapter. There, biophysical erosion and accretion find a continuity in the re-shuffling of the produced boundaries (Mitchell 1991) between the three main institutional actors of coastal life, and fully blossom into a metaphor for the political ecology of the coast.

Chapter 7: Institutional Erosions and Accretions

7.0 Introduction

In the previous chapter, we saw that coastal accretion in Tekku gave rise to a process of territorialisation led by the local parish priest, which indeed led to new—albeit indeterminate over time—institutional arrangements (Rasmussen and Lund 2018). In this chapter, I make institutions my central focus, in order to investigate the extent to, and respects in, which the state and the Catholic Church¹⁷³ are entangled with the socio-environmental transformations discussed so far. Because they are the major institutional players along the coast (Subramanian 2009; Sundar 2011) and because the state—and thus the Church too by extension to the specific context of southern Kerala (cf. chapters 2 and 3)—remains a decisive actor in environmental politics (Nightingale 2018; Loftus 2020), doing so renders a fuller picture of the process of frontier assembling taking place along the coast. And since these institutions span over my two fieldsites, a joint and dynamic approach seemed more fruitful.

In political ecology as in most other social sciences, different approaches to conceptualising the state have been coexisting with one another (Loftus 2020). Abrams (1988) was influential in positing that the state starts as an implicit construct, which is then reified through the structuration of the state-system or ‘palpable nexus of practice and institutional structure

¹⁷³ With the exception of Moonu, all my other fieldsites are exclusively Catholic. In the bigger picture of Nagaram district, the vast majority of fish-workers are Catholic (cf. chapter 2). Hence, historically (cf. General Introduction) the Catholic Church is the one major religious institution involved in coastal matters and, as such, an obvious institution to analyse here.

centred in government and more or less extensive, unified and dominant in any given society’ (1988: 58; cf. also Evans 1995)—with the state-idea, which is ‘projected, purveyed and variously believed in in different societies at different times’ (ibid.) As these two facets also suggest, the state’s boundary with society ‘appears elusive, porous and mobile’ (Mitchell 1991: 77). In an approach which is very much aligned with assemblage thinking (Nail 2017), Mitchell suggests to analyse the state as a structural effect rather than actual structure, i.e. ‘as the powerful, metaphysical effect of practices that make such structures appear to exist’ (1991: 94). My analysis of shifting boundaries thus unpacks the ways in which these effects and boundaries are produced by socio-environmental processes (Harris 2012; Nightingale 2018; Angel and Loftus 2017; Loftus 2020). Adapting Nightingale’s (2018) framework to the context I study, I use a state-nature-Church nexus to illustrate boundary-making processes, which thus represents an original contribution within the study of institutions as effects.

As this nexus suggests and in full coherence with the framework laid down in chapter 1, I start from a standpoint that sees the state—and other big institutions by extension—and nature as co-productive (Swyngedouw 2015b; Sud 2020c, 2021). Because these relations are eminently contingent and in constant flux, a qualitative inquiry is indispensable to further understand their whereabouts around my fieldsites. The fact that that these relationships are co-productive implies a two-way directionality. However, in chapters 5 and 6, I have already flagged aspects of the role of the state in assembling the frontier (Peluso 2019). In addition, in coherence with the analytical framework laid down in chapter 1, I lean on Swyngedouw (2015b) and Sud (2020c) to propose that the state is co-productive with nature (Swyngedouw 2015b; Sud 2020c) and society. Moreover, as seen in chapter 1 theoretically and in this entire thesis empirically, nature and society are also co-productive.

With the above in mind, I look at the other direction. I therefore delve into the effects of the frontierisation—and the emphasis put on the environment in previous chapters—on the state and the Church.

To do so, I divide this chapter in three sections. In the first one, I reflect on the growing importance of the Coastal Regulation Zone (CRZ) framework in shaping a state effect by examining petitions which, submitted in front of the National Green Tribunal (NGT), sought to revoke the Environmental Clearance granted to the seaport. As the state emerges as the herald of the public good, I delve into the specifics of the Seaport's PPP deal struck with its private to further look at how this principle is enacted.

In the second section, I turn to the alleged involvement of some members of the clergy in one of the leading petitions submitted in front of the NGT in order to discuss how the recurrent tension between socially-minded priests and more pastorally oriented ones might have played out in this particular setting. I show that while socio-environmental concerns revived the social orientation of the Church through the activism of certain priests, their eventual new affectations resulted in a return to the status quo of a Church that mediates between state and society.

Finally, in the third section, I go on the ground and look at how these processes unfold at the everyday level. By focusing on a re-settlement scheme prompted by the severe recent experience of coastal erosion, I show that the distinctive involvement of the state is blurred by the alleged moonlighting practices of local leaders. As the state thus undergoes mixed ebbs and flows around its boundaries, the Church is strengthened in its mediating role between state and society.

Altogether, this chapter therefore also illustrates a gradually evolving state idea (Abrams 1988), which contrasts with a very stable Church idea (despite inner tensions, as explained in this chapter's second section).

7.1 Socio-environmental state effects

Building on Mitchell's (1991) framework of state effect, Nightingale (2018) coins the concept of *socioenvironmental state* to reflect 'how contested, shifting, emergent boundaries of the state contain the possibilities for transformative change' (ibid.: 704). Likewise, Harris (2012) stresses the importance of political-ecological and socio-natural approaches in trying to further understand how boundaries between state and society, which are in constant shift, are produced. Angel and Loftus however underscore that while there is growing agreement on the importance of socio-natural state effects, discord remains 'as to what it is that produces state effects' (2019: 209). My contribution to this open debate is to show that in the case of the Thuramukham Seaport, the interplay of a quasi-judiciary body (the NGT), a contested coastal regulatory framework (the CRZ) and the simultaneous timing and power equation with its private partner are the contested political-ecological processes which, once crystallised (Angel and Loftus 2019), produced these shifted boundaries. I now elaborate on this argument.

7.1.1 CRZ: Discretionary Enforcement

As seen in chapters 3, 4 and 6, the Coastal Regulation Zone (CRZ) regulatory framework is certainly one of the most perceptible tokens of the relationship between public authority and the coast as a space. I have shown in chapter 6 that this framework is in direct conversation with coastal erosion, not least because in theory, it protects these areas from constructions and therefore nullifies many of its socio-economic effects by preventing them from taking place.

Sundar (2014) notes that the first CRZ notification, a clear instrument of territorial simplification (Scott 1998), was introduced in 1991. This notification defined the coastal zones as 'encompassing all that land with which the sea has direct contact and also those portions of the land on which the sea has an influence indirectly through tidal action' (Sundar 2014: 367). In practice, Sundararaju (2019) explains that this encompasses the coastal land up to 500m landwards from the High Tide Line (HTL). Within this space, four different zones called CRZ-I (ecologically sensitive areas), CRZ-II (built-up areas), CRZ-III (rural areas) and CRZ-IV (water areas) (Sundararaju 2019). Within these zones, different construction restrictions apply (ibid; Sundar 2014). Critically, the 2011 Notification, which was in force when the Seaport received its Environmental Clearance, explicitly includes the protection of the fishing communities in its provisions on constructions and their restriction.

More than the further specifics of these provisions, what matters to this thesis is that the enforcement of the CRZ, which falls under the remit of the state governments, has been quite discretionary in practice. For this reason, it represents an analytically fertile empirical lens to examine one concrete instance of the state effect (Mitchell 1991), or ongoing process through

which the distinction between state and society is (re-)produced (Harris 2012). In theory, the coastal states devise a Coastal Zone Management Plan (CZMP) each time the CRZ Notification is updated. This plan reflects the specificities of the state in question. While Kerala has been assiduous as producing these plans, it has not always been timely due to manifold practical constraints. For instance, the CZMP of 1995 reflects the CRZ Notification of 1991. Kukreti, who records its numerous violations over time, also notes that since its inception, ‘the notification has been iterated twice and modified 34 times, making it the most amended law in the history of India’ (2019).

To illustrate the ambivalent approach to the enforcement of the CRZ by public authorities, two directly relevant examples can be contrasted.

First, we saw in chapter 3, for instance, that new dwellings on the shore had been tacitly accepted until coastal erosion became more severe in the recent years (cf. chapter 4 and below).

Second however, when the Seaport was facing the opposition of small family-run touristic resorts that were located near its site, some of these resorts received the visit of the Kerala State Coastal Zone Management Authority (KSCZMA). Since the early 2010s, this state-governmental body is in charge of monitoring the respect of the Coastal Regulation Zone regulations. Following an audit on this subject, the KSCZMA came to the conclusion that most structures did actually not respect the CRZ, which stipulated that development activities could not be allowed within 200 metres of the High Tide Line (The Hindu 30/10/2013). According to the Hindu, 29 of the 31 resorts had violated the CRZ norms. In December 2013, as it had

become clear that the resorts would be dismantled, a Rs 1.4 crore¹⁷⁴ package was announced for the land and the 100 employees who lost their jobs, but not for the resort constructions since they had been violating the CRZ (New Indian Express 4/12/2013). The Environmental Clearance was confirmed in the first days of 2014. By enforcing the CRZ Notification here, the state effectively raised a boundary (Harris 2012), both with a facet of society (the resorts and their owners) and around itself, thereby crystallising a certain state effect and appearing more visible in the environmental realm as a result.

7.1.2 A Strengthened NGT

While the attention of the public and of the media moved quickly to topics of wider significance (e.g. an upcoming general election), the CRZ framework would not take long to again be at the centre of contention. Indeed, after the Seaport project was granted the Environmental Clearance (EC) in very early 2014, a total of four petitions decided to legally challenge this decision (CPR India 2017). They were quickly clubbed together and submitted in front of the National Green Tribunal (NGT), so that two main petitions drew the attention from the various stakeholders, including the media.

The NGT was established under the National Green Tribunal Act of 2010, in order to ‘dispose of civil cases relating to environmental protection...including enforcement of any legal rights related to the environment’ (Rengarajan et al. 2018: 11313). The idea was to accelerate the processing of such cases in a context where they kept growing (Shotria 2015). To this effect,

¹⁷⁴ Approx. GBP 140,000 as of January 2022

in addition to the Delhi bench, four zonal benches were established so that access would be made easier (Rengarajan et al. 2018). In terms of authority, the NGT was established as a quasi-judicial body, in the sense that it has jurisdiction over administrative and civil matters, but not criminal ones (Shotria 2015). Concretely, it has power to enforce laws, provide compensation or order the restoration of degraded environments for instance. It also has appellate jurisdiction (ibid.). Importantly, even though it is funded by the former MoEF (now called Ministry of Environment, Forest and Climate Change) which granted the EC to the Seaport, the NGT is independent from this ministry and the government: it is not bound by any of their orders (Shotria 2015). As such, it ‘functions as an independent statutory institution’ (ibid.: 173). In a context where the usefulness and power of the NGT are often doubted upon by environmental activist circles (Ramesh 2019; Singh 2021), the unique and relatively recent yet indeterminate character of this institution confers it frontier-like aspects, in the sense that it can be seen as the most advanced outpost of the state system (Abrams 1988) as far as environmental justice is concerned.

One of the two petitions mentioned above was filed by two fishermen, whom we later learned were lending their names and identities to an attempt by an alliance of priests and environmental activists to resist the Seaport. I come back to this in the next section. Here, what matters is that this petition challenged the EC on the grounds that the Seaport project was allegedly in violation of the CRZ Notification. More precisely, they argued that the Kerala Coastal Zonal Management Plan of 1995, i.e. the local adaptation of the CRZ Notification as per the provisions of the Act, classified the port site as an ‘area of outstanding beauty’ (NGT 2016: 20). This, in turn, would classify it under the CRZ-I category otherwise reserved for ecologically sensitive zones, and would imply a full construction ban.

The state, through its various organs who were the defendants, responded by challenging the jurisdiction of the NGT on this matter (Mathrubhumi 14/5/2014). The NGT issued a judgement on 17 July 2014 stating that, to the contrary, not only did it have the authority to hear these petitions, but that it would indeed proceed with a judicial 'review [of] the Coastal Regulation Zone notification issued by the Centre in 2011 and ... see whether it should be amended to include Thuramukham within its purview' (Suchitra 2014).

The GoK immediately appealed in front of the Supreme Court of India to request for this verdict to be stayed. After a short but tense period of speculation over the outcome of this appeal, the Supreme Court decided on 5 September 2014 not to stay this verdict (ibid.) As members of the NGT bench commented afterwards, '[i]f the Supreme Court starts staying the orders of the NGT, the tribunal will not be able to function' (ibid.) and 'economic and environment concerns need to go hand in hand' (ibid.).

Analytically, this decision is powerful because it strengthened the NGT as part of the state system (Abrams 1998), but not only. In terms of effects indeed, this decision also erected a boundary that set this quasi-judicial body apart from both the appellants (society) and the defendants (organs of the state). In this sense, it represents an accretion of the realm of the socio-environmental state (Harris 2012; Nightingale 2018). During one of our interviews, the activist B. Jacob¹⁷⁵ indeed drew my attention to the fact that beyond the sole case of Thuramukham and because the Supreme Court's order has not been challenged to date, this verdict still stands. In other words, under an environmental hallmark, the frontierisation of the coast of southern Kerala triggered waves of transformation all the way to the judicial landscape of the entire country.

¹⁷⁵ Interview with B. Jacob, long-term coastal environmental activist in Nagaram, 22 January 2019

7.1.3 The Effect of the Socio-environmental State Effect

The ruling of the Supreme Court raised the hopes of the appellants and of the wider range of opponents to the Seaport project. These hopes would however be short-lived, since the NGT's final verdict dismissed their claims. Having just argued that the socio-environmental state had been made more visible, what does this final verdict further tell us about its ongoing evolution?

As far as the CRZ is concerned, the final verdict of the NGT left no room for ambiguity. Rather, it dismissed the claims made by the fish-workers by stating that the provision of protections for areas of outstanding beauty had disappeared from the 2011 Notification of the CRZ, and that it was that Notification which was in force. The NGT considered that asking the MoEF to reconsider protecting such zones from infrastructural developments was not permissible by law, and that the statutory period for contesting the Notification had expired on 4 September 2011 (NGT 2016 para. 33). In paragraph 34, the NGT judgement further explains that in 2005 and 2009, expert reports had been commissioned and consciously decided to remove the category of 'areas of outstanding beauty' from the CRZ-I, on the grounds that it was a subjective appraisal, and therefore difficult to assign/deny. Over time then, the administrative apparatus had evolved towards claims of objectivity which corroborate Scott's (1998) analysis of environmental ordering as a pillar of state-engineered projects.

Against the concerns raised about coastal erosion, the NGT contended that the EAC¹⁷⁶ had left no stone unturned in terms of its independent appraisal and rightfully concluded that

¹⁷⁶ Environmental Appraisal Committee, the sub-committee of the MoEF in charge of steering the project towards—and of granting—its Environmental Clearance (cf. previous chapter).

there was no such risk in the project area (NGT 2016: para. 80). Here too, then, this verdict supports the state's organisation of the environment for the pursuit of what it sees as the interests of the public good (Scott 1998). Although the NGT rejected the claims against the granting of the Environmental Clearance to the Seaport, it also ordered that a Monitoring Committee should be formed. This Committee's composition and prerogatives are laid out in para. 116 of the final judgement, and include the regular monitoring of the changes to the shoreline at the cost of the proponent (hence the state through TISL).

The appellants tied their CRZ-related complaint, which directly ties with risks of erosion too, with overarching principles. On one hand, they invoked the Indian Constitution, claiming that neglecting these areas of outstanding beauty and the risk of inundation on them was violating their right to equality (Art. 14 Constitution) and to life (Art. 21). By further violating the precautionary principle (i.e. neglecting the environmental risks posed by the project), they claimed, failing to revoke the EC of the project amounted to violate the Public Trust Doctrine (NGT 2016: 17). This doctrine, which stems from the Constitution's article 21 on the right to life, serves two purposes: 'it mandates affirmative state action for effective management of resources and empowers citizens to question ineffective management of natural resources' (Legal Service India: undated).

The NGT's response was a legalistic one first, to dismiss its applicability in a case already covered by legislation or a regulatory framework (NGT 2016: 99). Much more interestingly to this thesis, the tribunal concludes that in addition, 'in this case public resources are not being diverted for commercial/private interest but for a project which will be for larger public good and serve national interest' (ibid.)

Coming back to the analytical terms laid down above, this ruling thus not only commensurates environment and economy, but subsumes the former under the latter. In the framework of a socio-environmental state being made and re-made, this development signifies that the consequence of the reinforced state effect identified above is in fact to crystallise an ongoing socio-environmental process (Angel and Loftus 2017)--here the frontier being assembled. In other words, as the herald of the public good, the socio-environmental state is once more made to appear as distinct (Harris 2012). The state therefore contributes to assemble the frontier (chapters 5 and 6), and is further assembled as the frontier unfolds.

7.1.4 Shifting Boundaries Around the 'Provision of the Public Good'

The state being an 'unbounded terrain of powers and techniques, an ensemble of discourses, rules and practices' (Brown 1995 in Harris 2012), there cannot possibly be a sole state effect. To be sure, while the socio-environmental state was crystallising and was portrayed as the herald of the public good, this dynamic was entwined with other boundary-shifting moments. More precisely, controversies about the structure of the deal shed light on a possible instance of a shift between the realms of the public and the private sector. Briefly reflecting on this enables me to supplement the analysis made so far by further characterising the evolution of the socio-environmental state in the case of the frontier being assembled around Thuramukham.

I have discussed in chapter 5 how the Seaport project's *financial* viability had been questioned by its opponents. The NGT judgement analysed above insists that '[t]he real balance to be struck is not between financial viability and environmental cost but between economic

development and the environment cost' (NGT 2016), thereby effectively signalling that economic development need not be financially viable as long as it is *economically* viable.

This notion is defined by the same tribunal as 'the benefit cost analysis from the point of view of the society at large' (NGT 2016: 105), and thus posits that the state—in its provision of the 'public good' discussed earlier—could cover financially unprofitable investments, provided they benefit the overarching notion of society. A direct effect of commensurating economic development and environmental cost is that the NGT effectively makes the socio-environmental state an economic one too.

As contestation over who benefited from what grew, a report issued by the Comptroller and Auditor General of India (CAG) in 2016 triggered yet another wave of controversy by explicitly asserting that the financial estimates for the project had been poorly made. More precisely, the report picked on the fact that since the GoK was afraid of the manifold losses that would result from losing its sole bidder, it offered an additional 10 years of concession to its private partner on top of the initial 30. Doing so, according to the CAG, made the deal more investment-friendly but also resulted in considerable foregone earnings that would have otherwise allegedly accrued to the state.

The report further indicated that the total investment of the state amounted to 67-68% of the expenses (57% by the GoK and 11% by the Gol [Radhakrishnan 2017]), but that its estimated revenue was incommensurably lower than this amount. Radhakrishnan (2017), an activist-analyst resolutely opposed to the project, also notes that while the expenses covered by the GoK rose by 53% between December 2014 and May 2015 (predominantly the breakwaters), the total of the project cost only increased by 4%.

This would imply that the state invests more than it benefits from the project, in direct terms at least (since the wider indirect claimed benefits must be considered to mitigate such claims, cf. chapter 5). The public good or benefit for society at large, here considered to be economic development, is thus partly entrusted to private actors in a model familiar in the academic literature (Sud 2009, 2014; Levien 2012, 2013b) and in other states or countries¹⁷⁷. As academic experts pointed to me during my fieldwork, this is however less familiar in Kerala, considering the state's specific development experience referred to earlier in this thesis.

The boundaries between public and private sector thus appear to shift here too, opening avenues for research and ex-post analyses which go beyond the remit of this thesis (cf. General Conclusion). Analytically, it further refines the characterisation of the ways in which the ongoing frontierisation, through its economic and environmental aspects, is intimately and dynamically entangled with equally processual state effects (Mitchell 1991; Harris 2012; Meehan 2014).

7.1.5 Upshot: a Metaphor for the Political Ecology of the Coast

This section has looked at the effects of frontierisation on the state. It looked at the evolving role of the CRZ framework to highlight that, following biophysical concerns (the protection of the coast), a socio-environmental state continued to accrete as an increasingly distinct effect (Mitchell 1991; Harris 2012). As the NGT's authority was reinforced through the procedures brought in front of its benches (also stemming from socio-environmental claims), the tribunal

¹⁷⁷ The point of this thesis is not to normatively assess this, as this thesis is not a political commentary, but to identify the emergence of a possibly new model.

effectively ruled that environmental and economic concerns were directly commensurable in the case at hand. Under the provision of public good, a reinforced effect of the socio-environmental state is the ordering of these priorities. The socio-environmental state is thus also intimately (socio-)economic, which prompted an inquiry into the evolution of this economic dimension. There, the state appears to have created the external conditions for sharing the provision of economic development in the form of a tradeoff, in this case at least, with the private sector (cf. Sud 2014 in the context of land governance in different Indian states). This outcome is relatively new and contrasts starkly with the specific development experience that Kerala is famous for.

As remits shift and boundaries are produced, erosion and accretion-- a key material backbone of the frontierisation taking place on the coast-- have thus also become a metaphor for the political economy that surrounds the Seaport.

7.2 The Church

In her study of socio-environmental state effects, Nightingale (2018) explains that her fieldwork revealed a boundary making process made by the co-productive nexus between state, nature and citizenship/belonging. I have explained in chapters 5 and 6 that my study of the Thuramukham Seaport fed into the research agenda that she opens about more carefully conceptualising the effects of infrastructure. In this section, by introducing the Church into the co-productive nexus of boundary making processes that are made evident in my field-

based research, I bring an original contribution which results from the fact that every frontier is highly contextual and contingent (Cons and Eilenberg 2019).

Beneath what it reveals in terms of frontierisation, the NGT episode of the resistance to the Seaport project also entails ramifications which involve the Catholic Church, and therefore also represents a perfect transition to the role of this actor. Before jumping to it, a bit of background on the Archdiocese's stance and moves in the earlier stages of the project are helpful to a more thorough understanding.

In chapters 1 and 3, I have referred to the extent to which the Catholic Church was an important actor in the lives of the Catholic fish-workers since the 16th century, and thus of the artisanal fisheries as we know them. I also explained in my methodology section that most of my informants belonged to this religious denomination, which is also by far the largest among fish-workers in Nagaram district. The reader will remember from the previous chapters that the Church and/or some of its representatives are ethnographically visible and influential. I now turn to unpacking their role analytically.

As a major actor on the coast, the Church shares analytical similarities with the state. Unsurprisingly, there is 'no single way of understanding' (Sundar 2011: 141) the role of the Church on the coast as it mixes identity, the authority of a 'quasi-state' (ibid.) in the villages, as well as both a powerful international hierarchy and the representation of a small minority (about 25 million people) at the national level in India (cf. chapter 1; Subramanian 2009; Sundar 2011). To be sure, the Church, the state and society also often overlap, since it is for instance quite common that in the villages, fish-workers serve on the Panchayat Committee and/or go to Church. Church, state and society are thus intimately intertwined.

In the background of this manifold complexity, Sundar (2011) further reminds us that the Church embodies and navigates multiple tensions, ‘between the secular and the spiritual, the international and the national [note: or local], the institutional and the popular’ (ibid.) These tensions can however also be creative, since they can potentially facilitate the mobilisation of different registers and influences. In this chapter, in sum, I reflect on how the Church steered ‘a careful course between these multiple scales and meanings’ (Sundar 2011: 172) in instances related to the specific case of the Seaport-led frontierisation.

With all this in mind, it is therefore crucial to understand how the socio-environmental processes unpacked in the previous section impact the distinct Church effect--i.e. Mitchell’s (1991) conceptualisation of the state applied to the Church instead. As I show in this section, members of the clergy were also involved behind the NGT proceedings, and their isolated intervention triggered dramatic effect at the level of the governance of the Archdiocese.

7.2.1 Initial neutrality/agnosticism

In the run up to the Seaport becoming more concrete than a mere idea (cf. chapter 5¹⁷⁸), the Church, when putting on its homogenous institutional hat, would adopt a moderately favourable inclination towards the project. The Church too can certainly be conceptualised as an institutional assemblage (Nail 2017), whose specific structure nevertheless makes certain heterogeneities far less visible and accessible to the outside. For this precise reason, a look at the Church effect(s) inspired from Mitchell (1991) is particularly insightful.

¹⁷⁸ In the last section of chapter 3, I also briefly recapitulate the hierarchy of the Church.

Himself hailing from the Catholic fish-working communities, the then Archbishop was said to be simply tagging along the general opinion in adopting this stance. As shown in chapter 5, this took place in a context of widespread enthusiasm for the 'dream of Kerala', and my various informants agree that there was hope that the project could economically and socially benefit the fish-working communities too. But as briefly alluded to in this section's introduction, just like in the case of the state and society in Mitchell (1991), drawing structural boundaries between the Church and the fish-workers is artificial. Identities and functions are fully intertwined. Nearly all the diocesan priests hail from the same fish-working community, and priests and fish-workers celebrate the religious festivities together. In sum, despite inevitable antagonisms and tensions at times (Subramanian 2009), the parishes and the villagers are very much embedded with one another: '[t]he Church governs *over* the fishing villages, but is also intimately *of* the villages' (Sundar 2011: 163).

In this context, when environmental activists started growing concern about the potential effects of the Seaport on the shores of the district in the early 2010s, they were bound to speak with both fish-workers and various local parish priests too. As also seen in the previous chapters, these environmental concerns are after all fully entangled with social and economic ones. It is therefore no surprise that the stance of the Church started changing towards a more doubtful one.

In this context, two former activists (cf. previous chapter) explained to me how the growing concerns sparked movement at the level of the Archdiocese. According to them, a meeting group was set by the Archbishop to further study the potential risks to the fish-working

community¹⁷⁹. These regulars consisted of, initially, bureaucrats openly favourable to the Seaport, as well as various activists from the coast—but not those considered too antagonistic¹⁸⁰. This illustrates the middle-way that the Church tries to embody in secular affairs. Preferring informal and under-the-radar consultations is also a common practice at various level of the clerical hierarchy, conferring a certain opacity¹⁸¹ but also more flexibility to the mediations being undertaken. Officially, the only trace of cross-stakeholder meetings can be found in the CEIA (vol. 2 – appendix 7.8), which reports that a team from TISL met with representatives of the fishing communities at the Bishop House on 30 May 2012 to alleviate their potential concerns.

7.2.2 Socially-minded Priests and Growing Dissent

Subramanian (2009) and Sundar (2011) retrace at length the influence of liberation theology¹⁸² on the coastal clergy since the late 1980s. During my fieldwork, I met some—but not many—priests who claimed a direct filiation to this movement. However, even without that, an omnipresent tension exists within the Church, at all levels and in every country, diocese and religious order (Reese 2016; Keane 2021; Rocca and Lovett 2021). This tension, in a caricatural way that priests themselves tend to find reductionist, contrasts liberal with conservative priests. This distinction often materialises along the lines of dogma and ritual practices, but also along more directly socio-political lines. Although these distinctions often form bundles, they sometimes do not overlap, making the tensions more complex to analyse.

¹⁷⁹ Interview with Marcos and Patrick in Nagaram, 6 January 2019

¹⁸⁰ Ibid.

¹⁸¹ Interview with Fr. Dominic, theologian and social scientist in Nagaram, 11 January 2019

¹⁸² Theology originating in Latin America, which while being fundamentally theological and biblical, was often associated with Marxism and radical socio-economic justice (Sundar 2011).

For this reason, borrowing the word of another senior priest who more directly evoked liberation theology with me but in a different context, I speak of ‘socially-minded priests’¹⁸³ here and contrast this with pastorally-minded ones. As mentioned by Sundar (2011), there need not be any contradiction between these two categories, and even less so after Pope Francis’ *Evangelii Gaudium* (2013)¹⁸⁴. However, through the influence of John Paul II, who was both openly opposed to liberation theology and an open initiator of a certain charismatic renewal¹⁸⁵, polarities between both have resulted in tensions over the priorities of the clergy, and more precisely about the extent to which they should openly engage in politically inclined social movements and actions¹⁸⁶. Although nothing says that they must be in opposition to one another, the spiritual and temporal realms of the Church have thus been found to be at odds with one another at times.

Below, I look at how the frontier being assembled through and around the Seaport affected this ongoing (even if often productive, according to many in the clergy) tension.

Several members of the clergy indeed had been developing an anti-Seaport sentiment, as they were convinced that its effects would be more detrimental than beneficial to the fishworkers along the coast of the district. Some were more tactful about it, and others less, often depending on the prominence of their position in the hierarchy too.

¹⁸³ Interview with Fr Solomon, senior educator with the Archdiocese and former member of the Fishworker’s movement in Nagaram, 10 January 2019

¹⁸⁴ Apostolic Exhortation in which the Pope outlines his vision and requirements for priests, and insists on them ‘smelling like their sheep [note: i.e. not in any ivory tower remote from people and their daily afflictions] and smiling like a father’ (AsiaNew.it 4/2/2015).

¹⁸⁵ Sundar summarises their prayers/celebrations as including ‘catchy music, prophetic preaching, and collective cathartic participation’ (2011: 160), but it should also be noted that it has often been underpinned by either an affirmed social conservatism or a stance considering that priests should not mingle into social matters unless it is in pro-life situations such as contraception.

¹⁸⁶ During my own spiritual explorations, I have witnessed these tensions in many communities around the world too

In the typology adopted above, these priests could therefore be seen as part of the group of socially-minded priests. Or in more analytical terms, the emergence of environmental concerns around the seaport enlivened the socially-leaning wing of the clergy which, since the high-time of the KSMTF (cf. chapters 3 and 4), had not been very vocal. Their influence was also growing outside of the Archdiocese system, since they were reported to convene regular and less formal meetings which involved activists, a few skeptical scientists, and few other sympathetic priests. Cons and Eilenberg (2019) remind us that processes of frontierisation most often come with resistance. While nothing says that they were directly steering this opposition, it is important to understand to see the cohesion that these priests brought and its effects in cementing an eclectic front of critical parties. Indeed, as a former resort owner told me, it was quite unlikely that he and artisanal fish-workers would now be sitting at the same table and sharing a similar interest. So far indeed, resorts had been seen as the fish-workers' main enemy on the land (a sort of counterpart to trawlers at sea), since both had been competing for radically different uses of the same coast in a quite hostile manner.

During the intellectual mobilisation by activists against the EIA, to which I referred in the previous chapter, they openly stood with the activists, jointly participating in their awareness campaigns. Even without doing it in the name of the Church but through umbrella organisations, the growing involvement of these priests could thus mark the accretion of socio-environmental effects (Harris 2012; Angel and Loftus 2019; Loftus 2020) as factors making the boundaries of the Church increasingly distinct, in relation to other actors, on this front.

7.2.3 Clerical Involvement Behind the NGT Petitions

The culmination of this tentative socio-environmental Church was however yet to come. As the Seaport obtained the EC in early January 2014 (Rajagopal 2016), we saw that a new phase of resistance picked up in the form of legal cases made in front of the NGT (cf. previous section). As briefly signposted in the previous section, it was soon revealed that one of the two petitions filed in front of the NGT had in fact been steered by some members of the Clergy, including local parish priests.

Building on Ram's (1992) work, Sundar (2011) analyses the role of village priests through a Gramscian lens. Essentially, she contends that the priest often remains the most authoritative intellectual¹⁸⁷ in the villages, which confers him a certain political potency in turn. In their framework, this potency is geared towards class (or here 'community') interests. As Sundar (2011) however nuances, 'different currents...must be seen as existing in some tension and contradiction with each other, and with the state' (2011: 167). At a time where the parish council of Thuramukham village was pushing in favour of the seaport (cf. chapter 5), a specific priest's actions seem to indeed illustrate Sundar's (2011) point.

It is not exactly clear how his involvement got unveiled, and his old allies claimed that one of the petitioners to the NGT, described as an environmental activist by the media, was followed by people working for TISL, i.e. a part of the state system (Abrams 1988). However it actually happened, the result was quite dramatic as the local media immediately rushed on the case

¹⁸⁷ Ram (1992) and Sundar (2011) dig further into the Gramscian differences between organic and traditional intellectual, cf Sundar (2011: 166).

in late spring 2014. The most detailed account came from a media generally sympathetic to the Seaport. In this article, the journalists tell the story of their attempts at finding this petitioner—then resident of a fishing village of which the parish priest was notoriously opposed to the port. First, they explain that neighbours were quite defensive, claiming to not being aware that somebody with that name lived in his house. The investigation of the journalists then deviates from these private life intrusions to focus on the crux of the matter: the said petitioner ‘doesn’t really know anything about the case.’ (Kerala Kaumudi: undated) The media details this claim in the following terms: ‘[he] had apparently filed the case as [he believed that] the [Thuramukham] Project would kill all the fish. But the petition at the Delhi bench of the National Green Tribunal challenges the Coastal Regulation Zone Act’ (ibid.). The newspaper accuses the petitioner of having no clue about this discrepancy, as a result of allegedly being a name-tag for an initiative actually steered by members of the Clergy rather than a genuine activist.

The newspaper report also went to look for the other main petitioner on the same case, who was reportedly prepared with more robust answers. A crucial element raised by the newspaper, however, is the fact that the two fishermen were defended by a prominent lawyer during the proceedings. Estimating his fees to about Rs 5-7 lakhs¹⁸⁸ per audition, the media raises questions and suspicion as to how fishermen were able to afford these fees.

Following this media scandal, covered by many other local news reports at the time, the first petitioner withdrew from the NGT case. While some accuse him of flaky loyalty, others are

¹⁸⁸ Approx. GBP 5,000 – 7,000 as of January 2022.

more sympathetic and blame a mix of social and media pressure, possible threats and possible rewards for denouncing him too. Following this event, a friend of the priest in question insisted that supporters of the Seaport ‘burned his effigy¹⁸⁹’. He indeed had to take refuge outside of the village, to let the abrasive situation settle. The other NGT petitioner kept his petition, but reportedly left the country eventually, seriously scarred emotionally by this situation.

Analytically, this case thus enables this thesis to build upon Sundar’s (2011) analysis and show how this specific ‘development project’ enabled a priest (and some of his hierarchy in more discrete support, as we see below) to invest this Gramscian intellectual role *against* the state, but also against the more moderate official stance of the Church. Even if this was not done in the name of the Church as an institution, Harris (2012) helps postulating that his clerical identity contributed to produce a clearer distinction between the Church and the state, as well as society. Given the nature of the submission to the NGT (cf. previous section), this was done along clear socio-environmental lines. In a global context where the Pope was increasingly vocal about environmental matters¹⁹⁰, a glance through Mitchell’s (1991) lens thus reveals the local iteration of an accreting socio-environmental part of Church. But accretion is a slow, iterative, grain by grain process. Hence, I explain below that owing to various internal mechanisms, this accretion did not extend to the Church as a whole.

7.2.4 Return to a “Balancing Act”

¹⁸⁹ Interview with Fr Benjamin, parish priest in a coastal village on 24 December 2018.

¹⁹⁰ This culminated in an entire Encyclical devoted to the environment (Laudato Si 2017).

Just like the verdict of the Supreme Court empowered the NGT to eventually reinforce the actions of the state, the controversy discussed above can be seen as a turning point for the Church as a wider institution too. Until the Environmental Clearance, as mentioned above, the Archbishop had been concerned with gaining awareness from different stakeholders about the opportunities and threats that the Seaport represented. But on top of that, as a priest told me—specifying that it was only his own reading—‘our Archbishop has a very good name [reputation]. If you have a good name in the community, slowly we will live for that good name.¹⁹¹’ Rather than hinting to a selfish move, this comment meant that this reputation was the guarantor of appeased and constructive relationship with the state system (Abrams 1988). The Church indeed often mediates between the community and the state for various affairs (Subramanian 2009; Sundar 2011). These can range from upheavals in fishing villages during the high time of the *Fishworkers’ Movement* to the management of schools, which are often co-managed between the Church and the State on the coast. This wide net of entangled affiliations and interests has resulted in the Church often performing a balancing act between the state and the community if/when a situation arises when both are at odds. The “good name” of the bishop is of course crucial to this, since without his charisma and credibility, no balancing or buffering act is possible at all.

It is not clear whether the Bishop was fully unaware of, or whether he was turning a convenient blind eye, to the local priest’s whereabouts during the NGT saga. According to my sources, he only learned it from the media. Either way, it would be unthinkable for him to endorse it publicly. Behind the stage, when he saw this affair exploding in the media, ‘the

¹⁹¹ Interview with Fr Benjamin, parish priest in a coastal village on 24 December 2018

Archbishop was also there waiting, and he was shouting like anything for so long, with anger. So far he had been supportive but now he was angry¹⁹². It seems, again from informal conversations with reliable sources, that the role of more senior members of the clergy was crucial in pacifying the Archbishop: 'it's very difficult for the Archbishop to get angry with [them], because he is very fond of [them]. They do a lot of things for the Diocese, they are into social action, do a lot of help and are very reliable people.' The latter allegedly used their position to mediate between the Archbishop and the local priests, and 'the situation got back in control'. In the bigger picture however, this event acted as a catalyst which subsequently transformed important things within the Archdiocese, which from now on insisted on having a united voice on the matter of the Seaport.

This voice was expressed in a Pastoral Letter, published and read in all parishes of the coast in August 2015, i.e. when the final agreement was signed for the Seaport. This pastoral letter recapitulates the main points of concern that have been expanded on throughout this thesis, namely: coastal erosion, the loss of housing, the risks to biodiversity and to the artisanal fishing activity among others. Drawing on the case of Cheriya Pozhi, the letter expresses its worries for a project over ten times larger in size. Seen from this perspective, the Church did combine and voice the many concerns expressed throughout the project. However, the important shift to notice in comparison with the isolated initiatives referred to above, is that the Letter concludes in the following terms:

'Even though the problems and the concerns that the people in the coastal regions are going to face because of the [Thuramukham] International Seaport are drawn to the attention of the authorities, there is no initiative from the part of the authorities to resolve this even now when the contract of the project is signed. If they go ahead with the project without resolving the problems raised by the fishermen repeatedly, it can be seen as the invasion over these people's right to live.'

¹⁹² Ibid.

They won't be allowed to go ahead with the project unless these concerns are taken into serious consideration.' (Archdiocese of Nagaram, 2015)

Although the tone may seem threatening, the major shift to note is that the Church is asking for potential negative effects of the project to be addressed, rather than disputing the project altogether. The letter is also most likely performative, since no measure is likely to result directly from such letters. Nevertheless, the letter still sends a signal to the state about the influence of the Church over its faithful, and thus about a potential bargaining power.

Either way, this official position comes back to being much closer to the middle-way that had originally been followed by the Archbishop at the very beginning of the project. It is also closer to how Subramanian (2009) and Sundar (2011) analysed the Church's position on temporal matters in the most recent decades: a constant "balancing act". The relative novelty here is that this balancing was between the economic interests heralded by the state and the wider society in Kerala (cf. chapter 5) and the environmental and social concerns which grew in the neighbouring fishing villages. As such, this stance reinforces the nascent effect (Mitchell 1991) and idea (Abrams 1988) of a socio-environmental Church (Harris 2012; Angel and Loftus 2017; Loftus 2020) in a twofold manner. First, by the explicit role of environmental processes and concerns in crystallising this stance. Second, by reinforcing a role which mediates between the state-society boundaries themselves stretched as a result of the frontier being assembled (cf. previous section), distinct boundaries around the Church are also re-made through these socio-environmental processes.

7.2.5 A Turn Away from Socially-Oriented Priests

Behind these boundaries, the assembled frontier also had a major effect on the Church system (Abrams 1988), which lets a certain indeterminacy about the future of the socio-environmental Church arise. Within the Church indeed, the lines along which I framed the ongoing tension between temporal and spiritual concerns at the onset of this section also shifted quite dramatically.

Indeed, the main protagonists among the 'socially-minded' priests were all gradually sidelined. This doesn't mean they were openly disgraced or punished, but they were being given missions which were less directly related to the social issues around the coast. By the time of my fieldwork in 2018-19, former prominent members of the social action wing of the diocese, for instance, were reallocated to non-coastal parishes or to intellectual/pastoral ministries instead. One of the local priests was eventually transferred from his responsibilities to serve abroad, and given the opportunity to pursue further studies along with his new mission. While more senior ones were still to be found around the seat of the Archdiocese, a new appointment in 2019 subsumed most of their roles (The Hindu 8/3/2019).

Indeed, a new face of 'the future' has been named in the person of a young Auxiliary Bishop, whom some priests anonymously teased by telling me that 'he is a good singer' when I asked them about his social commitments. As some observers pointed to me, other key positions within the Archdiocese also gradually befell to priests without publicly notorious secular political engagements.

In sum, over the few years that followed the active opposition of some priests to the Seaport, the key positions of influence within the Archdiocese were all replaced to ensure a more

“pastoral” and charismatic orientation. These significant changes were thus ultimately conducive to...nothing more than a return to the status quo. In other words, the main effect of these transformations was indeed to restore the Church’s position as an interlocutor of the state, which required some credibility in the eyes of the latter. The cost of this credibility, here, and consistently with much of the recent history of socially-oriented Catholicism, was the renunciation of ideas seen as too antagonistic—or even agonistic--by the other powerful actors of society. Within the wider context of the tensions inherent to the Catholic Church, the socio-environmental Church in Nagaram was thus made less temporal and more spiritual.

Analytically, two conclusions can thus be drawn. Echoing Sundar’s (2011) analysis, the frontierisation around Thuramukham did not fundamentally shake the position of the Church as an institution, i.e. its boundaries or influence against other major actors of coastal life as seen in chapter 1. Through the mobilisation of different networks and registers, the Archdiocese emerges once again as a mediator between different secular claims. Paradoxically however, maintaining this position necessitated important inner transformations. Using the recurrent polarity between socially-minded and pastorally-minded orientations¹⁹³ at all levels of the Church, the effect of the frontierisation around the Seaport has been to strongly displace the frontier *between* these tendencies within the diocese.

¹⁹³ See Sundar (2011; chapter 4) for a longer explanation of their recent genealogies and complexities too.

7.3 Everyday State and Church

So far, my analysis of institutional effects has focused on the apparatus-level of the state and Church systems (Abrams 1988). Corbridge et al. however explain that we should not take for granted that 'lower-level state personnel share the 'elite' understandings of government that have been internalized by some well-placed makers of public policy' (2005: 20). Thus, significant gaps in the performance and understandings of government do more often exist than not.

For this reason, this section turns to these processes of everyday life, following Das and Poole's insight according to which it is through them that 'we see how the state is reconfigured at the margins' (2004: 19). By extension, this applies quite naturally to the Church too, not least because of its state-like characteristics in many fishing villages of Kerala (cf. previous section; Subramanian 2009; Sundar 2011). Throughout this chapter then, I argue that at the everyday level, the variegated frontier assemblages of course generate different local situations. Here, the state effect is subject to contradictory dynamics, whereas the Church, in full consistency with the previous section, again puts on the hat of a mediator to minimise the processual disruptions.

In this section then, I focus on the re-settlement programme around Onnu, which I briefly mentioned in chapter 4. I first show how coastal erosion drives the activation of the CRZ framework encountered above which, in turn, results in this programme. I then explain that—as expected—erosion also drives the demand for re-settlement among the villagers. Finally, I reflect on the implementation of this programme, which gives rise to accusations of clientelism and brokerage by local politicians. As usual as such practices might be, they

contribute to a continuing loss of trust towards local politicians in the villages. More analytically, the fact that the re-settlement programme is intertwined with these dynamics results in contradictory state effects, where the porosity and stretching of the state (Sud 2020c) blur the otherwise distinctive socio-natural effect brought about by coastal erosion. As the boundaries between state and society blur, fish-workers turn to the Church as a last resort mediator. Similar dynamics take place around the Church 40km south, next to the Thuramukham Seaport site, thereby reinforcing the insight on which I concluded the above section.

7.3.1 Re-Settlement Programme in Onnu: Activation of the CRZ Framework

In chapters 3 and 4, I have briefly explained that the most directly relevant presence of the state —which is also the most visible in their everyday life-- was the Panchayat committee members and the Matsyabhavan Officer (MO henceforth).

In short, Panchayat committee members represent the lower level of the three-tier system of grassroot governance in India. Elected every 5 years, their role in the villages is visible but their power limited. The MO, on the other hand, is a bureaucrat detached by the Fisheries Department in the fishing villages delineated by the same Department. As such, they have a far more central position since they deal with nearly all matters pertaining to the fishing activity, which occupies the vast majority of villagers as seen throughout chapters 3-6.

Besides the routine procedures of boat registration and subsidies distribution, I also mentioned in chapter 3 that the MO was in charge of implementing the re-settlement scheme

mentioned in chapter 4. This programme was the state's response to the dramatic consequences of sea attacks and rapid erosion, which resulted in entire rows of houses being wiped out.

As I struggled to understand whether this programme—run by the Fisheries Department—was equivalent to the LIFE mission¹⁹⁴ programme, my different informants in the Fisheries Department all separately confirmed that although it was not equivalent, it effectively replaced and enhanced it in coastal areas¹⁹⁵. These schemes would therefore potentially be encompassed under the LIFE mission umbrella at a later stage, but nobody seemed to have clarity on this question. The former Panchayat president, Eugene, agreed with this understanding of the project, specifying that '[w]hen the new government ... came in power in May 2016, they started building homes under the LIFE mission, but it was not completed ... The same project is running for fisheries department which had started a long time back and it was moving faster. So these [re-settlements] comes under the fisheries department and not under panchayat'¹⁹⁶. In short, the project is thus managed locally by the MO.

Empirically, this programme corresponds to the most visible involvement of the state in direct relation to coastal erosion during my fieldwork. As such, it complements the approach taken in the previous chapter by focusing on the everyday life of my informants and their encounter with the state around Onnu. Below, I therefore reflect on the extent to which these bureaucratic processes reproduce the state (Sharma and Gupta 2006: 15) and try to see what

¹⁹⁴ Livelihood Inclusion and Financial Empowerment (LIFE), a state-wide housing scheme for underprivileged sections of society in Kerala (Gupta 2021).

¹⁹⁵ Interview with Sherly, Fisheries Department Officer in Onnu, 15 September 2018

¹⁹⁶ Interview with Eugene, former Panchayat President in Onnu, 15 September 2018

they tell us about potential changes in the socio-environmental state effect (Mitchell 1991; Harris 2012; Nightingale 2018) as a result from coastal erosion.

Hansen and Stepputat (2011) note that the 'implementation and administration of specific policies and regulations at the local level' (2011: 4) represent the 'most widely used and most immediately effective method used by political force to exercise power and to consolidate its popularity and support' (ibid.) As such, they represent a potentially fruitful lens to approach the study of shifting institutional boundaries.

Even though Sundar (2011) reminds us that the state is present at many levels on the coast, the general feeling of my informants through two rounds of fieldwork was that the government should be responsible for helping them through their hardships and aspirations. But at the same time, they would often tell me that 'the government does nothing' to help them and that 'politicians only come [to the coast] before elections', since the coast is often seen as an area that can make or break an election. In this sense, my informants very much resemble Roy's (2017) interlocutors in the agonistic character of their claims on the state. They too invoke injustice and their poverty, and here, in particular, their powerlessness in front of the brutality of coastal erosion. They too believe and say that local and national political leaders ought to help them (ibid.), and for them too these claims inevitably represent a 'key facet of their negotiations with democracy' (ibid.: 234), as also already shown by Subramanian (2009) and Sundar (2011) long ago.

To deploy the resettlement programme, the state government essentially decided to enforce the Coastal Regulation Zone (CRZ) framework already introduced in the first section of this chapter. In a nutshell, this framework restricts the construction of habitations and commercial buildings within a certain distance of the high-tide line (HTL). As we saw in the

first section of this chapter, this framework—which came into effect in 1991 initially— had however not been very much enforced on the ground¹⁹⁷. This changed in the recent years, due to the increased prevalence of coastal erosion and sea attacks. This regulatory framework was thus partly mobilised in order to solve the precarious situation of fish-workers living near the shore, whom alongside being offered re-settlement packages, were reminded that their dwellings were illegal.

By mobilising and activating the otherwise relatively dormant CRZ framework as a result of changing environmental processes (sea attacks and coastal erosion), the socio-environmental state effect was thus accreting here too, since the regulatory framework and the management of the scheme were directly effective in producing visible boundaries between the state and the fishing community (Harris 2012; Nightingale 2018; Loftus 2020). It is also difficult not to link this analysis with the fact that in separate settings, various senior policymakers or academics—unrelated to the fishing community—told me that they envisioned that fishing should become a ‘professional occupation’, with less fishermen and more technology. As stated by Corbridge et al., the high modernist state ‘is also defined by its hubristic ability to see a better future for all of ‘the people’’ (2005: 16). However informal because articulated in fairly casual conversations, this vision does strikingly resemble the state-engineered projects denounced by Scott (1998). And for these ideas to become a concrete reality, processes of ordering of space—such as the enforcement of the CRZ—are necessary too (ibid.). Hence, sticking to an analytic of effects, the coherence in the agenda of the ordering of nature which comes along with the frontierisation of the coast—as seen in chapter 6 and in the earlier sections of the present chapter (Scott 1998; Rasmussen and Lund

¹⁹⁷ Cf. chapter 3 for instance on housing licenses.

2018; Cons and Eilenberg 2019)—also clarifies the expanding contours of the state in this respect.

7.3.2 An Uneven Demand Driven by the Severity of Erosion

Even though the programme uniformly applies to the entire coast of Kerala, Onnu (cf. chapter 4) was the only village where I conducted fieldwork in which there was more demand than available funds and eligible spots. According to the MO at the time of my fieldwork, there were over 900 applications by the time of my visit (September 2018) for the current year, which would add upon the earlier ones not yet satisfied (888 according to her), but government funding had been sanctioned for 212 of them. The selection occurred on the basis of different criteria, which were marked individually and aggregated into an overall ranking of applicants: ‘we have a marking system, if people above 50 years we will give 10 marks, then widow we will give more marks, then, houses you know are like first line second line [from the sea], we give priority, more marks to first line, then marriage, above 15 years marriage we give more marks to them, then what if mentally challenged people are there in the family, we will give more priority, if two or more girl child who are not married we will give more marks to them.’¹⁹⁸ This system and its direct management by the Department of Fisheries, she further emphasized, was also designed to avoid the clientelism often denounced by villagers, where the beneficiaries of social or economic programmes would be

¹⁹⁸ Interview with Sherly, Fisheries Department Officer in Onnu, 15 September 2018

selected on the basis of their political allegiances within the village (Fox 1994 or Roy 2017 among many others).

The procedure, in the words of Joseph, one of my informants who was due to benefit from it, goes as follows: ‘the people receiving the package have to first find a maximum 3 cents of land. After which a government employee would come, value the price of the land and provide them with the price of the land. If in case the employee values, the land as 3.45 lakhs the person will only be provided with 3.45 lakhs of the 6 lakhs allotted for the same which they deserve the remaining money for buying land will lapse¹⁹⁹.’

If heterogeneities in supplications have also been documented widely (Roy 2017), the reason for the strong demand is very straightforwardly driven by environmental processes: Onnu was undergoing coastal erosion, rather than coastal accretion, as a fairly recent phenomenon that was extending north. Another element factoring into this preference, however, is also the severity of the immediate sea attacks. While the shore of Vadakku eroded by a few hundred meters over the past decades (cf. chapter 6), there were no more dwellings on the shore itself. Likewise, because the shore had long disappeared in Randu, there was no immediate demand for the scheme.

These environmental processes have a socio-economic counterpart too. Indeed, although this thesis does not use a class-lens for reasons explained in chapter 2 (methodology), it must be noted that the households who live the closest to the shore are generally the most financially precarious ones. A certain degree of social heterogeneity thus exists too in these claims (Roy 2017), since they inevitably emerge from the most destitute households. Thus, coastal erosion, besides activating dormant frameworks at the policy levels, contributed to make

¹⁹⁹ Interview with Joseph, fisherman in Onnu, 1 September 2018

these most destitute fish-working households visible to the state (Corbridge et al. 2005: 15). From the standpoint of state effect(s) (Mitchell 1991), this represents another axis along which the boundaries between state and society are produced as a result of socio-environmental processes (Harris 2012; Angel and Loftus 2017; Loftus 2020).

7.3.3 Accusations of Clientelism: Erosion of Trust

Along with the scheme, other state effects became visible. Below, I show how the boundaries between state and society, which were appearing to be clearer through the invocation of the CRZ framework and the deployment of a government-delineated scheme, go in the opposite direction and blur again (Sud 2020c).

Roy notes that many scholars (Heller 2000; Keefer and Vlaicu 2005; Kitschelt and Wilkinson 2007) agree on the fact that ‘clientelistic politics and targeted public policy co-produce one another’ (2017: 191). It is therefore rather unsurprising that in the place where the programme had the most traction, i.e. Onnu, I indeed encountered many accusation of practices that Gupta (1998) qualifies as brokerage (Roy 2017: 190). The fact that these practices aren’t new shouldn’t obscure their immediate relevance for my inquiry, since ‘the performativity of government business and politics is not a secondary matter when it comes to considering how people see the state’ (Corbridge et al. 2005: 30). From this performativity, further insights on the state effects and on the produced boundaries between state and society are thus bound to be made visible.

To understand these allegations and their analytical implications, it is important to briefly outline how the programme operates in practice. As mentioned in chapter 2, beneficiaries are eligible for a compensation reaching up to 10 lakh rupees, where 6 lakh rupees would go towards buying land (3 cents at most) and the rest towards the costs of the house (often judged insufficient by my informants). To ensure that the funds would be affected to their designated purpose, rather than just handing over cash to the beneficiaries, the state government—through the Fisheries Department and thus the MO at the local level—decided to directly pay the seller instead.

It is at this stage that many of my informants accused acting and former Panchayat members of taking commissions by acting as intermediaries²⁰⁰. Indeed, even the parish priest openly made such allegations when I interviewed him, explaining that ‘[t]he land would have a value that is fixed by the government but these agents will talk to the landlords to increase the price of the land so that both the landlord and the agent would get a benefit from the amount. These agents are the local politicians from this area itself.’²⁰¹

When not directly mediating, some also accused these local politicians of colluding with landowners in order to inflate the prices, and receive financial rebates on the premiums realized in this manner. Sherly, Onnu’s MO, explained that ‘[a]ctually, government will give only up to 6 lakhs²⁰² but the price is more here, for each cent it is more. So, if they buy 3 cent²⁰³ no, they have to give balance money to the owner from hand’. This means that although the government will only compensate the buyers on the basis of the certificate of

²⁰⁰ Informal conversations.

²⁰¹ Interview with Fr Robin, parish priest in Onnu, 2 October 2018

²⁰² Approx. GBP 6,000 as of January 2022.

²⁰³ Approx. 120 square meters.

fair value issued by the Village Officer²⁰⁴, side agreements can take place in which mediators ask for an additional fee to be paid along with the official transaction. In other words, these local politicians were acting like brokers (Gupta 1998). When I asked Sherly what the Panchayat members' role might be in the transactions, she explained that '[t]he members are helping them, most of the people here are uneducated, they can't read they don't know anything, so the Panchayat is helping them to find the land.'

Joseph too went on to tell me about what he called 'politics', and which in fact meant unclear practices to circumvent the baseline procedure:

'When they find a land to buy, whose value is say about 1.5 lakhs and if they go and ask the landowner to let them buy the land then the landowner will refuse them as per the word between the politician and the landowner. Then the people will go and complain about the same to the politician who assures that he will talk with the landowner and let them buy the land. The politician along with the register officers and the landowner decide the price of the land as 2 lakhs, whereas the actual value of the land is only 1.5 lakhs. After the people buy the land for 2 lakhs, 1.5 lakhs will be given to the owner, 40,000 will be taken by the politician and the remaining 10,000 by the register officers. Such cheats are common in here. The landowners along with the politician hike the price of the land and take the higher price from the people and divide it amongst the politician, landowner and other concerned officers.'²⁰⁵

In other cases, various informants claimed that lands 'that are not suitable for building homes are sold to people at higher prices and when they move on to get further money from the government for building home after buying the land, again a government employee will come to check if the land is suitable to build or not. On finding that the land is not suitable to build they do not provide them with the remaining 4 lakhs²⁰⁶ for housing²⁰⁷.' Again, these fraught negotiations take place in a context of shore erosion and accretion. It is these biophysical transformations, brought on by infrastructure development, that are necessitating this dance

²⁰⁴ The most local bureaucrat of the Revenue Department, which also administers land in India.

²⁰⁵ Interview with Roger, Panchayat ward member in Onnu, 15 September 2018

²⁰⁶ Approx. GBP 4,000 as of January 2022.

²⁰⁷ Interview with Joseph, fisherman in Onnu, 1 September 2018

of the everyday, bringing into its ambit the everyday lives of the fishworkers, the state, politicians, brokers and the clergy.

For Joseph, this is only an iteration of the basic clientelism analysed by Roy (2017) and the literature he draws on, according to which '[t]he person who wins he offers more help to his people and party. Those who are neutral or not in any political party are suffering and not receiving any help. Even undeserving people if they belong to the politician's political party or people they get all benefits but the deserving ones don't²⁰⁸.'

Analytically, two paradoxical conclusions arise. First, these alleged practices by Panchayat members resemble a soft version of moonlighting, where they turn into brokers and intermediaries besides their functions. Rather than producing further state-society distinctions a la Mitchell (1991), these practices instead blur these boundaries further. As Sud tells us, '[t]he porous, stretched-out authority of the moonlighting official does not run parallel to the state (contra Eggen, 2011). Instead, it draws on the official state, and it edges the state outwards' (2020c: 1189).

Second, if these practices are not new, they contribute to slowly keep eroding the trust that my informants displayed towards their local politicians. In this sense, they feed into the everyday expression of the political ecology of erosions and accretions that I referred to in the first section of this chapter. They thereby also fuel discourses about hard-work and merit such as those seen in chapter 4 in the case of ring-seine boat owners, are these are seen as the only ways to escape these practices. They indeed take place in the context set out in chapter 4, where I argued that a frontier (of capitalist expansion) was being assembled

²⁰⁸ Ibid.

through new fishing techniques (and exponentially increased income), landwards displacements and a touristic project, all giving rise to new aspirations.

Here then, I argue that the shortcomings of the local representatives of the state further feed into the discourses and aspirations brought about as the frontier is being assembled.

7.3.4 Church-led Mediation

The conflicting meta-narratives of the state's erosions and accretions that kept unfolding had, in turn and to the contrary, clear consequences on the Church, which emerged stronger from these developments.

Because tensions around the re-settlement project in Onnu were quite fresh at the time of my fieldwork, it proved delicate to obtain more direct data about it, and especially about the role of the Church. Fishworkers for instance would systematically refrain from naming the specific mediators, and likewise the parish priest did not want to expand on the matter. However, I gathered solid enough informal hints that the Church did play a mediator role where tensions had grown too big.

Onnu's parish priest indeed laconically explained to me that '[I]ately we had an issue regarding a plot of 30cents divided amongst 10 people for 3 cents each. After the documentation they were having issue that they did not have way to their plot. They were asked to give way using their land as nothing can be done after the documentation and all of them wanted to have their exact 3 cents of land. We had appointed a surveyor from the church side who had measured and talked the matter with the people and the problem is

somewhat OK.²⁰⁹ Off the record, another seemingly informed person hinted to interventions on deals where exorbitant prices had been asked of families that were going to be re-settled, half-wordedly confirming scenarios like the ones outlined above where side deals would still be made.

To probe this insight of a strengthening of the Church, I looked at my other fieldsites too. In chapter 6, we saw that the initiative of Fr R also enabled the Church to jump in the vacuum following the coastal accretion in Tekku. In addition, similar dynamics were also unfolding right next to the Seaport site, in villages adjacent to Thuramukham. A local councillor clearly first emphasised that ‘I am also a member of the Church, after all [despite being critical of it], and of this community. So, I have a lot of relations and all here. So they are okay with me. When elections come, they [the Church] will remain silent. At other times, we may have tension [on a case by case basis].’

Yet, the councillor mentioned early on that when the private partner of the GoK in the construction of the seaport, whose presence would necessarily result in various interactions with local villagers and authorities, intended to go for wider meetings with the District Collector or the Mayor, they would actually approach the Parish priest and his committee to mediate with the villagers first: ‘if the Church committee is not able to make a solution, then only they will come to [see me]²¹⁰.’ In this case then, the parish priest and his committee appear as the prime mediators of the relationship between Agarwal and the state, before the latter’s own local representative.

²⁰⁹ Interview with Fr Robin, parish priest in Onnu, 2 October 2018

²¹⁰ Interview with Prerna, councillor in the vicinity of Thuramukham, 2 March 2019

The following example is an illustrative case in point. After the construction work started on the seaport site, some residents living near to the construction site started complaining about material damage to their houses, such as cracks in the walls. So they gathered, and started protesting about it.

‘When [construction work was goin on] one night, [these angry residents] went and stopped the work. Then [they] promised to inspect these houses. [But] they did nothing. [So] the Church went to [them] with a list of 200 something houses, to request funding for compensations. Then only [the private partner in the seaport] called me, the councillor, and said, “now the Church is making these demands, but it’s your ward, so you have some rights and duties--only you can tackle this problem, now please help us”. So I said okay I will see.²¹¹

At that time, the private group was therefore seeking the local politician’s mediation to deal with these 270 angry residents. So, they devised a plan which involved an estimate amount that they could provide, along with local workers who could do the maintenance works. This plan was submitted to the Parish’s appraisal, where it was rejected there ‘because it was a very low amount²¹²’.

In both the contexts of the re-settlement scheme in Onnu and of the seaport’s site near Thuramukham, the Church—who retains a much more pyramidal hierarchy--thus emerged as the mediator taking the side of the frustrated fish-workers. In this capacity, a stronger Church effect vis-à-vis the state is thus produced (Mitchell 1991; Nightingale 2018), since as fish-workers selectively negotiate with and navigate the Church and the state (Subramanian

²¹¹ Ibid.

²¹² Ibid.

2009), they actively make and unmake the boundaries between the two institutions in their everyday lives.

7.4 Conclusion

Frontiers are not only the result of institutional mechanisms. Because of their processual and co-constitutive character, they also bring about institutional transformations (Rasmussen and Lund 2018; Cons and Eilenberg 2019). Peluso deepens this insight by stating that '[i]t is not only the materialities of the resources or natures that are of concern in...frontier studies; rather state actors' exercise of authority is key to understanding how and under what conditions state actors' actual controls on those resources and natures are established, realized, or abandoned' (2019: 77). I did this in chapters 5, 6 and partially here.

But in this chapter, I have also shown that the variegated frontier being assembled on the coast had effects on the institutions that took part in its assembling. I have thus also furthered Peluso's (2019) call by turning the gaze the other way round. Concretely, this meant looking at the shifting boundaries of the state and the Catholic Church as a result of this frontierisation.

First, I looked at the Coastal Regulation Zone (CRZ) framework and its place in the petitions submitted in front of the National Green Tribunal (NGT). This judicial saga eventually saw the NGT ruling against the withdrawal of the Environmental Clearance of the project. As the NGT's authority was bolstered by the Supreme Court, I have argued that we saw an instance of the socio-environmental state accreting, i.e. the production of a distinctive state effect (Mitchell

1991) which found its roots in socio-environmental processes (Harris 2012; Angel and Loftus 2017; Loftus 2020). This episode further mobilised, once more, the agonistic tension between environment and economy as it played out on the coast. In doing so, it pitted two conceptions of the public good's provision against one another. The state emerged as the provider of public good through the seaport. It then goes on to create the favourable conditions for this provision to be entrusted to its private partner, in a development that may signal a new approach in the context of Kerala.

Second, looking behind the proceedings of the NGT revealed the alleged role of some priests, who had been involved in supporting the petition of two fishermen against the Environmental Clearance given to the Seaport in various capacities. This enabled me to show how the Seaport too had become, unintentionally of course, the terrain for a fracture between "socially-minded" priests and more "charismatic/pastorally-minded" ones. Analytically, I stumble upon a paradox in the sense that to maintain its multi-dimensional mediating position and therefore not change much, the Archdiocese had fundamentally changed from within, by side-lining the vocal "socially-minded" tendency in its ranks.

Lastly, on the ground and in the everyday life of the coast, similar effects emerged from a re-settlement programme. While the boundaries between state and society undergo contradictory dynamics as a result of moonlighting practices, the result is a stronger Church effect nurtured by the consolidation of its mediating position.

This chapter, in conjunction with the insights flagged in chapters 5 and 6, thus bolsters the argument according to which frontiers are also 'edges of state [and by extension, in this context, Church] authority' (Peluso 2019: 77) in the sense that this authority is re-worked as the effects of socio-environmental processes. Altogether, this chapter has also shown that

erosion and accretion, which are physical phenomena that I put at the centre of my analysis of the variegated frontierisation of the coast in Kerala, also become a metaphor for the political ecology of this frontier, as socio-environmentally produced boundaries between state, church and society are in constant flux, and as influence ebbs and flows between these actors.

General Conclusion

From first discovering processes of coastal erosion and accretion to writing these words many years later, much journeying has happened, both “inwards” and “outwards”. In both cases, this journeying has taken shape—or materialised—in ways that I could not have foreseen. As the poet Machado put it best, ‘the way makes itself as [we] walk’. Indeterminate nodes align in contingent ways, influenced by various power equations and structures but not determined by them, and then only a path appears in the mirror.

If this thesis has thus been a journey, it has more importantly sought to, in turn, give an account of other journeys too: those of the coast of Nagaram district and its many actors.

Known for its use of artisanal fishing techniques only, the coast of Nagaram lies at the crossroads of impactful, involving, and overlapping contexts: the modernisation of these fishing techniques, Blue Growth, the port-led development strategy of India and environmental change.

By looking at two different sites, this thesis has focused on these manifold recent empirical transformations and their concrete unfolding along the coast of Nagaram district. Throughout the previous chapters, I have shown that the bundles of relations making the coast as we know it from ethnographic works were being re-wired in different ways with wide-ranging implications, that I summarise again below. The overarching journeying that I have studied here is thus one of unmaking and re-making, from which the coast certainly emerges transformed in many ways, and to which some indeterminacy nevertheless subsists.

Re-phrasing this central insight more conceptually, I have argued that the coast was being assembled into a frontier for capital and “development”. From the physical shorelines to institutional effects, I have traced linkages—biophysical and social, human and more-than-human--pointing to what I have called a political ecology of erosions and accretions, a term meant to illustrate the co-productive character of these dynamics across scales and realms.

Below, I thus conclude the present work in three steps. First, I highlight some of the biggest limitations of the present study. Then, I re-state my research questions and summarise the ways in which I answered them throughout this thesis, putting emphasis on the various academic contributions made by my work. Lastly, I propose wider directions for future research stemming from the current project.

GC.1 Limitations of the Present Project

The limitations of this study are countless, and are likely to grow as feedback from specialists of other, contiguous academic areas comes in. The main limitations that I identify at this point thus stem from my own iterative journeying (cf. chapter 2) throughout the years required to reach this stage of my project. In the body of my thesis, I have hinted to some limitations of scope resulting from my focus on coastal erosion and accretion. As mentioned in the General Introduction, this sets the role of water in the socio-ecological relations (Goodwin 2018) studied here beyond the scope of this research. Likewise, other aspects of the materiality of the shore (e.g. the type of sand, the ecosystems embedded in it) were beyond the scope of my research questions and of the data I could collect within a finite project of this type. I also

candidly reflected on limitations of access, especially not speaking Malayalam and not being welcome on the Seaport site itself, and explained how they contributed to shape my original research design in chapter 2. Self-evidently, these limitations are very concrete and thus represent points that could be deepened in expansions of the present work. Below, however, I focus on two axes which I have not touched upon at the onset of my project, and which nevertheless represent limitations that I believe important to flag.

First, I hinted in chapter 2 to the fact that this thesis could not possibly imagine giving equal importance to every voice encountered during the 12 months of aggregated fieldwork that I conducted. While this is perfectly reasonable in practical and methodological terms, it doesn't mean that the overall outlook of this thesis would not have been different by using different criteria in selecting the voices represented here. There is thus certainly scope to enrich my study by further understanding, and representing in turn, various individual and collective subjectivities.

A starting point could lie in strengthening its gendered aspect for instance, given that the fisheries remain highly segregated in terms of gender constructions and of the roles that follow thereof. Surely, the bulk of the literature that I surveyed in chapter 1 extensively focuses on nature-society relations. However, it doesn't question the fact that our understanding of, and interactions with, the non-human environment might also have been constructed through patriarchal lenses throughout the centuries. For this reason, thoroughly engaging with feminist political ecology (Elmhirst 2015) is likely to not only yield complementary insights on the empirical material studied in this thesis, but to also have far wider-ranging conceptual implications. Uniting this point and the second limitation identified below, Hall et al. stress the 'urgent need to address the near-total absence of critical analysis

of gendered differences' (2015: 483) in the context of the resistance 'from below' (ibid.) against land-grabs. By a similar token, my study would have benefited from a deeper engagement with non-Christian religious institutions and worldviews in the small pockets where I encountered them. I have explained at length in this thesis that the vast majority of fishing villages were exclusively Catholic on the coast of Nagaram district, which justified a predominant focus on the Catholic Church, which is also the most visible religious institution in the area. However, by focusing on the social, political and institutional networks animating the life of non-Christian pockets, such as Moonu, I would inevitably be able to paint a more precise, and therefore more accurate, picture of the transformations taking place on the coast.

A second limitation of my project has to do with the specific 'Development Experience' of Kerala. While I hinted to it, my engagement with this experience remained peripheral, due to the main themes and analytics I chose to focus on. Yet, the ambivalence of a state being 'deeply imbricated [in] everyday lives' (Sundar 2011: 138; cf. also Subramanian 2009), but whose wider developmentalism often left tribal and coastal areas marginalized, i.e. lagging behind in socio-economic terms (Kurien 1995; Ramanalthaiyer and MacPherson 2018), could be further unpacked. In sum, bearing in mind the specificities of Kerala's development experience and praises²¹³ but also criticisms (George 1993; Ravi Raman 2010), it would be important to examine the extent to which the state's recent increased involvement on the coast—infrastructural, economic and environmental—marks a paradigmatic turn in its approach to "development".

²¹³ Characterised by high human-capital, but low infrastructural and economic indicators. Within this experience, the coastal areas are considered as 'outliers' (Kurien 1995: 71), so that the recent and visible involvement of the State at multiple levels necessitates analysis.

Along with the involvement of the state and the characterisation of this potential neoliberal turn, I was often reminded of the importance of further engaging with the importance and the role of the dominant political parties, even if that was, and still is, not my personal inclination. As explained in my empirical chapters, the political parties did not appear as the most salient or decisive actors in the transformations analysed above. However, this does not mean that they don't exist either. Rather, they permeate the different processes and actors (including religious) which feature prominently in the above thesis. Hence, understanding these inter-relations while not falling into biases would likely add accuracy and thoroughness to my analyses. As a last corollary to this overarching limitation, I have referred to the absence of overt resistance to processes of dispossession at different nodes of my empirical work. Arguably, it may be too early to unpack them since the transformations referred to are very much ongoing. Nevertheless, following the cue of Hall et al. (2015), the question of the reaction 'from below' to these processes will deserve more analytical and critical attention to complement the characterisation of frontierisation processes that this thesis addresses.

GC.2 Main Arguments and Contributions

Keeping the above limitations and the fact that this is a finite project in mind, my thesis nevertheless makes various contributions, which I unpack below. I start with the general argument and contribution of my work, before delving into the more specific axes that underpin it.

Overarching Argument and Contribution

The overarching contribution of this thesis finds its roots in the analytical needs identified early in chapter 1. My thesis does indeed go beyond deterministic approaches to provide, by way of update too, a “greening” of the literature on the artisanal fisheries of Kerala.

With the help of the three subsidiary research questions below and of an original, multi-sited research design, I have shown in this thesis that the coast of southern Kerala (Nagaram district) is being assembled as a frontier for ‘development’ and capital. This is the overarching argument and contribution of this thesis, since this coast was so far analysed as a manifold margin (Hoeppe 2007; Subramanian 2009; Sundar 2011).

This frontier-making process is highly variegated and contingent, even if not random either. Some of its elements, like Cheriya Pozhi harbour and its consequence, arise in a ‘bottom-up’ fashion, i.e. from the claims of the artisanal fishworkers themselves. Others are imposed from the top, such as the Thuramukham seaport. Both dynamics have been studied separately, by the different authors referred to in the respective chapters addressing them. Yet, I believe that juxtaposing them as I did is an original academic contribution too, which directly results from my research design, itself based on the empirical occurrence of coastal erosion.

While characterising this variegating frontier-making process, I have made the shore and its geomorphological transformations visible, by showing how central they were to the multiple pathways and imaginations that they ignite. I have further shown that this takes place by re-wiring pre-existing co-productive relations between the shore, the sea, the community, the state and the Catholic Church. In echo with the title of this thesis, it is these relations—and

the manifold marginality they conferred to the coast at different stages—that are fundamentally unmade and remade. Through the subsidiary questions that I discuss below, I focus on the three most salient axes along which the coast is being unmade and remade: imaginaries, shifting shorelines and institutions.

Although these processes are variegated and the elements they involve heterogeneous, I showed a coherence in the imaginative, technological, biophysical and institutional effects of these transformations, i.e. how the coast is remade. Collectively called the ‘frontier’, these effects point to the fragile and indeterminate characterisation of the coast as a zone of social, environmental and economic transformation.

At the end of chapter 1, I laid down my subsidiary research questions (SRQ), meant to assist and substantiate my overarching research question. Below, I thus return to them by means of conclusion, to wrap up the main arguments developed throughout this thesis.

SRQ1: What are the discursive, and in particular imaginative, aspects of the frontier? How do they matter?

I addressed this question back-to-back, in chapters 4, 5 and 6. Near Cheriyaipozhi, the sudden and brutal loss of shore led the fish-workers of Randu to adopt a new fishing technique: the ring seine. Much more powerful and expensive than any artisanal fishing technique used in Nagaram district, this technological disruption led to incomparably better incomes. They manifest in nicer houses and material artefacts, but also in new discourses and aspirations. These discourses mirror a phenomenon documented by Li (2014a), where more emphasis is

put on hard work, on personal effort, and on the resulting increased material success. This differentiation within the artisanal fishing community also enabled my informants to send their children to expensive English-medium schools, or to study academic degrees in foreign countries. The frontier is of course indeterminate (Cons and Eilenberg 2019; Knott and Mather 2021), not least because the environmental sustainability of the ring seine is very questionable. Yet, my thesis documents new aspirations resulting from the brutal transformation of the shore.

In parallel, further north, houses get increasingly washed away by sea attacks (chapter 4). As a result, a re-settlement programme is deployed by the state (chapters 4, 7). This programme places my informants in front of a Cornelian dilemma: the proximity to the sea and the continuation of the distinct, co-productive livelihood outlined in chapter 3 vs. the possibility of losing this connection by shifting to the inland. But as this choice perturbs my informants, I also show that landwards aspirations of jobs disconnected from the sea grow among them.

South of the harbour, where the shore accreted, two new pathways are set in motion too. First, residents dream of touristic development. Second, corporate giant Agarwal's entry—granted by the state—connects Cheriyaipozhi to the Thuramukham Seaport located 40km south. In this sense, following Anderson's seminal notion of imagined communities, it also integrates the two places and their new aspirations together. Up to here, the new imaginations thus emerge from the changes to the shore and the brutal disruptions it causes across this stretch.

But in this variegated process of frontier assemblage, new imaginations also come from the top and trickle down. As we follow the Agarwal barge to its destination, we dock on the construction site of the Thuramukham Seaport—a massive international infrastructure

project which had been dreamt of by the state for decades (cf. chapter 5). The use of this specific verb is all but coincidental, since the project is often called ‘the Dream of Kerala’. This sets the tone in terms of discursive and imaginative realms. Indeed, I show in chapter 5 that the imaginary realm is crucial to inflate, fuel and drive the project to its administrative completion. As we enter the dreamwork of capitalism (Appadurai 2015) and its hyperbolic (optimistic) register (Simpson 2013), I unveil an entire system of imaginative aspects which all reinforce each other. Economic and financial promises portray Thuramukham—a location branded as having a unique potential for docking large cargo ships due to its natural depth—as the future Singapore, i.e. a location which became hyper-capitalist through, among other factors, a successful port system. When they trickle down to the ground, these dreams project most villagers into a future with stable, unrelated to fishing, employment. The effect (Nail 2017) thus exactly mirrors the aspirations found in Cheriyaapozhi and brought about through a different process. Moreover, when they scale up, these dreams—further fuelled by the inclusion of international consultants (Mosse 2011)—project the village of Thuramukham into the national and international arenas of global capitalism, where India competes, with China in particular. The ‘Dream of Kerala’ thus also contributes to branding the nation (Kaur 2020), which reinforces its political and strategic importance.

Altogether, then, the two sites of manifold transformations that I study in this thesis both rest on new and strong imaginations. In addition, at their respective scales, they cohere and fold into each other. In this sense, through a lens that sees frontiers as variegated processes (Cons and Eilenberg 2019; Knott and Mather 2021) that precisely cohere into the external effects that they produce (Nail 2017), we see that the two frontiers are in fact parts of one. This, as I argue at the end of this section, represents an original contribution to the literature on frontier assemblages.

SRQ2: What is the role of the environment, and more concretely of the materiality of the shore, in the different transformations studied in this thesis?

But the (economic, financial) dream has a (socio-environmental) shadow: the shore, again. In chapter 4, I explained how all the technological, aspirational/imaginative and political disruptions that take place around Cheriyaipozhi result from the brutal coastal erosion and accretion that followed the construction of the harbour. Because the impetus came from the local fishing communities and followed an inductive processual logic, I characterised this process as ‘bottom up’

In chapter 6, in contrast and at a much bigger scale, I rather show at length that the ‘top-down’ seaport sits well with existing and foreseen patterns of coastal erosion. There indeed appears to be a discrepancy between how these patterns are addressed in the quest of the project’s Environmental Clearance, a key milestone in the Indian regulatory system, and the lived experience of people who live in the surrounding villages. By going on the ground indeed, I show that coastal erosion in Vadakku is a major concern in the perception of my informants, who see it as ultimately helpful to clear the way for the Seaport project in the classic fashion of an enclosure (Levien 2013b; Perreault 2013). On the southern side, in Tekku, accretion triggers an unexpected resistance in the immediate run, but also Real Estate dreams allied to the Seaport for the longer run.

The upshot and contribution here are thus very clear. As Perreault (2013) calls for devoting more attention to the contingent role of nature in processes of capitalist development, my thesis shows that through these two complementary and symmetrical processes, the changing geomorphology of the shore is always at the centre of the frontier assemblage. A

detailed focus on the materiality (Bakker and Bridge 2006) of the shore also highlights a sequential process of transformation, which I argue deserve to be looked at before turning to the analysis of the institutional dynamics emerging thereof (Lund and Rasmussen 2018; Lund 2019).

This contribution, which I see as the most original one of the present thesis and in fact its backbone too, further illuminates past ethnographic work on coastal southwestern India in several ways. First, by bringing a mesoscale and eclectic (Knott and Mather 2021) analysis of the different contexts at whose crossroads the coast lies, I am able to offer a much more transversal view of the various transformations I study than traditional ethnographies, however deep and thorough (e.g. Hoeppe 2007; Subramanian 2009; Sundar 2011), have. Secondly, unlike in Subramanian (2009) and Sundar (2011), the environment has a clear and direct analytical role here. Unlike in Hoeppe (2007), the socio-political processes which take place around this environment are also clearly addressed. I therefore believe that my co-productive framework between nature and society contributes to further integrating perspectives that were strongly leaning one side or the other.

Third and related, my thesis makes the shore visible and analytically prominent. As set out in my General Introduction, coastal erosion is ever more damaging on the ground. Yet, at the time of writing, I am not aware of academic work charting the socio-economic causes and consequences of these disturbed ecological processes. This new focus therefore certainly represents a contribution to the field. Tragically, climate change and rising sea-levels makes it even more likely to grow in importance over the years.

As a corollary, although my thesis is not about infrastructure per se, infrastructure is the nodal point of each frontier that I study. While it is embedded in wider socio-political processes, it

is infrastructure that triggers the physical processes of coastal erosion and accretion. Yet, infrastructure is also nowhere prominent in the works of Hoeppe (2007), Subramanian (2009) or Sundar (2011). Of course, their fieldsites do not encompass such infrastructure and it is thus normal that infrastructure wouldn't feature in their research. Conversely however, infrastructure is a growing feature of the southwestern coast of India, and my work helps giving it the analytical importance that it empirically deserves.

SRQ3: How are institutional dynamics intertwined with the frontier assemblage?

The third subsidiary question that I tackled in this thesis has to do with institutions. Throughout chapters 4-6, I highlight the role of the state, predominantly, and of the Church in driving the assemblage of the frontier. While it is important to do so because every frontier is different and thus needs to be characterised (Cons and Eilenberg 2019; Knott and Mather 2021), it is not very surprising analytically given that the largest "sub-"frontier in this thesis is driven by the state. As such, documenting this process also feeds into old debates on state-led economic liberalisation (Sud 2009, 2014; Harvey 2003; Levien 2012, 2013b). Having placed my thesis in a wider framework of co-productive relations between institutions, society and nature (Swyngedouw 2015b; Sud 2020c), I therefore chose to look at the less explored but equally relevant other side of this two-way directionality. In other words, in chapter 7, I focused on how these institutional actors were shaped in turn by the frontier taking place along the coast. Given that my two fieldsites are distant from each other but 'spanned' by the same institutions, it was important to take them together.

My findings and contributions with regards to institutions feed into recent academic discussions on institutional boundaries. Seeing boundaries as effects (Mitchell 1991), I showed how regulations around the coast (the CRZ) and actual coastal erosion sent waves of transformations across the judicial landscape of India, and produced enhanced state effects by the same token. I called this accreting front the ‘accretion of the socio-environmental state’ (inspired by Nightingale 2018), to highlight that the underlying processes causing these effects were, here too, socio-natural ones. Nevertheless, I also showed that the effect of this effect, so to say, was to partly delegate the provision of the public good (as the economic development brought about by the seaport was ruled to represent) through creating favourable conditions for a big private actor, in what may signal a new turn for Kerala’s development model. To this apparatus-level context, I add the production of contradictory effects on the ground, where the state jumps in to mitigate the consequences of coastal erosion (and thus accretes) but also stretches into practices which have the opposite effect of blurring its boundaries with society. By being associated with brokerage activities which are not always perceived as fair or transparent, local political leaders draw on ‘the official [to edge it] outwards’ (Sud 2020c: 1189). In this context, the Church undergoes serious internal shakes, but emerges as remarkably constant in its ‘balancing act’ posture.

Conceptually, this facet of my thesis thus also furthers the academic field on the co-production of nature and institutions (Harris 2012; Nightingale 2018) by adding a third actor, the Church, which directly emerges from the particular context of my empirical work. More specifically then, in answer to Angel and Loftus, I contribute to clarifying ‘what it is that produces state effects’ (2019: 209) but also, thus what I called “Church effects”. In the context that I study, I substantiate my contribution by highlighting the role of the protection of the coast (the CRZ framework) and of the claims made on this coast (the NGT petitions) in setting

in motion the specific state/Church effects that I unpack. Here too, then, the biophysical nature is at the root of institutional effects. This contribution thus also furthers elements of political ecology mentioned above, such as Perreault's (2013) call for a greater attention to the role of nature in socio-economic processes.

GC.3 Future Research Directions

A few axes of reflection keep animating my thinking as I conclude the present project, and should eventually be tackled. Most importantly, I believe that this work could come back to some of the ideas discussed in chapter 1, and feed into discussions on relational ontologies, which underlies assemblage thinking. This could build upon my empirical findings and the above reflections, highlighting what it facilitated and might have obscured analytically, but also crucially what my work contributes to this ontological take overall. Lastly, acknowledging my anthropocentric lens, I would introduce possible (meta-)ethical implications of this situated study. Concretely, this would mean engaging with Deep Ecology and other environmental philosophies/ethics, in order to assess how my own grounded findings sit with them. Along this endeavour I could further reflect, across realms, on the links between the spatial (to the shore) and temporal (of envisioned futures) alterations which form the pathways studied so far. 'Nature-as-infrastructure' (Nelson and Bigger 2022: 88) is one of the academic currents in which my work could certainly be further embedded, since in effect I show that the shore is a form of infrastructure to different socio-economic orders in addition to being central in the transition from one to the other. However, recent directions in the 'politics of infrastructural nature' (ibid: 99) face the danger of being confined to a subset of

the politics of ecosystem services (here associated with the shore, to which I briefly referred to in chapter 3). While it would aptly complement my empirical insights (albeit necessitating another round of fieldwork), a focus on these politics may not really add much conceptual value to my work.

All in all, as I am finalising this thesis, I am left with an impression that my grounded work could, and should, be brought back to a greater level of conceptual abstraction in order to form a more complete intellectual project. This facet however remains fuzzy at this point, and is more likely to form the foundations of long-term interests than an immediate, time-constrained focus.

One way to do so could be to come back to my initial interests, i.e. to debates on what constitutes value and to engage with them critically. A transversal theme running throughout this thesis and central to political ecology is indeed the relations of (in)commensurability between economy and environment, how these two realms are valued by different stakeholders and, of course, how they are strongly intertwined too. Concretely, this research agenda would thus mean replicating, broadening and updating an approach similar to Hoeppe (2007) or Gudeman (2001; 2008), which consists in looking at the cultural construction of the different valuations of the economy and environment. Gregory, for instance, asks what the theoretical and empirical consequences are of the 'coevalness of rival value systems' (1997: 7). As explained above, this thesis has started answering these questions, but the whole point of the works of Gudeman (2001; 2008) or even Graeber (2001; 2005; 2013) is fully understanding these different value systems necessitates engaging with the cultural constructs underpinning the positions of different actors and institutions (and often overlapping!).

Another research avenue could be less abstract and more directly connected with the concerns emerging from my field research. Here, my benchmark would be Travieso (2018), who asks what ‘an economy that gives hope’ may look like. He does so by looking at how agroecological initiatives help breaking market dependency through reinforcing the relations between community and environment. And indeed, initiatives to ensure the safety and the sustainability of small-scale fisheries are gradually seeing the day in Kerala too. Two points however need to be noted here. First, Mills (2018) notes that in various parts of the world as well as trans-nationally, artisanal fish-workers have started formulating their resistance to the neoliberalisation of the ocean and the fisheries around food sovereignty. At the time of my fieldwork, there was no evidence suggesting that this was a priority among my informants. This doesn’t mean that it will never be the case, and it must therefore be kept on the radar since fish remains food, and food systems permeate socio-environmental linkages on which our survival as a species directly depends in many complementary ways. Second, I did hear very loose talks of new techniques of beach protection while on fieldwork. I also visited Puducherry, where a local NGO, explained to me their role in putting together a project of beach restoration, supported by the state. Should this materialise in Kerala, keeping in mind the highly indeterminate character of the transformations studied here, my findings will have to be updated.

In addition and in the meantime, student collectives like the one I refer to in chapter 2 are growing and developing ever-more inspiring initiatives. A more participatory and engaged research clearly geared at how the un/re-wired relations that co-constitute the artisanal fishery can be restored while improving environmental awareness and economic stability looks, to me, like a research agenda which looks towards hopeful horizons. One avenue in which this endeavour could be embedded is the Degrowth movement, which is gaining

traction in critical agrarian studies (Gerber 2020) for instance, and need not be a Global North-centric project (Gerber and Raina 2018). In addition to horizontalizing the process of knowledge production by giving more voice to the indigenous—a title that they claim openly (owing to their special relationship with the sea), not one that I ascribe to them from my western Ivory tower—people of the coast all the way to co-authorship, this type of initiative could also benefit from new methods. Among the myriad of possibilities, Powell (2016) suggests that mapping opens ‘multimodal and multisensory’ approaches which can only enrich the otherwise often too linear and reductionist lenses on which much research still relies. Further exploring other methods which enrich these multimodal and multisensory approaches will thus remain a continued agenda too.

Coming back to the core of the present thesis, the various processes at the crossroads of which this thesis is located keep unfolding too. Indeed, climate change means that coastal erosion and its socio-environmental consequences will only keep becoming stronger and more prevalent, far beyond sole infrastructure projects. In other words and in addition to the many more directions that will accrete as I take some healthy distance from the present thesis, the works of time will also make space for ever-emerging and self-actualising research directions.

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