Chapter 9
Wealth, Poverty, and Immigration: The Role of Institutions in the Fisheries of Tamil Nadu, India

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Abstract This chapter explores two concurrent processes in the fisheries of Tamil Nadu, India, over the past century: technological modernization and demographic growth. The first process is closely connected to the Blue Revolution instigated by the Government of India after Independence, as well as to the globalization of markets. It has resulted in substantial increases in sectoral wealth. The second process is the increasing size of the fishing population through natural growth and immigration. I situate the poverty that still occurs in Indian fisheries in the confluence of these two processes, arguing that varying institutional arrangements which structure participation have an important effect on poverty's availability and location. The chapter centers on one particular district – Ramnathapuram – which has witnessed particularly dramatic increases in its fishing population compared to other parts of the South Indian coastline. This has resulted in specific patterns of poverty and riches.

9.1 Introduction

An earlier chapter in this volume (Eide, Bavinck, and Raakjær, Chap. 2) pointed out that wealth has characterized marine fisheries in the twentieth century as much as poverty has. As a result, many of the world's fisheries have witnessed demographic expansion, also through immigration, and a changing divide between rich and poor. In the present chapter, the details of this process are explored in the context of Tamil Nadu, India. The focus lies on one particular coastal district called Ramnathapuram,

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or Ramnad, which stands out for its particularly high rate of immigration into fishing, and on the question of institutional control. I argue that the institutional configuration in Ramnad, compared, for example, to the Coromandel Coast, which lies to the north, was relatively weak, and therefore conducive to population inflow. This has contributed to severe competition on the fishing grounds, social conflicts on shore, and overfishing of marine resources.

Schlager and Ostrom (1993) distinguish two requisites in the fishing profession: rights of access and rights of extraction. The former pertains to the ability of establishing preconditions for the act of fishing: possessing equipment and beach rights, and actually being allowed to set out to the fishing grounds in question. The second requisite is the right to actually set the fishing gear, catch fish, and market the fish through available channels. Institutional controls over access and extraction thus constitute a core aspect of fisheries governance the world over (Charles 2001).

In many cases, such governance is exercised under conditions of legal pluralism (Von Benda-Beckmann 2002; Bavinck 2005). Legal pluralism implies the application of different legal ideas, principles, and systems to the same situation (Vanderlinden 1971). In many cases, one finds state law defining fishing rights juxtaposed over customary law. The former is implemented through governmental agencies and courts, whereas customary law relies on a range of traditional authorities. I argue that while state law has unambiguously striven to open doors into the fishing profession in India, customary law has frequently created informal barriers. The latter, however, is not distributed evenly along the coastline. Varying expressions and potencies of customary law have contributed, in interaction with state law, to diverse patterns of immigration and distributions of wealth (Bavinck 2003).

The following two sections describe the modernization of fisheries as it occurred in Tamil Nadu since Independence (1947), and the available distribution of wealth and poverty among the fishing population. I then delve into the change process in Ramnad District, highlighting its demographic features. These are linked, in comparison with other coastal regions, to institutional controls prevailing in the fisheries.

9.2 Blue Revolution in Tamil Nadu Fisheries

Like most new nations in the developing world, India took up the cause of industrializing capture fisheries after Independence. The so-called blue revolution was engendered by the Indian government in parallel to the green (agriculture) and white (dairy) revolutions. It commenced in the 1950s, and resulted in the establishment of a modern fishery sector, next to an old and widespread small-scale fishery (Bavinck and Johnson 2008). This modern fishery sector, which consisted – and still consists – largely of a fleet of small trawling vessels, developed rapidly. This was mainly because of the successful connection that was made in the 1960s to the international seafood market (Salagrama 2004). The differential between national and international prices, particularly for shrimp, resulted in what John Kurien (1978) has appropriately called a “pink gold rush.”

Table 9.1 Emergence of trawler fishing in Tamil Nadu: vessel numbers and production compared (1948 and 2000)

Year	Small-scale vessels	Trawler vessels	Trawler catches (t)	Total fish catch (t)
1948	13,204	0	0	27,135
2000	41,770	8,009	200,468	377,483

Source: Department of Fisheries 2000

Although the fishing profession generally has a low status in Indian society, and is associated with low castes, the opportunities for making a fast buck drew in investors from fields as diverse as big business, the film industry, politics, and the professions (Bavinck 2001a). Throughout the subcontinent, a wave of conflict between modern and small-scale fishers subsequently emerged, as trawler fishers were operating on the same fishing grounds as small-scale fishers (Bavinck 2005).

The continuation of conflict ultimately resulted in state governments enacting legislation to spatially separate the two categories of fishers. On paper, trawler fishers were thereby relegated to the offshore fishing zone (beyond 3 nautical miles). In practice, however, these rules were scarcely effectuated and conflicts continued (Bavinck 2001a). Industrialization also impacted the small-scale fisheries, however, introducing new vessel designs (often engine-propelled), gear types, and fishing practices. As a consequence of these developments, some observers (e.g. Johnson 2006) suggest that there are now three categories of fishers in the country: semi-industrial and industrial, small-scale, and intermediate.

Tamil Nadu was at the forefront of the industrialization process of capture fisheries in India, closely following the states of Kerala and Goa, which had taken the lead. The Fisheries Department played a highly proactive role, establishing boat-building yards and refrigeration facilities, distributing new gears and fuels at high subsidy rates, and generally encouraging technological innovation. Its officers had two concerns in mind: (1) increasing total output and contributing to the generation of foreign exchange and (2) uplifting the fisher population from its condition of "backwardness." The latter was of more than nominal importance. Government officials held the fishing population to be poorer and more backward than average, and in great need of social and economic development.

In accordance with the general trend in India, the Tamil Nadu government focused its efforts on establishing a trawl fishery along its 1,000 km coastline. Looking back, it was more than successful. After an initial phase of reticence and trial and error, there came a genuine rush to invest in this new technology. The trawl fleet thus expanded in leaps and bounds, and fisheries production boomed (Table 9.1). As a consequence, the government was able to terminate most of its primary involvement in trawl fisheries (such as boat-building) by the 1970s, henceforth leaving expansion to the private sector to carry out. Now the Fisheries Department, largely in reaction to demands from the fishing population, began to involve itself in regulation.

The Tamil Nadu Marine Fishing Regulation Act (1983) and the accompanying Rules brought about a licensing regime and successfully tied trawlers to specific ports, thereby creating conditions for further governmental control. And although the attempts to spatially separate trawlers from small-scale fishers failed miserably,

an effectual system of time-zoning was indeed established, at least in the three central coastal districts, including Ramnad (cf. Bavinck 2003).

Meanwhile, the small-scale fisheries in Tamil Nadu too were changing. Although government policy had tended to neglect this segment of the fishing population, particularly in the initial period of industrialization, technical innovation nonetheless took place (Bavinck 1997; Bavinck and Karunaharan 2006). By 2000, most small-scale fishers in Tamil Nadu were making use of light-weight and strong, synthetic fishing gears of various – frequently new – designs, and many of them had motorized their craft. Their range of operation had increased, they were fishing more days in every year, and catch per unit of effort had gone up.

Table 9.1 provides primary statistics on Tamil Nadu capture fisheries, as gleaned from departmental statistics.

The first point to note is the absolute growth of fish production. Catches in 2000 are no less than 14 times higher than five decades earlier. Much of this increase of production is caused by the modern fishery sector, which developed from zero vessels at Independence to approximately 8,000 vessels in 2000. These vessels are based in 13 harbor locations along the coast, and contribute more than 50% of annual production.

But small-scale fisheries too have grown, in terms of both the number of fishing units and average production. Thus, there were more than three times as many fishing units in 2000 than in 1948, and each unit caught on average about twice as much annually (from 2 to 4 t/unit). Together, the small-scale fishers of Tamil Nadu still account for almost half of the annual fish catch.[1]

The growth in fish production in Tamil Nadu, and in India, is linked to the development of the export market – first for shrimp, and then for a range of other seafood products. Separate figures for export of seafood from Tamil Nadu are not available. Salagrama (2004, p. 15), however, notes that the export of seafood from India increased from 15,732 t in 1961–1962 to a phenomenal 343,041 t in 1999–2000. In terms of value, exports went up from Rs 40 million to Rs 50,117 million (US$1,189 million) in the same period.

Discussing global trends, Delgado et al. (2003, p. 37) note that "fresh and frozen fish have shown a long-term increase in their real prices since the second world war." This conclusion also seems to apply to the domestic market in India. Salagrama (2004, pp. 14, 78) points out that, on the basis of wholesale price indexes for the period 1981–1996, "the increase in real value of fish is much faster than that of other food items." This is indeed the experience of consumers, for example in the urban conglomerate of Chennai, who complain about the regular rise of fish prices on the local market (field notes from author).

The long-term development of seafood prices, which obviously provides incentives for fishers to intensify their harvesting efforts, does not, however, quite capture the jolt experienced by fishers in the South, faced by the opening of the export market. Although Kurien's (1978) account of the almost miraculous development of the

[1]Compare Salagrama's (2004, p. 13) analysis of all-India trends which argues that catch per unit effort (CPUE) of artisanal fishers has declined since 1980.

Table 9.2 Population growth in Tamil Nadu 1951–2001: general figures and fisheries compared

	1951	2001	Growth (%)
Population in Tamil Nadu	30,119,047	62,405,679	200
Fisher population in Tamil Nadu	95,735[a]	679,711[b]	700

Source: Department of Fisheries 2000; Chacko et al. 1957; Govt of India Census 1952, 2001
[a]Data 1948
[b]Data 2000

demand for shrimp (from fertilizer for coconut plantations to prized export product) does not apply to all other seafood products in India (for many, a local demand does exist), the interval between domestic and international prices has been large enough to excite everyone engaged in marine fisheries.

What consequences has this had for the fishing population in Tamil Nadu? In the time period under consideration, the fishing population (men, women, and children) too has increased manifold. Available sources (Department of Fisheries 2000) suggest that the marine fisher population increased from 95,735 in 1948 to 679,711 in 2000 (an increase of 700%). This also resulted in a multiplication of fisher settlements. While the Tamil Nadu coastline in 1948 counted 233 villages and neighborhoods, this number had increased to 591 in 2000 (an increase of 250%).

Compare the above with the general demographic trend in Tamil Nadu. At the time of the 1951 census, Tamil Nadu counted 30 million inhabitants. This figure had more than doubled to 62 million by the time of the 2001 census.

Table 9.2 points out that the growth of the fisher population outstripped general population growth by far. The logical explanation for this trend is that a net movement occurred into fisheries during the period under consideration, triggered by the enormous economic potential of marine fisheries.

The sweeping process of modernization, or, to follow Smith's (2000) terminology, "industrialization," of the Indian oceans has had important consequences for the marine ecosystem, many of which are yet to be documented. Overall production data, however, point to a leveling of catches since the late 1990s, and scientists have recorded widespread evidence of "fishing down the food web" (Bathal 2005; Vivekanandan et al. 2005). These scientific analyses corroborate the observations fishers in Tamil Nadu have been making over a much longer time period of diminishing catches and sizes of fish, and vanishing species (Bavinck 2001a).

9.3 Location and Nature of Wealth and Poverty in Tamil Nadu Fisheries

There is evidence of extensive material poverty in the coastal fisheries of Tamil Nadu in the period before Independence. In the first decades of the twentieth century, the Madras Fisheries Bureau, established by the colonial government for the development of fisheries in southern India, thus concluded that the fishing population

of the eastern coast was "backward" and in dire need of upliftment. To substantiate its claims, it described the living conditions of fishers of Chingleput and South Arcot districts, in the heart of the Coromandel Coast, as follows (Madras Fisheries Bureau 1916, p. 135):

> Their huts and surroundings are dirty and they are illiterate without any desire to improve their condition. Intemperance is the curse of the community.

More to the south of the Coromandel Coast, the population of Akkaraipettai was viewed as being (Madras Fisheries Bureau 1916, p. 136) "very backward and [leading] a hand-to-mouth life without paying any attention to the sanitary condition of their hamlets, education of their children, etc." And in the Catholic belt, in the southern districts, the situation was not much different; with the exception of merchants monopolizing the processing and trade of fish, fishers are described as "mostly poor."

Anugraham (1940, pp. 16–17) provides details on the housing situation of fishers in Chennai at the inception of World War II:

> Most of the fishers live in huts. Normally a hut is about 8 feet by 10 feet with low walls and low roof of palm matting. There is only one doorway which is hardly 5 feet high. In some cases, a bamboo tatty which serves as a provisional "door" is placed at the entrance and fastened by ropes to either door post. Most of the huts have no windows, as the need for ventilation is neither valued nor even felt by the fisherfolk. The ventilators, if any, are nothing more than holes to send out smoke. Incidentally, they let in a little light. … It is remarkable that a hovel hardly 8′ by 10′ serves as a store room, a kitchen and dormitory, all in one.

These observations by outside academics and bureaucrats do not mean, however, that the situation of fishers at the time was undifferentiated. Certain categories, such as the owners of the capital-intensive beach seine companies, which operated along at least some shorelines, were most certainly quite wealthy (Hopewell 2004; cf. Salagrama 2008). Oral history suggests that within hamlets of small-scale fishers too there were distinctions between have and have-nots. The dividing lines between such categories, however, were relatively fluid, and poverty tended to affect the whole fishing population, to one extent or another.

The blue revolution brought about massive rearrangements of wealth and poverty in the fishery sector. As statistical evidence on income distribution within the fisheries sector is still limited, we will have to make use mainly of qualitative sources of information.

Today wealth is no longer concentrated with beach seine owners, who have beaten a quiet retreat. Instead, it is situated in the trawler ports situated along the Tamil Nadu coastline, and in a class of trawler owners. Here again, one finds a great deal of variation. Reviewing the dynamics of mechanized boat fishing in one of these ports, in Chennai, Bavinck (2001a) documents the existence of a successful group of trawler owners, who possess multiple craft and have diversified investments into other fields outside of fishing. Their children have pursued higher education and are moving into other societal domains. These families congregate in new, middle-class neighborhoods on the perimeters of the harbor area. In contrast stands a category of marginal trawler owners with old equipment, high debts, and

uncertain returns. Their societal position is shaky, and they may as easily move down as up.

But the trawl fishery has also generated a new male and female working class, employed on the boats and in the extensive service sector surrounding each harbor. Their work is dirty, insecure, and tiring, and they work long hours for low pay. Residing in (rehabilitated or non-rehabilitated) slums that spread out in the city, alcohol abuse, violence, and prostitution are common, and upward social mobility limited. Still, in comparison with their predecessors in the pre-Independence era, these workers will agree that absolute poverty has gone down. For them, this is a consequence perhaps less of the blue revolution than of the numerous welfare schemes initiated by the Fisheries Department and other governmental agencies particularly since the 1970s. These include the supply of essential food items at subsidized rates (ration schemes), subsidized housing, life insurance, and a saving-cum-relief scheme to provide for the annual off-season; to this can be added the benefits of the public medical system in Tamil Nadu. Despite its many deficiencies, this has increased average life expectancy from 40 to 63 years, and the general decline of poverty (Government of Tamil Nadu 2003). As we shall see later, many members of the fisher working class currently derive from outside the fishing sector.

Wealth and poverty in the 500-plus fishing villages of Tamil Nadu are more subtly arranged. Although many village populations still operate social "safety nets" (Kurien 1995) to offset individual or collective mishap, this does not prevent the accumulation of wealth and poverty in certain echelons. Salagrama (2006) has made an extensive analysis of fisher livelihoods along the east coast of India, focusing on the state of Orissa, and his conclusions are relevant for Tamil Nadu as well. Salagrama (2006, pp. 101–103) uses composite wealth-ranking methods to divide the coastal fishing population into four categories, ranging from "very well-off" to "extremely poor" or "destitute."

The occupations in the top- and bottom-most wealth categories are primarily located in the urbanized, trawler ports, whereas village fishers seem to congregate in the middle range. Thus, the owners of (motorized and non-motorized) beach-landing craft figure among the wealthier in rural fisheries, whereas petty traders (often women) and fishers with limited assets rank among the poorer. However, Salagrama (2006, p. 101) points out that there are frequent fluctuations in these middle ranks, with many people constantly moving up and down the ladder "as a result of the dynamic nature of their access (i.e. entitlements) to various resources."

9.4 Fisheries and Immigration in Ramnad District

I argued above that, parallel to an explosion of wealth in the capture fisheries of Tamil Nadu, the fishing population of the state has grown substantially, with a large proportion of this increase deriving from the movement of non-fishers into the sector. For simplicity sake, I define "non-fishers" as people who do not belong to a

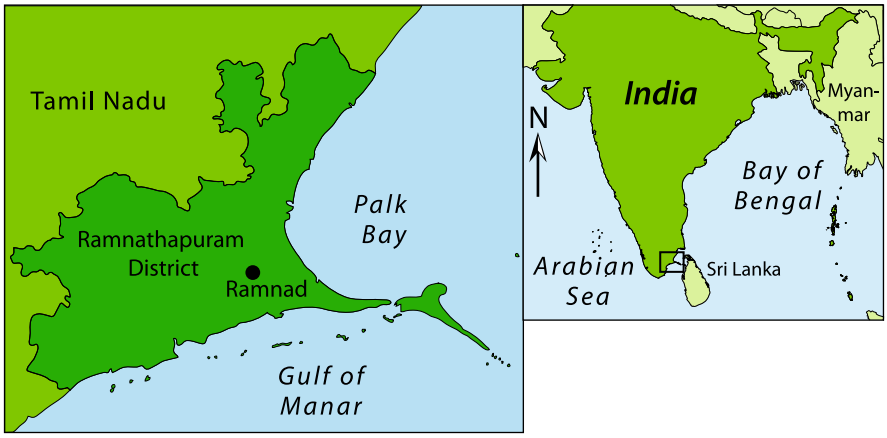

Fig. 9.1 The location of Ramnathapuram District within the state of Tamil Nadu as well as India

traditional fishing caste and who have memories of ancestral activity in economic sectors other than fishing.[2]

I now turn to examining the process of migration more closely, the argument being that immigration into Tamil Nadu fisheries has not been distributed evenly throughout the coastline. Instead, it has been differentiated geographically and socio-technically, concentrating in sub-sectors and regions which are characterized by high opportunity as well as low entry thresholds. High opportunity follows from the combination of natural, economic, and technological features, such as the availability of adequate aquatic resources, high market values, and the presence of suitable techniques for extraction. Low thresholds are the result of imperfect institutional barriers, created by state or non-state authorities. In the Tamil Nadu context, this has had two implications. First of all, immigration was strong in the new trawl fisheries, which government – making use of judicial and extra-judicial means (Bavinck 2001a) – shielded against protest and control by traditional fisher authorities. Second, it concentrated in geographical regions where traditional institutional barriers are weaker than elsewhere. Ramnad District illustrates both trends (Bavinck and Karunaharan 2006; Jentoft et al. 2009).

Ramnad is one of the largest administrative districts in Tamil Nadu, and its coastline of 237 km is by far the longest (Fig. 9.1). Within Tamil Nadu, Ramnad is known for its aridity, isolation, and limited level of development, and fisheries constitutes one of the major economic activities. Of the 1.2 million inhabitants, almost 10% depend on fishing for a livelihood. Bavinck and Karunaharan (2006) count 141

[2]Debates on the correlation between caste and occupation in India are heated and inconclusive as to the details. Observers will agree, however, on the main marine fishing castes of Tamil Nadu – the Pattinavar, Paravar, and Mukkuvar – who dominate the Coromandel Coast, the Gulf of Mannar, and the southern reaches of Tamil Nadu, respectively.

Fig. 9.2 Small-scale "vallam" fishers returning from fishing in the Palk Bay, Ramnad District

fishing settlements spread more or less evenly along the shoreline, with the trawler industry concentrated on or close to Pamban Island.[3]

The northern shore adjoins the Palk Straits, which is a shallow, sheltered sea area. The civil war, which took place in neighboring Sri Lanka from the early 1980s until 2009, has radically affected the fisheries in this region. As fishing activity in Sri Lanka has declined in lieu of the violence, many of the trawl fishers of Ramnad District relocated their operations to Sri Lankan waters, meanwhile risking a confrontation with border authorities (Suryanarayan 2005). Other small-scale fishers ply the near-shore region, in search of mud crabs, squid, and other commercial species (Fig. 9.2).

The southern shoreline of Ramnad District faces the Gulf of Mannar, which is recognized as one of the richest biodiversity regions of India. Because of its ecological significance, the Government of India in 1986 declared the 18 islands off the coast a no-take national marine park; the international community subsequently recognized the larger region as a biosphere reserve. Meanwhile, the Government of India (1976) ratified the Convention on International Trade in Endangered Species (CITES), and actively prosecutes those engaged in clandestine trade of the marine species on the CITES lists (Bavinck and Vivekanandan in press; Rajagopalan 2008). These institutional proclamations are slowly beginning to affect fishing practice, and fishers are complaining. There is no evidence, however, of significant numbers

[3]The 2000 census of the Fisheries Department of Tamil Nadu mentions 184 fishing settlements in Ramnad District. This includes, however, a large number of interior villages in which marine fishing is not the dominant, but a supplementary, activity.

Table 9.3 Religious composition of fishing settlements in Ramnad District (2005)

Religion	Number of settlements	Percentage of total
Hindu	92	65.2
Muslim	7	5.0
Christian	21	14.9
Mix of all	21	14.9
Total	141	100.0

Source: Bavinck and Karunaharan 2006

Table 9.4 Caste composition of fishing settlements in Ramnad District (2005)

Name of the caste	Number of settlements	Percentage of total
Paravas	17	12.1
Pattamkatti	4	2.8
Ambalar	59	41.8
Vanniyar	7	5.0
Pillai	3	2.1
Muslim castes	7	5.0
Mixed caste	44	31.2
Total	141	100.0

Source: Bavinck and Karunaharan 2006

of fishers shifting to alternative occupations. On the contrary, fishing intensity seems to be maintained and even increasing within the park as a result of demographic trends and new gear types.

Other than many fishing regions of India, the contemporary fishing population of Ramnad District displays an extraordinary diversity. There are Hindu, Muslim, and Christian (Roman Catholic and Protestant) settlements and settlements of mixed composition. Caste-wise, the district fisheries are highly differentiated too, with eight major castes being represented. Only two of these castes have a tradition of marine fishing, with one other consisting of former inland fishers. The others lack a long-time historical connection to the fishing occupation and have moved in relatively recently. There is no evidence of castes or religious groups coinciding with, or controlling, larger geographical areas. Muslim villages are alternated with Christian or Hindu settlements, and the same is true for castes (Bavinck and Karunaharan 2006). Tables 9.3 and 9.4 present data on the contemporary religious and caste diversity of fishing settlements in Ramnad.

Evidence of the incidence of large-scale immigration into Ramnad fisheries is of three types: cartographic, statistical, and observational. Cartographic evidence derives from a comparison of contemporary information on the Ramnad shoreline with a detailed map of the district drawn by the Madras Survey in the year 1892. The commissioning of this map, which measures approximately 1.5 by 2 m and is kept in the British Library, paralleled the publication of the so-called Ramnad Manual – an elaborate inventory of the physical, social, and political layout of the region (Raja Ram Rao c. 1889), intended for the support of the colonial administration.

Table 9.5 Fishing population of Ramnad District in historical perspective (1957–2000)

	Census 1957	Census 1978	Census 2000 (corrected)
Number of settlements	45	79	141
Number of fishers	11,250		
Fishing population	30,304	40,152	117,291
Average pop/settlement	673	508	832

Source: Chacko et al. 1957; Director of Fisheries 1982; Department of Fisheries 2000; Bavinck and Karunaharan 2006

The 1892 map shows a smattering of approximately 65 hamlets within 1 km of the coastline, and a total of only six villages or towns with a population of over 2,000 people. Not all of these habitations will also have served fisher people, however. Some of them were obviously more related to salt production, coconut cultivation, religious pilgrimage, and coastal trade than to fishing. Raja Ram Rao (c. 1889, p. 12) makes a mention of a diverse and what can be interpreted as an ecologically rich fishery, but concludes that "the condition of the fishermen is not very encouraging; they are able to obtain only a hand to mouth livelihood."

Statistical evidence derives from census reports which the Fisheries Department of Tamil Nadu has composed at various points of time, the most important being the census figures of 1957, 1978, and 2000 (Table 9.5). The latter figures were corrected by Bavinck and Karunaharan (2006).

The first point to note is that the number of fishing settlements in 1957 is not very different from the number indicated by the 1892 map (Table 9.5). This suggests that, aside from natural population growth, the fishing population remained at relatively similar levels during the first half of the twentieth century. The next point, however, is the threefold increase in the number of fisher settlements that took place in the period 1957–2000. Bifurcation and resettlement of a section of the population is a regular process in the fishing villages of South India, which takes place in response to population growth, carrying capacity of local fishing grounds, and social and political frictions. Re-zoning of administrative units and more relaxed criteria for inclusion in the census constitute other reasons for an absolute increase of settlements, at least on paper. Together, however, these factors cannot explain the extreme increase in the rate of fishing settlements in Ramnad District, which is far higher than the average for Tamil Nadu in the same time period. Thus, Tamil Nadu counted 242 fishing villages in 1957, and 591 in 2000 – an increase of 240%. In Ramnad, the rate of increase was 310%, far above average.

Travels along the coastline point out another aspect of population growth: the geographical expansion of certain settlements over others.[4] Although in 1892, Ramnad District possessed only four towns – the district capital Ramnad, Keelakarai,

[4]Interestingly, this expansion has not resulted in a significant growth of the average size of the settlements in Ramnad (see Table 9.5). Instead, it seems as if expansion has been complemented by a process of administrative subdivision. At specific locations, I therefore observe a clustering of fisher settlements into smaller and larger towns.

Devipattinam, and Rameswaram – of some size, there is now a whole range of towns along the coastline. All these settlements have expanded primarily because of suitable fishing conditions.

9.5 Immigration and the State

A major impetus for immigration in Ramnad District clearly derived from the state. I have argued elsewhere that Article 19(1g) of the Constitution of the Republic of India has had significant effect on the fisheries of the country (Bavinck 2001a). This Article, which is a part of a set of provisions defining fundamental rights, defines the right of every citizen "to practice any profession, or to carry on any occupation, trade or business." Trawler fishers, who often have had a non-fishing background, have frequently invoked this Article to justify their participation in the profession, and also to question the government's right to impose restrictions on their business (Bavinck 2001a, p. 229). Indeed the government of India – which was striving to implement a blue revolution in the country – defended and furthered the rights of the trawl industry, such as by constructing fishing harbors and removing them from the control of traditional authorities (Thomson 1989; Bavinck 2001a).

Another clause in the same Article – Article 19(1e) – provides citizens with the fundamental right "to reside and settle in any part of the territory of India." The combination of these clauses legalizes professional migration, such as in fisheries. It is limited only by the possibility afforded to the state – Art. 19(5) – to impose "reasonable restrictions" on the above rights "either in the interests of the general public or for the protection of the interests of any Scheduled Tribe." The government of Tamil Nadu, which the Constitution has entrusted responsibility for inshore fisheries in a zone up to 12 NM from the shore, has made some use of this opportunity to impose restrictions especially on the trawl fisheries. Such action generally followed large protests by small-scale fishers.

The Tamil Nadu Marine Fishing Regulation Act of 1983 thus authorized the registration and licensing of trawl vessels, and imposed conditions hereto. Although this legislation has taken many years to be implemented, and is still flawed,[5] it is one of the state's more successful interventions in the fishing sector. More recently, the state government has also implemented registration and licensing for small-scale fisheries. This effort has been more successful in Ramnad District than in other parts of the state.

Registration and licensing provides the state government with instruments to control fishing activity in different ways, including time and space zoning. It has also provided the government with opportunities to address the negative effects of trawler migration, which was a regular phenomenon in the period between the 1960s and 1980s.

[5] In 2007, the Tamil Nadu government announced an effort to re-count and re-register trawler vessels in the state. This exercise was considered necessary in lieu of evidence of gross over-registration.

Thomson (1989) made a thorough study of a village fishing economy in southern Tamil Nadu, describing the way in which trawler fishers obtained landing rights in an area in which small-scale fishing previously dominated. He distinguishes three methods, which differ as to the actors involved and their geographical origins. Two of them are relevant for our topic. The first method centers on the state which creates "private shore rights" by evicting small-scale fishers from places where harbors and jetties are constructed (Thomson 1989, p. 125, 137). The state's legal stamp on these locations provided the trawler sector with a measure of independence vis-à-vis small-scale fisher settlements. Although firm evidence is still lacking, this mode has probably played a role in the growth of several trawler fishing centers of Ramnad District, such as Rameswaram, Mandapam, and Tondi.

The second method consisted of migrant trawl fishers making agreements with the leadership of host villages. In exchange for landing rights, the trawl fishers thus paid weekly taxes to the local village fund. Thomson (1989, p. 138) notes that such contracts were quite common, until small-scale fishers' opposition to trawl fisheries increased. In my own work on the Coromandel Coast, I have noted (Bavinck 2001a, pp. 218–220) that contracts of this type probably also existed in this geographical region in the early days of trawl fishing, terminating – as in Thomson's case – in the 1980s. It also seems to have played an important role in Ramnad District, with one major variation. Contrary to other coastal regions of Tamil Nadu, Ramnad District has a history of large landowners running coconut plantations in the coastal area. These plantations are private property (*paddaa* title). Several cases where migrant trawl fishers have bypassed objections of small-scale fishing settlements by making landing site arrangements with coconut plantation owners have come to my attention. In other cases, there are serious disputes over the land on which trawl fishers are settled.

9.6 Non-State Regulation of Immigration

Thomson's (1989) description of trawler fishers' second strategy for accessing rural landing sites leads to the question of local leadership: who are these "leaders" who negotiate with outsiders over fishing rights? And to what extent does their authority extend above the local, to supra-local levels? Studies in other parts of Tamil Nadu have demonstrated varying patterns of non-state authority connected to particular caste groups. My own work among Pattinavar fishers demonstrates the prevalence of strong village councils, called *panchayats*[6] along the Coromandel Coast (see also Bharathi 1999; Bavinck 2001a, b). These non-state organizations – which possess headmen called *chettiyar* or *naaddaar* – take charge of a variety of collective needs, such as the regulation of fishing. Their authority is based on notions of territorial

[6]These non-state institutions are found throughout rural India, and are to be distinguished from the Gram Panchayats instituted by the government of India as the lowest tier of administration and political representation.

rights to adjacent waters, and on a prerogative to control the fishing that occurs there. Panchayat control extends to the landing site and includes the right to regulate its use, such as through taxation on landed produce. As territorial rights of neighboring villages are contiguous, and one village's rights commence where another's end, the entire coastline is thus nominally under non-state panchayat control.

In addition to regulating space and access to resources, these village panchayats also exert control over people. A clear system of village membership defines which males are part of the community, and are charged with responsibilities and rights. This same system allows, such as in the case of marriage, for transfers of membership from one location to another. It also allows for migrant fishermen – such as in Thomson's (1989) case of trawl fishers seeking local access – to request permission for the use of village resources and facilities. In principle, therefore, the non-state panchayats along the Coromandel Coast have substantial power over population movement into village fisheries.

So-called *panchayat circles* (Mandelbaum 1970), which coordinate decision-making for larger groups of villages and stretches of coastline, were traditionally in charge of supra-local affairs along the Coromandel Coast. Although such circles have mostly largely fallen into disarray among the Pattinavar caste in this region in modern times, coordination mechanisms between villages are generally still in place. Studies of local fishing regulation demonstrate that adjacent villages, through processes of regular communication and imitation, frequently adopt similar measures (Bavinck 1996, 1998).

Fishers of the Mukkuvar caste in southern Tamil Nadu appear to have a very similar set of arrangements (Ram 1991; Sundar 1999; Subramanian 2009), but with one big difference: being Roman Catholic and not Hindu, the village council in that region has been replaced by a parish council, and the headman by a parish priest. For regulation at the supra-local level, the Church appears to provide the necessary organizational infrastructure.

A conspicuous similarity between the two regions mentioned above is that the fishing populations are dominated by single castes, and that the organizations that play important regulatory roles are, in an important sense, caste institutions. Mandelbaum (1970, pp. 269ff) describes the role of panchayats and their leaders in India as "maintaining the jati" (or caste) as a social grouping. Although his analysis concentrates on cultural and social aspects, and less on aspects of work and profession, he does point out (Mandelbaum 1970, p. 316) that caste members "commonly carry on joint enterprises; they usually work together to advance and defend the jati's status in its local order." This is reminiscent of Kraan's (Chap. 8) analysis of how ethnic groups in Ghana occupy, and defend, various technologically defined livelihood spaces in fisheries. It suggests that, in the context of the India fisheries, caste identity may under certain circumstances constitute a powerful rallying point against immigration of "outsiders." The circumstance that, in the northern and southern reaches of Tamil Nadu, single castes continue to dominate village fisheries, and immigration is limited, lends support to the hypothesis.

Although our information on the history of the fishing population in Ramnad is limited, written sources suggest that even in the late nineteenth century it already had a mixed composition. Raja Ram Rao (c. 1889, p. 12) notes that those actually

engaged in fishing at the time of writing were Muslims, Paravars, or other "low-caste Hindus" (without specification). Three decades later, descriptions provided by the Madras Fisheries Bureau (1916) of numerous landing centers along the coast confirm the impression of social diversity. Since that time, variation appears only to have increased. As pointed out in Tables 9.3 and 9.4, not only are many settlements of different religious and caste composition in Ramnad interspersed, almost a third of all fishing settlements are internally mixed.

A study of six fisher settlements in different parts of Ramnad District (Bavinck and Karunaharan 2006) pointed out that although every site has some form of non-state organization for the regulation of fishing, these institutions are generally not as comprehensive or as powerful as in other parts of the state. Moreover, these authors argue that "the many social differences (religion and caste) that prevail in the district, and the many differences in fishing style […] prevent the easy translation of local law into regional law. Each village tends to have its own arrangements" (Bavinck and Karunaharan 2006, pp. 47–48). Other than in the north and south of Tamil Nadu, control over entry into fishing is therefore relatively weak, both at the local and the supra-local levels. Immigrants – single or in groups – thus have a greater number of potential entry points, and tend to face less effective opposition to their participation in fishing.

9.7 Are Migrants Poorer Than Non-Migrants?

One important question, which brings the argument of this chapter full circle, remains: are immigrant fishers poorer than people with hereditary connections to the profession? The evidence from Tamil Nadu is ambiguous. I noted earlier that the blue revolution provided opportunities for outside investors to partake in trawler fishing, and that these people belong to the current fishing elite. On the other hand, many of the laborers employed in and around the trawler fishery also derive from outside the sector, and, as Salagrama (2006) points out, many of them can clearly be categorized as poor. Within the urbanized trawl fishery, a case therefore seems to be made for connecting immigration and poverty (but also, at a numerically smaller scale level, for linking immigration with riches).

For rural, small-scale fisheries, which generate lower net incomes per unit of effort than the trawl fishery does, and therefore generally make up a lower economic level, the evidence is less clear. Fieldwork in Ramnad District does suggest that recent immigrants into the fishery possess fewer fishing skills and less financial capital, and tend to congregate in simpler fishing métiers such as crab fishing and squid jigging. This might result in lesser income levels. Added to this is the fact that older fishing communities sometimes succeed in marginalizing newcomers, for example, by denying them rights to housing program, piped water, and electricity. However, the extent to which this has taken place, and the consequences for well-being, are yet to be studied. The same holds true for the question as to whether immigrant fishing has significantly increased competition on the fishing grounds, as well as in the market, and what the consequences hereof have been for the poverty level of old-time fishers.

9.8 Conclusions

The main argument of this chapter has been that, even if one is mainly interested in the phenomenon of poverty in fisheries in India, it is worthwhile paying attention to the enormous wealth that fisheries have come to represent. Processes of industrialization and globalization, which have enveloped and driven fisheries in the course of the past century, have contributed to a steep rise in catch levels, economic returns, and fisher well-being. This has resulted not only in retention of employment in fisheries, but in demographic growth levels which suggest that there has been a significant movement into the sector.

To argue that fisheries in India is synonymous with poverty therefore amounts to a misrepresentation of the facts. This does not mean to say, however, that no hardship is to be found in the fisheries. Rather, I argue that whatever poverty exists is connected, directly or indirectly, to the ongoing process of wealth generation. By widening the scope to include riches, attention is redirected toward processes of social mobility on the one hand and exclusion on the other.

This chapter has paid special attention to processes of immigration into fisheries, emphasizing the fact that the institutional landscape that facilitates or hinders migration varies from region to region. While some geographical regions and hotspots have been characterized by high migration rates into fisheries, both at the bottom and the top of the economic hierarchy, this process is less pronounced in other regions. Ramnad District is a good example of a coastal area in which, over the past century, there has been very significant movement from the agricultural hinterland into both the rural and the urban fisheries. I argue that immigration in this case was facilitated by a relative lack of institutional defenses among the existing fishing population, which in turn relates to social heterogeneity and a limited capacity for collective action. It was also furthered by governmental action, which broke down existing social barriers and created new fishing sectors. Finally, I noted that there are linkages between immigration and the poorer parts of the fishery, with immigrants frequently collecting in less fortunate locations.

At a general level, my analysis confirms the argument made by Midré and Jentoft (Chap. 4) that poverty in fisheries is not an independent but rather a relational phenomenon – it is about how people, as individuals and in groups or categories, associate with one another within the dynamic framework of the larger economy. This viewpoint has important implications for the research agenda on poverty. As Harriss (2007, p. 10) points out:

> Instead of subjecting international poverty research to attempts to refine measurement and to test hypotheses for establishing predictive theory, it will be more productive to redirect greater attention to the analysis of the social processes, structures and relationships that give rise to poverty, recognizing that the creation and re-creation of poverty is inherent within the dynamics of capitalism.

Institutions are known to play an important role in creating, guiding, or reinforcing "social processes, structures and relationships" (cf. North 1990; Jentoft 2004; Bromley 2006). It is therefore reasonable to assume that, in the context of the wealth

generated by a century of industrialization and globalization in the world's fisheries (Eide, Bavinck and Raakjær, Chap. 2), institutions also exert great influence on the state and distribution of riches and poverty. This chapter has demonstrated, however, that such institutions are often far from coherent. Instead, one frequently finds institutional arrangements that differ from region to region, displaying contradictions and gaps, and possessing varying levels of effectiveness (Von Benda-Beckmann 2002). In many cases, such arrangements are characterized by legal pluralism. It is to the dynamics of such legal pluralist frameworks that, if we want to know more about poverty in fisheries, more attention is to be devoted.

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