



# Legal pluralism, governance, and the dynamics of seafood supply chains—explorations from South Asia

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## Abstract

This paper investigates the interface between scholarship on seafood supply chains and the fields of legal pluralism and governance studies. This particular interface has largely been explored with regard to global supply chains, and it is to broadening this perspective that the paper is devoted. Five case studies from South Asia—ranging from low-price sardines destined for local markets to high-value tuna for export—provide the material for comparison. These five supply chains vary in length, age, volume and value, visibility, and governance styles, with governance emerging not only from within the chains but also from their socio-legal environments. Legal pluralism characterizes all of them, with complexities generally increasing not only according to the chain's length but also according to the engagement of actors affiliated to alternative legal systems. Customary law emanating from non-state authorities is demonstrated to play an important role, alternatively weaving together with regulations from governments, as well as private sources. Whereas conflict characterizes some chains, others possess long histories of socio-legal accommodation.

**Keywords** Seafood · Supply chain · Legal pluralism · Governance · South Asia · Marine fisheries

## Introduction

Walking the beaches and fishing harbors of South Asia, as I have done regularly in the past two and a half decades, I am first of all struck by the variety of fish species<sup>1</sup> that fishers bring ashore. This variety is reflective of the diversity of tropical marine ecosystems, the non-specificity of fishing gears, and also of the varied demand of consumer markets. Although a small percentage of fish species is considered unfit for consumption and therefore discarded, the majority of species that is landed finds its way, via supply chains, to consumers/end-users in various geographical locations—local, national, or international.<sup>2</sup> These supply chains are obviously of differing

length and frequently cross socio-legal boundaries, thereby being affected by a variety of law (taken in its broad, socio-legal sense). Importantly, the fish that moves through these supply chains changes hands multiple times; it is only in the most simple of chains that a fisher supplies a consumer directly. The multiple “hands,” belonging to traders, processors, and transporters constitute the links or nodes in the host of supply chains that move inland from the coast.

In the course of my studies, I have also been struck by the fractured nature of the socio-legal environment of fisheries in South Asia. While state agencies have clearly gained force in the decades since Independence and implement a variety of—sometimes contradictory—rules for organizing the fisheries, non-state agencies, often rooted in pre-colonial formations, continue to play a strong role. I have generally investigated the multiplicity of law in fisheries from the perspective of legal pluralism. This school of thought is interested in the encounters that occur between rules and norms deriving from different legal systems and in the way that they are handled by commoners and authorities alike.

More recently, often joining up with Svein Jentoft and others, I have integrated my legal pluralism interest with one in governance, simply defined as the whole of interactions taken to solve societal problems and create societal

<sup>1</sup> In this paper, I use the term “fish” to cover all living marine species extracted from the ocean for purposes of human usage, despite the fact that some species are not taxonomically defined as such and are also not necessarily consumed as food.

<sup>2</sup> Seafood is reportedly one of the most traded food commodities in the world (Food and Agriculture Organization 2016).

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opportunities (Kooiman 2003). It will be clear that law plays an important role in governance efforts, and thus that authorities charged with governance make use of rules to provide direction. In situations of legal pluralism, one therefore can also expect to find “governance pluralism,” suggesting that it is not only the field of law that is fractured but also that of governance as a whole (Zips and Weilenmann 2011). The social field in question is thus characterized by multiple authorities exerting power and implementing rules for appropriate behavior. In such legal pluralism–related governance studies, the main enquiry concerns the encounters between pluralizing parts. For those concerned with enhancing the unity of governance, attention also goes to the institutions that might actually make this possible (Jentoft et al. 2009; Jentoft and Bavinck 2014; Parlee and Wiber 2014).

This paper attempts to link the above two observations and investigates the consequences of legal pluralism for the functioning of fish supply chains. Supply chains have recently become an important field of study. The paper asks, first of all, whether all fish chains are affected by legal pluralism. Secondly, assuming that legal pluralism is potentially a divisive force, it enquires how the chains that are so affected actually stay together. How do legally plural elements in value chains combine?

“Theoretical framing” section provides a theoretical reflection on issues of legal pluralism, governance, and supply chains. The next section (Examples of South Asian fish supply chains) includes case studies of a selection of contemporary chains in the South Asian setting and a digression on their legal/governance content. “Discussion” section wraps up the paper and provides directions for further research.

The ethnographic fieldwork on which the case studies are based was conducted along the southeast coast of India, in the state of Tamil Nadu, at various points of time in the period 1994 to present. Research methodology has consisted of participant observation, interviews, surveys, and the study of secondary sources, with an emphasis on the shoreline-side of fish supply chains.<sup>3</sup> Research methodology thus differs from what Gereffi and Fernandez-Stark (2016) suggests is the most appropriate: “In practice, governance analysis requires identification of the lead firms in the sector, their location, how they interact with their supply base and their source of influence and power over them (e.g. standards compliance)” (2016:10). Such lead firms, if any, will frequently be far removed from the coast, and therefore generally not part of my research effort. This paper therefore represents no more than a first attempt to deal with the topic.

<sup>3</sup> For more information on research methodology, see Bavinck (2001) plus his other publications included in the reference list.

## Theoretical framing

The literature on supply chains is large and varied, with alternative terms—such as commodity chain, value chain, or traceability chain—being coined for essentially the same phenomenon. Gereffi and Fernandez-Stark (2016) provide the following simple definition: “A chain represents the entire input-output process that brings a product or service from initial conception to the consumer’s hands” (2016:8). Scholarship suggests that agro-food chains, which include fish, possess other characteristics than, for example industrial products. Thus, Trienekens et al. (2012) point to the following features of agro-food products that influence the functioning and thus the governance of their chains: (1) unpredictable supply due to seasonal variations, (2) quality variation between producers and food products, and (3) perishability of products.

Gereffi—who plays a key role in the Global Value Chain literature—has studied “how a chain is controlled and coordinated when certain actors in the chain have more power than others” (Gereffi and Fernandez-Stark 2016:10). His distinction between buyer- and producer-driven chains remains relevant, as is his typology of intra-chain governance relations (Gereffi et al. 2005) that differ according to the extent that they are “integrated” and lower-level actors possess freedom to switch to other buyers. The dominance of so-called lead firms is therefore a core feature of his approach. The four most relevant types in his schema are:<sup>4</sup> (1) market governance, in which there is little to no cooperation between actors and price is the determining factor; (2) relational governance, in which there are mutual reliance and social ties, lead firms “still specify what is needed, and thus have the ability to exert some level of control over suppliers” (Gereffi and Fernandez-Stark 2016:11); (3) captive governance, whereby small suppliers are dependent on one or on a few buyers that often wield a great deal of power; and (4) hierarchical governance, where “chains characterized by vertical integration and managerial control with lead firms that develop and manufacture products in-house” (ibid.).

Gereffi and co-authors clearly locate governance within and not only external to the chain. This position correlates with the one taken by the legal pluralist scholar Turner (2016) in his seminal analysis of legal pluralism in supply chains. In this paper, he pleads for a distinction between “chain normativity,” or the socio-legal repertoires that are joined in the formation of specific supply chains, and the “plural legal environment” in which these chains are embedded. From this perspective, law and governance are exerted both from within and from outside the supply chain, creating “normative entanglements” (ibid.) and “tangled hierarchies” (Jessop 1995, in Parlee and Wiber 2011).

<sup>4</sup> I leave out “modular governance” which applies more to industrial than to food products.

The fisheries governance literature has sometimes taken a different position. Interactive governance writings have thus tended to locate fish chains in the so-called system-to-be-governed, whereas governance, and law, is positioned in the governing system. The best example of this is the *Fish for Life* book (Kooiman et al. 2005), in which the chain and the governance set-up are clearly separated. The drawback of this choice is that insufficient attention has perhaps been given to governance activities that occur *within* fish chains. But the tendency to categorize fish chains as separate from governance is not essential to Kooiman's original (2003) approach. In fact, Kooiman has repeatedly emphasized that his framework provides heuristic tools rather than fixed classifications, and that alternative formulations are possible, depending on the specific question to be answered. In the case of supply chain governance, it makes sense to follow the approach outlined above: to situate law, governance, and power both within and outside the chain.<sup>5</sup>

Having summarized my understanding of supply chains, I now turn to the broader topic of legal pluralism, which is argued to constitute both the body and the environment of seafood supply chains. Here, building on Weber (Rheinstein 1954), a body of norms and rules is termed “law”: “if it is externally guaranteed by the probability that coercion [...] will be applied by a staff of people holding themselves specially ready for that purpose” (ibid.: 5). Legal pluralism then is the condition whereby different—formal and informal—legal systems or parts thereof are applied to identical situations (Vanderlinden 1972; cf. Von Benda-Beckmann 2002), thereby coming into contact. In the field of natural resource usage, such as fisheries, legal pluralism analysis has hitherto been used for understanding the origins of fishing conflict (Bavinck 2001, 2005; Bavinck et al. 2013; Karnad 2017), institutional incompatibility (Wiber and Kearney 1996), dispute resolution (Wylie 1989), and, only recently, supply chain dynamics (Parlee and Wiber 2011, 2015). The understanding that emerges from the latter literature is that, in cases where the socio-legal body and/or environment of supply chains are normatively fractured, this too will modify their functioning.

Bavinck and Gupta (2014) emphasize that legal pluralism is “a key challenge of governance architecture” and “can affect the quality of governance” (ibid.: 78). They suggest that legal pluralism can impact governance in different ways: by creating incoherence in the substance and the procedure of law; by affecting the definition of property rights, which then become the focus of struggle; by setting a competitive process in motion; and, finally, by directing human behavior in various directions. Building on earlier work in the field of institutional studies (Helmke and Levitsky 2003) as well as in fisheries (Jentoft et al. 2009; Bavinck et al. 2013), these authors create

a matrix with four relational ideal types between legal systems. Type 1 in this typology consists of indifference, with lead actors in legal systems barely being aware of each other's existence; type 2 provides for conflict; type 3 suggests accommodation; while type 4 includes mutual support.

The above typology has recently been adjusted to include attention for power differentials (Jentoft and Bavinck 2014), which is anyhow an important topic in legal pluralism scholarship (e.g., Von Benda-Beckmann et al. 2009). Jentoft and Bavinck (2014:75ff) frame this in terms of symmetry and asymmetry between legal systems and distinguish two forms thereof. The first of these concerns the extent of “substantial coherence” between legal systems, at the level of values, norms and principles (the meta-order), institutions (the second-order), and the action or tools (first-order). The second concerns the power struggles that may occur between legal systems and the people that adhere to them. Asymmetry of both kinds is argued to influence the course of events, such as in fish chains, and thereby their governability. But such asymmetries are argued not to be “written in stone,” with harmonization thus to be fostered.

The Bavinck and Gupta (2014) typology has also been criticized for not providing the right set of tools for analyzing “the social meaning of legal plurality in the life-worlds of people” (Roth 2014:89).<sup>6</sup> The present paper is interested in understanding whether the typology is relevant to the analysis of legal pluralist encounters within and with regard to supply chains. I return to this question in the “Discussion” section below, after first presenting five cases from India.

## Examples of South Asian fish supply chains

In the following pages, I introduce five—incomplete—fish chains from the coastline of Tamil Nadu, India, which were encountered in the course of my research.<sup>7</sup> They are incomplete in the sense that I have come across these chains during my work along the coastline, and generally have a better understanding of their workings on the beach—than inland. These five chains vary according to their dates of origin (from pre-colonial times to the present), their volumes and monetary values, their visibility, as well as their geographical ranges—from local to national and international. The last category consists of what is commonly known as Global Value Chains—the dominant type in current supply chain research. I highlight chain dynamics, also including one example of what could be called an “interrupted chain.”

<sup>5</sup> Jentoft (2007), who has made a study of the role of power in the process of interactive governance, would most likely agree.

<sup>6</sup> The latter is of course a legitimate endeavor, resulting in fine-tuned analyses of interlegality (Simon Thomas 2013), forum-shopping (von Benda-Beckmann 1981), and socio-legal “repertoires” used for mobilizing law in “real-life social processes” (Roth 2014:2).

<sup>7</sup> These examples also figured in an earlier publication (Bavinck and Kooiman 2013), where they were subjected to a different form of analysis.

Finally, I trace the contours of legal pluralism affecting these chains. Table 1 provides an overview of the five cases and their characteristics.

Besides dividing supply chains according to destination and value, Table 1 provides an indication of when these supply chains arose according to three time slots: the pre-colonial era; the 1960s (coinciding with the Blue Revolution in fisheries), and the post-1990s (coinciding with the era of economic liberalization in India). It comes as no surprise that my international fish chains all have a relatively recent origin—this relates to the recent acceleration of globalization processes and India's position therein. The table also contains two vacant cells: although the local fish market does deal with higher value species; such chains have been left aside for reasons of brevity. The non-inclusion of low-value species for the international market on the other hand is reflective of the nature of fish flows from India, which still tend to concentrate on high value species.

**Case 1: Interrupted international chain** The marine species involved in this chain consists of a variety of sea snail (taxonomic class *Gastropoda*) inhabiting the inshore seabed of the Coromandel Coast. In the mid-1990s, local fish merchants introduced a simple hoop net to the small-scale fisheries of the Coromandel Coast in Tamil Nadu for gathering sea snails (Bavinck 1996, 1998, 2014), providing them for free to fishers willing to put them to use, and offering them a reasonable price per kilo. This *métier* required few fishing skills and could be carried out by small inshore fishing units. Produce was shipped to markets in the Middle East, thereby integrating the *métier* into a global value chain. Many of the region's fishers, however, protested against the use of the net, arguing that it interfered with the marine food web and would contribute to resource depletion. Moreover, it was argued to be socially unfair (Bavinck and Karunaharan 2006). The operation of this fishery thereby became a prime governance issue at the fisher level. A series of fisher councils, locally known as *ur panchayat*, that constitute the hub of customary law along this coastline (Bavinck 2001) prohibited the use of the net in their waters, while other councils refused to interfere. This resulted in conflicts between fishing villages, which could only be solved through decisive action of the Tamil Nadu Fisheries Department in combination with the police (Bavinck 1998, 2014). While the Fisheries Department, which is the governmental agency authorized by the Tamil Nadu Fisheries Regulation Act (1984) to regulate fishing gear, in this case, joining hands with the police, it took a law and order approach, supporting the viewpoint of the dominant fisher group, which wanted to prohibit this particular fishery, but not formulating any legislation of its own. As a result of this one-off combination of regulatory efforts from different sources, the sea snail fishery, and this supply chain, did not develop in a major way, except in a few landing centers where *ur panchayat* control is relatively weak (Bavinck 2014).

Legal pluralist dynamics thus interfered in an early phase of this supply chain, motivated by concerns over ecological and social sustainability (Parlee and Wiber 2015). Local merchants had probably aimed to establish a form of “captive governance” of the chain by providing gear in exchange for produce, but backed off because of fisher action.

**Case 2: Expanding national chain of sardine (genus: *Sardinella*)** This supply chain centers on various sub-species of sardines, which are traditionally a mainstay of the small-scale fishing sector along the east coast of India (Bavinck 2001, 94ff). There are two variations. Case 2(a) concerns a local supply chain. In the 1990s, most fishing households in the Coromandel Coast region had invested in sardine nets (Tamil: *sudaivalai*) and were operating them throughout the year. Although pelagic species such as sardines have a large geographical range and a seasonal availability, the human dimensions of the fish chain at this time were generally short and straightforward: fisher women or small traders generally sold fresh sardines to consumers on the local market at relatively low prices.<sup>8</sup> The sardine fishery therefore played a key role in the food security of the local agricultural and urban population. No urgent resource problems manifested themselves at the time, and the coordination issues that did arise were generally solved by individual market actors. Nevertheless, *ur panchayats* kept watch over the fairness of the village auctions in which fishers sold their catches. With limited economic interests and well-established procedures, governance activity was typically low key, dominated by fisher councils, and of Gereffi's market type. With sardine fisheries not connecting to state priorities of any kind, governmental authorities played no role in this supply chain. Legal pluralism interactions thereby fit best in Bavinck and Gupta's type 1 (indifference).

By 2017, in response to innovations in technology and fresh fish markets, the scene had changed, however. This leads us to case 2(b). While individual small-scale fishers continue to provide local markets with sardines, their catches have gone down due to the operation of newly introduced ring/purse seine units. The ring/purse seine fishery was brought to the east coast of Tamil Nadu from the neighboring state of Kerala around the year 2000 and has gradually been moving up the coast. Operated by collectives of small-scale fishers bundling assets and labor power, but also invested in by fisher elites, these units target schools of sardine and other schooling fish, landing large quantities at any one time. These landings are generally procured by large merchants who ship them to cities across the country (but mainly to Kerala), as well as abroad.

<sup>8</sup> A proportion of bulk sardine catches was dried and found its way into long-distance trade channels. The dry fish trade has deep historical roots (see Reeves et al. 2014); the DryFishMatters project, funded by the Canadian Social Science Research Council, is investigating its current relevance.



**Table 1** Characteristics of five fish supply chains in Tamil Nadu, India

	Description	Species	Value	Range of chain	Date of origin
Case 1	Interrupted chain	Sea snail	High	International	Post-1990s
Case 2a	Expanding chain (a)	Sardine	Low	Local	Pre-colonial era
Case 2b	Expanding chain (b)	Sardine	Low	National	1960s
Case 3	Historical niche chain	Chank	High	National	Pre-colonial era
Case 4	Established global chain	Shrimp	High	International	1960s
Case 5	Upcoming global chain	Tuna	High	International	Post-1990s

Although a substantial portion of these catches serve low-income consumers, another segment is actually being channeled to fish meal plants and ends up in the upcoming poultry and aquaculture industry. With these large merchants, or their local agents, as well as local auctioneers, providing credit for the purchase of relatively expensive ring/purse seine fishing gear, fishers are “tied” into certain marketing channels at the local level. The subsequent movement of fish to various national market centers seems to take place largely on the basis of the market or the relational modes of governance (personal information K. Subramaniam) and is barely subjected to regulation.

Similar to the case of sea snail nets (case 1 above), ring/purse seine technology is highly contested along the Coromandel Coast, with many *ur panchayats* actively opposing the use of the gear on the ground of ecological depletion as well as social unfairness. Making use of their range of control instruments, with excommunication from the community as the ultimate sanction, these *panchayats* prohibit their village fishers from applying the gear and have also put collective pressure on the state government to ban this kind of fishing. The government of Tamil Nadu initially complied and issued a notification (GO 40, Animal Husbandry and Fisheries Department, date 25 March 2000) completely prohibiting the use of ring/purse seines. It makes no effort to implement the law, however, with as ironic consequence that fishing harbors like Cuddalore, which I have studied in some detail, now possess a large fleet of illegal ring/purse seining vessels that regularly leave port for fishing. Here again, the main challenge posed to the fish supply chain is located in the harvesting phase. In addition, however, there is a social movement of consumers in Kerala who, relying greatly on sardines for consumption, decry the transfer of catches to fish meal plants and demand government action in order to protect consumer interests (personal information S. Saleem). In this case, legal pluralism has been reflected in conflicts at the level of fishers and consumers, as well as between customary and governmental authorities. These spread up and down the chain, affecting its performance.

**Case 3: Historical niche chain centering on chank (species: *Turbinella pyrum*)** The chank fishery of the Gulf of Mannar dates back to pre-colonial times (Hornell 1914), and is linked

to North Indian ornamental, religious, and other markets (Sen and Sinha 1965:37). Due to its crucial role in Hindu ritual, it is also known as “sacred chank” (Lipton et al. 2013). According to Sen and Sinha (1965), who conducted field research on the processing of chanks in West Bengal in 1961, “Conch [chank] shells are procured by merchants of Calcutta [Kolkata] from Madras [Chennai] through Madras agents and sold to the village artisans” (ibid.:37). The main dynamic in this fishery appears to be market demand.

This fish chain requires governance of a stable kind, primarily directed at curbing fishing effort within ecological limits. In parallel to the pearl fishery that took place along this coast, the colonial and then the Tamil Nadu government regulated the profession and monopolized the trade until the 1980s. Now, although divers continue to be licensed, they are free to sell their produce to the highest bidder (Sridhar 2018). The diving technology is still extremely simple, however, with divers operating from small boats with only a mask and a pair of flippers. Although there have been attempts to introduce scuba diving equipment, *ur panchayats* are prohibiting the use thereof (van Haastrecht and Schaap 2003).

The chank supply chain thus has an old history of strict governmental regulation that is supported by the *ur panchayats* in an instance of mutual support (Bavinck and Gupta type 4). Although *ur panchayats* play an additional role in curbing technical innovation, in recent years, market actors appear to have gained traction in the supply chain. The precise nature of governance within the supply chain requires further study, however.

**Case 4: High volume/high value chain focusing on shrimp (family: *Penaeidae*, including species *Fenneropenaeus indicus*)** The shrimp fishery of India is an example of high dynamics, precipitated by a sudden integration, from the 1960s onwards, into a high-value, international market (Kurien 1978) with an almost insatiable demand. Although small-scale fishers target shrimp too, the very substantial fleet of small trawlers—that was initiated by government during the onset of the Blue Revolution<sup>9</sup>—is the main supplier. The

<sup>9</sup> In recent years, the same term has been applied to the development of aquaculture, with authors apparently unaware of the fact that it had previously been used to describe the transformation of capture fisheries.

trawl fishery of India now counts almost 30,000 craft (CMFRI 2007) and still focuses largely on shrimp. The movement of trawler fleets from one Indian state to another has caused significant social tensions, as has their incursion into the fishing grounds of small-scale fisher populations (Bavinck 2001; Scholtens et al. 2012). These dynamics are additionally impacted by rising fuel prices as well as competition from the aquaculture sector. Governmental authorities have been exerting influence on the shrimp fisheries through subsidies on fuel and craft, as well as through state-wise bodies of fisheries regulation, such as the Tamil Nadu Marine Fisheries Regulation Act of 1983. But fisher bodies too influence the shrimp fisheries. *Ur panchayats* have thus desperately tried to limit trawl fishing in inshore waters, while also regulating the use of, for example trammel nets (Bavinck and Karunaharan 2006). Trawl owner associations, on the other hand, have strived to keep inshore fishing grounds open for their operations (Bavinck 2001).

From the time of landing, shrimp supply chains diverge from other fish chains, with a separate category of merchants, frequently linked to one of many export houses, taking charge. With exports to the European Union, but also to other international markets, being carefully monitored as to food safety, the processing industry in India is becoming ever more tightly regulated and licensed. Although integrated shrimp supply chains, running from harvest to export, have been attempted in India, lead export firms now generally focus on the trade chain itself, with various forms of governance—market, relational, and captive—being applied. International buyers establish relational or market governance connections with export houses.

Legal pluralism here is characterized by strong conflict between customary and governmental authorities over fishing rights, a struggle won by the newly established category of trawler fishers. The supply chain is now also infused by a web of regulations emanating from foreign seafood importers (and their governments), as well as by standards imposed by national agencies and private parties.

**Case 5: Upcoming global supply chain focusing on tuna (tribe: *Thunnini*, including yellowfin and skipjack)** The recently formulated “National Policy on Marine Fisheries” (2017) provides an indication of the direction in which the government of India would like its fisheries to proceed. After concluding that “the fisheries resources from the near-shore waters are fully utilized,” it suggests that “the deep sea and oceanic waters offer opportunities of increasing the catch” (Government of India 2017:14). One page down, it states

that “In terms of revenue, some of the high value species like tuna [...] are yet to be optimally harvested” (ibid.: 15).

In fact, tuna fisheries have been in the cards for two decades already. While I was doing my first fieldwork in Chennai in the mid-1990s, a small fleet of tuna longliners, leased from Japan by a Calcutta-based Indian company, had anchored there, much to the dismay of the local boat owner association (Bavinck 2001:249ff). Its discontent resulted in a demonstration against the government’s deep-sea policy in general, and against these longliners in particular, which contributed eventually both to a revision of governmental policy<sup>10</sup> as well as to the departure of this small fleet from Chennai.

Two decades later, in 2017, the government of India has made a new attempt to launch an indigenous, capital-intensive tuna fishery, linking this initiative to the resolution of the long-drawn fishing conflicts between trawler fishers from Tamil Nadu and the small-scale fishers of Sri Lanka (Scholtens et al. 2012). This time, the effort is focused on converting the trawl fishing vessels now plying Sri Lankan waters into tuna longliners that would take to the deep sea. Whether this program will be successful is still to be seen. It is clear, however, that governmental authorities view the deep-sea tuna fisheries as an important new opportunity to link up with high value international markets, particularly in Japan. To do so successfully, however, requires large investments in post-harvest facilities, as the quality standards of high-value tuna are necessarily strict. As it is now, the Indian fishing fleet (both large-scale and small-scale) does land tuna, but often of sub-optimal quality (John and Pillai 2009).

The global value chain of tuna is very well regulated. Not only has substantial effort been put into the regulation of the deep-sea fisheries itself, through intergovernmental organizations such as the Indian Ocean Tuna Commission, such organizations have also fostered a regulatory framework to which signatories, such as the government of India, are tied. IUU-fishing is an important concern, and rules to limit bycatch are implemented. Certification is an increasingly important practice exercising influence on tuna chain governance (Miller and Bush 2015).

Contrary to the sardine fishery discussed in case 3, the tuna fishery chain is long, of high monetary value, and extremely intricate. The governance challenges are diffuse and of a serious nature. On the one hand, international agencies are pushing for a management regime that prevents overfishing of tuna stock. On the other, agencies at various scale levels keep watch over hygiene, food quality, and sustainability. At the local level, boat owner associations are making their own decisions on which fishers are allowed to make use of harbor and market facilities (cf. Bavinck et al. 2015). Coordination of governance effort between actors is an important concern.

<sup>10</sup> The National Forum of Fishworkers (NFF) had launched a nation-wide campaign (the Campaign Against Joint Ventures) against the Indian government’s new policy to allow joint ventures between Indian and foreign firms in fishing. It ultimately resulted in the government’s revoking of the joint venture policy.

**Table 2** Role of legal systems in regulating fish supply chains India

	Case 1 (sea snail)	Case 2 (sardine)	Case 3 (chank)	Case 4 (shrimp)	Case 5 (tuna)
Customary law	2	2	2	2	2
State law	2	1	2	2	2
International law	0	0	0	2	2
Private law	0	0	0	1	2

0 = no involvement; 1 = weak involvement; 2 = strong involvement

## Discussion

The five case studies discussed in “Examples of South Asian fish supply chains” section are rich and diverse, each additionally concealing a range of variations according to time and place. Table 1 presents an overview of the chains’ varying dates of origin, volumes and monetary values, as well as their geographical expanse, ranging from local to national and international. It will be clear that whereas some supply chains enjoy high visibility (especially tuna and shrimp), others function in ways that are hidden to most observers. Finally, the case studies bring out the dynamics occurring in value chains over time, with some being nipped in the bud (case 1), and others expanding their geographical ranges and volumes over time (cases 2 and 4). While one case (case 3) enjoys a long and relatively stable historical trajectory, the final case (case 5) has come about quite recently in response to high international market demand. The dynamic nature of seafood value chains over time is also highlighted by Parlee and Wiber (2011), who, in their study of the Atlantic Canadian lobster supply chain, note that “diverse actors, including food retail corporations, environmentalists and lobster fishers, were (re)constructing scalar relations by working in new ways” (ibid.: 138).

Although more research is required on the topic of seafood intra-chain governance, the role of Gereffi’s et al. (2005) lead firms in controlling supply chains appears to differ from one case to another. Thus, it would seem that the strongest measure of control takes place in the export-driven supply chains (cases 4 and 5), which are demand-driven and in which a large number of regulatory actors play a role. In the local chains, such as chain 2, transactions are more often market-based or relational. Unlike the case of Norway, in which producer organizers have come to play a determining role in supply chains (Jentoft and Finstad 2018), and dissimilar from the lobster fishers of Atlantic Canada who initiated their own traceability chain (Parlee and Wiber 2011); harvesters in India have limited influence on chain dynamics.

But it is clear from all cases that governance of the fish supply chains derives not only from within the chain but also from the outside too. The case studies thus point out the relevance of “customary law”: the legal systems devised by fishing populations over time for the purpose of ensuring community wellbeing (Bavinck and Vivekanandan 2017). Customary

law continues to play an important role in many fisheries, including those of Tamil Nadu, India. I noted above how fishing communities use customary law to regulate the use of new fishing technology, as well as local markets, thereby influencing, and in one case even interrupting, the performance of fish supply chains.

Governmental and private authorities also play a role. Thus, Sathiadhas et al. (2012) divide influences on export-driven seafood supply chains in India into tariff and non-tariff measures. Tariff measures relate to import duties charged by fish-importing countries on seafood from India. These necessarily affect the direction of fish flows. Non-tariff measures are grouped into several categories: sanitary and phytosanitary measures (SPS), related to food safety; technical barriers to trade (TBT), such as labelling or testing procedures; anti-dumping measures, such as applied by the USA in 2003 to shrimp from India; subsidies given to fisheries; and ecolabeling and certification of seafood products. All these law-like measures emanate from different sources of authority: governmental agencies, international bodies such as the World Trade Organization (WTO), international agreements endorsed by national governments, and private bodies—such as the Marine Stewardship Council (MSC)—involved in certification and labeling. The complex of these regulatory forces, which are anchored in different legal systems, when applied to the seafood supply chains in question, can profitably be viewed as “entanglements.” Importantly, whatever complications may ensue, these entanglements generally do not prevent the chains from functioning: they continue, on a daily basis, to move seafood from diverse landing sites to consumer plates.

The crucial question in our analysis relates to the manner in which legal pluralist constellations affect the performance of fish supply chains. As a first step in this analysis, Table 2 reviews the extent to which four types of law affect the five cases in question.

Table 2 suggests that in each of the five case studies, at least two types/levels of law, according to their place of origin, play a role. It is only in two cases that all four types/levels exercise influence, either from within or from outside the chain. In three cases, in which the chains are limited to local or national markets, international law plays no role of importance whatsoever.

Customary law plays an important part in all cases, mainly with regard to the regulation of the harvesting process, and thus the delivery of catches to the post-harvest sector. Customary law also exercises a role in the mode of first sale but loses influence as products move up the chain and away from the coast. State law is most pervasive in the high value supply chains, such as for chank, shrimp, and tuna, linking up with international law as far as it concerns the meeting of international standards. International law plays a role particularly with regard to global supply chains, in which it exerts power through its control of consumer markets. Private law is most pervasive in fish chains in which certification or labeling takes place.

## Conclusions

This paper has attempted an investigation of the role of legal pluralism in the governance of fish supply chains, making use of five examples from Tamil Nadu, India. Following the lead of Turner (2016) and other authors, I distinguished intra-chain governance from the governance exerted by the larger socio-legal environment, such as by state authorities and informal village councils. Legal pluralist encounters were highlighted as a defining feature in both realms. However, the paper noted that with the length of chains comes greater legal pluralist interferences. International supply chains, otherwise known as global value chains, combine the largest number of legal influences. Such chains are most likely to be demand-driven and strongly controlled, thus belonging to the upper range of Gereffi's et al. (2005) typology. Local supply chains of low-value seafood enjoy the least number of socio-legal influences and reside in the lower ranges of Gereffi's typology.

Aside from the governance control that occurs from within fish supply chains, I noted the importance of the legally plural environment, which consists of different kinds of law arising from manifold sources and scale levels. The encounters that occur here resemble those described by Parlee and Wiber (2011) and Turner (2016). My case material was best suited for distinguishing the influence of customary, fisher law on the emergence, demise, and performance of fish supply chains. However, the material was also sufficient to also point out the contours of state, international and private laws as they contribute to shaping the nature and direction of these supply chains.

More research on fish supply chains is required in order to gain a better understanding of the legal encounters and the "entanglements" that are taking place. The typology of legally plural relations (Bavinck and Gupta 2014) mentioned in "Theoretical framing" section above does provide a starting point. On the basis of this typology and our case material, one may conclude that, as far as intra-chain

governance is concerned, two relational types—defined by accommodation and/or mutual support—are probably most prevalent. The two other types—indifference and conflict—may characterize certain phases in the genesis of chains but will need to be overcome in order for chains to actually move seafood from the coast to the consumer. Following the lead of Bavinck and Gupta (ibid.), situations of indifference "may need to be transformed into a learning process based on enhanced knowledge of, and interests in, the multiple circumstances. Situations of conflict need to be addressed and defused through negotiation, conflict resolution and action research" (ibid.: 82).

Within the environment of seafood supply chains, however, all four relational types may actually be available, creating complications of various nature and thereby affecting actors and actor strategies at different points within these chains. For the purpose of analysis, it may be useful to follow the lead of Jentoft (2007), who notes that "fisheries and coastal management rests ultimately on power" (2007:434). In view of the fact that "control" is recognized as playing an important role in value chains too, Jentoft's perspective on power can be expanded beyond fisheries management. Power differences between actors leaning on other legal systems within or external to the seafood supply chain are more than likely to play a role in their functioning, thereby providing additional explanations for their emergence, disruption, and expansion.

Here, we brush against a dimension of what Jentoft and Bavinck (2014) call the "symmetry" between legal systems in a particular constellation. The other dimension of symmetry is "substantial coherence" between the legal systems in question: a matter of matching between key elements thereof. The precise conditions of matching—an investigation that could only be touched upon in this paper—involve attention for the content of norms and rules (substantial justice), but also for procedures (procedural justice). The latter enquires into the "right way" of arriving at decisions and working arrangements, and may differ greatly between legal systems.

The comparative study of legal pluralist encounters in fish supply chains is obviously still in its infancy. This paper therefore concludes with three suggestions for further research:

- More research on other chains than the global and the local, both of which are reasonably covered, whereas regional and national fish supply chains are scarcely researched from a legal pluralism perspective;
- Comparison of fish supply chains of differing complexity (so local vs local, national vs national, international vs international); and
- Investigation of the genesis, the demise, and the adaptability of fish supply chains and the relation with legal pluralism.



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