

INTERSECTING GOVERNANCE AND TRADE IN THE SPACE OF PLACE AND THE SPACE OF FLOWS

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ABSTRACT

Coastal areas in Southeast Asia have historically been globalised spaces, with land and resources such as fisheries influenced by trade since pre-colonial times. As the intensity of resource use has expanded the resilience of the coastal environment and effectiveness of management practices have come into question. Commodity chains that once involved a stepwise progression through multiple global, national, local scales are now controlled through new 'spaces' of information and access, beyond the reach of scale dependent governance regimes such as the state. As a result the interaction of actors in commodity chains needs to be reframed within the lens of globalization while reiterating the practice and function of local actors. The spatial complexity of trade networks is as much a function of social cohesion as it is a function of the location of market infrastructure and sites of production. It is therefore important to understand the spatiality of the system in order to determine the geography of the trade, the source and influence of information, and the relevance of governance systems which mediate access and control over coastal resources. This paper examines the linkages between material transfers of commodities through the space of place and the movement of informational through what is increasingly referred to as the 'space of flows'. Using examples from Southeast Asia attention is given to the global dynamics over the coastal environment, including the process of resource extraction through artisanal and global commodity chains, and the flows of information, technology and consumer perceptions back to these areas. The paper then discusses the role of contemporary governance systems over resource use by focusing on how state and non state actors continually manipulate both formal and informal regulations over both flows of commodities and information, creating a complex web of socio-spatial interaction from local to global scales.

Keywords: traceability, shrimp, commodity chains, governance, Southeast Asia

INTRODUCTION

Worldwide, coastal fisheries are placing substantial pressure on the ecological functioning of coastal environments with production between 1989 and 1998 doubling to a current estimated value of US\$38 billion (MA 2006). As fish emerge as one of most widely traded commodities and the intensity of resource use has expanded, the resilience of these coastal areas and their related management practices have come into question (Vannuccini 2004; Adger *et al.* 2005). One of the strongest drivers of change in coastal zones has been shrimp aquaculture, which has expanded significantly with global demand. To illustrate, the production of the *Penaeus* shrimps (*P. vannamei* and *P. monodon*), which comprise around 80% of total shrimp production, increased from 1618 t in 1950 to 3,679,753 t at a value of over US\$14 billion in 2004 (FAO 2006). In some countries of Southeast Asia this has led to a loss of between 50-80% of mangrove area compared to 50 years ago (Valiela *et al.* 2001). Changes to hydrology and habitat are now increasingly recognized as key drivers in the loss of biodiversity, pond productivity and the viability of the livelihoods that depend on these systems (Manson *et al.* 2005).

Environmental change in coastal areas is not a new phenomenon but the intensity and extent of change has increased to levels that challenge both social and environmental resilience fueled largely by the rise in aquaculture production to meet global demand. As the practices of shrimp farmers gradually become embedded within global systems of production, the control and management over their resources, collectively termed governance, has also expanded to include networks of state and non-state actors at multiple spatial and political scales from local to global. The most 'fluid' connection between these local

and global scales is through trade, so understanding how market relations facilitate global commodity flows provides an entry point to understanding the pressures faced by farmers and fishers in both their 'local' and 'global' contexts.

As trade globalizes and the time and space between consumers and producers decreases, greater attention is being placed on the improvement of food safety and quality, ensuring that the conditions of production meet the required standards in the sites of consumption (Oosterveer 2005). Growing concern is also being given to the social and environmental conditions under which production takes place, and considerable effort has been displayed to ensure that consumer knowledge and concerns guide the process of production, most commonly through fair trade and eco-labeling. Faced with increasing difficulties these initiatives have shown considerable progress, yet there has been continued failure to effectively target and improve production process in information poor developing countries where rules, norms, values and control over production are neither clear nor amenable to modern auditing and traceability practices. While significant steps have been made in improving food quality and safety in global food chains such as shrimp, there are still considerable gains to be made in ensuring social and environmental sustainability at the sites of production.

This paper addresses this key challenge to understand how local-global dynamics both directly and indirectly influence the livelihood decisions of producers as well as the requirements for more effective governance arrangements that take into consideration not only food quality and safety, but also the social and environmental sustainability of production systems. The following examines the linkages between material transfers of commodities and information between sites of production in coastal areas in Southeast Asia and sites of consumption along intersected local and global commodity chains and networks. Specific attention is given to the failures of current governance arrangements in bridging the gap between 'consumer down' audit oriented, global chains and locally contingent, 'producer up' artisanal trade networks.

CONCEPTUALISING CHAINS AND NETWORKS

Fishery production remains one of the most challenging primary production systems to understand because of the complex interrelations between inputs and outputs and the diversity of actors involved. As Emmerson (1980) outlines: "To use a particular type of gear to seek a particular fish is to be involved in a unique set of economic transactions that radiate backward and forward in space and time from the place and moment of capture" (p.48). Thorpe et al.(2005a) build on this notion in their description of the 'fishery chain', to describe a set of scaled relations that can be conceptualized as a series of vertical 'linkages' between ecosystem functions, modes of production (including both capture and fish farming), processing, marketing and distribution. The 'fishery chain' framework will form the basis for our analysis linking livelihoods, trade and environment into an interlinked set of relations radiating both forwards and backwards from the point of production. As fish are caught, processed and transferred to local, national and international markets they pass through a series of scaled networks along the chain, each with formal and informal norms, rules and regulations that control and manage activities and social relations. Producers and traders alike are located first within communities with interrelated sets of social, cultural and familial norms, practices and expectations, and second within formal state legislation and emerging sets of formal and informal rules and regulations set by non-government institutions. Together these scaled networks and their associated governance arrangements influence the flow of the commodity up the chain and information down the chain. It is therefore important to understand the spatiality of the system in order to determine the geography of the trade, the source and influence of information, and the relevance of governance systems which mediate access and control over coastal resources.

Commodity chains

A commodity chain is "a network of labour and production processes whose end result is a finished commodity" (Hopkins and Wallerstein 1994, p159). The concept emphasises the sequential phases of

production, distribution and consumption through which a commodity passes providing a metaphor on which to base linkages between ‘core’ and ‘periphery’ discourses of power and production (Hughes and Reimer 2004). In particular, the global commodity chain literature has emphasised how production is influenced by consumers operating in spatially distant locations, drawing on the wider political economy of production through global flows of capital and control mediated by multinational corporations (Gereffi and Korzeniewicz 1994). The concept of global commodity chains has been extremely influential in organising criticism over mostly industrial processes of production in developing countries but has slowly branched out to include a range of agricultural production and consumption networks (Watts and Goodman 1997). As an approach, commodity chain analysis allows complex global flows of production and consumption to be analysed while also recognising the situated complexity inherent in multiple localities.

Chains are producer or consumer driven, which on a global scale provides a heuristic for understanding the specific control and power exerted by either retail capital in the developed economies or the position of producers within the wider setting of the rural economy in developing economies (Gereffi 1995; Murdoch 2000). In response to this essentially vertical analysis used to explain power relations, there have been calls for greater attention on the sets of hierarchically nested ‘horizontal’ networks at each point of transaction (Fine *et al.* 1996). Understanding the horizontal dynamics of the chain has developed a greater sensitivity to the socio-political influence over not only production and consumption but also the influence that individuals have at each transaction, drawing in a wider group of actors, both directly and indirectly related to trade, that contribute to the ‘life history’ or ‘biography’ of the commodity.

Conceptualising commodity chains as a series of horizontal networks in controlling predominantly vertical exchanges enables us to ground abstract notions of globalisation in more defined scales and units, and include otherwise disenfranchised networks of actors, focusing on their contingent multiple practices in either production and consumption (Collins 2005). Noting these actors ‘agency’ enables us to disaggregate ‘producers’ and recognise them as individuals that respond either separately or collectively to local or global perturbations: including flows of commodities, information and finance (Goodman and Dupuis 2002). In the context of commodity chains, understanding the agency of both consumer and producers therefore requires understanding how they respond to institutions that emerge from horizontal networks, such as customary land tenure arrangements, as well as to more abstract nested horizontal networks at each transaction along the commodity chain including provincial trade cooperative rules, state legislation over production or global food safety standards.

Commodity networks

The metaphor of a network has emerged in response to criticism of the hierarchical unidirectional linearity of a chain approach linking producers and consumers. As Hughes and Reimer (2004) argue, “While still recognizing the existence of sets of actors (or nodes) whose work it is to shape the circulation of a particular commodity, connections between actors are seen as complex webs of interdependence rather than fixed, vertical and unidirectional relationships” (p. 4). Networks provide a heuristic for multidirectional flows of information and commodities between actors who are both directly and indirectly involved in transactions. Expanding the notion of network even further, actor network theory argues that not only do humans have agency within a commodity network but also non-human elements through their ‘transformative capacity’ on the shape and character of trade (Murdoch 1997; Law and Hassard 1999). A key part of these networks is how knowledge is circulated and used to define who *decides* to participate in the consumption of a given product, and who is *capable* in participating in its production. As such, understanding how information and knowledge flows between producers and consumers requires an understanding of the interdependence of a wider set of actors, including advocates of ethical trade, scientists, and the media, and how these actors both shape and influence the process of production (Hughes 2000). If we take Ribot and Peluso’s (2003) ‘theory of access’ the influence of indirect, or external, actors becomes a matter of capacity and their capability should be seen within the wider structures that influence the flow of information, knowledge and finance.

Drawing further upon actor network theory the geographical analysis of commodity networks has emphasized the spatial morphology of networks. The interaction within commodity chains is influenced not only by individual agency but also location in space (Murdoch 1998) and the interdependence of actors is better understood when we position them relative to the physical nodes across the landscapes in which they operate. As Leslie and Reimer (1999) argue with respect to commodity flows, “[s]pace, place and nation play an important role in mediating relationships”, which locate institutional power and influence over production at the sites of production. This draws in the actions of not only consumers but also of an expanded net of individuals and organisations that operate both within the location of production termed the ‘space of place’ and the movement of commodities through a nested hierarchy of scales to producers, termed the ‘space of flows’ (Castells 1996). Within the ‘space of place’, actors, including producers, traders and bureaucrats, interact within the confines of physical environment and socially bound within formal and informal institutions that set rules and norms that determine: 1. ‘what production is permitted where’; 2. ‘how produce enters which markets where’; and 3. ‘what information reaches producers where and how’. In information rich countries there is a relatively clear understanding of the channels through which products travel, allowing the traceability of constituent parts and assessment of the conditions of production. Under such conditions both state and non-state intervention can define clear points of entry within the chain. In information poor developing countries, where the market is based more on flexible social (informal) institutions and relatively free of state (formal) institutions, policy is much more complex (Bush 2004). The localisation of the commodity networks within the space of place emphasises the grounded reality of producers, including their social and spatial contingency, which in turn determines their capability to access trade and gain access to information.

Production and consumption in a network society

The changing local food production practices within ever expanding international markets are best conceptualized through the emergence of the global network society (Castells 1996; Castells 1998). Within this global network society the focus on the production practices in physical space is being replaced by the more dynamic understanding of the interrelation of production within spaces of networks and global flows. The global ‘space of flows’ is increasingly replacing the local ‘space of places’ because economic activities and social practices in the 21st century are less organised on the basis of material transactions and face-to-face interaction and more via exchange and interaction without geographical contiguity. Nevertheless, most people and their environment are still situated within the local space of places, organized in real time and based on face-to-face interaction. However, to understand production practices within the space of place, attention must be given to the space of flows as well, as social actors build their identity and alter their social practices in order to accommodate global processes. Contemporary governance of food needs to reconcile the dynamics of the global space of flows with those of the local space of place, while acknowledging that both dynamics are interacting as well and therefore continually evolving over time.

In the global network society, a nation-state can no longer be understood as a sovereign, independent entity as an individual state is increasingly less able to fully control social processes within its borders and is forced instead to regulate the conditions of mobility through its borders. In a countervailing fashion to this reduced control, nation-states are transferring selected powers to supra-national agencies and institutions such as the World Trade Organisation (WTO). For trade-related food governance arrangements to be recognized by the WTO they must limit their engagement to product-related characteristics and refrain from interference with production-process related matters. The WTO’s principal objective is to facilitate trade while recognizing the sovereignty of nation states, and as such only accepts governmental interference with international food trade when measures are based on clear scientific proof. In reaction, different non-governmental actors have taken initiatives to remedy this fundamental limitation to global food governance. NGOs, private firms and producer organizations have initiated different arrangements to respond more adequately to contemporary concerns related to quality, safety, equity and animal welfare of food. Many of these non-governmental initiatives attempt to

influence global commodity chains. The global character of food flows in combination with the (often) large distance between the producer and the consumer means that non-governmental initiatives are generally developed at the global level. The distance from the specific local production circumstances means these initiatives often display a lack of understanding about the diversity of the local production practices in the space of place.

Global commodity chains involve international flows of food, finance and information and should be considered different scaled networks in which social agents, material and immaterial products are linked through different connection points, or what Castells has labeled as switches (Castells 2004). Switches are the obligatory passage points from one (part of the) network to another and therefore they play key roles in information exchange, processes of in- and exclusion, and in transforming the networks.

Intersecting global and local chains and networks

The chain approach offers considerable scope in understanding the flows of goods and information between producers and consumers. The notion of networks highlights the wider interactions that influence the conditions of production, the availability of information and the roles of various lobby groups. We argue that both network and chain metaphors are required to fully understand the movement of commodities and information from consumers and producers, as well as the agency of related actors over transactions at different points.

For fisheries both horizontal and vertical aspects of chains and networks are important due to the perishability, and high value of fish products, the global extent of trade, and the range of actors involved: ranging from small-scale producers through to multinational processors, importers and retailers. Building on the 'fishery chain', Thorpe *et al.* (2005b) detail the vertical nature of exchanges in the 'post-harvest chain' moving fresh fish as fast as possible to retailers, or transforming fish into products with a longer shelf-life. They conclude that to understand the complex processes that are at work within multi-scale fish chains analysis must take into consideration "the economic, social, and cultural factors that intercede to influence the arrangements by which the commodity passes from hand to hand up the chain" (p. 131). As these essentially 'bottom-up' chains expand to the global scale, the chains are more strongly influenced by 'top-down' pressures that restructure chains, mainly around issues of quality control. These global level arrangements mostly work in favour of retailers and consumers and have had in many cases disastrous short-term consequences on the livelihoods of producers (e.g. Henson *et al.* 2000; Mansfield 2003).

To illustrate the complex interaction of vertical flows of fish and information, and the interaction of networked actors at each transaction, we propose a scale sensitive chain-network model shown in Figure 1, which traces both material and informational flows as well as positioning individuals, groups and institutions within a wider global network of trade and governance. Horizontal points positioned along the chain, are made up of individuals and firms. For example, at the producer level individuals interact with individual traders or firms to secure both the inputs of the production process and access to the markets. As such these individuals exercise agency or capability, based on their social capital, material resources and information. Once access has been secured a transaction is made with primary and secondary traders, each operating at a higher spatial or political scale, such as a district and province. The flow of commodities through the 'space of place' comes to an end once the product is traded by an exporter to global markets. These exporters act as a funnel channeling information and products in and out of the space of place to the space of flows. They are subject to the national laws and regulations of the nation state but are also receptive to global controls and demand from laws, regulations and demand from importers. Exporters can be considered 'switches' within the global trade networks as they link local producer networks with global trade networks thereby translating and regulating the transfer of material and informational flows. Analyzing both the vertical flows between production and consumption and the influence of horizontal actors and processes at each transaction point remains essential in understanding how goods move through different hands and how information flows back down to producers. While a considerable amount is known about the flows of goods and information from

consumer to exporter in global chains, much less is known about the flows between those exporters and the local networks of traders and producers operating in information poor environments. This gap between the local producers and the global networks constitutes a ‘black box’ obscuring the actual functioning of both the vertical flow of commodities and the horizontal influence of formal and informal actors existing within any number of familial, communal, state and non-state based networks.

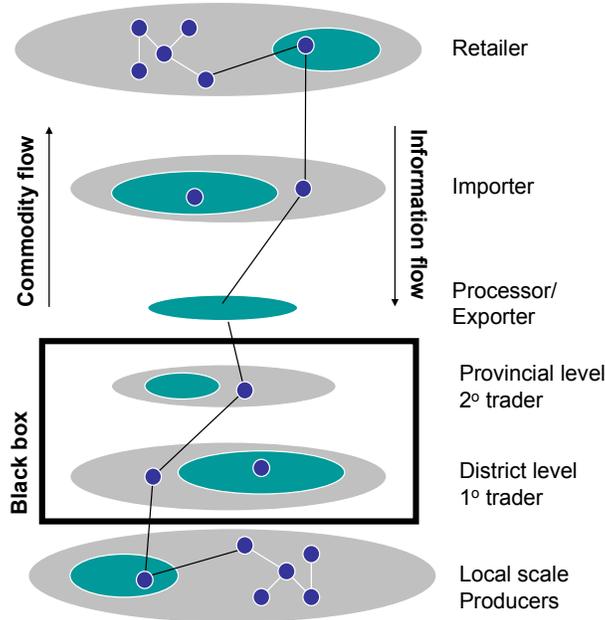


Figure 1 Intersection of global and local commodity chains and networks. The diagram indicates the flow of information and commodities between nested hierarchical scaled networks. Individuals (blue circles) exist either independently or as part of collectives or firms (green eclipses). The ‘black box’ bounds the link between producer and consumer indicating the break in transparent, information flows.

The lack of information about the nature of ‘petty’, ‘informal’, ‘small-scale’ or artisanal trade networks often means that policy interventions are misdirected, ignoring the role of non-scientific knowledge and social contract, promoting centralized infrastructure (e.g. Lynch 1994; Lyons and Snoxell 2005). These policies may assume that innovation within a chain facilitates the modernization of lengthy artisanal chains, making them more efficient and more easily traceable (Barrett *et al.* 2004). However, these long chains may alternatively ensure the ongoing access of marginalized producers and traders, absorbing risk and facilitating long distance trade from areas that would otherwise not be accessible to trade networks that link directly to global chains. Describing the complexity of both formal and informal trade networks above producers and below exporters therefore becomes a key challenge to understanding global commodity chains in both their vertical and horizontal entirety and formulating effective governance arrangements that promote both social and environmental sustainability.

GOVERNING CHAINS AND NETWORKS

The decreasing possibilities for governmental regulation of fish production and trade in the era of global modernity combined with the growing concerns among consumers leads to a search for governance arrangements that fit into the global network society (Busch and Bain 2004). During the last decades a growing number of innovative governance arrangements have emerged, shifting away from the conventional centralized system of decision making by the national state, to networked dynamics of formal and informal negotiations among multiple individuals and organizations at multiple scales,

including private enterprise, non-governmental organizations (NGOs) and consumers. The role of the nation state is not completely diminished as government departments may provide technical support, create the legal and regulatory context, and fund and carry out research for primary production, processing or trade. As such, governance can be conceived as a mosaic of both formal and informal networks, facilitated by scaled relations providing access to flows of information and capital. In this respect governance responses relate to the new global dynamics of interconnecting production and consumption practices in the space of place, linked by the space of flows, and understood through the horizontal and vertical dimensions of commodity chains.

Within the commodity chains and networks literature two kinds of governance arrangements can be recognized aimed at 'thickening' the relationship between consumers and producers (Crang 1996; Hartwick 1998). First, producer-driven chains are increasing manufacturers' influence over production and pricing in other parts of the chain. In consumer-driven chains retailers determine to a growing extent what is produced for what price. The governance of commodity chains and networks is being revised to reflect the possibilities for the inclusion of the concerns expressed a wider range of civil society actors, such as fair or ethical trade (Whatmore and Thorne 1997). While many of these actors involved are linked into networks, they do so at specific points of transaction with the intention to introduce additional elements in the governance of how commodities and information move between producers and consumers. The specific path of these commodities and information may change considerably over time, as actors enter and leave the transaction networks, just as the scale at which the transaction occurs may also change with vertical integration. Nevertheless, the linear progression of transactions remains and it is at these points that networked state and non-state actors intend to influence the flows.

Harnessing the global dynamics of trade and information exchange can facilitate a process of what Folkerts and Koehorst (1998) call 'chain reversal': facilitating the transfer of information down the chain back from consumers to producers through such tools as labeling, standards and consumer guides. Market-based standards assume that consumers will reward producers for more ethical or fairer practices with increased market access or higher prices. Oosterveer (2005) describes the combination of such processes as innovative 'global food governance' arrangements. Food labels and certification schemes form an exemplary case of the wider shift towards new relationships between fish consumers and producers beyond simple market-based relationships that include different, specific, and changing health, social and environmental concerns in governance arrangements. These consumer oriented governance mechanisms are becoming a tool for 'political consumerism' (Micheletti 2003), in an era where governments seem less able and willing to intervene actively in economic processes.

While labeling has an extensive history in promoting consumer driven demand for food safety and quality there has been less success with the promotion of environmental and social sustainable production. Socially responsible trade has emerged most prominently through the promotion of fair trade campaigns for commodities such as coffee and cocoa which emerged in response to the restructuring of these global chains moving market share and profits from producers to coffee roasters (Taylor 2005). Environmental concerns about production practices emerged from these campaigns and the wider 'post-productive' or 'organic' movement in Europe and North America. Concern also spread to natural resource exploitation through two notable campaigns began by the Worldwide Fund for Nature (WWF) in collaboration with industry: the forest stewardship council (FSC) and the marine stewardship council (MSC) (for detailed histories see Klooster 2005 and Oosterveer 2006). Both the FSC and the MSC have established labels which promote environmentally appropriate management and practice that is both socially beneficial and economical efficient (MSC 2002; FSC 2003).

Although the FSC and MSC aspire to global coverage the successes of these labels have been mainly seen in developed rather than the developing economies, where the criteria for certification are complicated by a lack of awareness of eco-labeling, lack of capacity for accreditation, and lack of quantitative scientific data on production practices conducted by often small-scale artisanal producers. The failures of both labels have been related to the cost and lack of information to those managing production or natural resources. A major stumbling block in promoting socially and environmentally sustainable production is the lack of a clear flow of information extending between consumers and producers. While effective in

commodity chains that are transparent and traceable down to exporters, certification bodies who issue the labels are unable to audit the chain below the level of exporters, where capital and information flows through informal, diffuse trade networks. As such the gap represented by the 'black box' in Figure 1 remains a key challenge for the inclusion of social and environmental sustainability within consumer-driven commodity chain governance.

Therefore, for shrimp trade the challenge is to recognize the importance of governing global commodity chains and networks in the space of flows while reflecting the embedded nature of producers within the space of place. The question is then how to open up the black box of trade and information flows in the space of place through a 'two-directional' approach: 'consumer down' – addressing the flow of commodities and information beyond the exporter down to producers; and 'producers up' – addressing the conditions of accessing information, finance and trade from the perspective of farmers through artisanal trade networks. Combined these two approaches provide a starting point for understanding what further potential there is for thickening the link between consumers and producers, while meeting the challenge of both social and environmental sustainability.

FROM CONSUMERS DOWN: STATE AND SUPRA STATE CONTROL

The 'nitrofurans' incident can be singled out as an example of the impacts of global market relations on production practices, as governance in the space of flows. Thai shrimp production from aquaculture is part of a transnational flow of food linking producers and consumers at very large distances and bringing together impacts at different scales. Environmental impacts may occur at the local level in the space of place where shrimp ponds are constructed and managed, while the demand for fishmeal to feed the shrimp and the collection of broodstock has a much larger scale environmental impact. The local practices in the space of place are thus closely linked to the transnational flow of shrimp, including the related financial and informational aspects. The existence of this global flow of shrimp is explaining why important pressures to reduce the environmental impact of shrimp production in Thailand have not been of domestic but more of foreign origin, as shown in the case of the use of nitrofurans.

Nitrofurans, a group of antibiotics used in shrimp farming to inhibit bacterial growth, is a cancer-causing chemical and has been banned by most countries including the European Union (EU), which since 1994 completely forbids the presence of nitrofurans in shrimp and other food products. In practice, however, the technology used by the EU to detect antibiotics had a limitation to a sensitivity of 5 ppb (parts per billion) and thus set a 'de facto' standard in the view of exporting countries. However, the subsequent introduction of new testing techniques lowered the detection threshold to 0.05 ppb, resulting in February 2002 in the discovery by EU customs officials of nitrofurans present in imports of shrimp from Thailand. In reaction the EU decided to test all shrimp imports from this and several other Asian countries. As a direct result, shipments of frozen shrimp from Thailand to the EU fell from 7,000 tons in 2001 to 1,850 tons in 2002.

The European shrimp market has always been more particular than the USA or Japanese markets and, due to consumer pressure, has recently become even more concerned about a range of environmental and food safety issues. These consumer concerns include sustainable and controlled farming, antibiotic regulation, ethical employment standards, traceability, genetically modified feed ingredients, fishmeal sustainability, animal welfare, genetics in shrimp breeding, dioxins, PCBs, heavy metals, agrochemicals and irradiation (FAO 2004). At the same time, the EU constitutes the largest market for shrimp in the world importing about 50% of all shrimp traded internationally. It was therefore under the pressure from the European consumers that the Thai government introduced a national Code of Conduct for Sustainable shrimp farming. This code was developed to obtain a framework to meet the shrimp farming industry's goal for taking environmental, social and economic responsibility (Nissapa 2002). If all actors involved in the shrimp production chain abide by this code, the final product can be labeled as 'Thai Quality' shrimp. The French supermarket chain, Carrefour, intends to use this quality assurance scheme and to sell these shrimps under its own private brand.

The national Code of Conduct translated the concerns from the European to guide the practices of the Thai shrimp farmers. Essential actors in this process of translation are the Thai Government and the shrimp processing plants in the country, notably CP (Charoen Popkhand). The shrimp farmers themselves are not directly involved in the translation process and they are confronted with strict quality requirements and informational demands from the processing firms. CP, and other processing firms in Thailand, have become the switches in the network governing the flow of shrimp. There is no direct communication between shrimp producers in Thailand and shrimp consumers in Europe.

The introduction of such a Code of Conduct as an innovative arrangement makes clear that contemporary governance can not be organized by conventional nation-states alone. Production areas, structures of trade and places of consumption may move swiftly without national governments being able to control them. Effective governance of global flows of shrimps has to combine various governmental structures and non-governmental actors at different levels to link in with global material flows as well as establish connections between the local dynamics within the spaces of production and of consumption.

FROM PRODUCERS UP: ARTISANAL PRODUCTION AND TRADE

The case of the coastal village of Ap Cho in the Mekong Delta of Vietnam exemplifies the complexity of customary production and trade arrangements faced by small scale farmers and fishers in marginal coastal areas (Bush 2006). Ap Cho is located within Hiep Thanh commune at the confluence of the Mekong and South China Sea in Tra Vinh province. The village is comprised of 135 families of which only 30 have agricultural land which has been gradually converted from mangrove over the last fifteen years, supported by a series of government concessions and credit schemes. Those households that do not have land either fish in inshore areas or provide labour for surrounding land owners who commercially farm *Penaeus* shrimp and *Tilapia*. Shrimp aquaculture has been strongly promoted by the government as a project for economic development, but families in Ab Cho have been slow to adopt shrimp aquaculture due to the high investment costs, lack of land ownership and existing investment in coastal fishing.

Farmers and fishers in Ab Cho sell to domestic and international markets through a combination of traders and agents for processing companies. There are a number of novel arrangements between farmers, agents and local traders that facilitate the timely trade of produce, and the supply of technical and market information. Farmers are a central actor within these arrangements, and base many of their production decisions on information from these channels. The reliance on social and familial relationships is largely based on trust and important in reducing risk and uncertainty associated with shrimp farming. Instead of comprising rational, transparent networks and flows of information, as exhibited in the nitrofurans case of Thailand, fish farmers in Ap Cho represent actors embedded within local networks where local elites, traders and processing companies control the flow of capital and information back to producers.

In addition the trade relationships producers have with traders in artisanal trade networks are often based on patriarchal, debt-tied relations which emphasize market access as capability rather than right. Fish farmers seek a range of relationships that helps them sell their produce and obtain market information, with the aim of meeting their families' financial and nutritional needs. As seen in many parts of the globe fishers and fish farmers within these relationships often balance lower market prices with access to credit, fishing equipment, and emergency cash flows, and a guaranteed market for their fish (Platteau and Abraham 1987). Fish farmers have less need for guaranteed markets as they can determine both the timing and size of the fish they harvest. In this case the onus is on traders to find and establish trusting relations with farmers, by offering labor and support for harvesting and transport from the farms to markets.

The strong role of traders and local elites in artisanal trade chains are particularly important in providing both social welfare and credit arrangements in the absence of a strong state presence. Existing credit services to farmers are through agricultural banks that have high interest rates and state sources of market information sources are consistently incorrect or late. Middlemen fill this absence of the state by playing a somewhat facilitating rather than exploitative role in trade. The lack of infrastructure, the dispersed

nature of the trade means that the transaction costs of both fishers and processing companies are too high to warrant direct contact. Middlemen are highly specialized, often selling a small range of products that have good knowledge about. They obtain their credit from family networks as they are unable to access credit from formal lending institutions. Some of the large traders operating at district level have established relationships with processing companies as well as maintaining their trade relations with small scale producers. As such these traders play an important role as switches, linking between local and national scale networks. These positions are unique to these people based on their capability in establishing and maintaining both formal (business) and informal (patriarchal) systems of trade.

The implications of these local trade networks for environment and livelihoods of farmers are many. Particular concerns for social welfare, equity and environment are somewhat lost within these chains as the specific objective is to maximize income while reducing risk and uncertainty. With greater pressure on production systems and the environments greater attention is being placed on the governance systems over these chains, but more attention is needed on balancing the somewhat 'global' concerns of safety and quality with the local concerns of social and environmental sustainability.

CONCLUSIONS

Analysing the global dynamics of trade and regulation illustrates how governance arrangements in the space of flows can influence the space of place. The combination of vertical and horizontal features in commodity chains is illustrative of these multi-scalar global dynamics, but attention also needs to be given to the specific arrangements under which fishers and farmers operate within their local context, including access to land, technology, market information, finance and trade. Given the marginal environments that many coastal communities in Southeast Asia live it is also imperative to reflect on the character and influence of such local governance arrangements in order to contextualise the influence of global governance arrangements over local production practices.

By focusing on capabilities to access artisanal trade networks we can determine how producers, within the space of place, can respond to political consumerism aimed at improving social and environmentally sustainability of production practices through the space of flows. Facilitating more socially and environmentally equitable production systems involves first engaging with complex, socially embedded networks that control information and capital flows within the space of place, finding novel ways for producers to maintain ownership of successful farming practices, and enabling support from local authorities before establishing global governance mechanisms.

As society, and especially consumers, demand greater accountability of how food is produced labels are seen as a means of consumer driven governance. Greater understanding of how 'thickening' the link between consumers and producers can lead to more effective ethical trade, through improved management of social and environmental outcomes, in addition to food safety and quality. Where information and commodity flows are clear down the chain between retailers, wholesalers, importers, and exporters, the path is less clear from exporters through local trade networks down to producers. Standards for certification must reflect the conditions under which production takes place. While some abstraction is always necessary in the process of formulating standards greater attention is needed to ensure that retailers and non-government organisations alike reflect the realities of producers, including the conditions through which they gain access to markets, finance and information. Without a clearer understanding of the local conditions under which production occurs consumer driven governance tools such as labeling will continue to be confronted with non compliance or weaker influence over the production process. Greater localism is therefore needed to improve our understanding of the role of locally embedded chains that facilitate commodity and information flows, as well as the wider networks of actors surrounding transactions within the space of place.

In order to maximize social justice, environmental sustainability and economic development for coastal areas, greater emphasis needs to be given to multiple nested networks in producers, traders and consumers processing companies, exports, importers and consumers exist. Reflecting the complex mix of state and non-state actors in the governance of coastal area production, including those involved in artisanal trade

networks, is an important precursor for improved and targeted technical assistance for farmers, as well as for fostering more socially and environmentally sustainable production.

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