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Capturing the Complexities of Globalization in Fisheries: Gendered Divisions of Labour and Divisions of Labour and Difference

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Abstract

The gendered nature of globalization has received considerable analysis across several economic sectors, and much has been learned about its general impacts, although less about the specifics. Within a particular locale and/or general pattern of impact, what factors shape a person or group's ability to adapt to changing economic contexts? Why are some groups and/or individuals more adversely impacted than others? Using the fisheries sector of Kerala, India, as a case study, this paper delineates a framework for understanding complexity and difference within general gendered patterns of economic processes. Combining feminist commodity chain analysis, livelihoods analysis, and insights from feminist studies of gender and development, I examine different impacts of globalization rooted in gender divisions of labour, and assess their implications for fisherfolk livelihoods. The results are usually complex and often paradoxical.

Introduction

Over the past 60 years, the world's fisheries have experienced a dramatic expansion of production and trade and the intensification of global economic relations. According to the UN Food and Agriculture Organization (FAO, 2010), total world fish production reached a record high of 142 million tons in 2008, and international trade in fish products increased to a record level of US$ 102 billion, up nearly 50% since 1998. In fact, fish has been referred to as the most international form of food production, evidenced by the fact that "over 40% of the world's fish production by weight enters international trade" (ODI, 2002). This intensification of global economic relations within the fisheries sector has led to an interest on the part of fisheries development professionals to understand the impacts of globalization, especially the expanding international trade in fish products, on local fishing communities around the world (Salagrama, 2002). However, until fairly recently and apart from a few notable exceptions (ICSF, 1997; Salagrama, 2002; ICSF, 2004; Neis et al. 2005) and Global Symposia on Gender and Fisheries 2004, 2007 and 2011, relatively little attention has been paid to gender as an inherent aspect of globalization, within the fisheries. There exists a growing body of empirical work on women's roles within fishing communities but there has been less effort to theorize gender relations and gendered aspects of globalization, within the fisheries.

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This paper focuses on the gendered nature of globalization and its impacts on small-scale fishing communities in the south Indian state of Kerala (Figure 1).

Fig 1. Kerala State and Districts, India.

By 'globalization' I refer to a set of trends and transformations through which local systems of fish production, processing, and trade have become increasingly organized and spatially integrated in a global fish-food economy (Bonano et al. 1994; Goodman and Watts, 1997). Utilizing a commodity (or value) chain analysis combined with a livelihoods approach, I examine how globalizing trends and processes within the fisheries sector differentially impact men and women in fishing communities in the south Indian state of Kerala (Figure 1). In doing so, my primary purpose is to delineate a framework for the incorporation of gender analysis into fisheries research. My objective is to offer a set of ideas about how we might theoretically analyze globalization and its gendered aspects within the fisheries, as well as how we might capture and comprehend the

complexities of its impacts. Different households and individuals experience broad-scale processes of economic change (globalization) in diverse ways. This paper seeks to illustrate some of the factors that shape a person or group's ability to adapt to changing economic contexts and how these factors are rooted in gender norms and divisions of labour. Understanding these complexities is necessary if we are to formulate effective policy. My argument is that commodity chain analysis provides a very useful starting point for identifying general pattern of impact, and combining this with insights from livelihoods analysis allows us to understand the diversity of experience and impact of general trends and processes.

Theoretical framework and methods

The analytical framework adopted in this paper uses a combination of feminist commodity (or value) chain analysis (Barndt, 2002; Bair, 2009) and livelihoods analysis (Ellis, 2000; Salagrama, 2006). Following Jarosz (1996) and Ramamurthy (2000) it centers on the concept of "local divisions of labour" through which I link processes of globalization to the production, processing, distribution, and consumption of fish, analyzing the gendered nature of globalization's impacts at various points along the global fish-food commodity chain.

Commodity chain analysis. Commodity chain analysis – variously referred to as "commodity systems," "global value chains," "commodity networks," or "systems of provision" – has emerged as a useful tool for examining global-local linkages associated with globalizing food systems. "Commodity chain analysis" is an analytical framework focused on understanding the organizational and spatial structure and dynamics of food industries across geographic scale (Sturgeon, 2009). Commodity chains are networks or structures of labour and production processes that connect actors to each other and to world markets across space (Bair, 2009). Commodity chain analysis presents a methodology to study a specific commodity (or group of commodities, e.g., fish) from its origin in production to consumption (Friedland, 2004) through mapping linkages and examining social relations of production and exchange along various nodes that constitute the chain, including the institutions, governance structures, and power relations that shape chains and inform their internal dynamics (Sturgeon, 2009).

Feminist commodity chain analysis involves examining the way each node of a chain is embedded in gendered relations in households and economies and asking a series of questions about both material and non-material processes that underlie the relations of production and exchange that constitute the chain (Dunaway, 2001). One way to approach this is to examine local divisions of labour and investigate the way labour processes in specific places get reworked in relation to those at the global level and how social categories such as gender, ethnicity, class, and/or caste shape the meanings people make and the actions they take, which in turn shape regional development and change, livelihood strategies, and agro-food industries themselves (Jarosz, 1996). This involves deploying a commodity chain analysis that identifies where women and men are the key agents at different nodes along the chain and maps the consequences of international and national state

policies for women and men's labour (Ramamurthy, 2000). Such an analysis then reveals general patterns of the differential impacts of globalization on women and men within a given food economy. To further understand the complexity and diversity of everyday experiences of globalization within and across different communities and households, one could then link a gendered commodity analysis to an analysis of livelihoods and the way different livelihood factors shape experiences of economic change.

Livelihoods and feminist theories of the household. Over the past decade, the sustainable livelihoods approach has received increasing attention from fisheries development agencies. However, until quite recently relatively little research has been conducted on fisheries from a livelihoods perspective (exceptions include Allison and Ellis, 2001; Salagrama, 2002; and Salagrama, 2006). Yet, as Allison and Ellis argue, "livelihoods analysis could provide a means by which to better understand the nature of small-scale fish production systems … and to identify appropriate entry-points for development intervention or policy support for poverty reduction in fishing communities" (2001). While traditional models of fisheries management and development tend to treat individual aspects of fish production systems (production, processing, marketing) in isolation from one another, a livelihoods approach offers a more holistic understanding of these systems and the complexities surrounding fisherfolk's adaptive strategies (Allison and Ellis, 2001).

"Livelihoods" refers to "the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household" (Ellis, 2000). Within this framework, individual and household livelihoods are understood as shaped by local and distant institutions, social relations, and economic opportunities. Assets and access (opportunities) interact to define the possible livelihood strategies (activities) available to individuals or households in an iterative process in which the various elements may change from season to season or from year to year as assets are built up and eroded and as access to resources and opportunities change "due to shifting norms and events in the social and institutional context surrounding … livelihoods" (Ellis, 2000).

Livelihoods research has provided a rich understanding of how individuals and households construct a living at the local scale, but it has been criticized for neglecting macro-level processes and structural shifts (Challies and Murray, 2011) and for failing to adequately deal with processes of economic globalization and long-run trends in economic change (Scoones, 2009). Combining livelihoods analysis with a commodity chain analysis provides a means for overcoming these problems.

Utilizing this combined approach, I first discuss globalizing trends within the global fish food economy that create the macro-level context within which national fisheries development policies and local fish economies and communities are situated. My focus is on marine capture fisheries. I then briefly discuss national and state-level fisheries development initiatives and use a commodity chain analysis to show how post-colonial development policies, responding to global

level economic opportunities and imperatives, have transformed local fish production systems in Kerala, India and how this transformation has impacted women and men fishworkers differently. I then present four short livelihood profiles of individual women fish traders to illustrate diverse experiences of globalization within general patterns of gendered impacts. Finally, I conclude with a discussion of the policy implications of gendered analyses of globalization within the fisheries sector.

The site for this research is Trivandrum District (Figure 1). Data for this research were collected during three periods of extended field research in 1993-94, 1999 and 2005 and in shorter follow-up visits in 2001 and 2008. The methods used included (1) extensive observations of fishing and post-harvest activities at numerous sites throughout the District; (2) over 100 in-depth interviews with fishermen, male and female fish traders, wholesale merchants, commission agents, auctioneers, social worker-activists, and government officials in charge of fisheries development; and (3) approximately 300 household surveys across three fisherfolk villages in Trivandrum District (Figure 2). Information obtained from the household surveys included household composition and demographic data, adult work histories, household assets, credit arrangements, divisions of labour and labour deployment strategies, financial management and decision-making, and notable events such as marriages, deaths, injuries, etc. I have used this information to develop an understanding of the livelihood strategies fisherfolk households are adopting and how these are shaped by intersections of local gender norms and ideologies and processes of globalization in the sector as a whole.

The fisheries sector is one of the most productive sectors of the Kerala economy (Kerala Economy, 2003), and Kerala's fish harvests constitute a significant portion of all-India fish production. Fishing is a caste-based occupation that ranks among the lowest strata of the caste hierarchy. Despite the importance of the fisheries sector to Kerala's economy, fisherfolk communities are among the poorest and most socially disadvantaged groups, lagging behind other communities in literacy/education and overall socio-economic well-being. Trivandrum District has the largest fisherfolk population in the state. Eighty-one percent of the district's fisherfolk population is Christian. Muslims comprise about 18% of the fisherfolk population in the district, and Hindus one percent (Marine Fisheries Census, 2005). Gender divisions of labour differ somewhat across these communities, however, in this paper I focus primarily on Christian fishing communities.

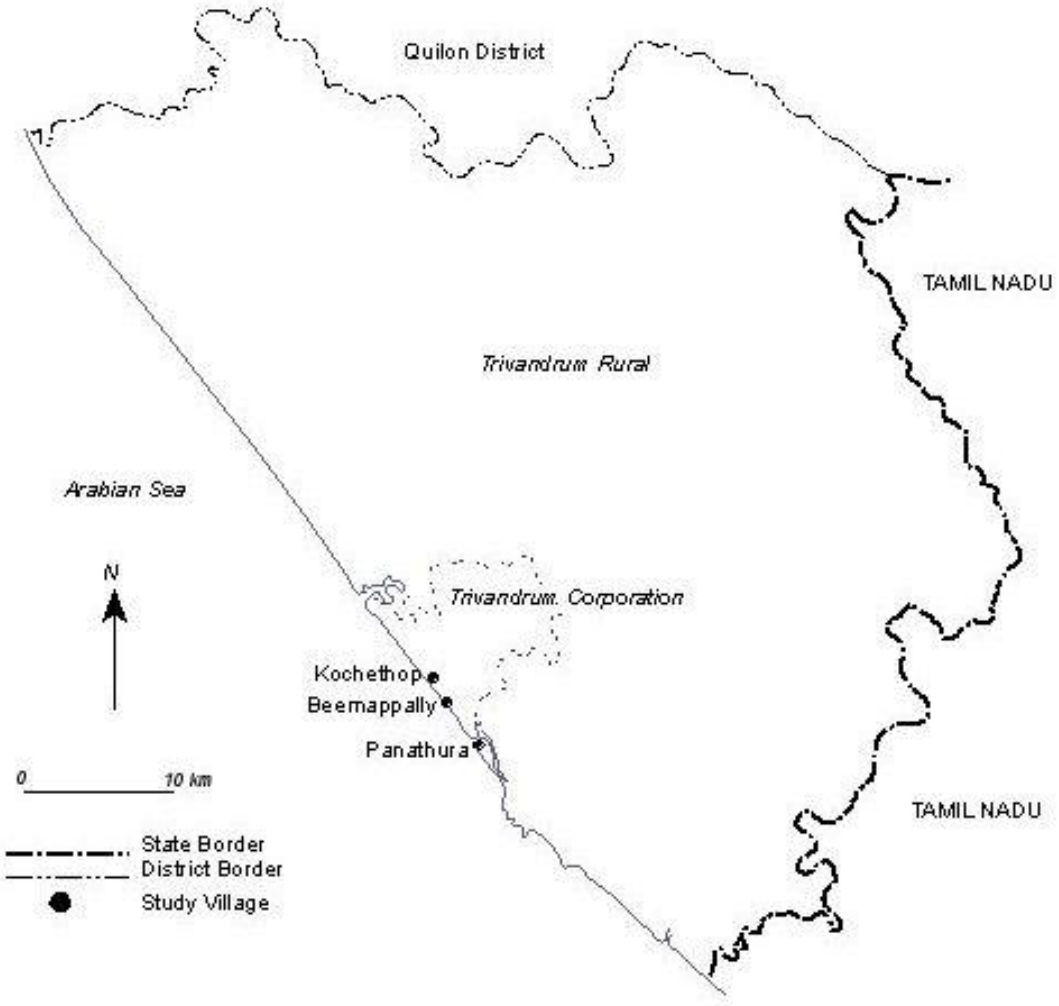

Fig. 2. Trivandrum District, Kerala State, India

Globalization and the global fish food economy

Through a series of trends and transformation, local production systems become increasingly organized and spatially integrated into a global food economy. In developing countries, these transformations are often driven by national fisheries development policies and programs pursued with the explicit objective of capitalizing on global market opportunities. In recent decades, four trends characterize globalization within the world's fisheries: (1) dramatic expansion of fish production and international trade; (2) transformations in fish processing industries; (3) elite consumption habits in industrialized countries shape development of national agro-food/fisheries sectors – shrimp is main item of export; and (4) geographical unevenness in per capita supply of fish as food.

Since the 1950s, production in the world's marine fisheries has increased four-fold and world trade five-fold (FAO, 2006). This development is the result of increased production capacity, technological innovations in production and processing (e.g., purse seine nets; freezing and freeze drying), and rising global demand for marine products, particularly from industrialized countries (Platteau, 1989). In trade, developed countries and regions such as Japan, the United States, and the EU account for more than 80% of the value of imports (FAO, 2006), while developing countries account for 50-51% of the value of exports (an increase from 37% in 1976) (FAO, 2010). "For many developing nations, fish trade represents a significant source of foreign currency earnings … [and fish] trade tends to flow from the less developed to the more developed countries" (FAO, 2002).

Over the past two decades considerable diversification into high value products and a marked shift from traditionally processed (dried, cured) items toward frozen fish has taken place. Fish processing has become "more intensive, geographically concentrated, vertically integrated and linked with global supply chains. … More and more producers in developing countries are being linked with, and coordinated by, firms located abroad" (FAO, 2010). With respect to shrimp, which is the dominant export item from fisheries – 15% of all export value in 2008, substantial restructuring is taking place in terms of capital flows, production modes, marketing, distribution and consumption such that transnational and/or national firms and groups are emerging as the dominant actors in the production, financing and marketing of shrimp in several countries around the world (Skladany and Harris, 1995). The desire to capitalize on global demand for shrimp, especially in industrialized countries, has driven the direction of national fisheries development programs in many developing countries.

More than one billion people rely on fish as an important source of animal protein and in some countries fish contributes 50% or more of total animal proteins (FAO, 2002). Yet, distinct geographical differences emerge in the role and importance that fish plays in nutrition. With few exceptions, per capita fish supply tends to be greatest in industrialized countries and China and lowest in South America, Africa, and central and South Asia. Although these patterns may be explained in part by relative population size, physical environment, species availability, and local dietary preferences and traditions, they are also indicative of the global market and the way consumer demand in wealthy countries has driven fisheries development in developing countries.

Fisheries development, local divisions of labour and gender – Kerala

Over the past 60 years, fisheries development in Kerala (indeed India as a whole) has been strongly state-led and characterized overwhelmingly by efforts to take advantage of global markets for shrimp and seafood through the introduction of mechanized & motorized production technology, ice and refrigeration technologies, and the construction of modern harbors. This technological transformation has entailed sweeping economic and social, transformations as well as a significant shift in the geography of production (Kurien, 1994). The nature, form and impact of these transformations, however, vary across different fishing communities in the State depending on type

of gear used and proximity to the new harbors.

Mechanized trawlers were introduced in the 1960s in only a few communities and operate out of a handful of centralized, modern harbors. Motorized boats have been adopted more extensively throughout the State since the 1980s, but a significant number of non-motorised craft and gear continue to fish. Whereas the mechanized sector is entirely geared toward export markets, connections of the motorised and non-motorised fleets to export markets vary and are more tenuous. These fleets tend to harvest domestically consumed species of fish – sardine and mackerel being the most important. Half of the non-motorised fleet is located in Trivandrum District and constitute the bulk of the district's fishing fleet. Local fishing communities and economies in Trivandrum thus are not directly connected to export markets and the global fish economy, but their livelihoods have nevertheless been impacted by globalization and economic transformation.

To understand the nature and impacts of the transformation, I begin with local gender divisions of labour, which among Christian fisherfolk in Trivandrum, are such that men fish and women process the catch and take it to market. In Muslim communities, women generally do not engage in fish marketing but do work in related activities such as net making. Women are also responsible for household chores, caring for children, procuring goods for household consumption, securing medical care for ill family members, and managing household expenditures and finances. Underlying this gender division of labour is a set of gender norms and ideologies about male and female identity, sexuality and cultural constructions of male and female space (Ram, 1992) that shape men and women's relationships to the fish economy, and for women, constrain their mobility and movement through public space and how they may conduct their market work (Hapke, 2001a). The influence of gender on how women and men as groups are impacted by globalization becomes evident as we examine the various points of the fish commodity chain.

Production. The main impacts of globalization stem from new forms of production technology and shifts in targeted species. These include a geographic shift toward centralized landing sites; overfishing, and within the artisanal sector, declining harvests and declining incomes from men's work in fish harvesting. Technological change and the race to tap export markets has led to overcapitalization and overfishing. The effects of overfishing have been felt most acutely by fishermen in the artisanal sector. Strategies men have adopted to cope with these impacts include: (1) attempts to intensify effort by acquiring new technology (outboard motor boats); and (2) migrate to work in mechanized sector in other parts of state. Neither of these strategies by themselves, however, has been sufficient to ensure household survival. Strategies to move out of fishing include migration for work in the Middle East, taking up second and third jobs such as painting, coolie labour, taxi driving, or obtaining education for employment in alternative occupations, which young men are increasingly pursuing. In general most families have tried to education their children with the objective of leaving fishing as an occupation altogether. The problem with this strategy is that unemployment levels in Kerala are quite high. This has created a situation in which young men are unemployed, but because they have some education they no longer can or want to work in fishing.

This has ironically led to a labour shortage particularly in beach seine fishing, and new labour arrangements have emerged in which boat owners must offer advances of cash in order to secure labour for a given season.

Processing. First, as a result of ice and the development of fisheries in neighboring States, fresh fish is available year-round. This means that traditional fish processing industries, namely dried fish, are in decline. Opportunities to earn an income from fish drying, consequently, have diminished, impacting women in particular who may be constrained from engaging in fish marketing or other work outside the home. Second, new processing industries associated with frozen shrimp and seafood markets have emerged, which have created new employment opportunities for women in prawn processing facilities. However, the work environments in seafood processing are highly exploitative and unhealthy (Desai, 1990; D'Mello, 1995; Samudra Dossier, 1995; Warrier, 1998; Sudhakara et al. 2008). Wages are low. Women are forced to work in a squatting position on the floor for long hours. They have to handle ice and frozen product with inadequate protective covering. Many complain of swollen hands, rheumatism, and spinal problems and have little access to entertainment or relief from work (Vijayan, 1995). Second, since prawns tend to be landed in specific centers rather than all along the coast, seeking employment in processing plants requires long distance migration either to other parts of Kerala or to other states in India where migrant labourers then face social isolation as a result of language barriers in addition to exploitative work environments.

Distribution. Within the stratified market system that has emerged, women are concentrated in the lowest echelons. Commercialization has had both positive and negative effects on women fish traders. Fish is now available year-round and more consistently than at local shores; the expansion of the middle class has increased consumer prices and profit margins, and many women make very decent incomes. Some women have become wholesalers while the most skilled women traders have been able to turn transformations in fish marketing into economic opportunities. On the negative side, commercialization and the geographical shift in fish landings have impacted women traders' access to fish. Although fish may be obtained more cheaply in centralized harbors than at local shores, women must travel long distances and pay for fish in cash. As a result of cultural constraints on mobility and household responsibilities, most women are restricted from accessing fish in the new landing centers. They thus continue to rely either on diminishing local sources for fish or more expensive fish in urban wholesale markets. The need for capital, centralized landing sites, and bulk landings, combined with household responsibilities and cultural factors limiting women's mobility, have in general placed women at a disadvantage in the market hierarchy at the same time the local ecological crisis has increased household reliance on their work in fish marketing for survival (Hapke, 2001b). To cope with these new challenges, some women have pooled resources to share transport and buy fish in bulk (Hapke, 2001a). Women have also organized politically to press the state to support their work in marketing such as providing transportation (Nayak, 1990).

Commodity chain analysis linked to an understanding of local divisions of labour as they are informed by gender provides us an understanding of the general pattern of globalization's impacts on fisherfolk households in a given region. Extending this analysis to the level of the household and questions of livelihood additionally provides a more nuanced understanding of how global economic processes impact households and individuals in particular ways. For example, women's actual relations to the fish economy/commodity chain and fish marketing in Trivandrum are much more complex and varied than suggested by the local gender division of labour and differ according to the type of fishing craft and the size and composition of fishing crews (Hapke, 2001a). In *kattumaram*[1] fishing, for example, female kin often take the catch directly to the market. However, in beach seine fishing, the entire catch is usually auctioned on the beach. Women also take up fish marketing under a wide range of contexts and circumstances. Not all fishing efforts are successful, and not all households own fishing gear. When necessary some women may buy fish from non-kin boats to take to market; other women go to the market only when their husbands (or sons) have fish. Examining these variations is crucial is to understanding the complexities of the gendered nature of globalization. One way to examine these variations is through the analysis of livelihood strategies and the household economy.

Gender, household economies and livelihoods

Factors such as current asset base (boat ownership/non-ownership), household size and composition (age, number and gender of members), education and skill levels, work identities and family ideologies, and entrepreneurial initiative (agency) shape the particular livelihood strategies individuals and households adopt. For example, households that are able to expand their asset base are not only able to withstand the shocks of ecological crisis, they may even benefit directly from new market trends and opportunities. The willingness of households to deploy women in remunerative work, the extent of their mobility, and their level of skill shapes the particular strategies households adopt, which then shapes future options for livelihood strategies. To illustrate how these factors influence particular experiences of globalization, I turn now to four individual household examples. These individuals were interviewed in different years over the course of my field research between 1993-94 and 2008. Although the details of their individual situations have changed over time, the overall structure of fish marketing processes has not changed substantially during the period of field research with the exception that the proportion of nonlocal fish in consumer markets appeared to have increased somewhat by 2005. This would have increased the reliance of women fish traders on wholesale markets for their supply of fish. Collectively, their stories are representative of the different ways households are connected to the local fish economy and the strategies they have adopted to cope with commercialization and ecological crisis.

[1] Small canoe-type boat made from strapping 3-4 logs together.

*Lily***.** (Interviewed in 1994 and 2005.) In 2005 Lily is 49 years old. In her household are her husband, age 55, and an unmarried son, age 25. Her two daughters, also in their 20s, are married and live in their own houses. Lily currently works as a wholesale fish trader in one of the capital city's large marketplaces. Her husband previously was a fisherman but has worked as a porter at the airport for most of their married life.

When I was young I really wanted to go to school, but I was not allowed to because I was needed to look after my younger brother. I started doing the fish business when I was ten years old. My mother took me to the market. I would go with her to her line of household clients. She would sit on a corner and ask me to take small baskets of fish to different houses. At noon we would go together to collect money and get food. When I was 13, my mother was in an accident and couldn't go to the market for three years. During this time I still went. I bought fish at the shore, not at the market, and took it to my mother's line. When my mother could work again, I stopped going with her and joined my aunt in a small marketplace selling fish we bought at the shore. I got married when I was 18. My husband used to fish so I would take his fish to the market. Two years after marriage, I formed a partnership with three other women. We bought fish in Palayam (the main wholesale market at the time) -- two boxes – divided it up between us and sold it in Kaithamukku (a retail marketplace). At that time we didn't have the intelligence to sell it in Palayam itself (do a wholesale business), but later we decided we could make more money if we sold fish to women traders in Palayam. So that's what we started doing. We buy five to seven crates of fish in Pangode (current main wholesale market) every morning. We arrive at 5:00 AM. By 7:00 AM we have our fish and hire cycle loaders to carry it to Palayam where we sell it to women traders. If there's leftover we sell it to customers (consumers) who come around 10:00 AM. Then we buy whatever we items we need in the market and go home by 12:00.

Selin. (Interviewed in 1999 and 2005.) In 2005 Selin is 35 years old. Her husband is 39. She has one daughter, age 15, and 1 son, age 13. Both attend school. Her father-in-law who is retired also lives in her house. Selin works as a fish vendor. Her husband is a fisherman who has owned his own boat for most of their married life. First he owned a *kattumaram*, which was purchased with her dowry funds. For the past 6 years he has owned a outboard motor boat which they purchased partly with a government loan. Selin organized several private loans to make up the balance.

I am from Marianad originally. I started going to the market with my mother when I was 10. We went to Mudikumpuzha and would carry the fish on our heads to the ferry and take a boat to the other side. I helped my mother for 4 years, and I learned how to do the business in that 4 years. Then I started my own separate business, but I went to the same market as my mother. I would spend my earnings on my own clothes and then give the rest to my mother who saved it for my dowry. After marriage I came to Thope (this village). So then I started going to Chalai (large wholesale market in capital city) and to Vadakada (a nearby market). My husband is a fisherman. He had a kattumaram for 8 years, but before that he worked for other people (boat owners). When we had the kattumaram, I would take the fish to the market if the prices on the shore were too low.

But first we would try to sell the fish on the shore. Now he owns an outboard motorboat. With that, I'll take whatever I can handle to the market, and the remainder will be sold on the shore. The reason (for this) is that to meet daily expenses, we need cash. If we sell all the fish on the shore, we won't get cash right away. If I take part of the catch to the market, I'll get cash that day itself. If he doesn't get a catch, then I go to Chalai and buy fish to sell or I get fish here on the shore if it's available.

Tracy. Tracy was 60 years old when I interviewed her in 1999. She lived with her husband, age 70; a son, age 26; 2 daughters, ages 20 and 23; a son-in-law, 32 years old; and a 2-year old grandchild. She was working as a small-scale retail vendor in a city marketplace. Her son and son-in-law were working intermittently for other fishermen with boats when work was available.

I've been going to the market (selling fish) for the past 20 years. Even before marriage I went to the market. I started when I was 15 with my mother. After marriage I stopped for a while. After we had our first two children (about 30 years ago) we bought a "kambavala" (beach seine net and large canoe). We had the kambavala for 10 years, and I used to manage it. I kept track of how much fish was sold, who worked. I divided money among the workers. Like that. So, I didn't go to the market during this time. Then the boat got ruined so we sold the net, and I started going to the market again. After selling the net, my husband, Thomas, would go to Calicut (northern Kerala) every year to fish and send money home. But, he's now 70 years old. He has diabetes and had to stop working six or seven years ago.

*Kochetracy***.** Kochetracy was 47 years old at the time of her interview in 1999. She was working as a fish trader but only went to the market when there was fish available at the local shore because she did not have the necessary connections to get credit in the wholesale market. Her husband, Seril, age 50, sometimes worked as a fisherman for others on both boats with outboard motors and *kattumaram*. They had four adult children – two daughters (Stella, 24, and Serafin, 23) and two sons (Sunil, 21 and Reetus, 20). Stella had been working as a maid in Kuwait for the past year and a half. Serafin was recently widowed, so had moved back into the house with her two young children. Sunil and Reetus had attended school to the 10^{th} standard (grade) but both failed the final exams and were working in a restaurant.

I am from Vizhanjam (a large fishing village and harbor for boats with outboard motors south of Kochethop). My father owned a boat, and his catch was auctioned in the harbor so we (mother and sisters) did not have to work in fish marketing. We also had a net-making business and so we worked in that. But, then machine-made nets were introduced so we lost that. I started selling fish five years after marrying Seril. His family had a kattumaram for 18 years. There would be more fish than buyers so Seril's mother asked me to help her take it to the market and taught me how to sell it. I also had an illicit liquor business until 10 years ago (i.e., 1989). It was a small business but provided enough to run the family. I started this business because my husband was an alcoholic. Whatever money he earned he drank, and we were in poverty. Now he just plays cards. Then (in the

late 1980s) the Church began a campaign to stop illicit liquor brewing so I shut down my business and now just go to the market when I can get fish. Before Stella went to Kuwait she attended a sewing/bookbinding class in which she earned about Rs 150/month (US $50). Before marriage, Serafin worked in a prawn-processing factory in Chennai for about a year and a half, but she left this job after marriage. Her husband worked in construction but was killed in an accident at work. After he died she came back to Trivandrum and now looks after her children and helps with the housework. We live on what I make in the market and what Sunil and Reetus make in the restaurant.

Discussion

. These four cases represent different ways households and individuals are connected to the fish economy and different experiences of the economic transformations associated with globalization as a result. They also show that the extent to which men responsibly contribute their earnings to household budgets help determine women's livelihood options. Over the course of Lily's life we see different connections to the fish commodity chain at different times. When she was young, fish was more plentiful on local shores, and for some time her husband harvested fish that she then took to the market. Her shift to procuring fish from a city wholesale market roughly corresponds to the period when wholesale market expansion began to take place (1970s). Commercialization and expansion of the fish market structure at that time presented an opportunity to move into wholesale trade, which she seized entirely on her own initiative, that is, without any advantages of State support. Lily also represents an example of the advantages of diversifying sources of household income. Her husband's regular employment at the airport, though low-wage, has been critical for their household support, allowing her to save and invest a greater share of her earnings in her fish trade business than what may have been possible without his income. This has ensured her a solid livelihood. When I revisited her in 2005, she was clearly financially secure. She reported having a stable income, and she had been able to arrange very good marriages for her two daughters to men working in the Middle East, which required substantial dowries. Both were living very comfortably in well-furnished, two-story concrete houses.

Selin is another example of entrepreneurial skill and flexibility in being able to adapt to changing conditions. First, her skill in fish vending, savings, and financial acumen underlay her household's ability to acquire first a traditional boat, and then later build on this asset base to acquire an outboard motor boat. Second, at the time of Selin's marriage (around 1990), urban wholesale markets had expanded and presented an alternative source of fish independent of her husband's fishing efforts. Procuring fish in the market while her husband sold his catch on the shore represents a livelihood strategy that expands sources of household income. If her husband can sell his catch on the shore for a sufficiently high price, and if she conducts an independent market-based fish trade business, they enjoy two streams of income instead of the one if she were to take his fish to the market directly. Or, if shore prices are low, she can take the fish to the market as a backup strategy. Taking a portion of the current catch from the outboard motor boat also represents an entrepreneurial flexibility that meets their daily needs for cash without overburdening her workload.

The third aspect of Selin's entrepreneurship is her ability to take advantage of government loan programs and marshal other sources of capital to expand her household asset base. These skills and actions represent an ability to adapt to transformations embedded in the fish food commodity chain and weather the challenges of globalization and its impacts. It is important, however, to emphasize that despite the relative success of these strategies, the overall situation of Selin's household is still precarious. A week before the interview with Selin took place, her husband's boat had sustained damage that was quite expensive to repair and caused considerable financial stress.

In Tracy's household we see cyclical patterns of boat ownership and loss. When they owned the beach seine (in the 1970s), overfishing had not yet affected local harvests, and their income from the net supported their household. The loss of the boat forced a change in their livelihood strategies. The mechanized sector presented an opportunity to her husband to migrate for work while he could, but at the time of the interview the household was relying on her work in fish vending and her son and son-in-law's work as hired fishermen, which, in the ecological context of declining local harvests in the late 1990s, was quite precarious. Few households could survive only on male work in fishing. Although the existence of urban wholesale markets provided her access to fish and an ability to earn an income, her age, lack of financial resources, and the medical expenses associated with her husband's illness posed significant constraints. Although able to operate within the transformed marketing structure, she was just barely surviving.

Kochetracy represents a different way in which women fish traders can be connected to fish marketing and fish commodity chain. Kochetracy is the de facto head of her household. Although her husband, Seril, owned a boat, his alcoholism undermined his household's economic security. Kochetracy has had to be very creative in forging a livelihood, undertaking different activities at different times as opportunities presented themselves and then vanished, e.g., operating a liquor brewing business until the Church intervened. In contrast to the other women profiled above, Kochetracy took up fish vending as an adult. Typically when women take up fish vending as adults, they do so at a point of economic desperation, which means that they lack capital and must spend time learning how to do the business before they are able to glean much economic benefit. Although Kochetracy was able to learn the business as a helper under the tutelage of her mother-in-law, she does not possess the same level of business acumen as Lily and Selin. The fact that she reports not having credit connections in the wholesale market that would allow her to get fish is a limiting factor in operating a fish trade business and adjusting to the shifts in fish marketing that have followed globalization. Many women are connected to the fish economy in this way, and their livelihood needs have been completely overlooked in State intervention programmes. As a result, they struggle to survive.

The work experiences of Kochetracy's children illustrate an emerging trend among the younger generation of fisherfolk seeking employment opportunities outside the fish economy as well as new avenues of employment (prawn processing, Gulf migration). The work experiences of Kochetracy's daughters also present an interesting paradox. The cultural context of Kerala strongly

favors the male breadwinner-female housewife model. So, on the one hand, the willingness to send young women far from home to work speaks to economic desperation. On the other hand, both the girls' and boys' work experiences also indicate flexibility and willingness to find whatever work they can. Over the long run, this flexibility and willingness may be key to household survival. The literature on livelihoods indicates that work/income source diversification should be interpreted in two ways. Depending on the particular economic circumstances of a household, it can facilitate income strength and stability. Among low-income households, it also tends to indicate economic instability and thus should be read as a coping strategy for financial stress.

Conclusion

Collectively these stories begin to show us how adoption of a multi-faceted, multi-scalar framework combining commodity chain analysis with livelihoods analysis allows us to probe the complexities of globalization and more fully understand the diversity of experience and impact within general trends and processes. As the above stories illustrate, the impact of globalization on local people is quite complex and paradoxical. Individual impacts derive in large part by how one is situated within the local economy, which is shaped by factors such as household asset base, household size and composition, education and skill levels, work identities and family ideologies, socio-economic networks, and entrepreneurial initiative.

The emergence of global markets for fish and seafood products beginning in the 1960s shaped national fisheries development initiatives in developing countries in ways that dramatically transformed regional and local fish economies. The differential impacts of these transformations on women and men fishworkers as groups are revealed by a commodity chain analysis that incorporates gender and local divisions of labour as the root focal points of inquiry. Probing these impacts through examination of livelihood factors at the household level further reveals diversity of experience within these general patterns. The way different livelihood factors shape and are shaped by gendered patterns of globalization also become apparent. Different livelihood factors (assets, access and activities) embodied within individual households create different opportunities and constraints as local fish production systems undergo transformation. Some individuals benefit tremendously while others experience intensified economic stress. Understanding these differences is critical if we are to formulate development policies and programs that support fishing livelihoods at the local level.

The policy lessons that this analysis reveals are three. First, within research that informs planned intervention is the need to view production and post-production activities as equally important constituent parts of a single, integrated economic system. Our assessments of local fish production systems and proposed development programs need to be premised on an understanding that interventions in one sphere (production) will impact the other (marketing) and that different groups of workers in each sphere are likely to be impacted in different and often conflicting ways. Second is the need to recognize women's economic roles within local fishing economies and incorporate

their interests and needs in planned intervention. The tradition within fisheries development has been to overlook the centrality of women's economic activities to the household economy and thus to local fish economies as a result. Ignoring women's roles within local fish economies undermines household livelihood viability and generates economic stress among the very populations State intervention often seeks to assist. Finally, this analysis points to the need to acknowledge the multiple strategies people adopt to cope with economic change and ecological crisis and plan State interventions to support the livelihood context in which people are situated. Fundamentally, planned Sate intervention needs to be directed at ensuring individual, household and community survival over the long run.

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