



Small-scale traders, Chau Doc, Vietnam (Bush)

Fish Trade, Food and Income Security: Constraints and Barriers Faced by Small-Scale Fishers, Farmers and Traders in the Lower Mekong Basin

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Introduction

Freshwater fish and other aquatic animals are important sustainable sources of protein and income for nearly 65 million people living in the Lower Mekong Basin. However, increased infrastructure development, widening economic disparities between rural and urban areas, and rapid economic regionalization of the markets in the Basin are collectively threatening the sustainability of water resources. The implications of these changes for small-scale fishers and farmers to secure food and income are not well understood. Faced with the pressures of economic development, riparian countries must initiate policy and management strategies to protect and sustain their aquatic resources.

This article examines the role of market access to fish trade networks and value added production to maintaining food and income security of small-scale fishers and farmers. Drawing on a study conducted in early 2005 in selected sites of Southern Lao, Tonle Sap in Cambodia and the Mekong Delta in Vietnam, we propose, that first, food and income security is directly linked to the ability of small-scale fishers and farmers to access the flows of fish and fish products between markets, and second, that this access must be seen as the combination of political, cultural and social forces that influence power and control between fishers, farmers and traders. The empirical results demonstrate how fish trade generates enormous benefits for increasingly fewer traders, at the expense of smaller

stakeholders. The complex, multi-scale and socially embedded nature of rural markets presents a challenge of how to best support pro-poor trade. Policy and management which ignores this complexity will not be able to sustain natural resources, nor the livelihoods dependent on them.

Livelihoods, artisanal fish trade and governance

A sustainable livelihood is comprised of capabilities, assets and activities that allow people to cope and recover from stress and shocks while maintaining and building on those capabilities and assets, and providing for future generations (Ellis 2000). An important feature of sustainable livelihoods is the capability to diversify between a number of agricultural, non-agricultural and natural resource collection activities in order to spread risk and reduce vulnerability to environmental, social or political disturbances. Fishery-based livelihoods are widely understood to be one of the most risk prone activities in rural communities; as fishers are vulnerable to a range of environmental change and extractive pressures to which they have little control (Allison and Ellis 2001). Although these livelihoods should not be seen outside of the wider rural economy, more attention should be given to ensuring that fishers have sufficient capability to maximise the potential of existing catch thereby avoiding overexploitation.

Most fishery-based livelihoods in the Lower Mekong Basin are semi-subsistence in nature. They depend on catching fish and other aquatic animals for personal consumption and supplement income through trade that is most often highly localised. This dependency, nonetheless, differs considerably throughout the Basin, dependent on the location of the fishery, the availability of species, distance from markets, price fluctuations, individual capacity, and relationships with traders. In order to develop policy strategies that promote equitable benefits from rural trade, it is necessary to understand how small fishers and farmers cope with and adapt to risk and vulnerability in the context of maintaining their livelihood.

Mekong fisheries governance needs to move beyond the decentralisation of management through state sanctioned regulations and instead address the devolution of power to develop capacity of fishers and farmers to not only control their resources but also better negotiate their access to income through the market (**Box 1**). This calls for new forms of governance which offers inclusive decision making processes, addresses question of power and recognises the organic linkage between local and regional as well as formal and informal processes. If developed in a participatory and transparent way, such an approach can enhance the access of the poor to trade and provide them the opportunities to reduce their vulnerability.

Fishery-based livelihoods in the Mekong Basin

The multiple contexts in which livelihoods exist in each country is an imperative starting point for understanding the existing and potential capability of fishers and farmers to increase access and diversification in fish trade, and the potential for increasing food and income security.

Box 1. Governance

'Governance' offers new ways of understanding the increasingly complex institutional arrangements over competing claims and decision making in public policy. In combination with a more detailed examination of relationships between traders and producers in fish trade networks governance offers a way of understanding how various groups negotiate their positions and are combined in decision making processes over resource utilisation. Both state and non-state actors need to analyse these issues of power and control before suitable interventions are devised that promote responsible fisheries management while also enable people to maintain food and income security.

Southern Lao PDR

Fisheries in Southern Lao PDR are characterized as small-scale and seasonal, practiced by predominantly semi-subsistence communities dependent on a combination of seasonal fishing activities to maintain food and income security. Seasonal fisheries target the migrations of both large-size, high-value species and locally consumed small-size, low-value species. The fish trading networks from these areas, once extensive, are increasingly concentrated along new roads and controlled by a smaller number of large-scale traders.

The government policy of economic liberalization and regional integration has led to the rapid transition of many rural livelihoods toward a market economy. Yet, across the country, people lack commercial skills and knowledge to effectively compete in national and international trade. The relatively strong dependency of rural Lao communities on the natural economy, including living aquatic resources, and the lack of non-fishery-based income opportunities,

River fishery, Attapeu, Lao PDR; and Nakasang market, Khong District, Lao PDR (Bush)





Processed snakehead fillets, Long Xuyen, Vietnam (Bush)

makes them more vulnerable in adapting to this seemingly inevitable transformation.

Mekong Delta (Vietnam)

Small-scale farmers use a number of strategies, ranging from the VAC systems (*Vuon-Ao-Chuong* meaning integrated garden, pond and livestock), used for family consumption and local trade, to large intensive fish cage culture sold directly to processing companies for export markets. Capture fisheries are accessible to the majority of the households who mostly fish the extensive canal systems and flooded areas during the wet seasons. The catch is dominated by small species that are either consumed locally, or sold as feed to aquaculture. The specific contribution to food and income security is not well understood.

Fishers and farmers in the Delta are exposed to rapid economic change and associated environmental change. With government support focused on export-led trade, the number of small and medium-scale intensive farming systems have increased, while the capacity for effective economic management has lagged behind. This disparity is increasingly seen as a key factor in limiting the ability of poorer farmers to take advantage of rapid change in infrastructure development.

Furthermore, while communities in the Delta are well integrated into a market economy, they are increasingly vulnerable to international market fluctuations. Development activities, especially in fisheries, have not been given due attention, especially concerning post-production and the barriers to trade faced by poor fishers and farmers dependent on low value capture fisheries.

Tonle Sap (Cambodia)

Floating communities living over the lake are comprised of some of the only full-time fishers in the Mekong Basin, dependent on a variety of seasonal fisheries. Most are landless Khmer, Vietnamese or Cham people with limited alternative sources of income. Despite state reforms to the fishery sector since 2000, small-scale fishers remain highly vulnerable as large-scale concessionaires continue to utilize illegal fishing gears, increasing their share of fish thereby restricting small-scale fishers' income and the potential for food security.

The Tonle Sap fish trading systems facilitate a high volume of trade concentrated in three main landing ports. Export markets are increasingly controlled by efficient, capital intensive, large-scale traders and trading associations. In contrast, domestic fish markets are 'traditional and habitual', characterized by high levels of informal taxes and gratuities arbitrarily paid to a range of government sanctioned concessionaires, and a lack of managerial and entrepreneurial skill, the combination of which resulting in 'low quality' and 'low value' fish and fish products. The complexity of ownership and diffuse trading systems have hindered a clear understanding and working solution to address the main barriers faced by small fishers and traders.

Promoting equitable fish trade

Equitable access (**Box 2**) and value-added production (**Box 3**) can be improved by addressing the specific social, cultural and political constraints that farmers and fishers face. This is best achieved by developing individual capacity to negotiate access and more efficiently compete in trade.

Infrastructure

Infrastructure development is a major focus of national governments and multi-national institutions when addressing market development throughout the Basin. Further attention is needed to determine the effectiveness of physical infrastructure, such as roads and market places, and the potential of what might be termed 'social infrastructure', including both professional and personal relationships.

Box 2. Market access

(From Ribot, Jesse C., and Nancy L. Peluso. 2003. *A Theory of Access*. *Rural Sociology* 68 (2):153-181.)

Market access is defined as the *ability*, rather than the *right*, to benefit from social relationships and institutions limiting participation in trade. In particular, access is a form of *social capital* comprised of trust, rules, norms and sanctions used to establish and maintain participation in trade.

Fishers and traders in each country negotiate their positioning within trade networks through a broad set of cultural and societal factors. Market access is most often limited by: i) the availability of marketable fish, ii) flexible, low interest finance, and iii) the ability to negotiate trade relations with traders and middlemen. In addition, access is controlled by a combination of debt-tied and social obligations based on ethnic, familial and socio-political ties between fishers and

traders. Often the importance of the initial credit transaction is secondary to the social obligation of the fisher to ensure supply to the traders with which they are indebted.

Despite often being grouped together as 'middlemen', the traders, collectors and wholesalers that facilitate trade are comprised of a diverse range of individuals who negotiate their position in response to prevailing social and environmental conditions. Although widely perceived as exploitative to small-scale fishers and farmers, these 'middlemen' play an important entrepreneurial role in trade; absorbing considerable risk and financing market access for otherwise disenfranchised people.

Box 3. Value-added production

Value-addition is broadly defined as post-harvest activities that increase the value of fresh fish. It is a form of *human capital* and *financial capital* that includes knowledge and skills, and investment needed to produce products including (but not limited to) dried, smoked and fermented fish.

Fish processing is traditionally linked to surplus catches in the wet season migrations. Excess fish is preserved for sale and consumption later in the year. Small-scale operators appear to maintain considerable control over fish processing, especially traditional activities such as fermented fish sauce.

Nevertheless, this pattern is changing throughout the Basin. As transport infrastructure improves, investment by people from outside often long established networks are taking over processing and value-added activities. This, in turn, leads to increased investment in preservation technologies and drastically reduced transit times to market, making more fresh fish sold to market. Nonetheless, a series of value adding activities have emerged in the Delta and Tonle Sap which focus on increased efficiency and specialization in value chains using a number of pre-processing and re-processing techniques.

- **Diversity of products** - a range of products including dried, smoked, and fermented fish have increased market share as demand has increased

in growing urban markets. However, with greater control by larger traders, the access of small-scale fishers and farmers to higher income from retail markets has diminished.

- **Cultural importance of traditional products** - the demand for specific traditional products has increased in both Laos and Cambodia. However, it appears that demand is guided by ethnicity, which may restrict the potential for alternative, innovative value-added products.
- **Grading and labelling** - value-addition includes skill-based activities such as grading and labelling, requiring fishers and farmers to use market information and coordinate surpluses and deficits in supply and demand. Responses to market and resource fluctuations occur over extended periods allowing however they remain limited by their daily need for cash, the variable quantity of suitable species, as well the technical and marketing expertise.
- **Economies of scale** - The significant investment required for commercial fish processing indicates a fundamental obstacle to small-scale fishers in getting extra income. It is widely evident that larger, more powerful operators manage to force the price down and effectively out-compete household level operators.

- *Physical infrastructure* is promoted as an important precursor to facilitating national and regional trade flows. However, there is little understanding of the impact of physical access on competition and increasing the value for rural poor communities, and neglects social issues of power, control and ethnicity.
- *Social infrastructure* development is critical in improving the capacity of the poor and disenfranchised to access markets and value added production. Collective efforts could be promoted in extension policy and supported in legislation (e.g. cooperatives and community fisheries law) to increase bargaining power and reduce exposure of individuals and households to both economic and environmental risk. The benefits are twofold. First, state supported legitimacy gives groups the autonomy to access formal finance, advertising and tax incentives, and second, greater bargaining power increases confidence of these groups to assess and negotiate their trade arrangements.

Economic management

Since the 1980s, economic management has resulted in a series of market reforms in all three countries that have led rural markets through a simultaneous process of liberalization and regional integration. After decades of conflict and isolation, both national and local economies alike are opening up to both domestic and regional trade with positive and negative impacts on fishers and farmers.

- *Fiscal decentralisation and taxation* – each country has developed local taxation systems, targeting the largely externalized natural resource trade, including living aquatic resource. However, due to the isolation and the *ad hoc* way in which legislation and accountability has been enforced, state jurisdiction has failed to supplant established customary, and often exploitative, patriarchal systems of control. For example, informal taxes or gratuities are then imposed arbitrarily by local elites who control transport thereby increasing costs of producers.
- *Regional and global markets* – exposure to international markets appears to have positive and negative affects on small-scale farmers. Both customary and formal institutions that address financial risk should be promoted to mitigate the impacts of global economic fluctuations, protecting already vulnerable farmers and fishers.
- *Economic and business management* – the poor performance of fishers and farmers to win high prices for their produce is often associated with a lack of market expertise. Capacity building of both individuals

and farmer groups to better understand market processes will encourage stronger negotiating power and fairer market access.

Production management

Increasing the production of fish is widely perceived by government and communities alike as a way of gaining access to markets. In each case the burden is on the state, rather than individuals or communities, to address the socially and culturally embedded constraints on increasing access and value added production.

- *Aquaculture* is noted by government and communities alike as showing the greatest potential for filling the growing deficit between supply and demand. However, the ability of farmers to adopt and practice aquaculture is not well understood, nor is the contribution to increasing market access and value added production.
- *Fisheries enhancement* – is also noted as having the potential to supplement declining stocks. Its



Long Xuyen Fish market, Vietnam (Bush)

contribution to secure livelihoods for small stakeholders is not yet well understood except in small enclosed water bodies. In addition, widespread promotion may encourage a false expectation of stock improvement, and subsequently higher fishing effort, leading to further overexploitation.

While production is an important aspect of agricultural and fisheries management, aquaculture and enhanced fisheries should not be developed in lieu of the responsible management of existing capture fisheries resources. Capture fish remain the most valuable to the majority of rural communities in the Basin in terms of both food and income security, and should be supported in both government and non-government policy.

Supporting food and income security

Governments and non-government agencies have an opportunity to improve market access and value-added production in order to support food and income security of

fish dependent people. Identifying the specific roles that different fish species and products play in the livelihoods of small fishers, farmers and traders alike is an important starting point to addressing the wider social vulnerability to resource decline and market fluctuation. A number of key factors need to be recognised. These include:

- 🐟 *Consumption of fish and fish products* – The soaring prices of large and scarce fish species means that fishers and farmers mainly consume smaller non-marketable fish. For example, large native fish are a consistent source of income, often used to purchase ‘luxury’ food products such as canned fish and mackerel. This ‘protein exchange’ has implications for both the management of fish stocks and trade agreements across the Basin. More research is needed to better understand the role that different species play in providing income and nutrition.
- 🐟 *Changes to value added production* – Fermenting and drying fish remains an important income generating activity throughout the Basin. Increased physical access to markets and the decline in transport times means that there is a shift in post production activities. Fishers are forced to sell their catch fresh in order to speed up cash flow, which in turn has changed patterns of their food and income security.
- 🐟 *Social and financial debt* – Traders, fishers and farmers alike are dependent on their ability to secure a supply of fish by retaining trading capital and relations. Middlemen minimize their risk through indebting fishers and supplement fish trade with alternative products. More research is needed to identify the role of social and financial debt in securing both food and income.
- 🐟 *Employment* – A large work force is employed in fishing, farming and value adding activities. It is not only the number of jobs created that improves food and income security, but how wealth is distributed within familial and community networks, especially between seasons.

Food and income security of fishers, farmers and traders is limited by their ability to participate in a range of social, familial and financial arrangements. Specialization and intensification in production restrict their ability to either invest in existing activities or diversify into new activities. As the financial costs of fishing, farming and trading increase, control over production is concentrated within a smaller, and more powerful group. Assistance to fishers needs to support diversification of livelihood activities outside the fishery in order to minimize their vulnerability to both resource decline and market fluctuation.





40 tons of prahok, Chhnouk Tru, Cambodia (FACT)



Priorities for research and development support

Development agencies and governments alike have an opportunity to promote better market access and value-added production of fish products for small fishers, farmers and traders. The challenge remains to address the diversity and complexity of local conditions while also promoting systemic change through regional sharing and cooperation. Attention must go to mainstreaming a market-based approach to fisheries development and management in each of the countries identifying the pervasive role of markets and trade on livelihood decisions that exploit fishery resources. Priorities include:

- 🐟 Developing a strategic research agenda across the Basin advocating: i) the shared importance of fish for food and income security; and ii) the complexity of local trade dynamics and their contribution to national and regional economies. Specific attention should be given to the dynamics between economic regionalisation, market liberalization, resource access and transforming local semi-subsistence livelihoods.
- 🐟 Facilitating more equitable access to trade and value added production through cooperation between government, non-government and community stakeholders. Greater awareness of participatory resource governance strategies is required to develop interventions that address barriers to benefit sharing through issues of exclusion, power and control within local social, cultural or political processes.
- 🐟 Advocating and supporting taxation strategies that encourage local investment in fish trade. Specific attention should be given to building the capacity of local government to identify and strategically implement pro-poor taxation. Greater support to alternative financing services for small-scale production and trade should also be addressed, giving specific attention to the social and cultural constraints of credit provision in existing trade systems.
- 🐟 Promoting value-added production strategies that include alternative activities such as packaging, labelling and grading. Attention should be focused on improving efficiency and returns from current levels of production and catch through activities that build on existing socially embedded systems of control in fishing communities instead of promoting capital-intensive activities.
- 🐟 Supporting collective, community-based strategies for organizing marketing initiatives which maximize bargaining power and market share in both new and established trade networks. Any support to collective action by small stakeholders to develop their

competition through supply chain management should be sensitive to the previous failures of cooperatives in some countries.

The equitable use of fishery resources in the Lower Mekong Basin requires governments to look beyond sustainable production to a fair distribution of wealth and nutrition. This calls for an integrated approach: first, ensuring the generation of sustainable wealth through the improvement of both fish farming *and* responsible fisheries management, and second, ensuring that this wealth contributes both to national economic growth and to the improvement of poor and marginalized natural resource-based livelihoods. In order to achieve this, resource managers must widen their view of what and who constitutes the fishery, so that trade and traders are seen as an integral component of both fishery management and the maintenance of food and income security.

Acknowledgements

This article is based on a report prepared for Oxfam America, East Asia Regional Office (EARO). The paper reflects work in progress towards the development of new thinking in Mekong fish trade. It is not necessarily reflecting the policy and views of Oxfam America.

Selected reading

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Grading fish for market, Kampong Leuang, Cambodia
(Photo by courtesy of Bush)