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Value chain analysis and small-scale fisheries management

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ABSTRACT

A value chain analysis is conducted to identify upgrading, that is, improvements in quality and product design that enable producers to gain enhanced value or through diversification in the product lines served. However, a range of data and information of use to managing small-scale fisheries can be also be produced. Eight value chain studies, carried out for specific fish species in different locations around the Philippines, are examined. Policy and management lessons learned and interventions resulting from the value chain analysis for small-scale fisheries management are discussed. Recommendations for using value chain analysis in small-scale fisheries management include stricter regulation on size limits of harvest, monitoring schemes, certification processes, post-harvest facilities, seasonal closures, social enterprises, credit facilities, and habitat protection.

1. Introduction

One of the greatest obstacles to decision- and policy-making with regard to small-scale fisheries is the lack of reliable data and information about various facets of the sector. Facilitating optimal conditions for small-scale fishers depends on access to good information upon which appropriate policies and management strategies can be based. This requires improved data collection, as well as further research, on small-scale fisheries to better understand the conditions, opportunities and constraints of this sector [1,2].

In recent years there has been increased interest in the value chains of seafood products and in investigating the linkages and relationship between different actors and economic agents (individuals, companies, government) in the value chains. The value chain describes the full range of activities required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers and final disposal after use [3]. Small-scale fisheries feed into diverse and spatially extensive networks of supply and trade that connect production with consumers, adding significant value and generating important levels of employment (the value chain). To some extent, this system can be used to provide an important mediation and buffering function to increasing variability in supply and source location, but direct impacts will also affect its ability to do so. This system can also be used to reduce vulnerability and increase adaptive capacities of fishers and fishing households [4].

The value chain perspective is important because it offers insights that would not surface in studies focused on individual economic agents or particular fisheries policy or management frameworks. A value chain analysis can also uncover insights into the challenges that face the sector as a result of different drivers of change, such as weak governance and market access, including small firms' and fishers' competitiveness in changing markets [4]. A value chain perspective of the small-scale fisheries sector can reveal response strategies that enhance the sustainability and competitiveness of the entire value chain

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and the economic agents that comprise it. Value chain analysis helps to effectively isolate the binding constraints that affect the sector in a systematic manner. The set of issues that emerge from such a detailed analysis at a sector level has implications for both the public and private sectors alike. Some of the issues are sector-specific, and others are relevant across an economy and apply to many sectors and firms in a country. It also provides an opportunity to find policy and management positions that can be supported by the sector's different economic agents and important stakeholders.

This paper will examine the role that value chain analysis can play in small-scale fisheries management through case studies from the Philippines. Eight value chain studies, carried out for specific fish species in different locations around the country, will be presented. Policy and management lessons learned and interventions resulting from the value chain analysis for fisheries management will be discussed. Recommendations for using value chain analysis in small-scale fisheries management will be presented.

2. Value chain analysis

A value chain analysis (VCA) can be either a narrow or a broad approach. In the former, a value chain includes the range of activities performed within a firm to produce a certain output. A broad approach to value chain analysis starts from the production system of the raw materials and moves along the linkages with other actors and enterprises engaged in trading, processing, assembling, transporting, etc. This broad approach examines all of the activities of a single enterprise, as well as all of the backward and forward linkages from the raw materials to final consumer [5]. The idea of a value chain is associated with the concept of governance, which is of key importance for fisheries because fisheries value chains crucially depend on the utilization of natural and environmental resources. The value chain framework can also be used to understand social ties and traditional norms, which can be used to draw conclusions on the participation of the poor and the potential impact of value chain development on poverty reduction, food security and fisheries management. Value chain analysis includes issues of governance (rules operating in a value chain) and coordination (formal and informal arrangements between actors) and the strategies for linkages and trust between actors in the chain. Conducting a value chain analysis involves an examination of how the individual actors operate, what is going on between the actors in the chain, what keeps the actors together, what information is shared, what power relationships exist, and how the relationships evolve.

The value chain approach is flexible and mainly a descriptive tool to look at the interactions between different economic agents. Value chain analysis allows for different entry points depending upon the objective of the analysis [5]. As a descriptive tool it has various advantages in so far as it forces the analyst to consider both the micro and macro aspects involved in the production and exchange activities. Commodity-based analysis can provide better insights into the organizational structures and strategies of different actors and an understanding of economic processes often studied only at the global level (often ignoring local differentiation of processes) or at the national/local level (often downplaying the larger forces that shape socio-economic change and policy making). At the heart of the analysis is the mapping of actors and key linkages. The value added of the value chain approach, however, comes from assessing these intra-and interactor linkages through the lens of issues of governance and distributional considerations. By systematically understanding these linkages within a network, one can better prescribe policy recommendations and, moreover, further understand their reverberations throughout the chain.

The methodology should address the following issues, and begin with an understanding of the nature of final markets, which are increasingly the driver in many value chains [5]:

- the point of entry for value chain analysis;
- mapping value chains (actors, product flow, volume, geographic flow, knowledge and information);
- product segments;
- how producers access final markets;
- governance (coordination, regulation, control);
- relationships, linkages and trust;
- upgrading in value chains; and
- costs and margins;
- distributional (income and employment).

Kaplinsky and Morris [3] stress that there is no 'correct' way to conduct a value chain analysis: rather, the approach taken fundamentally rests upon the research question that is being answered. None the less, four aspects of value chain analysis, as applied to small-scale fisheries, are particularly noteworthy.

1. At its most basic level, a value-chain analysis *systematically maps the economic agents* participating in the production, distribution, marketing and sales of a particular product (or products). This mapping assesses the characteristics of economic agents, profit and cost structures, flows of goods throughout the chain, employment characteristics and the destination and volumes of domestic and foreign sales [3]. Such details can be gathered from a combination of primary survey work, focus groups, participatory rural assessments (PRAs), informal interviews and secondary data.
2. Value chain analysis can play a key role in *identifying the distribution of benefits of economic agents in the chain.* That is, through the analysis of margins and profits within the chain, one can determine who benefits from participation in the chain and which economic agents could benefit from increased support or organization. This is particularly important in the context of developing countries (and small-scale fisheries in particular), given concerns that the poor in particular are vulnerable to the process of globalization [3]. One can supplement this analysis by determining the nature of participation within the chain to understand the characteristics of its participants.
3. Value chain analysis can be used to *examine the role of upgrading within the chain.* Upgrading can involve improvements in quality and product design that enable producers to gain enhanced value or through diversification in the product lines served. An analysis of the upgrading process includes an assessment of the profitability of actors within the chain, as well as information on constraints currently present. Governance issues play a key role in defining how such upgrading occurs. In addition, the structure of regulations, entry barriers, trade restrictions and standards can further shape and influence the environment in which upgrading can take place.
4. Value chain analysis can *highlight the role of governance* in the value chain. Governance in a value chain refers the structure of relationships and coordination mechanisms that exist between economic agents in that value chain. Governance is important from a policy perspective through identification of the institutional arrangements that may need to be targeted to improve capabilities in the value chain, remedy distributional distortions and increase value added in the sector.

3. Methodology

The selected study sites were the eight target Marine Key Biodiversity Areas (MKBAs) of the Ecosystems Improved for Sustainable Fisheries (ECOFISH) Project, a five-year initiative of the Philippine Government through the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR) and the United States Government, through United States Agency for International Development (USAID) (Fig. 1). The sites are: (1) Lingayen Gulf (Pangasinan and La Union provinces), (2) Verde Island Passage (Batangas province), (3) Calamianes Island Group (Palawan province), (4) Ticao-San Bernardino-Lagonoy Gulf (Sorsogon and Northern Samar