

Best practices to support and improve the livelihoods of small-scale fisheries and aquaculture households



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**BEST PRACTICES TO SUPPORT AND IMPROVE THE LIVELIHOODS OF
SMALL-SCALE FISHERIES AND AQUACULTURE HOUSEHOLDS**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
REGIONAL OFFICE FOR ASIA AND THE PACIFIC
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FOREWORD

As part of its strategic plan, the Asia-Pacific Fishery Commission (APFIC) has committed itself to work and support the area of small-scale fisheries in the Asian region. At its 30th Session in Manado (2008) APFIC undertook to identify areas of best practice and policies to support coastal community livelihood and also review those aspects that are to be avoided or which negatively impact coastal livelihoods. This document contains three reviews covering some key aspects related to policy support to livelihoods resilience and diversification and offers recommendations on approaches and practices which offer the best opportunity for practically improving livelihoods and building resilience in communities. The reviews formed the background to the APFIC Regional Consultative workshop “Best practices to support and improve the livelihoods of small-scale fisheries and aquaculture households”, convened 13–15 October 2009 in Manila, Philippines. The outcomes of this workshop and the background reviews are a regional contribution to the ongoing policy dialogue in the region as to how best support small-scale fisheries and aquaculture livelihoods and to improve their resilience in the face of the emerging challenges of globalization, economic development, social transitions and climate change.



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1 INTRODUCTION

At its 30th Session in Manado (2008), the Asia-Pacific Fishery Commission (APFIC) committed itself to identify areas of best practice and policies to support coastal community livelihood and also review those aspects that are to be avoided or which negatively impact coastal livelihoods. As part of this commitment, APFIC convened a Regional Consultative workshop “Best practices to support and improve the livelihoods of small-scale fisheries and aquaculture households”, 13–15 October 2009, Manila, Philippines, to develop guidance applicable to the local context of the region, to bring to the attention of policy-makers, government, regional organizations and non-governmental organizations. This guidance covered approaches and practices which offer the best opportunity for really improving livelihoods and building resilience in communities. This document contains three reviews covering some key aspects related to policy support to livelihoods resilience and diversification.

“The impact of sectoral and non-sectoral policies on fisheries and aquaculture dependent livelihoods in Asia” by Gayathri Sriskanthan

This examines how sectoral and non-sectoral policies can be made to support the livelihoods of poorer groups dependent on the fisheries and aquaculture sector in Asia. The review seeks to understand some of the key policy trends and impacts and focusses on areas of best practice as well as areas of concern. It contains suggestions and recommendations on key areas that could be addressed to improve progress towards sustainable development and livelihoods goals in the sector.

“Facilitating access to rural finance/microfinance services for small-scale fisheries & aquaculture in Southeast Asian countries” by Jocelyn Badiola

This looks at the development of microfinance services for small scale coastal fisheries as well as aquaculture with special attention to women in Southeast Asian countries particularly Cambodia, Indonesia, Philippines, Timor-Leste and Viet Nam. It looks for ways to make microfinance work in small scale fisheries and aquaculture in these Southeast Asian Countries. This review collates information from more recent studies in order to describe the extent of small fisheries and aquaculture development in Southeast Asia and reviews the development of microfinance policies in Southeast Asia. It discusses the importance of microfinance for small scale fisheries and aquaculture especially among Asian women and presents the approaches and best practices, so far, in microfinance for small scale fisheries and aquaculture. The review also provides information on the extent of outreach in small scale fisheries and aquaculture and identifies major issues, constraints and opportunities in microfinance for small scale fisheries and aquaculture.

“Microfinance services for coastal small scale fisheries and aquaculture for South Asia countries with special attention to women” by K.G. Karmakar, G.S. Mehta, S.K. Ghosh and P. Selvaraj

This covers the approaches and interventions of microfinance services for coastal small fisher people and aqua culturists, by identifying institutions, the financial services for small-scale fisher people and aqua culturists such as loans, savings, insurance, etc. with a gender perspective. The success or failures/limitations of these approaches is considered and the causes attributed to their success or failure and their primary and secondary beneficiaries are discussed. The review identifies the challenges faced by banks and other financial institutions providing credit and other services for small-scale fisheries and aquaculture in order to identify challenges and how to address these challenges. Lending gaps to these groups and how to improve the provision of services and funds to them are also evaluated. This review provides specific recommendations for innovative microfinance services, policies, approaches and delivery mechanisms for poverty eradication and livelihood development that can be considered best practice recommendations for financial services in the sector.

Summary recommendations of the APFIC Regional Consultative Workshop

The principle conclusions and recommendations of the APFIC Regional Consultative Workshop “Best practices to support and improve the livelihoods of small-scale fisheries and aquaculture households” indicate those areas of best practice and policies to support coastal community livelihoods and provide advice on those aspects that are to be avoided.

Investment in effective resources management and governance, and maintained ecosystem health, is the major foundation or a prerequisite for supporting and improving livelihoods of small-scale fisheries and aquaculture households. There is a need for specific policy development that addresses the small scale sector and the promotion of diversification within it. This should reflect and respect the rights of the small-scale fisheries, particularly in key areas such land tenure and access.

Policy development following the principles of the Code of Conduct for Responsible Fisheries (CCRF) and using the Ecosystem Approach to Fisheries and Aquaculture (EAF/EAA) aims at achieving a balance between ecological well-being, human well-being and good governance. There is a close linkage between the policy objectives of economic development, providing for food, income and sustaining livelihoods and fisheries management, conserving biodiversity, habitats and resources.

There is a clear need for diversification of livelihoods in many resource dependent fishing communities and small-scale aquaculture communities. Incomes are declining and the natural resource base is increasingly degraded. These dependent communities are seeking increase household income and reduced uncertainty of livelihood. Diversification is constrained by lack of coherence between national and local development planning and serious capacity and skills gaps. Local budgetary allocation/resourcing is rarely directed at natural resources and weak governance undermines many initiatives.

Small-scale fisheries and aquaculture communities marginalized in development as they are often considered too poor and too difficult to work with. They frequently lack collateral or assets and there may appear to be limited options to diversify. Despite this there are clear opportunities and plenty of examples of successful formal and informal diversification initiatives. These are being promoted by government, NGO/CBO initiated-facilitated, community self-empowerment processes and Regional Organizations

Informing policy and policy development

Good policies should also focus on improving fisheries management and sustainable development. Policy preferences by local and national decision makers are still often very growth focused aiming to increase production, intensify and drive exports, promote aquaculture development. These are often focused at natural resource extraction rather than conservation or sustainable utilization. Harmonizing policies within the framework of the Ecosystem Approach to Fishery/Aquaculture management can provide the proper balance between conservation and development and improve policy coherence.

Emphasis on support for diversification to small-scale sector is frequently driven by reluctance to tackle issues of the larger-scale sector. Problems arise because the underlying causes of unsustainable fisheries and fisheries livelihoods are not being addressed (e.g. over-capacity in the more intensive/industrial fisheries; illegal fishing, lack of effective regulation, market inefficiencies, etc.).

Policies for resource management do exist in many countries, but often weakly implemented. The impacts of non-implementation are poorly understood, as are the gains possible from effective implementation. Policies may conflict (e.g. increasing production and export promotion versus protection of small scale fisheries, maximizing employment and conserving resources). There is often more emphasis on strategies for resolving conflicts but not on preventing their occurrence. Such short term “fixes” often result in longer-term systemic problems (e.g. subsidies on fuel, relaxation of fishing regulations). Long-term “change policies” often result in short-term loss, this may require other supporting policy to mitigate such impacts.

The process of policy development is often moderated by political processes, lacks effective consultations with those affected and not adequately informed by scientific and technical basis for the decision. Lobbying by interest groups invariably results in a policy that disadvantaged other groups. Feedback of the impacts of policy from those adversely affected does not always reach the decision making level.

There are significant grass roots level initiatives that could usefully inform policy development or revision. But these are usually disparate and poorly coordinated at the national level to have any impact on national policy and planning processes.

Sectoral interventions with a sectoral focus may be constrained by lack of the right linkages and coordination. This also limits the effective implementation of local initiatives because local institutions (such as a local government unit) do not have all the necessary capacity and experience to address the broad and multi-faceted issue of resources management and livelihoods development. Engaging the collaboration of a partner organization or various partner organizations with different competencies and specializations (i.e. rural development, social mobilization, finance, etc.) which are then coordinated, will be vastly more effective.

Local government invariably derives revenue from and even invests in fisheries and aquaculture but may not invest in the management of the natural resources on which fisheries depends. In this regard, there is a need for capacity development and sensitization of local level government on the issues of small-scale fisheries governance and livelihood enhancement and their strong ecological and economic links with resource management.

There are significant opportunities presented by non-sectoral or social development type policies such as education, land reform, property rights and tenure, health service delivery, financial services, market access especially reducing asymmetry in market information, liberalization of trade, and integrated coastal environmental management.

Promotion of diversification

A wide range of opportunities has been identified related to improving production, increasing technical and economic efficiency, improving product quality, enabling better market access, non fishery activities, and other activities such as micro-enterprises that can reduce or at least do not increase pressure on the fishery resource.

Livelihood diversification programmes that aim to reduce fishing pressure need to be linked with support to strengthen fisheries governance. This will require some form of limitation on re-entry or additional new entry. Viable alternative livelihoods will also require a policy that promotes healthy competition in a level-playing field where technical and economic efficiencies in management and production processes and an efficient market can greatly improve economic returns, reduce wastes and — most crucially — inhibit the tendency to seek rent.

In promoting diversification it is important to establish clear policy and programme goals which are:

- ▶ informed by national and local context,
- ▶ locally specific but coherent with wider economic, environmental and social policy.

It is essential to ensure participation at all stages of diversification-related interventions:

- ▶ from programme identification, through policy formulation and planning, to implementation and evaluation.
- ▶ This will require capacity building and investment
- ▶ Coordination between development initiatives is a critical need, particularly at the local level.

Programmatic support for diversification should be flexible, not blue-printed. This includes provision of generic financial, business and technical services rather than narrowly specified technical interventions that are in most cases conceived and imposed from outside.

Carry out viability analysis of proposed alternative or supplementary activities before encouraging fishers to adopt them. Pay particular attention to assessing and addressing marketing opportunities and constraints. Viable and sustainable diversification needs to build on people's aspirations, strengths and existing initiatives and aim to fit within existing institutional processes.

Increasing the effectiveness of future programmes relies on proper monitoring and evaluations. This requires good, participatory baseline surveys, monitoring and particularly, post-impact assessment.

Microfinance support to livelihoods and diversification

Microfinance offers diverse opportunities and there are examples of good schemes, also poorly implemented schemes. Innovative schemes can lead people out of poverty financial services are varied and can be used for:

- ▶ Production needs (short term)
- ▶ Cash-flow
- ▶ Standard daily needs, consumption credit, education
- ▶ Emergency/contingency
- ▶ Savings mechanisms
- ▶ Refinancing an existing loan
- ▶ May not be so useful for *long-term* borrowing

Financial services must be flexible and not over-bureaucratic. The requirements for collateral challenge entry for many poorer individuals and fisheries and farmers are constrained by inflexible repayment schedules due to their irregular and often seasonal incomes.

Microfinance institutions may not have the same social roles and linkages as traditional or informal financial services. Informal systems are often local, quick, flexible and familiar. Their interest rates are high but the overall package of services may be preferable to that of formal lending. Microfinance is not cheap nor economically efficient for the credit institution to administer, which is often the reason that interests in micro-loans can be high.

Target groups have very different needs and capacities. Groups such as the very poor, migrants, or those with no collateral will require specific modes of microfinancing. Group approaches may not always work well, although it tends to be the recommended starting point. Capacity building/organization is critical, as fishers or farmers need the capacity building to borrow and the finance sector needs confidence to lend to them. The provision of technical support is often critical to reduce risks.

Non-banking specialists, such as Fisheries Departments or NGO's without that capacity should avoid direct involvement in financial service provisions. Their role should be to act as a go-between or facilitator between fisheries sector and financial service providers. Government/donor support to microfinance can undermine private sector service if rates are subsidized.

Another important financial service, especially with potentially higher risks with livelihood diversification and exacerbated natural and economic risks from climate change impacts, is insurance. Along with microfinance, insurance as a risk-management option should be explored for the small scale fisheries and aquaculture sector.

Success is not always measured by the recovery rates of the system. There are other indicators which may be used to complement repayment rate as a measure of effectiveness. A combination of indicators would be more appropriate with groups that are challenged by more standardized microfinance models.

2 THE IMPACT OF SECTORAL AND NON-SECTORAL POLICIES ON FISHERIES AND AQUACULTURE DEPENDENT LIVELIHOODS IN ASIA

Gayathri Sriskanthan

2.1 Summary

The crucial importance of the fisheries and aquaculture sector to the livelihoods of communities associated with coastal areas and inland water bodies is well documented (Whittingham *et al* 2003, Bene *et al* 2007, World Bank 2004, World Bank 2008) and households in Asia linked to the fisheries sector comprise some of the most poor and vulnerable groups (FAO 2007a). As an open access resource, capture fisheries represent a vital livelihood option for the poor as well as an important protein source at the household-level (Payne 2000) and millions of people from rural areas are seasonally or occasionally dependent on fisheries-related activities (Bene *et al* 2007). However, these important resources are threatened by poor management and continued overexploitation. Given dwindling and unreliable capture fisheries stocks, aquaculture will increase in importance as a supplier of fisheries products for ever-growing global demand (World Bank and FAO 2004, World Bank 2008). Given current trends of climate change, population growth and international trade, it is certain that the availability and livelihoods role of these resources will also be subject to huge changes.

The fisheries and aquaculture sector holds considerable potential to stimulate equitable national growth and contributed to poverty reduction. National, regional and international policies, both within and outside the fisheries and aquaculture sector, play a key role in this; determining how well the sector contributes to these goals. However, policies have to take in a range of considerations, not only those of groups with sustainable livelihoods and poverty reduction concerns. Often, decision-making processes do not succeed in including the interest of poorer groups effectively, with policies failing to support them or, at worst, actively disadvantaging them.

Opportunities to support poorer fisheries and aquaculture dependent stakeholders through effective policies may be lost if we are not aware of how and why policies at different levels impact them. This paper reviews some of the significant policy mechanisms that impact on the fisheries and aquaculture sector and looks at the implications of these to livelihood outcomes. Some conclusions are drawn on potential and current best practice as well as bad practice with regards to policy design and formation for the Asia region. A summary of recommendations are presented under the five steps of the policy process¹:

Establishing a policy framework

- ▶ Initial activities should include a full analysis of stakeholders, an accurate understanding of projected impacts, and an appreciation of the broader extra-sectoral and regional/international policy context to identify potential policy conflicts and trade-offs.

Informing and setting the policy agenda

- ▶ The policy process should be formalised, with supportive legislative provisions, to allow for fuller participation of all stakeholders. This includes ensuring that open participation at all levels, including the regional and international levels, is not blocked.
- ▶ Less powerful stakeholders should actively be supported to contribute to decision making. This may require adjustments in policy planning and consultation processes that need to be recognised and budgeted for.

¹ As defined by IMM (2002)

- ▶ Where appropriate, policy should be made in collaboration with other sectors and levels of governance to ensure policy coherence. Such collaborative mechanisms should also be formalised and provided with legislative provisions.
- ▶ Best practice in all fields (e.g., poverty reduction, livelihoods, economic management, environmental and resource management) should be reflected as a priority, and policy should reflect an understanding of the complexity of livelihoods and ecological systems.
- ▶ If there is a need to compromise on best practice due to trade-offs that can't be avoided, this should be clearly justified.

Formulating policy

- ▶ Indicators with which to measure policy objectives should be clearly defined along with strategies through which this will be accomplished and the resources and tools that will be used to achieve this.
- ▶ Ensure that all the factors contributing to implementation success (e.g., ability to enforce, human capacity, market conditions) have been sufficiently considered.
- ▶ Factor in needs such as cross-sectoral assistance and collaboration, particularly for associated actions that may be outside the administrative mandate of the particular policy in question.

Delivering policy

- ▶ Implementation success should be viewed practically, as often readjustments and redefinitions of the policies may be needed (IMM 2002).
- ▶ Barriers to implementation (e.g., corruption, lack of capacity and resources) should be factored into the policy formulation stage.

Reviewing policy

- ▶ Accountability feedback systems for reviewing policy outputs and processes that are open for public comment should be developed. These accountability processes should include the right to demand comprehensive reasoning for any policy decision made and a full explanation of the process used to arrive at the policy decision.

Underlying issues regarding transparency, good governance and the disproportionate power of different interest groups need to be tackled at the forefront of policy reform for there to be meaningful improvements. These issues are inseparable from the policy-making process and, if not voiced and addressed, will undermine the sector and livelihoods based upon it.

Note on terminology

This paper deals with a broad spectrum of fisheries and aquaculture sub-sectors: coastal capture fisheries; inland capture fisheries; coastal aquaculture; and inland aquaculture. When the terms "fisheries" or "coastal and inland fisheries" are used, this refers broadly to both capture fisheries and aquaculture activities. The term may also encompass processing and trading activities that are associated with the fisheries industry, as it refers loosely to the sector as a whole. The term "fisheries products" is used in reference to products originating from inland and marine capture fisheries as well as aquaculture fisheries. Distinctions between the sub-sectors will be made explicitly where discussion focuses specifically on one or the other.

2.2 Introduction

Fisheries and livelihoods

The crucial role of fisheries and aquaculture to the livelihoods of communities associated with coastal areas and inland water bodies is well documented (Whittingham *et al* 2003, Bene *et al* 2007, World Bank 2004, World Bank 2008) and in terms of poverty reduction priorities, households in Asia linked to the fisheries sector comprise some of the poorest groups (FAO 2007a). Of the 38 million officially recorded fishers globally, 90 percent are thought to be small-scale and a further 100 million people are thought to be involved in the post-harvest process (Bene *et al* 2007). The sector plays a vital role in the provision of food security, income and employment to these groups in addition to supplying global demand for fisheries products. Asia dominates world fisheries statistics and currently holds 87 percent of all people involved globally in fisheries and aquaculture (FAO 2008).

Capture fisheries, as an open access resource, and household aquaculture represent vital livelihood options for the poor as well as an important protein source at the household-level (Payne 2000) and millions of people from rural areas are seasonally or occasionally depend on fishing activities (Bene *et al* 2007). Fisheries and aquaculture products contribute to the food security of Asia's poor and are thought to make up 15 to 54 percent of the annual protein intake in the Asia region (Silvestre *et al* 2003).

However, these important resources are threatened by poor-management and continued overexploitation. It is estimated that 75 percent of stocks are either fully exploited, overexploited, depleted or recovering; placing most commercially targeted species for capture fisheries precariously at the edge or over the edge of sustainable use (World Bank and FAO 2008). Relatively recent estimates show that the biomass of coastal fishery resources in South and Southeast Asia have dipped to as low as 5 percent of their pre-fisheries expansion levels and upper limits hover at only 30 percent, with larger, valuable species taking the brunt of this decline (Silvestre *et al* 2003). Ever increasing global demand for seafood is driving the rapid growth of the aquaculture sector. However, land availability, sustainable feed sourcing and the challenge of adhering to environmental and food standards overshadow the industry's growth (FAO 2008). Given current trends of climate change, population growth and international trade, it is certain that the availability and livelihoods role of these resources will also be subject to huge changes, putting millions of livelihoods across the region in question.

Policy development and the fisheries and aquaculture sector

International, regional, national, and local-level policy makers aligned with the fisheries and aquaculture sector have the task of serving a range of interests, including: economic growth targets, trade issues, poverty reduction, sustainable resource management, employment and biodiversity conservation. In doing so, they simultaneously represent the often diverging interests of numerous stakeholder groups, such as: investors in the fisheries industry, small-scale fishers and poor communities dependent on fisheries resources, biodiversity conservation interests, industrial fishers and consumers. In addition to this, fisheries policies will intersect with independently determined international, regional and national policies on trade, industry, employment, water management and agriculture. In attempting to achieve the wide range of objectives that may be represented by different interests within the sector as well as accommodate for, complement and compete with objectives from other sectors, policy makers find themselves being drawn in multiple directions.

The current failure to fully account for and adjust for the policy trade-offs that impact on the sector is not without a price. The World Bank estimates that as a direct result of poor fisheries governance, US\$ 50 billion are lost annually on a global level – an amount that is equivalent to more than half the value of the global catch (World Bank 2008). This overwhelming figure expresses itself in a number of ways: as losses to national and local economies and, for millions of people in the Asian region, diminished livelihood outcomes and security.

General policy objectives regarding the target group of small-scale fishers, which are also relevant to the fisheries dependent poor in general, are encapsulated in the vision statement for small-scale fisheries developed by the FAO's Advisory Committee on Fishery Research (ACFR) Working Group on small-scale fisheries that should be supported by all States (FAO 2004a):

- ▶ Small-scale fisheries are not marginalised and their contribution to national economies and food security is recognised, valued and enhanced;
- ▶ Fishers, fishworkers and other stakeholder have the ability to participate in decision-making, are empowered to do so, and have increased capability and human capacity; thereby achieving dignity and respect; and
- ▶ Poverty and food insecurity do not persist; and where the social, economic and ecological systems are managed in an integrated and sustainable manner, thereby reducing conflict.

The challenge for policy makers is to ensure that policies both within and outside the fisheries sector support and do not undermine the above objectives. Problems arise when policies either (a) fail to effectively contribute to their aims because they are based on poor knowledge or the inadequate use of existing knowledge; or when (b) these aims conflict with others and the associated externalities are not accounted for.

In order to set the scene, an exploration of what kind of livelihood outcomes governments in the region should be aiming to support is given. This paper will then provide an overview of some of the most compelling policy issues at the national level in (i) the fisheries and aquaculture sector; (ii) outside the fisheries and aquaculture sector; and also (iii) explore the impact of international and regional policies. It will attempt to unravel some of the underlying issues and patterns that need to be addressed to find the balance between competing aims, powerful interests and, in some cases, broader institutional reform, if livelihood interests are to be supported by well-designed and implemented policies.

2.3 Livelihood outcomes in the fisheries sector – what outcomes should policies support?

Before exploring some of the potential repercussions of various policies on the livelihoods of inland and coastal fisheries and aquaculture dependent communities, it is useful to answer a number of questions: What kinds of outcomes at the livelihoods-level are realistic and desirable? What are the key drivers of these outcomes? Where can policy help to support these? Are the solutions within or outside the fisheries and aquaculture sector? This section will look at some of these underlying questions and suggest what kind of livelihood outcomes policy-makers in the Asia region may want to focus on.

The current importance of fisheries at the livelihoods-level through the provision of food and food security, employment, income as well as social and cultural benefits for huge numbers of rural poor situated close to inland and coastal fisheries resources is widely accepted. In Asia, fishing households are noted to lack the kind of assets available to agricultural households. Access to credit and the perception that small-scale fishers make unreliable borrowers, further reduce opportunities for this group and make a descent into poverty more likely (FAO 2008). Fisheries provide important secondary or seasonal livelihood activities for large numbers of people. This is particularly true for the rural poor, who may pursue mixed livelihood strategies, of which fisheries may comprise only one component (Kurien 2005, World Bank 2004, FAO 2008).

Bene *et al* (2007) provide a succinct review of the contribution of inland and coastal small scale fisheries to poverty alleviation at a number of economic levels, all of which have a degree of inter-dependence (see Table 1). This analysis makes a distinction between two different components of poverty alleviation i.e., (i) poverty reduction, and (ii) poverty prevention). It also looks at the vulnerability context of fisheries, which should be considered in the context of the potential risks that the poor face that may impact on their livelihood outcomes as well as poverty status (Bene *et al* 2007).

Table 1. The different dimensions of poverty alleviation in relation to small-scale fisheries, including the specific issue of vulnerability²

Level	Poverty alleviation				Fisheries as a source of vulnerability
	Poverty reduction: Fisheries contribute to life people out of poverty		Poverty and vulnerability prevention: fisheries contribute to maintain a minimum standards of living		
	Contribution	Mechanisms	Contribution	Mechanisms	
Individual/ intra-household	Livelihood support to other household members, particularly dependents	Fishing income spent on children's education and building other household assets (e.g. farm inputs, investment in small enterprises for other household members to run)	Household subsistence	Fishing income contributes to household budget – expenditure on food, clothing and health care	Strongly gendered roles and frequent absence of (migrant) male fishers may limit intra-household income distribution. Absence from home and fishing lifestyle may increase vulnerability of partners to HIV infection.
Household level/ Sector	Wealth generation	Effective capture of fishery rent (capital accumulation) High level of commercialisation Access to effective market mechanisms Fish as cash crop for investment and diversification	Safety net function (transient poverty) Activity of last resort for the poorest (chronic poverty)	Fisheries reduce vulnerability and mitigates poverty effects Fisheries contribute to food security through direct contribution (subsistence), but also fish being an immediate cash crop acts as safety net	High occupational risk Risks of losing physical assets
Local level	Local level	Increased demand for goods and services Rise in wages and employment opportunities (income and employment multipliers)	Social-redistributive system (welfare)	Fisheries provides alternative sources of income, food and/or employment	Unpredictability of the natural resource availability Natural disaster risk Conflicts
National level	Economic growth	Trickle up to government through taxes and foreign exchange earnings (regional or international trade)	Redistributive	Government expenditure on poverty alleviation measures is drawn from fisheries-related tax and foreign exchange earnings	High susceptibility to macro-economic fluctuations

² Taken from Bene et al (2007)

Understanding potential livelihood outcomes

In its review of the future of global fisheries, the World Bank (2004) outlines some of the projected impacts that could be achieved if fisheries were sustainably managed and complementary diversification policies were pursued. Over a ten year period, the implementation of sustainable management programmes in Asia could result in halting the income declines or provide access to training or credit for alternative livelihoods for 5–15 percent of Asian fishers who are currently facing livelihood insecurity. At the macro-level gains could be expressed in stabilised export earnings at current or higher levels. Beyond the immediate 10 year-scale, it is possible that yields could increase in well-managed fisheries, expanding incomes and livelihood possibilities (World Bank 2004).

The sections below explore some of the specific livelihood outcomes that are tied to the fisheries industry and look at the future of maintaining or enhancing these outcomes. The different livelihood outcomes considered are:

- ▶ Improved food security
- ▶ Maintaining and enhancing wealth and income generation
- ▶ Supporting multi-activity livelihood strategies
- ▶ Ensuring the maintenance of safety nets
- ▶ Coping effectively with vulnerability

Improved food security

Defining the role of fisheries on food security has been central to many analyses looking at fisheries within the poverty alleviation and sustainable livelihoods debate. The 1996 World Food Summit defined food security as being a state “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” As Kurien (2005) notes, this relates to security at the individual livelihood level, but broadens the notion of equity across a community or society. This refocuses attention on issues of access at the individual or household level, making a distinction between ideas of national food self-sufficiency which don’t necessarily translate directly into equitable access to food for all (Bene *et al* 2007). Kurien (2005) uses definitions of different types of entitlements which provide the means for achieving food security as proposed by Sen (1981):

- ▶ *Production-based entitlements* – producing food for self
- ▶ *Trade-based entitlements* – selling or bartering goods or other assets
- ▶ *Labour-based entitlements* – selling own labour power
- ▶ *Transfer-based entitlements* – receiving gifts or transfers of food

In the context of food security as a livelihood outcome, the focus should be on understanding (a) how important these entitlements, as supported by the fisheries sector, are at the livelihoods-level, and (b) how policies can support these entitlements effectively to maintain the desirable livelihood outcome of adequate food security. For example, policies supporting the access rights of communities to a fishing resource can support their production based entitlements. Policies that support fishers to participate effectively in local markets, improve their ability to capitalise on trade-based entitlements.

Maintaining and enhancing wealth and income generation

Given the region’s global dominance in fisheries the role of fisheries in income generation for households across Asia is immense. For example, the capture fisheries industries of the Mekong River countries account for around 2 percent of all global capture fisheries (both inland and marine), while the combined annual revenue of capture fisheries and aquaculture activities in this area are thought to generate first sale values of approximately US\$ 2 000 million (FAO 2008). Bene *et al* (2007) note the status of fisheries products as an effective cash crop, with more potential to generate cash income than comparable

agricultural products. Wealth generation allows further investment in other assets, decreasing vulnerability to poverty and gives access to benefits such as education and health. The cash crop nature of fisheries acts a strong market stimulator and wealth generation goes beyond the immediate boundaries of the industry (FAO 2004b), with multiplier effects providing broader income and employment opportunities (e.g., support services to fishing operations and communities; post-catch marketing, packaging and transport activities).

Supporting multi-activity livelihood strategies

Estimations of the number of people engaged on an occasional basis in the fisheries sector in the region are largely unavailable (FAO 2008) but the adoption of fisheries activities as part of a diverse livelihood strategy is thought to be widespread. Given our poor understanding of how this plays out, responses to supporting improved livelihood outcomes for those who are only occasionally involved in the sector are generally weak. Levels of engagement can differ; with some individuals or households participating in regular, seasonal fisheries activities, others engaging sporadically in the sector in order to augment their principle livelihood activity/activities, and some falling back on the sector in times of need (see section on safety nets below). Communities dependent on the resources in and around the Tonle Sap lake system, for instance, seasonally engage in occasional fisheries in the wet season when agricultural activities are restricted (Ahmed *et al* 1998). Access and availability of fisheries resources may therefore have a profound impact on communities that may not fall strictly under the fisheries sector.

Ensuring the maintenance of safety nets

Fisheries often present an open-access resource that can be used informally, giving it the power to act as a safety net for households when habitual livelihood options are removed due to some kind of shock, such as an extreme event such as a climate, economic or conflict induced crisis (World Bank and FAO 2004). This can be particularly significant for communities living in marginal areas where access to external support or other options is scant. Households with poor asset bases are attracted by the opportunities presented by open-access fisheries. There is evidence to indicate that in many developing countries, fisheries activities, whether full-time or part-time, do not generate high economic yields for many households but instead provides a very important fall-back mechanism that can prevent a slide into deeper poverty. Indeed, Bene *et al* (2007), make the assertion that the most important role of small-scale fisheries to poverty alleviation, given the sheer number of individuals and households implicated, is its crucial contribution to poverty prevention.

The task of national policy makers is to understand and support the role of fisheries as a safety net where possible and ensure that policies do not contribute to the erosion of this function without providing some kind of viable alternative. This is of particular relevance to actions resulting shifts in access rights that may reduce accessibility for those who depend on fisheries resources as a safety net. Often, these kinds of interventions attempt to improve the long-term sustainability of fisheries resources for the associated goals of poverty reduction without assessing the impacts on poverty prevention (Bene *et al* 2007). Short-term impacts on poor households need to be carefully factored into policy responses to a range of external issues such as changes in property rights regimes, biodiversity conservation and resource restriction regimes.

Coping effectively with vulnerability

The issue of vulnerability is closely linked, but not mutually inclusive, to our understanding of poverty. Classic interpretations of vulnerability describe it as a state of insecurity that leaves the individual more open and susceptible to shocks and stresses. This is largely seen as a function of the underlying asset base of a livelihood, or the resources that an individual or household has available to buffer against such disruptions to their livelihoods (Chambers 1989). This has some cross-over with ideas regarding safety nets, as livelihoods exhibiting greater levels of vulnerability may be more likely to fall upon fisheries as a last option in the absence of other assets or opportunities.

In addition to this, those engaged full- or part-time in the fisheries sector can be exposed to a wide range of factors that affect their vulnerability status, and this can put them at risk of falling into poverty or prevent them from moving out of poverty (Macfadyen and Corcoran 2002). The unpredictable, nature of fisheries (e.g., it is season- and weather-influenced; fisheries products are highly perishable; non-sessile resources are fugitive in nature), makes the sector inherently susceptible to vulnerability. Other sectoral characteristics, such as the dearth of robust supportive organisations and institutions, the insecurity of those engaged in the sector as casual labourers and the industry's sensitivity to fuel and market fluctuations, heighten the significance of the vulnerability context (Bene *et al* 2007). Policies must aim to reduce vulnerability and not exacerbate it further. This may be partly achieved by strengthening and diversifying the asset base of households to improve resilience. There needs to be a careful appraisal of whether options for diversification lie within or outside the fisheries sector.

How should the fisheries sector support desired livelihood outcomes?

Given the assumption that the livelihood outcomes explored above need to be maintained or enhanced to support sustainable development and poverty reduction, it is crucial to understand whether the fisheries and aquaculture sector has the capacity to achieve this. The current status quo is such that the continued productivity and capacity of the fisheries sector in Asia to continue to provide these benefits well in to the long-term future are under serious doubt given patterns of poor management and declining returns (FAO 2008, World Bank 2004, Payne 2000).

Based on resource availability trends, countries have to make clear choices as to whether these vital livelihood outcomes that are currently fisheries-based are going to be maintained via the fisheries sector or if answers outside the sector need to be pursued. If solutions can reasonably be supported within the sector, the dedicated pursuit of policies and supportive processes to enable this will be essential. In cases where the latter is more appropriate, the fisheries policy makers have to boldly bridge the gap between the fisheries sector and external sectors and ensure that the policy framework can help those involved in fisheries to make this switch.

It is unlikely that any one fishery can simultaneously achieve multiple goals such as to generate foreign revenue, stimulate international trade, contribute to local-level food security and function as a safety net. It is paramount that policy makers are enabled to prioritise goals, understand the failures of current policies to support certain objectives over others, recognise where policy trade-offs must be made and make certain that they are equipped with the skills and resources to ensure extra-sectoral livelihood outcomes can be pursued successfully where necessary.

Current initiatives looking at the use of an "ecosystem approach" to fisheries management have identified areas that require attention if the aims of supporting livelihoods and social resilience are to be achieved through the sector. Bailey (2008) identifies seven key considerations that need to be addressed:

1. Creation of broadly-shared entrepreneurial opportunities and employment generation;
2. Consideration of gender roles and relations so that both men and women benefit;
3. Promotion of economic diversification that reduces the vulnerability associated with economic specialisation (e.g., diversification away from the fisheries sector as well as within it);
4. Investment in infrastructural development to support both production and social well-being;
5. Promotion of local food security through development of systems that meet local needs;
6. Avoidance of user conflicts; and
7. Promotion of change that does not create greater imbalances in wealth, income, and power.

Edwards (2000) elaborates how such benefits could be bolstered through policy and institutional changes that make a more concerted effort to recognise and deliver more flexible services targeting the

specific needs of aquaculture households, and participatory, people-centred processes in the development of interventions. Additionally there is a need to deal with surrounding structural issues, such as land tenure and cross-sectoral collaboration.

The following sections explore in more detail the current policy landscape; the significance of this to those whose livelihoods are dependent on the fisheries sector; highlight areas where incoherence and policy failure are issues and reform may be necessary; and look at how policy processes could be strengthened to support livelihoods best practice more effectively.

2.4 The impact of national policies within the fisheries and aquaculture sector on livelihoods outcomes

National policies looking specifically at the fisheries sector are largely concerned with maximising the economic contribution of fisheries to local and national economies as well as to poverty reduction and development. Sustainable fisheries resource management is crucial to achieving these objectives and sustaining gains in the long term. For the purpose of this review, national fisheries policies have been separated according to their focus on:

- ▶ Resource use and management;
- ▶ Financial mechanisms and trade; and
- ▶ Livelihoods and poverty reduction.

The separation of these categories is slightly artificial when taking into account the considerable overlap between them. For example, financial mechanisms, such as subsidies, may be used to support livelihoods related interventions or management measures (e.g., gear restriction compensation, subsidies for livelihood diversification). However, separating these three areas is a useful way of examining the wider objectives that drive policy making and reflective of how a culture of maintaining sub-sectoral separations can result in incoherence between different policy areas. Overlaps will be discussed specifically where relevant.

A 2006 FAO review of 14 countries in Asia analysed a number of national policy documents directly relating to fisheries management with regards to their content, focus and their broader implications (FAO 2006a). This analysis has been used to understand patterns of policy prioritisation in the region, but a broad range of other sources have been consulted to augment this. The following sections review some of the most commonly promoted national policies within the fisheries sector in Asia and the implications of these policies on the livelihoods of small-scale fishers and the poor.

Policies concerning resource use and management

Promotion of expanded capacity of the capture fisheries sector

Many national fisheries policies in the region continue to propose increased production targets from capture fisheries. Some countries are specific in focusing on offshore fisheries or “under-exploited” resources, but others simply state increased production targets (FAO 2006a). With 75 percent of all fisheries known to be fully exploited or overexploited (World Bank and FAO 2008) and current management systems failing to stem unsustainable exploitation, this reveals a huge disconnect between the ground reality of resource availability and management capacity versus national-level goals for food security and economic growth.

In the face of diminishing returns from inshore fisheries, a number of countries in the region have shifted their focus on expanding offshore fisheries in an attempt to transfer employment to the offshore sector. 79 percent of national fisheries policies in Asia surveyed by the FAO refer to an expansion of offshore fisheries. The majority of countries in South and Southeast Asia are under the impression that offshore

demersal fisheries are underexploited, and concrete plans for the expansion of these fisheries in the region are being supported by incentives in the form of fuel subsidies, tax reliefs, competitive loans and the development of corresponding infrastructure (FAO 2006a, Staples 2008).

It has been flagged that this may be part of a new trend of looking to offshore fisheries as a fix-all for diminishing inshore opportunities (FAO 2006a). But this appears to be happening in the absence of scientific evidence that it is feasible ecologically. These policies are based on the assumption that there are sufficient fish stocks available and often driven by the perception that other nations are already exploiting these resources, thus the urge to act on a "lost opportunity" (FAO 2008). Popular pelagic species (e.g., all tuna species except for skipjack tuna and swordfish), are already either fully exploited or overexploited in the Indian Ocean and Western and Central Pacific Ocean. Though some argue that localised stocks may be viable, these assessments do not fully take into account the highly migratory nature of some of these species. Experiences from already-depleted offshore demersal fisheries in temperate waters serve as a warning of the challenges facing agencies that are responsible for ensuring the sustainable management of offshore resources (FAO 2006b). Moreover, it is predicted that climate change will lead to changes in fish distribution that may disproportionately affect pelagic stocks (FAO 2008b). There is a danger that fishers could be shifted into the offshore sector only to experience further losses and livelihood insecurity if stocks are insufficient.

Even if carefully determined to be ecologically viable, a shift to the offshore sector would require sufficient access to capital and credit as well as skills training, and an understanding of the social and cultural feasibility of this for target communities (FAO 2006a). Offshore fishing requires more intensive inputs in the form of searching time, manpower and fuel, and the harvestable biomass available in the offshore environment is generally less per capita than inshore fisheries. Few basic economic feasibility studies have been carried out on proposed offshore expansions and the status of offshore stocks is largely unknown, indicating that bold policy decisions are being made in the absence of adequate information (Staples 2008).

Increased competition for dwindling inshore resources is already forcing small-scale fishers further offshore, requiring them to spend longer periods out at sea. This increases the vulnerability of fishers: exposing them to the risk of arrest if they stray across state lines; increasing the possibility of accidents at sea; and generally incurring greater operational costs (Bene *et al* 2007). Offshore fisheries do not present a simple and comparable alternative to inshore fisheries; requiring a completely different set of skills, equipment and lifestyle. Safety, insurance and compensation issues need to be accounted for. Maldivian vessels being hastily constructed for offshore expansion, for instance, have been found to lack safety controls with regards to design and construction; with incidences of damage already being reported (Staples 2008). Small-scale fishers venturing on multi-day trips don't always have the adequate refrigeration capacity to store their catch, resulting in reduced market values (Staples 2008). If not properly supported to make the switch, there is a risk that new offshore fishers may return to inshore areas or find themselves jumping to a failed livelihood occupation. The FAO (2008) already notes instances of offshore fishers returning to pressurise inshore stocks.

In one of its key recommendations for capacity management and the reduction of Illegal, Unreported and Unregulated (IUU) fishing, the Asia-Pacific Economic Co-operation (APEC) states that increased production targets should be removed as matter of best practice (APEC 2008), indicating that national fisheries policies may out of touch with current best practice. The proactive development of the offshore sector in Southeast Asia is thought to be contributing to IUU fishing (FAO 2006a). This lends weight to the concern that, currently lacking the ability to manage and control inshore and IUU fisheries, many countries in the region may be facing the creation of unsustainable and poorly regulated national offshore fisheries in the near future if expansion is pursued without requisite governance and monitoring, control and surveillance (MCS) mechanisms in place.

The issue of foreign offshore vessel activity within countries' EEZs is also of relevance to this topic. A number of countries are actively pursuing a policy of supporting foreign offshore vessel access to their national waters, with fee generation from foreign vessels providing an incentive for this policy approach. What is less clear is whether proposed expansions in the national offshore sector are going to be balanced with reductions in foreign access levels. Malaysia, for instance, has the stated policy goal of replacing foreign skippers deep-sea boats with local skippers (FAO 2006a) but few other countries tackle the issue of managing the total offshore fishing efforts of national and foreign vessels.

The short-sighted promotion of expanded capacity, whether offshore or inshore, in the context of a reduced resource base and other factors, such as increasing fuel prices and climate change, may therefore be based on flawed economic and ecological reasoning and ultimately undermine economic and poverty reduction goals, particularly those relating to long-term livelihood security.

Promotion of aquaculture

With capture fisheries caught in downward spiral of decline, aquaculture has become the focus of attention as the only viable option for satisfying the world's fisheries needs. The economic and social contribution of aquaculture to the region is significant and the Asian region dominates the world's aquaculture industry by a huge margin (FAO 2008; World Bank 2008). Aquaculture now produces close to half of the world's supply of fisheries products, and the region's contribution to this, when taking into account aquatic plant production, is thought to be around 90 percent in volume and 80 percent in value (FAO 2006b). The further expansion and intensification of the aquaculture industry appears to be a consistent policy aim for a number of countries in Asia, with many proposing specific production increase targets and the explicit support of certification/traceability systems (FAO 2006a).

The importance of small-scale aquaculture to rural households is only slowly being recognised by policy makers, particularly in inland farming areas where the role of aquaculture in mixed livelihoods strategies is poorly understood by agricultural administrators

with a narrow sectoral focus. Irrigation policies tend to be insensitive to small-scale aquaculture needs and other farming policies can conflict with the sector. Box 1 presents an overview of the contribution of aquaculture to livelihoods of the rural poor, giving an idea of the range of benefits that could be supported to contribute to poverty reduction.

Box 1. Potential contribution of aquaculture to the livelihoods of the rural poor

Direct benefits

- ▶ Food of high nutritional value, especially for vulnerable groups such as pregnant and lactating women, infants and pre-school children.
- ▶ 'Own enterprise' employment, including for women and children.
- ▶ Income through sale of relatively high value produce.

Indirect benefits

- ▶ Increased availability of fish in local rural and urban markets, which may bring prices down.
- ▶ Employment on larger farms, in seed supply networks, market chains and manufacture/repair functions.
- ▶ Benefit from common pool resources, particularly the landless, through cage culture, culture of molluscs and seaweeds, and enhanced fisheries in communal water bodies.
- ▶ Increased farm sustainability through:
 - construction of ponds which also serve as small-scale, on-farm reservoirs
 - rice/fish culture as a component of integrated pest management.

Edwards (2000)

Questions that hover over the continued expansion of the aquaculture industry in Asia relate to the ability of the poor to contribute and benefit from market-driven trends that favour large-scale and intensive production. Current policy directions are towards export-oriented production of high-value species, with technical support concentrated on increasing biological yields (Edwards 2000). Markets

demanding certification and traceability standards pose prohibitive technical barriers to small-scale and poorer entrants, skewing the industry in favour of larger-scale producers (Macfadyen *et al* 2005). Some of these trade and export related issues are discussed in more detail in other sections of this paper. Attempts to include the poor in the rapid expansion of the sector have led to state-driven initiatives to adopt commercially viable species. These changes have implications on local markets and consumption patterns as well as impacting on levels of local biodiversity, as traditional species are phased out. The case study on aquaculture households in Orissa presented below illustrates some of these issues.

The availability of appropriate sites and water resources, issues regarding environmental standards, and the sustainability of feed sources are all huge limiting factors to the industry. Current regulations governing aquaculture standards and expansion are thought to be insufficient with regards to presenting a clear, integrated framework of regulation that can effectively maintain the sustainability of the sector. In addition to this, the conversion of important ecosystems, such as mangroves, in the process of aquaculture development removes the multiple goods and services provided by these systems to the poor (Soto *et al* 2008), in addition to removing vital shoreline protection and flood management services.

The aquaculture industry has associated impacts on capture fisheries: it can increase pressure on wild stocks through seed collection; it can reduce the productivity of surrounding ecosystems due to pollution and poor practice; the contamination of wild stocks is a possibility, both with regards to disease and inter-breeding; it can distort local markets by suppressing seafood prices and, conversely, through creating markets for “trash” or “low-value” fish for fishmeal it can lead to an increase in prices for low-value fish through demand for fishmeal (Macfadyen *et al* 2005). There is growing concern over the viability of low-value fish stocks in serving an expanded fishmeal market.

Case study: The use of indigenous species by aquaculture households in Orissa, India

Most agricultural households in Orissa pursue mixed-activity livelihoods, and homestead ponds are widely used for extensive or semi-extensive fish culture. Households utilise a variety of small indigenous species as well as commercially favoured Indian Major Carp (IMC) species, which are usually kept alongside other species in a mixed polyculture. Indigenous species fetch comparable, if not higher, prices to IMCs, depending on the locality and prevailing patterns of preference. In areas close to the state of West Bengal, for instance, established marketing networks and price agreements are in place between Orissan pond owners and Bengali traders. The difference in prices obtained from markets in West Bengal are often as much as US\$ 1/kg more than Orissan market prices for these preferred local species.

In addition to their value as tradable commodities, approximately 1-2 kg of fish is consumed per week by extended family units; figuring as an important source of nutrients and protein for pond-owning households. Any excess fish are also sold in local markets and form a significant part of regular household earnings. Local preferences for eating these fish whole also make the high concentrations of vitamin A in the fish heads available. Rich in vitamins, minerals, calcium, zinc and fatty acids, these resources are a vital source of special nutrition for local communities and some fish are prescribed for women with bone conditions and lactating mothers.

The cultivation and household-level importance of these fish are poorly recognised in national and state-level statistics. Government spearheaded aquaculture initiatives have a more narrow focus on the promotion of market-oriented IMC species. Corresponding extension services encourage farmers to remove all indigenous species and focus on the yield-maximisation of IMC species. Anecdotal information indicates that there may be a slow disappearance of the polyculture of indigenous species in some areas. Despite suggestions in the past to develop more tailored aquaculture support services that accommodate indigenous polyculture, state interventions are focused on developing uniform initiatives that largely ignore the role of local species at the livelihood-level. The impacts that this may have on local nutrition and household food security need to be better understood and state programmes should reconsider the current focus of aquaculture extension services.

Source: Koshy (2009)

The risk of a targeted low-value fisheries resulting in the overexploitation of these resources is a genuine concern. Various studies carried out by the Asia-Pacific Fisheries Commission (APFIC) and the Australian Centre for International Agriculture Research (ACIAR) have found that low-value/trash fish production accounts for approximately 25 percent of the total marine capture landings in the region, with values ranging between 4-38 percent in seven countries in South, Southeast and East Asia surveyed (APFIC 2006b). Analyses of fishmeal production have noted that production is unlikely to increase significantly while demand is likely to grow with the continued growth of the aquaculture industry. This high demand and stagnating supply compounded by increases in fuel prices, may result in rises in low-value fish prices (FAO 2008) and this could have implications on the food security and livelihoods of small-scale fishers who are dependent on these previously low-value species. A recent experts meeting on the use of fish in aquaculture feeds specifically highlighted the role of governments in ensuring that policies address the livelihood implications of the industry and should not exclude other users of low-value fish (FAO 2007b).

Capacity reduction and Illegal, Unreported and Unregulated (IUU) fishing

Overcapacity and IUU in marine and inland fisheries, in the industrial as well as the small-scale fisheries sub-sectors, continues to plague fisheries management in the region. The scale of overcapacity is literally staggering; it is estimated that the current marine catch could be maintained with half of the global fishing effort currently employed (World Bank 2008). Though it is extremely difficult to find accurate data on IUU fishing (APEC 2008), it is understood that it results in the substantial loss of economic revenue and US\$ 5.8 billion a year is thought to be forfeited by the Asian region as a whole (FAO 2006b). Even at the local-level losses due to overcapacity can be considerable. It is estimated that annual rent loss in the Gulf of Thailand due to overcapacity in the trawl and push net fisheries totals US\$ 230 million (FAO 2007c)

Overcapacity and IUU fishing are widely recognised by regional policy makers and managers to represent a huge threat to economic development and food security in the region through: directly affecting the incomes of industrial fishers; compromising the livelihoods and nutritional status of subsistence fishers, in addition to the poor more broadly; acting as a limiting factor to economies heavily dependent on the fisheries sector in their efforts to alleviate poverty and develop more generally; and threatening the future sustainability of economically important fisheries (APFIC 2007, FAO 2008). Table 2 summarises some of the potential impacts that this issue has on the livelihoods of fisheries-dependent communities and national economies.

Even though the majority of national policies in the region reflect overcapacity concerns in their texts (FAO 2006a), most Asian countries lack the legislative capacity to deal with the issue (2006b). The level of detail in relevant policies are vague and do not outline specific measures for implementation, e.g., they do not state what tools they intend to use to achieve capacity reduction goals. The fact that developing employment alternatives to accompany capacity reduction poses incredibly complex and difficult challenges to the capture fisheries sector has been another reason for the reluctance to tackle this issue (FAO 2007c). The topic of overcapacity proves to be highly contentious and politically charged; some countries in the region find it problematic to highlight the issue comfortably. Policy-makers' nervous avoidance of core issues can result considerable policy gaps and ultimately act as an implementation barrier.

The magnitude and scale of the problem of IUU is also reflected very clearly in national fisheries policies in Asia (FAO 2006a). However, overall capacity, and policy and legislative instruments to tackle IUU have also been found to be inadequate. Asia is the only region in the world where National Plans of Action (NPOAs) for IUU have not been developed for all countries, with the majority of countries lacking this instrument (FAO 2008). There is a huge grey zone surrounding the area of transboundary cooperation, with no adequate regional mechanisms to oversee sustainable exploitation in the region. There are number of subregional Regional Plans of Action (RPOAs) looking at IUU between select states, but many

Table 2. Examples of the economic, social and environmental impacts of IUU fishing³

Economic impacts	Social impacts	Environmental impacts
<ul style="list-style-type: none"> ▶ Loss of revenue from the direct sale of fish taken illegally ▶ Loss of revenue from post-harvest activities (transport, processing, packaging etc.) involving such catch ▶ Loss of export income ▶ Loss of revenue arising from access fees which do not reflect the true level of catch ▶ Depletion and potential loss of the resource upon which the local fishing industry relies ▶ Potential loss of revenue arising from provision of port services as a result of depleted resources arising from IUU fishing ▶ Significant contraction of local industry given smaller potential long term harvest ▶ Loss of wealth for the country as a whole ▶ Potential loss of tourism opportunities associated with impacts of IUU fishing on environmental amenity, for example, in marine protected areas ▶ Greater reliance on long-term foreign aid 	<ul style="list-style-type: none"> ▶ Loss of employment opportunities associated with catch and post-harvest activities ▶ Potential social dislocation arising from overexploitation of stocks relied upon by coastal communities ▶ Nutritional impacts arising from overexploitation of stocks relied upon by coastal communities for subsistence purposes ▶ Human safety concerns associated with involvement in IUU fishing operations ▶ Further reductions in total available employment opportunities as fisheries become depleted 	<p>Loss and depletion of target stocks and broader impacts on habitats and ecosystems arising from:</p> <ul style="list-style-type: none"> ▶ Overfishing ▶ Use of illegal fishing methods such as dynamite fishing or driftnets ▶ Use of methods that have a significant impact on the benthic habitat ▶ Lack of adherence to management measures, including by-catch mitigation measures, by IUU fishers ▶ Impacts on protected or endangered species

countries in the Asia region have failed to sign up to international and regional instruments that are concerned with the coordination of fisheries management, access and surveillance (FAO 2006b).

Resource exploitation restrictions and conflict management

Policies targeted at altering resource exploitation patterns in inland and marine capture fisheries tend to focus on a range of tools, such as: the use of no-take areas; gear restrictions; size restrictions; permanent access restriction for important breeding or nursery habitats; semi-permanent closures to allow stock recovery; or seasonal closures. Similarly, restrictions associated with aquaculture can target the sustainable management of seed or fingerling stocks, which are often collected in the wild and can incur huge bycatch costs. The development of user and access rights for different groups is also a technique that falls under this category. Zoning is often used to resolve conflicts between different groups. Many countries in the region use this technique to manage negative interactions between industrial operators (who are theoretically relegated to offshore areas) and inshore/small-scale fishers (FAO 2006a). The use of area restriction methods are sometimes synonymously referred to as Marine Protected Areas (MPAs).

³ Taken from APEC (2008)

Case study: Conflict mitigation policies in the Philippines – the livelihoods implications of ineffective implementation

Under the 1998 Philippine Fisheries Code (R.A. 8550), small-scale fishers should theoretically benefit from the prohibition of commercial fishing within municipal waters. The provision was created to protect the livelihoods of community-level fishers. These small-scale inshore fisheries also create local employment for small fish retailers and processors; in contrast to commercial fishing operators who send their catch to central processing units in the country's capital city. The income generated by local fisheries feeds into the broader local economy, with local farmers and small businesses benefiting from the patronage of those associated with the industry.

Implementation by Local Government Units (LGUs) is variable and highly dependent on the political will of local administrators. In areas where the LGUs are successfully implementing the policy directive, the maintenance of vibrant local economies is found to be effective. However, in many localities implementation is weak and the resulting impacts on local livelihoods are considerable, with repercussions across local economies affecting many actors. Governance failures are cited for this; including the political domination of certain commercial operators in some areas and the prevalence of bribery and corruption.

Source: Fajardo (2009)

Temporary closure techniques have significant benefits to certain fisheries. Recoveries of stocks in northern countries, as seen in earlier experiences with herring fisheries in Europe are examples of some of the classic closure successes (Caddy and Agnew 2004) and a number of reviews of MPAs have reported positive gains in biomass (PISCO 2007, World Bank 2004). However, the case-by-case nature of results makes generalising about the efficacy of closure techniques difficult. There is also evidence to suggest that gains may be less dramatic and predictable in tropical ecosystems (FAO 2008). Additionally, for many systems isolated protectionist interventions may not have much added benefits in the absence of a more Ecosystem Approach based understanding of stocks and resources that could call for supporting measures, such as the maintenance of a network of habitats or the mitigation of displaced effort beyond the confines of restricted areas (FAO 2008). As Pauly (2009) notes, for MPAs or marine reserves to be credibly used as a fisheries management tool they cannot be limited to isolated interventions that are spurred by conservationist pressure, and need to adhere to an Ecosystem Approach to resource management.

Exploitation limiting tools for fisheries are reflected consistently in national fisheries policies across the Asian region, with many policy documents referring to the use of MPAs and conflict management techniques, including zoning. However, policy attention to the use of property and user rights to manage access and exploitation is more weakly reflected in national policy documents. It is suggested that reluctance to use access rights mechanisms to exclude users stems from the associated political costs such unpopular measures may incur (FAO 2006a), revealing similar drivers of institutional lethargy seen in parallel failures to boldly implement capacity reduction interventions.

All of the tools outlined above can be seen to have similar long-term and immediate livelihood implications. In the long-term it can be argued that, issues of access and equity and the biological efficiency of proposed measures permitting, fisheries-dependent communities stand to make gains from a better managed, more sustainable and more abundant resource base. In the short-term, however, such measures have direct implications on food security and income generation. Immediate compensation and long-term livelihood substitution therefore need to be embedded effectively in these policies. In addition to this, issues of conflicts between user groups need to be addressed more systematically and the implementation of restrictions needs to be enforced uniformly. In the case of conflicts between trawlers and inshore fishers, for example, small-scale fishers the region-over often complain that restrictions targeting politically powerful industrial operators are not implemented (see case study).

Fisheries co-management policies

Relatively broad policy support in the Asian region for the use of co-management techniques is evident in formal fisheries policies (FAO 2006a), showing how this is now a more accepted mechanism. However, attention to specific policy areas that are necessary to support this meaningfully is less emphatic, reflecting the more tempered realisation of co-management goals on the ground. A recent review of policy and legislative support for fisheries co-management in the Asian region concluded that only two countries in Asia (Japan and Sri Lanka) have sufficient policies in place and are fully engaged in co-management activities on the ground. Cambodia, Philippines, Indonesia, Thailand and Viet Nam have fairly supportive policy frameworks for co-management, while Bangladesh and India were lacking in these altogether (Macfadyen *et al* 2005).

Co-management represents a ground-level expression of localised management, devolution, community-level participation and better-realised user rights. Thus, if properly supported, co-management can yield substantial economic, social and environmental benefits (FAO 2005a). However, these elements of “good management” are crucial for co-management to work. Associated policies enabling all these factors have to be prioritised in order to operationalise co-management – particularly if states are aiming for a systemic use of this management model. Frameworks for clear property and user rights and the necessary decentralisation of power and financial resources, along with capacity building, are currently not robust enough, limiting co-management initiatives to pilot and project-based activities in most countries (FAO 2006a, Macfadyen *et al* 2005).

Policies concerning financial mechanisms and trade

Fisheries can contribute to national-level economic development through directly contributing to the GDP; generating revenue through licencing fees and resource rents, export earnings, and inward investment (i.e., the investment of external corporations developing their presence in a region) into the sector (FAO 2007a). In its appraisal of the integration of fisheries into the mainstream development discourse, the FAO (2007a) note that the role of the fisheries sector as a generator of foreign exchange is a pivotal area of interest for integrating the sector into mainstream national policies. Indeed, the net export revenue generated by the sector is noted to be very significant in comparison with other food products and fish products are the most heavily traded food commodities on the global market in terms of value (FAO 2008).

In absolute terms, the fisheries sector tends to have a less profound contribution to the GDPs of countries in the region than other major economic activities (FAO 2007a, FAO 2008). Though official figures on the number of people employed in capture fisheries and aquaculture in Asia are relatively modest, these figures do not account for the millions of people who may depend on the sector informally. Fisheries-related activities and products are very important at the livelihood-level in terms of providing important livelihood opportunities for the poor, generating income and contributing to food security (World Bank 2004; FAO 2007a; FAO 2008). GDP-level analysis often fails to capture these important benefits and may also underestimate the contribution of the artisanal sector (FAO 2008).

Resource rents

Capture fisheries resources have been historically regarded as open access resources in many countries. The move towards a better definition of user and property rights is much needed for more effective management. Resource rent systems are an important tool for achieving this, but prove politically difficult to implement due to long established exploitation patterns and perceptions regarding the “free” nature of capture fisheries resources (DFID 2004). Partly in response to this constraining reality, fisheries policies in the Asian region are failing to adequately consider issues regarding user fees and the reform of resource rent systems (FAO 2006a). There is a need to more effectively use resource rent systems to counter problems of overexploitation, and to communicate these needs to budgetary decision makers.

Trade and export

With 50 percent of the financial value of global fisheries production and 40 percent of the live weight equivalent entering international markets (ICTSD 2006), the impacts of trade in fisheries products on both exporting and importing countries is immense. These impacts can be both positive and negative depending on the local circumstances (Kurien 2005). On the one hand, trade in fisheries products provides jobs and opportunities for millions involved in the sector across Asia (Macfadyen *et al* 2005). On the other hand, changing needs and demands on supply, processing and marketing activities have profound implications for poorer groups involved in the sector. There are a number of ideas regarding the specific impacts of increased trade in fisheries products on livelihoods and food security. Some of the most significant impacts and observations, which are applicable to the Asian region, have been summarised by Kurien (2003):

- ▶ Developing countries earn considerable amounts of foreign exchange from fish exports;
- ▶ Increasing fish exports creates more jobs in the fish producing and processing activities, particularly of women, and raises incomes;
- ▶ Fishing for exportable species of fish can result in competition between different sub-sectors of fish producers causing disruptions that have a negative effect on employment and income;
- ▶ Large imports of fish can lower the price of fish for fish producers in the importing countries, which will have an adverse impact on their earnings;
- ▶ Large fish imports can provide numerous jobs in the fish processing and distribution activities in the importing countries raising the employment and incomes of many fish workers, particularly women;
- ▶ In a context of poor fishery resource management, increased fish exports from one region and their imports, can result in the fish producers in both the exporting and importing countries to exploit fishery resources indiscriminately – the former for gaining more income and the latter for compensating for its loss. This will have adverse impacts on the aquatic environment and resources of both the exporting and importing countries;
- ▶ Promoting fishery exports from developing countries could endanger the nutritional status of poor fish consumers because domestic supplies will decline;
- ▶ Any trade that impinges on the issue of food security raises the related question of the right to food as a basic human right, which must be addressed as an integral part of any such analysis; and
- ▶ WTO and other international agreements that have a bearing on international trade in fishery products can create conditions that are disadvantageous to the interests of developing countries.

Given the fact that export and trade of fisheries products from countries in Asia is considerable and growing, the implications of these issues need to be meaningfully reflected in policy frameworks. Fisheries related commodities figure as one of the most globally traded primary food products and this is projected to increase at a rate of 1.5 percent annually. The majority of growth will occur in the aquaculture sector and largely in developing countries (Kurien 2006).

With a huge and rapid shift in focus from capture fisheries to aquaculture, from local trade to international export markets, the sector will be subject to seismic changes all along the supply chain. Traditional processing methods are increasingly being sidelined for the use of chilling or freezing for preservation, and importing country demands for food safety and traceability requirements require the skills and systems to be able to comply with these (Macfadyen *et al* 2005b). These drivers can result in the move of post-harvesting activities towards areas associated with aquaculture and a dependence on technology-heavy techniques that favour stakeholders with more initial capital (see case study).

Case study: The impact of the global market on the fisheries industry in India

With the increased global demand for seafood and expansion of markets to serve this, India has experienced huge corresponding changes across the fisheries sector. Changes affecting marketing and supply chains have resounding repercussions on livelihoods throughout the sector, highlighting how large economic shifts can result in displacement on a number of levels that need to be better recognised.

Supply trends

A move towards more species-specific fishing practices requires greater capital investment for more effective fish catching technology. This has led to ownership being dominated by fewer players. Fewer landing centres are being favoured by modified fleets due to the increased security, better facilities and improved access to markets they present.

Processing trends

There have been significant changes in the availability and access of fish to processors. Better road networks, refrigeration technology and electrification have improved access to ice. Traditional village-based processors face declining supplies, with more fish being diverted to urban centres, and the higher availability of ice at the village-level, coupled with changing tastes for fresh fish, have reduced the demand for traditional processing. With greater competition between more buyers for fish at fewer landing sites, higher prices mean that smaller operators who can reach these areas are still unable to participate in these markets. With modern packaging for frozen, high-value products becoming more prevalent, traditional fish packaging and those who create these products are being phased out. Population increases and demand for land for aquaculture can reduce the space available for traditional processors in some areas.

Marketing trends

The changes in supply patterns have also affected traders. Villages with good communication and road networks allow buyers to locate and access landing sites with refrigerated vehicles. There is increased competition with more traders from outside coming into these villages as well as more individuals within villages turning to marketing activities. These new entrants may be displaced from the fishing or processing industries or from other non-fisheries activities. With these changes, women who traditionally dominated the fish trading sector are being displaced by men entering the profession. Small traders are also challenged by the costs associated with refrigerated transportation of products to marketing hubs. In addition to this, reciprocal relationships that would have allowed for credit based purchases are being broken down with the market increasingly relying on cash, rather than long-standing relationships and loans. Some small traders have responded by forming groups, to reduce competition with each other as well as reduce costs to effectively combat some of these changes. Positive impacts of marketing trends have included reduced damage and loss rates, with less wastage and products reaching consumers in better condition. The associated demand for grading for a multi-tiered market has generated employment in fish handling and grading.

Consumption trends

Coastal communities have had to adjust their consumption patterns in some areas in response to issues of availability and affordability. Increased demand for exports, and the increased willingness to pay higher prices for preferred products by a domestic middle class market, have resulted in some traditional products becoming less available or too expensive for poorer consumers. The overall impact that these changes may have on underlying food security issues is still not clear.

Source: IMM (2003)

In terms of policy priorities in the region, currently national policy goals to increase exports and stimulate regional and international trade in fisheries products are fairly consistent across the Asian region, with aquaculture products increasingly forming the bulk of exports (FAO 2006a). As noted above, export markets can stimulate overexploitation. Similarly, policies promoting technical progress and value-added products can also lead to overexploitation in the absence of complementary access and management measures (FAO 2003). The majority of national fisheries policies in the region do not specifically recognise and address these associated impacts, and the connection between increasing profitability, trade and increased incentives to overexploit resources has been de-linked. There is also a insufficient consideration

of tariff and non-tariff trade barriers and their potential impacts on the sector (FAO 2006a). Policy attention to increasing value-added to fisheries products is high in the region, but is often limited to the issues of trade and post-harvest activities, with little focus on other parts of the supply chain, such as the catching or farming sectors (FAO 2006a).

Technology and export-oriented trade policies in Asia take their cue from national goals that are focused more on GDP-level gains and targets. These policies operate with the assumption that smaller-scale operators and poor communities will benefit without looking specifically at the opportunities and challenges that are posed to all stakeholders involved in the sector (Macfadyen *et al* 2005). It is clear that, in the absence of thoughtful policies that seek to redress imbalances and losses sustained by those less able to cope with rapid change, poorer fisheries-dependent stakeholders may fall through the cracks if they are not provided with the support to adapt and benefit from the opportunities that globalised market forces present.

Subsidies to the fisheries sector

This section deals with subsidy policies promoted within the region. Subsidies, by nature, can be hard to identify and it is challenging to measure their impacts on livelihoods and economies (Sumaila and Pauly 2006). Khan *et al* (2006) note that, according to analyses by the Marine Resources Assessment Group-MRAG (2000) and Cox and Schmidt (2003), the objectives of most fisheries subsidies can be grouped under three loose categories:

- ▶ To support and develop local fishing industry;
- ▶ To maintain employment and to improve income distribution in fishing communities; and
- ▶ To manage geographical areas (e.g., the marine environment) relevant to fisheries.

There is much global concern over the scale of subsidy use in the sector and it is estimated that annually between US\$ 30–34 billion are spent on fuel and non-fuel subsidies, of which only US\$ 7 billion is targeted at positive management activities (Sumaila and Pauly 2006). Subsidies are perceived to distort the sector and contribute to overfishing by reducing the operating costs of fishing and making the industry more profitable than it should be, therefore driving overcapacity. Other concerns include their impacts on livelihoods and food security, and the trade-distorting nature of fisheries subsidies which, like hotly debated agricultural subsidies, can provide recipients with an unfair advantage (Oceana/ICTSD 2009).

Khan *et al* (2006) categorised commonly employed fisheries subsidies as “good”, “bad” and “ugly” – the latter referring to subsidies that may have either a good or a bad impact depending on the context of implementation. “Good” subsidies are viewed as those which encourage fisheries resource use to maximise societal benefit and support sustainable management, and largely come in the form of:

- ▶ Fisheries management programmes and services; and
- ▶ Fishery research and development.

Common “bad” subsidies that may drive overfishing and distort trade include:

- ▶ Tax exemption programmes;
- ▶ Foreign access agreements;
- ▶ Fuel subsidies;
- ▶ Boat construction renewal and modernisation programmes;
- ▶ Fishing port construction and renovation programmes;
- ▶ Fishery development projects and support services;
- ▶ Marketing support, processing and storage infrastructure programmes.

“Ugly” subsidies may or may not have a positive impact, depending on local circumstances and the manner of implementation. For example, subsidies aimed at supporting fisher assistance, such as community development programmes, can have the undesired effect of continuing to encourage participants to remain in the fishing industry and can affect market prices. The most common “ugly” subsidies are:

- ▶ Fisher assistance programmes;
- ▶ Vessel buyback programmes; and
- ▶ Rural fishers’ community development programmes.

The same study looks at global subsidy estimates for the year 2000 as an indication of how subsidies can be apportioned between these three categories, concluding that the vast bulk of expenditure dispensed globally goes towards “bad” subsidies (US\$ 16 billion), with only US\$ 6.6 billion and US\$ 3.4 billion spent on “good” and “ugly” subsidies respectively (Khan *et al* 2006).

Policy-level support for the use of subsidies in the Asian region appears to be relatively high, with most countries expressing some policy objectives relating to their use (FAO 2006a). Analyses presented by Khan *et al* (2006) showed that Asia contributed more than any other region in terms of global non-fuel subsidies. Almost 30 percent of subsidies expended annually come from Asia; more than half of these can be categorised as “bad” subsidies. Many of these are provided through credit provision or in a manner that supports specific policy goals such as fishery exports or sustainable fishery objectives (FAO 2006a). Subsidy policies in the Asian region identified by the FAO (2006a) include: fuel subsidies (Malaysia, Pakistan, Philippines and Thailand); one-time payments for fleet up-grading (India); subsidies to support various components of the aquaculture industry, such as targeting spawning, breeding or culturing activities (Malaysia, Pakistan); subsidies for vessel scrapping and job redeployment (China, Japan); and subsidies to support co-management based on result-based outputs (Republic of Korea). The reduction and rationalisation of subsidies are also stated aims by many countries in specific areas, such as credit guarantee schemes (Philippines) and phasing out trade distorting subsidies (Sri Lanka).

Though the specific impacts of subsidy-related policies on the livelihoods of small-scale fishers and other poorer groups associated with the fisheries sector are not fully understood, there is overwhelming consensus that the bulk of subsidies used in the fisheries sector are potentially damaging and may be actively promoting unsustainable patterns of exploitation, employment and sector development that the region should actually be trying to reverse (Khan *et al* 2006, Oceana/ICTSD 2009, World Bank 2004). Suggestions for policy interventions have included: mechanisms for fully appraising subsidies as part of Regional Fisheries Management Organisation (RFMO) and World Trade Organisation (WTO) processes; better monitoring of capacity reduction subsidies; careful assessment of effort-enhancing subsidies and subsidies that may stimulate overfishing; and better analyses of poverty reduction and food security oriented subsidies which should be treated as separate to export-stimulating subsidies (Khan *et al* 2006).

Policies concerning livelihoods and poverty reduction

Given the “sectoral-silo” culture of most national administrations, the leading authorities on issues relating to livelihoods, employment and poverty reduction are often not the preserve of the fisheries sector. Poverty-related issues faced by fishing communities are caused by the same lack of institutional, economic and political development issues that cause poverty the rural context more generally (Bene *et al* 2007). Fisheries agencies, traditionally responsible for the specific management of fisheries resources for the purpose of national wealth generation, are now finding it necessary to incorporate a suite of poverty and livelihoods related objectives. As many of tools and interventions that are needed to tackle poverty are broader than the confines of the sector, fisheries bodies may not necessarily have the specific expertise or institutional mandate to tackle these.

The consideration of poverty issues within the fisheries sector has improved over the last few decades; with a corresponding increase in the level of attention given to important subsidiary issues such as welfare, alternative livelihoods, employment generation and food security (FAO 2006a). These issues have largely become mainstreamed within fisheries policies in deference to their importance to a sector that supports some of the poorest groups in society (FAO 2007a). There has been a tendency for fisheries policies to follow the lead of flawed macro-economic arguments of recent decades; resting on the assumption that poverty related objectives would be served by increased economic growth and interventions based on stimulating trade and improving infrastructure (FAO 2006a). However, we are now aware that specific policies are necessary to ensure that special interest goals such as poverty reduction and livelihood diversification can be achieved. Despite this, these subsidiary goals are often less well developed in terms of clear, supportive policy frameworks that refer to other sectoral and non-sectoral issues (Bene *et al* 2007).

Livelihood diversification and employment

Providing alternative or supplementary livelihoods to adjust for livelihood opportunities lost due to measures relating to reducing or changing fishing effort (e.g., capacity reduction measures, gear restrictions, fisheries closure measures) is a priority of many countries in the region; 85 percent of the 14 national fisheries policies from Asia reviewed by the FAO (2006a) contained objectives to this effect. With market changes and resource degradation pushing people out of traditional occupations at an exponential rate, this is an area that is of prime importance for the region.

However, often policy references to livelihoods diversification tend to be vague and unsubstantiated by more detailed analyses on what supporting strategies and resources would be required, and fail to outline what these alternatives might be and whether they originate from within or outside the fisheries sector. Increased employment targets within the sector are also proposed, but, similarly, clarity on which fisheries sub-sectors will absorb these new jobs, and how this relates to issues of over-capacity, is less apparent (FAO 2006a). Furthermore, as with co-management policies, the supporting policy frameworks needed to ensure interventions are effective are generally not given enough consideration. Even cursory references to important associated issues, such as credit provision and micro-financing, are very low in national fisheries policies (FAO 2006a).

This rather superficial treatment of livelihood issues indicates that the sector is failing to rise to the challenge to develop holistic and robust strategies to tackle this critical area. This is particularly worrying given the fact that a number of other policies discussed in this paper implicitly require the movement of fishers out of their current occupation for the short-term as well as the long-term or expect fishers to sustain losses. As the World Bank (2004) states baldly "adjustment programmes cannot effectively reduce fishing pressure without reducing the number of fishers". With the impacts of growing, globalised trade potentially destabilising the livelihoods of small-scale operators and remote fishing communities further, the necessity for workable livelihood alternatives is an urgent priority.

Reviews of fisheries-related livelihood enhancement and diversification initiatives consistently report that current efforts are falling short of their objectives. Global, as well as regional, appraisals of the efficacy of livelihood interventions have tended to be very mixed (O'Gara 2007, Perera 2002, Salagrama and Koriya 2008). Poorly thought out interventions tend to rely on menus of livelihood options that do not take into account the underlying capacities, aspirations, needs or historical development of target communities (Campbell *et al* 2006) and decision-makers instinctively default to promoting fisheries-related activities without determining whether these are truly the best options (World Bank 2004). Pro-poor fisheries policies tend to focus on improving the management of fisheries resources for the benefit of poor fishers rather than exploring the option of using increased revenue from better management to assist their movement into other alternative employment outside the sector (DFID 2004). Often fisheries officials are under the impression that fishers are unable or unwilling to move out of the sector, however experiences have shown that with adequate support fishers can be very willing to leave the sector, if the gains are apparent (World Bank 2004).

Livelihood diversification has to be accompanied by management measures to prevent the continued degradation of the resource base. This includes the need to simultaneously address associated governance issues, such as tackling open access and dealing with property rights issues. Many attempts in the past have failed to move people out of the sector, with communities approaching alternative activities as supplementary to original fisheries activities or with new individuals moving in to replace those who have left the sector (World Bank 2004).

These concerns, and the extremely complex and meticulous challenge of moving vast numbers of diverse ground-level actors in highly contextual, varied circumstances, away from unsustainable or disappearing occupations, is not appreciated with a sufficient enough level of detail by fisheries policies. Research indicates that, in order for livelihood diversification to be successful, systematic and bottom-up approaches need to be pursued and best practice needs to be absorbed by policy and practice (IMM 2008, Salagrama and Koriya 2008). Additionally, policies should not be de-linked from broader issues regarding governance and institutional structures.

Food security

Food security issues are mentioned specifically in most fisheries policies in the Asia region, but there is little discussion on the distinction between food security at the livelihoods-level versus national food self-sufficiency (FAO 2006a). Failing to deal with the specific challenges that livelihoods-level food security pose, could result in a failure to support the nutritional needs of the millions of rural and urban poor dependent on fisheries products as a protein source. A number of sectoral changes that may affect food security have been discussed in this paper. Changes in affordability and access can occur in response to different drivers, such as: export-oriented changes or the creation of new low-value fish markets; reduced stocks due to overexploitation and resource degradation; and exclusion due to development or conservation pressures.

Gender issues

The Asia-Pacific Fisheries Commission (APFIC) recently highlighted the concern that policy documents in the region contain insufficient consideration of gender issues, noting that they are usually embedded in policies on poverty alleviation and marginalised groups (FAO 2006c). A national fisheries policy review of the Asian region in the same year (FAO 2006a) had very limited references to gender issues. Women tend to occupy distinct roles in the fisheries and aquaculture sector and may be affected differently to men, particularly with regards to the marketing and the processing sectors. It is important to recognise that gender differences within the sector are often a reflection of wider societal issues (Bene *et al* 2007), making the need to incorporate relevant cross-sectoral considerations and an appreciation of the prevailing cultural environment into the policy-making process.

2.5 National policies outside the fisheries sector

The need for cross-sectoral collaboration in fisheries and aquaculture resource management is increasingly being recognised by policy-makers. The incorporation of integrated approaches, such as integrated coastal management (ICM) and the Ecosystem Approach to Fisheries (EAF) management, in policy objectives indicates commitment to making important extra-sectoral links (FAO 2006a). However, the level of detail and practical action in making these links explicitly and considering them in the formation of policy targets and decisions often falls short of needs. Furthermore, integration is a two-way process, and proactively looking for points of synergy with other sectors can be as important as lobbying for fisheries and aquaculture considerations to be incorporated. This section looks at how fisheries management issues are reflected in other sectoral policies and highlights some of the more pressing cross-sectoral issues that need to be addressed.

National development and management policies

National development and planning policies

There are a wide variety of development, poverty reduction, trade and more general land use planning policies that are employed by national governments. Most of these have direct implications on the fisheries and aquaculture sector through defining the development objectives and tools that will be available for sector-level policy makers.

In contrast to other parts of the world such as Africa (Bene *et al* 2007, Payne 2000), fisheries-related issues are generally well-reflected in national-level development and poverty reduction policies in the region, as evidenced in the Poverty Reduction Strategy Papers (PRSPs) and National Development Plans (NDPs) of a number of Asian countries (FAO 2007a). The prioritisation of fisheries in the PRSPs/NDPs of Bangladesh, Cambodia and the Philippines is seen to be high, and moderate mention of the sector can be found in the NDPs of India and Malaysia. Eight out of ten national development documents reviewed from the region were also seen to incorporate fisheries to varying extents (FAO 2007a). The economic importance of fisheries to the Asian region has ensured that it is not ignored in mainstream development policies, but the challenge for countries is to ensure that this translates into positive policy outcomes on the ground.

Other general planning policies relevant to the fisheries and aquaculture sector include those concerned with land use planning and Integrated Coastal Management (ICM). These may simultaneously represent a variety of competing sub-sectors alongside fisheries and aquaculture, such as tourism, private sector interests and conservation. The FAO (2007a) has noted that there needs to be better integration of the sector in coastal zone management and tourism policies. Needless to say, the level of integration varies between countries in the region. Sri Lanka, for instance, has a fairly advanced and long-standing Coastal Zone Management process, upon which its national fisheries policy is based (FAO 2007a). The implementation successes of integrated coastal management approaches in Asia have had fairly modest outcomes. This is partly due to the inherent challenge of incorporating multiple goals and sectors, but can also be blamed on fundamental institutional failures, such as the inability to support necessary property and user rights for effective management (Brugere 2006). Expressing sectoral needs and concerns successfully is therefore only one part of the solution, and institutional flaws need to be adjusted in parallel to policy dialogue for any practical gains to be supported.

Fiscal policies

National expenditure and revenue generation policies include those governing budgetary allocations, taxation and the management of resource rents. Budgetary decisions governing sectoral spending are made “centrally” at the national, but further allocation decisions can be made at the provincial or state level, depending on the level of financial and political devolution. Funds are apportioned in the context of competing needs between and within sectors, and the perception that there is an insufficient provision of central funds to match management needs is certainly not unique to just the fisheries and aquaculture sector. The costs of fisheries management across the region are believed to be rising, but policy responses to this in the Asian region, in terms of supporting revenue enhancing mechanisms such as increased user fees, are not keeping pace (FAO 2006a).

A significant proportion of the capture fishing industry needs to be phased out and this will entail huge investments on the part of national governments. It is clear that the large scale removal of fundamentally unviable fishing operations from the system will be too politically contentious unless this is accompanied by adequate compensatory measures requiring greater financial commitment at the national levels (see Box 2). Just as fisheries and aquaculture authorities are making the difficult shift to encompass more intricate challenges than were historically posed by the old paradigm of simply increasing fisheries production and efficiency, national fiscal systems urgently need to revise patterns of allocation that were fixed to reflect these more limited needs of now-outdated fisheries goals and objectives (FAO 2004b).

More specific issues regarding subsidies and the management and distribution of resource rents are intimately bound to fiscal systems. With resource rent regimes often contributing to incentives or disincentives to overexploit capture fisheries, fiscal arrangements can effectively act as management measures and contribute to the control of over-fishing. These mechanisms can contribute to solving problems of open access systems; bolstering concepts of property and user rights (World Bank and FAO 2008). Many countries suffer from short-termism, with non-sectoral budgetary considerations over-riding the long-term needs of fisheries management (SIFAR 2003). There is a need to reform fiscal policies to phase out harmful subsidies, gauge the cost

burden that could be shared between the public and private sectors, manage resource rents in a manner that deals with some of the negative aspects of open access and re-direct income towards strengthening management and institutional capacity in fisheries (World Bank and FAO 2008).

Anti-corruption policies

There is a well recognised link between the prevalence of corruption in the natural resource management sector. Prior to the 1990s, many theorists held the view that corruption may be positive force that increases efficiency; these ideas are largely thought to be incorrect now, and corruption is widely regarded to be one of the main obstacles to poverty reduction, social justice and sustainable development (UNDP 2008, Sumaila and Jacquet 2008). The rewards associated with fisheries resources have the potential to encourage rent-seeking behaviour and the open access nature of many fisheries systems increases the potential for this. Powerful groups have been seen to drive policy agendas through means that circumvent transparent, democratic systems (UNDP 2008).

The ADB (2006) identify that corruption in the fisheries sector can:

- ▶ increase incentives to engage in irresponsible resource management practices;
- ▶ worsen resource degradation;
- ▶ misallocate scarce public resources;
- ▶ hinder the enforcement of fishery-related laws and safeguards; and
- ▶ undermine transparent decision making

These outcomes prevent certain groups from benefiting from resources that they should theoretically have rights to, and undermine the sustainability of livelihoods dependent on the sector.

The UNDP (2008) reports that corruption in natural resource management in the Asia-Pacific region disproportionately affects the poor, rural communities and indigenous people; severely impacting on their livelihood outcomes. The failure to tackle these drivers, often the primary obstacles to good management, will undermine efforts at other levels (see case study for an illustration of this).

Box 2: The cost of transition to responsible and sustainable fisheries

For adequate reforms to the fisheries sector to be realised, considerable investment will be required for a range of actions, such as: removal of excess fishing capacity; timebound income support to displaced crews and employees; economic incentives for the creation of alternative employment and income opportunities and for facilitating occupational mobility; and adjustments of public fisheries management administrations. However, political support for the reallocation of budgetary funds to support this is low in most developing countries.

Reasons for this include: already inadequate budgetary funds; no precedent for policies that represent investing in actions that are essentially a form of de-investment; the time lag between the investment and the accrual of benefits from more sustainable fisheries; and opposing vested interests that serve to lose in the face of reforms.

Source: Willmann *et al* (2003)

Case study: The influence of corruption at multiple levels on the livelihoods of fishers in Sulawesi, Indonesia

In the Togeian islands of Sulawesi, fishers supplying the life reef food fish (LRFF) trade using destructive and illegal fishing practices face a daunting wall of prohibitively punitive action from the State. Despite this, poor fishers persist in using cyanide; not only threatening the underlying resource base, but in the long-term undermining the sustainability of their own livelihoods. The fishers themselves are aware of this, but there is a sense of fatalism regarding the practice, as they are bound by an informal system of corruption and patronage that they have little influence over.

Government bureaucrats and conservationists focus on penalising and controlling fishers at the local-level, but with limited success. These management efforts largely ignore the systemic corruption that protects this destructive industry and is supported by the very same bodies that are supposed to regulate it. Wealthy groups that control LRFF businesses benefit from the protection of local and national bureaucratic elites. The web of corruption that shields the trade operates on a number of levels: government fisheries and enforcement agents, commercial operators, brokers, community leaders and local fishers. Central to this web is a core group of officials and individuals with commercial interests that are enabled to profit greatly from the system.

This not only undermines fisheries management, but has led to the development of an entire system of representation driven by corruption. In certain areas village heads can only accede to power if they specifically support the illegal LRFF trade. The poorer fisher groups that bear the brunt of the remedial enforcement of laws, that present opportunities for bribery and profiteering for enforcement officials, therefore bear the risks for those benefiting from the system. More generally, these communities are compelled to exist in a local governance context that is based on corruption and patronage and does not provide them with the democratic space to express their concerns and influence policy on a wide range of issues, of which fisheries management is only one.

Source: Lowe (2002)

Corruption can hamper good fisheries management from the point of capture all the way down the processing and marketing chain, affecting a whole spectrum of issues, e.g., resource and pollution management, national resource rent management, and even international trade. Corruption seen at the capture level include: the mismanagement of flags of convenience; the bribery of officials to relax the enforcement of management measures; and the misreporting of catch data from the local to nation level.

At the processing and marketing levels corruption is often used to circumvent labour standards, threatening the safety and health of millions of people involved in the sector. For example, the ILO (2006) has reported that child labour, forced labour, and long work hours are endemic in seafood processing plants in Thailand. The shrimp processing industry is notorious for its illegal labour conditions, and it is speculated that there are more child labourers in this industry than any other (Sumaila and Jacquet 2008). Those engaging in corrupt activities even resort to homicide to protect their interests, with reports of murders linked to the shrimp industry being reported in 11 countries, including Bangladesh (EJF 2004). Other common corrupt practices include mislabelling of seafood and the manipulation of traceability systems (Sumaila and Jacquet 2008).

Acknowledgement of the need to tackle corruption can be seen in the increasing incorporation of anti-IUU measures in fisheries policies. However, the factors that enable corrupt systems that originate outside the sector need to be addressed, involving broader systemic changes and the reversal of relationships based on patronage. A number of Asian countries have signed and/or ratified the UN Convention Against Corruption (e.g., Bangladesh, Cambodia, China, India, Japan, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Korea RO, Singapore, Sri Lanka, Thailand and Viet Nam). However, progress is noted to be very slow for the majority of countries in the region and this is often blamed for the loss of considerable national wealth.

Weak institutional arrangements and poor political will are often the underlying drivers of corruption (Kolstad *et al* 2008). Therefore, the successful strengthening of institutions and governance to reduce

corruption at all levels is essential for the fisheries and aquaculture sector. Providing the right to information (RTI) and greater transparency is important, and the role of the media and civil society in this can be extremely useful. It is therefore important that these actors are allowed to participate more fully in policy and governance issues (UNDP 2004). Unfortunately, many countries in the region are still reluctant to support this; calling into question the political will to meaningfully tackle corruption.

The decentralisation of resource management is thought to be central to combating local-level corruption through giving users greater incentives to sustainably manage and protect these resources. It is also recommended that the agencies responsible for monitoring and conservation should be separate to those responsible for production (UNDP 2008). On a more general level, institutional failings that allow corruption must be addressed, and incentives for corruption need to be dismantled. The use of Anti-Corruption Agencies is a useful approach, but often these are seen not to have the power they require and are also subject to being hijacked for political means (UNDP 2008). All anti-corruption mechanisms are themselves subject to manipulation or personal agenda, but greater transparency on all levels can help to minimise this. Genuine political will to tackle corruption is greatly needed, but the conundrum of getting actors who may themselves be benefitting from corrupt systems to support and oversee mechanisms to support greater transparency, is a huge barrier to change. The maintenance of transparency and the strengthening of international and regional bodies in order to play a greater role in combating corruption is therefore of prime importance.

Other extra-sectoral policies

Water, agricultural, forestry and environmental management policies

The management of freshwater systems have implications for capture fisheries as well as aquaculture operations, particularly with regards to species that spend some portion of their lifecycle in freshwater environments (FAO 2008). Fisheries can make a significant contribution to the food security and livelihoods of agriculture-dependent communities (Payne 2000), however, water management policies tend to have a poor consideration of the importance of fisheries to irrigation-dependent communities (IWMI 2005a). The limited view of fisheries as a strategy of last resort ignores the multiple needs of communities reliant on water services that support fisheries and farming systems crucial for their livelihoods. Sometimes non-sectoral policies can directly contradict this underlying interdependence quite literally, unduly favouring agricultural goals over other sectors without a more careful consideration of the interplay between sectors. For example, Edwards (2000) notes that policies aiming to promote agriculture have been used to prohibit the conversion of rice fields into fish ponds, highlighting the exclusive emphasis on grain for food security.

Competition for water between the fisheries and agriculture sectors can lead to conflicts between user groups. Similar conflicts arise regarding the diversion of fresh water for water-thirsty industries, such as hydroelectric power generation. Sometimes diversions can be implemented on a huge scale, completely altering water systems. For instance, water management policies driven by a range of needs in India and Bangladesh are responsible for an estimated 60 percent of the Ganges River's water flow being abstracted (Payne 2000). Pollution from agricultural sources can also have a detrimental impact on both inland and marine fisheries.

Recent debates on water management have incorporated the idea of environmental flows, or "e-flows". This term refers to the maintenance of flow regimes necessary to provide essential ecosystem services (IWMI 2005b). Fisheries-oriented analyses are quick to point out that multi-sectoral discussions on water management may present a space for the Ecosystem Approach to fisheries management to contribute to the discussion (FAO 2008). However, there is sparse mention how discourses on non-sectoral approaches that present opportunities for considerable synergy, such as environmental flows, could conversely be applied to fisheries management in the region. Inland capture fisheries and aquaculture could benefit from engaging more with this move towards an environmental flows approach that would allow for greater cross-sectoral collaboration.

Given the role of fisheries as a safety net for the poor and its importance for mixed activity livelihood strategies in rural areas, the success of policies in the agricultural sector in dealing with predicted changes such as market and climatic trends will have far ranging impacts. Decreases in water availability due to climate change are predicted to have a strong negative impact on agricultural productivity in lower latitudes, and Asia may find its river basin systems severely compromised. Coastal agricultural areas are likely to be affected by increased salinity as well as physically disrupted by more frequent extreme events (IPCC 2007). Decreases in agricultural productivity could lead to greater rates of migration and increased pressure on fisheries and other open access resources. The ability of the agricultural sector to rise to the challenge of adapting to climate change, therefore, has serious consequences for the fisheries sector.

Forest ecosystems can have very intricate relationships with fisheries systems, ecologically as well as economically. The importance of forest habitats associated with aquatic systems (e.g., mangroves) as nursery grounds for commercially important stocks is possibly one of the most obvious links between fisheries and forestry management. The failure of the forestry sector to protect habitats vital to fisheries can be detrimental to local livelihoods. The lack of effective forestry policies for the seasonally flooded forests around Tonle Sap lake and river in Cambodia, for example have allowed harmful logging practices, resulting in the loss of valuable fisheries habitat (Broadhead 2001). The inter-dependence of the fisheries and forest sector (e.g., wood for boat building, firewood for curing fish) can be considerable. The poor management of forest resources or restrictions on access to forestry resources can therefore have significant impacts on fisheries activities.

The weakness of environmental and pollution management policies is a cause for concern. This is particularly pertinent with regards to the aquaculture sector when considering international trade issues, but capture fisheries are of course equally affected, especially those associated with sensitive habitats such as coral reefs. Chemical bans for health reasons (e.g., chloramphenicol in Thailand and Viet Nam) are often poorly enforced; ingredient and concentration information is often inadequate and there is a lack of data on inputs and corresponding impacts (EJF 2004). In addition to the health and safety implications that this has, for an industry vying for export trade there are difficulties in adhering to traceability standards and operators risk facing non-tariff trade barriers. European importers are placing greater emphasis on these issues following the detection of prohibited antibiotics in shrimp sourced from farms in Bangladesh, China, India, Myanmar, Thailand, and Viet Nam (World Bank and FAO 2008). Wild caught shrimp and fish are also being rejected by importers due to contamination issues. Pesticide residues, metals (e.g., mercury, lead, cadmium) and toxic algae are found to be some of the most common contaminants of fish (World Bank and FAO 2004).

Conservation policies

Conservation policies, driven by biodiversity and habitat conservation concerns, can have overlapping objectives of maintaining the integrity and productivity of fisheries-related ecosystems. However, consideration of the needs of the people directly depended on these resources has been neglected or, at best, partially and sporadically addressed by the conservation sector, which has tended to place more emphasis on the intrinsic societal value of biodiversity resources. This emphasis has been changing over the last few decades, with an increasing shift towards understanding biodiversity's role in maintaining essential services, as most clearly seen in the ecosystem services discourse. National level policies in the region have yet to catch up with this directional shift, with sectoral separation and historically inherited administrative systems making it difficult to integrate livelihoods concerns into the conservation sector.

Biodiversity conservation measures that result in the exclusion of people from fisheries resources, or even those that demand modifications in exploitation patterns, can have a direct impact on fisheries livelihoods. Restrictions on particular species or groups can be seen with measures relating to shark, marine mammals and marine turtle conservation in the region. Other conservation-driven policies include the restriction of gears for species conservation, particularly with regards to bycatch. For example,

the high levels of marine turtle mortalities in connection with global shrimp fisheries have spurred support for the use of Turtle Excluder Devices (TEDs). The use of TEDs is enforced in a number of countries, but capacity and willingness to use these devices remains limited in certain countries. There is little argument with the need to ensure that species are not driven into extinction, however there is an acute need to support fishers more practically to observe restrictions and gear use, requiring more dialogue with, resources and potentially compensation for concerned stakeholders.

There is a wide and heated debate on the use of protected areas, particularly Marine Protected Areas (MPAs), as a fisheries management tool (FAO 2008). This section looks at MPAs that are nationally recognised “protected areas”. Across much of Asia these formally designated conservation tools tend fall under the jurisdiction of agencies concerned with environmental or forest management. Historically protected areas were confined to terrestrial and forested lands – with marine areas being subsumed under the umbrella term of “protected areas” only more recently. The priorities and capacity of agencies to incorporate the concerns of fishers into MPA management can be inadequate.

MPAs may have subsidiary fisheries management objectives, but these are likely to compete with other objectives, such as biodiversity protection and tourism. There is evidence that in certain systems closing areas to fishing can yield fisheries benefits (PISCO 2007). However, there is some concern that the line between the closure of fisheries grounds for the protection of important fisheries habitats for stock recovery and the potential fisheries benefits of MPAs that may be designated for multiple purposes is being deliberately blurred by those with a greater interest in biodiversity conservation. Though MPAs designed to yield multiple benefits may present an array of societal advantages, including fisheries related ones, to forcibly re-interpret this as blanket benefits for fishers at all times represents a counterproductive and even dishonest simplification.

There is a need for a rational and transparent debate on the specific benefits and costs to different stakeholders involved in MPAs. Examples of community-driven MPAs, such as efforts to establish the first community co-managed MPA in India in the Lakshadweep Islands, show more encouraging applications of the use of MPAs and MPA-like tools to support fishing communities using collaborative, bottom-up techniques. The intersection between community involvement in management and success is significant. There is often a disjuncture between the lack of community involvement in the design of MPAs and the expectation of communities to comply and participate with MPA implementation. Global reviews of the impact of MPAs on fishers carried out by the International Collective in Support of Fishworkers (ICSF) found that most communities felt they had little ownership over MPA management and designation processes and were forced to pay the costs of conservation with no compensation or recognition of their losses. Countries where communities were in the forefront of the MPA process exhibited the most positive outcomes (Rajagopalan 2008).

Urbanisation and migration

Urbanisation is a huge force in the Asian region. Asia is home to some of the world’s largest cities and a number of countries in the region (e.g., India, China, many countries in Southeast Asia) have fast growing economies and medium to high rates of urbanisation (Sheng 2003). Steep increases in the population densities of coastal areas, where many urban centres in the region are located, have been witnessed in Asia as well as globally; currently 39 percent of the global population lives within 100 km of a coastline (World Bank 2004).

Policies that fail to address the links between rural-to-urban migration and support the expansion of populations in coastal areas without sufficient attention to issues of resource sustainability jeopardise the fisheries sector, with issues such as pollution and poor waste management impacting on the productivity of fisheries habitats. The fisheries sector must also grapple with some of the changes posed by rapid urbanisation. There is high potential for altered demand patterns as urbanisation brings with it a greater prominence to large retail chains with specific sourcing demands for fisheries products, exerting pressure for changes in the processing sectors.

The inter-relationship between the fisheries sector and patterns of migration should be acknowledged in policies. With the continued depletion of resources or reduction in access rights for a range of reasons (e.g., land use policies due to tourism development or conservation measures), communities traditionally dependent on fisheries resources may fall back on migration as a livelihood strategy. A review of migration patterns apparent in communities associated with the Tonle Sap lake system in Cambodia, for example, noted that local livelihood conditions acted as the main push factor in determining migration. Villages where fisheries resources were accessible and plentiful reported very low rates of out-migration, while the converse was found for villages with an eroded livelihood base – with individuals facing considerable risk and insecurity in order to seek work in other areas within and outside the country (Murshid 2007). Climate change impacts are likely to accelerate and change patterns of migrations, with the possibility of “environmental refugees” fleeing ecosystem and corresponding livelihood failure (IPCC 2007).

Current discourse on migration and urbanisation in the region reflects a slight disconnect between policy makers and academics, with the latter advocating a more positive and facilitating approach to urbanisation. Policy makers still view rural to urban migration as a burden on cities and a drain on rural areas. However, there is a case for supporting urbanisation more effectively, instead of shying away from improving conditions for migrants to urban areas due in order to disincentivise this livelihood strategy (Sheng 2003). The connections between successful urban migration and a reduction in dependence on subsistence fisheries is not a well explored topic. The fisheries sector should try to understand the challenges and opportunities posed by migration patterns and attempt to contribute to the debate to ensure that fisheries-related concerns are included.

2.6 International and regional policies

International and regional policies are enormously influential in driving decisions further down the policy chain at the national and sectoral levels. This is particularly the case with policies governing issues such as international trade, food standards and conservation. Policy conflicts at this level often arise when countries act to protect their own interests while attempting to benefit from international opportunities. Regional and international mechanisms can be used to protect one state’s interests from another. Certain international and regional mechanisms represent a collective endorsement of best practice and have the explicit aim of supporting nations to adopt and implement good policy. Though success can be seen in the ability of some of these instruments to drive national and local policies, the accompanying political will and institutional arrangements to see these through meaningfully is unfortunately not always adequate.

International and regional fisheries and aquaculture policies

There is a plethora of relevant international and regional policy-level institutions and mechanisms that target the sector: coastal and fisheries management organisations, international resolutions, conventions and action plans. Depending on the nature of the institution, these bodies can wield the power to establish management measures, facilitate decision making through consultative processes, or simply provide managerial and scientific advice. This paper will not attempt to provide an exhaustive list and analysis of all of these mechanisms, but outlines the significance of different types of regional and international policy bodies.

Fisheries management and advisory bodies

Regional Fisheries Management Organisations (RFMOs) perhaps represent the first tier of regional governance for fisheries resources. Their mandate is to oversee the management of single species or species groups of interest that are not confined by State boundaries. The two RFMOs most relevant to the region are the Indian Ocean Tuna Commission (IOTC) and the Western and Central Pacific Fisheries Commission (WCPFC). These bodies can be effective in driving national policy formation through binding

agreements. The IOTC, for instance, has recommendations relating to IUU fisheries that compel contracting party states to adopt measures stipulated in Commission resolutions. The effectiveness of RFMOs is variable and they are beset by less than efficient consensus and decision making processes, often falling back on peer pressure as a method of enforcement (World Bank and FAO 2008).

There are a number of regional advisory bodies that are relevant to the fisheries and aquaculture sector, such as: the Bay of Bengal Inter-Governmental Organisation (BOB-IGO), the Mekong River Commission (MRC), and the Asia-Pacific Fisheries Commission (APFIC). These may have very different sub-sectoral focuses, but tend to operate on similar principles; acting as a source of best practice and playing a role in convening and facilitating countries to work towards decisions of shared interest. Other than formal, policy-setting institutions there are a number of large, regional programmes and initiatives looking at the sector. Many of these specifically target the sticky problem of implementing best practice. The recently re-started Bay of Bengal Large Marine Ecosystem (BOBLME) programme represents one of these. With its focus on tackling regional barriers to resource management, with a focus on poverty reduction outcomes, it has some promise of redressing many of the transboundary issues that are under-served in existing region policies. The Support to Regional Aquatic Resources Management (STREAM) initiative is another regional programme which has a more specific focus on dealing policy issues associated with the management of critical resources for the poor in a total of fifteen countries across the Asia-Pacific region.

Legally binding international instruments

The mandates and messages of many regional and national policy instruments are derived from legally binding agreements formulated at the international level. In terms of marine fisheries, one of the more significant international mechanisms is the 1982 UN Convention on the Law of the Sea (UNCLOS); this defines the rights and responsibilities of nations with regards to the use of use of the world's oceans. Other agreements of interest include: the UN Fish Stocks Agreement (UNFSA); the 1995 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement); the 1995 Kyoto Declaration from the International Conference on the Sustainable Contribution of Fisheries to Food Security; the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); the 1992 UN Conference on Environment and Development; the Convention on Biological Diversity (CBD); the 1995 Jakarta Convention; International Convention for the Prevention of Pollution from Ships (MARPOL); and (In process) the Agreement on Port State Measures (FAO 2008). The International Labour Organisation (ILO) has seven instruments covering issues such as training, working hours, and minimum age, that specifically concern the fisheries industry, and these can help to improve conditions and livelihood outcomes when they are applied.

Voluntary agreements

Fisheries-management specific agreements include the 2005 APEC Bali Plan of Action, the Coordinating Body for the Seas of East Asia (COBSEA), as well as related conservation and habitat management instruments such as the 1971 Ramsar Convention on Wetlands. On a more instructive level, the FAO's 1995 Code of Conduct for Responsible Fisheries (CCRF) emerges as a widely recognised best practice standard-setting instrument for wise and equitable management of fisheries and aquaculture systems. The CCRF seeks to influence action by overseeing a ladder of policy formation down to the local and national levels. One way that the CCRF focuses its influence is through the use of International Plans of Action (IPOAs). Four IPOAs that have been developed over the last decade, looking specifically at the following objectives:

1. Reduction of incidental catch of seabirds in longline fisheries;
2. Conservation and management of sharks;
3. Management of fishing capacity; and
4. Prevention, deterrence and elimination of IUU fishing.

In 2007 a Regional Plan of Action (RPOA) was developed for specific subregions within Asia and the Pacific, involving 11 countries from the region. Countries are being encouraged to develop National Plans of Action (NPOAs), though this process is going very slowly in the Asia-Pacific region and progress towards implementation is seen to be largely disappointing and inadequate (FAO 2008, ADB 2006).

The CCRF has been successful in getting countries to harmonise standards and objectives to some extent. However, the low rate of implementation may be indicative of the CCRF's need to facilitate specific, local application of its principles more effectively; potentially through the use of more bottom-up processes to improve applicability and relevance. One of the identified problems with the CCRF is its emphasis on State responsibility. There is a need to create a better structure to incorporate the actions of all fisheries and aquaculture stakeholders (e.g., fishers, processors, NGOs, communities) and support different levels of representation (Caddy 2000). The legal formalisation of the decision-making process of the CCRF, with the provision for greater access to information and non-State participation, could strengthen the mechanism and has been suggested as a way of improving its functionality (Friedrich 2008).

Other weak points of the CCRF include its rather cursory attention to issues such as transparency and corruption, as well as its relatively poor attention to poverty reduction issues in line with the principles reflected in the Ecosystem Approach to fisheries management and mainstream development initiatives such as the Millennium Development Goals (e.g., the consideration of gender issues is extremely low). Issues such as eco-labelling are also not well covered, with certification issues only referred to under the topic of food safety standard issues. The CCRF could be a more effective tool if brought up to date and some of the underlying processes of implementation were reformed.

Civil society

A huge number of environmental and social justice oriented organisations have mandates to actively target and influence various aspects the fisheries and aquaculture sector. These diverse actors have their own policy objectives on a variety of issues: from biodiversity conservation, to fishers' rights, to sustainable resource management. Specific initiatives include the Marine Stewardship Council (MSC), which has enjoyed some successes in influencing private sector seafood-sourcing practices through the promotion of certification standards. The Marine Aquarium Council (MAC) provides a similar service for marine life used in the aquarium industry. Environmental NGOs have been instrumental in pushing for MPA and resource restriction policies. Other lobby groups directly target the fishing industry or more broadly seek to influence policies and processes that fail to stop resource mismanagement and to protect the interests of poorer stakeholders.

Some activities are more transparent and structured than others, with the MSC representing a formalised mechanism with a relatively clear mandate and mode of operation (even though this tool is not without associated controversy with regards to its accessibility to and representation of poorer groups). Other organisations may work in ways that are less explicit, often attempting to influence policies through their involvement in less visible consultative processes or donor projects. These interactions form a complicated network of activities to influence policy that are partly driven by fairly open internal NGO policies and mandates. However, often these mandates are applied elastically and opportunistically in response to donor interests and priorities, clouding the purity of stated organisational mandates. The crucial role of civil society in supporting better representation is highlighted by many authors (Bene *et al* 2007, World Bank and FAO 2008, World Bank 2004). The development of clear platforms and processes for civil society engagement will undoubtedly strengthen policy-making processes and reduce the ambiguity surrounding the specific policy objectives and agendas of non-state actors.

Private sector and industry groups

Commercial and industry interest groups have a comparably fluid and often unsystematic relationship with policy formation as civil society, in that the mode of engagement and dynamics of influence are not always formal and open to scrutiny. The influence of private sector interests on fisheries and

aquaculture policy and legislation formation is not well documented, but the role of these groups in other, better studied sectors indicates that interactions could be significant. Records from other parts of the world show considerable private sector activity. In 2000 it was estimated that 44 lobbyists were registered in the United States (US) fisheries and wildlife sector, expending a total of US\$ 1.5 million in “hard” and “soft” contributions to various different bodies and associations (Sutinen 2008). The power of the fisheries industry lobby in the European Union (EU) is well recognised and often bemoaned. The EU’s Common Fisheries Policy (CFP) is understood to be rife with bad practice policies that support short-term economic gains favouring powerful fishing industry interests; these interests exert considerable political pressure on their member states and emerge as key drivers of fisheries policy (EC 2009).

International lobbying activities from private sector interests are seen to contribute to the adoption of policies in other regions that unfavourably impact stakeholders the Asian region. Examples include subsidies to distant water fishing fleets and fishery access agreements that devastate local fishers in developing countries. Within the region, similar dynamics could be responsible for the development of fisheries and trade policies that disproportionately represent wealthier interest groups. Again, a move towards more fully transparent and inclusive policy-making processes is the only way to break out of the deadlock of specific interests pushing destructive policies.

Non-sectoral international policy instruments

Regional and international development and poverty reduction policies

Globally endorsed principles regarding poverty reduction and sustainable development, such as those enshrined in the Millennium Development Goals (MDGs), provide strong cues for national policies and strategies. Multi-lateral agencies such as the UN, World Bank and the Asian Development Bank theoretically support these goals through their policies, which serve as the foundation of numerous projects, programmes and donor funding disbursed to governments and third party organisations directly targeting the region.

In a review of the recognition of fisheries interests in regional development policies, the FAO (2007a) noted that the fisheries and aquaculture sector was often poorly incorporated and understood by these instruments. UNESCAP’s 2003 “Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenge of Poverty Reduction” made no mention of the sector and UNDP was noted to have only recently acknowledged the significance of the fisheries sector in the 2006 “Asia-Pacific Human Development Report”. The same review notes the redundant nature of the Asian Development Bank’s 1997 fisheries policy framework, which has failed to influence or drive even its own work on the sector in any meaningful way (FAO 2007a). Though international agencies driving policy change often stress the importance of participatory processes as being fundamental to good policy design, it is important to note that policies developed by these very agencies are often not subject to the same rigorous participatory processes that they may promote.

An exploration of how this can happen at the multi-lateral level is provided in the case study on the ADB’s fisheries policy and the decision making processes that underpin the organisation. The ADB is a multi-lateral development agency that provides financial assistance in the form of loans and grants to developing country members. Its overarching mission is to “help its developing member countries reduce poverty and improve the quality of life of their people”. Though infrastructure development dominates the bulk of its sponsored activities, it also seeks to support positive development in range of other areas, including the fisheries sector. The ADB’s recognition of the importance of supporting poverty reduction and livelihoods outcomes in the fisheries sector only really became established in the last two decades. Throughout the 1970s interventions in this sector were largely limited to stimulating industrial fisheries. With the growing realisation that the industrial fisheries sector was suffering from overexploitation, in the 1990s the ADB revised its approach to more carefully reflect social and environmental sustainability concerns (ADB 2007).

Case study: The policies of the Asian Development Bank's (ADB) and their potential impact on fisheries and aquaculture livelihoods

In 1997 the ADB endorsed its new policy to guide interventions in the fisheries sector. The ADB Fisheries Policy was created to guide projects to support the sustainable management of aquatic resources in light of poverty, resource and environmental degradation, and overexploitation of fisheries resources. An ADB-initiated review of the fisheries policy carried out in 2006 found that the policy had largely failed on a number of counts. Firstly, some policy recommendations were found to be irrelevant and, in some instances, examples of poor practice. Secondly, it was demonstrated that most of the ADB fisheries-related projects suffered from very poor performance. It was also found that very few sponsored projects were actually influenced or informed by the policy and that ADB did not have the technical capacity or framework in place to manage it. Criticisms of the policy included the fact that it did not have internal guidelines, a monitoring framework, and an operations manual for ADB staff to support application and enforcement of the policy (ADB 2006).

Issues of policy incoherence can be seen in other ADB policies, such as those overseeing the development of the Greater Mekong Subregion (GMS). Conceived in 1992, this programme has the broader goal of economically integrating six Mekong River countries in order to reduce poverty. Activities have had a strong focus on developing economic infrastructure to do this, with a heavy emphasis on transport, energy and telecommunications. GMS activities have supported the commercialisation of land as a tradable commodity which, in some places, has resulted in increased landlessness due to land transfer actions. This has had the knock on effect of the increased exploitation of fisheries resources by the landless poor. Hydropower developments have also been seen to alter river systems; resulting in declines in fish stocks and impacting on local livelihoods negatively in a number of ways. In general, the programme has been seen to have multiple negative impacts on certain vulnerable groups, including decreased access to important fisheries resources in some areas (Oxfam 2007).

Evaluations of infrastructure projects in the GMS carried out in 2003 concluded that the environmental and social impacts of these projects had not been systematically considered in the preparation phase, despite their potential impact on tens of thousands of people (UNEP-GRID 2004). The GMS's programmatic structure actually has no specific focus on fisheries. The sector is only vaguely represented under its goals for environmental management, and any consideration of the programme's specific impact on fisheries issues was completely absent from the GMS mid-term review (ADB 2007). This is despite the huge importance of fisheries to the livelihoods of the poor in the Mekong River region (Oxfam 2007).

Understanding the policy processes pursued to develop these initiatives can provide valuable lessons on why there might be policy "failures" or conflicts. The ADB's Fisheries Policy was developed based on "ADB's experience in the sector, including lessons from ADB's post-evaluation findings; a review of relevant literature; extensive in-house dialogue; views of selected DMC governments; and consultations with major bilateral and multilateral agencies, non-government organisations (NGOs), and research institutions" (ADB 1997). However, consultation methods are not clearly described and do not appear to be standardised, and it is notable that only select countries' governments were consulted. In the case of the GMS programme, the management and decision-making structure appears to consist of a tight tier of senior officials reporting upwards to a ministerial-level decision-making group, with technical guidance for decision-making provided by internally selected sectoral working groups and forums⁴. The ADB's mid-term review of the GMS programme noted the need to "expand engagement with civil society" and "pursue consultative mechanisms in the design, implementation, and monitoring of subregional programmes and projects" (ADB 2007), indicating that issues of stakeholder participation are a concern that the ADB itself has recognised.

The ADB's overarching policy for civil society contribution to policy formation is rather vague, encouraging broader stakeholder consultations and providing some broad recommendations on good practice for civil society engagement. However, these represent general suggestions rather than a standardised framework for consultation (ADB 2005). Currently, only the ADB's Safeguard Policies specifically require civil society consultation (ADB 2005), and this stipulation appears to have been adopted in response to concerted civil society lobbying⁵. Consultation is merely "encouraged" for policies relating to sectors or thematic areas; while policies regarding ADB's internal financial or administrative issues do not require any external consultation (ADB 2005).

Source: ADB, www.adb.org

⁴ <http://www.adb.org>

⁵ www.oxfam.org.au

The case of the ADB's Fisheries Policy's failure and the inadequate consideration of the cross-sectoral relevance of fisheries in ADBs other programmes, highlights the importance of pursuing more comprehensive stakeholder involvement and structured, transparent policy development processes at the multi-lateral level. Ideally this should be open and mandatory to all policy areas of the ADB's work, given the fact that the organisation is effectively financed by government contributions which represent citizen contributions via taxation. Full stakeholder involvement is particularly important given the immense power of large, regional programmes to influence national governments and other actors.

Regional economic integration policies

Regional economic integration bodies primarily serve the trade and development interests of member countries through regional collaboration and representation. A number of these have also developed institutional arms to deal with fisheries and aquaculture resources. The Association of Southeast Asian Nations (ASEAN) has a dedicated fisheries programme as well as hosting the ASEAN Southeast Asian Fisheries Development Centre Fisheries Consultative Group under the auspices of ASEAN's Sectoral Working Group on Fisheries. Similarly, the Asia-Pacific Economic Cooperation (APEC) has a fisheries working group to oversee sectoral issues. These should theoretically represent the unified concerns of the sector regionally and contribute international policy processes.

As economic growth priorities can be the primary drivers of these bodies, policy trade-offs in the pursuit of economic growth objectives, as opposed to poverty reduction and socio-economic development objectives, need to be clearly monitored and understood. In addition to this, issues of participation and representation in the decision-making processes adopted by these regional bodies need to be reviewed more systematically. The opportunity for different groups within the fisheries and aquaculture sector to present their perspectives may be very limited given often dominant political forces. Recent attempts to create a platform for civil society representation during the 15th ASEAN summit in October 2009 were actively blocked by a number of countries, including Cambodia, Lao PDR and Myanmar, with aggressive lobbying by the governments of some member states to ensure that ASEAN civil society interactions were downgraded to informal meetings (Macan-Marker 2009). The continued contraction of the space for broader and more diverse representation in the region goes directly against the grain of good practice for good policy.

International trade and food standard policies

Given the central importance of international trade to the fisheries and aquaculture sector, the influence of policies that govern trade rules and product standards cannot be over-stated. Flaws in these mechanisms are often accused of preventing poorer countries from participating in and benefiting from international trade; potentially denying the opportunity for improved livelihoods outcomes for millions of people (ICTSD 2006, World Bank 2008).

The World Trade Organisation (WTO) is perhaps one of the most important trade policy setting mechanisms, and has a number of policy provisions that impact on the fisheries and aquaculture sector. The main fisheries-related areas of interest for developing countries involved in WTO processes revolve around the issues of: (i) market access; (ii) non-tariff barriers; (iii) subsidies; (iv) eco-labelling requirements; and (v) technical assistance. Policy objectives that are reflected under these areas can include: the re-adjustment of import tariffs and the management of preferential access agreements to address market access; managing potential technical barriers to trade (e.g., Sanitary and Phytosanitary Standards and policies originating from the FAO-WHO *Codex Alimentarius* Commission's Committee on Fish and Fishery Products); agreeing on best practice in subsidy reform and eco-labelling; and ensuring that adequate technical assistance is available to provide the capacity for developing countries to comply with trade rules (FAO 2005b).

International environmental and fisheries agreements also contain trade-related measures such as: trade bans; trade sanctions; export/import licensing procedures; notification requirements; vessel monitoring requirements; and labelling requirements. One of the more specific trade-focused conservation agreements is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), but provisions regarding international trade are also supported by certain multilateral environmental agreements (MEAs) and by measures imposed by RFMOs (ICTSD 2006).

Access agreements involve governments opening up their national waters to fishing operations from other countries in return for access fees. In some instances, these arrangements can be viewed as a type of subsidy; as agreements can be negotiated and paid for by governments, with the benefiting operator only having to partially cover costs and thus receiving subsidised access (World Bank 2008). There is considerable debate within the WTO over how access agreements should be tackled in this light, with some resistance from developing countries that are benefiting from associated revenue generation. Bi-lateral and regional policies and processes often govern the nature of these agreements, which can sometimes be brokered with private operators with no governmental affiliation. Transparency in the negotiation and implementation of these agreements are seen to vary greatly, with some concern over the abuse of these mechanisms (ICTSD 2006).

Given the export-oriented national trade priorities of Asian governments, the representation of “developing country” agendas and regional agendas in WTO talks may not reflect the specific livelihoods concerns of all stakeholders. Table 3 gives an overview of the diversity of potential impacts of international trade issues on different objectives represented by the fisheries and aquaculture sector: (i) trade objectives; (ii) sustainable resource management objectives; and (iii) socio-economic development objectives. This shows how setting policies by trade and economic growth objectives only can have mixed impacts beyond immediate trade benefits. This may ultimately undermine desired outcomes for certain groups as well as for goals relating to sustainable resource management; the success of the latter being crucial in maintaining trade outcomes that are primarily based on a productive and sustainable resource base.

2.7 Making policies work for livelihoods

Policies represent the priorities, interests and decisions of a “group” or multiple “groups”. Decisions are made at numerous levels and by a range of different formal and informal institutions. The policy backdrop to the sector emerges as a complicated constellation of competing interests and agendas. The challenge for those interested in supporting fisheries and aquaculture based livelihoods is to understand how to best represent the priorities of this group. Through understanding desired policy outcomes at the livelihoods level, it is possible to take a critical look at different policies and how effective they are at supporting these outcomes. However, in order to successfully change policies it is important to look at why policies may succeed or fail in order to understand how we might redress these failures systematically.

This section will review the underlying reasons for policy success or failure, synthesise some of the main issues and presents ideas on how policies could be made to work to support positive livelihoods outcomes for those in the sector.

Why do policies succeed or fail?

There are a number of factors that influence the success of policy outcomes: some of these are related to knowledge based issues and others to political and institutional issues. The following sections summarise some of the main reasons why policies may succeed (i.e., accurately represent and achieve the objectives they purport to) or fail (i.e., produce poor results and fall short of or fail to achieve their stated objectives). The analysis has a specific focus on the policy-making process, and looks at the issues and drivers behind this.

Table 3. International trade measures – Outcomes based on the objectives of (1) Trade; (2) Sustainable resource management; and (3) Socio-economic development

Objective 1: Trade	Objective 2: Sustainable resource management	Objective 3: Socio-economic development
<p>Tariff Structures (including reductions of tariffs and tariff escalation)</p> <ul style="list-style-type: none"> ▶ Facilitated market access and increased export earnings through lower tariffs ▶ Encourage value addition by addressing tariff escalation <ul style="list-style-type: none"> – Loss of government revenue through tariff reductions – Preference erosion 	<ul style="list-style-type: none"> ▶ Opportunity of investing export revenue in environmental management ▶ Reduced pressure on importing countries' stocks due to availability of cheaper imports <ul style="list-style-type: none"> – Increased exploitation resulting from greater trade and demand <ul style="list-style-type: none"> • Pressure on exporting countries' resource through value-addition may be positive (e.g., same or greater return for same or lower resource use) or negative (e.g., increased incentives to exploit due to greater returns) 	<ul style="list-style-type: none"> ▶ Increases in producer prices and income resulting from trade subsidisation ▶ Greater availability of cheaper imports for consumers and processors <ul style="list-style-type: none"> – Displacements of small-scale fishers by commercial operators taking advantage of trading opportunities – Diversion of fish from domestic consumption to export may threaten food security and local markets – Threat of market concentration in aquaculture and possible conflicts with capture fisheries – Increased competition between domestic fishers and processors with cheaper importers <ul style="list-style-type: none"> • New or improved trade opportunities for fishers and processors may benefit some (e.g., workforce in expanding processing centres) and disadvantage others (e.g., traditional processors)
Safeguards and anti-dumping duties		
<ul style="list-style-type: none"> ▶ Protection of domestic industry against artificially cheap imports ▶ Protection of an uncompetitive industry in cases where duties are unwarranted <ul style="list-style-type: none"> – Potential loss of revenue by exporters faced with anti-dumping duties 	<ul style="list-style-type: none"> ▶ Reduction in potential positive or negative environmental impacts resulting from tariff liberalisation (see above) 	<ul style="list-style-type: none"> ▶ Protection of importing countries' fishing and processing industries in case of unjustified dumping <ul style="list-style-type: none"> – Greater vulnerability of small-scale producers to duties, less impact on large-scale exporters – Impacts on earnings and revenue in importing countries' processing industry and retail sector due to lower availability and higher prices of fish imports – Higher consumer prices in importing Country

Table 3. (continued)

Objective 1: Trade Standards and other non-tariff measures	Objective 2: Sustainable resource management	Objective 3: Socio-economic development
<ul style="list-style-type: none"> ▶ Possibility of accessing new markets, taking advantage of market niches, or consolidating existing markets if compliant with standards <ul style="list-style-type: none"> – Barriers to market access due to compliance cost and/or lack of capacity to comply 	<ul style="list-style-type: none"> ▶ Better management measures supported through compliance with environmental standards 	<ul style="list-style-type: none"> ▶ Possible spill-over effects from compliance with export standards on domestic food safety, and resource management/ environmental standards <ul style="list-style-type: none"> – Burden of compliance particularly on small-scale producers – Possibility of a two-tier market with varying quality for export and domestic market
<p>Eco-labelling and other market measures</p> <ul style="list-style-type: none"> ▶ Possibility of accessing new markets, taking advantage of market niches, or consolidating existing markets if compliant with standards <ul style="list-style-type: none"> – Barriers to market access due to compliance cost and/or lack of capacity to comply (where there is a strong demand for products) – Market opportunities dependent on demand – Possible “discrimination” between domestic versus foreign labels 	<ul style="list-style-type: none"> ▶ Incentive for sustainable management and harvesting of fisheries resources <ul style="list-style-type: none"> – Difficulties in effectively designing and implementing schemes – Possibility of producers adapting to a two-tier market (e.g., demand for standards from the North and not the South) 	<ul style="list-style-type: none"> ▶ Potential opportunities for fishers and processors to generate income and employment by exploiting market niches <ul style="list-style-type: none"> – Burden of compliance particularly on small-scale producers
<p>Subsidies</p> <ul style="list-style-type: none"> ▶ Distortion of competitive relationships between subsidised and non-subsidised fleets 	<ul style="list-style-type: none"> ▶ Subsidies to finance fisheries management, stock assessments and capacity reductions <ul style="list-style-type: none"> – Contribution of subsidies to overcapacity and overfishing 	<ul style="list-style-type: none"> ▶ Subsidies to finance social programmes and support disadvantaged regions, fishing operators and processing industries <ul style="list-style-type: none"> ▶ Lower cost of production and consequently lower consumer prices <ul style="list-style-type: none"> – Competing with subsidised fleets particularly difficult for small-scale fishers – Overexploitation by subsidised fleets undermines local livelihoods

Table 3. (continued)

Objective 1: Trade	Objective 2: Sustainable resource management	Objective 3: Socio-economic development
<p>Access agreements</p> <ul style="list-style-type: none"> ▶ Revenue from access fees ▶ Economic use of resource in absence of domestic fishing capacity <ul style="list-style-type: none"> – Access fees often do not represent value of fisheries resources 	<ul style="list-style-type: none"> ▶ Use of access fees for management and support in monitoring compliance of distant water fleets with management schemes <ul style="list-style-type: none"> – Often not based on management schemes, stock assessment, sustainable catch levels or regulation of fishing methods – Lack of regional approach to regulating access to shared stocks – Overcapacity and overexploitation due to subsidised access fees and fleets 	<ul style="list-style-type: none"> ▶ Possible economic spill-over effects in host country (e.g., processing, employment on boats, servicing etc.) ▶ Use of access fees for social programmes <ul style="list-style-type: none"> – Competition between local fishing fleets and (often subsidised) distant water fishing fleets in national waters – Overexploitation by distant water fleets undermines local livelihoods
<p>Trade measures in fisheries and environmental management agreements</p> <ul style="list-style-type: none"> ▶ Balancing competitive relationships by providing a mechanism to deal with free riders or non-compliant fishing nations <ul style="list-style-type: none"> – Use of unilaterally imposed measures for protectionist purposes or to impose a country's standards on others 	<ul style="list-style-type: none"> ▶ Incentive for compliance with environmental standards and management (enforcement) 	<ul style="list-style-type: none"> ▶ Improves livelihood outcomes through more sustainable and equitable resource management <ul style="list-style-type: none"> – Difficulties in implementation, especially monitoring and enforcement

Adapted from ICTSD (2006)

Forming adaptive policies based on the best available knowledge

Policies succeed when they are adaptively formulated in response to research-based evidence and best practice. They fail when they are based on flawed assumptions or knowledge, and historical patterns of administration that are now out-dated and remain inflexible.

It is widely recognised that the statistical data available for fisheries management is largely inadequate (Macfadyen and Corcoran 2002) and that policies are often formulated in the absence of clear information (FAO 2006a). This is the case on a number of levels. The complexity of fisheries systems (e.g., fish population dynamics, multi-species interactions, food webs, migration patterns, sustainable yields), combined with the challenge of monitoring and understanding aquatic ecosystems in the face of growing uncertainty due to climate change, leaves us with large gaps of knowledge on the ecological aspects of successfully managing fisheries resources.

Case study: Reducing fishing capacity in the Gulf of Thailand – Using livelihoods-level information to support better policy formation

Overcapacity and the use of destructive fishing methods in Thai coastal fisheries have resulted in the acute degradation of the resource base. Sharp declines in the ecological and economic viability of the marine capture fisheries industry in Thailand have spurred the Thai Department of Fisheries (DOF) to pursue a capacity reduction programme for trawl and push net fisheries; which represent some of the most ecological damaging fisheries in the area as well as being the source of conflicts with local small-scale fishers. As part of these efforts, the DOF implemented a “Fishery Resource Rehabilitation Project,” making Thai Baht 19 million (US\$ 580 000) available to 1 300 push net fishers operating on the Andaman Coast to permanently cease push netting in favour of other fishing methods or alternative livelihood activities.

The FAO supported an extension of these activities to the Gulf of Thailand in 2006. The methodology used a number of surveys to gather information on key stakeholders’ (i.e., fishing boat crews, vessel owners and fish processors) attitudes to leaving the industry. This revealed differences between various groups. The willingness of fishers to move out of their current activity was found to be highly dependent on the type of gear used, and the corresponding profitability of the operation. A large proportion of vessel owners surveyed felt there was little future in the industry and would prefer investment in education for the next generation, and there was a high willingness in fish processors to switch occupations. Information on the use of foreign and local labour in the industry also revealed large differences between the different boat and gear classes. Using this livelihoods information, the DOF were able to prioritise the removal of boat and gear types based on an understanding of the economic profitability of the operation as well as referring to original criteria concerning the negative impact of operations on the resource base. This led to DOF adopting a policy to focus on supporting the exit of push netters, particularly small-scale push netters, as a priority.

A stakeholder consultation process involving the targeted fisheries operations was conducted to develop a process for pursuing viable alternatives based on consensus. A plan of action that incorporated key issues, such as increased community participation in management, institutional and legal frameworks, and resource management, was developed as a result of this process. Initial gains, reflected in responses to a 2007 call for voluntary exit registration for those involved in targeted push net operations, have varied between provinces. But it is expected that as the process develops in tandem with greater community involvement and understanding, gains could be expected to increase. The process also allowed the DOF to better understand the challenges facing fishers in diversifying their livelihoods away from destructive and unsustainable practices.

Unfortunately, political commitment to capacity reduction remains limited in Thailand, and recent fisheries master plans have failed to tackle this issue effectively. The challenges to reforming the fisheries sector in this area remain considerable. However, this example highlights the potential for community and stakeholder based analyses to drive more responsive and effective policy.

Source: Ebbers and Gregory (2008)

However, information availability is not always the only limiting factor. Even with the access to good knowledge on factors governing the productivity and use of fisheries resources, we find that resource management regimes are set in response to political and economic considerations that often appear absurd in light of our understanding of the capacity of systems. Fisheries biologists lament an almost superstitious bureaucratic adherence to maintaining stocks whose biomass is only a remnant of the amount it may have been in the past, and note that an expectance for fisheries resources to keep pace with projected demands is not based on biological realities (Pauly *et al* 2002). Often policy agendas are set on precedent and tradition rather than in a clinical response to empirically determined facts, which is one of the reasons why it is difficult to get fisheries policies to move away from the narrow historical focus of setting production targets (IMM 2002).

This ecological complexity is mirrored by the social, economic and institutional complexities inherent in the livelihoods of poorer communities. In order to simplify paradigms, systems are often reduced to models that may or may not faithfully reflect ground realities. For example, the assumption that “income” is a proxy for livelihood status has led many policies to focus on goals of increasing fishing efforts to increase income to improve livelihoods without looking at issues of access, assets and the broader enabling environment governing livelihoods (Allison and Ellis 2001).

Similarly, a reliance on the idea that economic development at the macro-level will automatically “trickle-down” and result in broad livelihood and poverty reduction gains have been found to be misplaced (FAO 2006a). The belief that expansion of the sector translates into higher incomes was perhaps the killer assumption of the last century, with recent analyses showing that overexploitation is actually the cause of steady income declines and increased vulnerability in the sector (World Bank 2008). Decision-makers need to factor in the complexity of peoples livelihoods and devise policy responses in response to a careful consideration of all the drivers, variables and projected impacts. The potential benefits of using a more diagnostic process for policy formation in order to understand complex social, economic and livelihoods drivers can be seen in the case study examining capacity reduction measures employed in the marine capture fisheries in Thailand.

Understanding and accounting for policy trade-offs

Policies succeed when they tackle policy trade-offs and recognise the cross-sectoral and multi-level context in which they need to operate. They fail when they are made in isolation from each other, following traditional patterns of strict sectoral separation.

The preceding sections explored how policies may have a positive impact on selected interest groups or issues, but have unforeseen impacts on others, or harbour negative externalities. Figure 1 provides an overview of where these policy conflicts may occur, highlighting the multiple opportunities there are for policies to contradict each other. Often the focus is on the impacts of non-sectoral policies relating to issues such as trade and agriculture. But even within the fisheries sector, there may be policies that favour certain distinct groups over others (e.g., industrial fishers over small-scale fishers).

The fisheries sector must contribute strategically to debates on the cross-sectoral level, and clearly articulate its needs and options based on a clear understanding of its own goals and priorities. The policy process should also include steps to analyse policy conflicts between potentially conflicting internal objectives of sustainable livelihoods, sustainable resource management, and economic growth.

Developing transparent and equitable decision-making processes

Policies succeed to incorporate the multiple objectives of different stakeholders when they are made in a transparent manner that allows the equal participation of all interest groups. They fail when they are formulated in the context of governance failure; serving specific political or group interests that have disproportionate influence over policy making processes.

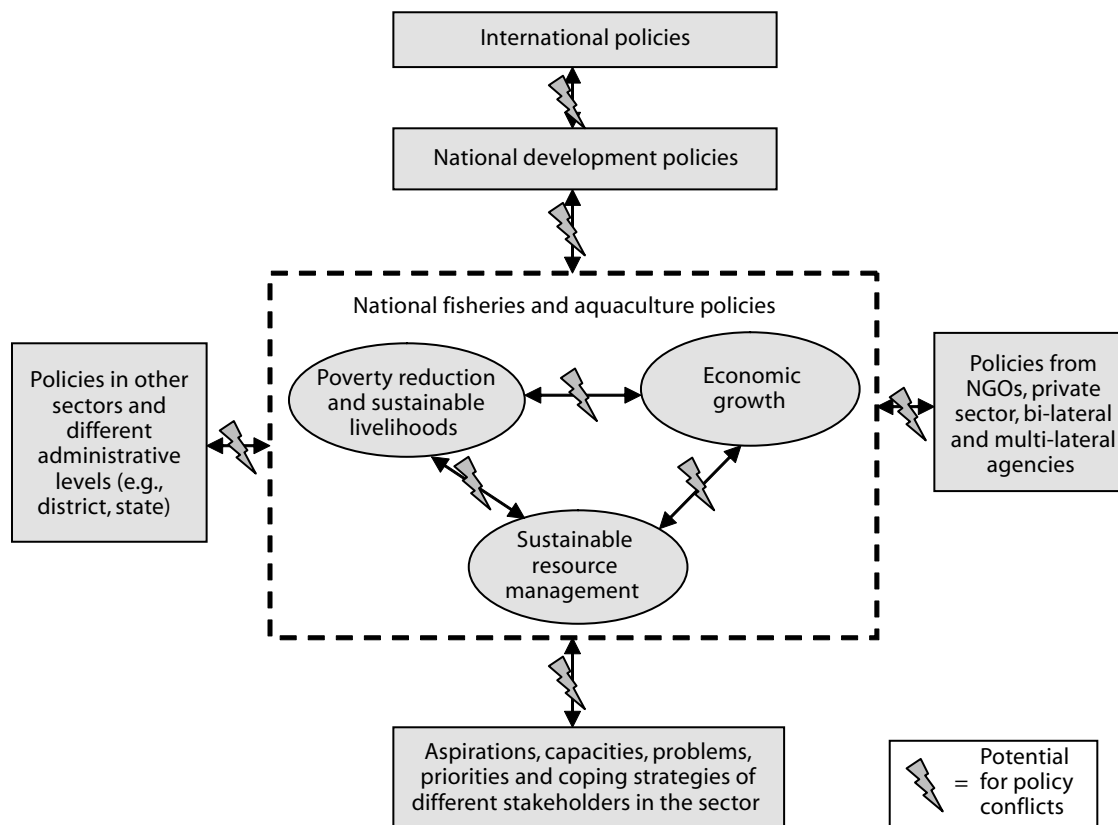


Figure 1. The potential for conflicts between policy objectives from various different levels and sectors⁶

Governance failure (which for the purposes of this paper, can be interpreted as undesirable policy outcomes) can be due to a range of issues, including: special interest effects, bundling of issues, political and economic short-sightedness, the separation of costs and benefits, and bureaucratic and administrative inefficiencies (Sutinen 2008). The issue of governance failure is most simplistically understood as being when private interests or the interests of a few, whether political or economical, trump public interests. As an industry defined by weak property rights and low-levels of devolution of rights and responsibilities to user groups, the fisheries sector's susceptibility to governance failure is higher (Sutinen 2008). In the context of the fisheries sector, governance failures result in available knowledge on best practice being ignored and poor management decisions being implemented.

The interference of private interest groups can be seen to operate from the local-level all the way up to the international-level. There is a poor understanding of how these powerful groups work to influence the policy making process (Sutinen 2008), but there is sufficient evidence of their impacts. For instance, it is politically contentious to mention, let alone pursue policies to adjust for, unpopular reforms such as capacity reduction in some Asian countries. Other measures are taken purely on account of their populist reception in the interests of short-term political gains. A recent review of fisheries policy in the Lower Mekong Basin presented an account of how a government official admitted that the distribution of fingerlings for aquaculture development was known to be ineffectual in his jurisdictional area, but insisted that a local develop project support this action because it made the local administration look good to the community (Bush 2008). The incentives to pursue policies that improve public image rather than those that represent best practice are considerable in the absence of any other incentive or accountability structure.

⁶ Adapted from IMM (1996)

This necessitates an appreciation and active promotion of good governance as a crucial first step to addressing policy failure. Decentralisation, comprehensive stakeholder consultation, the presentation of proper justifications for policy decisions, and institutional reform are often presented as a means for achieving this (Bene *et al* 2007, World Bank and FAO 2008, World Bank 2004).

2.8 Recommendations

Policy can represent the conclusion of a “discussion”; one that balances different interests, opinions and pieces of information and comes up with an average decision that is seen to represent best practice. One of the main challenges in reforming policies is the complexity of policy processes. Depending on the specific context, this “discussion” will be based on an array of formal and informal dynamics that are often difficult to identify. IMM (2002) in their review of policy processes in the coastal context, identified five key steps in the policy making process: 1) Establishing a policy framework; 2) Informing and setting the policy agenda; 3) Formulating policies, 4) Delivering policies; and 5) Reviewing policies. A number of recommendations for ensuring best practice with each step of this process based on the conclusions of this paper are presented.

Establishing a policy framework

A basic understanding is developed of how policy operates at different scales, levels and sectors, and how these different policies interact, support or contradict one another.

Recommendations:

- ▶ Initial activity should include a full analysis of stakeholders, an accurate understanding of projected impacts, and an appreciation of the broader extra-sectoral and regional/international policy context to identify potential policy conflicts and trade-offs.

Informing and setting the policy agenda

This step involves sorting through competing interests and issues to prioritise what gets onto the agenda.

Recommendations:

- ▶ The policy process should be formalised, with supportive legislative provisions, to allow for fuller participation of all stakeholders. This includes ensuring that open participation at all levels, including the regional and international levels, is not blocked.
- ▶ Less powerful stakeholders should actively be supported to contribute to decision making. This may require adjustments in policy planning and consultation processes that need to be recognised and budgeted for.
- ▶ Where appropriate, policy should be made in collaboration with other sectors and levels of governance to ensure policy coherence. Such collaborative mechanisms should also be formalised and provided with legislative provisions.
- ▶ Best practice in all fields (e.g., poverty reduction, livelihoods, economic management, environmental and resource management) should be reflected as a priority, and policy should demonstrate an understanding of the complexity of livelihoods and ecological systems.
- ▶ If there is a need to compromise on best practice due to trade-offs that can't be avoided, this should be clearly justified.

Formulating policy

During this step policy objectives will be defined.

Recommendations:

- ▶ Indicators with which to measure policy objectives should be clearly defined along with strategies through which this will be accomplished and the resources and tools that will be used to achieve this.
- ▶ Ensure that all the factors contributing to implementation success (e.g., ability to enforce, human capacity, market conditions) have been sufficiently considered.
- ▶ Factor in needs such as cross-sectoral assistance and collaboration, particularly for associated actions that may be outside the administrative mandate of the particular policy in question.

Delivering policy

This represents the implementation phase.

Recommendations:

- ▶ Implementation success should be viewed practically, as often readjustments and redefinitions of the policies may be needed (IMM 2002).
- ▶ Barriers to implementation (e.g., corruption, lack of capacity and resources) should be factored into the policy formulation stage.

Reviewing policy

The assessment of how well a policy has achieved its objectives and affected its target groups.

Recommendations:

- ▶ Accountability feedback systems for reviewing policy outputs and processes that are open for public comment should be developed. These accountability processes should include the right to demand comprehensive reasoning for any policy decision made and a full explanation of the process used to arrive at the policy decision.

It cannot be stressed enough that underlying issues regarding transparency, good governance and the disproportionate power of different interest groups need to be tackled at the forefront of policy reform for there to be meaningful improvements. These issues are inseparable from the policy-making process and, if not voiced and addressed, will undermine the sector and livelihoods based upon it.

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3 FACILITATING ACCESS TO RURAL FINANCE/MICROFINANCE SERVICES FOR SMALL-SCALE FISHERIES AND AQUACULTURE IN SOUTHEAST ASIAN COUNTRIES

Jocelyn Alma R. Badiola

3.1 Small fisheries and aquaculture development in Southeast Asia

This paper looks at the development of microfinance services for small-scale coastal fisheries as well as aquaculture with special attention to women in Southeast Asian countries particularly Cambodia, Indonesia, Philippines, Timor-Leste and Viet Nam. This review:

- ▶ collates information from more recent studies in order to describe the extent of small fisheries and aquaculture development in Southeast Asia
- ▶ reviews the development of microfinance policies in Southeast Asia
- ▶ discusses the importance of microfinance for small-scale fisheries and aquaculture especially among Asian women
- ▶ presents the approaches and best practices, so far, in microfinance for small-scale fisheries and aquaculture
- ▶ provides information on the extent of outreach in small-scale fisheries and aquaculture
- ▶ identifies major issues, constraints and opportunities in microfinance for small-scale fisheries and aquaculture
- ▶ provides recommendations on how to make microfinance work in small-scale fisheries and aquaculture in Southeast Asian Countries.

Number of fishermen/fish farmers

The Food and Agriculture Organization or FAO reports a total of 43.5 million commercial and subsistence fishermen and fish farmers in the world based on 2006 statistics which accounts for 3.2 percent of the 1.37 billion people economically active in agriculture worldwide. About four-fifths of this number or thirty-seven million come from Asia which does not include millions more involved in seasonal or occasional fishing and/or aquaculture activities that are not recorded as 'fishers' in official statistics. In 2006, countries other than China that posted a significant number of fishers and fish farmers include India, Indonesia, the Philippines and Viet Nam. Most fishers are small-scale, artisanal fishers, operating on coastal and inland fishery resources.

Capture Fisheries vs. aquaculture

FAO reports further that 74 percent of the 43.5 million are into capture fisheries while 26 percent are engaged in aquaculture. In recent decades, major increases in the total number of people engaged in fisheries and aquaculture have come from the development of aquaculture activities. Farmed fish now provides 43 percent of the fish eaten worldwide, compared to 9 percent in 1980 (FAO 2008). Rural populations, that were once almost entirely dependent upon inland capture fisheries for their food, have seen the decline of fisheries resources through environmental changes and changing water management regimes.

Table 1. Number of world fishers and fish farmers (in '000s), by continent

Continent	1990	1995	2000	2005	2006
Africa	1 773	1 896	3 631	3 589	3 637
North And Central America	760	777	891	1 034	1 038
South America	730	704	706	702	708
Asia	23 766	28 118	34 781	36 650	37 338
Europe	654	498	812	734	725
Oceania	55	52	49	54	55
World	27 737	32 045	40 871	42 763	43 502
Of these total the number of fish farmers*					
Africa	3	13	107	111	108
North And Central America	3	6	75	300	301
South America	66	93	71	69	69
Asia	3 738	5 896	7 369	8 078	8 107
Europe	20	26	44	71	73
Oceania	1	1	5	4	4
World	3 832	6 124	7 672	8 632	8 663

* Data for 1990 and 1995 were reported by only a limited number of countries and therefore, are not comparable with those for later years

Source: FAO 2008.

Aquaculture fish has become an increasingly viable alternative to inland capture fish as cheap wild fish becomes less available. The relatively low labour demands of aquaculture mean it can be a profitable part of diverse income-generating activities in both rural and urban areas. Poor people benefit from aquaculture in several ways:

- ▶ Small fish from aquaculture farms provide cheap food;
- ▶ Expanding aquaculture increases opportunities for employment, ranging from seed and input supply to processing and marketing;
- ▶ Poor people in countries like Viet Nam are setting up their own aquaculture farms, as the costs can be low.

Both capture fisheries and aquaculture make important contributions to the Gross Domestic Product (GDP) of Asian countries. Among the countries covered in this report, Table 2 shows the economic contribution of capture fisheries production which is highest in Cambodia at 7.884, followed by Viet Nam (3.897) and the Philippines (2.217). Viet Nam has the highest aquaculture production share to GDP at 5.166 percent while the Philippines, Indonesia and Cambodia each posted a share of less than one percent. The Philippines' fisheries sub-sector accounted for 25.8 percent of total agriculture output and has registered the highest output gain this year at 5.8 percent. Aquaculture remained the main source of growth in fisheries because of high demand for freshwater species and continuous technical support and implementation of the fingerling dispersal program. Commercial fisheries, on the other hand, produced 2.8 percent more output this year.

Table 2. Contribution of fisheries to gross domestic product (GDP), selected Southeast Asian countries

Production value as % of GDP			
Capture Fisheries		Aquaculture	
Cambodia	7.884	Viet Nam	5.166
Viet Nam	3.897	Indonesia	0.842
Philippines	2.217	Cambodia	0.914
Indonesia	1.835	Philippines	0.769

Source: FAO Fishery Yearbook 2006

Role of women in the fisheries sector

While most fishermen are men involved in offshore and deep-sea fishing, women, on the other hand, also play an important role as entrepreneurs and by providing labor before, during and after the catch in both artisanal and commercial fisheries. Labor 'before fishing' includes "making and mending nets, baskets and pots and baiting hooks" (FAO 2008). Labor during fishing, on the other hand, means "fishing from small boats and canoes in coastal or inland waters – harvesting bivalves, molluscs and pearls, collecting seaweed and setting nets or traps" (FAO 2008). Labor 'after fishing' is probably the most common among women especially in fish processing and marketing either in their own "cottage-level industries or as wage laborers in the large-scale processing industry" (FAO 2008). Women also play an important role in aquaculture, where they attend to fish ponds, feed and harvest fish, and collect prawn larvae and fish fingerlings. However, there is no information on the exact number of women actively participating in the fisheries sector making it difficult to provide a comprehensive picture of the role of women.

Importance of fisheries and aquaculture in employment and food security

The capture fisheries and aquaculture sectors play a very critical role in Asian economies especially in terms of food security, revenue generation and employment. In 2004, the sector employed 1.4 million persons, equivalent to nearly 12 percent of agricultural employment or 4.3 percent of total employment in the Philippines. In Cambodia, the fishery sector employed approximately five percent of the labour force, about 1.3 times more than the country's garment industry. Where the diversity of systems and species remains high, such as in Cambodia, aquatic resources offer considerable opportunities to coastal people to diversify their livelihood in order to meet their changing requirements (IMM *et al* 2005). Coastal fisheries provide employment to two million people in Indonesia (Silvestre *et al* 2003).

Table 3. Rural/urban population in Southeast Asia (in % share)

		1980	1990	1995	2000	2002	2003
Brunei Darussalam	Rural	40.1	34.0	31.0	...	...	...
	Urban	59.9	66.0	69.0	...	...	...
Cambodia	Rural	89.7	88.4	85.6	84.0	84.0	...
	Urban	10.3	11.6	14.4	16.0	16.0	...
Indonesia	Rural	77.5	69.1	63.9	59.8	...	54.4
	Urban	22.4	30.9	36.1	40.2	...	45.6
Lao PDR	Rural	86.6	81.4	79.0	76.5	80.0	79.4
	Urban	13.4	18.6	21.0	23.5	20.0	20.6
Malaysia	Rural	62.5	45.3	45.3	41.2	37.6	37.4
	Urban	37.5	54.7	54.7	58.8	62.4	62.6
Myanmar	Rural	76.0	75.2	74.0	72.3	71.0	70.5
	Urban	24.0	24.8	26.0	27.7	29.0	29.5
Philippines	Rural	62.7	51.4	46.0	41.4	40.0	39.0
	Urban	37.3	48.6	54.0	58.6	60.0	61.0
Singapore	Rural	...	...	...	...	...	...
	Urban	100.0	100.0	100.0	100.0	100.0	100.0
Thailand	Rural	82.4	82.3	81.7	81.5	71.4	71.4
	Urban	17.6	17.7	18.3	18.5	28.6	28.6
Timor-Leste	Rural	91.6	92.2	92.5	92.5	92.4	92.3
	Urban	8.4	7.8	7.5	7.5	7.6	7.7
Viet Nam	Rural	80.7	80.5	79.3	75.8	74.9	74.2
	Urban	19.3	19.5	20.7	24.2	25.1	25.8

Source: www.unescap.org/stat/data/statind/pdf/t3_dec04.pdf

In addition to fishers and fish farmers involved in the direct primary production of fish, there are people involved in other ancillary activities, such as “processing, net and gear making, ice production and supply, boat construction and maintenance, manufacturing of fish processing equipment, packaging, marketing and distribution” (FAO 2008). Others are involved in research, development and administration connected with the fishery sector. However, there is no official data on the estimated number of people involved in these other activities.

Some estimations indicate that, for each person employed in capture fisheries and aquaculture production, “there are about four jobs produced in the secondary activities, including post-harvest, for a total of more than 170 million jobs in the whole fishery industry” (FAO 2008). However, each jobholder on average provides for three dependants or family members. Thus, fishers, aquaculturists and those supplying services and goods to them assure the livelihoods of a total of about 520 million people, 7.9 percent of the world population (FAO 2008).

Another characteristic feature of employment in the fishing industry is the prevalence of occasional or part-time employment, peaking in the months of the year when coastal and offshore resources are more abundant or available, but leaving during seasonal lows for other occupations. This is especially true in fisheries for migratory species and those subject to seasonal weather variations. In fact, in the past three decades, the number of full-time fishers has declined while the number of part-time fishers has grown quite rapidly. This trend has been particularly marked in Asia (FAO 2008).

Moreover, fish is a food of excellent nutritional value and it makes a very significant contribution to the diet of many fish consuming communities in both the developed and developing world. In some of Asia’s poorest countries (Bangladesh, Cambodia) people derive as much as 75 percent of their daily protein from fish. It is an important accompaniment to Asia’s rice-based diets including traditional fishery products such as fish sauce and fish-based condiments which are important ingredients in a typical Asian’s daily diet that cannot be easily substituted. Asian people utilize all sizes, types and most parts of fish and there is, thus, very little discard or wastage of this valuable resource.

Often referred to as “rich food for poor people,” fish provides essential nourishment, especially quality proteins and fats (macronutrients), vitamins and minerals (micronutrients). Fish makes a vital contribution to the survival and health of a significant portion of the world’s population.

Poverty situation

Despite the importance of the fisheries sector to employment, income, production and food security, poverty in coastal areas is a defining characteristic of countries such as Bangladesh, India, Indonesia, Myanmar, Pakistan, Philippines and Viet Nam (IFAD 2002). According to FAO (2002), the majority of fishers are small-scale, artisanal, coastal operators and are among the poorest in society. Income generated by the fisheries sector is generally lower than those from other sectors and within the sector itself, small-scale fishers earn the lowest incomes (Silvestre *et al* 2003). Fishing people are, thus, often labelled ‘the poorest of the poor’. Many people in fishing communities live in deprived conditions. Vulnerability to natural hazards (such as floods and storms) is high, due to physical exposure and vulnerable livelihoods. Many settlements are temporary and unofficial, and do not benefit from state-delivered services such as health and education.

In general, however, the extent of poverty in coastal communities is difficult to measure and while there have been many studies on poverty in farming and urban areas, there have been few that have focused on the fisheries sector (FAO 2002). Nonetheless, Table 4 describes the extent of poverty in the countries covered in this report, particularly, the Philippines, Cambodia, Indonesia, Viet Nam and Timor-Leste.

Table 4. Poverty status of Cambodia, Indonesia, the Philippines, Timor-Leste and Viet Nam

Country	Poverty Status
Cambodia	The poverty rate – that is, the percentage of the population living under the poverty line – is estimated at 35 percent for 2004. It is highest in rural areas and lowest in Phnom Penh.
Indonesia	The number of those below the poverty line has risen by 3.95 million from 35.1 million in February 2005 to become 39.05 million by March 2006, or 17.75 percent of the population of the country. Over 70 percent of fishers are poor. It may be over 80 percent in some areas. Poverty levels in coastal communities are generally considered to be around 80 percent of the population (Suspita 2006).
Philippines	Poverty remains to be the biggest problem in the Philippines despite decline in poverty incidence of families from 27.5 percent in 2000 to 24.7 percent in 2003; and the poverty incidence of the population from 33 percent in 2000 to 30.4 percent in 2003. Almost three out of four (73 percent) of the total number of poor in the country reside in the rural areas (NAPC 2004). The poverty level in rural areas is much higher at 48.8 percent against 18.6 percent in urban areas; about 5 out of 10 rural residents are poor compared with almost 2 out of 10 urban residents. In 2003, poverty incidence among fishery workers in the Philippines was estimated to be 50.8 percent; compared to total poverty of 33 percent and poverty among farmers at 46.6 percent.
Timor-Leste	Timor-Leste ranks 158 out of the 177 in the UN Human Development Index (2004) as the poorest country in Asia. About 41 percent of the population live below the national poverty line of \$ 0.55 per day. Majority of the poor survive on subsistence agriculture and have very little education.
Viet Nam	There has been a significant headway in reducing overall poverty in Viet Nam. The poverty rate dropped from 58.1 percent in 1993, to 37.4 percent in 1998, 28.9 percent in 2002, and 19.5 percent in 2004, while in the same years food poverty declined from 24.9 percent, to 15 percent, 10.9 percent, and 7.4 percent. The poverty reduction speed has slowed down (from 4.14 percentage points in the period 1993-1998 to 2.98 percentage point in period 1998-2004). However, growth elasticity of poverty reduction has increased, from 0.94 to 1.32 respectively.

3.2 Importance of microfinance in helping the poor

Some empirical evidence

Microfinance institutions (MFIs) provide financial services—typically credit and savings—to poor communities that are otherwise cut off from formal financial services. MFIs distinguish themselves from standard banking institutions by their physical proximity to clients, regular face-to-face contact with clients, and often, by the peer-lending system through which clients cross-guarantee each other's loans. These characteristics of microfinance make MFIs a uniquely high-potential vehicle for reaching and organizing poor communities. Some of the distinct characteristics of MFIs are, as follows:

- ▶ MFIs serve difficult-to-reach clients, with whom they maintain regular contact, a relationship which is essential for interacting with vulnerable populations
- ▶ High-quality MFIs develop a trust-based relationship with clients, which increases the MFI's ability to discuss difficult topics or to interact during crises
- ▶ MFIs often work with organized groups of clients; information and services can be delivered on a leveraged basis.

Microfinance institutions (MFIs) are, thus, close to the poor—they strive to serve those who are excluded from the formal banking sector, and bring them into the market for financial services as a key strategy

for reducing poverty. Access to these facilities is seen as a way of providing the poor with opportunities to take an active role in their economy through entrepreneurship, providing them with income and bargaining power and building up social empowerment for poor women and men in their communities.

Microfinance, a lifesaver in natural disasters

The targeted application of microfinance can soften the devastating economic effects of such natural disasters as the recent tsunamis. Access to banks enables fishermen and other villagers running small businesses to build up savings in the event of a loss of income because of a crisis situation. Existing credits must be renegotiated and, where there is potential, small new credits with adapted conditions can help resume economic activity. Experiences in Bangladesh show the importance of microfinance in helping overcome the effects of natural catastrophes. In 1998, in the wake of disastrous flooding in the country, the microfinance sector offered more than nine million families financial services and contributed to the income security and economic development of around 36 million poverty-stricken people.

There is some empirical evidence that microfinance can help the poor especially in terms of smoothing and increasing income (Robinson 2001). Remenyi and Quinones (2000) noted, for instance, that in Indonesia, an average annual increase of 12.9 percent in the income of borrowers was observed compared to the 3 percent income increase among non-borrowers. Moreover, among microfinance borrowers in Bangladesh, a 29.3 percent annual average rise in income was recorded while a 22 percent annual average increase in income was estimated among non-borrowers. Sri Lanka also showed a 15.6 percent rise in income among borrowers and a 9 percent rise among non-borrowers. In the case of India, a 46 percent annual average rise in income was reported among borrowers while non-borrowers only showed a 24 percent annual average increase in their incomes. Morduch and Haley (2002), thus, indicate that under the right conditions, microfinance is an instrument that can address the needs of a broad range of the population including those living below the poverty line.

Development practitioners and policy makers, therefore, view microfinance as a practical solution to the growing demand for financial services by the poor and to the reality that most formal financial institutions do not serve the poor because of perceived high risks, high costs involved in small transactions, perceived low profitability and inability of the poor to provide the required physical collateral (Asian Development Bank (ADB) 2000)¹. Most if not all of these financial institutions have a business culture that is not geared to serve the poor, low-income households and micro-enterprises. Through microfinance, financial services like savings, credit, and insurance facilities can be delivered to poor households/micro-entrepreneurs who will, in effect, be able to smoothen their consumption, manage their risks, build their assets gradually, develop their micro-enterprises, enhance their income earning capacity and enjoy an improved quality of life. Without permanent access to institutional microfinance, most poor households/micro-entrepreneurs would have to continue to rely on meagre funds from savings and credit from informal sources. The lack of access to finance services constrains their income and production capacities.

Why target women?

Seventy percent of the world's poor are women (Dyar *et al* 2006). Yet traditionally women have been disadvantaged when it comes to accessing credit and other financial services. Commercial banks often focus on men and formal businesses, neglecting the women who make up a large and growing segment of the informal economy. Many microfinance programs have, therefore, focused on women, with some

¹ There is the debate on whether microfinance should cater to the poorest of the poor or the so-called 'entrepreneurial poor.' One side of the debate argues that the poorest of the poor are so destitute that they would need welfare services from the government, not microfinance services from MFIs. The other side says that it is all right for MFIs to target the poorest of the poor provided MFIs can find the innovations or new technologies to deal with high transaction costs, very low incomes of those potential clients, that is, the poorest of the poor.

programs providing services exclusively for women and others having a majority of female borrowers. By the end of 2006, microfinance services had reached over 79 million of the poorest women in the world (Dyar *et al* 2006) while 98 percent of borrowers in Asia are women as compared to 66 percent in Africa and 62 percent in Latin America. As such, microfinance has the potential to make a significant contribution to gender equality and promote sustainable livelihoods and better working conditions for women.

In “Microfinance and the Empowerment of Women,” Linda Mayoux (2001) identifies three distinct models outlining why women are frequently targeted for microfinance initiatives.

Model 1: Financial self-sustainability

In this model, organizations work to increase financial and lending services to poor people — particularly women — with the goal of creating overall market growth. Women are considered to be ideal targets because of their proven high loan repayment rates when compared to men. Ultimately, the goal of this model is to ensure that women have the same access to opportunity as men, since economic empowerment provides the necessary access to resources to enable individuals to make their own decisions and become self-reliant. The Financial Self-Sustainability Model assumes that providing women with access to small loans will increase their economic empowerment.

Model 2: Poverty alleviation

According to the Poverty Alleviation Model, organizations promote microfinance as a means of alleviating poverty and fostering community development. The poverty alleviation model targets women because of their characteristically high levels of poverty and responsibility for maintaining and running the family unit. Empowerment is viewed as a means of increasing well-being for women, their families, and by extension, their communities.

Model 3: Feminist empowerment

The Feminist Empowerment Model is the most indirect of the three models, because its’ overall goal is to promote economic, social and political empowerment among women. Women are the primary target for this model among organizations that seek to create gender equality and promote human rights for women. This model considers empowerment to be the “transformation of power relations throughout society” (Mayoux 2001: 6). The Feminist Empowerment Model assumes that the empowerment of women is the result of overall changes in the structure of society at the macro level, as well as a redefinition of gender roles at the micro level.

It is important to realize that while there are three broad models for looking at microfinance initiatives, most microfinance programs do not strictly adhere to just one of these models. Instead, microfinance programs tend to be a mixture of all three models with different levels of emphasis placed on different areas depending on the views of the organization managing the programs.

Based on these models, Mayoux (2001) suggests further, three major benefits that women can attain from access to and use of microfinance services:

Economic empowerment: The ability to create their own, better, employment opportunities increases the income of women. This increased income enables women to secure greater levels of decision-making power within the family unit (UNCDF Report 2002). Furthermore, increasing women’s income also increases overall household income, allowing families to consume items and purchase services that they previously would not have been able to afford.

Increased well-being: When women have greater access to financial resources and services, they obtain greater decision-making power regarding money and their households. Where this power lies may have

significant implications for families and communities. Cheston and Kuhn (2002) argue that while women typically contribute all of their financial resources to their families, men rarely do so. Further evidence of this distinction is provided by a World Bank report that indicates men contribute approximately 60 percent of their income to their families. According to Mayoux (2001), when women are given decision-making power, they generally make decisions that will be optimal for their families. As a result, women will tend to make financial decisions that will promote nutrition, health and literacy within their families, whereas men may allocate some of their resources towards activities that are not helpful (and sometimes harmful) to the family.

Social and political empowerment: Social and political empowerment provides the most indirect benefit to women. It is a result of women's increased economic opportunity and control over their own finances, which in turn provides women with new skills, information and organizational capacity building (i.e. an expanded network of people). As a result of social and political empowerment, women are able to improve their status within their community. Together with other microfinance group members, they are able to work together to promote increasing levels of gender equality.

3.3 Rural finance/microfinance policy environment

The rural financial markets of most countries in Asia have gone through various stages of development and experience — from a policy environment characterized by credit subsidies, credit allocations and loan targeting to a liberalized and deregulated financial markets. Prior to reforms, there was much uproar over the importance of credit in increasing agricultural productivity and rural household incomes. Credit, then, was viewed as the panacea for rural poverty.

In effect, the Philippines and other countries like Indonesia, followed the supply-led approach through massive infusion of institutional credit using cheap credit funds from the government. (Llanto 2005). In the Philippines, for instance, various commodity-specific agricultural credit programs such as the *Masagana 99* for rice, *Masaganang Maisan* for corn, *Gulayang Pangkalusugan* for vegetables, and *Bakahang Barangay* for livestock, among others were implemented through rural banks as conduits. Rural banks were 'gifted' with 'cheap' funds (i.e., at very low interest rates) via the Central Bank's rediscounting window as an incentive for them to lend to small farmers. Without the 'incentive', these banks would normally not lend to these farmers because lending to the latter is generally perceived as risky and quite costly to administer. Moreover, some government non-financial agencies did the lending themselves, providing loans directly to program beneficiaries but without putting in place an appropriate loan collection mechanism.

Subsidized credit programs were likewise implemented in Indonesia through its two nationwide programs specifically created to intensify agriculture, stimulate rural non-farm enterprises and to increase rural employment (Bimas Rice Intensification Scheme, Small Investment and Permanent Working Capital Schemes); the Bank Rakyat Indonesia (BRI) unit *desas* were selected to channel subsidized credit to rice farmers.

For most of these countries, however, the positive effects of a supply-led strategy were short-lived since farmers started to default on their loan repayment, government funds dwindled and a great number of rural banks closed shop and went bankrupt. While some farmers blamed the weather, others simply refused to pay because of the notion that government funds are a dole-out and need not be returned. In addition, the government agencies that implemented credit programs did not exercise due diligence in loan collection. And because of too much dependence on cheap funds from the government, most rural banks neglected deposit mobilization and demonstrated leniency in loan screening and collection which led to poor repayment rates.

Given this experience, governments started to liberalize and deregulate the financial markets. Having an enabling rural financial policy environment was the goal of every government. Greater reliance on market principles especially in pricing as well as allocating credit funds was therefore the basic framework for reforms. In effect, interest rates were deregulated and subsidies gradually removed. Majority of these countries thus, liberalized and deregulated their rural financial markets although in varying degrees. Countries like the Philippines and Cambodia, for example, follow a full market-determined interest rate policy regime wherein all financial institutions are given the freedom to set their own interest rates.

The importance of such a policy is to allow banks and other lending institutions to cover their costs in lending so that their operations can be sustained and credit to the rural areas can continue to flow. However, while the Philippines has totally removed its anti-usury law, India has maintained the same law and thus, still keeps a close watch over the level of interest rates in order to ensure that the rates charged by the institutions do not become usurious according to the provisions of the law. In Cambodia, the government has also stopped putting ceilings on interest rates but it (the government) continues to negotiate with microfinance institutions (MFIs) for them to bring down their interest rates.

While Indonesia has adopted market-oriented interest rates as a policy in credit delivery among microfinance institutions, it continues to practice subsidized credit and loan targeting under special programs of the government for specific sectors. Most of the countries have stopped direct lending by government non-financial agencies and therefore, provides financing services through banks and other financial institutions. Rural Finance/Microfinance development in Asia, thus, varies significantly across countries, depending on the stage of financial development, the level of economic development and the policy environment, among others.

Transition countries (meaning, a country that is undergoing a shift from a centrally-planned economic system to a market economy) like Cambodia and Viet Nam have underdeveloped formal rural financial markets. Outreach in these countries is, thus, limited with the majority of their population still lacking access to formal financial services. A common characteristic of the rural financial markets of these countries is that Specialized Banks and NGOs play a dominant role as formal credit providers. Cambodia has the ACLEDA Bank, which has the largest network in both the urban and rural areas of Cambodia while Viet Nam has the Viet Nam Bank for Agriculture and Rural Development (VBARD), which has been the major source of credit and savings in rural Viet Nam since its establishment in 1988. Viet Nam also has the Viet Nam Bank for Social Policies, Viet Nam Bank for Agriculture and Rural Development, Viet Nam Postal Saving Company and the People's Credit Fund including 57 international non-government organizations and 4 government-recognized microfinance organizations.

In contrast, countries like the Philippines and Indonesia have relatively more developed rural finance/microfinance markets. These are also the countries that have been most affected by the 1997 Asian financial crisis which drove them to put into place the fundamentals for the development of strong and viable market-based financial institutions. These countries, too, have successful innovations and rural financial institutions that cater to specific sectors, for instance agricultural and fishery households that are worth replicating in other countries.

Finally, microfinance in Timor-Leste is still in its cradle, being a war-torn developing country still undergoing rehabilitation. Its policy and regulatory framework for financial service provision is still evolving and incomplete. The lack of economic activity in the country, in general, has also slowed down the development of microfinance in the country.

Cambodia

Among the Southeast and East Asian transition countries, it can be said that Cambodia is among the first that put into place the fundamentals of a market-oriented policy framework. It has adopted a market-oriented interest rate policy. Policy authorities in Cambodia are guided by the school of thought

that since most sources of funds for MFIs are private funds, an interest rate cap could discourage growth because when microfinance operations are not profitable, there will be no further investments in this sector. Since it is market-driven, interest rates will be determined solely by competition in the market.

With respect to bank branching, MFIs are actively encouraged to open branches to both increase the outreach to the poor and to increase competition subject to evaluation by the National Bank of Cambodia.

Moreover, the government of Cambodia is not involved in microfinance operations or lending. Microfinance operators make their own credit decisions without influence from the government. The government merely promotes the transformation of NGOs into MFIs and the transformation of MFIs into commercial companies by setting simple conditions for them to comply with. The government has also focused its attention on the establishment and provision of appropriate support services in the rural areas. For instance, national and rural road systems have since been rebuilt in the remote areas. Better roads allow microfinance operators to enter and provide services at low costs which helps bring down interest rates. In addition, the construction of irrigation systems such as canals and ponds also contributes towards the increased capacity of microfinance borrowers to pay back their loans as they are able to increase their production and income. Other critical support services such as training on new farming technology including the correct use of fertilizers as well as proper animal feeding, have been given attention by the government in order to increase the creditworthiness of the poor.

The institutions that are able to address the financing requirements of the poor in the rural areas are, therefore, the MFIs. Most of these MFIs have been transformed from non-government organizations (NGOs) that were involved with humanitarian work among refugees in the Thai border. After the Paris Peace Accord in October 1991, the refugees had returned home. With the passage of time, NGOs have redefined their roles and have become very active in microfinance operations. Their main financial products include individual loans, group loans and savings from members.

Cambodian microfinance has, therefore, grown remarkably in 2006. There are 17 licensed MFIs, 26 registered credit operators and around 60 small unregistered NGOs operating in the rural areas. This growth makes a significant contribution to economic development and poverty alleviation. With its credit and savings services, MFIs help people, especially the poor to relieve their family burdens and improve their livelihood.

The financial institution that has the largest network in both the urban and rural areas in Cambodia is ACLEDA Bank. It has grown from being an NGO, to a specialized bank and now a commercial bank. The ACLEDA Bank provides both commercial banking and rural financial services. Fully supported by international donors since its establishment, ACLEDA Bank has been expanding its range products in retail banking to include loans to small and medium enterprises, cash management and money transfer services and deposit services to the public. Savings mobilized by ACLEDA has been growing rapidly as well from 22.4 KHR million in 2002 to 255.9 KHR million in 2005.

Viet Nam

Microfinancing in Viet Nam is provided by formal, semi formal and informal sectors. The formal sector includes the Vietnam Bank for Social Policies, Vietnam Bank for Agriculture and Rural Development, Vietnam Postal Saving Company and the People's Credit Fund. The semi-formal sector, on the other hand, includes 57 international non-government organizations and 4 government-recognized microfinance organizations. The informal sector consists of the "Ho/Hui" (a popular form of rotating savings and credit associations (ROSCA)), relatives, friends, neighbors and other moneylenders.

Since its establishment in 1988, the Vietnam Bank for Agriculture and Rural Development (VBARD) has been the major source of credit and savings in rural Viet Nam. VBARD is regarded as having contributed

significantly to the agricultural expansion under the doi-moi (renovation) policies in Viet Nam. Now the biggest commercial bank, it has a very extensive network (nearly 2 000 branches) and serves more than 5 million households.

The Vietnamese government also established the Vietnam Bank for the Poor (VBP) in 1995 to serve poor households that could not be reached by VBARD. Its major task is to provide subsidized credit through a joint liability group. The VBP used VBARD's extensive network of branches; it had no separate staff members and was not involved in any savings mobilization activity. While VBP's outreach in terms of amount of loans and number of households has reached substantial figures since 2002, the crucial issue is VBP's long-term viability and sustainability.

In 2002, one of the country's financial reforms included the reorganization of VBP. Thus, VBP was renamed the Vietnam Bank for Social Policies (VBSP) in March 2003, and started to develop its own network of branches, while serving a much broader population including students, disable people, and micro and small entrepreneurs. VBSP was established to take over the poverty targeting program run by VBARD and consolidate all governmental programs lending to the poor and other vulnerable social groups.

VBSP provides subsidized credit without requiring formal loan collateral. VBSP is supervised by the State Bank of Viet Nam. At the end of 2003, VBSP was reaching 3.3 million clients, of which 1 000 000 were considered poor. At that time, VBSP had 9.75 trillion VND in loans outstanding and was expecting to reach 16 trillion by the end of 2004, which represents more than three quarters of the current loan portfolio of VBARD. VBSP is based in Hanoi and has 61 branches and 600 offices throughout all 64 provinces of the country.

The State Bank of Viet Nam (SBV) was established in 1951. Until 1988, SBV played the role of a Central Bank, setting broad monetary policies and regulations, and the role of a commercial bank, carrying financial activities of a regular retail bank. Since 1988, and the reform of the financial system, the banking sector follows a regular two-tier system, with the establishment of specialized commercial banks. The law on the State Bank of Viet Nam (1998) clarifies the roles and responsibilities of the central bank. The SBV lends to state owned banks such as VBARD and VBSP, which conduct microfinance activities. It also directly supervises the People's Credit Funds system and issues individual licenses to new PCFs.

Since 2002, the State Bank of Viet Nam has liberalized interest rates, except for the VBSP. In practice, however, only a few organizations apply market-based rates to cover their costs, due to informal and political pressures. Hence, the government still follows the directed credit approach for most of its programs. In particular, government credit programs provide loans at subsidized interest rates to targeted sectors, groups and areas in the country through VBARD and VBSP. However, programs being implemented by NGO-MFIs and funded by international organizations already adopt microfinance techniques regarded as international best practices including market-oriented interest rates and no physical collateral requirement.

Philippines

The Philippines is among the few countries in the world with a national strategy for microfinance. The national strategy envisions a viable and sustainable private microfinance market with the main objective of providing low-income households and micro-enterprises access to financial services. Anchored on this national strategy, a policy framework was created and several laws and issuances were passed to promote greater involvement of the private sector, the non-participation of government line agencies in credit programs and the adoption of market oriented financial and credit policies. These are the Social Reform and Poverty Alleviation Act, Agriculture and Fisheries Modernization Act, Executive Order 138, which rationalized government directed credit programs, the General Banking Law of 2000 and the Barangay Micro Business Enterprise Act. Aside from the laws, issuances and national strategy, the Philippines has also established a clear regulatory framework for microfinance institutions. This

framework focuses on the key areas of transparency, portfolio quality, efficiency and outreach. The regulatory framework was established to support the diverse set of microfinance institutions, whether bank, NGO or cooperative, recognizing the strength of each type of institution in delivering quality microfinance services. The Philippines, thus, has established a set of performance standards that can be used by microfinance institutions across the banking, non-governmental and cooperative sectors to facilitate assessment and evaluation of their performance. The standards go by the acronym PESO, which stands for Portfolio Quality, Efficiency, Sustainability and Outreach.

With respect to rural finance/microfinance delivery in the Philippines, the structure can be viewed at two levels: wholesale and retail. The main players at the wholesale level include the Land Bank of the Philippines, the Development Bank of the Philippines, the Rural Credit and Guarantee Corporation, the People's Credit and Finance Corporation, and Small Business Corporation. Those that provide rural finance/microfinance services directly to clients include: rural banks, NGOs and credit cooperatives. The Bangko Sentral ng Pilipinas (the country's central bank) classifies banks engaged in microfinance into two broad categories: (a) microfinance banks and (b) microfinance-oriented banks. Microfinance banks are those whose loan portfolios are 100 percent microfinance loans. On the other hand, microfinance-oriented banks are those banks whose microfinance loans comprise at least 50 percent of their gross loan portfolio.

Commercial and rural banks, credit cooperatives, and farmers cooperatives/organizations are known to provide agricultural finance services (e.g. for production and other agricultural loans). Banks, in particular, are mandated by Presidential Decree 711 (Agri-Agra Law) to set aside 25 percent of their total loanable portfolio for agriculture/fisheries and agrarian lending. On the other hand, NGOs, rural banks and cooperatives are considered the major providers of microfinance services according to the benchmarking report conducted by the Microfinance Council of the Philippines (MCPI) and the Microfinance Information eXchange (MIX).

By far, the largest single source of credit to small farmers and fisherfolk is the Land Bank, which was established in 1963 to purchase landholdings and finance their distribution to tenants under the Agricultural Land Reform Code of that year. It is fully owned by the government with a capitalization of P1.8 billion. In 1973, it was given a license to operate as a universal bank and it has steadily stepped up its support of agrarian reform operations as their scope has widened through the series of land reform acts over the years.

The Land Bank is organized into three sectors: (a) the Agrarian Sector which provides lending and extension services to agrarian reform beneficiaries, in particular and small farmer in general; (b) the Banking Sector which handles its commercial banking functions; and (c) the Executive Operations Support Sector which provides administrative support.

The semi-formal financial sector (composed of cooperatives and NGOs) is handled by the Field Operations Group in the agrarian sector staff, through a network of field offices at the regional and provincial level. Also part of the agrarian sector staff is the Countryside Financial Institutions Group, which is responsible for accrediting Rural Banks and processing rediscounting lines to them and equity infusion as part of the scheme to strengthen them. Regular commercial lending, including that to private and corporate agriculture, is handled by banking sector staff through a separate branch network.

Under the Comprehensive Agrarian Reform Law (CARL) of 1987, Land Bank has primary responsibility for land valuation and payment of compensation to land owners under the Comprehensive Agrarian Reform Program (CARP), and for collection of land amortization payments from Agrarian Reform Beneficiaries (ARBs). To further expand its outreach of ARBs/small farmers, it adopted the strategy of wholesaling funds through cooperatives or through private rural financial institutions such as rural banks through the Land Bank's rediscounting program.

With the wholesale lending thrust, Land Bank employed a Cooperative Accreditation Criteria in 1994. The objective is to rationalize and systematize the delivery of financial and technical assistance to bank-assisted cooperatives (BACs). A criteria set is applied to cooperatives to enable the Field Offices to assess, rationalize and calibrate credit assistance to BACs based on their loan absorptive capacity; and to plan and implement timely, adequate and necessary measures to graduate BACs to a higher level of growth. To access appropriate financial and technical assistance a cooperative must first meet a set of performance standards and credit requirement. The accreditation criteria depend on whether the cooperative is a newly accessing cooperative or an existing bank-assisted cooperative. Eligible projects range from crop and livestock production, post-harvest and processing activities, cottage industries, irrigation facilities to other income-generating projects.

Land Bank's lending facilities in support of countryside development can be classified into three broad programs: (a) Cooperative Credit Delivery Program for financing cooperatives' projects; (b) RFI Rediscounting Program for the liquidity requirements of accredited rural financial institutions (RFIs) including rural banks, cooperative rural banks, private development banks, stock savings and loan associations; and (c) Special Financing Programs which are being implemented by or in coordination with other government agencies.

Land Bank is also tasked to implement the AFMA-mandated Agri-Fisheries Modernization Credit and Financing Program or the AMCFP as one of the program's wholesalers. As provided for in the Agriculture and Fisheries Modernization Act (AFMA) or RA 8435 of 1997, the AMCFP is meant to replace the different credit programs under the Department of Agriculture in order to make credit delivery to small farmers and fisherfolk efficient, responsive and sustainable.

Indonesia

In Indonesia, the nationwide banking network provides sustainable finance for poor rural communities. Within the last two decades, the Bank Rakyat Indonesia (BRI), a large state-owned commercial bank, has shown via its "*unit desa*" or local banking system that the demand for microfinance can be met sustainably on a large scale. Bank Rakyat Indonesia and Rural Banks are the leaders of agricultural credit and microfinance that serve the rural areas. Other microfinance interventions that are currently being undertaken by Indonesia include the *Permodalan Nasional Madani*, a state-owned entity managing micro-credit and SME lending programs and microfinance families such as the village credit agency, saving and credit cooperatives, credit unions and rural fund and credit institutions.

The NGO microfinance sector in Indonesia includes the following: cooperatives, Islamic lending cooperatives, foundations, and informal village banks.

Cooperatives (*Koperasi*): Cooperatives are a common form of MFI. They are often set up by a group of individuals who pool their funds and create a cooperative as an investment option. They allow nonmembers to borrow funds or create secondary members who can borrow but do not participate in annual profit-sharing. Most cooperatives are small, local institutions with up to 5 staff and no more than 1,000 clients. They usually provide individual loans, including some that do not require collateral.

Islamic-lending cooperatives (*Baitul Maal wat Tamwil or Baitul Qirat*): Another common form of cooperative is the Islamic-lending cooperatives that use traditional profit-sharing schemes instead of charging an interest rate on their loans.

Foundations (*Yayasans*): This type of institution is the closest equivalent to the NGO MFIs found in most other countries. Foundations cannot collect savings from their members and they usually offer simple lending schemes, often utilizing group-based guarantees. This type of MFI used to be more common. However, a current Indonesia law stipulates that foundations will no longer be able to legally lend funds as of the middle of 2007 and that all foundations must re-register as a legal entity before then. As a result, the remaining foundations are trying to find ways of maintaining their poverty-lending focus while resolving their legal status.

Self-help groups and Village banks: These self-help groups and village banks (or village credit institutions) are group-based savings and lending institutions that are often governed by the village hierarchy or by local associations. They are usually not formally registered. Village members can take loans from the bank and sometimes save in it, based on approval from the village head. In the 1970s and 80s the Indonesian government established many of these groups under the name "*Lembaga Dana Kredit Pedesaan*" (LDKP) or Rural Credit Fund Institutions. These groups have received funds and technical support from various government programs and may be linked to local community banks or regional development banks that help manage the funds. Some village banks have formalized and registered either as community banks or as NGOs, particularly the "*Lembaga Perkreditan Desa*" (LPDs) in Bali. Of all of these NGO MFIs, only a few have more than 5 000 clients and the only strong group of institutions are the LPDs in Bali. The largest NGO MFI is "*Yayasan Dana Bakti Parasahabat*"; based in Java, which has over 100 000 clients and uses a solidarity group lending model.

With respect to Indonesia's policy and regulatory framework, the first of a series of major financial reforms was announced in June 1983. Government banks were allowed to set their own interest rates on most loans and deposits. Among its other purposes, this deregulation served to provide an enabling environment for the transformation of BRI's local banking system. Following the reforms, the government decided that the subsidized unit banks would be converted into a sustainable system of commercial banking at the local level, and that a program of general rural credit at commercial interest rates would be implemented through the unit banking system. After an initial period, the loan program would be financed by locally mobilized savings. Commercial microfinance in the unit banks began in 1984 in the rural areas. In 1989 the unit banking system was extended to urban areas as well.

The provisions in the 1992 Banking Act that paved the way for financial liberalization that started in 1983 is summarized below:

- ▶ Ceilings on loan rates and amounts were eliminated;
- ▶ Savings mobilization and financial intermediation were emphasized (through incentives for savings mobilization and deposit protection);
- ▶ State banks were placed on an equal footing with the private sector (they were permitted to issue shares and the Government's responsibility was limited to the amount of subscribed capital, although this was not borne out in practice);
- ▶ International prudential regulations based on the CAMEL rating system were introduced;
- ▶ The Central Bank was required to conduct routine monitoring and supervision operations, and penalties were introduced;
- ▶ The Government was empowered to call on all the banks (not only state institutions) to become involved in development programs;
- ▶ The distinction between the "general banks" and the "people's credit banks" (BPR) was confirmed.

The liberalization process as summarized in the Banking Act resulted in simpler financial market operating procedures, since there were only two categories of banks, the classical commercial banks and the "people's banks" (BPR) serving the rural population. The procedure for securing operating licenses was clarified. The rules allowed some flexibility.

In fact, amendments to the law were later instituted when the Banking Act set a five-year time limit for financial institutions to adjust to the new regulatory framework. This applied essentially to rural banks established between 1967 and 1970, which, despite the fact that they were described as "banks," had continued to be classified as non-bank financial institutions. However, any new institution which had joined the financial system since 1988 was required from the outset to comply with regulations

governing banks. The Act explicitly stipulated what status banks were permitted to adopt: "General" banks could be set up as limited liability companies owned by the central or provincial governments or by private entities, or as cooperatives; People's banks could be established as limited liability companies owned by the provincial governments or private entities; these banks could take the form of cooperatives, or they could adopt some other forms as provided for in the law.

However, to some extent, the government continued to play a major role as both a direct and indirect actor in the rural finance/microfinance system and even retained the right to require banks to participate in certain development programs (such as KUK).

Timor-Leste

During the Indonesian occupation, the formal financial system in Timor-Leste consisted of five branches of state banks, ten branches of the regional government bank and three branches of private national banks, totalling eighteen branches of commercial banks corresponding to one bank per 46 650 people. No licensed rural banks existed in Timor-Leste prior to 1999. The Bank Rakyat Indonesia operated a number of village units throughout Timor-Leste (unit desa) that provided basic deposit and loan facilities on a commercial basis (FDC 1999). After declaring independence from Indonesia in 1999 which resulted in mass violence killing thousands of people and destroying over 70 percent of the infrastructure, Timor-Leste was left with basically no functioning administrative structure, no judicial system, no education system and very few economic opportunities (Fox and Soares 2000; Martin 2001). Thus, no local formal or informal financial service providers were in operation. With the violence that erupted, all banks closed and left for Indonesia, leaving nothing in terms of equipment or records (UNCDF 2005). Due to its practical non-existence, developing the microfinance sector in the country has been considered a challenge.

In the assessment study of the microfinance market in Timor-Leste conducted by the Asian Development Bank (ADB) in 2001, it was concluded that microfinance was truly an underdeveloped sector with only one existing microfinance institution, the MORIS RASIK. After the independence of Timor-Leste, The World Bank initiated and supervised two projects that included the provision of subsidized credit: the Community Empowerment Project I-III and the Small Enterprise Project I-II. Neither of the two projects did very well in the microfinance sector, resulting in low repayment rates and major losses when the projects closed down (Conroy 2004; UNCDF 2005). The ADB then became the leading international actor in the financial sector in Timor-Leste and was mandated to prepare and implement projects in the physical infrastructure and microfinance sectors. The Bank's microfinance operational strategy was defined as creating a 'policy environment for the viable delivery of a wide range of financial services to the poor, especially women and in rural areas' (ADB 2002). Furthermore, focus were to be put on fostering a sustainable microfinance infrastructure, on capacity-building of Timor-Lestese to manage the various microfinance mechanism, and on private initiatives and autonomy (ADB 2002).

With regards to the laws and regulations providing guidelines for the microfinance sector, a Banking and Payments Authority (BPA) was created in 2001 to function as a central bank until one is formally established (UNCDF 2005). In 2005, the Ministry of Development asked for technical assistance to develop a policy framework for microfinance to 'clarify the role of microfinance within the financial and private sector and then speed up the development of an inclusive financial sector when linked to national development strategies (INFUSE 2006). As it is today, the financial law does not deal with microfinance and overall, a regulatory framework for financial service provision has yet to be completed.

A direct result of the ADB Microfinance Development Project was the establishment of the Foundation for Poverty Reduction and the Microfinance Institution of Timor-Leste (Instituicao de MicroFinancas de Timor-Leste or IMFTL) in May 2002 to address the needs of the rural poor, especially women. The IMFTL is a 'regulated banking institution' with a cap on the total sum of deposits although there is a proposal to transform it into a rural bank so that it can expand its savings and lending operations (UNDP 2006).

In 2003, eleven (11) microfinance institutions including IMFTL formed an informal working group called the Association of Microfinance Institutions in Timor-Leste (AMFITIL) (UNCDF 2005). However only 4 of these MFIs have remained active particularly IMFTL, Moris Rasik, the Tuba Rai Metin (TRM) and the Opportunity Timor L'orosae (OTL) after the crisis in 2006; close to half of the country's military was dismissed after having deserted due to claimed discrimination against them, again resulting in violence which made people flee the country because of the fear of the repetition of the 1999 destruction, causing a wave of internal displacement and destroying much of the economic infrastructure. The remaining active MFIs are focused largely on the extremely poor households in the rural areas. Other formal lending institutions in Timor-Leste include three commercial banks but these do not cater to poor rural households but rather to salary-earners as well as small, medium and large businesses. Timor-Leste also has about three active credit cooperatives that need to undergo further training on portfolio and financial management (UNDP 2005).

3.4 Microfinance services for small-scale fisheries and aquaculture: approaches and best practices

Overview of microfinance performance in Asia

Data from the Asia Microfinance Analysis and Benchmarking Report 2008 indicate that MFIs in South Asia, East Asia and the Pacific Asia have reached close to 47 million borrowers with more than US\$ 10 billion in loans and have sourced more than US\$ 7 billion in deposits in 2007 (Table 5).

Table 5. Overview of Performance of Asian MFIs (2007)

Country	MFIs	Borrowers	Gross Loan Portfolio	Deposits
	(Actual Number)	(Thousands)	(US\$ Millions)	
Afghanistan	14	358	106	5
Bangladesh	28	21 699	1 680	374
Cambodia	15	802	469	348
China	6	32	13	–
Timor-Leste	2	14	5	2
India	80	9 910	1 359	31
Indonesia	33	3 712	3 558	5 728
Lao PDR	1	<1	<1	–
Nepal	34	478	81	16
Pakistan	15	1 248	143	32
Papua New Guinea	1	7	4	10
Philippines	55	1 921	365	222
Samoa	1	4	1	<1
Sri Lanka	14	943	263	189
Thailand	2	5	1	–
Viet Nam	12	5 788	2 203	126
Total	313	46 921	10 250	7 083

Source: MIX Market 2007 data as of December 1, 2008.

Pakistan and India in South Asia posted the highest growth rates for active borrowers at 57 percent and 44 percent, respectively followed by Indonesia and Philippines at 36 percent, Cambodia at 32 percent and Viet Nam at 20 percent in Southeast Asia (see Table 6).

Table 6. Growth rate for active borrowers for selected countries (2006–2007)

Borrower Growth, (2006–2007)		
Nepal	13%	28 598
Bangladesh	20%	3 318 282
Viet Nam	20%	965 045
Sri Lanka	22%	55 202
Afghanistan	32%	80 417
Cambodia	32%	193 408
Philippines	36%	438 417
Indonesia	36%	45 277
India	44%	2 895 159
Pakistan	57%	277 502
EAP	24%	1 656 631
Asia	26%	8 311 791
S. Asia	27%	6 655 160

Grameen Bank of Bangladesh tops the list of MFIs with the most number of active borrowers followed by BRAC of Bangladesh, Vietnam Bank for Social Policies (VBSP) of Viet Nam, ASA of Bangladesh, Bank Rakyat Indonesia and SKS, Spandana, SHARE Microfin Ltd, Bandhan, SKDRDP, all of India (Table 7). These institutions include banks, non-bank financial intermediaries (NBFIs) and non-government organizations (NGOs).

Table 7. Top 10 MFIs by Number of Active Borrowers (2007)

Name of MFI	Country	Charter	Borrowers
Grameen Bank	Bangladesh	Bank	6 707 000
BRAC	Bangladesh	NGO	6 397 635
Vietnam Bank for Social Policies	Viet Nam	Bank	5 648 140
ASA	Bangladesh	NGO	5 422 787
Bank Rakyat Indonesia	Indonesia	Bank	3 515 812
SKS	India	NBFI	1 629 474
Spandana	India	NBFI	1 188 861
SHARE Microfin Ltd.	India	NBFI	989 641
Bandhan	India	NBFI	896 698
Shri Kshetra Dharmasthala Rural Development Project (SKDRDP)	India	NGO	606 791

With respect to penetration rates (i.e., the proportion of outstanding microfinance borrowers relative to the total number of potential clients living below the poverty line), the top 5 countries with the highest penetration rates include Bangladesh, Sri Lanka, Viet Nam, Cambodia and Indonesia (Table 8). India, which placed second among countries in terms of growth in the number of active borrowers, posted a penetration rate of only 3 percent given its huge population of poor families.

Table 8. Penetration of microfinance in selected countries (2007)

	Number of MFIs	Total Borrowers	Total Population	Poor Population	Penetration Rate	
		a	b	c	a/b	c/b
Bangladesh	274	24.8	142	71	17%	35%
Sri Lanka	23	1.4	20	5	7%	29%
Viet Nam	11	6.1	83	24	7%	25%
Cambodia	14	0.6	14	5	4%	12%
Indonesia	49	6.4	221	60	3%	11%
Nepal	47	0.7	27	8	3%	8%
Philippines	96	1.9	83	31	2%	6%
India	288	10.9	1 090	312	1%	3%
Pakistan	28	0.9	156	51	1%	2%
China	11	0.1	1 300	60	0%	0%

Microfinance in agriculture and fisheries: approaches and best practices

Microfinance is needed by poor households in fishing communities. Experiences of microfinance institutions have shown that there is a demand for savings and credit services among the poor that is rarely met because they do not have access. Experiences show that when the poor do get access to credit and microfinance services, they are able to save and repay their loans. Microfinance should help these households increase their income from fisheries activities and their general income-earning capacity through the promotion of other income-generating activities and micro-enterprises, both inside and outside the fishery sector, to be undertaken by household members. Microfinance support to inland fishing households should further support urgent consumer and other social needs related to their quality of life and smoothen consumption patterns, particularly during lean and off-seasons when little or no income or food is generated. Microfinance should help in managing risks better and reducing economic and social vulnerability by promoting mutual insurance, assistance mechanisms and other means.

However, the state of rural financial markets in developing countries is characterized by low and decreasing availability of financing especially for agricultural activities. Rural areas are often characterized by a paucity of viable financial institutions and lack of variety of financial services available. Rural communities often do not have access to saving options, credit services, insurance or transaction services. Limited access to long-term financing needed for agriculture, land improvement and other rural activities is also a hindering factor in the improvement of the agricultural or rural sector.

In Cambodia, banks have to this point played only a small role in savings mobilization and financial intermediation and their operations are generally confined to Phnom Penh (Fukui and Llanto 2003). Nearly 40 percent of the people have no access to formal bank branches and only 6 percent of total banking sector advances are for agriculture or related activities.

Despite continued efforts by governments to continue to find ways of making credit for small farmers/fishers adequate, timely and sustainable, marginal farmers and fishers continue to have limited access to credit in the Philippines. Based on studies done by the Agricultural Credit Policy Council, the following findings indicate that the provision of loans to the agriculture and fisheries sector in the Philippines needs to be improved further (ACPC 2007):

- (1) Formal banks' lending to agriculture/aquaculture production declined in real terms, from less than P100 billion in 1980 to P44 billion in 1986 and P86 billion in 2004;

- (2) The ratio of agricultural production loans to total formal loans granted also declined from 7 percent in 1986 to 4.0 percent in 1997 and dropped further to 0.9 percent and improved slightly to 1.1 percent in 2006 (Table 9);
- (3) Informal sources of finance continue to dominate and have not changed much from 1981-1982 to 2001-2002 at a 60: 40 ratio in favor of informal credit. In fact, the ratio has become worse in 1986, 1988-1989, 1990-1991, and 1997-1998. The usual indictment is that formal finance is persistently inaccessible while informal finance is still limited and/or very costly to compensate for its high risk and high transaction costs. The government has meddled too much and has pursued more wrong, than right, interventions (such as directed credit to non-financial government institutions, subsidized credit, credit rationing), thereby resulting in many pitfalls and expensive blunders;
- (4) Credit from non-bank financial institutions (e.g., lending investors, credit unions, and cooperatives, self-help groups, NGOs, microfinance institutions) has been generally increasing in terms of loan volume and outreach, but they provide loans mainly for non-agricultural purposes and therefore, has not reached out to small fishermen.

Table 9. Ratio of agricultural production loans to total loans granted

Year	Total Loans Granted (Php Billion)	Total Agricultural Production Loans (Php Billion)	Ratio (%)
1986	352	25	7.0
1997	10 141	86	4.0
2004	16 789	156	0.9
2006	18 700	211	1.1

For sometime, rural finance around the world especially in Asia and Latin America in the 1960s and the 1970s was characterized by the following interventions which were aimed at promoting agricultural development:

- ▶ Lending quotas on banks and other financial institutions
- ▶ Refinance schemes
- ▶ Loans at preferential interest rates
- ▶ Targeted lending by development financial institutions

The above interventions may have helped some developing nations, especially in Asia, in improving agricultural yields in the short-term but these were not sustainable over the long-term as they were costly and failed to reach the majority of the rural households. Moreover, financial discipline was damaged; intermediaries weakened which led to the insolvency and consequent closure of several financial institutions.

Since the emergence of financial inclusion as an effective tool for sustained economic growth, social stability and poverty reduction, major development financial institutions in Asia found it imperative to devise efficient and effective agricultural finance strategies or methodologies that will provide sustainable, timely and adequate financial services to poor agricultural and fishery households. These strategies are based largely on the features of the basic and dominant microfinance methodologies such as the Grameen Bank Approach and the ASA Approach sometimes modified to suit the requirements of the intended clients for every country. Several models have thus emerged from mixing features of these methodologies with new features such as the SHG Linkage Model of India and the Unit Desa Model of Indonesia. In most countries, government policy is neutral regarding methodologies and thus, leaves the choice of lending methodology to the MFI. The basic and dominant lending methodologies employed by MFIs in Asia and Pacific are shown in Table 10.

Table 10. Dominant microfinance methodologies in Asia and Pacific

Key Features	ASA Methodology	Grameen Bank Approach	Mixed Method	
			Banks	Cooperatives/CBO
Target Clients	Poor Women	Poor Women with special focus on the poorest	Poor and non-poor Women or Men	Poor Women with focus on economically disadvantaged
Credit Delivery	Centre (20–30 members)	Centre (30–60 members)	Through Small groups (5–10 members) or self-help groups or individual	Small groups (5–20 members)
Savings	Flexible (weekly minimum savings, no maximum limit); savings can be withdrawn provided 15 percent of loan disbursed remain in the account of the client	Compulsory (weekly minimum savings; 5 percent loan deduction); non-withdrawable savings	Compulsory savings by group even before it is able to avail of a loan; weekly savings based on 10 percent weekly loan amortization; can be withdrawn after every cycle; client can also open their own individual savings account.	Compulsory (weekly minimum savings, 5 percent loan deduction)
Repayment Responsibility	Individual liability	Group liability	Individual liability	Group responsibility
Loan Amortization	Weekly	Weekly	Daily, Weekly or monthly	Weekly, bi-weekly or monthly
Loan Terms	6 to 12 months but mostly 6 months	6 to 12 months depending on the clients	3, 6, 9, 12 months depending on the clients	6 to 12 months depending on the clients
Type of loan products	One type only (productive loan)	Multiple loans (productive, emergency, housing, seasonal loans)	One type of loan (productive loan)	Two types of loans (productive and emergency loans)
Branch Staffing	1 Branch Manager and 4–5 Loan Officers	1 Branch Manager; 1 Assistant Manager; 1 cashier; 1 bookkeeper; 6–10 Loan Officers	Integrated with normal branch operations of a rural bank	Integrated with Cooperative structure
Average clients per loan officer	300 members per loan officer	300 members per loan officer	100 members per loan officer	200 members per loan officer

From the viewpoint of MFI management, implementation of the Grameen methodology with its distinct feature of group liability for loans appears to be relatively easy in the first four years of implementation. Poor clients tend to be comfortable being members of a group and appear willing to answer for unpaid instalments of a defaulting member. But as the groups or centres mature and move into higher loan cycles with higher loan amounts, group cohesion and credit discipline tend to diminish when members who are good payers continue to answer for loan instalments of a defaulting member. Under such circumstances, good payers reluctantly decide to leave the group and eventually drop out of the program. They feel that whatever income they derive from their micro-enterprise goes to payment of delinquent loans of group members. MFIs that continue to implement the Grameen methodology now realize that the group liability feature tends to hide the real situation regarding the extent of delinquency in the centres. Management is made to believe that the high collection rates indicate low arrears even when good payers, are, in fact, covering the unpaid weekly payments of delinquent borrowers. Under a group liability scheme, the true extent of delinquency can sometimes be hidden from the eyes of management.

In recent years, many institutions have made the shift to individual liability while still keeping the “group” intact for administrative purposes. For example, BancoSol in Bolivia has converted large shares of their group liability portfolio into individual liability lending, and Grameen Bank in Bangladesh has recently relaxed the group liability clause in the Grameen II program. This approach appears to preserve many of the benefits of group lending without the unintended costs of group liability. Organizing borrowers in groups lowers transaction costs by simplifying loan disbursement and collection logistics, and may maintain some of the monitoring and enforcement effect due to the shame of defaulting in front of an audience of peers. But until recently, there has been little quantitative evidence to support lenders who take this approach.

The ASA methodology, on the other hand, emphasizes individual accountability for loans. Borrowers alone are responsible for payment of loans. Group members do not answer for loan defaults of other members. In the Grameen methodology, the centre chief is made responsible for enforcing credit discipline and maintaining group cohesion. Centre chiefs in the Grameen methodology carry a heavy load of responsibility. In the ASA methodology, loan officers are responsible for maintaining group cohesion and credit discipline. As such, they have to exert extra care in identifying and selecting potentially good borrowers or clients.

The operating structure under the ASA methodology is highly decentralized. Majority of decisions related to operational issues are made at the branch and area levels. Field staff normally refer to operating manuals that spell out actions to take for many situations. Bookkeeping is very simple and provides loan officers, branch managers and area managers sufficient information to manage operations in a cost-effective manner. The weakness of the ASA methodology lies in its limitations to address the need for larger loan amounts of growing entrepreneurs. Loan officers who are oriented toward lending fixed amounts with fixed weekly repayment schedules will need retraining to evaluate loan applications of growing enterprises. Individual lending based on cash flow analysis is the more appropriate loan product for micro-enterprises that are moving towards the level of small enterprises.

In order to make these methodologies more responsive to the requirements of specific clients or sectors, some countries particularly Cambodia, the Philippines, Indonesia, Viet Nam and Timor-Leste have created models that are variants of either the Grameen Bank Approach or the ASA methodology. They usually have the salient features of Grameen or ASA but replace other features such as individual liability in lieu of group liability and adds other components such as savings mobilization, education or capacity building.

Vietnam Bank for Agriculture and Rural Development (VBARD)

The Vietnam Bank for Agriculture and Rural Development or VBARD is the largest bank in Viet Nam in terms of capital, assets, staff, operating network and number of clients, with the most extensive network of branches in the rural areas. As of March 2007, VBARD has 2 200 branches nationwide with more than 30 000 staff and a clientele of 10 million farming households, representing more than 75 percent of the 13 million farming households in the country.

VBARD primarily targets the poor especially farming households. Its loans to poor households are provided at very low interest rates and without collateral. The bank has likewise simplified its lending procedures to include only a one-page loan application form. Thus far, VBARD provides a maximum of VND 10 million (US\$ 600) for farming households; VND 30 million (US\$ 1 800) for households engaged in manufacturing; VND 50 million (US\$ 3 000) for households into aquaculture or fish farming. The average outstanding loan for a small enterprise is VND 11.27 million (US\$ 700); and for a micro-enterprise, VND 5 million (US\$ 300).

In order to reach more households, VBARD has established 2 200 branches and transaction offices nationwide as well as 700 mobile car-banks giving bank access to people in remote areas. A great proportion of VBARD's loan portfolio is agricultural. The growth in loans to farming households has grown considerably over time for the period 2000–2007 as shown in the table below.

Table 11. VBARD's loans allocation, in US\$ Billion

Norm	2000	2001	2002	2003	2004	2005	2006	2007
Total Outstanding Loans	2.65	3.62	4.90	6.87	8.58	9.71	11.23	14.84
Lending to farm households	1.50	2.55	3.30	4.31	4.94	5.59	6.36	9.05
Lending to other sector	1.15	1.07	1.60	2.56	3.64	4.12	4.87	5.79

Source: VBARD, Sept. 2008

In order to reach out to more farming and fishing households, VBARD has developed a unique and effective group lending model. Under this model, a borrower-savings group composed of 5–7 members in the rural areas is formed in cooperation with the Farmers' Union in accordance with a joint resolution between VBARD and the Farmers' Union signed in 1999. The group loan is disbursed by VBARD and the farmers' union is in charge of managing the preparation and overall operation of the group including loan application assessment, debt repayment and interest collection from the group members. VBARD also covers the operating fees of the Farmers' Union, and organizes regular training regarding borrowing procedures, invites agricultural organizations to give lectures on cultivation, aquaculture, animal husbandry, etc.

The Farmers' Union consults and closely coordinates with the group members on the formulation and implementation of the policies governing the group including those on loan application assessment and debt collection. Thus, the violation of lending policies and regulations by the borrowers and group leaders is minimized. So far, this group lending model has enhanced and strengthened credit management; has contributed towards the efficiency of loan utilization and repayment; and has also reduced the workload of the credit officers of VBARD. The group leaders, local authorities and bank officers meet once a month in order to get updates on the performance of the members and the socio-economic situation of the area so that they can work out suitable plans and measures. The Central Farmers' Union also provides group members with updates on government agricultural policies and regulations.

After more than seven years of implementation, this group lending model has developed into a successful scheme. It has performed well in terms of debt repayment, reaching 98 percent including

both principal and interest. There are now 85 425 groups with 1 494 409 member households with an outstanding loan amount of US\$ 1 billion (VND 16 820 billion), 16 percent of which are loans to farming/ fishing households. Forty percent (40 percent) of the members are women. Moreover, about US\$ 0.6 billion deposits (VND 10 000 billion) have been mobilized from the members. VBARD and the Farmers' Union plan to double the number of the borrowing-savings group by 2020. The group lending model does not only provide loans, but it also provides a platform for farmers to learn and share technology and experiences in farming, fishing and other business endeavours.

ACLEDA Bank of Cambodia

ACLEDA was established in January 1993, as a national NGO for micro and small enterprises development including financing. Since the start of its operations, ACLEDA received the support of a number of major international development agencies. Two factors namely expansion of network and ability to operate at a profit to ensure sustainability, led the management international partners to conclude that ACLEDA should be transformed into a bank. This would not only provide a secure regulatory framework lacking under previous status but would enable it to enlarge its range of funding options (e.g. injection of fresh equity, mobilization of public deposits and obtaining inter-bank loans) support expansion of its core-micro finance business. Hence on October 7, 2000, the National Bank of Cambodia granted the ACLEDA Bank a license to operate as a banking institution. Since its transformation from NGO to bank, ACLEDA has expanded its business achieving an average portfolio growth rate of over 15 percent per annum since 1997. Table 12 below demonstrates ACLEDA's rapid expansion since its inception in 1993.

Table 12. The development of ACLEDA Bank

Year	Offices	Staff	Borrowing Customers	Average Loan Size (US\$)	Loan Portfolio (US\$)
1993	5	28	1 475	147	216 556
1995	11	100	6 539	177	1 157 093
1997	27	291	44 533	132	5 898 486
2000	28	463	60 860	274	16 667 328
2001	66	662	81 453	258	20 980 016
2002	75	964	82 976	332	27 547 752
2003	97	1 284	98 905	516	40 572 670
2004	119	2 108	122 173	715	65 981 229
2005	138	2 434	139 157	681	94 831 556

Source: ACLEDA training material made available at CPHFLP training workshop in February 2005, and presentation made at microfinance workshop on 22 & 23 December 2005.

ACLEDA Bank targets the lower segment of the market and provides loans to both individuals (for small businesses) and groups (for micro-business loans). It caters to the banking needs of both urban and rural population without discrimination. The ACLEDA bank is the only bank in Cambodia that has extensive branching network in the rural areas. As confirmed by *Banking with the Poor* (2006), "there are almost no branches of banking institutions operating in rural areas, with the exception of ACLEDA; outreach is thus, very limited in more remote, rural regions". Nonetheless, approximately 40 percent of the rural population does not have access to commercial bank branches and even microfinance providers. The ACLEDA Bank and other financial institutions in Cambodia have no lending program specific to fishers and fish farmers. However, the ACLEDA Bank strives to make its financial services accessible and more responsive to the needs of poor rural households including farming and fishing households, by adjusting its loan terms and conditions to adapt to the situation of every borrower. The ACLEDA Bank makes a conscious effort to acquire more information about the borrower by direct inspection instead of relying on the documents alone.

Collateral is used wherever available but premium is placed on the applicant's character and personality. First, ACLEDA uses a "ladder approach" to credit delivery. Smaller loans are given initially and, based on the repayment performance, larger amounts of loans are provided. Second, ACLEDA puts emphasis on the credit history of the client and not on collateral. The ACLEDA Bank, thus, has separate requirements for more established clients; assessment of their applications is based largely on the feasibility of the project to be financed and the applicant's assets and documents submitted. Moreover, ACLEDA employs the solidarity group lending approach when providing microfinance services. Under this approach, groups of 2–10 members are formed and they guarantee each other's loans, thus, replacing the traditional collateral requirements. Loan approval is based on the group's application. Access to subsequent loans is dependent on successful repayment by all group members and can be increased depending on the ability of the borrower to take on a larger loan amount.

Aquaculture producer in Kampong Cham

Four years ago, Mr Visoth borrowed money from ACLEDA for the first time for his aquaculture business, which is located close to Kampong Cham town. He needed working capital to buy fish feed. Starting with US\$ 1 000 in the first year, this sum was increased every year by the same amount, now totalling US\$ 4 000, a sum which he considered sufficient. Every year, he had to pay back his loan before he can obtain a new one.

The interest rates to be paid depended on the size of the loan and on the currency, whether in US\$ or Riels. For example, 2 percent per month is charged on US\$ loans and if the loan amount is in excess of US\$ 1 500. If the loan amount is smaller then 3 percent is charged per month. Similarly, 3 percent is charged on loans if bigger than CR5 million and 4 percent per month on smaller loans. Mr Visoth never had problems repaying his loans because he wanted to maintain his good credit standing in order for him to qualify for repeat loans.

The ACLEDA Bank also provides basic training on business plan development among microfinance clients and most of the training is done close to the clients' residence. Trainings are very simple, whereby clients can bring their literate relative with them to help them with the reading and writing and calculation for those who are illiterate. The training for business plan development lasts about two hours in total. The ACLEDA Bank provides basic training on business plan development that is used to determine how much loan each customer should obtain, and explain the customers the importance of using banking service to manage their capital properly including information on savings/deposit and fund transfer.

Table 12 has shown that the average loan size of ACLEDA Bank has been increasing over time which could mean that micro-enterprises previously assisted by the bank have grown into small enterprises and have become qualified for larger amounts of loans. It could also mean that the portfolio of ACLEDA Bank has expanded considerably to cover more small enterprises. The majority of the ACLEDA loans are for individual customers and sixty percent of its clients are women (MIX Market 2008). The Banking with the Poor (2006) has noted that microfinance institutions have shifted their methodology from village banking experimentation (1991–1995) to solidarity groups (1995–2002) to individual lending (2002 up to the present). However, as note above, ACLEDA still employs the solidarity group scheme when lending to poor households.

The bulk of the ACLEDA loans are for trade related businesses (74 percent in 2004) followed by services (17 percent) and crop loans (4 percent). However, out of the total loan portfolio in 2004, only about 1 percent (US\$ 630 183) was disbursed to the fishery sector particularly capture fisheries and aquaculture. Loans to fish processors and traders are not classified under fisheries loans but placed under trade related businesses.

In order to ensure repayment, ACLEDA applies a rigorous policy as far as reimbursement of loans and default are concerned. Some villagers therefore hesitate to take a loan from ACLEDA for fear of losing their collateral if they are unable to pay. However, it needs to be acknowledged that such a policy is necessary if levels of default are to be kept low, and if the bank is to continue its expansion.

AMRET of Cambodia

Another leading MFI in Cambodia is AMRET. As of October 2005, AMRET operates through 28 district branches located in six provinces of Cambodia. Like VBARD, AMRET employs the group lending model through village associations. It works with 1 384 village associations and has 119 183 active borrowers, out of which 75 percent are female and 95 percent are borrowers of group loans. Eight percent (8 percent) of the borrowers are involved in fishing activities. The average outstanding loan per borrower in a group is US\$ 80 and US\$ 258 in the case of individual loans. A village association is composed of several groups of five members per group in a particular area or locality.

A Village Association consists only of a Chairman and Vice-Chairman. It plays the role of an intermediary by borrowing funds from AMRET and lending them to its members. However, the Village Association Committee does not deal with cash management and record keeping as all these are handled by the credit officers of AMRET. The Village Association is largely tasked with administrative work and is also partly involved in decision-making. Under the Village Association model, AMRET is able to provide more financial service to more clients and can better sustain its services to more rural areas over the long-term.

Bank Rakyat Indonesia

The Bank Rakyat Indonesia (BRI) is one of the largest commercial banks in Indonesia and the most profitable and efficient bank. In the early seventies, 3 600 BRI Unit Desas (village banks) were created as part of a government program called BIMAS aimed at achieving self-sufficiency in rice. The BRI unit desas were used as conduits for the government's subsidized lending programs but all of these programs could not be sustained and were, thus, terminated. In 1984, the unit desas were completely restructured: each unit became an individual profit centre adopted a commercial approach to microfinance, meaning, no subsidies, market interest rates, efficient management and savings mobilization. This led them to financial profitability since 1985. The BRI has now become a profitable and efficient financial intermediary with a large microfinance program that caters to the rural poor.

Before BRI's reorganization, the bank had provided loans to small-scale inland fish farmers and fishers through large commercial companies under its nucleus-plasma program. The large companies were considered a nucleus that channeled the bank's fund to the fishers and fish farmers and guaranteed the loan. The fishers and fish farmers, considered "plasma" were in turn obliged to sell their production to the company through which the loan was channeled. It worked like a contract-growing concept. However, the nucleus-plasma programme had not worked satisfactorily. The bank encountered difficulties in supervising and monitoring its lending operations and many of the companies through which the loans were channelled had financial and management problems and could not effectively guarantee the loans. There were also conflicts between nucleus and plasma, which hampered the proper use of loans their repayment.

After the reorganization, BRI started to lend directly to individual fishers and farmers at the village level, which were organized into microfinance groups. Local village officials are involved in the screening by acting as character references for the borrowers. This is under the bank's micro-loan product called KUPEDES. Consequently, the proper use of loans and their repayment improved drastically. Lending is accompanied by compulsory saving schemes. Each group receives training and selects from among them a group head, accountant, cashier and teller.

The bank provides up to IDR 3 million without collateral and up to IDR 50 million with collateral. Collateral may be in the form of a village savings account (SIMPEDES), land, furniture, motorcycle, etc. Loan amounts depend on the borrower's current income or cash flow. Lending procedures are simple, timely and flexible and include: registration of a loan application; an evaluation of the proposed collateral, if any; preparation of a loan disbursement and repayment schedule that is compatible with the cash flow of the proposed economic activity; and the signing of the loan agreement. Maximum period between the registration of a loan application and the decision on whether the application is rejected or approved is only 7 days.

The BRI also disburses loans to fishers in the coastal fishing communities. This is being carried out within the Coastal Community Empowerment Program of the Indonesian government. Funds are provided from the budget of the Department of Marine Affairs and Fisheries which cooperates closely with BRI. The program is designed to empower coastal communities and ensure their participation in the management of coastal and aquatic resources, develop entrepreneurship and provide microfinance support for small-scale enterprise development, income generation and poverty alleviation. Loans under this program are provided through cooperatives to their members.

A key to the success of the BRI is the autonomy of its unit *desas* or village banks as an independent profit centre. Village banks are free to set their own loan terms. Loan processing is fast, only about a week for new borrowers and less than a week for repeat borrowers. Village banks, too, are focused on providing services to the poorest of the poor in the rural areas of Indonesia.

Land Bank of the Philippines

Land Bank was created when Republic Act 3844 also known as the Agricultural Land Reform Code was passed on 8 August 1963 to finance the acquisition of agricultural estates for distribution to tenants/small farmers. In 1973, by virtue of Presidential Decree 251, the Bank was transformed into the first universal bank by charter in the country for it to generate enough funds to sustain its social mandate of spurring countryside development. Expanded commercial banking powers were granted to support the Bank's land reform function and credit assistance to small farmers and fisherfolk.

It also empowered Land Bank to grant loans to farmers' cooperatives/associations to facilitate production, marketing of crops and acquisition of essential commodities. The Bank was also given expanded powers to include industrial, commercial and other productive enterprises to ensure Land Bank's financial stability and sustainability.

When the government embarked on the Comprehensive Agrarian Reform Program (CARP) with the Passage of the CARP Law in 1988 (RA 6657), Land Bank had a clearer understanding of its social mission. CARP underscored the government's resolve to strengthen the basis for a more equitable form of land ownership in the country. Land Bank thus championed the cooperative movement and extended support services aimed at leading communities in the countryside on the road to self-reliance.

Land Bank is a government financial institution that strikes a balance in fulfilling its social mandate of promoting countryside development while remaining financially viable. This dual function makes Land Bank unique. The profits derived from its commercial banking operations are used to finance the Bank's developmental programs and initiatives.

Over the years, Land Bank has successfully managed this tough balancing act as evidenced by the continued expansion of its loan portfolio in favour of its priority sectors: the farmers and fisherfolk, small and medium enterprises and micro-enterprises, livelihood loans and agribusiness, agri-infrastructure and other agri-environment-related projects.

Today, Land Bank is by far the largest formal credit institution in the rural areas. Its credit delivery system is able to penetrate a substantial percentage of the country's total number of municipalities. Land Bank also ranks among the top five commercial banks in the country in terms of deposits, assets, loans and capital.

In the last decade, Land Bank has focused its efforts on diversifying and expanding its loan portfolio within identified priority sectors, including farmers and fisherfolk, micro and small and medium-sized enterprises (MSMEs), income-generating projects, commonly known as livelihood projects, agribusiness, agri-infrastructure, and other agri-related and environmental conservation projects. Land Bank has both retail and wholesale lending programs, depending on type of clientele. It provides retail loans directly to SMEs and institutional borrowers including Local Government Units (LGUs) through its own branch

Table 13. Land Bank's Projected Credit Flow vs. Actual Credit Releases to Fisheries

Releases	2004	2005	% Increase/Decrease
Target releases (P million)	873.21	882.51	1.0
Actual loan releases	407.07	445.24	9.4
% of target releases	47.00	50.00	-

Source of data: Land Bank of the Philippines 2006

network/field offices located all over the country. On the other hand, Land Bank also provides loans indirectly to individual small farmers, fisherfolk and micro-enterprises through wholesale loans to cooperatives and Corporate Financial Institutions.

In May 2005, Land Bank, through its Agrarian and Domestic Banking Services Sector, designated and deployed Small Fisherfolk Specialists (SFSs) in its Regional Development Assistance Centers in May 2005, to focus on serving the credit needs of small fish farmers under the Land Bank Support Program for Fisheries (LSPF). The LSPF provides loans to small fishermen through cooperatives and rural banks accredited under the Land Bank. Under this program, more than P873 million and P883 million were made available by the bank for onward lending to small fisherfolk in 2004 and 2005, respectively but due to poor credit demand and high risk reputation of fishery projects, actual loans availed were only about half of the total amount allocated for the sector during these years.

Table 14. Number of fisherfolk with credit availment from Land Bank, by source of loans

Source of Loan	2004		2005		Jan – May 2006	
	Amount	%	Amount	%	Amount	%
Cooperatives	1 677	43	1 108	29		
CFIs and Quedancor	2 241	57	2 722	71		
Total	3 918		3 830		2 329	
Increase/Decrease				-2		
Penetration Rate (Total 1.616 million Small Farmers and Fisherfolk)						
For the Year		0.24		0.24		0.14
Cumulative		3.10		3.40		

Source of data: Land Bank of the Philippines 2006

In terms of the number of fisherfolk assisted with loans, there was a decrease from 3 918 fish farmers in 2004 to 3 830 fish farmers in 2005. Considering the target outreach of 1.6 million small fishermen, Land Bank was able to reach less than one percent of the total number of small fishermen under this program. Loans provided to the small fisherfolk, in the amounts of P445 million in 2005 and P407 million in 2004 were a measly 2.6 percent and 2.4 percent, respectively, of the total agricultural loans released to small farmers and fisherfolk.

There was also a declining trend from a 5 percent share of P654 loans to farmers and fisherfolk in 2000 to P563.4 million or 4.2 percent share in 2002 to only P407 million in 2004, representing only 2.4 percent of the 16.6 billion loans released in 2006.

Table 15. Land Bank's loans to small fisherfolk and percentage share of credit releases to small farmers and fisherfolk, 2000–2005

Year	Small Farmers and Fisherfolk (P million)	Small Farmers (P million)	% Share
2000	13 091.40	654.00	5.0
2001	12 920.24	499.88	3.9
2002	13 407.91	563.39	4.2
2003	14 016.28	538.19	3.8
2004	16 600.00	407.07	2.4
2005	17 100.00	445.24	2.6

Source of data: Land Bank of the Philippines 2006

The continued reluctance of banks and other financial institutions to lend to the fisheries sector can be explained by past credit programs where most fishermen reneged on their loan obligations. One of such programs is the ADB-funded Fishery Sector Program (FSP) where Land Bank, as one of the participating financial institutions, provided the bulk of the loans. The impact assessment study of the program (ACPC 2000) showed that 75 percent of the program borrowers in the priority areas failed to pay their loans on time due to the following reasons: (i) "force majeure" due to typhoons and natural calamities; (ii) poor catch harvest; (iii) delayed harvest; (iv) lack of subsistence funds; (v) use of loan for household consumption; (vi) medical/other emergencies; and (vii) wilful default (outright refusal of 10 percent of the borrowers to pay their loans).

Microfinance for fisheries: Mindanao, Philippines

Oxfam Novib has engaged in a partnership through a loan arrangement with the Enterprise Banking, Inc. Based in Lianga, Mindanao, Philippines. The Enterprise Bank is a rural bank which aims to become a leading microfinancial institution in Mindanao. The microfinance program of EBI is set up as a loan product side by side with its traditional loan products. Microfinance loan can either be a group loan (Modified Grameen) or individual loan. Traditional loan products include, among others, salary, pension and secured loans. In 2005, microfinance loans comprised about a third of the bank's loan portfolio, yet management wants to increase the share of its microfinance loans to its total loan portfolio. Through funding support from an international organization, Oxfam Novib, the Enterprise Bank will be able to start a microfinance scheme specific for fishing families. Its objectives are:

- 1) to reach the poorer segment of the population living coastal areas engaged in fishing and/or other related activities;
- 2) to improve the productivity of fishermen and increase the level of income of those engaged in fishing and/or other related activities;
- 3) to introduce new techniques and fishing technologies related to fish cages, seaweed production, fish processing, etc.;
- 4) to increase awareness of those living in coastal areas and families whose livelihood depend on fishing in protecting marine resources and the environment in general.

The program started in 2006.

Nonetheless, the Land Bank continues to adjust its strategies in accordance with the requirements of rural households so that it can reach out to more small farmers and fishermen and, at the same time achieve efficiency and sustainability in its operations. For one, its accredited conduits, particularly, cooperatives and rural banks have simplified its lending procedures under its microfinance program. Loan borrowers are exempted from submitting the usual documentary requirements for credit evaluation and approval, e.g., audited financial statements or statements of income and expense which borrowers find hard to comply. Loans are given even without collateral, and loan repayment is adjusted

to the cash flow of the borrower to encourage timely payment. Moreover, these conduits adopt a zero tolerance for loan default in order to ensure borrower discipline and sustainability of the MFI. Prior to lending, borrowers undergo social preparation and are given technical assistance to assist them in handling microfinance loans. One of the programs that adopt such an approach is the Agri-Fishery Microfinance Program (AFMP) (formerly called the Rural Household Business Financing Program or RHBF) which the Land Bank is implementing in cooperation with the Agricultural Credit Policy Council, an agency attached to the Department of Agriculture.

The AFMP seeks to create jobs and increase the incomes of small agricultural households by financing farming and fishing activities as well as other alternative livelihood projects. The strategy is to: 1) encourage existing accredited retailers of Land Bank (cooperatives and rural banks) to expand their agri-fishery microfinance operations; and 2) tap potential lending conduits that are not currently accredited with the Land Bank such as non-government organizations (NGOs), people's organizations (POs) and farmers' organizations including irrigators' associations (IAs) to undertake agricultural microfinance operations. It has the following features: 1) non-requirement of collateral to allow small agri-fishery households to avail themselves of loans; 2) repayment scheme based on entire household's cash flow rather than highly seasonal farm incomes; and 3) risk and income diversification by financing off-farm and/or non-farm micro-enterprises apart from the main farming activity. The AFMP is open to credit retailers that have at least 6 months experience in any of the microfinance methodologies (whether group or individual lending). The program offers the following services: 1) financing component through the Land Bank rediscounting and loan facilities, wherein the amount that can be rediscounted is 100 percent of the value of sub-borrowers' promissory notes; and 2) deposit hold-out coverage, the funding of which is provided by the DA-ACPC to guarantee the loan principal exposure of Land Bank to the participating institutions.

In 2008, the AFMP (or RHBF) released P15 million to 1 540 farming and fishing households. Since the start of its implementation in 2004, the RHBF had released P72 million loans to 6 228 households (Table 16). The program provided alternative livelihood opportunities to small farming and fishing households through lending agents accredited by ACPC and its partner institution, the Land Bank of the Philippines.

Table 16. Land Bank Microfinance Program (RHBF/AFMP) as of end December 2008

Programs	For the Year 2008	Cumulative as of December 2008
No. of lending agents	3	19
Approved rediscounting line (₱M)	6.0	87.0
Amount of loans generated/granted (₱M)	15.2	71.9
No. of agri-household beneficiaries	1 540	6 228

Source: ACPC – Program Development and Management Office

In order to encourage more financial institutions to lend to the agriculture and fisheries sector especially the marginal farmers and fishermen, the Department of Agriculture established a guarantee fund and tasked the Land Bank to administer said fund under a program called the Agricultural Guarantee Fund Pool or AGFP. The AGFP is intended to provide guarantee cover to unsecured loans extended by financial institutions and other lending conduits (i.e. Rural/Cooperative Banks, cooperatives, NGOs, SMEs, etc.) to new small farmer-borrowers engaged in rice and/or food production projects/activities. The Department of Agriculture (DA), in coordination with the Land Bank of the Philippines (LBP), provides direction and exercises supervision over the AGFP thru a Governing Board. The Board is composed of representatives/officials of the Department of Agriculture, Agricultural Credit Policy Council, Land Bank of the Philippines, National Anti-Poverty Commission and the National Transmission Corporation (TRANSCO), which is the

GOCC with the biggest fund contribution to the AGFP. A Program Management Committee was also organized to execute the policy decisions of the Board and manage its operations.

The AGFP extends guarantee cover to eligible loan exposures of participating financing institutions of up to 85 percent of the loan principal. The program covers rice, corn, high value crops and fisheries. Risks from losses due to non-payment of loans, including those that were caused by natural calamities (such as typhoons, floods, etc.), pests and diseases, as well as market aberrations — with the exception of fraud on the part of the conduit — shall be covered by the AGFP. The program has about P4.5B which, if leveraged twice, would result in loans to agriculture and fisheries in the amount of P9 billion.

Timor-Leste microfinance institutions

There has yet to be a leading microfinance institution in Timor-Leste. None of the commercial banks in Timor-Leste are engaged in microfinance. The Instituicao de MicroFinancas de Timor-Leste – IMFTL was officially established in December 2001 to address the needs of the poor, especially women but over ninety percent of its loan portfolio is said to be in the form of salary loans. In 2003, eleven microfinance providers, including IMFTL, formed an informal working group, which in 2004 turned into the Association of Microfinance Institutions in Timor-Leste (AMFITIL) (UNCDF 2005). This association still exists but only three of its MFI-members have remained active and operational, particularly IMFTL, Tuba Rai Metin (TRM) and Moris Rasik. At the end of June 2007, IMFTL was estimated to have approximately 3 700 borrowers and over 10 500 savers. As of mid-2007, Tuba Rai Metin (TRM) posted approximately 3 200 borrowers while Moris Rasik had close to 9 400 borrowers and 9 500 savers. Among these three MFIs, Moris Rasik has received more donor money and has managed to reach profitability, making it easier for the institution to secure external funding.

These microfinance providers are estimated to serve approximately 44 percent more borrowers than the commercial banks (UNCDF 2005). Although the total number of potential clients is difficult to approximate, the minimum market is estimated at 257 300 people in 2004. However, the microfinance institutions together serve only around 10 percent of the market with credit and about 20 percent with savings services as of September 2004 (UNCDF 2005). With regards to type of projects financed, remarkably few loans actually go into agriculture. Both Moris Rasik and TRM have discussed and made attempts to engage in agricultural lending but are discouraged because of the failure of past agricultural credit programs like the World Bank initiated Community Empowerment Project I-III and the Small Enterprise Project I-II which had to be terminated because of low repayment rates and major losses (Conroy 2004).

With respect to microfinance approach and methodology, these microfinance institutions target women as primary clients and employ solidarity group lending. Patterned after the Grameen Bank model, these MFIs organize peer groups of five members, composed mostly of women, are organized and incorporated into village centers of up to eight peer groups. Membership is limited to people who live in the same village and who have similar economic resources. A chairperson is elected in each group who is responsible for the group's discipline. Weekly meetings are mandatory, so are weekly savings and group fund contributions. Group members perform loan appraisal. Access to loans is phased whereby two members initially receive the loans and subsequently to two more members after successful repayments. No collateral is required as group members mutually guarantee each other's loans. Progressive loan sizes are also provided.

3.5 Major issues and constraints in microfinance for fishermen

The major issues in aquaculture credit relate to the very limited access to both formal and informal credit among the enterprising, labouring, and low-income fishfarmers. While credit is considered as the key to adopting technology and enhancing productivity to increase the income of poverty-ridden fisherfolk, the lack of viable and profitable aquaculture projects and the attendant risks (technology packaging; weather

aberrations such as typhoons, floods and drought; business and financial risks, peace and order, market risks) have limited the provision of credit to fish farmers by the rural financial institutions.

On the demand side, fish farmers are not considered creditworthy mainly because (i) they lack physical and livelihood assets, including land (capital) that can be used as collateral; (ii) they do not possess technical or technology expertise (capacity); (iii) they tend to be more individualistic, are not functionally organized, are geographically dispersed, and have no critical mass to warrant economies of scale in production, marketing, and post-harvest handling operations (condition); and (iv) they do not have good credit history, and the banks do not have a reliable database on their financial, livelihood, and character standing (capacity to pay).

On the credit supply side, government and private financial institutions are constrained by the lack of viable and bankable financial products or “lending technology” for aquaculture or fish farmer credit. Most poor rural households in fishing communities require consumption loans to mitigate short-term cash flow problems or to meet unforeseen expenditures but most banks do not have such products as they only provide production loans. Some of these institutions also view small loans and marginal borrowers as social obligations rather than a potential business opportunity. Small clients are treated as beneficiaries and not as partners. Moreover, banks are discouraged by the high transaction costs of lending to small borrowers given the number of trips to be made and the documents to be furnished not to mention the illegal charges that need to be paid in most developing nations. Thus, these financial institutions are not able to immediately respond to the requirements of the poor households in fishing communities, leaving majority of these households without access to financial services.

3.6 Making microfinance work in agriculture and fisheries

As shown above, microfinance providers in Asia, particularly in Cambodia, Indonesia, the Philippines, Viet Nam and Timor-Leste employ specific approaches or methodologies usually based on either the Grameen Bank Approach or the ASA methodology and then modified accordingly to respond to the individual requirements of each country, aimed at making their services more accessible as well as sustainable among poor rural households. Some of these methodologies are, as follows:

Group lending/joint liability lending. Most microfinance institutions in Asia pattern the group lending approach after the Grameen Bank model and modify it according to the microfinance environment in the different countries. The typical group lending approach that microfinance institutions use in Asia is the Self-Help Group (SHG). SHGs are clusters of poor people, of which most are poorest women, who organize themselves into groups. The group members can save and lend within their own group. The group as a whole takes the responsibility of the repayment of any loan undertaken by any member within the group. By pooling borrowers that know each other well and making them jointly liable for each others’ loan repayment, the lender effectively outsources the screening and monitoring function.

The Vietnam Bank for Agriculture and Rural Development (VBARD) has also developed a borrowing-saving scheme specifically targeting rural areas, through cooperation with the farmers’ union. The group loan is disbursed by VBARD and the farmers’ union is in charge of managing the preparation, operation, assessment of lending to group members, debt collection from the group members. Another similar arrangement is the AMRET-Village Association linkage.

Individual lending: In recent years, many micro-lenders have expanded rapidly using individual liability which has, in turn, motivated other lenders that were using group liability to shift to individual liability.

Partnership with NGOs in order to expand microfinance outreach: This includes creating awareness on the availability and importance of microcredit within the communities and extending the channels of financial services delivery.

“Ladder approach” to credit delivery: Smaller loans are given initially and, based on the repayment performance, larger amounts of loans are provided.

Collateral-free loans: In lieu of hard collateral, MFIs look at the cash flow of household or business as well as the track record, credit history and/or character of borrower; character reference from an authority or official in the village is often required.

There is no single product or technology that can make microfinance work in agriculture and fisheries. What is important is for that product or technology to take into consideration the requirements and peculiarities of the institution’s target clients and/or areas. Generally speaking, the term “lending technology” covers the entire range of activities carried out by a financial institution that have to do with selecting borrowers, determining the type of loan to be granted, the amount of loan and maturity, the way in which the loan is to be secured and the monitoring and recovery of loans. Some key points when deciding on microfinance terms and conditions for poor fishing communities are, as follows:

Loan size and purpose

Loan amounts should be based primarily on the purpose of the loan, the borrowers’ debt and absorptive capacity, and on the regulations followed by a given financial intermediary. The amount of credit should be in accordance with the production or investment needs of a borrower. The medium- and long-term credit needs of inland fisheries are generally for the following:

- ▶ modernization and replacement of fishing craft and gear through acquiring
- ▶ ecologically sustainable and economically viable production inputs;
- ▶ navigational and safety equipment;
- ▶ equipment for on-board preservation and handling of catch;
- ▶ small- and medium-scale fish processing equipment and facilities;
- ▶ fish transportation and marketing facilities;
- ▶ fish product development and value addition;
- ▶ establishment and modernization of hatcheries and nurseries;
- ▶ small infrastructure works such as landing places or wharfs.

Moreover, loans should not be limited to fisheries-related activities only, but include other livelihood opportunities available to members of the inland fishing community. As can be seen from the credit and microfinance needs listed above, a very wide variety of loan sizes can be expected, ranging from very small loans related to small-scale fish trading, to medium-sized loans related to the purchase of fishing craft and gear, to very large loans related to shelter and habitat creation. In the case of microfinance, lending usually starts with small loans, including those for social and consumption needs, which should gradually increase based on the repayment performance and absorptive capacity of the borrower.

Interest rates, lending procedures and repayment periods

As with other rural credit and microfinance operations, interest rates should be market-oriented so that financial institutions can cover their costs and thus, promote the the emergence of healthy and viable financial institutions and intermediaries, which can sustain the provision of financial services to inland fisheries clients. As for other rural sectors, lending procedures for inland capture fisheries should be flexible, timely and demand-oriented. Time taken for processing of a loan application should be kept to the minimum and loans should be disbursed when the funds are actually needed, for example, at the beginning of a particular fishing season to maximize investment profitability. Loan repayment periods and frequency of loan repayments should be based on the borrower’s cash flow. A wide variation of loan repayment periods is recommended in accordance with the various purposes for which loans are required and used in inland fisheries. In the case of microfinance and small-scale fish processing and vending activities, short-term loans to be repaid in less than one year might be appropriate, while most capital investment loans for acquiring fishing boats or fish processing facilities and equipment may be

considered medium-term loans with repayment periods from three to five years. Loans for the establishment of hatcheries and other long-term projects may be considered long-term loans with repayment periods of more than five years. In order to ensure the proper use of a loan as well as timely repayment, it is recommended to follow a loan supervision schedule. The loan supervision schedule should be mentioned in the loan agreement. Depending on the type of loan and the borrower, different time intervals and methods of monitoring may be followed and different institutions may be involved. In the case of microfinance programs for inland fishers, however, regular field visits for the supervision of loan use may be necessary, which offer an opportunity to establish close contact with borrowers and to jointly identify and solve any problems that might arise.

Documentation and collateral requirements

Generally, documentation in microfinance and rural credit operations involving inland fishing communities should be kept simple and short. One important consideration is that some, if not most fishers and fish farmers are illiterate or unschooled. In lieu of hard collateral, financial institutions may require the following:

- ▶ Household or business cash flow for a particular period
- ▶ Character reference from persons of authority (e.g. village chief or parish priest)
- ▶ Co-Maker or guarantor, group guarantee or joint liability if a group member

Based on lessons learned from past credit program, other elements to be considered/emphasized when designing a microfinance program for fisheries are the following:

Establish linkages and networking. This requires well-planned social marketing of the project, effective institutional development and training program in community organizing, technology packaging and transfer, and strengthening of fisherfolk, cooperatives and associations, particularly their savings and lending capability and creditworthiness as well as support to project development and packaging, overall project execution and management, and market linkaging. There is also an urgent need to implement a comprehensive aquaculture-based financing strategy and practical demand-led schemes and innovations.

Support interventions to help improve the investment climate and viability of aquaculture finance: (i) provision of public or social goods (support infrastructure facilities (e.g., farm-to-market roads, rural bridges, irrigation and drainage facilities, electrification, transport and logistics systems, post-harvest facilities, potable water supply) which reduce production and marketing costs; (ii) technical assistance via technology transfer and commercialization in terms of the research, development, and extension (RD&E) support continuum; and (iii) social, educational, and health services that enhance the productive capacity of fisherfolk.

Institutional arrangements that will encourage the greater participation of private banking institutions in aquaculture credit, through the institution of positive changes and reforms at the demand and supply side of credit, will minimize lending costs and risks. Moreover, appropriate institutional arrangements are required in mobilizing credit supply and availment through a national network of rural viable credit cooperatives (mostly church- or school-based).

Improving credit delivery and repayment performance of fisheries project will involve a total household cash flow approach to developing technically and economically viable land-based income-generating projects that will augment income from aquaculture on a sustainable basis. Such improvement in credit delivery will enhance creditworthiness and credit repayment performance.

4 MICROFINANCE SERVICES FOR SMALL-SCALE, COASTAL FISHERIES AND AQUACULTURE IN SOUTH ASIAN COUNTRIES WITH A SPECIAL FOCUS ON WOMEN

Dr K.G. Karmakar, G.S. Mehta, Dr S.K. Ghosh and Dr P. Selvaraj

4.1 Summary

Fishworkers in the small-scale fisheries sector in India, Bangladesh and Sri Lanka have always been very poor and among the most marginalized groups. Their low social status is a result of poverty as well as exploitation by merchants and middlemen who have control over credit and fish marketing. This exploitation drains away the surplus generated by fishworkers and often makes them indebted.

A combination of variability in catch, the need for technology upgrades, overcapitalization, rising costs, aggressive fishing, overcrowding, etc. has made the economics of fishing and fishing-related occupations uncertain. The overall output remains almost the same as in the past but the investment and operational costs have gone up considerably. This has resulted in fishers becoming increasingly dependent on loans to finance their expenditures. The key expenditures are: (i) capital expenditure such as the purchase of boats, launches, nets and engines; (ii) running expenses such as boat, net and engine repairs, ice, fuel and goods; and (iii) other expenditures such as medical treatment, responding to emergencies and education.

The available data indicate that small-scale fishworkers cannot access formal institutional credit except through intermediary people's organizations such as the South Indian Federation of Fishermen Societies (SIFFS), state cooperatives (Matsyafed), NGOs, microfinance institutions (MFIs) (Dhan, ICNW, Sneha, Shanti Dhan, IASC) and self-help groups (SHGs) in India. The lone exception seems to be gold loans for which the fishing community accesses banks quite easily and directly. People still rely on money lenders, financiers, chit funds, loans from friends and relatives for raising funds for life cycle needs, housing, education of children, setbacks and emergencies, etc. The situation in Bangladesh is better with the Grameen Bank offering various microfinance products and services.

This document reviews the status of the small-scale coastal fisheries sector in three South Asian countries, namely India, Bangladesh and Sri Lanka with a special focus on women. Fisherfolk have always been very poor and are among the most marginalized groups, often exploited by middlemen and merchants and, as a result, generally indebted. Microfinance can make a difference in the lives of small-scale coastal fisherfolk and small-scale aquaculturists. Although data are lacking, this document attempts to quantify the credit gap after estimating the present level of demand. The details of various credit models of intermediary people's organizations such as SIFFS, DHAN Foundation, Bangladesh's Grameen Bank, the National Cooperative Development Corporation (NCDC) and the Fisheries Federation in Kerala (Matsyafed) are discussed in detail. In the absence of adequate institutional credit, the fisherfolks' only recourse is the informal credit system for which they have to pay a heavy price in terms of high interest rates as well as selling the prime quality catch at a predetermined rate that may be half the market price. Moreover, the fishing operations involve high risks to life and assets and uncertainty in terms of availability of catch and market related vagaries and fisherfolk have no insurance/social security to fall back upon. It is against this background that the microfinance services extended by Bangladesh's Grameen Bank and the integrated microfinance programme extended by SIFFS to the sector are noteworthy. The role of women and the difficulties they face are analyzed. Various success stories in microfinance have been highlighted in the document, indicating that solutions are available. The study also points out the need for the inclusion of the fishworkers in South Asia in the subregion's financial systems.

4.2 The small-scale, coastal fisheries sector in India, Bangladesh and Sri Lanka

Despite the potential importance of microfinance as a tool for inclusion in the region's financial systems and for poverty alleviation, a surprisingly low proportion of financial policies in Asia and the Pacific region include specific reference to it. Evidence from evaluation studies of past initiatives suggests that formal credit programmes through cooperatives and rural banks, often supported by donor agencies, are often not successful, both in terms of the viability of lending institutions in outreach and the ability of intended beneficiaries to access cheaper sources of credit. Informal savings schemes and credit markets are widely developed in many countries and may positively contribute to providing access to capital or assets because they are closer to the users, more flexible, have user-friendly processes and procedures and are more adapted to the client's microcredit needs.

Consequently, there is growing recognition of the microfinance sector as a crucial development tool, which is yet to be fully reflected in official fisheries policies. Microfinance in this context is seen as the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance, and is characterized most commonly by micro/nano loans to meet urgent family or production expenses.

Few microfinance institutions or commercial banks exist that are willing and able to provide small loans to small-scale fisherfolk at interest rates much lower than those of middlemen. Fisher people also consider the perceived inflexibility of banks as a big disadvantage in terms of timely access to finance because of the documentation involved and the collateral based lending norms.

Globally, women constitute the majority of microfinance clients, primarily because of their excellent loan repayment records and microsavings. They play an important role in fishing communities, encompassing social and economic responsibilities and duties within and outside their households. Women are particularly involved in productive activities directly related to fisheries production, processing and marketing as well as in non-fisheries income-generating activities. Loans required by women are frequent but small, which makes them appropriate clients of microfinance. There is a demand for savings and credit services among the fisherfolk that is rarely met because they rarely have access to institutional finance. Microfinance is needed by households to increase their incomes from fisheries activities and other income-generating activities. It is also required for social needs related to their quality of life and for smoothening consumption patterns, particularly during lean and off-seasons when little or no income or food is generated. Microfinance could also help in managing risks and reducing economic and social vulnerability.

Objective of the review

This section reviews the approaches and interventions of microfinance services for small-scale, coastal fishers and aquaculturists, by identifying institutions, financial services such as loans, savings, insurance, etc. with a gender perspective. The success or failure/limitations of these approaches is considered and the causes attributed to their success or failure and their primary and secondary beneficiaries is discussed. The review identifies the challenges faced by banks and other financial institutions providing credit and other services for small-scale fishers and aquaculturists in order to identify challenges and how to address these challenges. Lending gaps to these groups and how to improve the provision of services and funds to them are also evaluated. This review provides specific recommendations for innovative microfinance services, policies, approaches and delivery mechanisms for poverty eradication and livelihood development that can be considered best practice recommendations for financial services in the sector.

The small-scale, coastal fisheries sector

This is an intensive review of the development of microfinance services for small-scale, coastal fisheries and aquaculture in three South Asian countries: India, Bangladesh and Sri Lanka, with a specific focus on women, based on a review of available literature, web-based materials and information, and the experience of organizations such as NABARD, involved in the promotion and development of microfinance in the sector.

The study of the fisheries sector in the three countries is a study in contrasts. In India, the major thrust is on the inland fisheries sector in which the brackishwater and marine sectors are basic export earners. In Bangladesh, there is a large artisanal and coastal fisheries sector and an equally large inland fisheries sector, whereas Sri Lanka basically represents artisanal marine fisheries (89 percent). The data set out in Table 1 below indicates the relative strengths of each country in the fisheries sector.

Table 1. The fisheries sector — India, Bangladesh and Sri Lanka

	India	Bangladesh	Sri Lanka
Area (sq km)	3 290 000	147 570	65 610
Water area (sq km)	NA	45 757	2 905
Shelf area (sq km)	530 000	NA	27 800
Length of continental coastline (km)	8 118	714	1 770
Exclusive economic zone (sq km)	2 020 000	166 000	517 000
Population (millions)	1 028.700	140 600	20.217
GDP at present value (US\$ billion)	1 209	225	92
Per capita GDP (US\$)	1 016	1 389	4 581
Agriculture GDP (US\$ billion)	207.948	67.467	6.901
Fisheries GDP (US\$ billion)	17.772	10.042	1.840
Population of fishers (million)	14.485	5.2	0.715
Population of marine fishers (million)	3.519	0.51	0.608
Fisheries exports (US\$ million)	1 908.63	307	100.8
Imports (US\$ million)	47.2	NIL	59.4
Brackishwater fish culture (ha)	130 000	217 877	11 000

A study of the fish available for human consumption and commodity balance reveals that the per capita supply in Sri Lanka is the highest at 17.4 kg/year, followed by Bangladesh at 14.24 kg/year, and then India, with the lowest, at 5.86 kg/year (Table 2).

Table 2. Commodity balance of fish — India, Bangladesh, Sri Lanka

Country	Production (tonnes)	Imports (tonnes)	Exports (tonnes)	Total supply (tonnes)	Per capita supply (kg/year)
Sri Lanka	286 370	67 284	13 680	339 974	17.40
Bangladesh	2 563 296	–	49 907	2 513 389	14.24
India	6 571 630	5 029	551 282	6 025 377	5.86

Fisheries play an important role in the national economies of all the three South Asian countries, providing full-time or part-time employment to a considerable proportion of the poorer people living in coastal areas. Most of the fisher people are not included in the financial system and have little or no access to credit and insurance facilities. However, microfinance agencies or self-help groups or fishers' associations have provided some financial services.

Fishery development prospects

Marine fish production from nearshore waters has reached almost a plateau and, at best, only marginal increase is predicted from this zone. A major gap in total fishable potential and present production exists in deep sea and offshore pelagic resources. Good potential exists for coastal aquaculture and mariculture. Resource enhancement measures in coastal waters also need to be implemented. In contrast, inland fish production has been showing rapid growth of about 6 percent per annum and has great potential for further development. Area expansion, diversification of farmed species and augmenting productivity from the existing farms in a sustainable manner are possible strategies in this sector. A substantial portion of the future additional demand for fish will have to be met from aquaculture because of the massive and unplanned worldwide depletion of marine fish stocks.

Objectives for future fisheries development include enhancing fish production and productivity, generating employment, improving the socio-economic conditions of fisherfolk, increasing marine products for export, and increasing *per capita* availability of fish. These objectives can be achieved through intensification of aquaculture, qualitative and quantitative improvement in farming, introduction of more economic varieties, improving the productivity of reservoirs and lakes and horizontal expansion of the farmed area. Combating diseases, popularizing organic farming and implementing sustainable farming practices are necessary. Developing policies and legal frameworks with required safeguards for the introduction of exotic varieties require attention. In the marine sector, besides intensifying coastal aquaculture, sea farming, and deep-sea fishing, better management of coastal fisheries according to principles of sustainability and stock enhancement measures should be practiced for maximizing returns. Considering the massive processing facilities created and the skilled manpower available, the import of raw material for processing, value addition and then export has good prospects.

The South Asian marine fisheries sector faces frequent fluctuations as cyclic and climatological effects influence the pelagic stocks. All the coastal states in India have enacted a marine fishing regulation act with jurisdiction over their territorial waters. Management measures such as closed seasons, delimitation of fishing zones for different categories of fishing craft etc. have been implemented to ensure sustainability. Capture of non-targeted species and rejection of bycatches are discouraged through awareness programmes involving stakeholders.

Future trends

Fisheries development plans are aimed at making substantial contributions to the doubling of food production, improving the welfare of fisherfolk, promoting exports and providing food and livelihood security to the coastal population. The *per capita* availability and consumption of fish is to be doubled for the fish eating population for which production and distribution has to be scaled up appropriately. All this requires scientific and technological backstopping and capacity building in key areas.

Aquaculture is recognized as an important source for meeting future demands for protein food in the three countries. A number of schemes have been instituted to augment production from the brackishwater and freshwater aquaculture sectors. The private sector has emerged as a major player in brackishwater aquaculture, particularly in shrimp farming. Responsible aquaculture and prevention and management of aquatic diseases, organic farming, cage farming, induced breeding and fattening of select species are some of the challenges to be addressed in this sector for improving productivity.

Considering the growing global demand for seafood, developing the export production with appropriate care for food safety and product competitiveness has been embarked upon. To improve hygiene and sanitation in fish handling, centrally sponsored schemes have been launched to upgrade the existing infrastructure at fishing harbours, landing centres and shrimp peeling yards. Upgrading quality in the post-harvest and domestic marketing sectors requires concerted efforts.

A number of schemes have been initiated by the three countries for the welfare of the fishing community, so as to provide them livelihood security through housing, insurance, and sea safety. Training,

microcredit and increased participatory management by the stakeholders need to be ensured. Another immediate requirement is to update the national preparedness for handling situations such as the recent tsunami, which had a profound impact on coastal communities and their livelihoods. Improvements in database management and development of linkages in all sub-sectors are another felt need.

4.3 Microfinance in the small-scale fisheries and aquaculture sector in India, Bangladesh and Sri Lanka

Information sources

Information and data pertaining to microfinance in the fisheries sector, including the small-scale fisheries and aquaculture sector, in all the three countries are not readily available. Nevertheless, there are field level experiences of microfinance in the small-scale coastal fisheries and aquaculture sector and this review draws on these experiences and a variety of other sources to make an assessment of the flow of microfinance to the sector.

Table 3. Outreach and loan portfolios of MFIs in the three countries

Country	Year	No. of MFIs reporting data	Gross loan portfolio (million US\$)	Number of active borrowers (million)	Total women borrowers (million)	Share of women borrowers (%)	Average loan size (US\$)
Bangladesh	2007	28	1 759	23.67	21	89.48	74
Bangladesh	2008	6	1 396	13.29	13	98.41	105
Sri Lanka	2007	13	224	0.69	0.40	58.14	326
Sri Lanka	2008	2	1.7	0.01	0.01	62.45	151
India*	2007	76	1 385	10.20	10	94.66	136
India*	2008	61	1 688	12.48	12	93.59	135

Data source: MIX; * Data does not include SHG bank linkage programme

The first source used in the review is data submitted to the Microfinance Information Exchange (MIX), a web-based microfinance gateway. Data were compiled for two consecutive years, i.e. for 2007 and 2008 for the three countries (Table 3). Unfortunately the data cannot be disaggregated at a sectoral level. The second source is information on the microfinance flow through the SHG bank linkage programme in India and is based on the published data contained in *Status of microfinance in India, 2007/08* (Table 4).

Table 4. Outreach and loan portfolios of MFIs for all three countries and SHG Bank Linkage Programme in India

Programme	Year	Amount					
		Gross loan portfolio (million US\$)	Number of active borrowers (million)	Total number of women borrowers (million)	Share of women borrowers (%)	Average loan size (US\$)	Average loan size (INR)
MFIs*	2007	1 385.26	10.20	9.66	94.66	135.74	6 516
Banking system (SHGs)#	2007/08	3 541.65	45.20	36.37	80.46	78.35	3 761
Total		4 926.90	55.40	46.03	83.08	88.93	4 269

Data source: MIX; # Data source: NABARD 2008; Data on active borrowers (BS-SHG): Srinivasan 2009; Data on women borrowers (BS-SHG): Extrapolated from NABARD 2008; Exchange rate: INR 48 = 1 US\$

An effort has been made to assess the sectoral credit flow through the microfinance route by applying two independent methods: (i) calculating the ratio of fisheries GDP to the total GDP of each country and then working out the share of microcredit of the small-scale coastal fisheries and aquaculture sector using those ratios; and (ii) working out the share of microcredit to fishermen in the total microcredit disbursement of each country using the ratio of fishermen population to total population of each country (Table 5).

Table 5. Assessment of microfinance outreach and MF credit flow in the fisheries sector of the three countries

	Unit	India	Sri Lanka	Bangladesh
Total population of the country*	Million	1 028.7	20.217	140.6
Fishermen population*	Million	14.485	0.715	5.2
Marine fishermen population*	Million	3.519	0.608	0.510
Share of fisheries in total GDP of country*	Percent	1.07	1.5	4.91
Outreach of microfinance (SHG + MFI clients)#	Million	55.4	0.69	23.67
Loans outstanding (MFIs + SHGs)#	US\$, million	4 926.9	223.55	1 759.41
Average loan outstanding	US\$, million	89	324	74
Estimated number of fishermen clients of MF – derived from population ratio	Million	0.780	0.024	0.875
Estimated number of marine fishermen clients of MF – derived from population ratio	Million	0.190	0.021	0.086
Estimated share of fishermen to MF loans – derived from population ratio	US\$, million	69	8	65
Estimated share of fishermen to MF loans – derived from GDP ratio	US\$, million	53	3	86
Estimated share of marine fishermen to MF loans – derived from population ratio (A)	US\$, million	16.90	6.80	6.39
Estimated share of marine fishermen to MF loans – derived from GDP route (B)	US\$, million	12.81	2.85	8.47
Lower of the two estimates (considering A and B)	US\$, million	12.81	2.85	6.39

* **Data source:** Official government web site of the respective country; # **Data source:** NABARD, 2008; MIX; Data on active borrowers (BS-SHG): Srinivasan 2009; Exchange rate: 1 US\$ = 48 INR

The lower of the two assessments derived from the two methods has been considered for the present assessment of microcredit flow to the sector. The microfinance flow in the coastal fisheries sector of India, Bangladesh and Sri Lanka is estimated to be US\$ 12.81 million, 6.39 million and 2.85 million respectively. There is considerable scope for increasing microcredit to this sector, if low cost funds are available.

Trends in bank finance to the fisheries sector and share of microfinance

The data on bank finance to the fisheries sector in the cases of Bangladesh and Sri Lanka were not readily available. The available data on flow of credit through regular banking channels (Table 6) to the fisheries sector were analyzed for the coastal states of India.

There is no clear trend in GLC flow in the sector (Figure 1) through regular banking channels comprising the scheduled commercial banks, regional rural banks and co-operative banks. The credit flow to the sector in coastal districts through regular bank finance has been in the range of INR 9 633 to INR 10 392.

The credit flow through the MFIs and SHG-BLP for the sector has been worked out following the procedure as discussed earlier (Table 5). The agency-wise share of microfinance to total credit flow to the sector in the coastal states was analyzed (Table 7), which reflects the share of regular banking

Table 6. GLC* flow in fisheries for the coastal states of India, by state (INR million)

Name of state	Total GLC in fisheries			Total GLC in coastal district		
	2005/06	2006/07	2007/08	2005/06	2006/07	2007/08
Orissa	363.6	470.8	421.7	289.6	252.2	276.5
West Bengal	548	656.1	909.9	114.5	163.8	504.2
Andhra Pradesh	2 110	2 819.8	3 795.6	634.2	875.4	807.3
Tamil Nadu	479.1	452.5	488.2	418.2	387.9	419.4
Kerala	457.9	763.2	575.2	426.6	743.1	424.1
Karnataka	122.3	181.7	193.9	20.8	26.8	26.6
Maharashtra	221.9	232	161	165.2	101.1	160.2
Goa	36	33.3	71.3	36	25.8	64.2
Gujarat	7 949	7 075.6	7 719.1	7 941.5	7 056.6	7 709.4
Total	12 287.8	12 685	14 335.9	10 046.6	9 632.7	10 391.9

* Ground level credit (GLC)

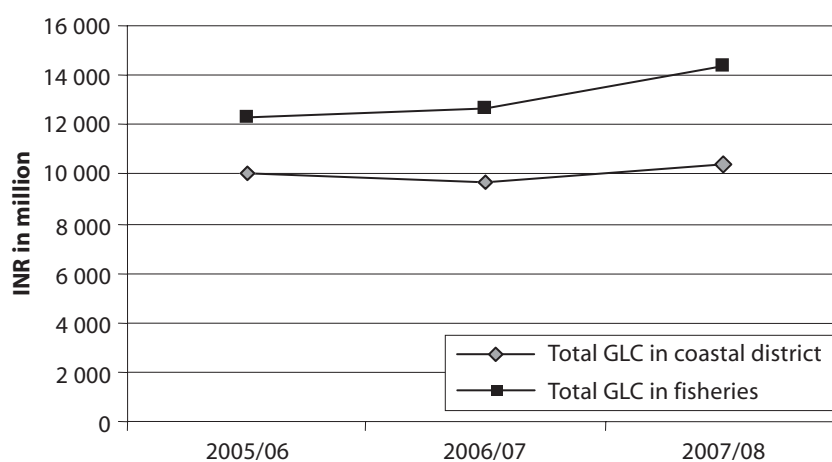


Figure 1. Trend in GLC flow in coastal fisheries sector in India

Table 7. Estimated share of credit flow to fisheries by various agencies

Agency	Estimated amount (INR million)	Share (%)
Regular banking channel	10 392	94.41
SHG-bank linkage programme*	442	4.02
MFIs#	173	1.57
Total	11 007	100

Data source: MIX

* Data source: NABARD 2008; Exchange rate: INR 48 = 1 US\$

channels to be 94.41 percent. The balance of credit flow is through the microfinance route with SHG-BLP accounting for 4.02 percent and MFIs accounting for 1.57 percent. The available data on microfinance (Table 4) reveal the following features of microfinance in India:

- ▶ The share of women borrowers to total borrowers in the case of MFIs is 95 percent, whereas it is 80 percent in the case of SHG-BLP.
- ▶ The average loan size of MFI borrowers is INR 6 516 whereas that of SHG-BLP is INR 3 761.

Thus, it may be concluded that the women borrowers are being given due importance by the microcredit providers. There is also need to step up the availability of funds for SHGs.

Analysis of the lending gap and the financial services gap

Lending gap analysis

In the absence of readily available data on the credit needs of the coastal marine fisheries and aquaculture sector of the three countries, an assessment has been made for the case of India utilizing available data on the occupation profile (Table 8) of coastal fishermen in India (Marine Fisheries Census 2005).

Table 8. Occupation profile of marine fisherfolk of India (Census 2005)

Category	Population	Share (%)
Full-time fishing	717 999	20.40
Part-time fishing	117 628	3.34
Occasional fishing	53 901	1.53
Marketing	207 362	5.89
Net making/repair	139 718	3.97
Curing/Processing	87 142	2.48
Peeling	23 143	0.66
Labourer	220 662	6.27
Others – fishing related	78 364	2.23
Other than fishing	83 073	2.36
Total occupied	1 728 992	49.13
Total population	3 519 116	

In order to make an assessment of credit needs, various fishing and non-fishing activities have been ranked for credit support broadly into three categories, i.e. the activities that may qualify for SHG-bank linkage, those that may qualify for microfinance, and those that may qualify for regular bank finance (Table 9). For group activities, the loan amount is limited to INR 50 000 per SHG, the same has been considered for SHG-BLP. The upper limit for microfinance has been considered up to INR 10 000 per borrower without collateral and covers individual activities. These have been considered for microfinance support from MFIs. The activities which are beyond the microfinance limit have been considered for regular bank finance with collateral.

Credit need for all other activities have been assessed taking into account the occupation profile of the coastal fishers

Based on the above categorization of activities for credit support and the available data on existing marine fishing units (Marine Fisheries Census 2005), the credit need for replacement of the existing units @15 percent per annum has been considered. The bank loan component has been worked out considering the margin money to be 25 percent for mechanized fishing units, 15 percent for the motorized fishing units and 10 percent for the non mechanized units.

Financial services gap analysis

In India, the financial services gap is high considering the fact that apart from the South Indian Federation of Fishermen Society (SIFFS) and the DHAN Foundation, there is no other player which provides any kind of insurance products. The social intermediation, enterprise development and social services are provided under the SHG-BLP and by MFIs. The coverage is not uniform and is largely concentrated in the pockets covered by SIFFS, Dhan Foundation, Matsyafed, church organizations, ICNW, etc. However, Bangladesh's Grameen Bank offers comprehensive services covering all possible intermediation comprising financial, social and enterprise development services.

Table 9. Assessment of coastal fishery and non-fishery dependent activities from microfinance point of view

Activities	Unit cost (INR)	Operation cost/consumption need (INR)	Total cost (INR)	1 = individual activity 2 = group activity	Group size in case of group activity	Average loan size/beneficiary (INR)	Qualify for SHG bank linkage	Qualify for micro-finance	Bank finance (individual/cooperative)
Fishery dependant									
Mechanized fishing units									
Gillnetters	1 000 000	200 000	1 200 000	1	1	900 000	X	X	✓
Trawlers	1 000 000	200 000	1 200 000	1	1	900 000	X	X	✓
Motorized fishing units	141 667	16 667	158 333						
FRP boats	165 000	20 000	185 000	1	1	157 250	X	X	✓
Catamarans	95 000	10 000	105 000	1	1	89 250	X	X	✓
Plank built boats	165 000	20 000	185 000	1	1	157 250	X	X	✓
Non mechanized fishing units									
Catamarans	30 000	3 000	33 000	2	3	9 900	✓	X	X
Plank built boats	125 000	8 000	133 000	2	4	29 925	X	X	✓
Dugout canoes	30 000	3 000	33 000	2	3	9 900	✓	X	X
Other fishing activities									
Beach seine	47 000	3 000	50 000	2	30	1 500	✓	X	X
Bagnet fishing	20 000	3 000	23 000	2	3	6 900	✓	X	X
Seashell collectors	0	3 000	3 000	1	1	2 700	✓	✓	X
Fishing as hired labour	0	3 000	3 000	1	1	2 700	✓	✓	X
Post-harvest activities									
Fish trade	0	8 000	8 000	1	1	7 200	✓	✓	X
Repair of nets	10 000	3 000	13 000	2	3	3 900	✓	X	X
Icing	5 000	10 000	15 000	2	2	6 750	✓	X	X
Fish drying	5 000	25 000	30 000	2	4	6 750	✓	X	X
Pickle making	30 000	20 000	50 000	2	10	4 500	✓	X	X
Other small-scale processing	10 000	30 000	40 000	2	5	7 200	✓	X	X
Coastal aquaculture									
Shrimp farming	250 000	125 000	375 000	1	1	281 250	X	X	✓
Finfish culture in community ponds	10 000	30 000	40 000	2	5	7 200	✓	X	X
Mussel culture	20 000	5 000	25 000	2	3	7 500	✓	X	X
Seaweed culture	20 000	10 000	30 000	2	4	6 750	✓	X	X
Ornamental fish culture	100 000	10 000	110 000	2	5	19 800	X	X	✓
Cage culture	50 000	10 000	60 000	2	3	18 000	X	X	✓
Crab fattening	20 000	10 000	30 000	2	3	9 000	✓	X	X
Other activities									
Boat building	1 000 000	200 000	1 200 000	1	1	900 000	X	X	✓
Engine repair	200 000	100 000	300 000	1	1	255 000	X	X	✓
Loading/unloading at landing sites	0	3 000	3 000	1	1	2 700	✓	✓	X
Rope making	0	10 000	10 000	2	3	3 000	✓	X	X
Marketing ice	0	5 000	5 000	1	1	4 500	✓	✓	X
Non fishery dependent									
Saltpan worker	0	3 000	3 000	1	1	2 700	✓	✓	X
Farming	2 000	5 000	7 000	1	1	6 300	✓	✓	X
Farm workers	0	3 000	3 000	1	1	2 700	✓	✓	X
Petty traders	20 000	10 000	30 000	1	1	27 000	X	X	✓

'✓' denotes feasible; '✓' denotes feasibility in cooperative sector

Conversion rate: 1 US\$ = 48 INR

✓

Table 10. Assessment of credit need for coastal fishery and non-fishery dependent activities (India)

Activities	Unit cost (INR)	Operation cost/consumption need (INR)	Average loan size/beneficiary (INR)	Existing units/members engaged	Total credit need (INR million)	Credit programme to qualify for SHG bank linkage (INR million)	Credit programme to qualify for micro-finance [#]	Credit programme to qualify for bank finance (individual cooperative) (INR million)
Fishery dependent								
Mechanized fishing units	1 000 000	200 000	900 000	58 911	17 968	0	0	17 968
Motorized fishing units	141 667	16 667	134 580	75 591	2 597	0	0	2 597
Non mechanized fishing units	30 000	3 000	29 700	104 270	730	0	0	730
Other fishing activities								
Beach seine	47 000	3 000	1 500	17 153	49	49	0	0
Bagnet fishing	20 000	3 000	6 900	17 153	67	67	0	0
Seashell collectors	0	3 000	2 700	17 153	53	0	53	0
Fishing as hired labour	0	3 000	2 700	120 070	371	0	371	0
Post-harvest activities								
Fish drying/curing	5 000	25 000	6 750	87 142	1 969	1 969	0	0
Peeling/processing	30 000	20 000	9 000	23 143	435	435	0	0
Coastal aquaculture								
Shrimp farming	250 000	125 000	281 250	7 836	1 273	0	0	1 273
Fin fish culture in community ponds	10 000	30 000	7 200	7 836	211	211	0	0
Mussel culture	20 000	5 000	7 500	7 836	45	45	0	0
Seaweed culture	20 000	10 000	6 750	7 836	77	77	0	0
Ornamental fish culture	100 000	10 000	19 800	7 836	98	0	0	98
Cage culture	50 000	10 000	18 000	7 836	95	0	0	95
Crab fattening	20 000	10 000	9 000	7 836	81	81	0	0
Other activities								
Fish trade	0	10 000	9 000	207 362	2 136	0	2 136	0
Repair of nets	10 000	3 000	3 900	139 718	465	465	0	0
Boat building	1 000 000	200 000	900 000	7 836	2 743	0	0	2 743
Engine repair	200 000	100 000	255 000	7 836	1 066	0	0	1 066
Marketing ice	5 000	5 000	9 000	7 836	47	0	47	0
Non fishery dependent								
Saltpan worker	0	3 000	2 700	20 768	64	0	64	0
Farming	2 000	5 000	6 300	20 768	114	0	114	0
Farm workers	0	3 000	2 700	20 768	64	0	64	0
Petty traders	20 000	10 000	27 000	20 768	289	0	0	289
G. total (million INR)					33 108	3 400	2 850	26 858
G. total (million US\$)					690	71	59	560

Notes:

- Assessment of credit for fishing units based on 15 percent annual replacement
- Assessment of credit for all other activities based on assumption that the annual credit need for new units will be @20 percent of the existing units
- Assessment of credit for operating cost will be for @85 percent of the existing units
- Margin money for mechanized fishing vessels @25 percent
- Conversion rate: US\$ 1 = 48 INR
- Margin money for motorized fishing vessels @15 percent
- Margin money for non mechanized fishing vessels @10 percent
- The limit for SHG-BLP loan/Group without collateral considered to be INR 50 000 (as per RBI guidelines)
- The limit for MFI loan/beneficiary without collateral considered to be INR 10 000

Table 11. Assessment of credit gap in coastal fisheries and aquaculture in India (2007/08)

Items	Credit programme under SHG bank linkage*	Credit programme under microfinance [#]	Credit programme under bank finance (individual/cooperative)	Total amount
Total credit need ⁺	3 400	2 850	26 858	33 108
Present level of credit flow	442	173	10 392	11 007
Gap in credit	2 958	2 677	16 466	22 101
Gap in credit (%)	87.00	93.93	61.31	66.75
Amount: INR in million				

⁺ Data source: Assessment made on the basis of marine fisheries occupation data, Gol 2005

[#] Data source: MIX Data source: NABARD 2008

Exchange rate: INR 48 = 1 US\$

Considering an annual credit need for new units @20 percent of the existing units as well as operating cost @85 percent of existing units, the total credit need for the sector is assessed at INR 33 108 million. INR 26 858 million of this sum is likely to flow through normal banking channels, INR 3 400 million through the SHG-bank linkage programme and INR 2 850 million through MFIs. The estimated present level of credit flow to the sector is INR 10 392 million through regular banking channels, INR 442 million through SHG-BLP and INR 173 million through MFIs. The overall credit gap is assessed to be 66.75 percent. The gap in credit for the formal banking channel, SHG-BLP and MFIs is estimated to be 61.31 percent, 87 percent and 93.93 percent respectively.

4.4 Role of microfinance in developing the small-scale fisheries and aquaculture sector

Institutional financing models

Fishworkers in the small-scale fisheries sector in South India have always been very poor and among the most marginalized groups of the country. Their low social status is a result of the caste system and exploitation by middlemen and merchants. A combination of variability in catch, the need for technology upgrades, over capitalization, rising costs, overcrowding, etc. has made the economics of fishing and fishing related occupations uncertain. Moreover, the distinctive aspect of fisheries credit is that incomes vary widely on a daily, seasonal and regional basis (in addition to the type of fisheries). There are also closed seasons when income from fishing is zero.

The fishers are getting increasingly dependent on loans to finance their key expenditures: (a) capital expenditure, such as the purchase of boats, launches, nets and engines; (b) running expenses such as boat, net and engine repairs, ice, fuel; and (c) other expenditures such as medical treatment, emergencies and other family expenses including education. Banks are not ready to cater to these increasing credit needs because the fishers do not have any collateral. As a result they land in the debt trap of the informal credit system comprising moneylenders, financiers, chit funds, or they borrow from friends and relatives.

SIFFS model

The South Indian Federation of Fishermen Societies (SIFFS) is the apex body of a three-tier structure for artisanal fishers, which as established as a result of the initiative of many NGOs in the 1970s and 1980s. SIFFS was mainly intended in the mid-1980s to take up technology development and promotion, a role that became essential because of the declining fortunes of the traditional fishers who faced unfair competition from mechanized trawlers. However, over time, SIFFS has diversified its portfolio in response to the aspirations and changing needs of its members and to new opportunities.

Today SIFFS runs a network of boatyards manufacturing marine plywood boats as alternatives to the traditional craft. It imports and supplies outboard motors (OBMs) and spares and also operates a network of OBM service centres. It has a large R&D programme involving the development of new boats, improvements in propulsion, artificial reefs, and safety at sea, improvements in fish handling, etc. It also runs ice plants and is trying out export of fish under a social labelling initiative. It has also taken up the responsibility to extend the society network in northern Kerala, central Tamil Nadu and Andhra Pradesh. Policy research and advocacy have been added to these activities. The development of a large microfinance programme in recent years is of particular relevance.

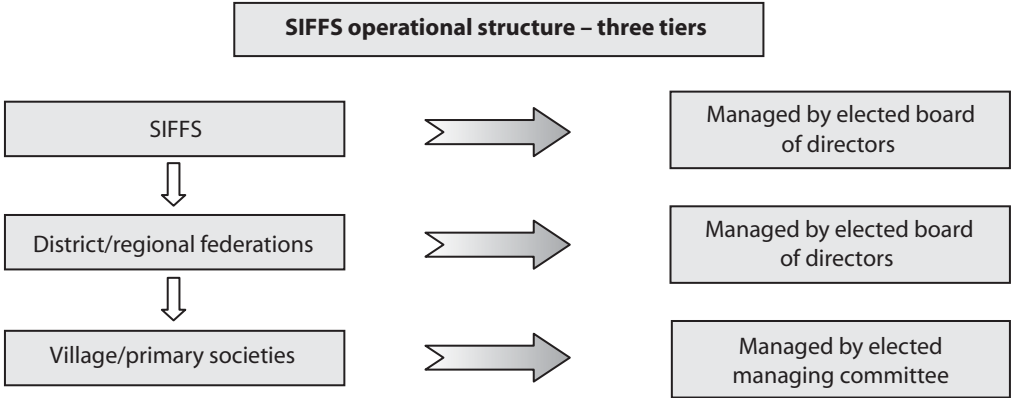


Figure 2. Operational structure of SIFFS

At the village level, there are over 156 primary societies in 17 districts of Kerala, Tamil Nadu and Andhra Pradesh as well as the Union Territory of Pondicherry with a membership of 9 500 fishing units in which 50 000 fishers are employed. These societies are in turn affiliated to district federations that are members of SIFFS. Moreover, 174 women societies/SHGs with 7 500 members are associated with SIFFS.

Village society	District federation	SIFFS
<ul style="list-style-type: none"> ▶ Fishers’ control over first point of sale of fish of members (beach auctions and sale to wholesalers, agents and export houses). ▶ Savings to help members during lean season and emergencies. ▶ Loans to help fishermen acquire fishing equipment and maintain independence from middlemen. 	<ul style="list-style-type: none"> ▶ Members’ services. ▶ Supervision and monitoring of village societies. ▶ Helping village societies with credit access from banks and other sources. ▶ Marketing support (direct assistance or liaison with markets and companies). ▶ Supply of inputs such as nets and fuel at lower/competitive prices based on economies of scale. ▶ Welfare activities for members. <p>Broader sectoral interventions</p> <ul style="list-style-type: none"> ▶ Formation of new societies. ▶ Organizing women’s groups. ▶ Some forays into education, environmental action, etc. 	<ul style="list-style-type: none"> ▶ Members’ services. ▶ Microcredit programme. ▶ Capacity building of district federations. ▶ Marketing of fish products (export of specific species). <p>Broader sectoral interventions</p> <ul style="list-style-type: none"> ▶ Development and commercialization of appropriate technologies, especially in fishing craft. ▶ Supply of new inputs like outboard motors (imports). ▶ Service network for boats and motors (new technology related). ▶ Expansion of society network to new districts. ▶ Policy research and documentation. ▶ Advocacy and lobbying (resource conservation and the protection of small-scale fishers’ rights).

Figure 3. Three tier structure and related activities

Integrated model

The model developed by the South Indian Federation of Fishermen Societies (SIFFS) is an integrated model of marine fisheries development, refined and standardized over 30 years. Matsyafed adopted the same model and very rapidly spread it across the whole of Kerala state. An interesting fact is that Matsyafed “cooperatives” are the strongest where the SIFFS societies are also strong. A wide variety of choices and alternatives for people have forced these organizations to perform well to attract and retain fisherfolk as members. In Tamil Nadu, state cooperatives are present in several districts but they need significant attention for revival. SIFFS is now rapidly expanding into Tamil Nadu as are other church-based organizations working in Kerala/Tamil Nadu.

The SIFFS intervention is multifaceted and holistic. It includes economies of scale, advocacy for influencing policy, interfaces and inter-linkages. Key areas are right to first sale of fish and release from indebtedness to merchant moneylenders. Hence, there is an open auction of fish landings, credit support for repairs, replacements (and working capital). The way ahead would be forward linkages of these two critical interventions. That is where SIFFS needs to intervene to a greater extent.

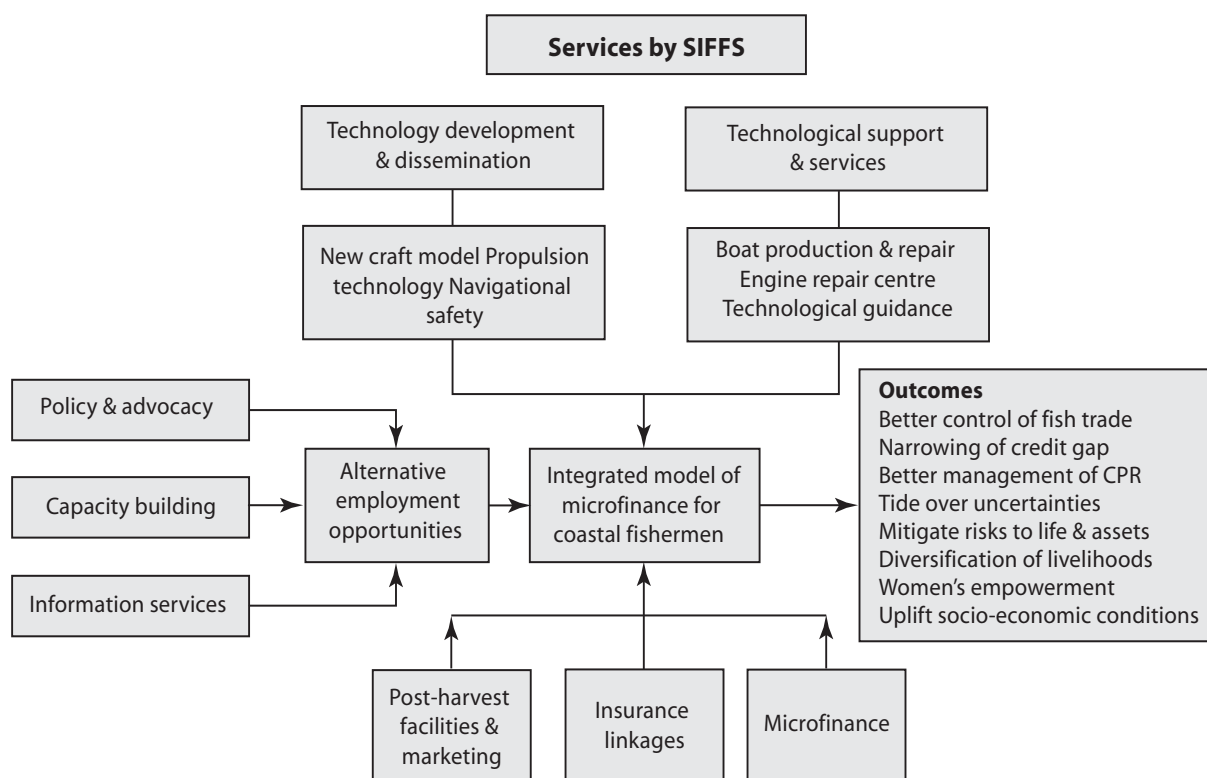


Figure 4. Services provided by SIFFS

SIFFS microfinance programme

By the mid-1990s, a major gap in credit availability had emerged as a result of a combination of factors. First, the banking sector had become less accessible because of the aftermath of the loan write-off scheme and the populist loan *melas* of the late 1980s. The service area concept introduced in the late 1980s also broke the relationships with some of the banks that had supported the societies. Second, fishing had undergone a transformation and most fishers had started using marine plywood boats and outboard motors pushing up the loan requirements to above the level for collateral-free loans. Third, in some areas, the poor track record of SIFFS societies had also created difficulties for banks in recovering loans.

The district federations, which had the role of facilitating credit flow to the societies, responded by developing revolving funds (based on donor funds) and also put up collateral for getting bank loans for members. All this proved insufficient, especially in Kerala, as the societies were also facing competition from government sponsored cooperatives, which were liberal with loans and subsidies without enforcing sufficient credit discipline. This led to a decline in the growth of the societies and even an erosion of membership in some areas.

Table 12a. Loan products

Category	Target group	Purpose	Loan amount (INR)	Term	Interest rate
Production	Owners of artisanal fishing units, motorized and non motorized	Purchase of fishing equipment such as kattumaram, boat, motor, net, ice boxes, other equipment, debt redemption	6 000–75 000	36 instalments in 42 months	12%
Labour loan	Crew of artisanal fishing craft	Consumption needs such as children’s education, medical expenses and other consumption needs	2 000–3 000	12 instalments in 14 months	14%
Fisher women’s loan	Fisherwomen	Working capital for fish vending as well as other petty trade and income generating activities	2 500–20 000	24 instalments in 28 months	18%*
Seasonal loan	Fisherwomen with proven credit discipline	Relatively bigger loans for working capital for seasonal fish vending	10 000–30 000	Bullet payment when season ends	18%*

Note: the extra 6 percent goes to women’s federations and is not retained by SIFFS

Table 12b. Details of different types of loans given by SIFFS

Purpose of loan	Purpose-category	Beneficiaries	Loan amount (INR)	Group or individual	Loan per head (INR)
Purchase of fishing equipment (motorized unit)	Production	Men	25 000–75 000	Individual	6 250–10 000
Purchase of fishing equipment (non motorized)	Production	Men	5 000–10 000	Individual	5 000–20 000
Purchase/installation of ice boxes	Post-harvest	Men/women	5 000	Individual	5 000–10 000
Working capital for fish vending and curing	Post-harvest	Women	1 000–20 000	Individual	1 000–10 000
Alternative employment (small businesses other than fish vending)	Alternative employment	Women	10 000–20 000	Individual	5 000

It is in this context that SIDBI approached SIFFS with its pilot programme in microcredit. SIFFS, which had not considered credit as part of its portfolio of activities, decided to take the plunge. After a slow start in 1997, SIFFS has, since 1999, been putting a lot of effort into its microcredit programme and has emerged as a leading MFI in the fisheries sector. Now SIFFS has an outstanding portfolio of INR 86 651 935 (as of June 2009). The finances for these loans were sourced from SIDBI, SBI, Canara Bank, Indian Overseas Bank, Axis Bank and Cordaid, Netherlands as external commercial borrowing (ECB). At the district and village levels, production loans are sourced from commercial banks. Funds under the SIFFS credit programme are meant for addressing the gap between the demand for credit and its availability from commercial banks.

The following are the main objectives of the SIFFS credit programme:

- ▶ to close the gap between credit demand and supply;
- ▶ to remain an additional channel rather than to eliminate existing channels of institutional credit to members;
- ▶ to use the SIFFS credit programme to introduce professionalism in the credit programmes of the district federations and societies, by example and through training and other forms of support;
- ▶ to improve the credit worthiness and absorption capacity of the societies and members by introduction of new concepts and methods in selection, monitoring, etc;
- ▶ to give a boost to the expansion of the SIFFS cooperatives and their membership which is stagnating because of difficulties in accessing credit for members;
- ▶ to use credit as an instrument for fisheries management to the extent possible, supporting appropriate technologies and discouraging the finance of inappropriate technologies; and
- ▶ to support fisherwomen's groups, that have historical links to SIFFS, to have access to credit for fish vending activities and also to promote alternative employment among fisherfolk, especially women and youth.

SIFFS microfinance – salient features

- ▶ The fishers have a continuous, ongoing requirement for credit and this is an instrument of oppression when borrowed from middlemen who retain control over fisher's right to sell fish because of their indebtedness.
- ▶ The loan products are customized to suit the needs of the small-scale fishers.
- ▶ Larger loan amounts and longer repayment periods make these loans different from other conventional microfinance loan products.
- ▶ Continuous credit, independent fish marketing and savings are the three pillars of the SIFFS model of fish marketing societies from its inception. This is helping to bring fishers control over fish marketing.
- ▶ SIFFS has been successfully dealing with fisheries credit since 1980 despite the fact that it is high risk activity.
- ▶ A fixed instalment repayment does not make much sense in fisheries credit and hence SIFFS has been following a formula, i.e. 10 percent of value of daily fish catches, for repayment of credit.
- ▶ Matsyafed, in Kerala has adopted the same model and very rapidly spread the same across the whole of Kerala State. It is interesting to note that wherever the SIFFS societies are functioning well, the Matsyafed "cooperatives" are very effective.

Table 12c. Comparison of SIFFS with other MFIs

Parameter	Most MFIs	SIFFS
Clients	Predominantly women	Primarily men
▶ Local organization	▶ SHGs or joint liability groups	▶ Fish marketing society (commodity cooperative)
▶ Loan amounts	▶ Small: A few hundred to a few thousand INR	▶ Larger: INR 5 000 to 50 000
▶ Loan repayment	▶ Fixed instalments, often weekly	▶ Fixed percentage of income with high uncertainties and fluctuations in income
▶ Loan period	▶ Short term: 6 months to 18 months	▶ Medium term: 3 years
▶ Loan purpose	▶ Significant percentage for consumption	▶ Almost entirely for fishing equipment (productive purpose)
▶ Interest rates	▶ 18–40 percent p.a; comparison with informal sector rates of 60 percent and above	▶ 16 percent; in comparison with bank agri loans ▶ (12 percent) and government cooperatives (15 percent)
▶ Interest spread	▶ High	▶ Low
▶ Operating costs for credit	▶ High because of sole focus on credit and associated activities	▶ Low because of multiple activities and revenue generation from marketing and input distribution
▶ Risk	▶ Lower because of small loan size and effectiveness of peer pressure	▶ High because of larger loan size and repayments dependent entirely on fortunes of fishing enterprise rather than peer pressure.

Matsyafed model

The Kerala State Federation for Fisheries Development Ltd. (Matsyafed), was established on the 19th of March 1984 and is registered as a cooperative apex federation of 653 primary level fishermen development welfare cooperative societies. The administration and management of Matsyafed are vested with the board of directors having 25 members, of whom 15 are elected from the primary cooperatives, seven official members and three non-official members nominated by the government. The chief executive is the managing director.

Matsyafed has a district office in each of the nine maritime districts and one in the inland district of Kottayam, headed by a district manager for administrative convenience. The district managers, each with a team of supporting staff, coordinate and supervise all the activities in the district. Of the 653 primary societies, 334 are in the marine sector, 186 in the inland sector and 133 are women’s cooperatives. The total membership in these societies is more than 300 000. The primary societies are grouped into 60 clusters for administrative convenience based on geographical area. The number of primary cooperatives varies from four to eight in a cluster. Matsyafed has a field office named the Project Office in each cluster. The field level officer provides necessary guidance and advice on the development programmes. This officer also coordinates the implementation of the various projects as well as other extension activities at the grassroots level. The main objectives of Matsyafed are ensuring total development (economic, social, educational and cultural) of the fisherfolk communities and implementation of various schemes for promoting production, procurement, processing and marketing of fish and fishery allied products.

Matsyafed has adopted the SIFFS model and is very rapidly spreading it across the whole of Kerala state. An interesting fact is that Matsyafed “cooperatives” are the strongest where the SIFFS societies are also

strong. Matsyafed has taken some dimensions of these multilayered and intricately interwoven interventions and scaled them up. The positive side is that every fish worker in Kerala today is covered under producers' organizations.

The activities of Matsyafed include development programmes aimed at enhancing production, self-employment programmes, commercial activities for forward and backward integration, aquaculture programmes, and extension.

Development activities

Beach level auctions/Control over first sale

The main focus of the federation is to equip the traditional fishermen to achieve control over the first sale of fish. The system of beach level fish auctions developed across the state through the primary cooperatives have enabled fishers to exercise first right over sale of fish. The fishers are also ensured of getting cash-down payment at the beach itself through the primary cooperatives. A tie-up has also been made with seafood exporting companies for procurement of high value and bulk quantity of fishes through the primary cooperatives so that the producers get a reasonable price for their catch at the beach itself. This has ensured that there is no price fall during bulk landings. The fishers are also assured timely assistance for replacement of their fishing inputs and working capital requirements. Matsyafed also provides working capital assistance to the primary cooperatives for strengthening the beach level auction.

Integrated Fisheries Development Project (IFDP)

The Integrated Fisheries Development Project was formulated and implemented with the assistance of the National Cooperative Development Corporation (NCDC) in 1985. The objectives of the project were to make the fishers the owners of fishing units and eliminate the exploitation by the middlemen at all levels. Matsyafed took up the distribution of fishing inputs at subsidized rates and at comparatively very low rates of interest to groups of fishers through primary cooperatives, provision of working capital, marketing infrastructure, supply of fuel and other fishing accessories.

Welfare activities

Fishers' personal accident insurance scheme

Every year, Matsyafed implements the personal accident insurance scheme for the fisher members of the affiliated primary cooperatives (with the assistance of insurance companies) by collecting a nominal insurance premium. The scheme provides compensation of INR 0.1 million to the dependents of fishers who have suffered accidental death, permanent disability, loss of both limbs/eyes etc.

Matsyafed Input Security Scheme (MISS)

Matsyafed is implementing the Input Security Scheme (MISS) for compensating for losses resulting from accidents and natural calamities such as loss of or damage to fishing implements distributed under Matsyafed schemes. The corpus of this scheme is constituted as a revolving fund using money from different sources including government and beneficiary contributions. The fishers can enrol under MISS at the time of applying for assistance for fishing implements under loan schemes of Matsyafed by remitting the contribution @4 percent of the cost of the implements. The coverage is for a continuous period of three years. The losses/damages sustained to fishing inputs under prescribed conditions will be assessed by the Matsyafed officials and the compensation will be released to the beneficiaries.

Special bus service for fisherwomen vendors (Vanitha bus)

Matsyafed is operating buses at nominal rates for transporting fisherwomen vendors on various routes. The fisherwomen are picked up from selected landing centres and transported to the various market

places and back. These buses are being operated as a welfare service for the fisherwomen vendors who are normally denied access to public transport.

Community peeling centres

Matsyafed operates two community peeling centres in Kollam district. The community peeling centres are being run as a common service facility for the fisherwomen of the area.

Employment generating activities

The Matsyafed is implementing schemes with the financial assistance of the National Backward Classes Development and Finance Corporation (NBCDFC) and the National Minorities Development and Finance Corporation (NMDFC) to promote economic and developmental activities for the benefit of backward and minority communities. Matsyafed has so far provided assistance worth INR 121.05 million to 6 607 beneficiaries.

Centrally sponsored schemes and plan schemes

The schemes include motorization of country crafts, subsidies for suitable complements of fishing gear, popularization of new generation crafts, bankable schemes, deep sea fishing and value addition. A project for promoting a marketing network by ensuring the quality of fishes from the point of fishing to the supply centres and to the consumer is envisaged under a planned scheme with an outlay of INR 10 million.

Tsunami Emergency Assistance Project (TEAP) and Tsunami Rehabilitation Programme (TRP)

Matsyafed has been at the forefront of implementing the state government's tsunami relief programmes for the fisheries sector in the state since January 2005. Matsyafed was the implementing agency for distribution of fishing units to the tsunami affected marine fishermen in the state and has distributed fishing inputs worth INR 130 million. Furthermore, Matsyafed is the implementing agency for the Asian Development Bank (ADB) assisted TEAP and TRP programmes in the state and are establishing projects such as fish kiosks, vehicles for fresh fish marketing, working capital for revolving fund, seafood kitchen, repair and replacement of marine fishing inputs, introduction of LPG kit, OBM repair unit.

Engineering works

The Engineering Division forms an integral part of the organization as all the construction and developmental needs of the Federation are being taken care of by the division including infrastructure developments, diversification and modernization of the units, housing and basic sanitation programmes for the fisherfolk, purchase of machineries, computerization programmes, vehicle purchases and maintenance, printing, stationery purchase, housekeeping, staff welfare measures.

Other activities

The other activities include motivational programmes, extension and mass communication programmes. The various commercial activities of Matsyafed include net making, ice making, fish processing and freezing, extraction of *chitin* and *chitosan*, production of fish manure, supply and servicing of OBMs, supply of diesel, aquaculture.

SHG movement and microfinance

As a part of building a strong co-operative institution with the participation of fishers and their family members, Matsyafed started organizing self-help groups associated with primary fishermen's co-operatives. Now, there are 10 162 self-help groups (SHGs) (2 840 men's groups and 7 322 women's groups) with 122 434 members (33 140 men and 89 294 women). These groups have generated INR 120.71 million as thrift which is utilized for giving short-term low interest loans to the members. The SHG movement has acquired momentum, which has resulted in an increased level of participation of

fishers and their family members. These self-help groups have changed the organizational culture of fishers considerably. Within a year it can be inferred that about INR 160 million is revolved in the sector without any assistance from Matsyafed or any other external agency. This is very helpful to the fisher families who are otherwise forced to borrow from private moneylenders at exorbitant interest rates. INR 90.0 million was released as microfinance loans last year to these SHGs. The beneficiary receives the loan at the interest rate of 6 percent. By the end of the last financial year, 466 SHGs had started micro-enterprises and are planned.

Table 13. SHG movement supported by Matsyafed

Attributes	
No. of societies	270
No. of groups	10 162
No. of members	122 434
No. of groups with grade >100	6 469
No. of groups that started enterprises	466
Thrift generated (INR million)	120.71
Amount used for internal lending (INR million)	66.21
Bank loans taken (INR million)	43.10
Business turnover (INR million)	263.20
Income generated (INR million)	26.60

Women's empowerment programmes

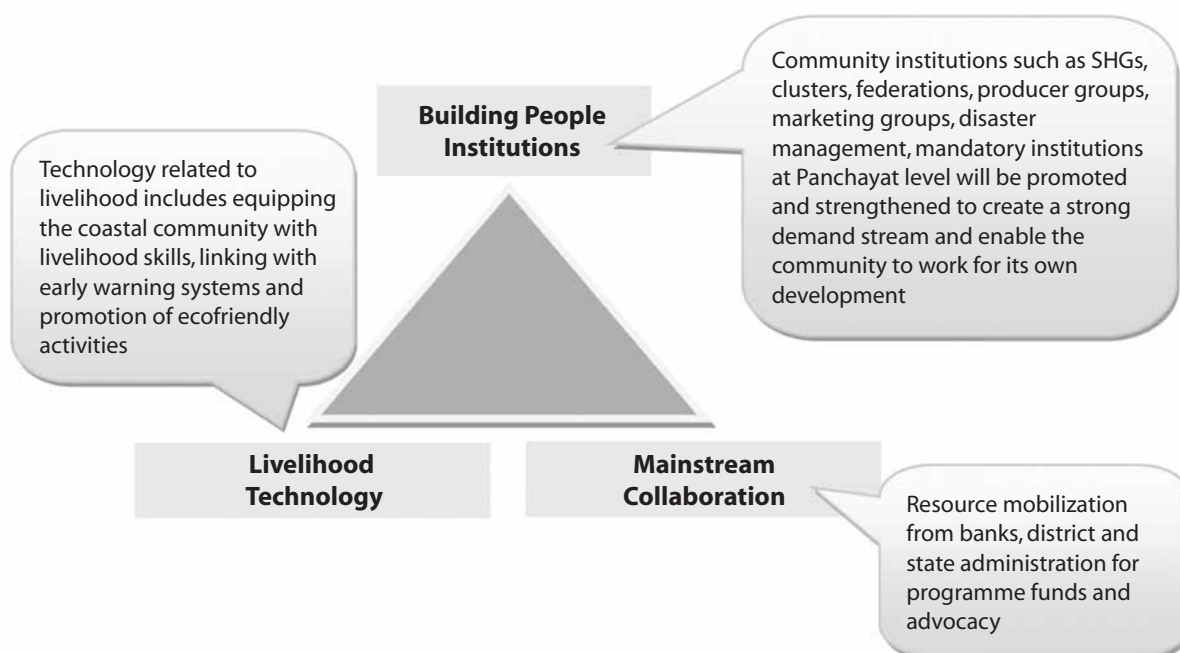
Ornamental fishery development scheme: Matsyafed is implementing a scheme on ornamental fishery development with financial assistance from the Department of Human Resource Development, Government of India with an outlay of INR 4.8 million. The project aims to generate income for women by breeding and rearing ornamental fishes and is being implemented in seven districts, namely Thiruvananthapuram, Kollam, Alappuzha, Kottayam, Ernakulam, Thrissur and Malappuram. So far, 450 women have been assisted.

Production and marketing of value-added fishery products from trash/low value fish: A project with an outlay of INR 10 million for producing value-added fishery products utilizing trash/low value fish that are seasonally abundant is being implemented for fisherwomen of Trivandrum, Kollam, Alappuzha, Kottayam and Ernakulam districts. So far, 500 women have been provided financial assistance for setting up production units for fishery products such as pickles, wafers, fillets, cutlets.

Production and marketing of value-added fish and fishery products: A scheme for large-scale production and marketing of value added fishery products is being implemented with financial assistance from the Government of India under the Swarna Jayanti Grama Swarozgar Yojana. So far, 3 000 beneficiaries have been provided with specialized training related to value-added fishery products. Financial assistance is extended for setting up production and marketing units. The total outlay of the project is INR 115.7 million.

DHAN Foundation model

The approach of the DHAN Foundation is well defined and based on more than a decade's experience. Organizing communities into self-managed institutions for their entitlements on a co-operative, democratic and self-help basis is the first core approach of the DHAN Foundation. By organizing the community, the demand stream will be strengthened and institutional legitimacy attained and in line with the formula "all for one and one for all", mutuality and holistic development can be achieved through a people's institution. Community organizing is followed by mainstream collaboration and a livelihood technology approach to ensure sustainability.



DHAN model

The DHAN Foundation exclusively works with the fisherfolk communities involved in traditional methods of fishing and using minor mechanized crafts, families involved in seashell collection or fish vending and labourers in four coastal blocks of Ramnad district in Mandapam, Thiruvadanaï, Thirupullani and Kadaladi blocks covering 105 coastal villages. Organizing the community into SHGs creates scope to work collectively for poverty reduction. The DHAN Foundation has so far promoted 261 SHGs in the coastal villages of Ramnad by organizing 4 682 fisherfolks. Microfinance is used as a tool to address the credit needs of poor families and promote livelihood activities. The SHGs promoted serve as banks for the poor and without complicated procedures, the SHG members are able to gain credit services. The SHGs serve as information dissemination hubs through monthly meetings. Various development-related topics and government schemes are discussed at the SHG meetings. DHAN Foundation organizes regular training events for the SHGs on the SHG concept, system requirement at SHG level, group accounts, leadership, insurance, disaster management, conservation, health and nutrition.

The SHG federations provide continuity to the initiatives of DHAN Foundation and support the community in achieving livelihood stability. As of March 2000, DHAN Foundation has promoted 13 SHG federations in Ramnad district and three of these SHG federations are owned and managed by the fisherfolk community. The total savings mobilized by the community as of March 2009 is INR 10.2 million. The total amount mobilized from the bank, mainly to strengthen livelihoods, is INR 12.2 million.

Insurance

The DHAN Foundation has introduced a group insurance scheme in which all SHG members can be enrolled. The various insurance products include life, health and livestock insurance. In Ramnad district, 600 fisherfolks are covered under life insurance through the group insurance product (Janashree Bhima Yojana – Life Insurance Corporation of India) and recently a health insurance product was introduced. The members enrolled under life insurance receive insurance coverage of INR 10 000 to INR 30 000 per person in the case of natural death and INR 75 000 in the case of accidental death. Records show that 3 125 families are secured with life insurance under the group insurance scheme.

Outcomes

The DHAN Foundation's strength is its institutional approach. DHAN always begins with community organizing and the promotion of a people's institution through which all of DHAN's interventions are

routed. The Foundation organizes existing SHG members involved in ecofriendly fishing into marketing groups to facilitate income enhancement through collective marketing and non ecofriendly activities are prohibited.

- ▶ Through collective marketing, the poor fisherfolks were able gain 10 to 30 percent as additional income from the fish catch.
- ▶ The women were trained in leadership skills, livelihood activities and institution management and are now leading institutions and interacting with bankers and mainstream service providers to mobilize resources.
- ▶ The SHG federations promoted by DHAN Foundation have initiated civic activities to promote social well being including health, access to safe drinking water, sanitation, education, employment opportunities and resource conservation.

Table 14. Role of NGOs in providing various financial and non-financial services to the coastal fisher sector

Type of Intervention	Services	Particulars
Financial Intermediation	Working capital	The SHGs engage in microfinance (savings, credit and insurance) activities. The people's institutions are linked under government schemes to mobilize working capital for micro-enterprise activities.
	Fixed asset loan	
	Savings	
	Insurance	
Social Intermediation	Group formation	In Ramnad district, the DHAN Foundation has organized 4 682 fisherfolks into 261 SHGs.
	Leadership training	DHAN Foundation has organized more than 75 events on leadership covering 1 350 households in Ramnad district.
Enterprise Development	Marketing	So far, more than 25 micro-enterprises covering about 750 families are being promoted in Ramnad district. Of the existing micro-enterprises, 11 serve the fisher community.
	Business training	The coastal communities were trained in collective marketing.
Social Services	Education	Each year, about 350 students receive support in the coastal villages to continue their education.
	Health & nutrition	DHAN Foundation has organized more than 40 awareness events (street plays) on health and nutrition in 40 coastal villages.

Grameen Bank

The Grameen Bank Project was born in the village of Jobra, Bangladesh, in 1976. In 1983 it was transformed into a formal bank under a special law passed for the purpose. It is owned by the poor borrowers of the bank who are mostly women. It works exclusively for them. Borrowers of Grameen Bank at present own 95 percent of the total equity of the bank. The remaining 5 percent is owned by the government. The Grameen Bank has 2 558 branches operating in 84 573 villages through 23 338 staff members. Since its inception, the Grameen Bank has disbursed loans amounting to US\$ 8.26 billion. Of this, US\$ 7.34 billion has been repaid. The current amount of outstanding loans stands at US\$ 738.84 million. The projected disbursements for 2009 are US\$ 1 091 million with a loan recovery rate of 97.89 percent.

The Grameen Bank has made a profit every year since its inception except in 1983, 1991 and 1992. It has declared a 30 percent cash dividend for the year 2008. This is the highest cash dividend declared by any bank in Bangladesh in 2008. The highest record of dividend declared by the Grameen Bank was in 2006 when it reached 100 percent. The bank has also created a Dividend Equalization Fund to ensure distribution of dividends without much fluctuation in successive years. Receiving the dividends each year greatly inspires the shareholders, 96 percent of whom are borrowers.

The Grameen Bank caters to 7.93 million borrowers, 97 percent of whom are women. Grameen Bank finances 100 percent of its outstanding loans from its deposits. Over 54 percent of its deposits come from the bank's own borrowers. Deposits amount to 139 percent of the outstanding loans. If both deposits and own resources are combined, it becomes 151 percent of loans outstanding. Although each borrower must belong to a five-member group, repayment responsibility solely rests on the individual borrower, whereas the group and the centre oversee that everyone behaves in a responsible way and no-one has problems repaying a loan.

Interest rates

The Government of Bangladesh has fixed the interest rate for government-run microcredit programmes at 11 percent. It amounts to about 22 percent using a declining-balance method. Grameen Bank's interest rate is lower than the government rate.

There are four interest rates for loans from Grameen Bank: 20 percent for income generating loans, 8 percent for housing loans, 5 percent for student loans, and 0 percent (interest-free) loans for struggling (beggars) members. All interest rates are simple interest rates, calculated by the declining-balance method. The minimum interest offered is 8.5 percent. The maximum rate is 12 percent on the deposit to Grameen Bank.

Beggars as members of the Grameen Bank – a unique scheme

The uniqueness of the Grameen Bank is to have reached the beggars by a special programme, called Struggling (Beggars) Members Programme, to reach out to the beggars. About 111 645 beggars have already joined the programme. The total amount disbursed stands at Tk. 136.56 million. Of that, Tk. 102.26 million has been paid off already.

Micro-enterprise loans

Many borrowers are moving ahead in businesses faster than others for many favourable reasons, such as proximity to the market, presence of experienced male members in the family, etc. Grameen Bank provides larger loans called micro-enterprise loans for these fast moving members. There is no restriction on the loan size. So far, 1 944 829 members have taken out micro-enterprise loans. A total of US\$ 730 million has been disbursed under this category of loans. Average loan size is US\$ 361.32 and the maximum loan taken out so far is US\$ 23 209. This was used to purchase a truck which is operated by the husband of the borrower. Power-tillers, irrigation pumps, transport vehicles and river-crafts for transportation and fishing are popular items for micro-enterprise loans. The Grameen Bank has introduced scholarships and education loan schemes for its micro-enterprise loan members. Students who succeed in reaching the tertiary level of education are given higher education loans, covering tuition, maintenance, and other school expenses.

Life insurance

Each year families of deceased borrowers of Grameen Bank receive a total of US\$ 0.25 million to 0.29 million in life insurance benefits. Each family receives Tk. 1 500. A total of 118 251 borrowers of Grameen Bank died and their families collectively received a total amount of US\$ 4.31 million. Borrowers are not required to pay any premium for this life insurance. Borrowers come under this insurance coverage by being a shareholder of the bank.

"Telephone-ladies"

Grameen Bank has provided loans to 360 054 borrowers to buy mobile phones and offer telecommunication services in nearly half of the villages of Bangladesh where this service never existed before. "Telephone-ladies" operate a very profitable business with these phones.

“Telephone-ladies” play an important role in the telecommunication sector of the country and also in generating revenue for Grameen Phone, the largest telephone company in the country. “Telephone-ladies” use 2.22 percent of the total air-time of the company, whereas their number is only 1.64 percent of the total number of telephone subscribers of the company.

Getting elected to local bodies

The Grameen system familiarizes borrowers with the election process. They routinely go through electing group chairmen and secretaries, centre-chiefs and deputy centre-chiefs every year. They elect board members to run the Grameen Bank every three years. This experience has prepared them to run for public office. Borrowers are contesting and getting elected in the local government elections. In the 2003 local government (Union Parishad) election, 7 442 Grameen borrowers contested the reserved seats for women and 3 059 members got elected. They constitute 24 percent of the total members elected in the seats reserved for women members in the Union Parishad local government. During the 1997 local government election, 1 753 members got elected to these reserved seats.

National Cooperative Development Corporation (NCDC)

NCDC has been promoting and developing fisheries cooperatives since the act instituting it was amended in 1974 to cover fisheries within its purview. The Corporation has formulated specific schemes and patterns of assistance to enable fisheries cooperatives to take up production, processing, storage, marketing activities, etc. Assistance is provided to fisheries cooperatives on liberal terms, treating the activity as a weaker section programme.

Assistance to fishery cooperatives is provided for the following purposes:

- ▶ purchase of operational inputs such as fishing boats, nets, and engines;
- ▶ creation of infrastructure facilities for marketing, transport vehicles, ice plants, cold storages, retail outlets, processing units, etc.;
- ▶ development of inland fisheries, seed farms, hatcheries, etc.;
- ▶ preparation of feasibility reports; and
- ▶ integrated fisheries projects (marine, inland and brackishwater).

The efforts are to reduce post-harvest losses, enhance processing of catch and improve income of fishermen. However, the efforts have not borne much fruit as a large number of fisherfolk are not funded by the NCDC schemes. As of 31 March 2006, the Corporation had sanctioned assistance of INR 970 million and released INR 7 163 million for fisheries development through cooperatives in different states and union territories (UTs).

Rating of models

Considering the various type of financial intermediations and sector specific intermediations provided by the various MFIs, producers organizations and banks, a rating chart has been developed giving equal weight to all the services. As is evident (see Table 15), the maximum services are being rendered by SIFFS followed by Matsyafed.

It is observed from the functions of the agencies under consideration that there are some negative attributes associated with some of the organizations that may be against the interests of the sector and the philosophy of microfinance as such. The attributes in the present context are directed government interventions associated with the implementation of government sponsored programmes, creating distortions in the sector vis-à-vis the concept of creating a level playing field for the operation of all agencies and that of sectoral development.

Table 15. Services extended by the institutions – loans, savings, insurance

Type of Intervention	Services	NCDC	Dhan Foundation	Matsyafed	SIFFS	Grameen Bank
Financial	Working capital	×	✓	✓	✓	✓
	Fixed asset loans	✓	✓	✓	✓	✓
	Savings	×	✓	✓	✓	✓
	Insurance	×	✓	✓	✓	✓
Social	Group formation	✓	✓	✓	✓	✓
	Leadership training	×	✓	✓	✓	✓
	Cooperative learning	✓	✓	✓	✓	✓
Enterprise development	Marketing	✓	✓	✓	✓	✓
	Business training	×	✓	✓	✓	✓
	Production training	✓	×	✓	✓	✓
	Subsector analysis	×	×	✓	✓	✓
Social services	Education	×	✓	✓	✓	✓
	Health & nutrition	×	✓	✓	✓	✓
	Literacy training	×	✓	✓	✓	✓
Sector specific interventions	Infrastructure creation	✓	×	✓	✓	×
	Technology development	×	×	×	✓	×
	Technical support & services	×	×	✓	✓	×
	Supply of boat and engine	×	×	✓	✓	×
	Supply of fishing inputs	×	×	✓	✓	×
	Post-harvest operations	×	×	✓	✓	×
	Information services	×	×	✓	✓	×
	Alternative employment	×	✓	✓	✓	×
	Policy & advocacy	×	×	✓	✓	×
	Women's empowerment	×	✓	✓	✓	✓
Total		6	14	23	24	15

To remove the impact of such distortions, a negative marking has been introduced, which may have to be adjusted to the intrinsic value of such interventions. In the absence of any such yardstick, one point has been deducted from the overall score of these organizations viz. NCDC and Matsyafed (Table 16). The maximum score obtained is that of SIFFS followed by that of Matsyafed. The sector specific intermediations are the strong points of these producers' organizations. Thus the SIFFS model emerges as the best replicable model.

Table 16. Rating of models

Score	NCDC	Dhan Foundation	Matsyafed	SIFFS	Grameen Bank
Positive intermediations	6	14	23	24	15
Negative intermediations	-1	0	-1	0	0
Net score	5	14	22	24	15

4.5 Policies relating to microfinance and gender issues in the small-scale fisheries and aquaculture sector

In line with the main thrust of the Millennium Development Goals (MDGs), eradicating poverty from the region is one of the priorities of the SAARC nations. Empowering the poor, women in particular, through the provision of microcredit is one of the most effective ways of alleviating poverty and should be of interest to policy-makers everywhere.

India

As a large section of the population in the unorganized sector, particularly in the rural areas, remained outside the formal financial structure, a need was felt for alternative policies, systems and procedures, savings and loan products, other complementary services, and new delivery mechanisms which would fulfil the requirements of the poorest, especially the requirements of the women members of the poorest households. The emphasis, therefore, was on improving the access of poor women to microfinance.

The SHG-bank linkage programme

In 1992, a pilot project of linking self-help groups (SHGs) with commercial banks was launched under the aegis of the National Bank for Agriculture and Rural Development (NABARD), which is the apex bank for rural and agricultural credit in the country. The Government of India has supported the SHG-bank linkage programme through policy formulation and regulation. The Reserve Bank of India has also boosted the programme with suitable policy interventions. Three different models of linkage have evolved based on variations in the delivery mechanism as follows:

Model I: SHGs formed and financed by banks

Under this model, banks act as self-help promoting institutions (SHPI). As of March 2009, 16 percent of the total loans to SHGs was in this category.

Model II: SHGs formed by NGOs and other agencies but financed directly by banks

Under this model, non-governmental organizations (NGOs) and other agencies in the field of microfinance act as facilitators, and banks in due course link the groups by directly providing loans to them. About 70 percent of total loans to SHGs as of March 2009 was in this category.

Model III: SHGs financed by banks using MFO/MFIs as financial intermediaries

Under this model, NGOs take on the dual role of facilitators and financial intermediaries. The proportion of total loans to SHGs linked to banks under this model is relatively small, i.e., 14 percent as of March 2009.

The SHG-bank linkage programme has shown significant growth in terms of the number of groups linked to banks. Starting from only 255 SHGs linked to banks in the year 1992/93, the number increased to 0.5 million SHGs linked during the year 2004/05. Cumulatively, the number of SHGs linked to banks aggregated 6.1 million as at the end of March 2009 whereas 4.2 million SHGs are credit linked with banks. This translates into an estimated 85.4 million poor families brought within the fold of formal banking services. Eighty percent of the groups linked with banks are women's groups. Cumulative disbursement of bank loans to SHGs stood at over INR 226.8 billion as of 31 March 2009 with an average loan of INR 53 688 per SHG and over INR 4 000 per member.

A total number of 438 banks including 27 public sector commercial banks, 13 private sector commercial banks, 85 RRBs and 313 cooperative banks are now associated with the SHG-bank linkage programme. Whereas 583 out of 612 districts of the country in 31 states/union territories have been covered under this programme, the total number of NGOs presently involved as SHPIs in this linkage programme is about 2 318.

Bank-MFI bulk lending model

An alternative delivery model for microfinance is the bulk lending model where funds are placed at the disposal of NGOs or MFI for on-lending.

The Bank-MFI partnership model

This model has been popularized by the new generation of private sector banks in the country. Under this model, the MFI evaluates, recommends, originates the loans, helps in disbursement and subsequently

tracks and collects the loans. However, the loans are accounted for in the books of the bank and not those of the MFIs. This model has overcome the constraints of capitalization of the MFIs. Sixty MFIs have availed themselves of loans amounting to INR 37.3 billion from banks under this programme. Some NGO – MFIs in India have adopted the Bangladesh Grameen Bank model for providing microfinance to poor women.

The policy framework for microfinance

Although there is no accurate data on MFIs in the country, the number of MFIs is estimated to be about 800, the majority of which are operating on a smaller scale with the number of clients ranging from 500 to 1 500 per MFI. An estimate from the largest association of MFIs indicates that on 31 March 2009, outstanding loans disbursed by 522 MFIs amounted to INR 37.32 billions. Microfinance institutions that are registered as companies come under the regulatory purview of RBI. Non-Banking Financial Companies (NBFCs) accepting public deposits are subjected to rigorous supervision by RBI. There are, however, only a few MFIs in the country that are registered as NBFCs. Furthermore, companies that are engaged in microfinancing activities, licensed as not-for-profit companies and that do not accept public deposits, are exempted from the key regulatory/statutory requirements, viz. registration and maintenance of liquid assets and transfer of minimum percentage of profits to the Reserve Fund.

The Reserve Bank of India has been striving to create an enabling environment for the growth of microfinance in the country. The pilot project of SHG-bank linkage launched by NABARD in 1992 received full policy support from RBI and it advised the commercial banks to participate actively in the linkage programme, which has since been extended to the regional rural banks and cooperative banks. The Reserve Bank set up four informal groups in October 2002 to examine: (i) structure and sustainability issues; (ii) funding issues; (iii) capacity building issues; and (iv) regulatory issues relating to microfinance. The Advisory Committee on Flow of Credit to Agriculture and Related Activities from the Banking System (Vyas Committee) appointed by the RBI also examined various microfinance issues.

Furthermore, foreign direct investment (FDI) has been allowed by the Government of India in the MFI sector subject to certain norms and NGOs engaged in microfinance have now been allowed to raise external commercial borrowing (ECB) up to US\$5 million during a financial year.

Expanding the outreach of microfinance

An internal group of RBI on rural credit and microfinance (the Khan Committee) examined the issues relating to expanding the outreach of microfinance through linkage between banks and intermediaries from the formal, semi-formal and informal sectors and leveraging information and communication technology (ICT) for the purpose. On the basis of recommendations made by the Committee, banks have since been permitted to use the services of NGOs/SHGs/their federations, MFIs and other civil society organizations as intermediaries in providing financial services through the use of business facilitator and business correspondent models.

Role of other apex level institutions

NABARD

A microfinance development fund of INR 1 billion was established in NABARD in the year 2000/01 for: (a) giving training and exposure to self-help group (SHG) members, partner NGOs and government agencies; (b) providing start-up funds to microfinance institutions and meeting their initial operational deficits; (c) meeting the cost of formation and nurturing of SHGs; (d) designing new delivery mechanisms; and (e) promoting research, action research, management information systems and dissemination of best practices in the microfinance sector. The corpus of the fund has now been raised to INR 2 billion and it has been renamed as the microfinance development and equity fund. The objective of the redesignated fund is to facilitate and support the orderly growth of the microfinance sector through diverse modalities.

The Small Industries Development Bank of India (SIDBI)

The cumulative assistance of SIDBI's microfinance initiatives as of the end of March 2005 aggregated to INR 4.2 billion through 209 MFIs, benefitting approximately 1.51 million poor, mostly women.

The Rashtriya Mahila Kosh (RMK)

The cumulative loan sanctioned by RMK stood at INR 1.3 billion in respect of 749 NGOs and other agencies as of the end of March 2004.

Impact evaluation

Impact evaluation studies conducted by NABARD and SIDBI revealed positive results. The SIDBI study indicates that the microfinance initiatives have increased non-farm employment of the rural people and women in particular have benefited in terms of economic and social empowerment. This has enabled them to access loans, to own their own productive resources, to engage in income generating activities and decision making, and has increased their mobility.

The road ahead – issues and challenges

Regional variations: Although more than 90 million poor families have been covered so far there is a need to upscale the number of SHGs, particularly in the northern, eastern and northeastern parts of the country where there is a dearth of good self-help promoting institutions (SHPIs).

Cost of credit: Adoption of innovative methods and processes, including low cost ICT solutions, can be one way of reducing transaction costs and, hence, the cost of credit to the borrowers.

Promotion of micro-enterprises: The average loan amounts per SHG and per member are about INR 58 015 and INR 7 000 respectively. The per member loan amount is too small for any meaningful micro-enterprise activity. The average per SHG savings amount to Rs 9 060. The quantum has to be increased substantially when the SHGs go higher up the ladder to the level of micro-enterprises.

Funding support: The Micro Finance Development and Equity Fund established in NABARD is expected to play an important role in providing equity capital or quasi equity to enhance the capacity of the MFIs to undertake financial operations. The banking sector also supports the "fit and proper" NGOs/self-help promotion institutions (SHPIs) in the formation and nurturing of SHGs and other microfinance initiatives.

Capacity building and other developmental issues: Efforts of NABARD, SIDBI and associations of the MFIs in this area need to be continued. The national level training institutions like the College of Agricultural Banking (CAB), Pune and the Bankers Institute of Rural Development (BIRD), Lucknow are also involved in the training of banks and MFIs. There is need for more stringent disclosure norms for MFIs/NGOs. In the interest of these organizations, proper accounting standards have to be developed and implemented. There is also a requirement of some form of credit information bureau on a localized basis to provide borrower information to banks and the MFIs.

Bangladesh

Microfinance is currently at the centre of policy discussions related to financial sector development and poverty alleviation. Microfinance experiences in Bangladesh have made important contributions to the emergence of this concept globally.

International agencies and development professionals have accepted microfinance as a tool for poverty alleviation although the models and the experiences are diverse. It is important to analyze the experiences of microfinance as the exercise can lead to potential lessons for developing sustainable rural finance to eradicate rural poverty. Microfinance institutions (MFIs) have managed to develop important innovations that have enabled them to expand the financial frontiers in developing countries such as

Bangladesh. For the first time, because of these innovations, large numbers of poor borrowers have access to financial services through formal or semi-formal institutions. Microfinance institutions have been able to serve poor clients successfully without collateral, which is normally required by banks. The techniques that are used by the MFIs are in sharp contrast with those of the formal banks operating in the rural areas. Therefore, there is a need to learn from the emerging sector and build up a conducive regulatory and policy environment for the development of this sector.

Development of the microfinance sector in Bangladesh

The institution that has shaped much of modern-day microfinance is the Grameen Bank, which began in 1976 as an experimental project and was established by law as a formal bank for the rural landless in 1983. For the last two decades, Bangladesh has been drawing the attention of the world for its microfinance initiatives. Over the last 25 years, hundreds of specialized microfinance NGOs have been created worldwide mainly based on the Grameen model, either to provide microfinance services exclusively or to add microfinance to their main agenda of social services. Bangladesh also experienced a massive expansion of microfinance activities during the 1990s.

In the early 1990s, replication of the success of microfinance institutions in Bangladesh was one of the big challenges. Since then there has been a massive expansion of microfinance all over the country with scaling up of existing providers, entry of new players and the emergence of apex funding institutions such as the Palli Karma-Sahayak Foundation (PKSF). Therefore, survival and expansion strategies for the microfinance sector discussed today are more in terms of vertical expansion through market segmentation and product diversification, providing more client-responsive services, establishing fair competition through a regulatory environment, ensuring accountability by a proper monitoring system, and linking microfinance with the mainstream financial market.

Microfinance programmes of different types of organizations

In Bangladesh, there are four main types of institutions involved in microfinance activities. These are: 1) Grameen Bank (GB), a specialized institution; 2) non-governmental organizations (NGO) such as BRAC, Proshika or ASA; 3) commercial and specialized banks such as Bangladesh Krishi Bank (BKB), Rajshahi Krishi Unnayan Bank (RAKUB); and 4) government sponsored microfinance projects/programmes such as Bangladesh Rural Development Board (BRDB), Palli Daridra Bimochon Foundation (PDBF), Swanirvar Bangladesh, RD-12 and others, which are run through several ministries. As of June 2003, the total coverage of microfinance in Bangladesh by different organizations was over 15 million households (Table 17). It is a sector that has created jobs for over 100 000 people. Semi-formal NGOs are the major players in the microfinance market in Bangladesh. A rough estimate finds that about 60 percent of the total market is covered by NGOs.

In the macrocontext, microcredit loans constitute about 5 percent of the total private sector credit in

Table 17. Coverage of microfinance programmes in Bangladesh (as of June 2003)

Organizations	Borrowers covered
NGO-MFIs	8 894 969
Grameen Bank	2 786 748
BRDB	709 073
PDBF	272 349
Department of Youth Development	123 800
Department of Social Service	48 469
BSCIC	42 837
BARD	43 123
Sub Total	12 921 368
Nationalized commercial banks	2 159 927
Private banks	117 954
Sub total	2 277 881
Grand total	15 199 249

Source: Maps on microcredit coverage in Upzilas of Bangladesh, June 2003, PKSF.

the economy. Table 18 shows a rising trend for the share of microfinance institutions in the total private sector credit. But in terms of the aggregate number of borrowers, the MFI sector may have a larger share than other private sector lending organizations. MFIs have nearly 15 million borrowers who received only 5.30 percent of total private sector credit in the financial year 2004, whereas the private sector's borrowers number only 7.85 million (from the banking sector, the largest supplier of credit in terms of total amount loaned).

Table 18. Yearwise loans outstanding

Outstanding (in billion Takas)	FY 02	FY 03	FY 04
Banks	675.70	776.60	902.20
Non-banks	24.60	31.60	40.20
MFIs	36.30	43.10	53.00
Total	736.60	851.30	995.40
Microfinance as % of private sector credit	4.90	5.10	5.30

Source: Bangladesh Bank

Grameen Bank

Grameen Bank is the pioneering microcredit institution in the country. It started off as the Grameen Bank Project in the village of Jobra in 1976 and became a formal microcredit bank in 1983 by virtue of a special law. Over the past 23 years the bank has emerged as the country's largest MFI, attaining a network of 1 735 branches by the end of December 2005. By that time it had mobilized 5.58 million members with loans outstanding of Tk. 27.97 billion. Along with the expansion of its network and loan disbursement, there has been an increase in savings mobilization from the members. The net members' savings balance as of December 2005 was 20.14 billion, which is a little over seventy percent of the loans outstanding. Total savings from both members and non-members stood at Tk. 31.66 billion by December 2005. Grameen Bank finances 100 percent of its outstanding loans from its own funds and savings from its depositors. Although the bank was subsidized in its initial years, its dependency on cheap funds has declined. This is evident from the contribution of its savings in loan financing. The bank has been operating profitably with a high degree of efficiency.

Non-government microfinance institutions (NGO-MFIs) in Bangladesh

Non-government MFIs number over 1 000. Of this number, 721 institutions (including all major players in this sector) had mobilized more than 14 million members and had loans outstanding of about Tk. 44 billion by the end of December 2004. The average loan is Tk. 3 896 per borrower. Although there are many players, the top three – BRAC, ASA and Proshika – dominate the sector. These three non-government MFIs mobilize 73.60 percent of the borrowers and account for about 77 percent of the loans outstanding. Next in line are only ten NGOs who have more than 50 000 borrowers followed by forty more whose borrowers number between 10 000 and 50 000. The remainder, the overwhelming majority of the NGO-MFIs, are small, having less than 10 000 members. (Table 19).

NGO-MFIs also mobilize savings from their members. Their savings mobilization approaches vary from voluntary to compulsory. Until December 2004, these institutions mobilized Tk. 17.29 billion from their members as savings. But average net savings per member is quite low. By the end of 2004, it was only Tk. 1 200 per member. The top 20 institutions mobilize 89 percent, whereas the topmost trio (ASA, BRAC and Proshika) mobilize 73 percent of the total savings. Savings occupy a significant portion of the total loanable funds of NGO-MFIs. At the end of December 2004, about 40 percent of the outstanding loans of NGO-MFIs had been financed by the savings collected from members.

Table 19. Market share of major MFIs

Agency	Number of members (million)	Number of active borrowers (million)	Outstanding loan portfolio (million Taka)	Member's savings (million Taka)
Four big MFIs*				
Grameen Bank	4.06	3.70	20 008.20	13 793.10
BRAC	4.86	3.99	14 491.54	7 656.09
ASA	2.99	2.77	13 775.62	2 828.24
Proshika	2.75	1.54	4 851.07	2 103.56
PKSF's other partners	1.70	1.25	3 021.74	2 557.66
Other NGO-MFIs	3.90	0.80	3 561.43	1 446.34
Total	20.26	14.30	59 709.60	30 384.99
Big four as % of total	72.36%	85.66%	88.97%	86.82%

* Figures for the big four for December 2004; figures for other NGO are for June 2004.

Grameen Bank and BRAC have emerged as the largest MFIs in Bangladesh. BRAC is the largest in terms of membership whereas Grameen is the largest in terms of credit disbursement. By the end of December 2004, BRAC commanded about 23.99 percent of the total borrowers, whereas Grameen Bank's share was 20.04 percent. Grameen's share in credit disbursement, on the other hand, was 33.51 percent, whereas BRAC's was 24.27 percent.

Government microfinance programmes in Bangladesh

The government has been promoting public sector microfinance programmes with financial support from international financial institutions or agencies. Seventeen departments of the thirteen ministries of the government of Bangladesh have poverty-alleviating microfinance programmes (Table 20). The programmes are implemented as projects. The government programmes include any collateral free loan provided directly.

Table 20. Microcredit programme of different ministries (as of December 2003)*

Name of ministry	Cumulative disbursement (Taka in millions)	Cumulative recovery (Taka in millions)	Recovery rate (%)
Ministry of Finance	1 359.90	1 106.30	81.35
Ministry of Local Government, Rural Development & Cooperatives	30 374.30	25 880.00	85–95
Ministry of Women & Children Affairs	2 353.10	1 589.70	64–100
Social Welfare Ministry	5 503.50	5 002.20	90.89
Ministry of Labour & Employment	147.20	(Past due) 376.30	255.64
Cabinet Division	89.90	76.90	85.54
Ministry of Fisheries & Livestock	1 567.80	1 055.50	45–77
Ministry of Industry	1 968.20	1 747.60	69–91
Ministry of Agriculture	2 673.10	1 914.30	71–98
Ministry of Land	684.60	554.30	80.97
Ministry of Local Government	561.80	237.50	42.27
Ministry of Youth & Sports	5 331.70	4 365.30	81.87
Ministry of Textiles and Jute	262.30	89.20	34.01
Total	52 877.50	43 990.60	83.19

* Bangladesh Economic Review, 2004, Ministry of Finance.

By the end of 2003, the total outstanding loans of these projects was about Tk. 8.89 billion and their cumulative disbursement was Tk. 52.88 billion. The programme implemented by the BRDB under the Ministry of Local Government, Rural Development and Cooperatives is the largest programme run by the government. BRDB has disbursed Tk. 34 billion to 102 342 cooperative societies/groups comprising 3.6 million members. Palli Daridra Bimochon Foundation (PDBF) is another big programme of the government. BRDB and PDBF together have achieved significant mobilization of members with over 3.95 million members.

Banks in microfinance

The concept of microfinance is perceived a little differently by the nationalized commercial banks (NCBs), specialized banks and development banks (DBs). They consider any loan up to Tk. 50 000 and extended without any collateral either based on an individual or group basis as microfinance. From this perspective, the NCBs and the DBs have been making very significant contributions to microfinance. By the end of June 2003, 12 banks disbursed a cumulative amount of Tk. 99.35 billion among 10.80 million beneficiaries (Table 21). Bangladesh Krishi Bank (BKB) is one of the specialized banks that has been providing financial services largely in rural financial markets. It had disbursed Tk. 9.5 billion by the end of December 2003.

Table 21. Microcredit disbursement by banks as of December 2003*

Name of the bank	No. of beneficiaries	Cumulative disbursement (Taka in millions)	Recovery rate (%)
Sonali Bank	4 302 144	46 937.70	98.87
Agrani Bank	3 073 802	14 338.10	99.47
Janata Bank	756 901	18 317.40	89.83
Bangladesh Krishi Bank	1 507 863	9 488.80	86.26
Rajshahi Krishi Unnayan Bank	183 975	1 691.70	77.55
Rupali Bank	32 546	254.70	85.00
Ansar-VDP Bank	632 222	2 835.70	98.43
Social Investment Bank	3 279	232.70	94.00
National Bank	12 273	93.70	95.00
Islami Bank	130 465	2 923.60	98.00
The Trust Bank Limited	30 000	1 564.90	95.00
Basic Bank Limited	159 576	673.30	98.00
Total	10 827 246	99 352.30	

* Bangladesh Economic Review 2004.

Palli Karma-Sahayak Foundation (PKSF): Apex funding organization

Palli Karma-Sahayak Foundation (PKSF) is the apex microcredit organization established by the government in 1990. It also works for capacity building of the organizations. It does not directly lend money to the landless and people without assets but reaches its target groups through its partner organizations (POs). It receives financial support from the government and development partners. PKSF currently provides loanable funds to 233 POs, at 4.5 percent interest to small and medium POs and 7 percent to large POs. PKSF is also widely credited with sharpening the focus of many NGO-MFIs towards financial sustainability and also in setting appropriate standards that would ease the way for a strengthened regulatory structure for microfinance. Up until September 2005, PKSF had provided Tk. 23 291.74 million to its POs that enabled them to disburse Tk. 23 175.46 million to the targeted poor. The outstanding number of borrowers of the microcredit programme directly supported by PKSF stood at 5.68 million as of September 2005 and loans outstanding stood at Tk. 10 947.76 million. The repayment rate is about 98 percent because of strict monitoring and incentives for POs to repay in order to access new loan trenches.

Major microfinance developments in Bangladesh

The microfinance sector in Bangladesh can take pride in its substantial achievements in only two decades, especially in terms of outreach, sustainability and its impact on the borrowers. Some of the significant achievements are as follows:

Outreach or coverage

The growth in the MFI sector, in terms of the number of MFIs as well as outreach, was phenomenal during the 1990s and continues until today. The total coverage of microfinance programmes in Bangladesh is over 15 million households (Table 17). A survey conducted by the PKSF mentions that overlapping would be about 33 percent. After adjusting for the overlap, the effective coverage of MFIs stands at 10.05 million, and that covers about 37 percent of all households in the country. If 80 percent of them are living below the poverty line then it can be said that this programme covers more than 8 million poor households.

Savings collected by the sector

As of December 2004, Grameen Bank and NGO-MFIs had collected more than Tk. 30 384.99 million from over 14 million poor people (Table 19) of rural Bangladesh as savings. This clearly indicates that the notion that poor people cannot and do not save is completely wrong. This means that there is a huge demand of savings in rural Bangladesh, along with the demand for credit. This demand for savings products is not properly recognized by the banking sector operating there.

Sources of funds and financial sustainability

With the exception of the Grameen Bank, no other MFIs are equity-based organizations. Although initially all MFIs were very much dependent on donor funds, different sources have emerged over time. In the initial years, commercial banks were not involved in microlending for poverty alleviation. PKSF emerged as an effective organization in the 1990s for wholesale lending to its partner MFIs. As MFIs are financial intermediaries, they mobilize resources from the members and raise funds from external sources for financing lending activities. A "revolving loan fund" is financed with a flow of funds from different sources such as: (a) member savings; (b) PKSF; (c) local commercial and development banks; (d) international NGOs; (e) international donors; (f) local NGOs; (g) own fund and reserve; and (h) net revenue. During the last few years there have been significant changes in the composition of the revolving loan fund of the non-government MFIs. Now the sector is accumulating more funds from local sources, i.e. members' savings and service charges and these two sources contributed more than 50 percent into the revolving loan fund in 2004.

Local banks are now more responsive and they contributed more than 12 percent to the revolving loan funds of MFIs in 2004. Because of the growing importance of PKSF and internal sources (net revenue and member savings) of finance, the share of international donors has declined from about 48 percent to about 10 percent over a span of eight years. These results do suggest the emerging role of PKSF and internal funding sources. It has been observed that the sector has made impressive progress towards financial sustainability – MFIs in Bangladesh have been consistently covering cost of operations as well as the cost of finance over the last several years. Smaller MFIs rely more on PKSF loans than savings, whereas big MFIs rely more on savings and the accumulated surplus. An interesting research observation is that MFIs can be profitable at every level of operation if they can match their incomes and expenses with the size of their operations.

Impact of microfinance

A number of studies on the impact of microfinance highlight the fact that access to microfinance has resulted in increases in employment and incomes. The most comprehensive and rigorous studies were carried out by the Bangladesh Institute of Development Studies (BIDS). Three important studies can be mentioned here: (1) A joint study of BIDS and the World Bank on the impact of group-based credit

programmes in Bangladesh; (2) A survey report of BIDS on PKSF's monitoring and evaluation systems (MES); and (3) the follow-up study on PKSF's monitoring and evaluation systems (MES) done by HB Consultants Limited. A summary of the findings of the three studies is presented below.

(a) Impact on incomes and employment

The programmes have helped the poor in consumption smoothing, as well as in building assets. The average annual income of participant households is higher than that of non-participants. Self-employment activities have contributed more than 50 percent of the total income of the participants as against 43 percent in the case of non-participants. Compared to non-participants, the participants' households were better able to cope with floods, sustain their incomes, and achieve higher purchasing power and consumption levels. Wage and self-employment in the non-agricultural sector is also higher for the participant households because of their access to a microfinance programme. The last study mentions that the total household income has increased from 2.8 percent to as high as 12.2 percent per annum during 1997–2004. Wage employment for women participants has increased significantly between 1998 and 2004.

(b) Social impact

Microfinance programmes promote investment in human capital (such as schooling) and contribute to increased awareness of reproductive health among poor families. The adult literacy rate is significantly higher among the eligible participants. The second study also found that programme participation increases the chance of both boys and girls being enrolled in schools.

(c) Impact on women's empowerment

Findings suggest that women do acquire assets of their own and exercise power in household decision-making. One of the most visible recent changes in the lives of rural women in Bangladesh has been a significant increase in their access to credit. In Bangladesh, in the last 15 years, hundreds of thousands of women have become more visible through increased mobility. Microcredit programmes make women come to the centre meeting and that helps build their confidence. Microcredit allows a woman to handle money and so she becomes a financial manager. Anyone can see this great transformation in Bangladesh. One simple example from the Grameen Bank is its housing loan – to take a housing loan, the land has to be transferred to the woman's name. A great legal change is involved here. There is some evidence that members are able to stop domestic violence because of personal influence in income generation and through group action. In Bangladesh, microcredit programmes have also increased women's participation in the activities of local government. Some women microcredit clients have been elected as chairpersons and members of various Union Parishads, the lowest and the most vibrant tier of local government.

(d) Impact on the local economy

The programmes have spillover effects in the local economies, thereby increasing local village welfare. The results of the studies strongly support the view that microfinance not only affects the welfare of participants and non participants, but also facilitates aggregate welfare at village level.

Nevertheless, there has been little work on the aggregate poverty reduction impact of microfinance at the local or national level in Bangladesh. A World Bank study based on the 1991/92 household survey indicates that only approximately less than five percent of microfinance borrowers can lift themselves out of poverty each year, even if the estimated impacts on consumption are sustained over time. Such a percentage represents only about 1 percent of the population; thus the aggregate poverty impact of microfinance programmes was quite negligible in the period 1991/92. The last study mentions that according to the most recent national estimates, absolute poverty declined by 9 percentage points between 1991/92 and 2000 and 11 percentage points between 1998 and 2004. However, moderate poverty declined by less than 5 percentage points between 2000 and 2004. The declining trend implies that microfinance has a positive and statistically significant effect.

Emerging issues

The microfinance market in Bangladesh has come quite a long way. However, there are certain issues that need special attention. Stakeholders frequently talk about the following issues:

Interest rate

The effective annual interest rate of microcredit usually varies between 20 and 30 percent. Though higher than the commercial bank's lending rate, one has to consider the issue of sustainability. Considering the enormous effort needed to mobilize the large number of poor borrowers and make financial services available to them on their doorsteps, it is more or less impossible to keep the interest rate close to that of the commercial banks and make the institution financially sustainable. Lending interest rates probably will come down if MFIs operate efficiently in a competitive market. But this requires restructuring of MFIs and establishment of an appropriate regulatory agency. The interest rate is still a debatable issue among the policy makers and needs to be handled carefully.

Programmes for the extreme poor

The extreme poor, who constitute about 15 percent of the total population of Bangladesh, have remained outside the traditional microcredit programmes. Those deprived include beggars, slum dwellers, day labourers, bonded labourers, female headed households, the physically disabled and elderly persons without a source of income. The current microcredit programme design does not fit with the needs of these groups, who require different products with more flexibility. Though present day microcredit programmes are characterized by a single loan product and one/two savings instruments, there are encouraging moves by MFIs to diversify their products in order to meet the varied needs of the poor people. PKSF, Grameen Bank and some other NGO-MFIs have recently introduced some special programmes to reach the excluded groups. MFIs are, however, yet to meet the challenge of diversifying their products adequately to meet the growing demand of the hardcore poor and need to be better prepared for this group.

Graduated borrowers and microenterprises

As borrowers have become more skilled, the average size of the loans made by MFIs has grown. Currently, many microcredit borrowers are attempting to establish micro-enterprises. Research shows that there has been a growing demand from microcredit borrowers for larger loans. MFIs are being encouraged to support these borrowers in order to help them generate additional income and employment. Although not all MFIs are able to provide these borrowers with adequate funds, some are responding to their customers' needs. Unlike MFIs, banks have not traditionally provided smaller loans to those who have just lifted themselves out of poverty or to other micro-entrepreneurs. In addition, bank credit is generally collateralized, which makes it almost impossible for micro-enterprises to qualify. Therefore, there arises a serious financial demand from these growing small- and medium-size enterprises that needs to be met.

Commercial viability and self-reliance

Currently, nearly half of the revolving loan fund of microfinance programmes of MFIs comes from the interest earned and their members' savings. The rest comes from subsidized sources, donors' funds and commercial lending. Access to commercial borrowing is also very costly for them. Therefore, the question of commercial viability without subsidy is an important issue for them. It is true that access to public deposits helps the Grameen Bank to reduce its dependency on subsidized funds. Without having access to public deposits MFIs would need startup funds as grants or concessions which can often seriously damage their spirit of self-reliance.

Ownership and governance issues

As the existing legal framework to register the NGOs providing microcredit is inadequate, these organizations usually have been registered under different charters of the government of Bangladesh, where the issues of ownership and governance are not appropriately defined. Research findings indicate

that governance and financial sustainability are closely interrelated. Weak governance and management characterize many microfinance NGOs in Bangladesh. The problems of governance are mostly a result of the inadequacy of the existing laws and regulations and lack of reporting, supervision and monitoring. At the same time, the ownership structure of NGOs is not well organized. Both issues are important, now that the sector has become institutionalized.

Regulation and supervision

The issue of regulation and supervision has come to the forefront because MFIs are providing financial services and products to the poor outside the formal banking system. NGO-MFIs should be subject to an appropriate but friendly regulatory framework. Regulation would shield them from political interventions. It would enable MFIs to protect the interest of their members. It would also enable MFIs to grow and develop like financial intermediaries. If they operate under a proper regulatory authority, the monitoring system of MFIs will develop to comply with certain regulatory requirements. With such considerations in mind, the Microcredit Regulatory Authority was set up in Bangladesh in 2006.

Future challenges

The future challenges that the microfinance sector faces in Bangladesh as a new and growing industry are described below.

Sources of funds and the issue of sustainability

It is clearly understood that donor funds for microcredit will diminish in the near future, which means that the current operating spreads of MFIs will shrink and they will have to seek more commercial sources of funding. Hence, MFIs will need to balance greater efficiency and reduce funds for cross subsidization of social programmes that many NGO-MFIs operate. It is obvious that in the future MFIs will have to prepare more efficient financial strategies for survival.

Operational efficiency

As the industry reaches the peak of its maturity it will face more competition. Therefore, MFIs will need to further refine the services/products that they offer and will have to identify market needs and design appropriate products accordingly to compete.

Monitoring microfinance sector development

Development of the microfinance sector requires both sustainable MFIs and a flow of information for comprehensive understanding. At least two agents are required for sound microfinance sector development: sustainable microfinance institutions, and an appropriate regulatory framework for monitoring and supervision. In Bangladesh, efforts are underway to develop sustainable MFIs and a regulatory framework. Big MFIs have their own institutional arrangements for training, management information systems, monitoring and research, but small MFIs are unable to have institutional arrangements for monitoring and research. PKSF, however, provides technical support to its partner MFIs on a limited scale to build up their capacity. Much help is actually needed in this area.

Many questions related to the regulation and supervision remain unsolved and will have to be addressed by a future regulator. It is frequently asked whether the same type of regulation and supervision would fit all types of NGO-MFIs and what would be the most cost-effective technique to supervise some 1 000 plus organizations? NGO-MFIs mainly operate in the rural areas, which sometimes are very difficult to reach in time and communication is generally poor in the rural sector. Considering all these problems and their non-traditional method of operation, what kinds of supervision technique would be suitable for them – on site or off-site or self regulatory for smaller NGO-MFIs?

Developing comprehensive rural financial market

Rural financial markets comprise formal, informal and semi-formal institutions. Public sector banks (PSBs) dominate the formal financial market. These PSBs, are not able to reach all types of clients in the rural financial market and they are not commercially viable. In such a situation, the rural financial market can be more effective if the MFIs become formal institutions. It will enable MFIs to expand their portfolios and exploit economies of scale. As such, MFIs would be able to improve their viability and offer financial services at relatively low interest rates, especially for the poor people in the rural financial market.

Conclusion

Microcredit in Bangladesh has reached over one-third of all rural households in Bangladesh. Currently there are more than 1 000 NGO-MFIs operating all over the country. In Bangladesh, four big institutions including the Grameen Bank dominate the market. Government programmes and commercial banks' participation in microfinance are now considered valuable, and both government and banks are playing useful promotional and development roles in this sector. Microfinance operations are now more self-reliant than before; half of them are funded from local sources that comprise members' savings and service charges on loans. However, as mentioned earlier, the interest rate is still a controversial issue among policy makers.

The issue of regulating microfinance and supervising NGO-MFIs is being discussed more seriously among policy makers, including the government and its development partners. In this context, PKSF is playing an important role in the development of a self-regulation process and in supervising its partner organizations and is thus building up a culture of accountability among the MFIs. The government has established the Microcredit Regulatory Authority to develop uniform policy guidelines and to formulate a regulatory framework for this sector.

Sri Lanka

Over the years, Sri Lanka has developed a very diversified microfinance system. However, by international standards it operates at a very low level. The core problem is the poor quality of the microfinance services offered, indicated by insufficient outreach, low repayment rates, low cost efficiency and financial products which are not client driven. This seriously threatens the sustainability of the offered financial services and their outreach to poorer households, micro enterprises and small enterprises. The March 2005 joint study on the investment climate of Sri Lanka conducted by the World Bank and the Asian Development Bank has cited high costs and limited access to finance as two of the most crucial impediments to economic growth, especially in the rural areas.

The main causes of the poor performance of MFIs lie in the inadequate qualification of the MFI staff and the fact that the Government of Sri Lanka has yet to design a national policy for a sustainable microfinance sector. Another problem lies in the lack of a cohesive regulatory and supervisory structure that encompasses all MFIs. Commercial banks engaged in the microfinance business are regulated and supervised by the Central Bank. The multipurpose cooperatives such as the savings and credit cooperatives are supervised by the Department for Cooperative Development. The Samurdhi Banks (MFIs attached to the government welfare programme of the same name) are supervised by the Samurdhi Authority of Sri Lanka. However, most NGOs engaged in microfinance are neither regulated nor supervised although most mobilize savings deposits from the public. These institutions are weakened by politically motivated debt relief, often ahead of elections, and by natural disasters, such as the 2004 tsunami, both of which seriously jeopardizes the repayment culture among their clientele.

Another factor is the insufficient infrastructure for training, further education and advisory services. The pervasive and immense challenges of poverty alleviation in remote rural areas and in the once again accessible regions of the north and east are so enormous that MFIs have prioritized support and development measures for their target groups over improvements of their own organizational and service structures.

The negative impacts which result from all of the above, ensure an insufficient supply of financial services to the poorer sections of society and to micro enterprises and small enterprises. These groups can only be marginally integrated into the economic cycle. This hinders employment and economic growth and further hampers economic progress and poverty reduction.

Moreover, there is a danger that a number of unregulated MFIs may collapse, causing depositors, mostly poorer households, to lose their savings. Additional problems have now arisen because of the tsunami catastrophe of 26 December 2004. The need for small loans has substantially increased and the existing institutions can only partially meet it. Moreover, there is an urgent need to coordinate the various donor initiatives planned in response to the disaster.

The government is aware of this critical situation. The first steps towards stabilization of the microfinance sector have been taken. A new Department for Development Finance has been set up in the Ministry of Finance to stabilize the microfinance sector. The Central Bank has drafted legislation for a system of prudential regulation and supervision of microfinance institutions.

Subsequent to the tsunami devastation in December 2004, the framework for the Sri Lankan microfinance sector and institutions has changed considerably with the influx of a considerable amount of donor funds which were channelled through grants, soft loans, subsidies etc. Many of the MFIs who had not operated in the affected areas set up new branches in these areas to be able to engage in tsunami relief activities. Many MFIs started to provide loans with lower or zero interest, on soft terms and also grants and in kind. As mentioned, these changes were mainly driven by donor funded relief programmes which included microfinance and livelihood recovery components.

4.6 Role of women in small-scale fisheries and aquaculture development – Indian examples

According to a United Nation's report, women perform 65 percent of the world's work, receive only 10 percent of the world's income and own only 1 percent of the total assets. Though the transformation of the fisheries sector because of mechanization has enabled multifaceted changes in the role and contribution of fisherwomen, the overall structural changes in the marine fisheries sector brought about by extensive use of ice in local markets and export oriented development efforts have dislodged a large proportion of women from employment sectors such as fish drying, curing, dry fish trade and net making.

Indian context

There are about 0.5 million fisher households located all along the Indian coast and a total of three million fisherfolk inhabiting the coastal villages. The average number of seagoing fishermen is 282 in a coastal village. Of the 1.2 million fisherfolk in the post-harvest sector, women account for more than 0.5 million. They play a significant role in the pre and post-harvest operations in capture fisheries and their presence is conspicuous in all the stages of culture fisheries. Their role in household management is far higher than that of women in other sectors. The majority of the workers in the shrimp pre-processing and processing plants are women. Women also contribute a major proportion of the workforce to export oriented processing of cuttlefish, lobsters and finfish varieties.

In Tamil Nadu, women are engaged in seaweed collection in addition to fish curing, marketing, net making and prawn seed collection. Salt-pans are another major sector that employs many women. In Andhra Pradesh, the main occupation of women include collecting fish and mollusc shells, fish drying, curing, marketing, shrimp processing and net making. In West Bengal, fishermen spend little time in actual fishing and engage mainly in net making. Women from non fisheries communities also carry out fish drying and curing. In Maharashtra, women play a major role in fish marketing and control the entire fisheries economy revolving around Mumbai. In Gujarat women mostly do the handling and processing

activities. In Lakshadweep, particularly Minicoy, the major fishery products known as *masmin*, *riha*, and *akru* of tuna are produced mainly by women. The scope of providing alternative employment for women and thereby invigorating their socio-economic progress as well as the growth of the marine fishery sector, remains unexplored.

Direct contribution of fisherwomen in the marine sector

The role of fisherwomen in the post-harvest capture fisheries sector has been analyzed by many researchers. The entire fish processing industry is highly dependent on women as more than 90 percent of the work force in prawn peeling and 70 percent in the processing of other fishery products are women.

The majority of working fisherwomen are engaged in prawn peeling followed by small-scale fish trading. Women also play a major role in small-scale fish marketing, value addition and aquaculture practices. However, as in any other state, many constraints including occupational segregation and wage discrimination are noticed among the fisherwomen of Kerala (Table 22).

Table 22. Direct contribution of fisherwomen in the marine sector in Kerala

Category	Total no. of workers	No. of women workers	Percentage
Beach workers	20 843	5 612	26.92
Small-scale fish traders	67 527	20 220	29.94
Fish curers	21 103	14 028	66.47
Peeling workers	43 620	39 397	90.31
Processing plant workers	11 051	6 504	58.85
Total	161 144	85 761	53.22

Indirect contribution of fisherwomen in the marine sector

In a fishing family, the responsibility of household management – food, childcare, education, health, sanitation, financial management and the responsibility of getting and repaying debts – rests squarely on the women’s shoulders. The burden of her responsibilities doubles in the off-season. After mechanization and intensification of multi-day fishing, the household responsibility of fisherwomen has increased to a greater extent. The daily timetable of a fish trading woman of Edava, Kollam district of Kerala who purchases fish from a traditional fish landing centre and sells at the local market, reveals the magnitude of strain in her day-to-day life (Table 23).

Table 23. Activities and time allotted by fisherwomen

Activities	Time	Duration (hrs)	Activities	Time	Duration (hrs)
Cooling	4 to 6 am	2	Fish trading	4 to 7 pm	3
Landing centre	6 to 7 am	1	Shopping for groceries	7 to 8 pm	1
Travelling	7 to 8 am	1	Household activities	8 to 11 pm	3
Fish trading	8 to 12 am	4	Rest	11 to 12 pm	1
Household activity	12 to 2 pm	2	Drinking water collection	12 to 1 am	1
Landing centre	2 to 3 pm	1	Sleeping	1 to 4 am	3
Travelling	3 to 4 pm	1			

Table 24. Indirect contribution of fisherwomen in the marine sector

Activities	Contribution of Women
Cooking	96%
Childcare and education	89%
Family health	84%
Sanitation	81%
Finance (including repayment of debts)	54%
Petty shops in landing centre	56%
Diesel supply for boats	41%
Mobile food units	66%

Table 25. Demographic development parameters among fisherwomen of Kerala

Parameters	Kerala	Fishing villages
Population growth rate	1.9	2.3
Sex ratio	1 032	972
Infant mortality	40	85

Source: Report of State Planning Board, Kerala (1997–2002)

lacking among fishing communities. The wellbeing of fisherwomen measured on the basis of morbidity, longevity, nutrition and education is low. Even though neonatal death is more common among male children, the high population growth rate among fisherfolk is not reflected in the proportion of female children. It leads to the assumption of a higher mortality rate among female children. The dowry system and marrying the girls off at an early age devalues the female child and the resulting neglect can be one of the possible reasons for the skewed sex ratio and infant mortality (Table 25).

Role transformation of fisherwomen

Role transformation of fisherwomen during the major phases of technological transformation in household management as well as pre and post-harvest activities in the fisheries sector of the Kerala State is assessed and the results presented in Table 26 below.

The indirect roles fisherwomen play, relate to decision-making, financial management, family welfare, net making, running petty shops, mobile restaurants and supplying food to fishermen at the landing centre's and fish markets. The more direct involvement of women are in post-harvest related activities such as peeling, fish trading, export-oriented works, making value-added products, small-scale entrepreneurship, fish curing. A number of interventions both by government and non-government agencies have acted as catalysts in this process of role transformation.

The social mobilization (and consequent unionization) among the fisherfolk in Kerala for the first time was spearheaded by a *Mahila Samajam* in Trivandrum district for a statutory right to use public transport by women fish vendors. Various extension interventions for propagating mariculture technologies among the women fisherfolk have been attempted at coastal villages of the southwest coast. Nevertheless, the follow-up studies have indicated that the sustainability of most of these interventions is threatened.

Besides, in many places women are running petty shops, selling fishing inputs and other household articles. In Vizhinjam landing centre of Kerala, the diesel supply units for boats are the monopoly of women. Mobile food selling units are run by women in landing centres. The extent of involvement of fisherwomen in household management in the districts of Thiruvananthapuram and Kollam is shown in Tables 23 and 24.

Women's role as a homemaker, though supportive and unpaid, is indispensable in allowing the men to go out fishing. However, an examination of the demographic development indicators such as population growth rate, sex ratio and infant mortality among the fisherfolk reveals the prevalence of gender injustice and socio-economic marginalization. The much acclaimed social progress in Kerala, also indicated by surplus females, is found to be

Table 26. Role transformation of fisherwomen in Kollam and Trivandrum Districts of Kerala

Role items	Extent of involvement of women during technological transformation		
	Traditional (1952 to 1962)	Motorization & mechanization (1962 to 1998)	Multi-day fishing (1998)
Indirect roles			
Decision making	++	+++	++
Financial management	++	+	++
Family welfare	++	+	+++
Net making	+++	++	+
Petty shops	n/a	++	++
Mobile food supply	n/a	++	+
Direct roles			
Peeling	+	++	+++
Fish trading	+++	++	+
Export-oriented processing	0	+	++
Landing centre-oriented works	+++	++	+
Value addition	+	++	++
Small-scale entrepreneurship	0	++	++
Fish curing	+++	++	+

+ = Low involvement; ++ = Medium involvement; +++ = High involvement; 0 = Nil/Slight; n/a = Not available

Major issues confronting the fisherwomen working in capture fisheries

Social issues

In the fishers’ community women have roles of housewives or become engaged in income generating occupations. Their perceptions of the issues that concern them were ranked and are given below in Table 27. In a traditional fisher society, generally a woman’s social status is based on that of her husband.

Table 27. Fisherwomen’s perceptions of various social issues

Issues	Rank
Poor social status	1
Poor social acceptance	2
Lack of representation in fishery cooperatives and other local bodies	3
Heavy dowry system	4
Lack of platform to express opinions	5
Restrictions on going out to work	6
Men do not play supportive role	7
Less interaction with development agencies	8
Division of labour and wage discrimination	9

When a fisherwoman seeks outside employment, it will be inferred that her husband is unable to support the family. For this reason, the women usually do not enjoy the freedom to go out to work or interact with change agents, especially when the agents are males. Nevertheless, there are a few exceptions of women who overcome the barriers of society in the struggle for existence and may display androgynous behaviour as a consequence.

Fisherwomen are unempowered and appear to lack an comprehensive overall picture of their working environment

and tend to accept whatever meagre facilities are provided to them. The strong profit motivation of businesses and autocratic style of management prevailing in the majority of the seafood processing centres of Kerala only worsens the extent of marginalization of women labourers.

Economic issues

Fisherwomen in any work sector can be found occupying the position of a subordinate, generally performing minor supportive roles. At landing centres, women engaged in fish drying collect small sized bycatches. In markets, women usually sell low value products in a remote corner. Though highly nutritious

Table 28. Fisherwomen's perceptions of various economic issues

Issues	Rank
Lack of secure marketing channel	1
Poor income	2
Inadequate savings schemes	3
Lack of marketing information	4
Poor working capital	5

and helping to meet the nutritional demands of consumers, these bycatches fetch very low prices and thus poor profit margins for the women. Women wholesalers are very few, such as at markets in Trivandrum and Mangalore. The major economic constraints ranked by the respondents are shown in Table 28.

Lack of alternative employment in off-seasons leads to forced borrowing from money lenders at a very high interest rate of 10 percent per month or even more. Though the women work hard in the peak season, they can hardly pay back the money, as it would have doubled by then. The vicious circle of indebtedness continues. Women in the value addition sector also sell their products to local petty shops and households. The inadequate market information support and the lack of sound distribution networks are reasons behind this. The problem is not the lack of opportunities but of the lack of awareness of these opportunities.

Institutional issues

It can be seen from Table 29 that the inaccessibility of credit was perceived by the fisherwomen to be the most important institutional issue. The fisherwomen are often denied credit from public sector

Table 29. Fisherwomen's perceptions of institutional issues

Issues	Rank
Inaccessibility of credit	1
Inadequate saving schemes	2
Lack of location-specific development projects	3
Shift in focus from local markets to export markets	4
Lack of job security	5
Insufficient information support	6
Inadequate supply of production inputs	7
Lack of professional expertise in NGOs	8
Inadequate legislative support	9

institutions because they lack ownership of assets. The slow administrative procedures for obtaining credit also make it inaccessible to small-scale entrepreneurs.

Most of the institutions do not have saving schemes suitable for fisherwomen, nor do they come forward to introduce innovative schemes. The problem of lack of awareness about secure saving schemes can be solved. But the formality of procedures coupled with lack of awareness makes them shy of starting accounts in either post offices or banks and other financial institutions. The chit agents collect the money personally and all the transactions can be done orally. None of the financial institutions under the government sector have flexible operations that are fisherwoman friendly.

Though NGOs have taken steps to promote small-scale entrepreneurial development in culture fisheries, they are not receiving sufficient attention. It is disheartening to note that women spending their lifetime as peeling workers are still not included under the category of fisherwomen by the state government and are not provided with any welfare measures.

Technological issues

Technologies, as techniques, affect the ways in which people do things, and as systems of knowledge, affect the ways of thinking and are not value free or gender neutral. The extent of technological

Table 30. Technology issues

Issues	Rank
Technological progress leading to unemployment	1
Lack of innovative equipment/method	2
Lack of technical advice/supervision	3
Lack of training opportunities	4

logically marginalized to a greater extent, e.g. in clam fisheries a metal teathed dragging net (*palli*) for collecting clams has been introduced which is very heavy and women cannot handle it. As a result, the male workers go to deeper areas and collect huge quantities in less time outsmarting the women clam collectors. The negative impact of the technological changes on these small-scale entrepreneurs is often ignored.

The women fish traders form a good proportion of petty fish traders (in Kerala, of the 67 527 small-scale fish traders, 20 220 are women). The fish trading women face severe competition not only from the men folk who use two-wheelers in domestic marketing but also from the agents of the export companies, resulting in the non-availability of quality fishes that consumers prefer in local markets. Currently, they also face the same fate of the traditional net makers who have almost vanished from the scene.

The establishment of fish booths for women at retail level in prominent places including markets, preferential allocation of prominent places in markets, etc. can be tried. But even in Kerala where women form a major share of the extension personnel, farmwomen are not generally contacted

Table 31. Fisherwomen's perceptions of various personal issues

Issues	Rank
Ergonomic problems	1
Lack of alternative employment opportunities in the off-season	2
Lack of access to change agencies	3
Lack of ownership of assets	4
Irresponsible nature of counterparts	5
No time to look after household activities	6
No time/mind set to maintain social contacts	7
Low literacy rate	8
Lack of political commitment	9

by extension workers. This may be the reason for the delayed availability of technological inputs to fisherwomen.

Personal issues

It may be seen from Table 31 that ergonomic problems were rated as the most important issue. This is not surprising as the working conditions for most of the fisherwomen are deplorable, whether it is a market or a peeling shed.

Poor access to change agents is not because of their dearth but

because of their apathy towards their mission. Simultaneously, the change agents concentrate on men folk who are more socially visible by virtue of the traditional patriarchal social system. Lack of ownership of assets is also discussed under institutional problems, which is an outcome of social marginalization.

Psychological and motivational issues

The irresponsible nature of some spouses indicated by alcoholism, gambling, etc. was another major complaint. Interestingly, this was found to be related to the introduction of mechanization. The low literacy rate and poor political commitment of fisherwomen seem to be very minor issues in their view.

All the above issues cannot be solved by simply equipping or empowering women as the issues are overlapping and are of course linked with the problems and prospects of their male counterparts. Fisherwomen should develop an interest in and a desire to seek changes in existing practices related to farm and home and adopt changes as and when practical and feasible, i.e. they should get enough

opportunities for developing *innovations*. The perception of women regarding the improved practices could be marred by the results of their past experience and knowledge. Thus, the extent of *risk orientation* is very important in achieving a successful career. *Self-awareness* shows that the level of awareness a fisherwoman has about her potentials and drawbacks is directly related to entrepreneurial skill development. An individual's orientation towards achievement of maximum economic benefits in his or her profession indicates the extent of *economic motivation*.

Conclusion

Empowerment of individuals, both males and females, should be assured. This gains significance in the context of ever changing technological options in marine fisheries. There are many areas in the capture fisheries sector with ample scope for employing fisherwomen. Several mariculture technologies have enough scope to accommodate women in large numbers. More effort needs to be made towards filling the gaps in programme planning rather than programme implementation. Researchers also have to pay sufficient attention to identifying the needs of fisherwomen and thereby generate women-friendly technologies. As Amartya Sen (2001) has rightly observed, "there are no good reasons to abandon the understanding that the impact of women's empowerment in enhancing the voice and influence of women does help to reduce gender inequality of many different kinds, and can also reduce the indirect penalties that men suffer from the subjugation of women." Women's empowerment and thereby the community's development through the combined efforts of men and womenfolk requires a holistic approach.

4.7 Microfinance success stories

Access to credit

Fisherwomen SHGs from South Kanara District, Karnataka became highly indebted to local money lenders to meet their daily credit requirement for fish marketing. The NGO (GMR Varalakshmi Foundation) came to their rescue and extended not only microcredit (INR 4 000) but helped the SHGs to get linked with banks who financed them. As a result, the daily requirement of INR 1 000 to 4 000 is being met by the SHGs themselves. They have stopped taking loans from moneylenders and in fact no moneylender is even visible in their village.

The Uppada Kothapalli Mathsyakara Mandala Mahila Samakya is helping 388 SHGs (women) who are in the dry fish and wet fish marketing business. They have a bank linkages with Andhra Bank and SBI. These SHGs are receiving *pavalavaddi* benefit, that is if the repayment is above 95 percent, the SHGs are eligible for reimbursement of 3 percent interest charged by the state governments on the loans received from banks.

Market intervention

Smt Banumati is an illiterate and poor fisherwoman from Mangalore Karnataka who was selling fresh fish when she received a microcredit loan from Canara Bank. After prompt repayment and receiving fresh loans, now she owns a three wheeler tempo, an ice factory ("Gajanana Ice and Cold Storage" with a capacity of 15 tonnes/day) and has extended her business to nearby states, proving that microfinance can make a poor woman into a businesswoman.

Pultibai, who is from the fisher community of Gudpally village of Andhra Pradesh, was basically a marine fish seller who was unable to earn a livelihood. Her family migrated to Raipally, which is on the banks of the river Manjira. She received a microcredit loan (INR 1 500) from SKS microfinance to purchase nets and started fishing. Later she received INR 6 000 for the purchase of more nets and now owns a successful business. Putlibai's success has inspired others from non-fisher families to take up fishing as a full-time occupation.

The Indian Bank, Kanyakumari Branch Tamil Nadu tried out the SHG route to reach a group of fishermen who needed credit for meeting their operational expenses and clear off their debts with money lender/traders. As the members had borrowed money from local traders, they had to sell their high valued catches at the lowest rate fixed by the traders. The bank sanctioned an advance of INR 2 million on 18 January 2006 to Alankara Matha Men's SHG so that its members could free themselves from the clutches of traders of high value fish. The group members have come out of the clutches of middlemen and they are supplying their catches to other exporters directly and get a better profit margin. Moreover, the men's SHG is arranging the bulk supply of inputs such as nets at a cheaper rate and has, with a bank loan, started an outlet to sell fishing nets and materials.

Innovative approaches/diversification

Lok Sahayak Samiti (LSS), an NGO from Puri district of Orissa, has helped, with financial assistance from NABARD, CAPART etc, the coastal women's SHG to take up seashell craftwork as an alternative source of income for the members. The NGO helps in marketing of these products. Moreover, LSS is also involved in health awareness and family planning programmes, providing training to unemployed educated youths, disaster management, management of environmental resources by the community etc.

The Peoples' Employment and Need Based Community Development (PENCODE), an MFI for the development of the migrant Telugu speaking fisher community of Puri, has formed 81 SHGs and has played a vital role in motivating the fisherwomen community to form into four cooperative societies. The organization has provided the training on new areas like seashell craftwork, processing shark liver oil, quality dried fish and prawn and fish pickles etc.

Seven joint liability groups from Manadapam, Tamil Nadu, supported by Goodlife, an NGO, have proved that seaweed cultivation in the coastal areas is a viable, alternative livelihood activity among the lower income group of fisherwomen in the coastal villages. SBI and BOB have extended financial assistance amounting to INR 14.647 million under SGSY with a buy back arrangement by Aqua Clinic Centre, Mandapam.

Thirty-five women SHGs with 358 members have joined together for a crab fattening activity in North 24 paraganas district and South 24 paraganas district. Crabs are exported to Europe, USA and Southeast Asia. Women are fully involved right from feeding to segregation of sexes and grading for marketing. In West Bengal, fisherwomen are also engaged in producing value added products such as fish pickle, fish noodles, fish soup powder, fish papad and fish sauce. The Captain, Bhery Shaluk, of the fisherwomen's cooperative society has recently signed a memorandum of understanding with TIFAC to establish a project on value addition technology transfer to fisherwomen who deal with low value fish. The total project outlay is INR 2.025 million comprising TIFAC's share of INR 1.18 million, the cooperative society's share of INR 0.429 million and the self-help groups' share of INR 0.435 million. *Numerous fisherwomen are successfully engaged in this new activity.*

Insurance

To mitigate the problem of being indebted to middlemen, the Social Welfare Samithi, an NGO, organized the fisherwomen into SHGs, and the State Bank of Travancore, Sakthikulangara branch, advanced INR 24.5 million (US\$ 544 000) to 917 fisherwomen in 118 groups. The bank has advanced individual loans of INR 25 000 to INR 50 000 per group member. These self-help groups are mainly undertaking three activities, namely pre-processing of fish to be supplied to the seafood export units, curing and drying of fish and fish vending. Encouraged by prompt recovery of loans, as an additional benefit, the bank has arranged to cover each member of the programme under the Super Suraksha Policy of the SBI Life.

Other potential areas

The marketing of fresh fish is relatively easy for women who have access to fish and it can bring them financial security and occupational sustainability. But the vendors face a range of problems such as fish supplies becoming increasingly scarce because of overfishing and increased competition from the processing and export sectors. Most women prefer this activity mainly because of the high demand for fresh fish and the quick return on the investment. Observers have identified the following activities of women in fisheries in India:

- ▶ Clam collection
- ▶ Sorting
- ▶ Marketing
- ▶ Fresh fish marketing
- ▶ Dressing of fish (surimi units)
- ▶ Aquaculture (fish farms, shrimp farms and shrimp hatcheries)
- ▶ Processing plants (peelers, graders, packers)
- ▶ Labour at landing centres (loading ice to boat, unloading fish from boat, loading fish to tempos, sorting of fish)
- ▶ Traditional fish processing (salting and drying of fish)
- ▶ Byproduct units (fish meal, fish oil, liver oil units and manure).

Constraints on women in post-harvest fisheries

- ▶ Raw materials (limited seasonal availability, uncertainty of catch/scarce supply of fish, high perishability, intense competition, long waiting time, non availability of ice, losses resulting from spoilage, poor quality, lack of cold storage facilities at markets).
- ▶ Traditional processing (labour intensive, non availability of good quality salt, lack of knowledge on hygiene, scarcity of potable water, lack of space for drying, adverse climates, inadequate drying, losses in drying on road sides, losses by insect infestation during storage, browning, drying at floor levels, lack of facilities in drying yards for nine raised-platform drying racks), informal trading – large number of intermediaries, lack of storage facilities, low profit margins, risks and uncertainties, low quality products).
- ▶ General (low income, lack of transport facilities, long distances, inadequate facilities for women at markets and landing centres), declining fish catches, no alternative income source, use of inappropriate tools and accessories, high interest rates).
- ▶ The advantages of fisherwomen engaging in post-harvest activities are flexibility of working hours, immediate returns, they have the skill and expertise, there is a strong demand for fresh and dry/salted fish, low investment costs, low working costs, support from the family.
- ▶ Although value addition provides the highest earnings per hour, fish vending offers the best opportunity to earn higher annual income in terms of the average annual working hours provided. Shrimp peeling is a seasonal activity depending on the prawn fishery season, the peak being June to September. The work takes place usually in a peeling shed and women are employed depending on the quantity of prawns they peel in a day.
- ▶ As soon as the catch is landed, women (mostly) are hired for the post-harvest operations, including curing and drying. Sorting is done to separate different varieties of fishes into separate lots. There are three grades of sorting based on uniformity of size and quality. The procured fishes are sorted out and trash fishes are taken to fish meal plants. The exportable varieties are graded, cleaned, packed in ice and sent to processing centres. In fish drying,

women labourers work on a contract basis. Women fish vendors operate as an important link between producers and final consumers. They purchase fish either from the fishermen at landing centres through auction or from traders through bargaining. Female vendors carry baskets of fish as head loads. These fisherwomen borrow INR 500 to INR 2 000 daily from middlemen to buy fish. After selling the fish they return the money to lenders, with interest.

Constraints on the development of fisherwomen

- ▶ Limited access to resources
- ▶ Lack of access to leadership positions and voice in decision-making
- ▶ Inadequate training and formal education
- ▶ High disparity in ownership of productive assets and wage structure
- ▶ Exploitation by middlemen and contractors
- ▶ Intensive labour and long working hours
- ▶ Lack of interest in occupations other than fisheries
- ▶ Lack of credit facilities
- ▶ Socio-economic framework with traditional customs and conventions
- ▶ Inadequate health care for occupational hazards
- ▶ Lack of knowledge in latest technologies of aquaculture and post-harvest management.

Training needs

- ▶ Location-specific and need-based training programmes for fisherwomen should be organized to enhance their awareness and technical know-how enabling them to start self generating grants/employment ventures in the aquaculture and post-harvest fisheries sector.
- ▶ Involvement of women in all types of aquaculture practices should be encouraged.
- ▶ There is enormous scope to adopt and expand ornamental fish culture to earn a very high income both in rural and urban centres.
- ▶ In view of the possibilities of income and employment generation in the rural areas, pearl culture could be suggested as an alternative and lucrative microventure, especially for women, both in marine and urban segments. Women could take up pearl culture as a productive income earning venture on account of the vast unutilized potential.
- ▶ Another opportunity in aquaculture is the extensive adoption of mussel culture by self-help groups of women.
- ▶ More emphasis should be given to the involvement of women in the preparation of value added products. Promotion of diversified value added products not only accelerates earnings in exports but also provides a multiplier effect on employment especially for weaker sections and women.
- ▶ Efforts made by government and non-governmental agencies to organize fisherwomen into SHGs and involve them in the preparation of value added products and marketing has brought encouraging results.
- ▶ Aquafeed, using the indigenous resources, may be developed as a cottage industry to suit the needs of the aquaculture industry.

4.8 Suggestions for sectoral growth

From this review it is clear that the gap in information and credit flow to the sector is widening. It was not possible to get the sectoral credit flow data from Bangladesh and Sri Lanka and microfinance data from all the three countries. Any exercise of the present kind, dealing with enhancing financial services

flow to the sector would demand information and data that is not being recorded by the identified agencies. In the case of India, although data relating to ground level credit flow to the fisheries sector from scheduled commercial banks, regional rural banks and cooperative banks is available, further classification into inland, coastal and marine sectors is not available.

The data relating to credit flow through SHG-bank linkages in India also suffers from the above mentioned limitation. The data relating to microcredit and microfinance services to the sector is not available for all the three countries. The only data that is available now, and is in the public domain, is country data on microcredit flow and its outreach. The microfinance gateway and microfinance information exchange web sites are useful in this context, but as indicated, sectoral data is not captured in these databases. Moreover, these databases are dependent on voluntary reporting by MFIs.

Considering the above constraints on availability of data on credit flow to the sector, the central banks in the respective countries may consider the following suggestions pertaining to the reporting of data:

- i. A guideline on activity-wise reporting of sectoral data on credit flow may be devised and the banks as well as MFIs advised to follow the same vigorously.
- ii. A centralized data repository agency may be created by the central banks, which may be responsible for data compilation and dissemination. Such reporting may be made mandatory for the banks and MFIs and the same should be linked to rating of MFIs.
- iii. Considering the large gap in information on microfinance to the sector, a detailed study may be mounted by agencies like FAO/UNDP to assess the role of microfinance in the respective countries through conducting suitable field surveys.

The models relating to microfinance which have been analyzed as a part of the present exercise, reveal that credit plus services are being offered by MFIs in varying degrees. Considering the special need of the sector, the most comprehensive services are being offered by SIFFS and Matsyafed in India. Although the Matsyafed model is based on the SIFFS model, the portfolio of Matsyafed is crowded with implementation of several government-sponsored programmes and is also influenced by government policies and decisions, including government pilot-subsidy schemes, resulting in distortion. Considering the same, the ideal and holistic model for the fisheries sector may be that of SIFFS which, in addition to the range of various microfinance services, takes care of the sector-specific needs pertaining to technology, supply of fishing related hardware, inputs and services.

The lack of spread and penetration of microfinance services in the fisheries sector in general and coastal fishing and aquaculture in particular, is a reality and a number of steps and measures are required to increase their outreach to fisherfolk who are financially excluded. They have been subjected to extreme exploitation by the middlemen and moneylenders who control the market and the lives of fisherfolk condemning them to abject poverty. Any improvement in their living conditions has to deal with all the externalities affecting the operations of fishermen including credit need, risks to life and assets, uncertainties in marine harvest, seasonality of income, poor infrastructure, human development and social issues. All these require the concerted efforts of all development agencies, financial institutions, MFIs and producers organizations like SIFFS. Various concerns in this regard have been addressed in the recommendations.

The sustainable development of the coastal fisheries and aquaculture sector is yet another major challenge. The overcapacity and overexploitation in the sector is a glaring feature, globally. Use of destructive and wasteful fishing methods like trawling and purse seining and their impact on coastal resources is a matter of concern. Use of beach seines and gears of small mesh size in the artisanal marine fisheries sector is also a potential threat to sustainable development. Implementation of FAO's code of responsible fishing and the retirement of vessels in sectors where excess capacity has been created, need to be supported strongly by the development agencies and the financial institutions.

Women play a major role in the coastal fisheries sector, particularly in fish vending and post-harvest processing. However, gradually they are withdrawing from it as a result of stigma attached to the occupation. Indeed, school and college going children do not want their mothers to continue as vendors. Thus interventions are required to upgrade fish procurement, processing, storage, transport and sale of fish.

As a result of preprocessing and the demand for ready to eat fish products associated with the sale of fish in supermarkets and city malls, there is considerable scope for fisherwomen to produce in these areas. There is a huge market to be tapped. Fisherwomen, being better educated than men, are in a better position to absorb the lessons of entrepreneurial training and could successfully run such businesses as well as small-scale mariculture activities such as seaweed culture, mussel culture, crab fattening, ornamental fish culture. Women fisherfolk need to be aggressively supported in such activities in order to help communities to diversify their livelihoods and widen their income bases.

Considering the analysis made in respect of the MFI models, it may be necessary to strengthen institutions like SIFFS and Matsyafed. They may be encouraged to render assistance to agencies outside their zone of operation to develop their expertise in rendering comprehensive microfinance services to the coastal fisher communities. The concerned state governments and central banks may prepare blueprints for such coastal community development programmes.

4.9 Recommendations

The recommendations of the study for FAO/UNTRs, in respect of financial services flow to small-scale marine fisheries sector (Arunachalam *et al* 2008) are very well researched and exhaustive and are appropriate in the present context. These have been adopted with some modifications.

Provide information on finance in the sector

Centralized data repository agency: A centralized data repository agency may be created by the central banks, which may be responsible for data compilation and dissemination. Such reporting may be made mandatory for the banks and MFIs and the same should be linked to rating of MFIs.

Need for detailed study on microfinance: Considering the large gap in information on microfinance for the sector, a detailed study may be undertaken by agencies like FAO/UNDP to assess the role of microfinance in the respective countries through suitable field surveys.

Increase management support to the sector

Make coastal fisheries viable through enforcing appropriate regulation: The yields from capture fisheries in inshore waters have stabilized across India, Bangladesh and Sri Lanka. Because too many people are chasing too few fish in the same space, there is unhealthy competition, leading to overcapacity (higher horse power engines, more aggressive fishing techniques, larger volumes of nets, breakdown of traditional fishing restrictions on mesh size, timing, zoning etc.) and increasing tensions among various segments of the sector. Hence, stringent enforcement of the regulatory policy is urgent. It should cover zoning, seasonal bans, control over fleet size, craft/gear combinations, licensing and registration and quota systems. The overall objective should be to restrict/control fresh inflow of financial and other resources into capture fishery in the inshore waters. This is a very critical aspect for (financial viability) of fisherfolk engaged in harvest fisheries.

Phase out the mechanized sector and enable diversification: To ensure viability of small-scale fisheries, financial investment, particularly in the mechanized sector, should be phased out. Diversification should be encouraged. This calls for great caution in financing new units in mechanized fisheries. Engines of higher horsepower should be discouraged. Increase duties, raise tariffs and interest rates, toughen finance flow. It is recommended that the Ministry of Finance/the Central Bank of the respective countries

constitute a working group to ensure that appropriate guidelines are framed to prevent lending by any financial institution (including central government run cooperative institutions like NCDC) in support of unsustainable marine fishery practices including use of encircling nets, trawlers, higher horse power engines.

Remove distortions in financial markets

Subsidies: There are huge distortions in financial markets, e.g. subsidies that are available through some channels but not others. There is a need to create a level playing field by making subsidies available to individuals irrespective of organizational affiliations. State governments must be dissuaded from giving subsidies through their own channels. If these subsidies exist, they should be available to individuals, irrespective of institutional affiliation. In general, production subsidies should be reduced.

Supply-side distortions: These distortions must also be addressed. Lending institutions must lend to all intermediaries and channels. There is a need to create credit guarantee interventions to enable producer groups and MFI type channels to access and leverage more funds from lending institutions.

Interest subvention:

The issue of a level playing field also concerns private versus public sector banks. The interest subvention by the central governments must be made available for fisheries on a par with agriculture.

Revitalize state-run financial institutions and make them autonomous

Governments should make financial institutions autonomous. There are very many examples of unviable government financing. They should instead strengthen the capacity of existing cooperatives and create federations at district/state levels. Although the government's aim to revitalize these cooperatives is right, it needs to choose the best approach and there are a number of options:

- ▶ Strengthen governance, transparency and management systems in village cooperatives and ensure/enable autonomy for their operation by allowing these cooperatives to really function as cooperatives by, for and of the people.
- ▶ The SIFFS/Matsyafed model for capture fisheries and SIFFS/Dhan models for post-harvest activities could be adapted and replicated at the village cooperative level.
- ▶ The affiliated state federation could be scaled up into an autonomous Fisheries Cooperative Bank (with district outlets). The assistance of NABARD and NCDC should be mobilized for capitalizing this fisheries bank and building its capacity.

Provide composite life and health insurance products for protection

Health insurance: Fishing communities are vulnerable to epidemics because of their living conditions. There is a huge opportunity for governments to structure composite (life and medical) insurance products, since the current penetration of such financial products is almost nil. There is also a need to sell through intermediaries like SIFFS/DHAN/SHG and their federations to ensure on-time payment of premiums and good service. The distribution mechanism is very critical for insurance and without this no insurance product however well designed will be effective. Private sector insurers have very valuable experience in structuring and distributing products for low income people and they could be invited to pilot models and products.

Composite insurance for crew members: Unnamed crew insurance is already in practice (SIFFS) but some useful rider's can be added to these existing products such as critical illness and/or other such riders. Insurance regulatory authorities may be approached to provide special permission for such products, given the nature of the fisheries sector.

The delivery mechanism plays a critical role: Participation of local fisherfolk must be explored and tried. This is with regard to life, health or asset insurance etc. Basically, the distribution channels must suit customers. They should deliver what clients want in a way that will reach them and provide cost-effective service to a low-income fisher clientele. This could be achieved by keeping administrative costs low by using technology, outsourcing some functional responsibilities to fisheries-related local producers or other organizations and leveraging existing infrastructure for distribution.

Ensure enabling provisions needed for delivery of asset-insurance products

For asset insurance for boats to be expanded, several internal control aspects need attention such as registration number, location. These aspects require regulatory attention from the government and all boats must be registered and have a unique (ID) number.

Promote voluntary savings – attitude change, products and mechanisms

Voluntary Savings: The SIFFS system of compulsory contribution of 10 percent for loan repayment, 4 percent towards savings and 3 percent towards meeting expenses of the federation has resulted in generating a cash surplus and timely loan payment to fishermen, to a large extent. However, there is a need to enable the fishers to inculcate financial discipline and save voluntarily. There is a genuine need to change attitudes and producer organizations and governments must facilitate that. Banks can also work with producer organizations to collect savings as per the banking correspondent model with ATMs and also serve as conduits for insurance layered on savings.

Facilitate establishment of pilot projects

Women have several unique needs and demands. Special pilot activities could be carried out. The focus of interventions in the area of gender could include:

Special financial products for women: There is increasing evidence that traditional loan products, especially relating to weekly repayment, cause women great stress. There is a need for pilot activities that promote understanding on how to create products specifically for women, with loan terms and conditions convenient to women's needs.

Delivery of risk-management products tailored to needs of low-income women: The design and distribution of the micro-insurance and risk mitigation products in fisheries call for action research that would throw light on micro-insurance for low-income women in fisheries, especially post-harvest fisheries.

Reducing transactions cost for retailing with technology: The search for a low-cost technology-based retail model for delivering financial services to low-income fisherwomen on a mass scale merits attention. Mobile phones and other such mechanisms can be encouraged. It would be a smart strategy to invest in public-private partnerships and provide efficient technology-based scaleable retail models to help low-income fisherwomen.

Encouraging public-private partnerships to overcome market imperfections: This is a key aspect. Pilot projects to enhance diversification of fishers into urban and rural livelihoods are required. Such pilots should: (i) attempt to spark (sustainable) growth with regard to micro-enterprises and micro-livelihoods systems for low income fisherwomen; and (ii) facilitate development of strong and vibrant micro-enterprises and microlivelihood systems. These should be in areas, where a large number of low-income fisherwomen are active.

Enabling livelihood financing for women through larger loans/individual lending: There is a great window of opportunity for MFIs to get into "livelihoods financing", in partnership with bankers/corporations and other(s) through public-private partnerships. MFIs could play an important role through livelihoods financing with a single product or a combination of several products, tailored to the needs

of low-income women: (i) warehouse receipt financing; (ii) cash flow based financing; and (iii) other innovative products including leasing.

Client education: In order to promote financial inclusion of fisherfolk presently outside the fold of formal credit, it is necessary to educate the beneficiaries in matters relating to financial discipline by mounting a financial literacy campaign through specialized NGOs and such efforts need to be supported.

Economics database and credit scoring: There is need for hard data and relative cost data. A scientific template that models the economics for units using hard data across locations, borrowers, geographies and time is necessary so that it can be used in fisheries financing. What can enhance credibility and finance flow to capture fisheries is the creation of a database on catch and economics across seasons, across geographies, across crafts, across states for many borrowers. Institutions can use that to devise credit scoring models that will reduce the risks of lending to capture fisheries. The pilot could be tried with SIFFS, which already has a good MIS/database.

Use traditional microfinance approaches for loans to non boat owners, women vendors and others

Traditional approaches

Typical microcredit approaches apply well to financing of vendors/hawkers, etc. and perhaps crew.

Holistic approaches

Holistic approaches appear to be more suitable for financing activities in the low income fisheries value chain, especially for capture fisheries. This integrated approach can be delivered by multipurpose, large, well networked institutions that can diversify risks across craft types, geographies, etc.

Support diversification in capture fishery through innovative priority sector financing

Finance must support diversification into these aspects through innovative financial products (and carefully framed pilots), covered under priority sector financing. Mariculture, production and harvesting of seaweeds, tree plantations along the coast (bioshields) can provide gainful employment opportunities and avenues. Financing of these requires an experimental approach and banks and financial institutions would have to be innovative in supporting and lending to these innovations/pilot tests.

Make post-harvest fishery a thrust area for financial institutions

Small-scale fishing is being sustained despite falling catches and increasing operational costs because of the high demand for fish in the export and domestic markets. This has made post-harvest fishery interventions and financing of aspects related to it extremely important. Women fish vendors (fresh, dry and pickled) and cycle/scooter/three wheeler vendors (smaller trade loops) and now cold chain networks supplying processed and branded fish to the up-scale markets. There is a need to strongly finance storage and holding facilities (ice, iceboxes, storage facilities) so that producers can negotiate better market prices. Such entrepreneurial units can also provide services such as floor prices, market intelligence and credit against fish held in stock and even market "futures," especially in partnership with exporters, banks and wholesale merchants.

The traditional microfinance approaches using SHGs/JLGs could also be tried here as delivery mechanisms. The use of warehouse receipts that has been successful in reducing vulnerability in other sectors can be tried in fisheries. Women can be organized for value addition and processing, so that apart from retaining women in fishing, even younger and educated women can find employment spaces and entrepreneurship opportunities in post-harvest fisheries.

Classify supplies by fishers as “deemed exports”

Specifically, producer organizations should be eligible for packing credit type of working capital and other infrastructure credit etc. much like marine exporters are being financed. Special loans (and tie-ups with exporters) could be provided to intermediary/producer organizations like SIFFS.

Ensure that fish producers have access to warehouse receipts

Experience from around the world illustrates that warehouse receipts can make a difference to producers. By storing their goods in a reliable warehouse until the price increases and using the goods as loan collateral, producers may access funds before they sell their goods. Warehouse receipts are often administered to producer groups, instead of individuals, which helps the flow of market information. Warehouse receipts also can create price transparency. This empowers producers to make informed sales decisions rather than waiting for “gate” buyers who often offer below market prices. Producer organizations/microfinance institutions (MFIs) also have a strong incentive to offer warehouse receipt financing. With this system, their risk is reduced because the system has a built in use of collateral that can retain a high commercial value and be liquidated quickly. The necessary government regulations in this connection need to be in place.

Support the role of supply chain actor

Although export promotion expenditure may be justified by trickle-down effects, the investment on downstream actors, namely the fishers, has to be increased. This is where finance can play a major role and extending packing (working capital) credit to producer organizations is a strategy recommended as part of priority sector financing. This must be supported whole-heartedly by financial institutions. Banks should also provide working capital/other loans at packing credit interest rates to producer organizations like SIFFS – especially, if the produce is traceable as going to exports (deemed exports).

Finance projects to reduce length of the value chain

The fisherman's share in INR 1 of fish is between 32 percent to 45 percent and it could vary across different markets and places. Clearly, value can be added by financing infrastructure for cold storage/wholesaling/transport and other vulnerability reducing mechanisms that can help them get post-harvest loans and/or reduce the perishability risk. However, the marketing process is also inefficient with several layers of intermediaries – facilitating consolidation of intermediaries or bypassing one/two of them could lead to more value for fishermen, more stability in their cash flows, and quicker turn around in accounts receivable. Commercial banks need to finance innovative approaches wholeheartedly to reducing the length of the value chain, especially through producer organizations like SIFFS.

Make available innovative financing for fisheries including under priority sector

The following loan products can be tried by the public sector and private sector banks as well as the cooperative banks and priority sectors.

Special loans for disinvestments/downsizing

Disinvestment financing: Owners of trawlers and other large boats who wish to replace their boats/craft/equipment should be given finance to enable them to diversify their occupations/livelihoods. This should help in reducing overcapacity, particularly in the mechanized sector.

Downsizing loans: For the ring seines and large canoe boats, special (incentive) loans may be given to help them to change to smaller crafts and more sustainable practices.

Special loans for merchant traders

It is critical to find financial products/investment that can make the merchants/traders more efficient and/or reduce the risks for them so that they increase prices given to societies/fisherfolk and also reduce lead time for settlement of payables.

Flexible loans for fishermen

Cash flow based financing for capture fisheries: To create a lending programme in association with banks/ financial institutions/producer organizations wherein the loan is structured to factor in “payment holidays” during the lean period when the earnings are impacted, e.g. monsoon time/breeding months, when a government imposes a ban on fishing, etc. This calls for cash flow based financing with repayment holidays on principal/interest and a lot of flexibility in repayment. Such a product could be piloted for harvest fisheries through producer organizations. This again could be classified as priority sector financing.

Debt swap: Initially to look at debt replacement/consolidation - repaying high cost loans with low cost loans. This will enable fishermen to lower their interest burden, which in turn will improve their cash flows and also their ability to make timely repayment of other loans and also give them discretionary income. This could be classified under priority sector financing.

Flexible credit limits for enterprising owners: As far as responsible and enterprising owners are concerned (graded on fishing asset value, average monthly catch across three years, average bills written, savings and extent of loan repayment – see below), they could have access to flexible and fungible working capital loans (a working capital limit can be fixed each year). Thus, credit limits may be offered to high performing units, on a yearly basis – this could also serve to incentivize units to graduate upwards. Once these persons have established good relationships they can be also supported with a larger basket of credit (housing, education, household equipment and amenities, consumption financing). Pilots could be tried through producer organizations and all of these may be classified under priority sector financing.

Special loans for women

Individual lending to women: Women handle the cash in the household and manage the running of the house in a very professional manner and hence can be lent to individually. Vocational centres are needed to train and help women diversify into livelihoods such as handicrafts, tailoring and embroidery, *agarbatti* making. These women must be encouraged and enabled individually to set up small-scale business units such as grocery shops/trading in commodities to generate cash profits and thereby enhance household earnings. Mentors and financing are crucial for this. Hence, one could provide women with small individual loans for them to become/scale-up as micro-entrepreneurs and thereby enhance household earnings. Mentors could be identified and be trained through producer organizations, NGOs etc. Individual loans are very successful today and these could be provided to them under priority sector lending.

SHG (DHAN) methodology or solidarity group (ICNW) methodology

Both methodologies could also be adapted and tried in this regard. The group methodology has been used worldwide with similar workers. These could also be classified under priority sector financing.

Innovative risk management products for crew

Accident/death at sea/work cover should be ensured through a master policy with each owner (unnamed crew cover introduced by SIFFS is an example) but useful clauses on critical illness and other aspects could be added to make it more useful. Insurance regulatory authorities need to be sensitized in this regard and special permission obtained for these clauses.

Micro-pensions with flexible payment options through linkages to UTI Mutual Fund (or others) as in India could be designed and delivered for crews.

Capitalize and build capacity with producer organizations and MFIs/RFIs

Producer organizations/MFIs/RFIs should be capitalized and have capacity built so that equity investment can occur in these along with a package of (institutional) systems support, training, MIS and

other aspects. Without equity, producer organizations/MFIs/RFIs cannot access low cost money – many producer organizations/MFIs/RFIs are over leveraged and with the recent outsourcing guidelines that call for critical functions not to be outsourced and also preparation for adoption of BASEL II norms, loans to producer organizations/MFIs/RFIs will be difficult to come by in the future. Products similar to the quasi equity (transformation loan) product of SIDBI could be developed for producer organizations/MFIs/RFIs with exit routes for investors. Quasi equity investment and flow of loans to good intermediaries (such as cooperatives/producer organizations/MFIs, etc.) should be facilitated also. This can be done through guarantees and counter guarantee mechanisms and many national/international donors are quite willing to offer this and they must be brought on board.

Credit Information Bureaus: Collateral substitutes should be created to gain historical information and reduce risk perceptions; this includes integration of low income fishery loans and transactions into MIS of producer organizations with CIBIL. Credit history is the only immediate collateral that a low income fisher builds through his/her prompt repayment of loans over the loan cycles. Capturing this credit history and making it available to the client/financier is becoming important. Also, availability of credit history can help segments of the population like migrant fishworkers to access credit from different places they migrate to. Technology enables all these and much more and needs to be properly harnessed to this effect.

Establish a fisheries innovation challenge fund to support innovation and financial deepening through public – private partnerships and linkages, with investment by various stakeholders. It is critical to establish such a fund to help producer organizations/microfinance industry and the private sector to innovate and develop models, methodologies, products, processes, procedures and performance measures for financial intermediation specially tailored to the needs of low income fishers in several contexts. It is suggested that this fund be established with contributions from multilateral and bilateral donors and other stakeholders. The FAO tsunami secretariat could act as coordinator.

Support priority demonstration pilots on financing for fisherfolk: Governments and donors could initiate action pilots to test out new models, new methodologies and new products such as micropensions, alternative savings products, technology based delivery systems (including SMS banking and use of e-money, which has had huge success with the poor in Africa by Vodafone), special loan products for fisherfolk such as flexible versus fixed repayment, individual lending models, cash flow based financing etc. These could be supported through the challenge fund.

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