



WorldFish

POLICY BRIEF | 2011-07

Financing Smallholder Aquaculture Enterprises

ACCORDING TO THE INTERNATIONAL FUND FOR AGRICULTURE DEVELOPMENT (IFAD):

- Poor rural people, including the 2 billion who live and work on the world's 500 million small farms, have tremendous potential to contribute to a country's economic growth and food security. They also have much to offer the private sector – not the least of which is a sustainable supply of high-quality agricultural produce.
- Agriculture is a business, and our business is to make smallholder agriculture a profitable agro-enterprise. With the right support, smallholders can contribute to a vibrant rural sector, where locally-produced products and services meet growing local demand. This, in turn, can spur sustainable off-farm employment, growth in services, agro-processing and small-scale manufacturing.
- The challenge today is to help build the capacity of smallholders and their organisations so that they can deliver what large customers require, and in turn to encourage these customers to adapt their models to be inclusive and supportive of small-scale agricultural producers. We can accelerate progress in meeting the Millennium Development Goals, and achieving a world without poverty and hunger, not only because it is the right thing to do, but also because it makes financial sense (Nwanze, 2010).

BACKGROUND

Aquaculture is the world's fastest growing food production sector. Developing countries produce the bulk of aquaculture production, and smallholders dominate the rural landscape throughout the developing world, making up a large proportion of people involved in aquaculture production in many countries. Smallholders participate across the spectrum of aquaculture, from subsistence fish farming where aquaculture is part of a diverse household livelihood, to specialisation in more commercially oriented aquaculture, involvement in micro enterprises across value chains, and even through employment in the growing number

of larger commercial aquaculture enterprises. Growing demand for aquaculture products throughout the developed and developing world is offering important opportunities for improving incomes and livelihoods of rural smallholders.

Household level subsistence type aquaculture will continue to support family nutrition for many, yet raising incomes for rural smallholders through aquaculture production means shifting towards a more business oriented approach – essentially market oriented aquaculture that generates sufficient profits and income for poor households to move out of poverty. This

approach is not appropriate for all, particularly smallholders with limited assets (e.g. those with small land holdings, no capital and limited knowledge). Where it is appropriate, an inclusive business approach is required to create and build value for smallholders, together with a conducive enabling environment. Enabling factors include environmentally suitable sites for aquaculture, smallholder numbers and geography (scattered smallholders are more difficult to manage than farmers in more concentrated clusters) and the presence of infrastructure that allow access to input and output markets. Often the presence of larger commercial businesses, particularly input suppliers for feed and seed is needed, as well as access to services and markets that allow commercially oriented transactions. Policy and institutional orientation of private and public sectors towards smallholders also plays a role, and both private and public sectors need to be much more pro-actively engaged with smallholder commercial aquaculture, particularly in areas with large numbers of smallholders and social and environmental imperatives.

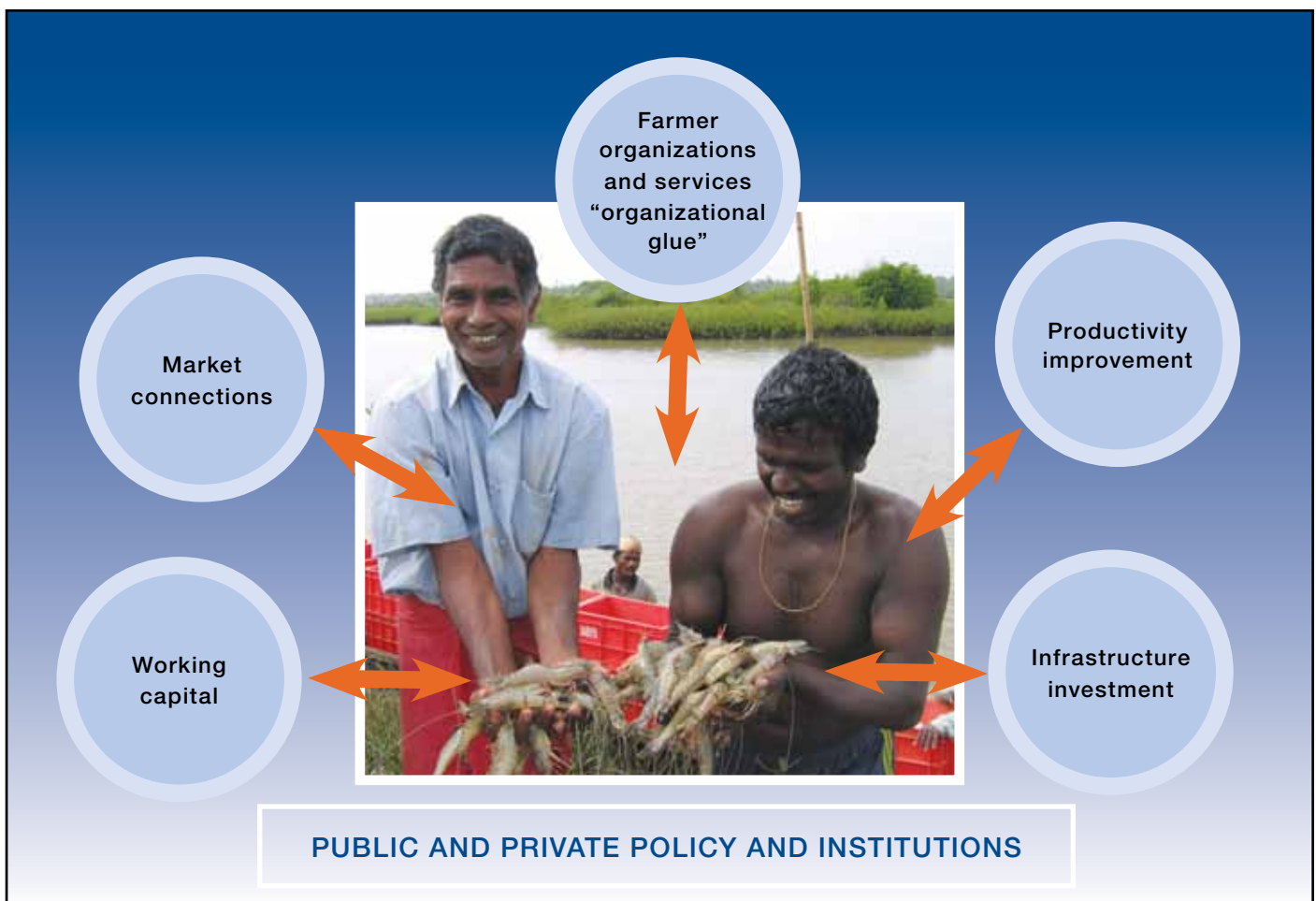
This policy brief provides guidance on investing in the improvement or establishment of smallholder aquaculture enterprises. It builds upon experiences of working with smallholder commercial farmers in Asia, and particularly from facilitating improvements with small-scale shrimp and fish farmers in Aceh, Indonesia, analyses of the Vietnamese catfish industry, a review of aquaculture producer organisations as well as cross-commodity and country comparisons (Padiyar et al ,2011; Kheim et al, 2010; Kassam et al, 2011; Umesh et al, 2009). It is intended to guide both public and private actors in approaches to financing improvements in business oriented smallholder aquaculture, and to be an entry point for the private sector on more inclusive ways to engage smallholders in value chains.

GETTING THE COMBINATION RIGHT

The core of an investment designed to establish or improve a smallholder aquaculture enterprise should be a viable business. Such a business should deliver value to smallholder participants, either individually or collectively and ideally have scope to increase in value over time. Whilst there may be multiple pathways to achieving business success for smallholders, complementary investments are usually needed to achieve business goals, and delivered in

ways that facilitate and support the transition of smallholders towards commercially viable enterprises. The types of investments that can be considered include the following:

- **Improving farm productivity:** Investments that deliver improvements and efficiencies in farm productivity and profitability are usually required. These may include those that improve access to quality seed and feed; reduce environmental impacts; prevent or treat disease; or facilitate adoption of better farm management practices or environmental standards. This category of investment might also include investments in R&D, such as the development of better feeds, resource efficiencies or higher yielding fish strains.
- **Improving organisation:** Investments in “organizational glue”, improving horizontal linkages so that smallholders can form groups or farmer organisations, and establishing vertical arrangements with buyers and suppliers, is often necessary. Collectively, farmers can create economies of scale for access to goods and services and improve bargaining power, improve management systems, build social capital and create more equitable relations with input and output markets. Organisational improvements may include those in community services, social enterprises and the development of farmer organisations and networks that facilitate knowledge sharing and cooperative business structures.
- **Access to working capital:** Operating costs for smallholders, such as in feed, seed, and water management require working capital. Farmers will commonly need to have access to sources of finance for improvements that generate sufficient income, in a context where access to credit is a common difficulty for many smallholders.
- **Improving market access:** Investments that improve access for smallholders and their organisations to output markets and create value for products both domestically and internationally are required. Market access improvements - particularly combined with organisational improvements - can generate further value for farm products. Such improvements may also open opportunities for cooperation with larger customers and new markets and may create incentives for better management, through, for instance, meeting certification standards.



Investments that support improvements in smallholder aquaculture enterprises

- Improving infrastructure:** Investments in production facilities (e.g. ponds, cages), infrastructure, input supplies (e.g. hatcheries) and post-harvest facilities may be necessary to improve farm performance and add value to products and the small holder business. Such improvements will often require access to loans with longer pay back periods.

The right combination of these types of investment and a viable business should be at the core of financing schemes for small holder aquaculture. To date though, public and private investments in commercially oriented smallholder aquaculture have usually targeted only individual components, often have a short term outlook and do not consider the necessary investments as a whole. The outcome is that investment returns - both individually, and as an integrated approach - have been reduced and undervalued, commonly leading to difficulties. All aspects need attention over time for the enterprise approach to work effectively and create value for smallholders.

CREATING VALUE THROUGH THE RIGHT APPROACH

The right combination of investments is required, but the right approach is also necessary to create value for small holders. Among the considerations:

Business model: A viable business needs to be at the heart of the smallholder aquaculture enterprise. Business models for improvement should consider farmers as part of a commercial enterprise with business arrangements that deliver value to farmers as owners. The business model should consider opportunities that create more value for smallholders right along the value chain, not only in production. Organisational elements – such as the group or cooperative – need also to be operating in a financially sustainable manner.



Pangasius arriving at a processing company in Dong Thap province, Vietnam. Farmers are not present when the fish is weighed when arriving at the factory. Figures are recorded and then communicated back to the farmer by the transport agent. Smaller farmers can be disadvantaged by such negotiations. Improving access to markets requires support to farmer organisations to build commercial skills and increase collective bargaining power with buyers.

Time: Investments in smallholder aquaculture become sustainable through a shift to a more business oriented approach, as well as access to services and better functioning value chains connecting farmers to input and output markets. The move to a more formalised production and marketing system may take time to implement, particularly across significant numbers of farmers. In Aceh, three years of investment in farmer and organisational capacity building was needed before viable business models started to emerge. Investments in farming services and farmer groups and organisations may take some time to realise returns and require different approaches than investments in farm operations.

Scheduling: Different types of investment are appropriate at different points along any “improvement pathway”. Introduction of the right skill sets at the right time into the pathway is key; there is no point in introducing the “organizational glue” too early before there is farmer buy in and commitment. Similarly, building market connections often requires a sufficiently high quality product to sell in sufficiently large quantities. Successful investments in improving productivity and organisational assistance in India for example preceded investments in improving market connections. Where opportunities for improved productivity and farm efficiencies may be limited yet the product is available in sufficient quantities, investments in improved market connections might be more appropriate for generating value to smallholders.

Intermediary organizations: Connecting farmers horizontally and vertically with “organisational glue” often requires facilitation through intermediary organisations. Intermediary organisations in themselves may need capacity to provide professional assistance for enterprises, and there is a need for investment in capacity development of both smallholders and their organisations. Competent intermediary organisations can also be channels for effective delivery of finance and other services to smallholder aquaculture farmers, but sound business models are needed to sustain these beyond development projects. Investment in “organisational glue” and the business of farmer organisations has received minimal attention to date, but is key in moving forward.

Facilitation and analysis: Circumstances of smallholder aquaculture enterprises are diverse and there may be multiple pathways and end points from investment. Business strategies need to differentiate different types of farm and different products in different places, and the role of public and private actors in the process should therefore be facilitative rather than prescriptive. Opportunities for “catalytic” investments in smallholder aquaculture in many developing countries should be sought out to address gaps or inefficiencies in value chains and should be careful to assess whether the elements needed to correct them, such as functioning farmer organisations, are in place. Grants and subsidies alone can never be the basis of business planning and should only be used to temporarily address gaps on the way to a self-sustaining business (Kassam et al, 2011).



Kafue Fisheries delivery truck, Zambia. Kafue Fisheries is the single largest fish farming SME in Zambia, producing tilapia and African catfish. The SME provides an example of an aquaculture enterprise moving up the value chain from production to marketing for more profitability, now targeting markets throughout Zambia and beyond.

Environmental sustainability: Investments in smallholder aquaculture can be a “win-win” for smallholders and the environment. Experience shows that environmental improvements in smallholder aquaculture can deliver better profits to farmers through improved water quality, efficient feed management, or reduced disease risks. Farmers therefore have incentives to comply with environmental legislation and certification standards when these lead to more household income. Investment in smallholder aquaculture can therefore be an entry point for improved environmental management, particularly in areas with larger numbers of farmers.

Business, not project: Investments should not be considered as project interventions; instead they should be made within the context of an economic vision or investment goal, using business principles as a foundation. Duration and exit strategy should be considered where external assistance is required. The goal should be to leave behind a functioning enterprise operating as a business. Investment in developing the capacity of smallholders and local people to run small business enterprises is necessary to sustain the business as well as to contribute to the long-term improvement of health and employment opportunities in communities.

BUILDING PARTNERSHIPS

Partnerships are important in increasing the likelihood of success with smallholder aquaculture enterprises. Public agencies, private investors and smallholders and their organisations bring different skills and resources and these complementary partnerships can reduce risk and increase the overall chances of success. Selection of partners with suitable levels of motivation, financial capacity and appropriate complementary skills is required.

Investments in production assets, working capital and infrastructure would be most suitable for private and public banks, but many banks are often wary of smallholders because of difficulties in dealing with large numbers of customers and concerns over risk. Bank concerns can be mitigated by productivity and organisational improvements such as partnering with farmer groups or intermediary institutions, and supporting technical organisations which



Aceh, Indonesia. Investments in organisation of smallholder groups helped communities to work together to restore and improve aquaculture pond infrastructure and management following the 2004 tsunami. More recent investment in local community operated service centers have also helped improve the technical services available to aquaculture farmers in the region.

reduce risk and transaction costs. Once engaged, banks may also bring further skills to enterprise development, such as business models and financial management.

Investments in market access and value chain cooperation are also important for creating sustainable opportunities for further value creation. Improving market access and marketing may require bank financing - such as for large investments in improving product quality through better post-harvest facilities - but there are also opportunities for building partnerships with large domestic and international customers such as seafood buyers and retailers. Such stakeholders can be important partners in connecting smallholder aquaculture enterprises to markets and making skills available to support improvements and developing longer term contracts that meet the needs of both parties.

Such coalitions of partners that together provide the right combination of investments and skills are rare to date, but provide real opportunities for delivering social and environmental benefits. Investments in management and organisational arrangements made possible by such coalitions provide a means of reducing risk for all participating partners and could generate significant social and environmental benefits for smallholders if achieved at scale.

CREATING IMPACTS AT SCALE

Smallholders are an important part of the rural landscape in developing countries across Asia, Africa and Latin America. Asia dominates in terms of numbers however, with about 87 per cent of the world's 500 million small farms (those less than 2 ha). Many of the world's poorest people living in rural areas are to be found in Asia and the Pacific region (Hazell et al, 2007). China and India alone account for 193 million and 93 million small farms respectively, with three other Asian countries: Indonesia (17 million), Bangladesh (17 million) and Viet Nam (10 million) (IFAD, 2011), also prominent. Recent analyses indicate that more than 16 million small farms are currently involved in aquaculture in Asia (RLF/WorldFish Center, 2010), with perhaps as many as 20 million globally. Individual projects can benefit individuals and communities, but the real challenge in moving forward is to create change by working at scale. Whilst this will require significant investment, the social, economic and environmental benefits to farm households, investors and society will be significant. Below we identify a number of actions which can help to bring about this goal:

1. Coalition building and creating partnerships for investment in smallholder aquaculture and ensuring such coalitions have access to the resources and skills they need to cover all categories of investment and manage risk more effectively.
2. Conducting and sharing widely research on business cases for smallholder aquaculture investment to encourage uptake of models and approaches that work for smallholder aquaculture. Business models which create sustainable intermediary and farmer organisations also need particular attention.
3. Investment in intermediary organisations and farmer organisations and cooperatives that can deliver professional services to smallholders and enable strength, security and bargaining power through cooperation. There are opportunities for emerging ideas of social business to be applied to the business of smallholder oriented organisations.
4. Wider networking for knowledge sharing of experiences in smallholder aquaculture investments, both among smallholders and investors. Networking arrangements can produce greater economies of scale and the sharing of experiences across wider networks can be used to advocate for greater awareness of investment and change in smallholder aquaculture.

5. Improvements in rural internet access and mobile communications platforms are opening opportunities for innovations that could connect large numbers of smallholder aquaculture enterprises at scale with the services needed to facilitate improvements and business sustainability.
6. Advocacy aimed at orienting public and private sector policy and institutions toward investment in improvements in smallholder aquaculture enterprises. Private corporate social responsibility (CSR) investments could be used to bring more smallholders into supply chains, and build and test smallholder business models.



Capital investment in a small feedmill by a smallholder aquaculture group, Bang Huk aquaculture club, Chonburi, Thailand. Financed from member savings, CSR investment from a local steel company and a government grant for equipment. The shared investment has helped reduce feed costs for cooperative members, leading to improved profitability of tilapia farming.

7. Developing investment funds and financing mechanisms for smallholder aquaculture enterprises. There are a number of investment funds – from government and philanthropic sources – being considered for smallholder aquaculture and these developments are welcome. Their impact can be increased through partnerships and packaging of the investments in ways that cover the spectrum of needs across the “improvement pathway”. In future, measures which bring about environmental improvements for smallholder agriculture may gain access to emerging climate change finance, and such opportunities should be explored for smallholder aquaculture.
8. Further investigations should be conducted at country level to enable more focused approaches to smallholder aquaculture business investments.



Smallholder farmer in Andhra Pradesh, India, growing freshwater prawns (*Macrobrachium rosenbergii*). Membership of an aquaculture society has provided smallholders in this region of India with improved access to farm management information, reduced price of inputs such as feed and seed through collective purchasing and improved farm yields and incomes.

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