Stories from the Field

PRISMA has developed new tools to more accurately understand constraints, estimate realistic farmer returns, identify pathways to scale, and properly assess value for money.

Patron Hartoyo with the Lukman (far left) & H.Iman (in red)
(Photo: PRISMA/Nina FitzSimons)

The One that Got Away!

Learning from failures in cage fish farming in East Java

To get better farmer impact, outreach and sustainability, the Australian and Indonesian governments, through a program called PRISMA, started using an innovative approach to poverty alleviation for smallholder farmers. The approach is known as Making Markets Work for the Poor (M4P). By partnering with the private sector to improve farmer competitiveness and access to new markets, PRISMA aims to achieve a sustainable 30 percent increase in farmer incomes across a range of agricultural commodities important to the poor.

M4P is a new approach in Indonesia and relies on successful partnerships with the private sector to help identify and address constraints to farmer productivity and performance. Interventions are selected on: their potential for outreach – how many poor farmers will benefit; their impact – how much additional income farmers will earn as a result of the project and; sustainability - how enduring this change will be. So far PRISMA has started nearly 40 interventions in 15 agricultural sectors. Because the approach relies on piloting new business models, not all interventions will be successful. One such case was a fish cage farming project in Situbondo District in East Java.

The grouper farming intervention was designed to improve fisher folk incomes and improve sustainable fishing practices by strengthening the cage farming fisher association (A*sosiasi Pembudidaya Ikan Karamba Jaring Apuk-APIK*), and by providing access to credit for fisher folk so they could start their own fishery businesses under the patronage of APIK members. The intervention provided capacity building in cage farming practices to thirty APIK members, 6 of whom agreed to provide patronage services to local fisher groups.

The plan was for fisher groups to buy or rent fish cages from the APIK patron. The patron would then pass on the inputs, like fish food and medicine, and provide training in basic aquaculture management. This was made possible through a deal brokered with Bank Jatim, who would provide credit packages to fisher folk at reasonable terms.

As part of the fisher folk's business model, PRISMA partnered with a Bali-based grouper fish exporter, PT. Trimitra Anugrah Segara (PT.TAS), to sell quality fry (hatchlings) to the cage farmers and technical assistance in fish rearing to APIK patrons. APIK members in turn would sell their grown-out grouper stock to PT.TAS, who had established export clients in

Hartoyo at his cage farm in Gelung village, Situbondo (Photo: PRISMA/Nina FitzSimons)

Taiwan, Hong Kong and China. This deal would enable the cage farmers to significantly increase grouper production.

On paper the project looked promising with a projected outreach of 1,200 fisher folk with an estimated net increase in income of 140%. In practice, however, the project failed to reach any of these targets and did not progress beyond the pilot stage. So, what went wrong?

Underestimating complexity:

One of the big challenges was that the grouper species requires a high level of technical expertise in order to raise the fry to fingerlings and then from fingerlings to adults. Lukman (18) and H.Imam (46), fishermen who, through their farmer group, invested in nine cages with their APIK patron, Hartoyo Setiawan (48), explained that grouper are not only susceptible to disease but are also cannibals and this contributed to high mortality rates. Their fish stock was also affected by El Nino, which increased water salinity levels contributing to a further reduction in their stock. “This business is risky”, explains H.Imam. “When the other fisher groups saw our losses, no one wanted to join”.

While the rewards of cage farming are significant, the risks are also high. This meant that only fisher folk who had sufficient collateral were prepared to take the risk. This, of course, meant that the project was no longer attracting the poorer fisher folk, who were the intended beneficiaries of the project.

A poor understanding of sustainability:

Another weak point identified by PRISMA was the application of the approach. The cage fish intervention was facilitated by an international NGO on behalf of PRISMA. The NGO had experience in grouper farming in the Philippines. However, the organisation was new to connecting intervention stakeholders in win-win relationships in which deals are mutually reinforcing. Their lack of experience in understanding markets resulted in the NGO staff taking a more hands-on approach when the market players failed to perform. Rather than facilitating the business interactions between APIK and PT.TAS, and in an effort to meet implementation deadlines, the NGO began to perform key activities themselves. Fish rearing training and promotional activities, for example, were undertaken by the NGO staff, rather than the NGO encouraging PT.TAS to do this. As a result, PT.TAS were less invested in the business model and this led to an unsustainable reliance on the NGO.

Making finance too easy:

One of the core elements of the business model was to facilitate access to finance for fisher folk. The fish cages are a floating frame constructed from wood and bamboo with nets suspended in the water. One cage can cost up to Rp.5 million (approximately $500) with at least 8 cages required. Such an investment is beyond the means of poorer fisher folk without access to financial assistance.

To ensure fish farmer access to finance, the NGO facilitated an affordable loan package for fisher folk through Bank Jatim. To encourage the bank to develop this new loan product, the NGO provided a guarantee fund to cover 100% of the loan.

While the provision of the guarantee fund stimulated the bank to develop the new loan product, the bank was not interested in providing the loan package without the guarantee in place. This made the business model unsustainable and the bank withdrew the product once the pilot period came to an end.

Lessons Learned:

While the intervention was successful for some fisher folk, the outreach was limited and the investment represented poor value for money by PRISMA’s standards. Without the subsidised support of the NGO the business model was unsustainable. This was one of PRISMA’s first wave of interventions - problems were underestimated, staff were not familiar with sustainable business models, and the problem analysis was too superficial. As a result of this and other failures, PRISMA has developed new tools to more accurately understand constraints, estimate realistic farmer returns, identify pathways to scale, and properly assess value for money. The program has also invested in more market systems development training for co-facilitators and staff. PRISMA is also now working with a sister program called SAFIRA that specialises in helping banks to design sustainable value chain finance loan packages. This will certainly not be PRISMA’s last failure but as long as the program keeps learning from these experiences they expect to see fewer and fewer “getting away!"

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The Australia-Indonesia Partnership for Promoting Rural Income through Support for Markets in Agriculture (PRISMA) is a multi-year program that is part of the Indonesian Government’s long term strategy to encourage economic growth. With the support of the Australian Government, the program aims to achieve a 30% increase in the net incomes of 300,000 male and female eastern Indonesian farmers by the program's end by providing innovative solutions to increase productivity and market access.

PRISMA focuses on agriculture sectors that are the main source of income for a large number of smallholder farmers and have strong growth potential in areas of East Java, West Nusa Tenggara, East Nusa Tenggara, Papua and West Papua. Partnering with key market stakeholders, the program help spur growth along the value chain by reducing barriers and constraints within the agriculture sector.

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