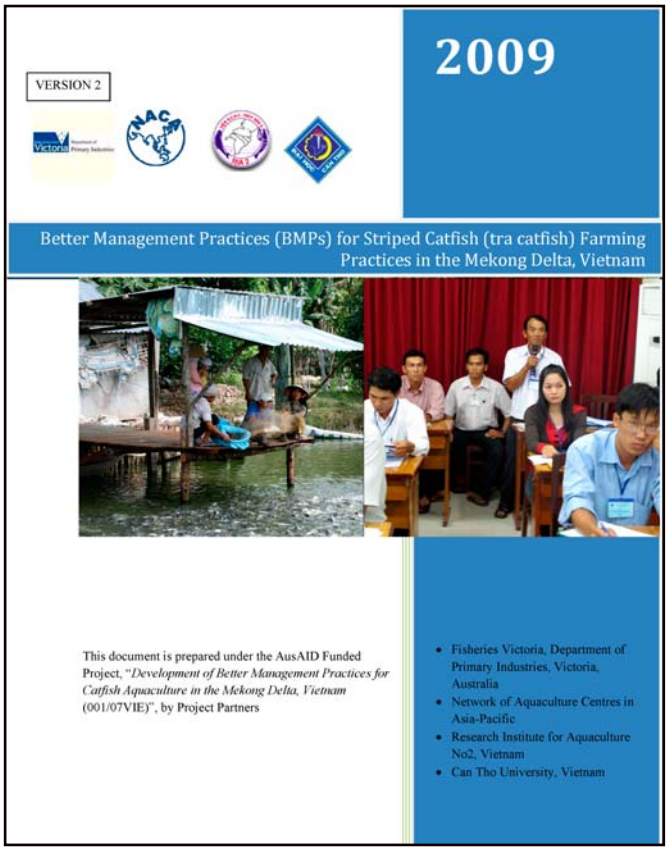


- Evaluating the financial and technical aspects of compliance to WWF standards by small scale farmers.

Networking of key BMP project implementers in the region

ACIAR supported a project to network and share experience amongst key personnel involved in implementing BMP projects in five countries, India, Indonesia, Thailand, Vietnam and Australia.

Conclusions

BMP projects, in India, Indonesia, Thailand and Vietnam provide good examples of translating the principles of responsible aquaculture into specific BMPs adapted to local farming conditions and ensuring their implementation by relevant stakeholders, with consequent gains in production, quality improvements and market accessibility. They also show evidence of the advantages of small-scale farmers being organised (farmer groups/societies), sharing resources, empowering the stakeholders, helping each other and adopting BMPs. The implementation of the better management practices has provided benefits to the farmers, environment and society.

BMPs need to be grounded in valid scientific justification, rather than perceptions and or superficial experiences. Thus there is a need for R&D to validate key BMPs, and to quantitatively assess their impact on farm production and economics. Equally, there is a need to develop implementation mechanisms to permit large-scale scaling up of BMPs to create impacts among large numbers of small-scale farmers. Implementation mechanisms should also, far as possible, be supported by and built on systems already in place in the relevant country i.e. the cultural contexts prevalent in each country have to be taken into consideration.

Market links are now being explored between BMP implementers and buyers, but considerable further R&D work is necessary on strategies that connect small-farmers to markets. Enhanced regional cooperation is required to build on existing experiences and promote wider adoption of better management practices across selected commodities and countries in the Asian region.

Way forward

The lessons learned from BMP programs in the region should pave the way for development and implementation of BMPs for other key aquaculture commodities. BMPs should be simple, science based and cost effective and pragmatic, so that farmers can readily adopt them. Development, validation and implementation of commodity-specific BMPs should be seen as a way forward for promoting sustainable aquaculture in the region.

The regional BMP work of NACA and its partners has received a further boost with the support from the recently approved EU-ASEM project under the 7th framework. In the EU-ASEM project an attempt will be made to assess the true holistic impact of BMP programs and develop practical and feasible strategies for national and regional scaling up of BMP and cluster management programs.

NACA is open to collaboration and partnership with national, regional and international stakeholders interested in furthering the BMP and cluster management work. Please visit www.enaca.org for details about various projects and get in touch with the R&D Manager, Dr CV Mohan at mohan@enaca.org.

An update on organic scampi aquaculture in Andhra Pradesh

The National Centre for sustainable Aquaculture (NaCSA) and India Organic Aquaculture Project (IOAP), MPEDA took up organic fresh water prawn (*M. Rosenbergii*) farming in two societies of West Godavari District of Andhra Pradesh. A total of 27 farmers, from Sri Venkateswara Aqua Farmers Welfare Society, Matsyapuri and Sri Sainadha Aqua Farmers welfare Society, Velivela were involved in the project covering 31 ha area. As the organic concept is new to the farmers a series of awareness meetings with the society members and officials of MPEDA/NaCSA were organised. In two of such meetings

the consultant for the project Mr. Mathias Krebs from Blueyou, Germany also took part. The different phases of project implementation are as follows.

Organisation of societies

Sri Venkateswara Aqua Farmers Welfare Soceity, Matsyapuri (279/2006) and Sainadha Aqua Farmers Welfare Society, Velivela (67/2007) are registered societies under *Societies Registration Act 35* of 2005.

Application for cluster organic certification

An MOU on the collaborative organic project in India was signed by MPEDA and the Swiss Government during IndAqua 2007. Following the signing of MOU initial awareness meetings were conducted on 20th March, 2007 by the SIPPO team along with their consultant from Blueyou. These two society farmers were already following traditional prawn farming practices without using any chemicals and antibiotics in their farms. These farmers were technically supported by NaCSA, which involved implementation of Better Management Practices through its field officials and also through training of the Society Coordinator in minimisation of disease risks and improvement of food safety. This work has been carried out for the last five years. The society farms are managed mainly by family members with the help of seasonal workers during the harvest period. Farmers used to sell most of their scampi production to the local traders.

Once the project started the supply of critical organic inputs like seed and feed was taken up by IOAP. The IOAP team conducted several meetings and successfully coordinated activities among all the key stake holders including the hatchery, feed mill, farmer society and processing plant. Prior to the beginning of farm operations the hatchery and feed mill were certified by Naturland for implementing organic standards. Later the two societies applied to Naturland for Organic Cluster Certification in the prescribed format through IOAP.

Preparation of internal control system

Societies were managed by a Managing Committee and an internal control system (ICS). The ICS was developed by societies to implement Organic Internal Standards prepared in consultation with farmers by the project team consisting of IOAP and NaCSA officials along with the consultant for the project on 9th July, 2007 during a workshop at Narsapur, West Godavari Dt., AP. Farmers, MPEDA, NaCSA officials and other stakeholders involved in the organic project were trained in the internal control system at M/s Indocert, Aluva, Kerala during the training workshop in 2008. With the help of knowledge acquired from training, farmer societies prepared internal control system along with NaCSA.

Implementation

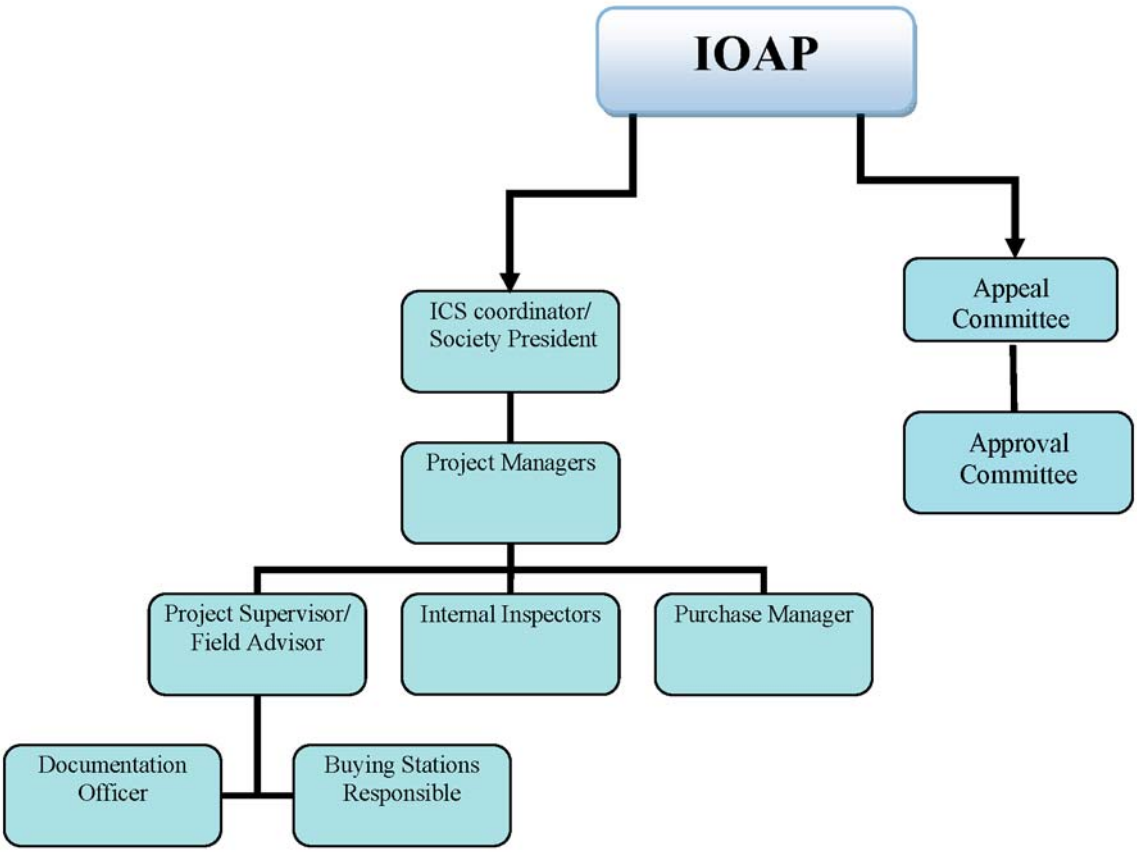
Coordination meetings among the society farmers were conducted regularly to coordinate all the activities of organic project. All decisions on the crop activity was reviewed during the meetings and it was properly recorded in society minutes book. Mr.Phani Raju President of Sri Venkateswara Aqua Farmers Welfare Society from Matsyapuir and Mr. Meher, President of Sri Sainadha Aqua Farmers Welfare Soceity from Velivela lead the Internal Control System Team as ICS project coordinators in the respective societies and were key contact persons in implementing the project. Farmers willing to join the IOAP approached the ICS team stating their willingness. Then field officer of ICS team visited the ponds and based on the assessment of the farmer's entrance form screened by the ICS coordinator.

The basic criteria to be eligible for organic certification are:

- Should be a member of the cluster/society.
- Farmers in possession of records on land ownership or leaseholdership/.
- Should have local legal farm registration.
- Should abide internal standards of the cluster/society.
- Willing to convert the whole farm into organic production.
- Farm premises should be kept clean and hygienic
- 50% of farm should be covered with vegetation.
- No track record of chemical, antibiotic or pesticide usage in the farm.
- Water source should be free of pollutants and chemicals.
- All the inputs used in the farm should meet internal standards.

The detailed organisational structure is schematically represented below

Figure 1: Organisational chart.



Organic certified seed

Organic scampi seeds were procured from Naturland Organic Certified Prawn Hatchery M/s Rosen Fisheries, Thrissur, Kerala during last week of July, 2008. As a general practice for scampi farming, seeds were stocked in nurseries. Common nurseries were maintained in Sri Sainahda Aqua Farmers Welfare Society, Velivela and individual nurseries were maintained in Sri Venkateswara Aqua Farmers Welfare Society, Matsyapuri. Both practices show a better result of ~80% survival in nursery. After 45 days of nursing period


Naturland

Certificate of registration
2008 / 2009

This is to certify that

Sri Sainadha Aqua farmers Welfare Society
West Godavari Dist, A.P., Andhra Pradesh
INDIA

Code: 98407

juveniles were shifted to the grow out with 1.5 PL/m^2 stocking density. Organic nursery feed was used during the nursery phase. Overall survival rate in the nurseries was 62%.

Organic certified feed

Societies purchased organic feed from organic certified feed company, M/s Waterbase limited directly without any middlemen/dealers. Through this process society farmers were able to purchase the feed at factory price with out any additional cost. Feed procured by the society in bulk was distributed to the farmers from society's central store. It was distributed to the individual farmers based upon their requirement, after verification of the IOAP dairy. Every day feed consumption was monitored by the society coordinator. A total of 18.4 tonnes of organic feed was used by these two societies.

Farm management

Water

The water source was from irrigation water supply canal from Godavari River Delta which met the organic standards. Water quality and growth rates were monitored regularly by the ICS team.

Data management

All the farm management data including farm entrance form, IOAP dairy, bill copies were kept in the society office. These data were maintained by the farmers and monitored by society coordinators in both the societies.

Certification

Societies implemented the organic standards under the supervision of MPEDA and NaCSA. Periodic meetings were conducted to emphasise the organic farming standards to every farmer. The internal control system was implemented by both societies. Internal inspections were conducted by internal inspectors involving farmers, society coordinators and NaCSA staff and external inspections was carried out by NATURLAND authorised inspection agency, Indocert, Kerala to ensure the implementation of organic standards. Both the societies were cluster certified by Naturland for organic scampi farming. This is the first of its kind in aquaculture. Below are the copies of the cluster certificates issues in the name of societies.

Table 1: Proportion and average size of harvest.

	Male	Female
% in number	53	47
% in production	38	62
Average Size	59 g	30 g

Marketing

M/s Jagadeesh Marine Exports, Bhimavaram which is a Naturland certified processor was the natural choice for marketing of organic prawn. The prices for the organic prawn were fixed well before the beginning of the crop. Based on a mutually agreed price structure during October, 2008 an agreement had been signed between Jagadeesh Marine Exports and both of society representatives for the quantities of organic prawn to be supplied and its final price.

Harvest

Scampi ponds were harvested partially as is the common practice. The inaugural harvest was conducted on 29-01-2009. Harvests within the society were coordinated, to give maximum possible quantities for the processor. Harvested prawns were chill killed immediately and there was no pre processing at farm site. Prawns were sold head on along with, claws. Average survival rate was 49.6% from PL stage. A total of 12.6 tonnes of organic scampi was produced from these societies and processed by M/s Jagadeesh marine exports (Table 1). Average FCR was 1.46. The crop outcomes are summarised in Table 2.

Way forward

Organic prawn farmers are happy with the over all outcome of the crop. There were no disease incidents, growth was good and farmers could make decent profits.

As a result 88.62 ha of new scampi farming potential areas are being identified and assessed for feasibility to implement the organic project.

India Organic Aquaculture Project

Table 3: Crop summary report of Organic project in AP during 2008-09

Item	Value
Total Area under Organic Aquaculture Project	30.85 ha
Total no. of juveniles stocked by societies	427,350
Total feed utilised by societies	18,400 kg
Total production	12,557 kg
Average production	407 Kg/ha
FCR	1.46

Table 4: Economics of Organic Scampi Project completed in AP during 2008-09.

Item	Production cost / kg
Lease cost	31.00
Pond preparation	17.00
Diesel cost	13.00
Seed cost	39.00
Feed cost	59.00
Labour charges	22.00
Certification cost	13.00
Cost of production per kg	193.00
Average revenue per kg	280.00
Profit / hectare	Rs. 55,495

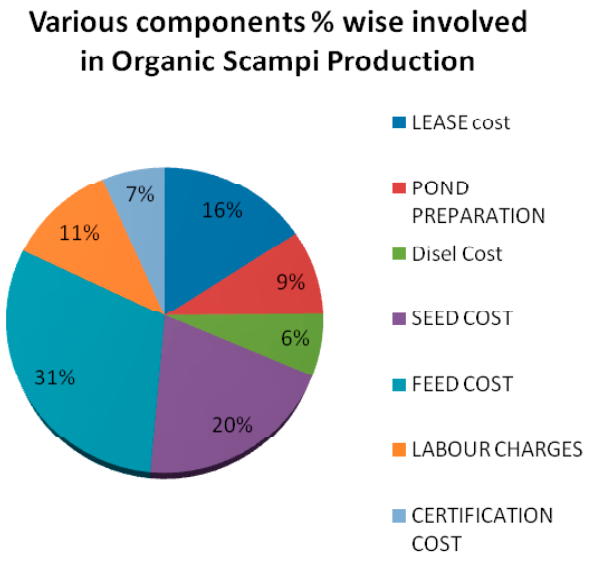


Table 2: Crop outcome.

	Area	Farmers	Total Production
Sri Venkateswara Aqua Farmers Welfare Society, Matsyapuri	10.26 ha	10	3,964 kg
Sri Sainadha Aqua Farmers Welfare Society, Velivela	20.89 ha	17	8,593 kg
Total	**31.15 ha**	**27**	**12,557 kg**