

Project Evaluation Summary Sheet

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| Project Number and Name: <i>002/05VIE. Technical and Economic Feasibility of applying Better Management Practices to household aquaculture in Vietnam</i> | | |
| Vietnamese Institution(s): Research Institute for Aquaculture No.1, Vietnam | | |
| Australian Partner Institution(s): The University of Western Australia (UWA), Australia | | |
| Date Approved: Aug. 2006 | Date Commenced: August 2006 | Date Completed: Dec. 2008 |
| Project budget (A\$): | Total: 498,663 | From: AusAID: 292,043 Vietnamese institution: 76,600 Australian institution: 130,020 |
| Project Abstract (from Proposal): | | |
| <p>Household coastal aquaculture farms, ranging in area between 0.5 ha and 3 ha, produce 90% of the output of farmed shrimp from in Vietnam, worth \$USD 1 billion in 2004. The economic viability and environmental sustainability of farms in this sector are threatened by poor farming practices that lead to disease outbreaks, environmental degradation; crops contaminated with chemical and antibiotic residues and decreased yields. Pilot-scale Better Management Practices (BMP) can, and have been applied to larger commercial aquaculture ventures in Vietnam, with the outcomes of improved yields and quality, environmental sustainability and reduced risk of disease. However, difficulties arise in the administration of BMP to household farms because of financial constraints, lack of knowledge and little incentive or initiative to adopt BMP. The overall objective of this project is to investigate the effectiveness of BMP application to household farms and to develop methods to initiate BMP within this sector. The project has used consultative, incentive, demonstration, training and dissemination methods that are appropriate to the needs and abilities of household farmers. Project outcomes are the development of methods for dissemination and utilisation of BMP amongst household farmers, leading to tenable farm practices, reduced disease risks, reduction in environmental degradation, increased yields and improvement of economic viability of the sector in the long term. The project has contributed to the Government of Vietnam's Comprehensive Poverty Reduction and Growth Strategy (CPRGS), which is aligned with CARD program strategic framework.</p> | | |
| Specific objectives: | | |
| <ol style="list-style-type: none"> 1. Document current status of shrimp culture in north central provinces, experience on BMP application to aquaculture worldwide; and to select suitable farms for BMP demonstration. 2. Demonstration trial of BMP proposed in on farm trials in 3 provinces in coastal region of north central Vietnam. 3. Data analysis and modelling of BMP from demonstration trials 4. Dissemination of BMP | | |
| Reports Produced (Scheduled and completed Date): | | |
| Milestone | Scheduled | Completed |
| MS1: CARD Contract Signed | April 2006 | August 2006 |
| MS2: BMP Protocols | June 2006 | May 2007 |
| MS3: Shrimp Culture Baselines | August 2006 | May 2007 |
| MS4: 1 st Six-monthly Report | October 2006 | March 2007 |
| MS5: 2 nd six-month report | February 2007 | August 2007 |
| MS6: BMP Extension Materials | March 2007 | October 2007 |
| MS7: 3 rd six-month report | August 2007 | February 2008 |
| MS8: Research Publications/Technical Reports | October 2007 | February 2008 |
| MS9: Staff Competencies | December 2007 | December 2008 |
| MS10: Project Validation | January 2008 | January 2009 |
| MS11: Project Completion Report | April 2008 | February 2009 |

| Evaluation Team: <ol style="list-style-type: none"> 1. Mr. Truong Duc Toan: Institute for Water Resource Economics and Management 2. Mr. Nguyen Quoc Nghi: Science Technology and Environment Department, MARD 3. Mr. Nguyen Ha Hue: CARD M&E Coordinator | | Date of Evaluation: Field visit 20-23, July 09 | Project Completion Evaluation (PCIE) |
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| Evaluation Summary | Score | Comments | |
| Relevance | 4 | <p>The project objectives were highly relevant to Vietnam in the context of development of fisheries sectors since Vietnam is still one of the leading fisheries exporting countries of the world, and it has a competitive advantage in producing shrimp. The design of the project, which focused on exploring best management practices in Vietnam and other countries and investigating current issues with regard to shrimp farming in pilot provinces to promote better management practices, addresses the real needs of Vietnam. The process of identifying existing problems in association with selecting current best management practices in Vietnam and other countries to adopt, implementing trials in project areas, then assessing the efficiency of BMP is evaluated being as a good approach to achievement of its objectives. The objectives were clear, realistic and measurable. However, the BMP is designed for farming common tiger shrimp only. Other types of shrimp need more research for adopting BMP.</p> <p>Asked farmers assessed that the project was very necessary. Local farmers were happy because they need to complete process for shrimp farming.</p> | |
| Effectiveness | 4 | <p>The project appears to have done the right things and succeeded in achieving its objectives. In particular, the project has proposed a new method of management of shrimp farmers based on groups/ clubs. This is assessed as a very important factor in terms of shrimp diseases as well as choosing good quality of shrimp seed for stocking. The mechanism for operation of such types of group is to select representatives of the groups to be responsible for taking care of disease control and checking the quality of seed before buying.</p> <p>The project was assessed by farmers to have a large effect on awareness of the community. Community groups had been established and operated thanks to the project. The project has increased the knowledge of the community and made shrimp farmers to work together closely”.</p> | |
| Efficiency | 4 | <p>The project team is assessed to be successful in organizing and cooperating with relevant stakeholders during the implementation of the project. Resources used in the project are appropriate with regard to equipment and BMP procedures as well as human resources.</p> <p>In terms of farm trials for BMP development, the project team selected different types of farming systems: semi-intensive and improved extensive and organising them into groups /clubs. Then during the demonstration, data was recorded for group of farms (reduce the costs of experiment) because normally farms belong to group have the same conditions on water quality as well as environmental parameters. The project invested tool kit for testing environmental parameters to be a good support for them to work in groups and to be familiar with BMP.</p> <p>The project worked with 9 core farms (3 per province), but the operational approach of the project is to work with 270 farms. The change of trial farms to work in groups did not impact on the initial estimated budget because the budget was spent mainly for group demonstration and building capacity. This is a good approach because if all individuals of farms in groups were implemented with environmental control it would take time and the results of farms in a group are often similar to each other in the group.</p> <p>The timeliness of the implementation of the project was considered good. However, during the implementation of the project, the shrimp households were affected by natural disasters such as the storm number 5 in Ha Tinh and Nghe An, and the flood in Thua Thien Hue in</p> | |

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| | | 2007. The white spot disease outbreak in Vietnam in 2007 and 2008 also affected to shrimp farms in project sites. In addition, in 2008, global financial crisis caused some negative effects on shrimp culture in Vietnam in general and in the project areas in particular. |
| Sustainability | 4 | <p>As the evaluation mentioned above, the project has produced different positive outcomes which are likely to be maintained and replicated. Indicators that were identified during the field trip include:</p> <p>1) The awareness of the community is higher with regard to shrimp culture adopting BMP to reduce risk of farming.</p> <p>2) Households understand the need to coordinate or cooperate in groups or associations in controlling diseases as well as input shrimp seeds to ensure farming more efficiently. Technical issues are more controlled by farmers and community management and organisation has been promoted. If BMP is adopted, the survival rate of shrimp is increased; shrimp diseases could be eliminated or easily stopped when shrimp diseases occur.</p> <p>3) The information on BMP is circulated through training courses, workshops, and training MSc student and technicians. Related information and outcomes of the project were published through different sources such as:</p> <ul style="list-style-type: none"> • The results of general BMP training course were published in Thua Thien-Hue Newspaper. • The BMP practical process was broadcasted on Ha Tinh Television • The project information and project results were published in the Newsletter and the Website of RIA1 and the website of CARD. • The project outcomes were presented at international ViFINET workshop at Cantho University and national young scientist workshop at RAI1 <p>The BMP training materials and BMP protocols were delivered to local offices and households in project provinces. Therefore, the benefits of the project are likely to be maintained, as a consequence of financial returns, stability, etc.</p> |
| Impact | 4 | <p>The project has a significant impact of knowledge skills, practices, profitability on stakeholders and beneficiaries, especially on shrimp farmers, fisheries extension staff at provincial and district level in the pilot areas. The project has been contributing to increasing yields, lowering risks and improving product quality of shrimp farming, therefore to long-term poverty alleviation and income generation for households directly involved in aquaculture production chains.</p> <p>BMP requires higher costs than non-BMP such as for pond preparation, shrimp seed and feed, bio-product, chemical, energy and others. However, the income of BMP group is higher (about 109.5 million VND per ha) as a result of less disease, higher yields, etc. The economic analysis of the project indicates that the average benefit-cost ratios of shrimp farming in three pilot provinces are 1.29, 1.23, and 1.37 in response to baseline, non-BMP, and BMP respectively. This is a very important factor to encourage farmers to apply BMP. Although the net average benefit of shrimp culture per ha in case of BMP is 30,844,000 VND in compared to 13,895,000 VND in case of non-BMP, the most important factor of applying BMP shrimp culture is to ensure to again income for households as a result of good disease control and high quality of product shrimp.</p> <p>The project has some good environmental and social impacts such as distributing to a better quality of farming environment. Female participants in the project were encouraged to attend in project activities such as training, cross visiting and association meetings. However, the percentage of females who attended was still low. Two female students (Bachelor and Master) were given to write their theses based on the project scope. These female students received very good results for their theses.</p> <p>In terms of capacity building (research activities and training), the project has contributed to improving capacities of stakeholders at different levels:</p> <ul style="list-style-type: none"> • At central level, RIA1s' staff, who directly involved in the project (both managers and technical experts), improved their capacity in both abilities of management and |

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| | | <p>research skills and ability to train others.</p> <ul style="list-style-type: none"> • At provincial level, extension staff in three provinces, who worked for the project, improved BMP implementation capacities and they approached to BMP knowledge through management, technical transferring and training activities. The extension workers were competent to train farmers, etc. • At local level, communities' leaders, aquaculture communities' managers and shrimp farmers in project areas, improved their capacities on BMP implementation, and more importantly, the capacity to manage and operate aquaculture clubs/associations in order to develop effective and sustainable shrimp culture. <p>The number of households/shrimp farmers using the BMP is, at initial stage, evaluated to be extended or scaled up outside pilot areas. Other households from different communes, have come to his farm to learn about the experience of BMP farming (to adopt BMP). The contribution of the project was aslo highly appreciated by some farmers.</p> <p>In the future, the impact of the project will be high since the issue of secured and safety food has been paid attention by the government as well as consumers. The culture following traditional farming always involves much risk such as diseases and high antibiotic residual in product shrimp affecting consumers' health. Such problems need to be eliminated. Therefore, the BMP will have a chance to be extended widely. However, it also needs the promotion of shrimp culture toward adopting BMP. Fisheries extension staff at different levels of provinces will take an important role in introducing and transfer the BMP to different households/ or shrimp farmers to ensure that they practise farming efficiently and toward sustainable development.</p> <p>During the field visit, although there are some opinions of local people that households who did not apply BMP could earn more income because they beared lower costs of farming. However, they take a high risk of loosing income, for example, the occurrence of shrimp diseases, the problem of anti-biotic residual affecting consumers. In the future, for sustainable development, the BMP adaptation should be essential and strictly required.</p> |
| <i>Average Score</i> | 4 | <p>Based on the evaluation team's findings, this project can be considered to have successfully achieved its objectives and has demonstrated early signs of positive impact for both the fisheries industry and the project participants. There are also good indicators that project outputs will be sustained and extended. In relation to the relevance, effectiveness and efficiency of the project, the evaluation found that the project was successful when assessed against these factors.</p> |
| Overall Assessment b/: Satisfactory | | |
| <p>Major Problems Identified:</p> <p>Some major problems identified regarding the practising of BMP include: 1) BMP was developed for common tiger shrimp only. At present, there are many farms of raising white leg shrimp. BMP, therefore, may not be appropriate if it needs further guidelines for farmers to adopt the BMP for such type of shrimp; 2) the costs for farms to practise BMP are significant higher than that of traditional practices, however, the price of product shrimp does not differ in practice. This is because of shrimp dealers/sellers prefer good looking shrimp rather than the inside quality of shrimp. At present, shrimp is sold for domestic consumption, but if the product is produced for export, it may not meet the required quality standards. This implies the need for an authorised agency to assess and provide certificates for farms adopting BMP.</p> <p>The field investigation identified that there are still farms where farmers keep their traditional practices. After the completion of the project, most farms do not follow the full process in BMP. For example, the records of environmental parameters are not implemented since farmers do not have equipment to sample and test. Other processes of BMP are often dropped by farmers such as killing crabs or using surrounding nets.</p> <p>Although the economic efficiency of adopting BMP was analysed to be higher, the analysis was only implemented in case of before and after for pilot models. After a period of 2 years, there may many other factors that could lead to better efficiency of shrimp farming. It would be more reliable if there was analysis of some models in cases of with and without adopting BMP at the same area.</p> | | |

Lessons Learned:

The project team has made good coordination with relevant stakeholders at locals and among partners. However, there are still some opinions that the cooperation between sector management at central level, provincial, and district and commune was not very good and needs to be strengthened. Links for talking, discussing and contribution of extension staff need to be developed. The responsibility of local government toward the project was not good. All these are considered as weakness to be learned.

The information about the BMP and the model of community management (in forms of clubs/ associations/ groups) should be circulated or disseminated across the whole sector for potential producers/ farmers to know and adopt in practice. The manuals and protocols of the BMP could be published as a guideline for farmers' adoption. Further research may be needed to modify and develop the BMP for different types of shrimps, especially tiger shrimp and white leg shrimp. These two are most popular in farming across provinces of Vietnam.

Further impact would depend on further support from decision makers at provincial level and even MARD in terms of promoting the adoption of BMP and related policies for development of community organisations in shrimp culture. Fisheries extension staff in provinces also needs to take an important role in introducing and assisting farmers in terms of technical issues and management model to change traditional culturing methods toward best management practices. There are some evidence that farmers can also assist in transfer of practices as mentioned above.

The delay of the project compared with the anticipated start (as the result of contract negotiations for about 4 months) caused further delay as a consequence of shrimp farming by seasonal. In terms of recommendation to CARD project management, it needs to process procedures as well as finish contract negotiations at proposed time since projects with experiments/ demonstrations especially with fisheries and shrimp trials, they largely depends on seasons with available seeds as well as weather conditions.

Recommendations:

In terms of policy recommendations, some issues need to be carried out to promote the development of BMP, including: to establish a unit inside provincial department of agriculture and rural development to assess and endorse farms where BMP is implemented to certify the meeting of environmental standards and quality of shrimp farming; to promote the development of community management (in form of clubs/ associations/ groups) to control shrimp diseases as well as seed quality; to set information provision channels at provincial level to consult technical issues to farmers' groups/associations/clubs even extension staff to come to farms in necessary cases; to provide extension activities on BMP in form of "on farm" workshops to spread the experience of BMP to other areas in each province.

High quality shrimp seed plays the most important role to shrimp production of farmers; therefore, it needs to have projects to support/ promote producing seeds with high quality because if the shrimp seed is low, farming shrimp could be died even farmers follow BMP strictly. It also needs to have recommendations on how long shrimp farmers should spend some time for ponds free (not farming) to ensure the issues of environmental quality. For product shrimp for export, it needs to require strict BMP and to be compulsory for farmers to implement. Further propaganda about the quality of product shrimp should be made to raise awareness of farmers and consumers toward the issues.

a/ 1 = worst 5 = best

b/ Highly Satisfactory, Satisfactory, Moderately Satisfactory, Un-satisfactory