I. INTRODUCTION

1.1 Background

Indonesia, as an archipelago with a total coastline of 95,181 km (DKP, 2009) and with warm water climate all-year round, has great comparative advantages in aquaculture industry. With appropriate efforts, applicable strategies and coordination, nationwide competitiveness can be built to increase sustainability in the aquaculture industry.

According to Statistics Indonesia (Badan Pusat Statistik Indonesia), Gross Domestic Product (GDP) of aquaculture products in 2008 at current prices is 136 Trillion Rupiah, which comprises 2.47% of the Total GDP. One of the aquaculture commodities is shrimp. In 2008 export volume of shrimp is 170,583 tons, which comprises 18.7% of the total aquaculture products volume. Shrimp export value for the respective year is 1.2 Billion USD, which comprises 43.2% of the total aquaculture products value (Badan Pusat Statistik Indonesia, processed by Ditjen P2HP). As shown in Figure 1, Indonesia has been one of the major shrimp producers over the years. In 2005 Indonesia was the world third largest shrimp producer in the world after China and Thailand.

East Java, supported by advanced infrastructure, easy road access and good knowledge network in fisheries, has a great potential for aquaculture production which contributes to national aquaculture production. In 2008 East Java export volume of frozen shrimp is 48,384 tons, which comprises 28.4% of the national shrimp export volume. East Java shrimp export value for the respective year is 385,527,631 USD, which comprises 33.1% of the national export value (Dinas Perindustrian dan Perdagangan Jawa Timur).
According to the research done by Independent Research & Advisory (IRA, 2005), the basic value chain of shrimp industry in Indonesia consists of six main functions/actors, which are broodstocking, hatchery, farming, processing, exporting and overseas distributor. Among all activities, farming activity has the greatest contribution in the final product value of shrimp industry. In Vannamei industry 46.1% of final product value comes from farming activity.


Figure 1. Global Production of Shrimp by Capture and Aquaculture, 1950-2005

Based on various former researches (FIAS, 2006 and IRA, 2005), some possible gaps in shrimp industry in Indonesia were identified:

1. Inability to comply with international health and safety standard. It was indicated that most traditional shrimp farmers were unable to comply with the stringent international standards.
2. Crucial environmental compliance with tighter and more stringent traceability standard. It was indicated that traceability standards had not been adopted in most of the shrimp farms in Indonesia.

3. Capital problem faced by small scale farmers. Lack of access for shrimp farmers and processors to financial assistance, especially from formal institution such as banks, was indicated as a business constraint.

4. Poor quality broodstock. It was indicated that the utilization of poor quality broodstock by local broodstock centres and hatcheries to produce postlarvae significantly reduced the survival rates, productivity and the output quality of shrimp farms.

5. High cost shrimp feed. It was indicated that the cost of shrimp feed in Indonesia was relatively higher than other countries such as Panama, Thailand and China due to unavailability of some key ingredients in country.

6. Poor management practice at the farm resulting in low productivity. It was indicated that lack of implementation of good management practice and enforcement of standards reduced shrimp farm productivity.

Considering that farming activity has a great contribution in the final product value of shrimp industry, this research was focused on the shrimp farmers as the main actors of farming activity. All the abovementioned gaps are closely related to farming activity. Shrimp farmers have some degree of control and can make direct contribution to address the first, second and sixth gaps. In order to address the first and second gaps, the poor management practice problem needs to be solved first. There is a room for improvement on the productivity,
especially in small and medium scale farms. Therefore the sixth gap was selected as the focus of this research.

Good Management Practice (GMP) is regarded as an efficient and effective mean to accomplish a particular outcome, which in this case was utilized to address the problem of poor management practice.

1.2 Problem Statement

To have a better understanding on Vannamei shrimp industry on the northern shore of East Java and to address the poor management practice problem at farm level, this research was focused to answer the following questions:

1. How is the value chain of Vannamei shrimp industry on the northern shore of East Java?
2. How is the current management practice that is being implemented by small to medium scale shrimp farmers?
3. What is the level of adoption of Good Management Practice by small to medium scale shrimp farmers?
4. What are the challenges that prevent small to medium scale farmers from adopting Good Management Practice?

1.3 Research Objectives

The objectives of this research were:

1. To describe the value chain of Vannamei shrimp industry on the northern shore of East Java.
2. To identify the current management practice that is being implemented by small to medium scale shrimp farmers.
3. To analyze the level of adoption of Good Management Practice by small to medium scale shrimp farmers.
4. To identify the challenges that prevent small to medium scale farmers from adopting Good Management Practice.

1.4 Significance of Research

This research is expected to give a contribution to small and medium scale shrimp farmers and create an impact to the overall productivity of shrimp farms, which in turn, through the value chain, create an impact to the shrimp industry in general, by:

1. Being a reference for organizations or institutions who would like to promote Good Management Practice to small or medium scale shrimp farms.
2. Assisting other actors in the shrimp value chain to have a better understanding on small or medium scale shrimp farms.
3. Being a reference for institutions to create relevant policies.

1.5 Scope of Research

Considering that farming activity has a great contribution in the final product value of shrimp industry and that there is a room for improvement of management practice in small to medium scale farms, this research was focused on Good Management Practice for small to medium scale shrimp farms with net
active operating area less than 10 hectares. This research was mainly focused on shrimp farms that cultivate Vannamei shrimp using intensive methods.

Good Management Practice can be significantly affected by the geographical and environmental characteristics of the farm site. Therefore the scope of the research will be limited to shrimp farms on the northern shore of East Java.
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