



MINUTES OF MEETING

CONSULTATION WORKSHOP ON SUSTAINABLE SHRIMP-FARMING PROTOCOLS

Project “Towards Sustainable Mangrove-Shrimp Aquaculture Through Capacity Building and Partnership in the Mekong River Delta”

I. GENERAL INFORMATION:

1. Time and venue:

- Time: September 8, 2022
- Venue: 2nd floor, Cuu Long Hotel, 210 Nguyen Thi Minh Khai, Ward 7, Tra Vinh city

2. Participants:

- Representatives of Tra Vinh Provincial Agriculture and Rural Development Department
- Representatives of Tra Vinh Provincial Fisheries Sub-Department
- Representatives of Tra Vinh Provincial Forest Protection Department
- Representatives of Tra Vinh Provincial Agriculture and Fisheries Extension Center
- Representatives of Tra Vinh University
- Representatives of Management board of Long Khanh Nature Reserve
- Representatives of Tra Vinh Provincial Fisheries Association
- Representatives of Long Thanh Cooperative
- Representatives of Thanh Dat Cooperative
- Representatives of Ngoc Hien private Company
- Representatives of Cuu Long SeaPro Joint Stock Company
- Representatives of farmers' association, shrimp farming households in Long Khanh commune, Duyen Hai district

II. MEETING NOTES:

1. Introduction the workshop and participants

Ms. Lam Ha Phuong - staff of Sub-Department of Fisheries

2. Presentation on Sustainable Shrimp Farming Protocols:

Dr. Phan Thi Ngoc Diep - Environmental and Fisheries Specialist

3. Discussion:

a) Mr. Nguyen Van Tam - Agriculture and Fisheries Extension Center

- Currently, the mangrove-shrimp farming model in Tra Vinh has some difficulties when it comes to certain certifications or ecological development. In the mangrove forest area, there are some households raising spontaneously, in the form of intensive farming with high density. This will pollute the surrounding environment. Therefore, it also creates difficulties to obtain eco-certifications. These households are located in the forest area, so it is difficult to ensure the conditions to obtain the certificate.
- Secondly, the government has also invested in irrigation systems for these areas, but it has not been synchronized and met the needs. Every year, the Department also supports households, but due to the spontaneity of each household, it has not been effective. Irrigation system only ensures the water quality but it still affects the water intake process. For shrimp farming, it is necessary to collect water and supply water according to the cycle of the tide. Therefore, many households have to suffer damage due to unstable irrigation system.
- Besides, the difficulty lies in the farming habits of the people from the past up to now. At present, there are still some households that choose poor quality fry, most of which are stocked in the way of releasing fry in a rush. This is also a limitation in the selection of fry, leading to unsafety and sustainability
- Thirdly, due to the current situation, most of the households take advantage of the available area. The ratio of ponds and forests is regulated by forest rangers. Most of the people have not been able to renovate to ensure suitable forest area and aquaculture area. This situation is also one of the current difficulties.
- Many households have also been trained and when implementing and maintaining, they also see the effectiveness of following instructions: how to choose good fry, how to nurse, nurture, and improve to achieve the ratio of nursery ponds and suitable forest. But due to economic conditions, households have not been able to do so.
- The above are some difficulties that I personally noticed, please discuss with the Project for further updates.

b) Tra Vinh Provincial Fisheries Sub-Department

- According to the current status of mangrove-shrimp farming in Tra Vinh, there will be some difficulties in order to have a set of rules and implement them towards sustainable development.
- According to Mr. Tam from the Agricultural Extension Center, the fry is now mainly purchased and produced by small local producers, which have not been certified to be eligible for external sale.
- Some households raising mangrove-shrimp currently do not feed natural food, and also some households supplement with other food sources. There is also a barrier to achieving organic shrimp certification.
- Another difficulty is the ratio of forests versus shrimp ponds. We have surveyed a number of mangrove-shrimp farming households in Duyen Hai town and found that the rate is very low, only about 10-20% of total area are the forest.

c) Mr. Nguyen Thanh Men - Representatives of shrimp farming households

- I would like to have an opinion on the issue of mangrove-shrimp farming. The reason that we cannot achieve the certificate, I think, there are 2. The first is the environment and the second is about the fry. Currently, people do not have quality fry. In order to get quality fry, only specialized agencies can nursery them. Therefore, I suggest that the authorities should nursery quality fry to sell to the people.
- In addition, it is also necessary to choose the right time and suitable weather conditions for selling and stocking.

d) Mr. Nguyen Vo Phuong - Tra Vinh Provincial Forest Protection Department:

- If developing a set of criteria like the project just mentioned, people will accept this set of criteria, of course, they will see the effects compared to not doing it. So first of all I think it will be more effective if you encourage people to participate. In my opinion, if you want to do it successfully, you need a business to follow, from which it is easier to convince people to participate.
- When following the set of criteria, the fry needs to be of good quality, in addition, many papers and dossiers are needed. In fact, Tra Vinh has also participated in many programs

such as the MAM 2 project applied in Ca Mau, but up to this point, no household has achieved certification.

- I personally think it is necessary to communicate and propagate so that people understand the benefits of participating in this set of criteria.
- I feel that the direction of this set of criteria is softer than other sets of criteria, so it may also be suitable for Tra Vinh province. However, the characteristics of Tra Vinh province are also slightly different from some other provinces. For example, in Ca Mau, people own about 5 to 10 hectares of shrimp farming area. But in Tra Vinh, on average, each household only owns about 1-2 hectares. There are even households with less than 1 hectare. Households owning less than 1 hectare, but living in intensive farming areas, and want to promote extensive shrimp farming, it will be a bit difficult to convince, because people want to prioritize economic development. If you only have 1 hectare of shrimp farming, it's not enough to live on.
- As some participants have said, there are some intensive farming households in extensive farming areas. So, with this set of criteria, is it possible if such cases exist? If not, when implementing, how will the project cooperate with state agencies to handle these cases? To continue farming or to leave this area? In my opinion, this is also a difficulty.
- In addition, the set of procedures and papers should be made as simple as possible so that people can easily access them.
- It is very good to have a project to support, I think people will support it, but I think it will be difficult in the initial steps. In addition to consulting the local, I think it is better to go to the field and meet with farmers to investigate further, thereby implementing the project more smoothly.

e) Mr. Diep Thanh Toan – University of Tra Vinh

- First, about the quality of the fry. Farmers today have a lot of trouble with this problem. Recently, Mr. Men shared about the current situation of fry selection of the people. Thus, I would like to recommend that, when stocking, you should be selective for stocking. Currently, there are 2 types of black tiger shrimp: black tiger shrimp which is usually caught from Ca Mau and Moana black tiger shrimp / domesticated black tiger shrimp. The type of domesticated black tiger shrimp is now very mass-produced. Characteristics of the production of Moana shrimp for farmers under the intensive farming model. The growth

rate of this species is faster than that of common black tiger shrimp. However, at present, there are some households using this variety of Moana shrimp in the direction of extensive farming. Only after about 3-4 months can be sold. Therefore, people should pay attention to this point to choose suitable fry. Secondly, people should also pay attention to the stocking size. Currently, most people buy fry and release them immediately with nursering. If there is a hapa net and an area to nursering before stocking, it will be more effective, expect nursering in the mud ponds. Therefore, the shrimp farming model has changed from mud ponds to mangroves. Therefore, our shrimp-forest model also needs to consider improvements in the issue of improving the survival rate of the stocking stage.

- I propose to increase the size of the fry, at least 20 to 30 days safter nursering, fry must be released into the rearing environment. And it is also necessary to apply the current method of using the hapa net nurseries. At that time, the fry will reach a maximum of about 1g. Thereby it will improve the survival rate during stocking and rearing. And when doing so, the number of stocked varieties will be less, so it is easier to care for and control the environment. The survival rate will be very high, above 90%.
- Currently, Tra Vinh University has successfully applied the method of nursering giant freshwater shrimp, implemented in Ben Tre. The survival rate of fry is increased by about 20 - 30% when applying this method. So, it can also be applied to the mangrove-shrimp farming model. Tra Vinh University has an experimental camp. We built the fry of black tiger shrimp and tried it on the model of white leg shrimp. The results show a very high survival rate. For example, instead of releasing 200,000 shrimp fry, now only 100,000 shrimp fry are needed and ensure a survival rate of about 70,000 - 80,000 shrimp. Thus, both reducing the number of fry and ensuring the survival rate.
- Third, on the problem of pathogens, people often think that in an open environment, pathogens always exist. But that's just a subjective opinion. Because in a large environment, although there are pathogens, the density is very low. In contrast, in small farms, the density of pathogens is very high. Therefore, the selection of fry without high risk of infection is very important. Diseases need to watch out for include white spot disease, yellow head disease, and stunted shrimp disease.

- Fry that are improved by this method will of course require an increase in costs, but will reduce the cost of the initial fry purchase and ensure the quality of the fry, thereby having a higher chance of success.
- Currently, the Department of Agriculture has opened a nursering center and is applying the results from the research on domestication of broodstock black tiger shrimp and is achieving certain results. This is the place where people can contact to buy quality fry.
- In my opinion, in the set of criteria that CECAD just mentioned, it is also necessary to pay attention to the ratio of forests and ponds. The method of planting forests how to match, and avoid the case of forest cover too much. Shrimp farming needs light to ensure shrimp quality. If raising shrimp indoors, shrimp often turn green, which is caused by lack of light. In the wild, having enough light will help the shrimp's color better.
- Fourth, I want to talk about planning. As you have mentioned, there are some households that raise industrial shrimp and mangrove-shrimp alternatively. Therefore, a planning solution is needed. If planning large areas, they must plan sub-forests and sub-regions depending on the area regulations. And how much space is required to achieve this ASIC certification?
- Next, I think it is necessary to establish a Cooperation Group. In Ca Mau, there are many cooperative groups. Each cooperative group does not have many people, only about 5-6 people. They often share and exchange experiences with each other, thereby forming a mutually supportive process. Hope the Project considers the issue of establishing this cooperative group.
- In addition, the project also needs to coordinate with exporters to get a higher selling price for shrimp, especially black tiger shrimp, which usually have a higher price than normal shrimp. To obtain certification will be more expensive, if the selling price does not increase, it will be difficult to get cooperation from the people.
- Tra Vinh is currently developing an eco-tourism model. So, the project can also combine with ecological zones or shrimp farming households participating in the project. Thereby, it is possible to increase the value of black tiger shrimp.
- Above are some difficulties that Tra Vinh people are facing and some solutions. In particular, people in Tra Vinh are now paying much attention to the super-intensive farming model because this model brings very high profits. However, this model requires

a large area. Therefore, I am very worried that Tra Vinh's forest area will decrease in the near future. For example, a model of super farming lined with tarpaulin is not much, about 5000m², but the demand for an area is up to 10ha. Due to the large need to change the lake water, they need a large area. The larger the area, the higher the success rate. That is the current trend. As a result, the area of mangroves is now greatly reduced. Moreover, in areas with super-intensive farming, mangrove-shrimp farming households will be less efficient. Currently, there is no official research on why the mangrove-shrimp farming model is no longer effective near the industrial farming model. However, it can be seen that waste including drugs, chemicals or even pathogens from the super-intensive farming model greatly affects the surrounding households.

f) Mr. Tran Hoang Xam - Association of Fisheries and Gardening

- The project towards certified shrimp farming, it can be seen that there will be many difficulties in the implementation process. Also, when certification is achieved, are the products that follow it recognized? Or just shrimp? Mangrove-shrimp farming where the main certificate holder is only shrimp will be very difficult to implement

g) Ms. Le Thi Hanh Chuyen - Department of Agriculture and Rural Development

I have some information to provide for the project so that you have more sources of information to implement the project.

- Mangrove-shrimp farming in Tra Vinh has received a lot of attention in the past 5 years. In the past, people raised mangrove-shrimp mostly spontaneous. However, thanks to the impact of specialized agencies, Tra Vinh province received a lot of projects related to mangrove-shrimp. First, the project that can be considered as the beginning of mangrove-shrimp development is the MAM 2 project. With the success of the project implemented in Ca Mau, Tra Vinh was also supported by World Wildlife Fund (WWF) to implement the MAM phase 2 project with the goal of achieving certification of ecological shrimp for 1000ha mangrove-shrimp area in Duyen Hai district. However, there were many difficulties in the implementation process.
- Before receiving support from the WWF, we also implemented a small study and implemented many models in Duyen Hai town and Duyen Hai district. Most of them are

shrimp nursery models nurse before stocking. We carry out nurseries in small ponds for about 20-25 days and then stock into the mangrove environment.

- Such experimental models have been implemented very successfully. However, due to the production practices of local people, when the yield is not much, they just buy more shrimp fry to stock more. Every season, people buy more shrimp fry to stocking without going through nursery or any censorship. Although departments such as Forestry and Agriculture have directed in many activities, the application of the model has not been widespread.
- Second, regarding the issue of certified seed. The project has a target towards sustainable mangrove-shrimp farming, similar to the MAM 2 project, there will be many difficulties.
- Although there is a company in the MAM 2 project (Cuu Long SeaPro Joint Stock Company) accompanying with the Department of Agriculture and Rural Development and WWF, but after 2 years of implementation, the project ended at the end of 2019, so far this number of mangrove-shrimp areas has not been certified.
- The first reason is the source of shrimp fry. In order to achieve organic shrimp certification, the seed itself also needs to be up to standard and old. And to achieve the certification of ecological seed, we also faced many difficulties. Second, due to people's production practices. They are not in the habit of taking notes, and they have trouble getting used to and following the rules. People are only used to traditional farming, do not have the habit of taking notes, it is very difficult to ask people to follow rules. In addition, in Tra Vinh, another problem is the ratio of mangrove in the mangrove-shrimp model. Currently, in Tra Vinh, the rate of mangrove is very low, only about 10-20%. To solve this problem, the Forest Protection Department and the Department of Agriculture and Rural Development have ordered a study on the appropriate ratio of mangrove for the mangrove-shrimp model. At present, related study have also been registered to be selected for the provincial scientific budget. The study is expected to start in 2023.
- In the past 5 years, Tra Vinh has received a lot of attention in the mangrove-shrimp areas from organizations and businesses. The MAM 2 project has supported 1000ha of mangrove-shrimp farming, but after 2 years of implementation, it has not yet achieved certification. We also have a cooperative group, but we have not achieved certification yet.
- Currently, the fund from the World Bank supported through the WB9 project on capacity building to climate change in the Mekong Delta also supports Tra Vinh in certifying about

850 hectares of land for the coastal district. (including 3 communes Long Khanh, Long Vinh, Dong Hai). The project has been assigned to the Department of Agriculture and Rural Development as the investor and entrusted to the Agriculture Project Management Board for implementation. According to information from the implementing unit, it is expected that in November, a consultant will be hired to assess and certify this area of wild shrimp.

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h) Ms. Nguyen Thi Phuong Chi - Cuu Long SeaPro Jont Stock Company

- The company has also participated in many projects on mangrove-shrimp. Our company specializes in exporting. And organic shrimp is one of the scarce raw materials for the company. But the problems of organic shrimp certification have not been achieved as expected.
- Our company specializes in certifications, but we don't know about ASIC Standards. Currently, I do not understand how ASIC is different from other certifications like Natureland, Organic, or ASC? For example, organic certification has requirements on the ratio of mangrove and water surface, and the sefry must be certified organic. Not sure if ASIC certification is mandatory for the shrimp fry? Currently, the company has absolutely no information about ASIC standards, and has not received any requests from customers. Therefore, the company needs to be provided with information about ASICs.
- In addition, I would like to mention the difficulties in the past period. First, the communicating among 5 households and the company is always a big problem, besides the issue of shrimp fry quality. Some people interact very enthusiastically, but others are still afraid. Usually, they want to see the immediate results and then they will be willing to join. And some other

difficulties such as people's customs. Their ways of buying and stocking makes it difficult to support quality fry for people. Some households are very responsive, but many other households are still afraid. Certified fry usually costs more than unknown sources ones.

- In the MAM 2 project, businesses have also supported people a lot. Some representatives of households who have used quality fry were also present at the workshop today, hoping that shrimp farmers will give more information to the project for more extensive implementation.
- In addition, our company always commits that the purchase price is always at least 10%-20% higher than the market, depending on the size. However, shrimp production follows the extensive farming model in small households. So need intermediate points for collection. I don't know for ASIC standard, does this intermediate point need certification or not? Currently, Tra Vinh has an agent Ngoc My, which is also a business that collects through small agents and supplies it to Cuu Long company, also in the supply chain.
- The export market of the company is quite large, the main markets are Europe and the US, the Asian market is limited. The ecological certificate that the company is expecting is the Organic certificate. The WB9 project is scheduled to have a formal assessment around November and December this year, but now there will be many difficulties. The consultant will fully support the company during the first evaluation phase, in the following years the company will maintain itself.

III. SUMMARY

The workshop introduced and provided necessary information about ASIC shrimp farming certificates to the participants. In addition, the participants actively commented on the difficulties of the mangrove-shrimp farming model in Tra Vinh today as well as some solutions that have been researched and implemented.

CECAD has noted the comments and will use it as a document for the upcoming activities of the project.

ANNEX
PHOTOS OF THE WORKSHOP



