

# POLICY BRIEF



TOWARDS SUSTAINABLE MANGROVE-SHRIMP AQUACULTURE THROUGH CAPACITY BUILDING AND PARTNERSHIP IN THE MEKONG RIVER DELTA

The Mekong River Delta is one of the most productive agricultural areas in the world, though it is also the most vulnerable. Vietnam has used the “International Principles” to adapt legislation and develop its national program toward better management of shrimp farming. However, it was reported by small-scale farmers in Tra Vinh province that the Principles were difficult to apply, as they focus on ecology and ignore the adaptation and social aspects. Shrimp farmers have been experiencing declining yields and incomes, along with the continued clearance of mangroves.

Vietnam has lost half of its mangrove forests over the past 30 years, with the majority of them being converted into shrimp farms. A worrying trend, as healthy mangroves make important contributions to both climate change adaptation and mitigation, forms a natural habitat for many aquatic and terrestrial species, and provides a source of livelihood for coastal communities.

To reduce the pressure on mangroves and enhance shrimp farmer livelihoods and resilience, the project “Towards Sustainable Mangrove-Shrimp Aquaculture Through Capacity Building and Partnership in the Mekong River Delta” was implemented to support the development and introduction of sustainable aquaculture models which coexist symbiotically with mangrove forests.

This project aimed to achieve the sustainable transition of shrimp farming in Tra Vinh based on ecological/organic shrimp farming requirements according to national and international standards, through a detail-oriented analysis of the environmental, social, and economic conditions of the region and context-specific capacity-building methods that targeted local stakeholders in shrimp farming.



## KEY FINDINGS

The total area of forest shrimp farming in Tra Vinh is 7,041 ha, concentrated in 5 sub-regions of Duyen Hai district and Duyen Hai town. This area will be maintained until 2050 (Decision No. 1925/QĐ-UBND dated September 29, 2022). According to Plan No. 69/KH-UBND dated August 6, 2021, of the Provincial People's Committee, by 2030, 5,700 ha (accounting for 80.9% of the total area) of mangrove-shrimp will be awarded export ecological certification. Compared with the certification criteria, below are the issues that farming areas are facing, and also barriers to achieving ecological certification (domestic and international):

- ❖ The farming areas have not been thoroughly planned, so the infrastructure, irrigation system, and farming areas have not been properly arranged, invested in, and not dredged annually. Thus, there is inadequate water circulation in many regions, which hinders the growth and development of mangrove trees, and causes tree deaths in some areas. In addition, since there is no regulation on separate supply and drainage channels, the wastewater from one shrimp pond (especially the wastewater from the industrial shrimp pond) becomes the supply water of another shrimp pond. This is the cause of disease spread and outbreak, causing a high mortality rate of shrimp, affecting the income of farmers.
- ❖ In the area with many shrimp ponds, each pond has a small area (about 1 ha), and the percentage of forest trees in each pond is low (10-20%), while according to the regulations on ecological shrimp farming, it is necessary to ensure the rate of forest canopy over 40% in the farming pond.
- ❖ Interspersed with the mangrove-shrimp farming ponds are the intensive farming shrimp ponds. This makes it difficult to achieve certified organic shrimp farming areas.

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## KEY FINDINGS

- ❖ Although households have been trained in mangrove-shrimp farming techniques before, and many households have had 20 years of farming experience, they still do not follow the correct techniques, shrimp are not stocked according to the seasonal schedule, leading to a high mortality rate.
- ❖ There is a total of 22 shrimp hatchery production and nursing fry facilities in Tra Vinh, scattered in Duyen Hai district with infrastructure that has not been synchronously invested, fry production is not quality-checked before reaching the consumers, causing damage to farmers.
- ❖ In the whole farming area, a production chain has not yet been established, people produce and consume products independently, the products are made without brands, and sold at low prices, which are often forced by traders.

For the aforementioned reasons, it can be said that the current mangrove-shrimp farming area in Tra Vinh is not sustainable. In order to achieve ecological farming certification from now to 2030, it is necessary for the joint efforts of management agencies, seafood processing, and exporting enterprises, and the mangrove-shrimp farming community to solve the above issues.





## POLICY RECOMMENDATIONS

- ❖ Review of 5 shrimp farming sub-regions of Duyen Hai district and Duyen Hai town, Tra Vinh province according to TCVN 11041-8:2018 or criteria of international certifications (such as ASIC or Best Aquaculture Practices - BAP).
- ❖ Research and rearrange the irrigation system in the region, clearly specifying separate water supply and drainage canals, add new excavations (if necessary), and/ or renovate the existing canals to ensure water circulation according to the tides.
- ❖ Study suitable locations, plant additional mangrove trees in the shrimp ponds to ensure the forest coverage rate to reach at least 40% and in the buffer zones to increase natural food sources for farmed shrimp in particular and aquatic organisms in the area in general.
- ❖ Build an environmental monitoring station in the farming area and provide sufficient information on water quality for farmers.
- ❖ Arrange fry production facilities into the aquatic complex for centralized management, strengthen the inspection of fry quality and provide information on the origin and quality of fry for farmers.
- ❖ Encourage households in the area to convert farming methods towards compliance with farming techniques and ecological/organic farming requirements according to TCVN 11041-8:2018 or criteria of international certification (such as ASIC, BAP, and Global GAP)
- ❖ Encourage households with farming ponds close to each other to form cooperative groups or cooperatives to facilitate the reorganization of shrimp farming towards sustainability and value chain linkage.
- ❖ Connect and encourage the participation of enterprises in the chain from supplying inputs for production to processing and consuming products, in order to increase product value, and ensure harmonization of benefits for all relevant stakeholders.
- ❖ Support legal procedures and partial funding for cooperative groups/cooperatives that want to be awarded ecological/organic shrimp certification.

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The project is funded and implemented by:



For more information about the project, please contact:

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## **MINUTES OF MEETING INCEPTION WORKSHOP**

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

**Time:** November 25, 2020

**Participants:**

- Representatives of the Department of Agriculture and Rural Development of Tra Vinh province
- Forest Protection Department
- Trà Vinh University
- Representatives of Cuu Long SeaPro Joint Stock Company
- Representatives of farmers' association, shrimp farming households in Duyen Hai district
- Staff of International Collaborating Centre for Aquaculture and Fisheries Sustainability (ICAFIS)
- Staff of Centre for Environment and Community Assets Development (CECAD)

**1. Opening speech and introduction of participants: Ms. Vo Thi Thu (CECAD)**

**2. CECAD and project introduction: Dr. Le Thi Van Hue (CECAD)**

**3. Speech of Mr. Vo Hoang Minh – Deputy Director of Fisheries Sub-Department of Tra Vinh province**

- In 2020: The total shrimp farming area is 60,000 hectares, the output is 150,000 tons
- Diversifying types of shrimp farming: white-leg shrimp, giant freshwater shrimp, and also developing mangrove shrimp. The current area of shrimp-mangrove is 3,200 ha
- Tra Vinh agricultural sector is restructuring towards the goal of sustainable development of shrimp farming, including shrimp-mangrove farming;
- Tra Vinh Department of Agriculture and Rural Development will work closely with CECAD to implement the project

**4. Presentation on organic certification of shrimp farming - Mr. Dinh Xuan Lap - Deputy Director of ICAFIS**

Discussing with Cuu Long SeaPro company

- Cuu Long company is implementing the MAM project and is in the project evaluation stage
- Currently working on EU certification

- Prawn fry are from Thao Nguyen farm – they have organic certification for the fry
- Tra Vinh is having a problem with the fishing pesticides
- People have septic toilets in their homes, so there is no problem of wastewater affecting the farming area

## **5. Discussion**

### **Shrimp farming households:**

- Should plan shrimp farming areas, clearly divide ecological shrimp farming areas, not to mix with industrial farming households. Because wastewater discharging from the industrial farming households can affect ecological shrimp farming households.
- There should be a focal point to buy organic shrimp, to ensure higher value organic shrimp farming

### **Mr. Minh - Deputy director of Sub-department of Aquaculture**

- There is a plan for shrimp-mangrove farming and industrial shrimp farming
- Every year, the locality has a schedule to renovate shrimp ponds to avoid wastewater from industrial shrimp ponds affecting the surrounding
- For the proposed plan of linking with shrimp farmers: all households are willing to participate

### **Mr. Trung - Forest Protection Department**

- Mangrove management software to update the forest to each household
- When the project is implemented, the forest ranger will support and coordinate to monitor the forest area in the farming ponds
- Mangrove ratio 30 - 70 or 60 - 40. It is possible to calculate the total, but it is difficult for each household.
- The total area of integrated shrimp farming forest 3,500 ha
- The central government supports mangrove protection 500,000 VND/ ha. It is necessary to combine aquaculture
- If people have ecological shrimp certificates, their income can be increased

### **Ms. Nguyen Thi Phuong Chi - Cuu Long SeaPro Company**

- The company is approaching the stage of getting certified organic shrimp but is also facing difficulties
- People have not realized the real benefits of organic shrimp
- There is a huge demand for organic shrimp as customers aim for better health and environmental values
- Cuu Long company commits to organic shrimp = market price + 5,000 to 10,000 VND/kg; and support 500,000 VND/ha of forest through support for shrimp prawn fry
- There will be follow-up meetings with farmers to discuss in detail
- Need cooperation from the people to implement the project: according to the company's 2018 - 2019 survey, people do not use antibiotics; and EU

standards, shrimp seed must be natural, not supplemented. Current problem in Tra Vinh is using tuba root (*Derris elliptica*) because it can cause Parkinson disease.

- Some households renovate extensive ponds to industrial shrimp farming households, which affects the environment; or industrial farming households affect the ecological farming households on wastewater
- Source of shrimp prawn fry is not guaranteed. Cuu Long company associated with Thao Nguyen company has certified organic shrimp fry with acceptable price.
- Buyers also need to participate in the project's chain to ensure quality

**Mr. Dinh Xuan Lap:**

- Tuba root (*Derris elliptica*) that kills algae, and destroys red blood cells in red blood. There must be a clear agreement on the using of this plant.
- There should be a memorandum of understanding for the parties to implement, with clear terms
- People also need to take notes carefully

**Representative of the households:**

- The common problem now is the usage of tuba root
- People's habit is to only see the immediate benefits
- The output of organic shrimp farming is low, while input costs are high.
- The price of buying organic shrimp is higher than 5,000 VND to 10,000 VND/kg. People are not interested in this.
- In Bac Lieu province: The chain link is very good, and there is good support from the company, especially input support for shrimp farmers
- Propose: the project and the company need to study clearly to consider the initial support for the people more, then when people are good with this farming model, they can gradually withdraw the support.
- It is recommended to establish a cooperative group and pay the management board to strengthen the management of the cooperative group
- When other fish come to the pond, they eat the shrimp. When using Sabonin, it takes 3-4 days for the fish to die. The cost of this solution is high. Meanwhile, it only takes about 15 minutes to kill the fish using tuba root. Tuba root is effective, low cost, so it is difficult to recommend not to use it for people.

**Ms. Phuong Chi - Cuu Long SeaPro Company**

- The company's expenses are quite large. Cost for ecological shrimp assessment is high: 1000 USD/day; total evaluation package cost is 6,300 USD
- Ecological shrimp farming is still allowed to raise other types of aquatic products.
- The company currently has an ecological shrimp farming project with 150 households. And there are 40 households that have been stocked.
- Profit comes from not only selling price but in higher survival rate.

Question: Reviewers recommend against using tuba root, so what really is the problem. The carp dies, but the mullet doesn't die

**Dr. Le Thi Van Hue:**

- The project will consult experts on the issue of tuba root use
- The project will build a sustainable ecological shrimp farming cooperative, sign a cooperation agreement with the company and shrimp farming households, including the approval of the Department of Agriculture and Rural Development of Tra Vinh province

**Mr. Minh - Deputy Director of Fisheries Sub-Department of Tra Vinh province**

- The Department will work closely with the project to implement effective activities



**ANNEX  
INCEPTION WORKSHOP PHOTOS**











**LITERATURE REVIEW**

**SUSTAINABLE SHRIMP FARMING IN THE WORLD AND IN THE  
MEKONG RIVER DELTA**

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

CBA2019-FP16-Le-CECAD

## **1. Background information**

### **1.1. Shrimp farming in the world and Vietnam**

Shrimp is one of the most valuable seafood commodities in the world. Shrimps and prawns dominate the aquaculture production in coastal areas, constituting more than 60% of the farmed crustaceans in the world. They are the major exports from developing countries in Latin America and Asia to the traditional markets in Europe and North America, and emerging markets like China (FAO, 2020). To meet the demand of the growing global population with rising affluence, shrimp production tripled from 1.2 million to around 4.2 million metric tons between 2000 and 2017 (Rubel et al., 2019).

Cultivation of shrimps and other aquatic species, nonetheless, is confronted by manifold sustainability issues, including environmental impacts like mangrove degradation, water quality degradation, salt-water intrusion, and disease outbreaks (Sivaraman et al., 2019), and socio-economic impacts such as water use conflicts, and privatization of natural resources (Primavera, 1997). These issues, coupled with the food safety concerns over issues like bacterial contamination and drug residues, have led to the establishment of multiple international and national standards.

Shrimp producers and exporters are increasingly compelled to satisfy many stringent standards in order to avoid port rejection and gain buyer's acceptance and trust. Multiple international organizations, including Food and Agriculture Organization (FAO) and World Wildlife Fund (WWF), have provided guidance on meeting those quality, environmental and labor standards (Suzuki and Hoang Nam, 2018). Firms, governments and organizations set up numerous schemes, notably ASC, BAP and GLOBAL G.A.P, to provide institutions for auditing and certifying the standard-meeting producers. However, it has been argued that these certifications are costly, complicated and requiring a certain level of managerial capacity, thus excluding myriad small-scale producers from accessing the certification process (Bush et al., 2013). These schemes mostly adopt technical standards which reflect the demands of powerful buyers and activists in the developed world rather than considering the local socio-economic and environmental situations of producers in the global South (Vandergeest, 2007).

Vietnam is the third largest shrimp-production countries in the world (FAO, 2020). Shrimp is the second most important aquaculture industry in Vietnam - only after catfish – with the export value of around \$3.4 billion in 2017 (Rubel et al., 2019). Shrimp culture has flourished in Vietnam especially after the Doi Moi liberalization reform in late 1980s. The government allowed farmers to convert rice fields and salt pans,

especially in the Mekong Delta, to shrimp ponds to promote poverty reduction. Shrimp farming thus becomes the main livelihoods for hundred thousands of people, who are mostly small-scale farmers supplying to export-oriented processors via contracts or networks of collectors and wholesalers. Although many processing companies produce shrimps at their own farms, the amount of internally farmed shrimps only reaches around 20% of their processing capacity (Suzuki and Hoang Nam, 2018).

The total area of shrimp production is about 700,000 hectares, focusing on two main species: whiteleg shrimp (*Litopenaeus vannamei*) and black tiger shrimp (*Penaeus monodon*). The former accounts for 60% of the total production; this species only started to be farmed in the early 2000s but rapidly overtook the latter due to their advantages like high productivity, fast growth, high resilience to diseases and environmental changes (Nguyen et al., 2019). Shrimps are cultivated in different models of farming systems, namely extensive/traditional, improved extensive, semi-intensive and intensive farming, which are classified based on pond size, capital, water exchange, feeding, chemical use, and stocking density (Anh et al., 2010).

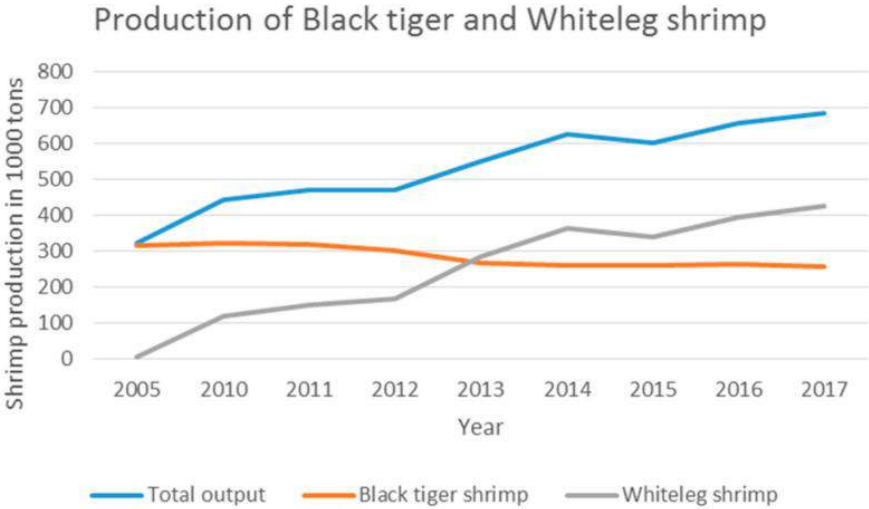


Figure 1. The production of black tiger prawn and white leg shrimp of Vietnam (2005-2017) (Nguyen et al., 2019).

**1.2. Questions for sustainability**

While playing an essential role in socio-economic development of many coastal provinces in the Mekong Delta, Vietnam’s shrimp industry is unable to circumvent tremendous ecological and socio-economic challenges that jeopardizes its sustainability. Empirical and geospatial data show that the rise of shrimp farming in the region was the among the main drivers of the decline in mangrove forest, along with agriculture and urbanization (Binh et al., 2005; Tran et al., 2015). Not only the clearance of mangroves

for installing shrimp ponds, but also poor farming practices such as the discharge of polluted water and sediments, and the excessive use of feeds, chemicals and antibiotics are impairing the ecological integrity of mangrove and wetland areas (Anh et al., 2010).

The release of contaminated effluents without proper treatment can amplify the spread of disease outbreaks, for instance white spot syndrome (WSS), yellow head disease (YHD), Taura syndrome (TS), and early mortality syndrome (EMS). Along with the expansion and intensification of shrimp cultivation, disease outbreaks become more and more prevalent, leading to huge harvest loss and generating massive financial burdens on small-scale farmers. It is reported that up to 80-90% of shrimp farms in 2009-2010 were affected by diseases; many families went bankrupt and indebted (Lan, 2013). Ecological deterioration and disease outbreak risks are also impacted by the adverse consequences of climate change, including temperature increases, changing rainfall patterns, sea level rise and saline intrusion (Nguyen et al., 2019).

To tackle negative environmental impacts, augment productivity and mitigate disease risks, a host of shrimp farmers are inclined to adopt intensification, relying on technological advances in terms of feeding, drug uses, effluent treatment and water/aeration systems. Nevertheless, the access to intensification (technology, knowledge, credit) is unequal for shrimp producers: better-off farmers are more capable of investing in intensive and semi-intensive farming, yet paradoxically facing high risks of indebtedness (Hue and Scott, 2008). Conflicts over land and water uses occur between intensive and extensive shrimp farmers, as evidenced in Ca Mau and Long An province, when extensive farmers claim that their intensive neighbor farms are discharging contaminated or disease-infected water into the shared canals (Lan, 2013). It is unquestionable that the dominance of individual small-scale farmers and their lack of cooperation are the major obstacle for addressing the situation.

### **1.3. Government policies and sustainable shrimp certifications**

The sustainability challenges that we briefly summarize above have been well-acknowledged by those public and private stakeholders involved in the shrimp industry or working on the socio-economic and ecological welfare of the region. Since shrimps are considered one of the key export commodities and economic segment (especially for the Mekong Delta) by the public and private actors, various initiatives have been launched to promote the sustainable transformation of shrimp farming. The government promulgated the master plan for the development of the shrimp industry (Decision 79



QD-TTg), along with other legislations, that provide guidelines and platforms for (summarized by (Rubel et al., 2019)):

- Improving technical standards for the hatcheries and farming of *L. vannamei*
- Adopting certification schemes, for instance VietGAP, Better Management Practices (BMP) and others
- Training and enhancing the expertise of smallholders
- Nurturing cooperation among farmers, cooperatives and different actors in the supply chains, including hatcheries, producers, and processing companies
- Protecting and replanting mangrove forests, mitigating land conversion and adverse environmental impacts
- Phasing out the usage of antibiotics and chemicals in aquaculture

It is worth noting that the 2018 master plan and previous government policies do not have any bias against nor for intensification. The government indeed endorses the development of both protocols: (i) High-tech intensive, semi-intensive zones in the Mekong Delta and Central coastal provinces, (ii) Extensive, organic or ecological farming zones of *P. monodon*, with integrated models like shrimp-mangrove and shrimp-rice cultivation in Ca Mau and other Mekong Delta provinces. We concur with the diversification of shrimp farming practices, considering various biophysical and socio-economic conditions of Vietnamese wetland and coastal areas, as well as different technical requirements of *L. vannamei* and *P. monodon* (See Box 1. The ongoing debate on integrated mangrove-shrimp vs. intensive farming).

*Box 1. The ongoing debate on integrated mangrove-shrimp vs. intensive farming*

The mixed models of mangrove-shrimp or rice-shrimp farming have been adopted in various parts of the Mekong Delta since the 1990s (Lebel et al., 2002). Their idea can trace back to the traditional practice of extensive shrimp farming in the early 1980s (Ha et al., 2012). The practice is characterized by the low artificial stocking density (1-3 per m<sup>2</sup>), low level of supplementary feeding, and sometimes, the usage of mangrove trees as biofilters for effluent treatment. The model appeals to shrimp farmers and policy-makers thanks to the lower investment cost than the intensive systems; and from the perspective of landscape management, protecting and integrating mangroves are for maintaining their ecological services (nursery, biofiltering, disease resilience) that benefit shrimp production (Bush et al., 2010).

However, it has been suggested that the construction of mangrove biofilters are costly but unproven in treatment efficiency (Engle and Valderrama, 2004). (Rubel et al., 2019) also argue against shrimp farming in mangrove areas, due to unfavorable pond construction, inappropriate acidic condition, higher risk of bank erosion, higher overall cost. There are few economic incentives for farmers to adhere to mangrove-to-pond ratio. Thus, many countries now stop recommending this practice, including Thailand which banned *P. monodon* farming in mangrove areas. Rubel et al. state that converting to closed, intensive *L. vannamei* farming while preserving mangrove forests is more economically and ecologically sound. (Nguyen et al., 2019) supported such argument, maintaining that closed systems like Biofloc or RAS (recirculating aquaculture systems) have advantages over the conventional “open production systems” (extensive, intensive, semi-intensive) in terms of the capacity to monitor and control the recycling of water and nutrients.

Lastly, numerous certification standards have been implemented for more than two decades, involving multiple actors and segments in the shrimp supply chains (Table 1). The most adopted ones are Good Agricultural Practices (including GlobalGAP & VietGAP), Best Aquaculture Practices (BAP), Aquaculture Stewardship Council (ASC); in addition to organic standards like Naturland, and food safety standards such as Safe Quality Food (SQF), Hazard Analysis and Critical Control Points (HACCP). Similar to other cases in the world, the trend in certification reflects the swelling market requirements as well as the efforts of state and non-state agencies in promulgating ‘sustainable’ patterns of agri-food production and consumption.

*Table 1. Main certification standards targeting different segments in Vietnamese shrimp industry (Nguyen et al., 2019)*

Specific Targets	General Types of Certification				
	General Product Certification	Standards	Production System Certification	Processing Certification	Product Certification
<b>Farming practices</b>	ASC, GLOBAL GAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	HACCP, GLOBAL GAP, BAP, VietGAP
<b>Chemicals</b>	ASC, GLOBAL GAP, BAP, VietGAP	BAP, GLOBAL GAP, VietGAP	GLOBALGAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	HACCP, GLOBAL GAP, BAP, VietGAP
<b>Environment</b>	ASC, GLOBAL GAP, VietGAP, BAP ASC	BAP, GLOBAL GAP, VietGAP	GLOBAL GAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	HACCP, GLOBAL GAP, BAP, VietGAP
<b>Social</b>	ASC, GLOBAL GAP, BAP	BAP, GLOBAL GAP, Viet GAP	GLOBAL GAP, BAP, VietGAP	GLOBAL GAP, BAP, VietGAP	HACCP, GLOBAL GAP, BAP, VietGAP

Various organizations play different roles in diffusing and governing the certification schemes. Ministry of Agriculture and Rural Development (MARD) provides legal frameworks for the development of the shrimp industry and those certifications, while National Fisheries Quality Assurance and Veterinary Directorate (NAFIQAD) offers essential services including monitoring, eval

uation and accreditation of product quality. Vietnam Association of Seafood Exporters and Producers (VASEP) supports its members (exporters, processors and producers) with information, expertise and training regarding safety and quality management. Non-government organizations, universities and research institutes are involved in supplying research information and extension services to producers and policy-makers.

*Box 2. Definitions of certification, standards, principles and practices (Corsin et al., 2007)*

**Certification** is a procedure through which written or equivalent assurance states that a product, process or service conforms to specified requirements. A process of testing or auditing is conducted by a **certification body** to evaluate and certify the degree of compliance of the product/production unit to the requirements (via issuing certificates). There are different types of certifications, depending on who certification body is: **first party** (producers or producer organizations), **second party** (entities that have user interests like traders, retailers or consumer organizations), **third party** (independent firms or organizations), and **fourth party** (governmental or intragovernmental entities). The procedure of recognizing a certification body is suitable to issue certificates is **accreditation**.

Specific characteristics required for a product or production process to be certified are **standards**, which can be mandatory or voluntary. **Principles** are statements describing the philosophical basis for production, trading and consumption of a product and are aimed at guiding stakeholders towards improving the sustainability of the sector. Examples of principles are Code of Conduct (CoC) or Code of Practice (CoP). To implement principles, **practices** such as GAP and BMP are developed. Practices are ‘indicative’ to implementing actors, in contrast to standards which are more like ‘normative’ rules.

As discussed above, the main ramification of international certification schemes is the exclusion of multiple small-scale holders from the certification markets due to high investment costs and complex registration process. Given the importance of

environmental quality control, their implementation also faces enormous challenges from the dominance of individualistic small-scale farms. It has become evident that fostering collective actions and promoting shared sustainable practices among small-scale producers are critical for achieving long-term sustainable development of the industry.

The analysis drives use to one main question: What are the key principles for the sustainable practices in along shrimp supply chains? In the following parts, we will present such principles of sustainability in the shrimp industry, classified by the two concepts of Good Aquaculture Practices (GAP) and Better Management Practices (BMP). We review the main principles covered by the concepts as well as their implementation globally and domestically. In the last part, we will discuss the newly developed shrimp standards by Asian Seafood Improvement Collaborative (ASIC), the strengths and limitations of these standards and their potential implications.

## **2. Principles for sustainable shrimp farming practices**

The two main groups of practices broadly adopted in the shrimp industry are Better Management Practices (sometimes Best Management Practices, abbr. BMP) and Good Agricultural Practices (sometimes Good Aquaculture Practices, abbr. GAP). While both concepts are used widely to define ‘sustainable’ practices in aquaculture, their scopes differ: GAP usually focus on practices that address food safety, whereas BMP encompass a wider range of practices related to environmental protection, social responsibility and disease management (Corsin et al., 2007).

Along with these two concepts, another important set of principles is the Code of Conduct for Responsible Fisheries, issued by Food and the Agriculture Organization of United Nations (FAO) in 1995. Owing to the mounting global concerns over social and environmental impacts of the rapidly growing shrimp industry, a Consortium was established in 1999, involving the World Bank, the Network of Aquaculture Centres in Asia-Pacific (NACA), the World Wildlife Fund (WWF) and FAO. The discussions and meetings among the members of Consortium contributed to the issuance of *International Principles for Responsible Shrimp Farming* in 2006 (FAO/NACA/UNEP/WB/WWF, 2006). The *International Principles* include eight main principles as presented below:

<p><b>Principle 1:</b> Locate shrimp farms according to national planning and legal frameworks in environmentally suitable locations, making efficient use of land and water resources and in ways that conserve biodiversity, ecologically sensitive habitats</p>
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and ecosystem functions, recognizing that other land use, people and species depend upon these same ecosystems.

**Principle 2:** Design and construct shrimp farms in ways that minimize environmental damage.

**Principle 3:** Minimise the impact of water use for shrimp farming on water resources.

**Principle 4:** Where possible, use domesticated selected stocks of disease free and/or resistant shrimp broodstock and post-larvae to enhance biosecurity, reduce disease incidence and increase production, whilst reducing the demand for wild stocks.

**Principle 5:** Utilize feeds and feed management practices that make efficient use of available feed resources, promote efficient shrimp growth, minimize production and discharge of waste nutrients

**Principle 6:** Health management plans should be adopted that aim to reduce stress, minimize the risks of disease affecting both the cultured and wild stocks, and increase food safety.

**Principle 7:** Ensure food safety and the quality of shrimp products, whilst reducing the risks to ecosystems and human health from chemical use.

**Principle 8:** Develop and operate farms in a socially responsible way that benefits the farm, the local communities and the country, and that contributes effectively to rural development, and particularly poverty alleviation in coastal areas, without compromising the environment.

The *International Principles* formulate the philosophical basis for the local development of sustainable shrimp-related practices. Thus, many governments and NGOs have worked on designing and disseminating their localized CoP or CoC for Better Management/Good Aquaculture Practices. In Vietnam, NAFIQAD in collaboration with US Food and Drug Administration has launched the first GAP initiative in 2002. Also, Directorate of Fisheries, MARD with the assistance of NACA have developed BMP as alternative CoP for responsible shrimp farming, which requires less technical capacity for implementation than GAP (Anh et al., 2011).

### **2.1. Better Management Practices (BMP)**

Better Management Practices refers to practices aimed at “overall reduction of on-farm and processing impacts and, by extension, cumulative impacts of agriculture” (Tucker and Hargreaves, 2009). “Better” indicates the ‘means’ necessary for the continuous enhancement in environmental conditions, while “best” denotes the “goals”. Therefore,

'better' is often preferred as the aquaculture practices always need to continuously improved to suit the ever-changing environment.

Based on the FAO CoC and *International Principles*, NACA and local authorities sought to develop BMP as the alternative option with less technical prerequisites than GAP. BMP should consist of simple, generally accepted practices which are aimed at fostering sustainability of shrimp farming, but not necessarily demanding a formalized evaluation and certification process (Corsin et al., 2008). It has been argued that BMP is more accessible for small-scale farmers who have less knowledge and capacities to adopt international certification standards, yet the lack of certification provide little economic incentive for farmers to follow (Ha and Bush, 2010).

While there is no fixed set of principles for BMP, some mutual key principles are described as follows (Kusumawati and Bush, 2015; Tucker and Hargreaves, 2009):

### **1. Site selection**

Ponds are built along the coast or beside the estuarine reaches of rivers where there is a suitable supply of good quality seawater or brackish water. The best areas for coastal ponds are above the tidal zone on flat or gradually sloping terrain. Former agricultural land often presents excellent sites, and salt flats located behind mangrove areas usually are suitable locations. The worst sites are mangrove forests or other coastal wetlands. Sites for inland culture of marine shrimp also should be restricted to those where salinization of soil and water can be avoided. Other considerations are:

- Do not alter local hydrology
- Consider climatological, meteorological, and geological conditions
- Confirm suitable terrain and soil characteristics
- Avoid sensitive habitats (mangrove forests, seagrass beds, coral reefs, or protected marine areas)
- Avoid conflicts with other resource users

### **2. Shrimp farm design and construction**

Shrimp farms should be designed and constructed in a responsible manner. Design features and good construction methods should be used to overcome site limitations and to prevent or mitigate negative environmental and social impacts. Construction should be done by reliable firms using standard and proven techniques. Farms should not be constructed in ecologically sensitive places or in places where it is impractical to correct site-related problems such as highly acidic, organic, or permeable soils. It is especially important to design and construct aquaculture facilities in a way to avoid

possible negative environmental impacts identified in the environmental impact assessment. Moreover, the construction project itself should not be the source of negative social and environmental impacts. Other requirements area:

- Reduce or eliminate impacts on mangroves
- Protect earthwork from erosion
- Avoid ecological damage and noise at pumping stations
- Prevent negative impacts during construction

### **3. Sourcing of broodstock and postlarvae**

The capture of wild postlarvae and broodstock is considered detrimental to natural shrimp fisheries and biodiversity. In Asia, natural broodstock for black tiger prawn has become scarce and very expensive. Therefore, producers should:

- Use only farm-reared broodstock and hatchery-produced postlarvae
- Purchase only specific pathogen-free (SPF) broodstock or postlarvae
- Use stress tests to evaluate postlarvae
- Comply with import regulations for broodstock and postlarvae
- Destroy diseased broodstock and postlarvae

### **4. Feeds and feeding**

Manufactured feed can greatly increase production and the economic feasibility of aqua- culture. Feeds also are the source of two major concerns about aquaculture. First, environmental groups are concerned about the efficiency with which marine fishmeal and fish oil are used in aquaculture feeds (including shrimp feeds). Second, feeding leads to high concentrations of nutrients and organic matter in pond waters.

Feed is expensive and it should be used efficiently to reduce production costs and conserve fish and plant meals and oils that are used to make it. Good feeds and feeding practices also are important steps toward reducing waste loads in shrimp farm effluents. Thus, the requirements are:

- Use high-quality feed (e.g. less fishmeal and fish oil, less nitrogen and phosphorus than needed)
- Use efficient feeding practices
- Maximize the contribution of natural productivity to shrimp growth
- Do not use raw fish or other animal waste as feed

### **5. Effluent**

Effluents from shrimp farms tend to have elevated concentrations of nutrients, suspended solids, and organic matter relative to receiving water bodies. Effluent

discharged from shrimp farms also is a potential avenue for the spread of pathogens to other shrimp farms or to wild shrimp. Adoption of BMPs for site selection, farm design and construction, feeds and feed management, and pond dry-out will provide water quality benefits within shrimp ponds that should improve effluent quality. However, BMPs for reducing the volume of effluent and removing solids before final discharge can also be beneficial in preventing water pollution by coastal shrimp farms.

These practices should be:

- Comply with applicable effluent standards
- Reduce water exchange
- Recirculate water on the farm during shrimp grow-out
- Reuse water discharged when ponds are drained
- Use settling basins to treat draining effluents
- Use mangrove wetlands to treat effluents
- Monitor off-site water quality

#### **6. Salinization**

Saline discharge from coastal shrimp culture facilities may sometimes enter freshwater bodies to cause salinization. Inland culture of shrimp also is possible in areas with sources of saline water, and effluents from such facilities can lead to salinization. Hence, the recommendations are:

- Do not contaminate freshwaters with saline effluents
- Do not use freshwater from wells to dilute seawater supplies
- Prevent seepage of saline pond water into groundwaters
- Do not allow excessive draw down of freshwater aquifers
- Do not discharge saline effluents into irrigation canals or onto agricultural land
- Site, design, and construct farms to prevent salinization of soils and freshwaters
- Monitor surface and groundwaters for signs of salinization
- Reuse saline waters rather than discharging
- Discharge water slowly to prevent excessive increases in receiving stream salinity
- Dispose of sediments properly Sediment

#### **7. Pond dry-out and sediment removal**

Pond sediment quality is important in shrimp culture because shrimp spend most of their lives on or burrowed in the sediment. High concentrations of organic matter can lead to anaerobic sediment that can have adverse effects on shrimp growth and survival and on the quality of harvested shrimp. Water quality in ponds with good



bottom soil quality tends to be better than in ponds with impaired bottom soils, and maintenance of good soil quality probably improves effluent quality. Moreover, disease organisms and their vectors can survive in pond sediment and infect the next crop. Pond dry-out improves conditions for decomposition of organic matter, and disease organisms and their vectors can be killed by a combination of lime treatment to raise pH and dry-out. Sediment also must be removed occasionally from basins, canals, and ponds on shrimp farms. This sediment has a salt burden and should be disposed in a manner that avoids soil and water salinization or other ecological damage.

- Dry and lime bottom soils to enhance organic matter decomposition
- Treat wet soils to destroy vectors of disease and enhance organic matter decomposition
- Dispose of sediments properly
- Treat black water from cleaning pond bottoms by sedimentation

#### **8. Predator control**

High concentrations of shrimp in ponds provide attractive foraging opportunities for certain species of birds, reptiles, mammals, and fish. Predacious fish also can cause serious losses. In addition, predators indirectly affect shrimp production by serving as vectors for infectious diseases. Birds and other animals may move infected shrimp from one pond to another or spread pathogens in regurgitated stomach contents or fecal material. Total exclusion of predators is impractical at shrimp farms, and predator control techniques must be employed. Effective control usually relies on a combination of management approaches. Overall, the best approach is integrated pest management where pests are identified, the type and level of damage is assessed through regular monitoring, and control methods are chosen that are appropriate for the predator and level of damage.

#### **9. Facility operation and maintenance**

Shrimp producers must store and handle fertilizers, liming materials, feeds, fuels, lubricants, and other chemicals. They also must operate tractors, trucks, aerators, and other equipment. This equipment and the farm infrastructure should be maintained properly. These general operations necessary to support specific pond management tasks should be done safely and in an environmentally responsible manner.

- Collect and dispose of solid waste on a regular basis and in a responsible manner according to all applicable state and federal regulations
- Maintain all equipment in good working condition

- Use and store petroleum products to prevent contamination of the environment
- Use and store chemicals to prevent contamination of the environment
- Oxidize sodium metabisulfite solutions completely before discharging them to natural waters
- Develop a response plan for spills of petroleum products, pesticides, and other hazardous materials
- Develop a record-keeping system

## **2.2. Good Aquaculture Practices (GAP)**

According to (FAO, 2003), Good Aquaculture/Agricultural Practices are defined as “approach that improves environmental, economic and social sustainability of on-farm production and results in safe and quality food and non-food agricultural products”. While the scope of GAP has been broadened to cover the three pillars of sustainability (economic, environmental, social), the international understanding of GAP usually refers to the practices necessary for producing high-quality food complying with food safety requirements (Tien and Griffiths, 2009). GAP approach seeks to minimize the risks of contaminating food products with biological pathogens (bacteria, fungi, viruses, parasites) and chemicals (pesticide residues, heavy metals, nitrate content).

GAP covers production based on site selection, land use, fertilizer, water, pest and disease control, collection, packaging, storage, field sanitation, and product transport, etc. to develop sustainable agriculture with the aim of ensuring:

- Safe for food
- Safe for producers
- Environment protection
- Traceability of the product

GAP standards for safe food focus on the following four criteria:

### **a. Standard for production techniques**

The aim is to use as few pesticides as possible, in order to minimize the impact of chemical residues on humans and the environment:

- Integrated Pest Management (IPM)
- Integrated crop management (ICM).
- Maximum Residue Limits (MRL) in products.

b. Food safety standards

These standards include measures to ensure the absence of chemicals, contamination or physical contamination at harvest:

- Risk of biological infection: viruses, bacteria, molds
- Chemical hazard.
- Physical risk.

c. Working environment

The aim is to prevent the abuse of farmer labor:

- Means of health care, first aid, workers' toilets
- Training and training for workers
- Social welfare.

d. Traceability

GAP focuses heavily on traceability. If something goes wrong, the supermarkets have to really be able to solve the problem and recall the defective products. This standard allows us to identify problems from the production to the sale of a product.

GAP has the following *benefits*:

- Food safety: as the certified food has lower amount of residues than the permitted level, and has no microbial contamination, health and safety of consumers are ensured.
- High quality food which are more likely to be accepted by domestic and foreign consumers.
- GAP production processes are part of protecting the ecological environment, reducing the health care costs of society, improving the quality of life for the community, ensuring the sustainable development of society.

Each country can develop its own GAP standard according to the international standards, for instance USGAP (USA) and EUREPGAP (European Union). ASEAN countries have implemented GAP from adjusting EUREPGAP standards to suit the production situation of each country such as: SALM system of Malaysia, INDONGAP of Indonesia, VFGAP of Singapore, GAP of Thailand...

The Union of Southeast Asian Nations (ASEAN) and the Australian Government developed a draft ASEANGAP standard representing 10 countries in Southeast Asia in

November 2005. ASEANGAP standards were issued in 2006 with the aim of facilitating the application of GAP to countries in the region, creating a competitive advantage for products. Facilitate regional and international trade. Harmonization within ASEAN through a common language for the GAP. Increasing the food safety of fresh products for consumers. Increasing the sustainability of resources in ASEAN countries.

In Vietnam, the state-sponsored GAP certification scheme – VietGAP - was launched on January 28, 2008. MARD is mainly in charge of the development of this scheme, providing guidelines for its implementation in different sectors (aquaculture, cultivation and husbandry). In aquaculture, code of good aquaculture practice in Vietnam (VIETGAP) was issued in July 2011 (Decision No.1503/QĐ-BNN-TCTS) and amended in 2014 (Decision No. 3824/QĐ-BNN-TCTS). This code applies to domestic and foreign organizations and individuals participate in aquaculture activities (regardless of object, form of farming) and VietGAP consultancy, evaluation and certification in aquaculture (not applicable to aquarium fish). Subjects who apply VietGAP to aquaculture need to comply with the following principles:

#### **General requirements:**

***Farming place:*** The culture area must be located in the local aquaculture planning area. Farming facilities should be built in areas less affected by pollution or controlled sources of pollution. The site of culture must be outside of national or international protected areas. If the farm is located in an area, the written consent of the protected area authority is required. Farming sites constructed after May 1999 must be outside of ecologically important natural wetlands (RAMSAR).

***Land/water use rights:*** Farmers must have land/water use rights for aquaculture in accordance with current regulations.

***Aquaculture registration:*** ***The*** farms must register production activities with the competent management agency in accordance with current regulations.

***The infrastructure:*** Farming facilities must be designed, operated and maintained to prevent the contamination of food, epidemic safety and occupational safety hazards. Farming establishments must have signs in each farming unit, auxiliary works in accordance with the ground plan and reality.

***Warning of unsafe risks:*** The farms must have warning signs at places where there is a risk of labor safety and food safety.

***Tracking aquatic moves:*** The farms must record the movement of farmed fish from outside to, or inside out, or between culture units from stocking to harvesting and selling the produce.

***Distinguishing products applying VietGAP:*** The farms must have an identification system to ensure there is no confusion between the cultured species and the non-applicable VietGAP (including the geographic location of the farm according to the reference system and coordinate system. country VN-2000).

***Human resource requirements:*** Farm operators must be trained in hazard analysis, preventive measures and control of hazards in aquaculture. Workers who work in the farm must be trained and properly adhere to safe and good aquaculture practices.

***VietGAP Documentation:*** The farms must develop, implement, maintain and update practical guidelines for the aquaculture process.

***VietGAP Profile:*** The farms must establish, maintain, and have a record of the activities performed during aquaculture practices. Records relating to fishery products must be kept for at least 24 months after harvest. Legal, human resources, and environmental records must be kept until there is a change.

#### **Food safety:**

Aquaculture operations must be controlled to ensure food safety by complying with applicable Vietnamese regulations and FAO / WHO Codex Guidelines.

***Quality of supply water:*** Water used for aquaculture must be suitable for each specific cultured species and meet the current regulations of the Ministry of Agriculture and Rural Development.

***Food, drugs, products for environmental treatment and improvement:*** The farm must make a list of feed, drugs, products for treatment and improvement of the environment in the warehouse and carry out monthly inventory. The farm only uses drugs, feed, and products for environmental remediation permitted for circulation in Vietnam, under the guidance of professional officials or the manufacturer. The farm does not use chemicals and antibiotics in the banned list set by the Ministry of Agriculture and Rural Development. In case of using homemade feed, it is required to record the ingredients and origin of the ingredients as feed. Farming establishments must preserve food, drugs, and products for environmental improvement in accordance with the manufacturer's instructions. The farm must discard and treat food, drugs, and

products for environmental treatment that are out of date and of poor quality. The farm must compile, update, store import and export records, use and preserve food, drugs, and products for environmental remediation and product handling.

***Sanitary:*** The farm must collect, classify and promptly treat ordinary solid wastes and hazardous wastes generated in the daily life and aquaculture in accordance with current regulations, must establish, update and keep records of hazardous waste disposal. It is necessary to ensure the hygiene of the workers' farming and working and resting areas in order to avoid the risk of arising and contaminating food unsafe agents. Farmers and visitors must comply with the hygiene requirements prescribed by the farm to prevent environmental pollution and pathogen generation in the farming area.

***Harvest and transport:*** the farm must harvest fishery products at the appropriate time and in appropriate methods to ensure food safety; transportation conditions must be applied to ensure food safety in the case of product self-transport; and must prepare and maintain records relating to harvest and transport.

#### **Aquatic health management:**

Should be done to ensure the health of aquatic animals by maintaining good and suitable habitats at all stages of the production process, as well as minimizing risks of disease

***Aquatic health management plan:*** Farms must develop a health management plan for farmed aquatic products in consultation with professional staff

***Aquatic breeds:*** Seeds have clear origins and are produced from qualified hatcheries; Aquatic breeds to be stocked must ensure the quality according to the respective QCVN, TCVN and other regulations of the competent authority; Farmers must compile and maintain records of the purchase and use of aquatic breeds including quarantine papers.

***Feeding regime:*** The farm must determine and implement a feeding regime appropriate to the nutritional needs and age of the aquatic animals raised. No hormones or growth promoters are used during the culture process and feeding regimen should be established, updated and maintained.

***Feeding:*** Feeding regime: the farm must determine and implement a feeding regime suitable for the nutritional needs and age of the farmed aquatic animals. Do not

use hormones, growth stimulants in the culture process. and must compile, update and maintain feeding records.

***Monitor aquatic health and prevent the spread of disease:***

Health monitoring: The farm must regularly monitor for signs of shock or sickness in the farmed aquatic animals and take the necessary measures to prevent pathogens; Must periodically check the average volume, survival rate, total aquaculture biomass of each farming unit depending on the species of culture and must prepare, update and keep records related to the health of farmed aquatic products.

Isolation and prevention of disease transmission: When detecting a disease, the farm must implement isolation measures to prevent the spread of the disease between the farming units and from the culture to the outside.

Water quality monitoring and management: Farming establishments must regularly monitor and manage water quality depending on species and prepare, update and keep records of this.

Epidemic and epidemic notification: When a disease occurs on the list of diseases subject to outbreak declaration, the farm must notify the nearest aquatic or veterinary authority and take measures to put the epidemic in place. Perform disinfection at the place where the epidemic occurs.

Handling dead seafood: the farm must properly handle dead fish to avoid environmental pollution and disease spread.

Use of antibiotics: In case of using antibiotics, the farm only uses the prescription or treatment regimen of professional staff; Stop using antibiotic before harvest as recommended by the manufacturer or regulator and record of antibiotic use should be established, updated and maintained.

Post-harvest treatment: the farm must ensure the downtime between two crops, disinfect and improve the culture area before the new crop and establish and keep records of the above activities.

**Environmental protection:**

Aquaculture activities must be conducted in a planned and environmentally responsible manner, in accordance with State regulations and international commitments.

***Commitment to environmental protection:*** must have an environmental protection commitment or an environmental impact assessment report in accordance with the current regulations and take environmental protection measures.

***Use of water and waste water:*** Domestic water (tap water) must not be used for aquaculture purposes. Wastewater discharged into the environment must meet the quality standards in accordance with current regulations and must prepare, update and archive a record of the amount of water used for each crop and check the quality of wastewater.

***Using groundwater:*** If using groundwater, it must comply with the current regulations.

***Salinity of natural freshwater sources:*** must be designed and managed to protect surface water and groundwater sources, and limit salinity of natural freshwater sources. Do not discharge salt water into natural freshwater sources. Local authorities and communities must be informed when groundwater becomes salty.

***Pest control:*** Take measures to prevent invaders from entering the farm / unit, including terrestrial animals, but to ensure the safety of wild animals and take the necessary measures to protect and not cause death to animals listed in the Vietnam Red Book that are likely to appear in farming areas.

***Aquatic resources protection:*** alien species can only be raised when permitted by the State and must comply with current regulations. The relevant regulations in the Fisheries Law must be complied with when harvesting wild seed for commercial farming purposes. and using genetically modified aquatic breeds must comply with the current regulations.

### **Socio-economic aspects:**

Aquaculture must be carried out in a socially responsible manner, respecting the local community culture, strictly abiding by State regulations and agreements. Labor rights of the International Labor Organization (ILO), do not affect the livelihoods of workers and surrounding communities.

#### ***Employer:***

Working age: do not use employee under 15 years old. In case the employee is from full 15 years old to under 18 years old, must ensure that the job does not harm their



health, does not affect their learning or impair their ability to absorb knowledge and must have a record of workers

**Rights and regimes of employees:** Employees are allowed to form or join legal unions to protect their rights and interests and does not assume any liability after exercising this right. Employees have the right to give comments and make complaints on issues related to labor rights and working conditions. Farm owners must consider, respond to or resolve recommendations and difficulties that workers raise. Employees are not discriminated against by gender, religion, or ethnicity from the employer or other employees. Employees working overtime must not exceed the maximum and are paid overtime in accordance with current regulations.

***Labor safety and employee health:***

**Working conditions:** The workplace must be arranged and a place to rest between hours to ensure hygiene and safety for employees. Protective equipment must be made available free of charge to workers to prevent occupational accidents and occupational diseases.

**Employee health care:** must pay insurance premiums and create conditions for employees to enjoy social insurance and health insurance in accordance with the Labor Code, the Law on Social Insurance, and the Law on Insurance. health insurance. must take timely action when an accident occurs and keep documents related to the handling of the accident. and must take similar accident prevention measures.

***Contract and salary (wages)***

**Probation and contract:** to ensure that the maximum probationary period for employees must not exceed the time prescribed by the Labor Law. Must sign a written contract with the employee, except for the case of hiring the employee to perform temporary jobs with a term of less than 1 month. There must be a probation agreement and proof of probationary pay.

**Wages and salaries:** wages must be paid in full, in cash or in the method most convenient for the employee. In case of hiring workers to perform temporary jobs with a term of less than 1 month, the farm must pay full wages right after finishing the work. The monthly salary must not be lower than the minimum wage set by the State at the time of salary payment and must be paid monthly and must have a labor contract and documents on the payment of salaries / wages to employees.

Community problems: Farm must have compromises and solutions to resolve conflicts with adjacent farms and surrounding communities and must keep the results of resolving complaints and conflicts with the surrounding community.

After 10 years of implementing VietGAP, MARD has granted 119 certificates for white leg shrimp farming, with the certified area of 1,664 ha; Black tiger shrimp was 20 certificates, the certified area was 614 hectares (MARD, 2014). However, up to now, the expansion of the area in many places has begun to be difficult due to the requirement that the area for shrimp farming must be in the planned area, the ponds must be adjacent to the other members to create a large area, infrastructure to ensure good maintenance of food safety and environmental protection standards. With these criteria, the infrastructure of many places cannot meet (Sau Nghe, 2020). Many farmers have not actively applied VietGAP standards to aquaculture activities because production costs for VietGAP application in particular and GAPs in general will increase by 20-30% compared to normal, but the product is not easy to sell. VIETGAP is more difficult to apply than other GAPs, VIETGAP has not been recognized internationally and has not been converted equally to other \* GAPs, so finding the output for the product is really not easy (Nguyen Manh Hung, 2019). In order to support farmers, especially small-scale shrimp farmers, who do not qualify for any GAPs certification, have the opportunity to connect to markets for their products, ASIC is the right type of certification. consolidation in the current period, can help farmers change their farming practices. However, ASIC does not have specific regulations for shrimp farming. Currently, ASIC's set of shrimp farming criteria has just started piloting and upgrading depending on the conditions of each country. ASIC has the following main characteristics:

### **3. ASIC standards and implications**

According to draft review of Aquaculture Social and Gender Standard and Shrimp standards (ASIC, 2020b, 2020a), ASIC has a range of initiatives to enable the improvement of the seafood industry of Southeast Asia (Indonesia, Myanmar, Philippines, Thailand, and Vietnam) to tackle social and environmental sustainability challenges facing the Asian seafood industry. ASIC stakeholders including producer organizations, processors, environmental NGOs, and local certification bodies work with export market stakeholders, including NGOs, buyers, and certification bodies, to build innovative tools designed to foster improvement for both shrimp aquaculture and fisheries in the region. One of the first efforts of ASIC to create an organization that can give producers a real voice, empower Asian seafood workers, foster inclusive business

models, and facilitate meaningful improvement. By supporting stakeholders to build their own tools that are in line with or coupled to international standards.

ASIC Shrimp in particular present a pathway towards improvement as well as a framework to meet the standards of international ratings that will facilitate market access to places like Europe and the US with a high demand for sustainable seafood. Producers, hatcheries, and feed mills involved in ASIC Shrimp will need to demonstrate compliance with the associated standards via a 3<sup>rd</sup> party audit to make any market claims on compliance with ASIC Shrimp Yellow or Green standards.

In contrast to other standards, ASIC targets small-scale shrimp farmers, environmental standards and the social standard especially regulates the age of young workers in accordance with the conditions of small-scale shrimp farming households in the region. Specifically, ASIC has the following technical and social standard:

**Technical standards/environmental standards:**

*At farmer level:*

ASIC has designed to address key issues associated with grow-out farming practices: Traceability; Shrimp Health Management; Source of Stock; Feed Sourcing and Management and Environmental Impact Management.

*Traceability:* By providing traceability for seafood products, consumers will know that the choices they make are not encouraging IUU (illegal, unreported and unregulated fishing) fishing, forced labor, or other social or environmental ills that undermine the long-term management of fisheries.

*Shrimp Health Management:* include directional regulations: Optimizing health, minimizing stress, reducing shrimp disease risks, and maintaining a healthy culture environment at all phases of the production cycle are critical to minimizing the environmental impacts of disease.

*Source of Stock:* regulations seek to address the use of shrimp species in production and ensure that the species used are from sustainable sources

*Feed Sourcing and Management:* regulations in this section seeks to address the sustainability and efficient use of wild fish resources in shrimp aquaculture feed that can be verified at the farm level.

*Environmental Impact Management:* regulations in this section seeks to manage the impacts that shrimp aquaculture operations can have on biodiversity through activities such as farm siting, predator control, or water quality discharges.

*Hatchery standard:* it is designed to address issues on wild population of shrimp. Ensuring that species used in production are sufficiently domesticated as well as screened for diseases.

*Feedmill standard:* Designed to ensure that the use of fishmeal and fish oil from illegal, unregulated, or unreported fisheries is minimized or eliminated

**Social standards:** promotes social responsibility to enhance long-term community benefits and resilience. Fundamental principles are:

- No child labors
- No forced labor, human trafficking or slave-like practices
- Freedom of association
- Equality and non-discrimination
- Fair recruitment and decent working conditions
- Safe working environment
- Respect for local communities
- Gender equality and women’s economic empowerment (WEE)

**ASIC steps for improvement:**

- Optional add-on based on the same fundamental principles
- Provide a way for groups to differentiate themselves in the market
- Improvement-oriented tool seeking to enhance community benefits and well-being.

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## 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 5000m<sup>2</sup>, 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







# Aquaculture Social and Gender Standard

Asian Seafood Improvement Collaborative (ASIC)

Version 1.1

Revised 7 June 2021

## Content

Introduction.....	4
Our approach.....	4
About this document.....	4
Structure of the aquaculture social and gender standard.....	5
ASIC Improvement Programme.....	6
Scope.....	8
Using the ASIC Aquaculture Social Standard.....	8
Fundamental Principle # 1: No child labour.....	12
ASIC Compliant: Minimum requirements.....	12
ASIC Leader: Menu of improvement options.....	16
Fundamental principle #2: No forced labour, human trafficking, slavery, or practices similar to slavery.....	20
ASIC Compliant: Minimum requirements.....	20
ASIC Leader: Menu of improvement options.....	27
Fundamental Principle # 3: Freedom of association.....	30
ASIC Compliant: Minimum requirements.....	30
ASIC Leader: Menu of improvement options.....	34
Fundamental Principle # 4: Equality and non-discrimination.....	36
ASIC Compliant: Minimum requirements.....	36
ASIC Leader: Menu of improvement options.....	41
Fundamental Principle # 5: Gender equality and women’s economic empowerment (WEE).....	43
ASIC Compliant: Minimum requirements.....	43

ASIC Leader: Menu of improvement options .....	46
Fundamental Principle # 6: Fair recruitment and decent working conditions .....	54
ASIC Compliant: Minimum requirements .....	54
ASIC Leader: Menu of improvement options .....	58
Fundamental Principle # 7: Safe working environment .....	61
ASIC Compliant: Minimum requirements .....	61
ASIC Leader: Menu of improvement options .....	64
Fundamental Principle # 8: Respect for local communities .....	66
ASIC Compliant: Minimum requirements .....	66
ASIC Leader: Menu of improvement options .....	68



## Introduction

The Asian Seafood Improvement Collaborative (ASIC) is a burgeoning regional collaboration between private sector stakeholders from Indonesia, Myanmar, Philippines, Thailand, and Vietnam who have come together to tackle social and environmental sustainability challenges facing the Asian seafood industry. ASIC's mission is to support Asian stakeholders in becoming agents of their own empowerment and through collaboration, create pathways for seafood improvement that account for the social, environmental, and traceability challenges in the region. ASIC stakeholders represent various elements of the Asian seafood industry including producer organizations, processors, environmental NGOs, and local certification bodies. These ASIC participants work in conjunction with export market stakeholders, including NGOs, buyers, and certification bodies, to build innovative tools designed to foster improvement for both shrimp aquaculture and fisheries in the region.

ASIC was built in Asia by Asian stakeholders and represents one of the first efforts to create an organization that can give producers a real voice, empower Asian seafood workers, foster inclusive business models, and facilitate meaningful improvement. By supporting stakeholders to build their own tools that are in line with or coupled to international standards, they are more likely to use these tools and seek to promote them within their respective communities. ASIC is committed to inclusion and making our programs available to any interested party no matter their starting point on the spectrum of sustainability or social standards.

### **Our approach**

ASIC was founded on three key principles that are critical for fostering improvement in aquaculture operations in Asia:

- *Incentivize continuous improvement:* Develop strategies and tools with the direct engagement of the producers via an ISEAL compliant, consensus-based approach to define and incentivize improvement.
- *Design inclusive tools:* Design tools that allow multiple compliance points for engagement with producers at all levels of performance.
- *Co-create realistic sustainable solutions:* Build tools that reflect the realities facing producers while seeking to align production with global sustainability standards where possible.

### **About this document**

The Social Standards are the latest ASIC tool being developed in order to address the complex social and gender challenges pervasive in the seafood sector. Similar to other ASIC standards, the social standards apply to seafood operations of different sizes and structures, with the specific needs of large-scale and small-scale aquaculture farms being addressed. In order to be an ASIC member, the social

standard for aquaculture must be implemented alongside the applicable ASIC environmental standards, such as ASIC Shrimp and or other relevant aquaculture standards developed in future.

Through this initiative, ASIC hopes to develop a tool with stakeholders that enables them to implement best practices, gain new knowledge and skills to benefit their businesses, increase their market penetration both locally and internationally, increase their incomes, and improve the wellbeing of their households and communities.

### **Structure of the aquaculture social and gender standard**

ASIC has divided the social standards into two documents for aquaculture operations and fishery operations, respectively, in order to recognize the similar but distinct social characteristics of these food production systems. The current document covers the social requirements for aquaculture operations participating in the ASIC program.

ASIC recognizes that aquaculture operations can take various forms depending on factors such as the system of cultivation, the species being cultivated, and the type of labour being used. The ASIC social standard distinguishes between small farms and large farms or operations, while also including exceptions for farms that rely exclusively on family labour and community work-exchange arrangements. This standard operates under the acknowledgement that most small farms will be verified at the group level, rather than individually, so some requirements may be verified at the group level. In order to distinguish between small and large aquaculture farms, ASIC uses the following definitions:

- 1) **Small farms** depend primarily on family labour and community work-exchange arrangements. Small farms may employ a total of 5 workers per year, including seasonal, temporary and part-time workers, however the farm should be primarily family-run.
- 2) **Large farms or operations** include farms and other aquaculture operations (hatcheries, processing plants, etc.) that rely on hired workers for its regular functioning. Large farms include any farm that hires more than 5 workers in a calendar year, including seasonal, temporary and part-time workers.

The limit of 5 or less hired workers arose from Steering Committee discussions which recognized that even for many small farms, some hired labour is used particularly during busier seasons and/or for specific tasks. In order to ensure that small farms were not burdened with the requirements of large aquaculture farms or operations solely due to hiring labour, ASIC decided to set a maximum number of hired workers, including seasonal and part-time workers, which reflects the dynamic realities of small-scale production systems.

## ASIC Improvement Programme

ASIC is committed to fostering continuous improvement and seeks to avoid the pass/fail system commonly associated with sustainability standards. Our approach to improvement involves recognizing farms for their commitment to sustainability and supporting them through the process of improvement and verification. In alignment with the ASIC Shrimp standards, the ASIC social standards for aquaculture are separated into two levels of improvement and compliance: ASIC Compliant - Minimum Requirements and ASIC Leader - Improvement Options. Each level of compliance is associated with an improvement programme which includes technical support and training for farmers to achieve the desired level of performance.



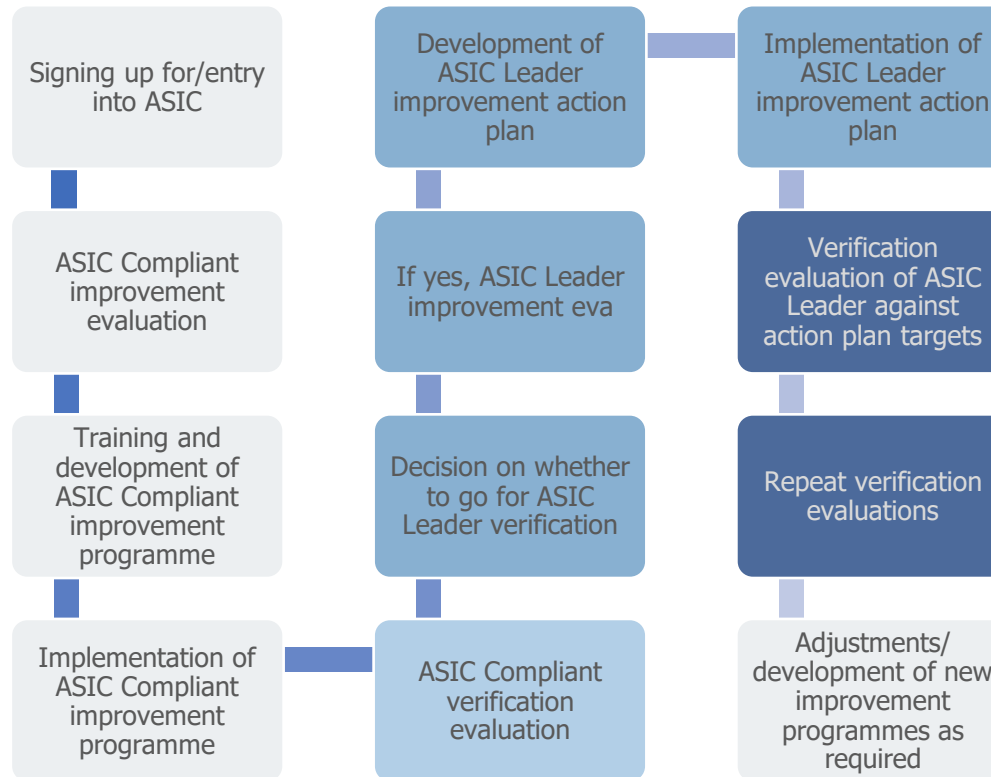
The first tier (ASIC Compliant) includes the minimum requirements that farms and operations are required to meet in order to be verified against the ASIC standard. These focus on compliance with basic social rights and principles and they can, in a sense, be seen as “entry-level requirements” for ASIC verification. When joining ASIC, farms will undergo an improvement evaluation to determine where they meet the minimum requirements and where improvement is required. Based on this, an ASIC Compliant improvement plan will be developed and implemented. Once farms have sufficiently improved and believe that they are prepared for verification, a verification evaluation will be undertaken to determine whether the farm or operation has successfully implemented the improvement plan and therefore has reached the minimum criteria to be ASIC verified at ASIC Compliant. In order to be verified against the ASIC Compliant level under the social standards, all requirements must be met by the individual farms, including all farms verified in a group verification process.

If a farm (including farmer groups) or operation wants to pursue ASIC Leader verification under the social standards, they will participate in a facilitated risk assessment and will collectively decide on specific actions to take in order to address those needs. An action plan including timelines, targets and indicators of improvement will be developed by the farmer(s), in collaboration with ASIC or a local partner, and must include at least one activity contributing to a goal for each of the eight Fundamental Principles<sup>1</sup>. To achieve ASIC Leader verification, the farm or farmer group will be verified against their action plan and must demonstrate continuous improvement to

<sup>1</sup> If no farm or operation included under the verification employs hired workers, then they are exempt from implementing improvement options under Fundamental Principle 6: Fair recruitment and decent work conditions.

maintain the verification. This structure for improvement and verification was decided on over a fixed set of requirements since ASIC recognizes that risks and needs are context-specific and may differ according to the community and country. Community development must start within the community; therefore, ASIC aims to assist by providing tools and technical support required to implement these activities, while allowing farmer groups and their social networks to collectively decide on priorities.

The process can be illustrated as follows:



## Scope

The ASIC social standard outlined in this document is open to aquaculture farmer groups as well as to individual farms or operations who have operations on a scale that makes individual implementation of improvement action and verification possible and affordable. This includes individual farms, as well as processing plants, hatcheries, feed mills, and other operations as desired. All operations are also responsible for ensuring that their subcontractors abide by the requirements laid out in this standard, and these subcontractors will be included in the verification process at ASIC and/or the auditor's request.

Regardless of the scale, all units of verification must abide by the management and administrative procedures outlined in the ASIC Internal Control System (ICS) Requirements (See ASIC ICS Framework for more details), therefore it is recommended that small farms are verified in groups to facilitate these requirements and reduce the administrative burden.

## Using the ASIC Aquaculture Social Standard

The aquaculture social standard is divided into eight sections based on eight fundamental principles. These standards are designed to address the realities of aquaculture operations, in order to promote improvements in labour practices, human rights and gender equality that lead to increased wellbeing, cooperation and resilience for everyone involved.

The standard is based upon relevant UN conventions, notably the "Palermo Protocol" on human trafficking, the ILO fundamental labour rights conventions, the FAO Sustainable Small-Scale Fisheries Guidelines, and the Convention on the Elimination of All Forms of Discrimination against Women. Throughout the document, reference to specific international instruments and guidelines are inserted where relevant.

In order to ensure that every actor in the seafood industry is represented in this social standard, ASIC is taking a gender mainstreaming and socially inclusive approach. The gendered implications of each principle, goal and indicator have been considered throughout the standard. Even when not specifically mentioned, farmers and verifiers should use a gendered lens to consider how best to approach the indicator.

Based on the frameworks and considerations listed above, the ASIC standard is organised into eight fundamental principles:

### *Principle 1: No child labour*

The requirements under this principle are based upon the UN Convention on the Rights of the Child as well as core ILO conventions, such as No. 138 Minimum Age Convention and No. 182 Worst Forms of Child Labour Convention. Together, the requirements are

designed to protect the fundamental rights and wellbeing of young workers, while recognizing the important contributions that the income of young workers can make to their households and communities.

*Principle 2: No forced labour, human trafficking, slavery or practices similar to slavery*

This principle is based upon core ILO conventions including No. 29 Forced Labour Convention and the associated Protocol, as well as No. 105 Abolition of Forced Labour Convention. This principle also draws on relevant international frameworks including the Universal Declaration on Human Rights and the Palermo Protocols. The requirements in this principle together contribute to ensure that the fundamental rights of every worker are respected. While most companies and operations do not knowingly utilize forced labour, a lack of transparency and a reliance on informal recruitment channels can contribute to an operating environment conducive to these issues. These requirements therefore aim to encourage active prevention mechanisms to address the problem before it starts.

*Principle 3: Freedom of association*

This principle is grounded in the core ILO Conventions No. 87 Freedom of Association and Protection of the Right to Organise, and No. 98 Right to Organise and Collective Bargaining. Freedom of association is a fundamental human right owed to all workers, no matter the scale of the operation. Even where no government support for unionisation exists, workers must have the right and ability to voice their grievances and join unions as desired. This contributes to a safe, productive and respectful work environment that can adequately adapt to the needs and concerns of its workers and acts as a mechanism to safeguard their human rights.

*Principle 4: Equality and non-discrimination*

Discrimination in the workplace can take many forms, including unequal remuneration and benefits, biases in recruitment, promotion and security of tenure, as well as workplace cultures and environments that fail to recognize diverse needs and experiences of the workers. Workplace harassment is also a common global issue that must be addressed to ensure that all workers are treated with dignity and respect. This principle aims to address discrimination in the workplace by promoting policies and procedures that mitigate these risks and recognize the need for a safe, respectful work environment. The requirements under this principle are grounded in international frameworks, including the Universal Declaration on Human Rights, the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO SSSF), as well as ILO Conventions No. 100 Equal Remuneration and No. 111 Discrimination (Employment and Occupation).

*Principle 5: Gender equality and women's economic empowerment (WEE)*

This principle is influenced by CEDAW, ILO Conventions No. 100 and No. 111, the UN Women's Empowerment Principles, as well as the FAO SSSF Guidelines, which was ground-breaking for its recognition of gender equality as fundamental to the sustainable development of fisheries and aquaculture. This principle is also grounded in the Sustainable Development Goals, particularly SDG 5: Achieve gender equality and empower all women and girls, as we note the glaring omission of gender equality targets from SDG 14: Life below water.

While Principle 4 Equality and Non-Discrimination addresses the most basic requirements for equal and respectful treatment in the workplace, Principle 5 recognizes that women (and people of all genders) often face additional barriers that prevent them from accessing equal opportunities and reaping equal benefits associated with the seafood sector. These barriers come in many forms, such a greater care and reproductive labour burden, less access to key resources such as financing and equipment, social norms and perceptions limiting and devaluing women's participation, and many other gendered challenges. The requirements under Principle 5 were developed in order to address this inequality and support women's empowerment in seafood value chains and fishing communities, so they promote activities that recognize women's contributions to the sector, that reduce women's burden, and that support shifts in social gender norms.

*Principle 6: Fair recruitment and decent working conditions*

This principle is fundamental to the rights and wellbeing of workers, regardless of the size of the operation. The requirements under this principle ensure that all workers are protected against exploitation during recruitment, are treated fairly in accordance with national legislation, and are valued for their contribution to the operation. The requirements are based upon relevant international frameworks and ILO conventions, including all of those conventions mentioned above as well as ILO Convention No. 102 Social Security (Minimum Standards), ILO Recommendation No. 202 Social Protection Floors, and Convention No. 181 Private Employment Agencies.

*Principle 7: Safe working environment*

The requirements for this principle are based on ILO Conventions No. 188, No. 102, and Recommendation No. 202 as mentioned above, as well as Convention No. 187 Promotional Framework for Occupational Safety and Health Convention. This principle recognizes that an unsafe work environment can have negative impacts on worker wellbeing, workplace morale, and the productivity of the operation. The requirements therefore aim to promote a safe and healthy work environment that recognizes and responds to the diverse needs of its workforce.

*Principle 8: Respect for local communities*

This principle was primarily influenced by the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO SSSF). Regardless of their size, all aquaculture operations have impacts on their wider communities through the use of communal resources to earn a livelihood. Aquaculture operations therefore have a responsibility to ensure that their commercial activities do not negatively impact on the rights of other community members to access, use and benefit from these resources. These operations also have the opportunity to positively impact their communities through activities such as educational opportunities, community-building, and risk management plans.

In this standard, each section focuses on a single fundamental principle and includes goals that ASIC aims to achieve within that particular social or human rights domain. The sections are divided into goals to achieve ASIC Compliant and include compliance criteria that must be met in order to achieve the ASIC Compliant verifications. The section also includes goals for the ASIC Leader level, which includes a menu of improvement options to work towards the stated goal. The improvement options listed under ASIC Leader present possible activities that a group or operation could implement in order to work towards the stated goal, if they select that fundamental principle as an area of improvement after conducting their risk assessment.

Beside both ASIC Compliant and ASIC Leader criteria, we have indicated whether the particular criteria or improvement option applies to small farms without hired labour, small farms with hired labour, and/or large farms.

The requirements are laid out as below:

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms</i>
<b>Goal No.:</b> <i>Defines the specific goal that the compliance criteria or improvement options are working towards related to human rights, social inclusion, gender equality and community wellbeing</i>				
No.	<i>Defines the specific requirement that the group or operation is expected to comply with or work towards in order to reflect the principle and goal.</i>	<i>Checked if applicable</i>	<i>Checked if applicable</i>	<i>Checked if applicable</i>



## Fundamental Principle # 1: No child labour

ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.1.1:</b> Child <sup>2</sup> labour is not acceptable, but children can help-out in family operations as part of socialization, provided their education is not compromised and their full and normal physical and mental development are not put at risk				
C.1.1.1	Children who help out in family operations <sup>3</sup> must be guided by an adult at all times	✓	✓	✓
C.1.1.2	Children who help out in family operations should not handle toxic substances, heavy machinery or perform other work that may harm their health and development	✓	✓	✓
C.1.1.3	Children who help out in family operations as part of socialization can only take do so outside school hours, during daytime and provided their education, physical, mental and moral development are not put at risk. In family operations, this also refers to children, particularly young girls, assisting with the unpaid care and domestic work.	✓	✓	✓

<sup>2</sup> For the ASIC standards definitions are derived from the relevant international agreements as follows: In accordance with the UN Convention on the Rights of Children, a child is anyone below the age of 18 years. Children can be allowed to work in accordance with ILO Convention 138 on the minimum age for admission to employment and ILO Convention 182 on the Elimination of the Worst Forms of Child Labour as follows: General minimum age is 15 years, provided the child has completed basic (compulsory) education. Hazardous work is prohibited below the age of 18 years. Each country must define the list of hazardous job, occupations and tasks prohibited till the age of 18 years. Children can undertake light work from the age of 13 (or 12, if permitted by national law) for a limited time per day, provided work does not impact negatively on the child's education or normal physical, mental or moral development. Where national legislation differs from the definitions in conventions, national legislation is used for the standard, unless the national legislation applies age limits (i.e. lower age limits) or other definitions that put children at higher risk than is provided for under the international agreements.

<sup>3</sup> For the purposes of this document, family refers to any spouse, child, parent, guardian, sibling, grandchild or grandparent, as well any person who lives in the household as a member of the family (not including paid/domestic help or live-in workers).

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.1.1.4	Parents whose children help out in family operations must comply with national legislation regarding child labour and compulsory education	✓	✓	✓
C.1.1.5	Children helping in family operations should not be used to replace hired workers and must not complete tasks that would typically be done by hired labour.		✓	✓
<b>Goal C.1.2:</b> Young workers are protected against hazardous work and violations of their rights, including the right to education. Infringements must be remedied immediately				
C.1.2.1	No-one below the national minimum age (or the minimum age set out in ILO convention 138 of 14/15, whichever is higher) works full time in the operation <sup>4</sup>	✓	✓	✓
C.1.2.2	No-one under 18 who has not completed compulsory, basic education, works full-time in the operation <sup>5</sup> even if they are above the minimum age	✓	✓	✓
C.1.2.3	No one below the age of 12/13 performs light work in the operation. Light work should be done outside of school hours, during daytime and	✓	✓	✓

<sup>4</sup> Currently, the labor legislation in all ASIC countries comply with the requirements of ILO C138 on minimum age. Exceptions tend to be legislations with higher requirements.

<sup>5</sup> The level of compulsory education varies among the ASIC countries, from 5 years of compulsory basic education in Myanmar to 11 years in the Philippines. More education data is available in the [World Bank Open Data base](#)

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
	should not exceed 2 hours per day on school days and seven hours per day maximum on any day, with a total maximum of 14 hours per week <sup>6</sup>			
C.1.2.4	Young workers (above minimum age but below 18 years) in the operation are not asked to do any work that may harm their health, safety or morals (as defined in the national list of hazardous work <sup>7</sup> )	✓	✓	✓
C.1.2.5	If a young worker is found doing hazardous work, they are immediately assigned other duties suitable for their age	✓	✓	✓
C.1.2.6	After all remediation efforts are explored, any child labourer found in the operation is removed immediately	✓	✓	✓
C.1.2.7	Any child labourer found and removed from the operation must also be provided a suitable alternative. This includes education or training, as appropriate. It is the responsibility of the parents/guardians to ensure that children are enrolled in education, but the operation must follow-up with parents, provide information about schools and available support schemes.	✓	✓	✓

<sup>6</sup> Light work according to ILO C138 is defined as work that is unlikely to be harmful to the health and development of the young person, nor negatively impact their attendance at school, participation in vocation orientation or training programmes, nor hinder their capacity to benefit from their education.

<sup>7</sup> Countries that ratify ILO Conventions on child labour must adopt a national list of hazardous child labour prohibited for anyone below the age of 18 years. In countries that have adopted the list, it defines what is permitted and prohibited under the ASIC standard. In countries, where a list is not yet adopted, any draft list made public will be the guide. In countries that has no list of hazardous child labour, nor a draft list, operators and ASIC auditors can be guided by the compendium of national lists made public by the ILO: [http://www.ilo.org/ipec/Informationresources/WCMS\\_382487/lang--en/index.htm](http://www.ilo.org/ipec/Informationresources/WCMS_382487/lang--en/index.htm)

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.1.2.8	When a child of any gender is removed from work due to child labour violations, management takes immediate steps to replace the child's income for their family or household. This can include hiring the child's parent or age-appropriate sibling, connecting the child with social assistance programs, or other context-specific solutions.			✓
<b>Goal C.1.3:</b> The safety, development and well-being of children and young persons working in or living in proximity to aquaculture operations is protected				
C.1.3.1	Children and young people, particularly young women and girls, are protected from violence, harassment and abuse, including bullying, cyberbullying and sexual harassment.  Children and young workers should be supervised at all times, have regular check-ins with supervisors, and have equitable access to confidential grievance mechanisms that are safe and trusted, and investigations and remediations that are swift and credible.	✓	✓	✓
C.1.3.2	When workers' children younger than the minimum age accompany their parents to work, child-care must be provided at no or minimal cost to the worker. The child-care must be in a safe facility and children must be supervised by an adult at all times.		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
	In family operations, the burden of child-care for workers must not unduly increase the responsibilities of young household members <sup>8</sup> and must not put at risk their education, physical, mental or moral development.			
C.1.3.3	Young workers and farmers are actively encouraged to participate in local decision-making bodies and worker organizations, including trade unions, farmer associations, youth associations and other relevant groups.  Particular steps are taken to facilitate young women’s participation, through for example providing child-care, consulting women on the timing of the meeting, providing transportation, allowing women to appoint a spokesperson representative, providing a safe environment, or other relevant accommodations.	✓	✓	✓

## Fundamental Principle #1: No child labour

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant farms

<sup>8</sup> While unpaid care and domestic work is often the responsibility of young women and girls, this standard recognizes that young men and boys may also be burdened with additional work that could increase the risk of child labour. Therefore, the operation must avoid increasing the workload of all young family members that may put their education and development at risk.

improve to ASIC Leader level, as well as the goals that will differentiate those who are ASIC Compliant from farms truly committed to combatting child labour within their communities.

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.1.1:</b> Child labour is prevented and addressed as a systemic issue within the community				
I.1.1.1	Farms or operations provide education and training opportunities to young people of all genders in their community. The education and training can take place either on the premises of the operation or in near-by schools or non-formal education centres. The schools and centres can be run by the farm or operation, by the government or by NGOs but must comply with government regulations and lead to a recognised education certificate.	✓	✓	✓
I.1.1.2	Farms or operations provide safe, reliable transportation to and from school for school-age children of workers at no or minimal cost to the worker. Transportation should be available to children of all genders.  Where workers’ children live on-site and the schools are not a reasonable and safe walking distance from the operation, this option <b>must</b> be implemented to achieve compliance with ASIC Leader.	✓	✓	✓
I.1.1.3	Farms and operations increase access to educational opportunities for workers’ children by offering scholarships, providing tutors, or providing educational or school materials.	✓	✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	Small-scale operations can establish a joint savings and grant/loan program to assist with educational expenses.			
I.1.1.4	Farms or operations offer paid apprenticeship opportunities for young people. The apprenticeships should be in line with the appropriate government regulations and should be available to all genders.	✓	✓	✓
<b>Goal I.1.2:</b> Families and communities make an effort to prevent work as a form of socialisation from developing into child labour				
I.1.2.1	Farms or operations establish after-school homework groups to encourage children to complete their schoolwork prior to helping on family farms.	✓	✓	✓
I.1.2.2	Farms or operations identify and record family labour and remunerate them accordingly. This could include, for example, all members of the family keeping timesheets or establishing verbal or written contracts within the household.	✓	✓	✓
I.1.2.3	Farms and operations support children’s access to safe, healthy recreational activities outside of school. This could include starting a sports team for children, constructing a playground, or another similar activity.	✓	✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.1.2.4	Farms and operations establish safe, cooperative day care facilities for young children, possibly in collaboration with other community groups or Community-Based Organizations (CBOs).	✓	✓	✓
<b>Goal I.1.3:</b> Farms and aquaculture operations can support young people in their communities to pursue careers in aquaculture				
I.1.3.1	Farms or operations work with local schools to teach children about aquaculture practices, either in the schools or through facility visits.	✓	✓	✓
I.1.3.2	Young workers are given access to further education and training with the support of the farm or operation. This could include scholarships to pursue higher education in a related field, training sessions run by the farm or operation, or other related activities.  Young women in particular should be encouraged to pursue further education and training in aquaculture.	✓	✓	✓



## Fundamental principle #2: No forced labour, human trafficking, slavery, or practices similar to slavery

The requirements under Fundamental Principle #2 primarily concerns operations that employ workers, as this is where the highest risks are often found, and therefore requirements are formulated to suit this scenario. It should be borne in mind that the requirements apply to all types of aquaculture operations, whether they employ 5 workers or thousands of workers, as well as to all sub-contracted and informal workers. It is also important to note that forced labour, human trafficking, slavery and other practices similar to slavery are criminal offences under national laws in most countries and therefore absolute compliance with the law is a fundamental requirement for all ASIC partners.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.2.1:</b> The use of forced labour, debt bondage, human trafficking or other forms of modern slavery or slavery like practices is strictly prohibited and must be remedied immediately <sup>9</sup>				
C.2.1.1	All workers must enter the job voluntarily and are free to leave employment at their own will, provided they give reasonable notice to the employer as per national legislation and contractual obligations		✓	✓
C.2.1.2	The farm or operation charges no recruitment fees or placement fees from its workers, including proxies in the form of wage retention		✓	✓

<sup>9</sup> For the ASIC standard, forced labour is defined in accordance with ILO Convention 29 on forced labour as “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily”. Human trafficking is defined in accordance with the “Palermo Protocol” as “...the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.” For the purposes of this document, ASIC refers to the 1926 Slavery Convention, which defines slavery as “the status or condition of a person over whom any or all of the powers attaching to the right of ownership are exercised.” Note that there is currently no internationally agreed legal definition of modern slavery.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.2.1.3	No worker is required to refund fees, or other recruitment expenses, incurred by the farm owner or operator		✓	✓
C.2.1.4	<p>If using recruitment agents, the farm or operation uses only legally registered recruitment agents, operating in line with national legislation. If migrant workers are hired, these requirements apply to recruitment agents in both the sending and receiving countries. In countries where a labour recruitment registration is not in place, only recruitment agents that apply the Responsible Recruitment Toolkit and/or recruitment agents verified by CLEARVIEW (or similar schemes) are used.</p> <p>Recruitment agents must have:</p> <ul style="list-style-type: none"> <li>- A valid business license to operate in the relevant country</li> <li>- If sub-contractors are used, the sub-contractors must also be legally registered and hold the required permits.</li> <li>- A written contract with the operation</li> </ul> <p>Operations must conduct due diligence before engaging new recruitment agents, including reviewing their history of legal violations, review of internal policies, and interviews with management/recruiters.</p>		✓	✓
C.2.1.5	The farm or operation bears the full costs of recruitment and placement. Migrant workers are not responsible for any expenses related to their recruitment <sup>10</sup> or migration, even when permitted by law		✓	✓

<sup>10</sup> Recruitment fees can include, but are not limited to, visa fees, passport fees, medical tests, transportation or other.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.2.1.6	If using recruitment agents, the farm or operation is able to document and confirm that no worker pays recruitment fees to a recruitment agent or to a broker <sup>11</sup> . If a worker is found to have paid recruitment-related fees to a broker, they are reimbursed by the operation		✓	✓
C.2.1.7	If a worker is found to be indebted to a recruitment agent, the farm or operation supports the worker to be released from debt and immediately ceases all collaboration with the recruitment agent and reports this to the relevant authorities		✓	✓
C.2.1.8	<p>Farms or operations using recruitment agents must have signed written contracts with the agents. This includes agencies or sub-contractors in sending countries, if migrant workers are employed.</p> <p>The contract must include, at minimum:</p> <ul style="list-style-type: none"> <li>- Name and address of recruitment agency</li> <li>- Name and address of employer</li> <li>- Clear definition of roles and responsibilities of the agency and the employer</li> <li>- Details of fees and costs, including who is responsible for fees</li> <li>- Worker protections, prior to and during migration if applicable</li> <li>- Details of lead times for briefing and recruitment of jobseekers, document processing, and fair and reasonable time for worker</li> </ul>		✓	✓

<sup>11</sup> Workers cannot be required to pay a recruitment fee as this practice poses a severe and documented risk of debt bonding in many countries. The employer can use recruitment agents, provided the employer bears the costs (fees) and uses legitimate agents as per the basic requirements (see also the standard for recruitment agents)

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
	consideration prior to departure from the sending country (if applicable)			
C.2.1.9	No restriction of movement is placed upon workers, except those that are needed for the operations (e.g. restrictions related to food safety, biosecurity, limited access to confidential files), to ensure prevention and protection against sexual abuse and gender-based violence (e.g. restrictions on men entering women’s dormitories or bathrooms), and/or to protect public health. This extends to dormitories and other types of accommodation provided to workers <sup>12</sup>		✓	✓
C.2.1.10	Resigning (upon reasonable notice) will not lead to deduction in wages or benefits (beyond what is permitted in national legislation), incurring of debt or claims of repayment (for example for personal protective equipment provided)		✓	✓
C.2.1.11	Workers (including hired and family members) are not kept in undue isolation from the surrounding community, their family and friends etc <sup>13</sup> .	✓	✓	✓

<sup>12</sup> Restriction of movement or the flow of movements within a factory or farm to ensure worker safety or food safety is permitted. The prohibition on restriction of movement relates, for example to imposing curfews in dormitories, prohibiting the use of public transport or other measures to control workers freedom of movement outside working hours or to prevent them from freely leaving employment

<sup>13</sup> In some operation, e.g. some farms, work takes place in isolated places. This is not undue isolation. It becomes undue isolation if the isolation is used to control freedom of movement etc. or if measures to increase isolation and control workers are imposed, such as confiscation of cell phones, heavy fencing (of people, not of equipment) etc.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.2.1.12	All workers and household members must have full control over their own identity documents, personal belongings (such as ATM cards, certificates etc.) and money at all times. If a storage facility is provided to workers for their personal belongings, they must never be barred from accessing it, and it will be the choice of the worker or household member whether to use the storage	✓	✓	✓
C.2.1.13	Workers are never disciplined through the use of physical, verbal, or sexual violence or abuse	✓	✓	✓
C.2.1.14	Threats and intimidation are not used under any circumstances. This includes in circumstances to pressure workers to perform certain tasks, take on additional or overtime work, and to remain in employment.	✓	✓	✓
C.2.1.15	All loans, including those taken from intermediaries, are clear and transparent and carry interests and other expenses commensurate with national levels (financial institutions) for short- and long- term loans (as appropriate).	✓	✓	✓
C.2.1.16	When loans are given to workers, the terms and conditions of the loan must be explicit and agreed in advance between the worker and employer (including any interest), and should never be used to coerce workers or bind them to employment		✓	✓
C.2.1.17	All workers receive training or orientation on their labour rights in a language they understand when entering the workforce. This training		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
	should be conducted in a manner accessible to all workers. Ideally, this would be delivered through a worker representative or an external organization.			
<b>Goal C.2.2:</b> The rights and dignity of migrant workers are protected and respected.				
C.2.2.1	All recruitment agents, labour contractors and/or other agencies through which workers are recruited must have a policy <sup>14</sup> against the use of violence, harassment and abuse during the recruitment and migration process, including explicit bans on sexual harassment, violence and abuse. If any worker is found to have experienced violence, harassment or abuse of any kind during their recruitment or migration at the hands of a recruitment agent, the operation immediately ceases all collaboration with the recruitment agent and reports this to the relevant authorities. The operation must also support the worker to access remedy, support and services in a language they understand (See Principle 3 for more details on grievance and remediation).		✓	✓
C.2.2.2	Migrant workers employed by the farm or operation are registered with relevant authorities and have demonstrated access to services and benefits in accordance with national and international laws		✓	✓

<sup>14</sup> Policies will generally be in the form of a Code of Conduct and Code of Ethics, although these may have different titles in a local context.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.2.2.3	If hiring migrant workers, the farm or operation ensures that they are provided with all relevant information in their own language about the employment prior to departure from their home country. This includes the nature of the work, the payment arrangements, any benefits, terms and conditions of employment, duration of the contract, living conditions in their receiving country, and their rights and legal protections as workers		✓	✓
C.2.2.4	Migrant workers have the right and are provided with the opportunity and resources to seek independent external advice in their own language on the terms of employment prior to signing a contract and prior to departure from the sending country.		✓	✓
C.2.2.5	If migrant workers are hired, the farm or operation provides a translator trained in labour rights who can assist workers to understand their terms of employment, rights and benefits (including fees, grievances, etc.), and grievance and remediation procedures.  Measures must be put in place to protect workers from exploitation by the translator. For example, a trusted NGO could provide a translator, multiple translators of different genders could be hired, or worker representatives could be trained in the local language to support workers during translation. For small farms hiring migrant workers, it is also possible that a cooperative could collectively hire a translator if multiple members have migrant workers.		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.2.2.6	If workers do not live on site or within a reasonable walking distance, <sup>15</sup> the farm or operation must provide transportation to and from the worksite at no or minimal cost to the worker		✓	✓
C.2.2.7	Migrant workers must have the right to consult with and be represented by worker representatives in a language that they understand (See Principle 3 for more details on worker representation).		✓	✓

## Fundamental Principle #2: No forced labour, human trafficking, slavery, or practices similar to slavery

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC verified operations improve.

#	Improvement Options	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.2.1:</b> The farms or operation actively prevents forced labour and slavery in its own operations and in communities in which they operate and/or recruit their work force.				

<sup>15</sup> Reasonable walking distance will be defined based on the location of the worksite, the terrain and infrastructure as well as the time of day.



#	Improvement Options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.2.1.1	Farms and operations can adopt and implement a no-modern slavery policy and report on initiatives under the policy in its annual report (or similar).			✓
I.2.1.2	Farms and operations can guarantee provision for return home to migrant workers, either upon completion of their contract or in exceptional personal circumstances.		✓	✓
I.2.1.3	Farms and operations can train staff and management on human trafficking and forced labour prevention and eradication at regular intervals		✓	✓
I.2.1.4	Farms and operations can support local and national counter-trafficking/anti-slavery initiatives financially or in-kind (e.g with information or as advocates)		✓	✓
I.2.1.5	Farms and operations can document and publicly share lessons and/or support research and studies aimed at identifying causes and effective action against human trafficking and forced labour and increasing transparency	✓	✓	✓
I.2.1.6	Farms and operations can introduce regular awareness raising activities for workers, their families and local communities to inform about modern slavery, possible support activities etc. The farm owner, family members and any hired workers should all be well aware of what constitutes forced labour.	✓	✓	✓

#	Improvement Options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.2.1.7	Farms and operations can engage with programmes addressing the root causes of forced labour and human trafficking and aimed at preventing it in local communities.	✓	✓	✓
<b>Goal I.2.2:</b> Small family-owned operations have full autonomy over their operations and are not trapped in debt cycles				
I.2.2.1	Small family-owned farms can form associations or other groups for sharing resources and negotiating contracts with buyers and suppliers	✓	✓	
I.2.2.2	Small family-owned operations can establish savings and credit groups or other systems that will improve access to financial and business services	✓	✓	
I.2.2.3	Small operations and/or farmer groups can host or participate in financial literacy training to ensure that everyone has the knowledge and skills required to evaluate lending agreements and negotiate transparent, fair loan arrangements.	✓	✓	

## Fundamental Principle # 3: Freedom of association

Freedom of association is usually associated with workers in larger operations being able to freely join a trade union of their choice and hence the requirements below are formulated to fit this scenario, regardless of whether the operation employs one worker or thousands of workers. It should also be noted that freedom of association also applies to employers (farm owners) who should be free to join employers' associations and to small-scale self-employed farmers, who should be able to join trade associations, farmer cooperatives, etc.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.3.1:</b> Workers of all genders, ages, and ethnicities have a right to freedom of association, to bargain collectively, to voice concerns and to a fair resolution of disputes				
C.3.1.1	Workers are free to join trade unions, labour associations, and/or farmworker organizations of their choice, where trade unions exist and are permitted by national/local laws		✓	✓
C.3.1.2	The owner of the farm regularly consults with hired workers and family members working on the farm to ensure that all workers can safely voice grievances. All grievances must be recorded, and the outcomes should be communicated to all workers.	✓	✓	
C.3.1.3	Workers who voice grievances, join trade unions or undertake other legal activities to voice their views and negotiate working conditions will not be dismissed, discriminated against or otherwise punished or retaliated against for these activities so long as they are not in breach of national legislation. Safeguarding measures are in place to protect these workers from threats, harassment and violence.		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.3.1.4	Where no trade unions or labour associations exist, actions are undertaken to facilitate a work-place dialogue between workers and employers on working conditions etc. (e.g. workers' welfare committee). This work-place level mechanism can also be established where trade unions exist		✓	✓
C.3.1.5	Farms and operations will establish clear, transparent and credible grievance and remediation procedures with workers where workers can submit grievances without fear or prejudice. Grievance and remediation procedures must be legitimate, accessible, predictable, equitable, transparent, rights-based, evolving and stakeholder-driven <sup>16</sup> . All grievances, investigations and remediations must be recorded and the outcomes must be communicated to all relevant parties, including workers.		✓	✓
C.3.1.6	Large farms and operations should have a written grievance and remediation procedure which is communicated to all workers in a transparent, equitable and accessible manner in a language that they understand when they are hired. Workers should be provided with a copy of the written procedure in a language that they understand, including the steps and timeframe to be expected during the remediation process. It is the responsibility of the operation to ensure that all workers have been sufficiently educated on their rights as well as the grievance procedures to ensure that they are able to effectively utilize them.			✓

<sup>16</sup> These requirements are in accordance with the United Nations Guiding Principles on Business and Human Rights, Guiding Principle 31. For more guidance, see the UN Guiding Principles as well as the ASIC implementation guide.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.3.1.7	Small farms are expected to have a plan to receive grievances and implement remediation procedures which must be communicated to all workers in a language they understand when they are hired, as well as when updates occur.		✓	
C.3.1.8	All workers are educated in a language they understand about their right to consult external, independent bodies, including NGOs, government services, and ASIC, regarding any grievances and remediation processes. Workers must be educated on how to contact these organizations and provided with a personal copy of the contact information in an accessible format.		✓	✓
C.3.1.9	The procedures will allow for anonymous and confidential reports from workers on sensitive and serious issues. If appropriate, credible and trusted (by both sides) outside facilitation can be sought from an independent facilitation body.		✓	✓
C.3.1.10	Workers and other relevant stakeholders must be able to file grievances in multiple formats. This could include, for example, by phone call, text, instant messaging, in-person and other culturally relevant formats. The procedure, including relevant information and all formats, must be accessible to all workers in a language that they understand.		✓	✓
C.3.1.11	Where doing so will not jeopardize the anonymity of grievances, grievance procedures should collect and monitor sex-disaggregated data. Imbalances must be reported to management and worker representatives, and corrective actions must be taken.		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.3.1.12	Grievances should be recorded and monitored for trends. If a grievance is recurring and/or particularly impacts a specific demographic of workers, the farm or operation is expected to conduct an internal investigation and implement changes to address the issue. The operation should monitor the changes to ensure that they reduce the number of grievances associated with the issue.		✓	✓
C.3.1.13	Workers must have worker representatives chosen by the workers to represent them and their interests. The representatives must be reflective of the demographics of the workforce, including women, migrant workers, and other disadvantaged groups. There must be no restrictions on who is eligible to be a worker representative.  For small farms, worker representatives could represent workers from multiple farms or from the whole cooperative. Worker representatives could also include local organizations and/or government services, if requested and/or approved by workers.		✓	✓
C.3.1.14	Worker representatives must operate independently of company management. Workers must have the right and opportunity to consult with worker representatives on a regular basis in a safe, clean and private setting during the workday. Worker representatives must have the authority to provide recommendations to the farmer or management on worker welfare, consult with external organizations regarding worker welfare and participate in all grievance and remediation procedures.		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.3.1.15	Workers, and/or worker representatives if preferred by the worker, must have the right and opportunity to participate in the investigation and remediation procedure for any grievance that they raise, in a language that they understand. All investigation and remediation decisions must include, at minimum, one worker representative representing the relevant demographic. For cases involving sexual and/or gender-based violence or harassment, investigation and decision-making bodies should be composed of at least 50% women.		✓	✓
C.3.1.16	Workers must be educated in a language that they understand on their right to pursue external remediation and must be made aware of how to do so, including the contact information for relevant NGOs and/or government services. Workers must never be asked or required to waive their right to pursue external remediation, including through judicial mechanisms, even after they have utilized the operation's remediation procedures.		✓	✓

### Fundamental Principle #3: Freedom of association

#### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

#	Improvement Options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.3.1:</b> The farm or operation actively promotes freedom of association and collective bargaining agreements for all workers regardless of gender, age, ethnicity or other characteristic.				
I.3.1.1	Where trade unions exist, farm or operations can enter into collective bargaining agreement(s) with one or more unions.			✓
I.3.1.2	Where unions are not permitted by law, farm or operations can actively advocate for changes to legislation, possibly in conjunction with other operations and/or through employers' organisations			✓
I.3.1.3	Farm or operations can sign up to employers' codes of conduct on fundamental rights, including freedom of association, where they exist. Signing up is only a first step. The COC provisions must be implemented to lead to actual changes and operations should publicly report progress.			✓
I.3.1.4	Small-scale farmers are encouraged to join producer organizations or groups that follow a code of good practice which incorporates social, human rights and labor issues.	✓	✓	



## Fundamental Principle # 4: Equality and non-discrimination

Discrimination and equal opportunities in the context of the ASIC standards relates to the employment context only (not to other aspects of life where discrimination may occur and equal access and opportunity is a basic human right, such as access to education and health care). Non-discrimination and equal opportunities are key issues in both small and large-scale operations, but it must be borne in mind that where an operation employs workers, it is the responsibility of the employer to ensure equal access to work and benefits and equal pay for equal work for all workers, Hence, some of the requirements below are particularly important to larger operations that employ a work force.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.4.1:</b> Discrimination of workers, or groups of workers (based on gender, age, sexuality, race, ethnicity, nationality, migration status, social status, religion, political affiliation, disability status or any other characteristic) is prohibited and must be prevented and mitigated <sup>17</sup>				
C.4.1.1	<p>The farm or operation provides evidence that all workers receive equal pay for equal work<sup>18</sup>, regardless of gender, age, migration status, ethnicity etc. through pay slips, payment records or other relevant records.</p> <p>This policy must be clearly communicated to all employees. Where significant gender disparities exist, operations must implement actions in order to address these imbalances. This includes immediately raising the pay of any worker who is being underpaid relative to employees in similar positions.</p>		✓	✓

<sup>17</sup> The ASIC standard applies the ILO Convention 111 definition of discrimination (in relation to work) as: “distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation”. The standard also applies the principle of equal pay for equal work in line with ILO Convention 100.

<sup>18</sup> Equal pay for equal work means that two people, performing equally difficult work, receives the same pay. Wages can still be different for different types of work. See implementation guide for more information

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.4.1.2	<p>The farm or operation hires, fires and promotes staff based on merit, not on age, gender, ethnicity, religion, marital status, parental status etc. Operations should consider any unconscious bias in their recruitment, benefits and promotion processes and take steps to correct this.</p> <p>This policy must be clearly communicated to all employees. Where significant gender disparities exist, operations must implement actions in order to address these imbalances, for example implementing quotas in managerial, executive and board positions.</p>		✓	✓
C.4.1.3	Workers must never receive direct or indirect enquiries about their marital status, pregnancy, family planning and contraceptive use, sexual orientation and gender identity, nor HIV/AIDS status at any point during their recruitment or employment.		✓	✓
C.4.1.4	<p>Sexual, and other forms, of harassment of any person in the workplace is never tolerated and the farm or operation has a policy and system in place to make sure it is always investigated and remedied by an independent monitoring body composed of both men and women equally. Anyone reporting harassment is protected from further harassment and all disciplinary measures (including dismissal where appropriate) proposed by the monitoring body are instituted against anyone found to have harassed another person in the workplace.</p> <p>Workplaces must have a process in place to report and address harassment allegations, which is clearly communicated to all workers.</p>			✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
	<p>The policy and remediation must be legitimate, accessible, predictable and equitable. All instances of reporting and remediation must be recorded.</p> <p>Victims of sexual and other forms of harassment in the workplace must be supported to access additional support and services, including counselling, medical, and legal services. Victims must not be forced to use the services and cannot be punished or retaliated against for doing so.</p>			
C.4.1.5	<p>Sexual, and other forms, of harassment of any person on the farms and in the community is never tolerated. The farmer group must, at minimum, include discussions about preventing sexual and gender-based violence as an agenda item in one meeting per year. Groups should have a process in place in the case that sexual and/or gender-based violence arises as an issue within the farming group, including reporting to the relevant authorities. All reports of harassment and/or gender-based violence should be recorded at the group level, including the remediation steps taken.</p> <p>Victims of sexual and other forms of harassment must be supported to access additional support and services, including counselling and medical services. Victims must not be forced to use the services and cannot be punished or retaliated against for doing so.</p>	✓	✓	

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.4.1.6	All workers should receive basic training about sexual harassment and gender-based violence, including prevention and bystander intervention, when they are hired or at the next-scheduled training session. Men should be actively engaged in the education process and encouraged to participate in the eradication of harassment and violence.		✓	✓
C.4.1.7	In large farms or operations, all managers and/or supervisors must receive sexual harassment and gender-based violence training at least on an annual basis.			✓
C.4.1.8	All workers, regardless of age, gender, ethnicity etc., are given full parental leave in accordance with national legislation, including full payment of wages etc. on return from leave and during pregnancy. Women workers will have maternity leave for not less than the 14 weeks <sup>19</sup> or as per national law, whichever is higher. Workers returning from parental leave must be guaranteed work of an equivalent nature, including pay and advancement opportunities.  No workers or job applicants are subjected to pregnancy tests, forced contraceptive use, or enquiries over marital status or family planning. The operation can request a doctor's certificate as documentation for parental leave.			✓

<sup>19</sup> 14 weeks of maternity leave is in line with [ILO Convention 183 Maternity Protection \(2000\)](#)

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.4.1.9	All workers, regardless of age, gender, ethnicity etc., are given full protections as per national laws governing small farms employment terms and conditions (including, for example, maternity/paternity protection and leave)  No workers or job applicants are subjected to pregnancy tests, forced contraceptive use, or enquiries over marital status or family planning. The operation can request a doctor's certificate as documentation for maternity/paternity leave.		✓	
C.4.1.10	There is an anonymous and confidential (if desired) mechanism in place for workers to convey concerns over equality and discrimination directly to their employer. These concerns must be regularly reviewed, investigated and responded to. All reports and remediation outcomes must be recorded and communicated to workers (See Principle 3 for specific requirements related to grievance and remediation procedures).		✓	✓
C.4.1.11	All workers, regardless of their gender, age, ethnicity, migration status, etc. are provided with details of workers-support hotlines, trade unions, NGOs or other local resources that operate in the country/community.		✓	✓
C.4.1.12	All workers (family members and hired workers alike), regardless of their gender, age, ethnicity, migration status, etc., are consulted respectfully on issues to do with terms and conditions of employment and all workers are free to seek outside assistance (from trade unions, NGOs, government authorities) if they so wish	✓	✓	✓

## Fundamental Principle # 4: Equality and non-discrimination

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

#	Improvement Options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.4.1:</b> The farm or operation actively pursues social change for equality.				
I.4.1.1	Large farms or operations can develop, implement and report against an equal opportunities policy.			✓
I.4.1.2	Farms or operations can offer paid leave to victims of domestic violence or other incidents of gender-based violence.		✓	✓
I.4.1.3	Farms or operations can establish special training and apprenticeships schemes targeting disadvantaged groups, individuals and/or (young) people in the surrounding community.	✓	✓	✓

I.4.1.4	Farms or operations can host or participate in workshops aimed at breaking down stereotypes, including gender stereotypes <sup>20</sup> .	✓	✓	✓
I.4.1.5	Farms or operations can establish initiatives to promote economic empowerment for disadvantages groups. This could include supporting women’s economic empowerment (WEE) <sup>21</sup> . This could also include initiatives to support people living with disabilities, elderly people, or other disadvantaged groups <sup>22</sup> .	✓	✓	✓
I.4.1.6	Small-scale farmer groups can develop and implement written policies or strategies against sexual violence and abuse.	✓	✓	

<sup>20</sup> The operation may likely need to work with external partners, such as community leaders or NGOs, skilled in mediation and considered trustworthy by communities for this to be successful. A stereo type refers to fixed general image or set of characteristics that a lot of people believe represent a particular group or type of person or a thing. Often these images are flawed and oversimplified.

<sup>21</sup> Programmes to promote WEE include, for example, savings- and loan groups or producer groups for women, financial literacy education for women, supporting child-care or designating certain managerial positions for women

<sup>22</sup> Disability is defined by WHO as “an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations as situations where”. Examples of such initiatives to accommodate disabilities include altering physical access to buildings and changing the specifications of equipment, raising awareness among management and workers, linking with disability rights organisations to reach out to people living with disabilities and to assess the production to find out where opportunities exist for people living with disability to join the operation

## Fundamental Principle # 5: Gender equality and women’s economic empowerment (WEE)

Despite progressive laws internationally and nationally recognizing women’s rights and various commitments to gender equality, women continue to experience various forms of discrimination and violence due to discriminatory social norms, patriarchal power structures and gender stereotypes. In the economy and in the seafood sector in particular, women are faced with systemic barriers that make their contributions invisible, low-valued, unpaid and not on equal footing with men. ASIC demonstrates leadership in taking concrete and measurable steps to achieve gender equality and eliminate the constraints on women’s economic empowerment in the seafood sector.

Gender equality is an inseparable element of ASIC’s Social and Gender standard. A gender mainstreaming and integrative approach has been taken throughout the standard. In addition, this principle (#5) opens the door to farms and operations that would like to include an additional focus on gender equality and WEE and take specific action as part of their improvement programme.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.5.1:</b> Gender and the promotion of women’s rights and empowerment are integrated throughout the standard and the farm or operation demonstrates verifiable improvement across all principles				
C.5.1.1	Farms and operations have demonstrated verified improvement and live up to ASIC minimum requirements under all Fundamental Principles including the relevant criteria where gender is mainstreamed	✓	✓	✓
<b>Goal C.5.2:</b> Gender disparities in women and men’s multiple productive, reproductive and community roles and responsibilities are recognized, and actions are taken to mitigate inequalities and promote equal rights				
C.5.2.1	Farms and operations collect sex-disaggregated data throughout the entire operation. This includes tracking the role and contribution of each worker (including both family and hired labour), even when unpaid.	✓	✓	✓



#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	This data should be regularly reviewed and acted upon to work towards improved equality outcomes.			
C.5.2.2	Farms and operations collect sex-disaggregated data for group membership as well as participation in events run and/or promoted by the group, including cooperative meetings, farmer association meetings, trainings run by extension workers or NGOs, and any other aquaculture-related group activity.	✓	✓	✓
C.5.2.3	Farms and operations systematically and in advance posts training notices and meeting announcements in spaces where both men and women see the notices (e.g. changing rooms, group messaging applications, announcement boards in communal spaces.). This can include hosting separate trainings for women, where necessary and appropriate.	✓	✓	✓
C.5.2.4	Women and men are consulted on the timing and location of trainings, skill development events and meetings. This can include hosting multiple meetings to accommodate different schedules and availability.	✓	✓	✓
C.5.2.5	Child-care must be provided during trainings, skill development events and meetings. This should be offered even when the training is provided by an external organization.	✓	✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.5.2.6	Transportation to and from trainings, skill development events and meetings must be provided if the location is not within a reasonable walking distance and/or if walking may put women, girls, boys and/or members of the LGBTQ+ community's safety at risk. This can be determined by the location, terrain, and timing of the event.	✓	✓	✓
C.5.2.7	Trainings, skill development events and meetings for workers should be held during the regular-scheduled workday.		✓	✓
C.5.2.8	All trainings, skill development events and meetings should promote women's active participation. This can include appointing a woman representative and providing time for small group discussions, allowing anonymous written submission of questions or comments, and utilizing multiple methods of engagement beyond written words (i.e. pictures, videos, activities, etc.).	✓	✓	✓
<b>Goal C.5.3:</b> Farms and operations have codes of conduct in place that recognize and affirm the rights of women and girls				
C.5.3.1	Large operations have a written code of conduct that affirms women and girls' rights with reference to key international conventions including CEDAW and the Convention on the Rights of the Child.			✓
C.5.3.2	The code of conduct must be signed and endorsed by the executive team and communicated to all employees upon hiring as well as at			✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	regular intervals, including when updates occur. Code of conduct should be posted in common spaces and explained to workers upon hiring.			

## Fundamental Principle # 5: Gender equality and women’s economic empowerment (WEE)

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

Given the broad spectrum of potential actions to address inequality and women’s empowerment, the below steps for improvement provide general areas that could be addressed. Farmers are free to develop their own activities, in consultation with ASIC or other local partners, which more directly address the reality of gender relations in their communities.

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.5.1:</b> Farms and operations demonstrate a strong commitment to supporting women’s rights and gender equality in their communities, supply chains and business networks.				
I.5.1.1	Farms and operations can undertake a social and gender gap analysis using an intersectional lens to identify and address gender inequalities throughout their operations. All analysis should be	✓	✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	followed by implementation of plans and activities to address imbalances <sup>23</sup> .			
I.5.1.2	Farms and operations demonstrate their commitment to women’s equality through their operational budgets and/or other financial commitments. <sup>24</sup>			✓
I.5.1.3	Farms and operations can take steps to support women in forming trade unions or farmer associations at all points in the supply chain.	✓	✓	✓
<b>Goal I.5.2:</b> Women’s roles and contributions are recognized and made visible in the supply chain.				
I.5.2.1	Women’s roles are identified across the value chain/market map and/or in the operation. This includes unpaid care and domestic work.	✓	✓	✓
I.5.2.2	Contracts and other documentation list all owners of the business	✓	✓	✓

<sup>23</sup> Some tools for gap analysis could include the Women’s Empowerment Principles Gender Gap Analysis Tool, Conservation International’s Social Responsibility Assessment Tool, or other tools developed in collaboration with human rights and gender experts.

<sup>24</sup> Gender-responsive budgeting could include committing a specific percentage of the budget to address women’s constraints, such as budgets for child-care, for technologies that reduces women’s labour burden, etc. Budgeting could also promote women’s empowerment by committing funds to support women’s access and inclusion, for example funds for leadership training, funds for equipment to enhance women’s livelihoods, etc. All gender-responsive budgeting must be considerate of the differing needs and wishes amongst women of various ages, class, religion, ethnicity, and other. Women must be active participants in the creation of a gender-responsive budget.

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.5.2.3	Farms or operations can support research and other initiatives to identify barriers preventing women from being formally recognized in the sector. Where barriers exist for women’s formal recognition in the sector, the farm or operation can provide support to register women and formalize their participation	✓	✓	✓
<b>Goal I.5.3:</b> Farms and operations promote equal access to all opportunities and increase gender equality in decision-making power.				
I.5.3.1	Farms and operations can host sensitization activities for men and women to promote joint decision-making in cooperatives and businesses (including family-run operations)	✓	✓	✓
I.5.3.2	Farms and operations can ensure that all democratic decision-making bodies associated with their business have between 40% and 60% women as voting members	✓	✓	✓
I.5.3.3	Farms and operations can nominate and support women members to represent the sector in local, national and/or regional meetings, trainings and other events, including meetings with government officials and/or management committees	✓	✓	✓
<b>Goal I.5.4:</b> Farms and operations set up affirmative actions supporting the reproductive health and rights of women				
I.5.4.1	Farms and operations can introduce paid parental leave, beyond legal minimum requirements.		✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.5.4.2	Farms and operations can introduce flexible work hours to accommodate workers’ family and community responsibilities <sup>25</sup>		✓	✓
I.5.4.3	Farms and operations can provide or facilitate access to feminine hygiene and/or reproductive health products.		✓	✓
I.5.4.4	Farms and operations can host sensitization activities for men and women to promote reproductive rights and joint decision-making in family planning.	✓	✓	✓
I.5.4.5	Farms and operations can provide sick leave for menstruation, if appropriate. However, steps must be taken to mitigate associated discrimination and bias towards women who take this leave, such as a ban on terminating workers while on sick leave for menstruation, and tracking retention rates for workers who take this leave to identify and mitigate discrimination.		✓	✓
<b>Goal I.5.5:</b> Women’s participation in educational and professional development opportunities is promoted and supported in order to encourage equal career and livelihood opportunities. Women’s leadership is supported, fostered and encouraged				
I.5.5.1	Mentorship programmes and/or networking events for women can be initiated to support women’s leadership opportunities.	✓	✓	✓

<sup>25</sup> Family and community responsibilities may include, for example, childcare and care for elderly or sick family or community members

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.5.5.2	Women’s representation in leadership positions can be supported through affirmative action policies and procedures, leadership training, regular consultations with women employees, flexible work arrangements, and other initiatives.	✓	✓	✓
I.5.5.3	Farms and operations can set quotas for women on Boards, in executive committees, in management and executive management positions, and in other leadership structures	✓	✓	✓
I.5.5.4	Farms and operations can offer leadership skills training for women in areas such as financial literacy, public speaking, negotiation, management and delegation, or other areas requested by women.	✓	✓	✓
I.5.5.5	Farms and operations can host sensitization activities and trainings for men and boys to combat stereotypes regarding gender roles and leadership traits, and to encourage men and boys’ constructive engagement in gender equality and women’s empowerment.	✓	✓	✓
<b>Goal I.5.6:</b> Farms and operations take continuous, systematic steps to foster change in social norms to reduce and redistribute women’s time in unpaid care and domestic work. Government and business systems support and/or invest in care infrastructure and services to promote an equal distribution of care work. Both men and women should be actively engaged in understanding, addressing and redistributing care and domestic work for a more equitable division of labour.				
I.5.6.1	Farms and operations can promote an equitable division of unpaid care and domestic work in the household, particularly encouraging men’s contributions to unpaid care and domestic work.	✓	✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.5.6.2	Farms and operations can promote positive masculinities which break with traditional stereotypes that impede equality through trainings, focus groups, social media campaigns, or other relevant activities.	✓	✓	✓
I.5.6.3	Men farmers can become advocates for women’s empowerment and the redistribution of household labour in their wider communities and social networks.	✓	✓	✓
<b>Goal I.5.7:</b> Women’s human rights are respected and steps are taken to eliminate all forms of gender discrimination, sexual harassment and violence against women and girls in the farms and communities, including taking steps to change social norms that normalize and justify these acts				
I.5.7.1	Farms and operations can hold gender sensitivity or gender justice workshops for workers and/or community members	✓	✓	✓
I.5.7.2	Farms and operations can host workshops or other activities in order to raise awareness about the problems of sexual and gender-based violence, including within households and between domestic partners	✓	✓	✓
<b>Goal I.5.8:</b> Farms and operations take steps to support women’s rights to and ownership of tangible and intangible assets in order to promote gender equality				
I.5.8.1	Farms and operations can identify opportunities and take steps to source products and/or services from women-owned businesses.	✓	✓	✓
I.5.8.2	Farms and operations can support women (financially or in a technical capacity) to establish women’s groups which could serve a	✓	✓	✓



#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	variety of purposes, including financial saving, knowledge and labour-sharing, and building social capital.			
I.5.8.3	Farms and operations can find ways to provide fair and transparent loans and financing to women, including women who may not own property or assets. This could come directly from the operation, through partnership with financial institutions, or in other locally appropriate formats.	✓	✓	✓
I.5.8.4	Farms and operations can take actions to ensure that women employees and/or producers retain control over their income <sup>26</sup> .	✓	✓	✓
I.5.8.5	Farms and operations employing can conduct a living wage analysis (and implement changes) to ensure that women workers are paid a fair and living wage.  This is particularly important in women-dominated positions where the equal pay principle may not adequately determine whether women are earning a fair wage.	✓	✓	✓
I.5.8.6	Where gender disparities in access to mobile phones and/or internet networks exist, farms and operations can support women’s access to	✓	✓	✓

<sup>26</sup> As general policy, facilities should ensure that payments to all employees are traceable and transparent, regardless of gender. In situations where risk assessments identify that women may be vulnerable to losing control over their incomes, particular attention should be given to addressing this vulnerability. Thus, the payment mechanism may differ depending on women’s preferences while promoting transparency, traceability, and financial independence throughout all transactions.

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
	and use of these technologies by providing subsidies for the equipment, training on effectively using mobile phones and other communication technologies, and/or workshops to address stigma regarding their use.			
I.5.8.7	Farms and operations can affirm women’s rights to own equipment and assets relevant to aquaculture, including boats, nets, feed, and other equipment. This can be done by supporting women’s ownership through co-financing, advocacy efforts or other relevant initiatives.	✓	✓	✓
I.5.8.8	Farms and operations affirm women’s rights to land and marine resources. This can include advocating for women’s representation on resource management boards, recognizing non-commercial use rights in resource-management decisions, supporting women’s registration as aquaculture farmers, and increasing women’s involvement in farmer associations.	✓	✓	✓

## Fundamental Principle # 6: Fair recruitment and decent working conditions

These clauses under Fundamental Principle #5 are relevant to all ASIC partners that employ workers, regardless of the size of the operation and regardless of the age, gender, nationality, ethnicity etc. of the workers. The clauses do not apply to self-employed aquaculture farmers with no hired workers, but they do apply to small-scale operators with 1-5 hired workers (including seasonal and part-time workers).

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.6.1:</b> Fair recruitment and decent working conditions for all workers is the basis for all operations				
C.6.1.1	<p>All hired workers sign written contracts in a language the worker reads and understands. If the worker is unable to read and understand, the contract is explained to them in detail prior to signing. Contracts should be standardized for workers in the same positions to ensure equal treatment. Workers must be given a copy of the signed contract for personal keeping. The contract should include, at minimum:</p> <ul style="list-style-type: none"> <li>- Working hours, pay rate/pay calculation and deductions, frequency of pay and overtime pay</li> <li>- Job duties</li> <li>- Other benefits including paid leave, parental leave, and any insurances including medical insurance and life insurance</li> </ul>			✓
C.6.1.2	<p>All hired workers have a written or verbal agreement as provided for in national law. Verbal agreements should cover, at minimum, the working hours, pay rate/pay calculation and any deductions, frequency of pay, and job duties.</p>		✓	

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.6.1.3	No contract or agreement may include any clauses related to marital status, pregnancy or family planning, sexual orientation or gender identity, HIV/AIDS status, or any other personal matter.		✓	✓
C.6.1.4	All workers are paid at least the national or minimum wages, or the minimum wage determined by relevant local government authorities, excluding overtime <sup>27</sup> . Wages earned (excluding overtime) must be sufficient to support a decent standard of living for the worker and their dependents.  Workers paid a “couple’s wage” or other pay-sharing arrangement in the household must at minimum be equivalent to paying the minimum wage to each worker.		✓	✓
C.6.1.5	For workers doing piece-rate work, the rates must be high enough to ensure an income equivalent to the minimum wage, including all mandatory benefits, in a time span that corresponds to a normal working week		✓	✓
C.6.1.6	All wages are paid to the worker in full and on time as per contract or agreement, including in a situation where workers resign (provided the worker has performed the duties specified in the contract) <sup>28</sup> .		✓	✓

<sup>27</sup> Wages may be paid in cash or in kind as permitted by the national regulations. There is preference for payment in cash over payment in kind in principle, as this allows the worker greater freedom over his/her income, but in certain circumstances (for example in remote locations with limited supplies) in-kind payments may be more suitable.

<sup>28</sup> Pay frequency must be in line with national legislation, or monthly at minimum, whichever is more frequent.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.6.1.7	All workers receive mandatory benefits, such as health insurance, and other relevant insurances, in accordance with national legislation and regulations. In some cases, small businesses may be exempt from providing benefits, however they should comply with national legislation including supporting farmworkers to access social protections.		✓	✓
C.6.1.8	Hours worked in excess of the national maximum number of hours per week/month <sup>29</sup> is considered overtime and must be compensated accordingly, including during peak seasons. All overtime is compensated for through over-time payment and/or compensatory time off <sup>30</sup> at a rate not less than one-and-one-quarter times the regular rate.  Workers must not be forced to accept compensation through additional time-off, they must not be forced to take time-off, and they must never be shamed or penalized for taking any valid time-off (including time earned through overtime).		✓	✓

<sup>29</sup> The maximum hours as stipulated in the national regulations apply. These may be fixed as weekly or monthly. It is recognized that work in farms has peak and slack time and therefore, there is not a fixed number of hours per day in the standard. It should be noted that the standard accepts that work is spread unevenly across the day (for example with a number of hours in the morning, then time off and a number of hours in the late afternoon). If workers are free to use their time as they so wish and leave the workplace, the “in-between hours” are considered free time. If workers are required to be available and report if called – even if they go to eat and rest during the in-between hours – they are considered “on-call”. This is working time but may be compensated differently from “full working time” if national legislation allows. On-call time may be remunerated financially or by time-off (just like overtime), depending on national regulations

<sup>30</sup> A standard working day, week or month (in accordance with national legislation) is the basis for calculating overtime. If working time and overtime is calculated on a weekly or monthly average basis, individual working days can be longer than eight hours. Overtime will result once the weekly or monthly standard working time is exceeded in a given week or month. Facilities will choose whether they use daily, weekly or monthly working time standards and overtime calculations, depending on the nature of activities and what is suitable for processing or a hatchery may not necessarily be suitable for a farm and vice-versa

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms - hired labour</i>	<i>Large farms/ operations</i>
C.6.1.9	<p>All overtime must be completely voluntary and must not be excessive. Workers must not be punished for refusing overtime, either individually or collectively.</p> <p>Involuntary overtime would also include cases of coercion, including where low wages force workers to accept overtime in order to support themselves and their dependents.</p>		✓	✓
C.6.1.10	<p>All national legislation with regards to rest breaks and adequate rest time is adhered to. At minimum, workers must be entitled to a 30-minute break after 6 hours of continuous work. Workers must have at least 10 consecutive hours of rest in any 24-hour period, or more if required by national legislation, and 24 consecutive hours of rest in any 7-day period or the equivalent averaged over 14 days.</p> <p>Nursing mothers must be entitled to daily nursing breaks or a reduction of working hours, to be agreed between the employer and the worker, in addition to the rest breaks mentioned above.</p>		✓	✓
C.6.1.11	<p>Disciplinary measures must be in line with national legislation, transparent, in relation to a specific violation of national or facility rules and never includes physical or sexual or verbal violence, abuse or threats. All disciplinary actions should be recorded, including the reason for disciplinary action and the outcome.</p>		✓	✓

## Fundamental Principle # 6: Fair recruitment and decent working conditions

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

#	Improvement Options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.6.1:</b> Farms and operations work towards working conditions that go beyond minimum levels for decent work in order to attract and retain a stable and committed work force.				
I.6.1.1	Farms and operations can work towards paying workers a living wage <sup>31</sup> , including family members working in the farm or operation.  Where hired workers are not yet earning a living wage, this is a <b>required</b> improvement option for farms and operations seeking ASIC Leader status.	✓	✓	✓
I.6.1.2	Farms and operations can replace in-kind payments with cash payments. However, this must not result in a lower net income for the worker.		✓	✓

<sup>31</sup> "Living wage" is defined differently in different countries and by different organisations and there may not be a living wage calculation available in a given country. Hence, each operation has to do research on what an actual living wage is in a country. Living wage is not the same as minimum wage. Minimum wage is the basic wage level set for a country or an industry through a minimum wage law or through collective bargaining. A living wage is an estimate of the level of income needed to ensure that a person or a family can have all basic requirements fulfilled (food, accommodation, health care etc.). The minimum wage and the living wage may therefore be different from each other and the living wage is often more detailed and specific to a locality (e.g. a city). To learn more about living wages, see for example <https://www.globallivingwage.org> or <https://wfto.com/sites/default/files/WFTO%20Living%20Wage%20Calculation%20Tool%20-%20Version%2018-6-2015.xlsx>

I.6.1.3	<p>Farms and operations can assist workers to set up personalised<sup>32</sup> bank accounts and promote digitised payments for all workers to promote transparency or set up other suitable methods for fixed payments and issuing pay slips.</p> <p>Workers must be consulted prior to changing their method of payment (e.g. from cash payment to bank transfers) to ensure that their preferences are reflected. In cases where bank accounts are associated with fees, this may not be a suitable option for workers unless specifically requested.</p>		✓	✓
I.6.1.4	<p>Farms and operations should reduce the use of seasonal and temporary contracts, in favour of permanent labour contracts, except where needed on a limited, justifiable basis to meet the needs of the operation.</p>		✓	✓
I.6.1.5	<p>Farms and operations can expand health, social and/or economic benefits for workers and offer social insurances beyond minimum requirements. This could include expanded maternity/paternity leave, sick leave, paid vacation days, or other relevant benefits.</p> <p>Any insurance offered beyond minimum requirements as required by national legislation must be gender-responsive and address the health and medical needs of peoples of all genders<sup>33</sup>.</p>		✓	✓
<p><b>Goal I.6.2:</b> Overtime during peak season is limited and/or compensated at a higher rate</p>				

<sup>32</sup> Accounts must be personalized to ensure that all workers have control over their income and to prevent. E.g. that young workers' income is not controlled by a parent or a woman's income is not controlled by her husband

<sup>33</sup> This could include, for example, contraceptive coverage, improved pre- and antenatal care coverage, treatment for HIV/AIDS, HPV vaccinations, reproductive cancer screenings, etc.



I.6.2.1	Farms and operations can take steps to limit the number of working hours required by each staff member during peak seasons through contracting additional staff, ensuring that staff still makes a living wage without performing excessive overtime.		✓	✓
I.6.2.2	Farms and operations can take steps to limit the number of working hours required by each staff member during peak seasons by mechanising processes, ensuring that staff still makes a living wage without performing excessive overtime		✓	✓
I.6.2.3	Farms and operations can take steps to limit the number of working hours required by each staff member during peak seasons through re-organising tasks and schedules, ensuring that staff still makes a living wage without performing excessive overtime		✓	✓
I.6.2.4	Farms and operations can actively improve compensation for overtime beyond requirements in national law.		✓	✓

## Fundamental Principle # 7: Safe working environment

A safe working environment is essential to both people’s health and livelihoods and to productivity in the operation, regardless of the size of the operation. However, some of the clauses below are relevant only to operations that employ workers and where management has responsibility to ensure that the working environment is safe for all workers, regardless of their gender, age etc. These clauses explicitly refer to provisions for “workers”. While these clauses only apply to operations with one or more employed workers or family workers, it is recommended that owner-only operated facilities also implement the clauses as far as possible to prevent accidents and illnesses.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.7.1:</b> The health and safety of workers is of paramount importance and workers are protected against accidents, injury and longer-term impact (e.g. disease) in the workplace and in any other facility associated with the operation (e.g. accommodation)				
C.7.1.1	Farms and operations have in place clear, written procedures for mitigating risks and protecting workers from accident, injury and illness. Workers must receive health and safety training in a language that they understand, as well as a copy of the written procedures for personal keeping,			✓
C.7.1.2	Small farms must have a plan for mitigating risks and protecting works from accident, injury and illness These must be clearly communicated to all workers upon recruitment in a language that they understand.	✓	✓	
C.7.1.3	All workers are able to refuse unsafe work and will not be dismissed from work, discriminated against, or otherwise punished for doing so	✓	✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.7.1.4	<p>All necessary health and personal protective equipment (PPE) are provided for all workers free of charge. Workers are trained on the proper use of PPE.</p> <p>Young workers as well as pregnant and nursing employees are provided with appropriate PPE for their particular health and safety needs. Pregnant and nursing mothers must not be obliged to perform work that may harm the health of the mother or child, and must be given alternative tasks, if requested, at the same rate of pay.</p>	✓	✓	✓
C.7.1.5	<p>First aid kits are available, easily accessible and regularly re-stocked as needed.</p> <p>For large farms and operations, the first aid kit must be available on the premises of the operation. For smaller farms, it is acceptable for the first aid kit to be located nearby, such as in a public place in the community or at the farm owner’s home.</p>	✓	✓	✓
C.7.1.6	<p>All workers must be given basic health and safety training, including basic first aid, upon hiring. Training must be provided during working hours.</p>		✓	✓

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.7.1.7	One or more staff members with advanced first aid skills <sup>34</sup> is always on call and easily reachable.			✓
C.7.1.8	Farm owners and all workers know where and how to access first aid support if required (e.g. from local clinics)	✓	✓	
C.7.1.9	Workers who suffer injury or illness have access to support and compensation in line with national legislation, including that which must be paid for by the employer, and are only dismissed in line with national labour law provisions regarding illness and injury		✓	✓
C.7.1.10	All workspaces and all additional facilities (e.g. accommodation, toilet facilities and canteens) are constructed and occupied according to national building regulations and are safe, clean and hygienic.  If farm owners do not know the regulations, or are unable to apply the regulation, they must seek guidance from relevant authorities, producer associations, NGOs or others		✓	✓
C.7.1.11	When living quarters are provided to workers, they are adequate, well maintained, clean and safe. Where possible and appropriate, separate, private sleeping facilities should be provided for men and women.		✓	✓

<sup>34</sup> Skills can be obtained through training by local medical facilities, NGOs with relevant expertise (e.g. Red Cross/Red Crescent) etc.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.7.1.12	Workers have access to clean, hygienic toilet and bathing facilities on the farm and/or in reasonable proximity to their workstations. Toilets and bathing facilities should be completely private and have internal locks on the doors.		✓	✓
C.7.1.13	Workplaces and meeting spaces have safe, accessible facilities to dispose of feminine hygiene products.		✓	✓
C.7.1.14	An anonymous and confidential mechanism is in place for workers to raise health and safety concerns (see Principle 3 for specific requirements of grievance mechanisms). All grievances must be recorded and responded to.		✓	✓

## Fundamental Principle # 7: Safe working environment

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
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<b>Goal I.7.1:</b> Farms and operations continuously strengthen capacity to ensure a safe working environment.				
I.7.1.1	Farms and operations can establish onsite health facilities, such as a clinic or a medical officer. The facility must comply with national regulations. Ideally, the health facility would be open to all workers as well as their families.			✓
I.7.1.2	Farms and operations can organize and host first-aid training for workers' families as well as for community members in order to prevent accidents outside of the workplace.		✓	✓
I.7.1.3	Additional health and protective equipment can be provided beyond the minimum requirements that increases the comfort and wellbeing of pregnant and nursing women (e.g. chairs to avoid standing for long periods of time, mats to stand on to ease pressure on feet, postpartum products, etc.)		✓	✓
I.7.1.4	Farms and operations can organize and provide emergency response and advanced first aid training for all farmers and workers.	✓	✓	✓

## Fundamental Principle # 8: Respect for local communities

All seafood producers, regardless of their size, are part of a community to which they may contribute positively (e.g. through purchasing inputs, creating jobs and supporting community life more broadly). At a minimum all ASIC partners must therefore ensure that they do not infringe on the rights of other community members and, in the longer run, ASIC partners should aim to make strong positive contribution to their communities. Hence, the clauses under principle 8 apply to all operators, large and small, but it is recognised that they may be implemented in different ways, depending on the size of the operation. For example, large aquaculture operations will have to undertake more complex risk assessments than a self-employed shrimp farmer, but the fundamental principle of respect for local communities apply to all.

### ASIC Compliant: Minimum requirements

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal C.8.1:</b> Understanding the impact (positive and negative) on communities, mitigating negative impact and contributing to positive development is a business responsibility <sup>35</sup>				
C.8.1.1	<p>Farms and operations must undertake risk-based self-assessment of aquaculture farm/facility and potential (positive and negative) social impacts and environmental impacts that may lead to social impacts, and act upon the findings. All impact assessments should be gender-sensitive.</p> <p>The individuals who conduct the risk assessments should be clearly identified, including their roles and contributions. For small farms, this can be done at the cooperative or group level.</p>	✓	✓	✓

<sup>35</sup> This links with similar requirements in the environmental standards and some of the processes to assess risk and consult with communities may be combined. However, facilities should remember that for the social impact it is important to consult also with non-producers, e.g. children and young people.

#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.8.1.2	Farms and operations must engage in dialogue with community representatives (of all genders, ages and ethnicities) over resource use and access rights before expanding or embarking on new activities <sup>36</sup> . For small farmer groups, this dialogue can involve consultations with neighbours. Large farms must undertake a more expansive community dialogue, such as hosting open community meetings and public comment periods. All dialogues must actively engage people from disadvantaged groups, including women and people living with disabilities.	✓	✓	✓
C.8.1.3	Farms and operations must have plans in place to deal with emergencies <sup>37</sup> , particularly those that impact the wider community. This can include plans to deal with disease outbreaks and containment plans, fires or floods, school or medical facility closures, and other relevant social emergencies. For small farms, this can be done at the group level and there does not need to be a written plan, however farmers must be able to clearly communicate the process and how it was established.	✓	✓	✓

<sup>36</sup> Such dialogue must fit the operations in terms of scale. Larger facilities are expected to undertake systematic, formalised dialogues with their host communities whereas self-employed fishers and farmers are expected only to consult those who are immediately impacted by their activities (e.g. farm neighbours). Self-employed operators can also undertake consultations within the framework of producer groups.

<sup>37</sup> Emergency in this context should be understood as “social emergencies”. Natural disasters, environmental impact etc. is dealt with under the environmental standards. The emergencies in question here would be emergencies relating, for example to schools and other social infrastructure in communities. It may also include individual disasters, such as a child dropping out of school. In each operation, management, workers and community members need to define the social emergencies as part of developing a plan for the response. Owner operated facilities are not expected to develop large-scale plans for the entire community on their own, only as part of producer groups.



#	Compliance Criteria	<i>Small farms - no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
C.8.1.4	All farms and operations comply with national legislation that relates to communities’ social and cultural rights, e.g. use of land for ceremonial purposes stipulated in national laws as well as local by-laws	✓	✓	✓
C.8.1.5	Farms and their access roads must not bar access for other legal users <sup>38</sup> of land and/or water in the farming area	✓	✓	✓
C.8.1.6	Agreements and action plans to address social impacts of aquaculture and other operations related to aquaculture have been developed			✓

## Fundamental Principle # 8: Respect for local communities

### ASIC Leader: Menu of improvement options

All farms and operations pursuing ASIC Leader compliance must implement at least one improvement option for each of the eight Fundamental Principles in this standard. Farms and operations must select and implement an improvement option that addresses the risk areas identified in their risk assessment. This menu serves as guidance for the types of interventions that may help ASIC Compliant operations improve to ASIC Leader.

<sup>38</sup> Legal use related to both livelihood use, recreational use and traditional/cultural use

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
<b>Goal I.8.1:</b> Farms and operations continuously engage with local communities and strive to contribute positively to community livelihoods and well-being based on community recommendations				
I.8.1.1	Farms and operations that employ contract farmers can institute specific actions to improve their terms and conditions (e.g. higher wage or percentage of profit, lower working hours with same rate of pay, purchase equipment to reduce heavy labour, limiting debt, etc.)			✓
I.8.1.2	Farms and operations can make it a priority to hire workers from the local community, including women and/or workers from disadvantaged groups who may have less access to decent employment		✓	✓
I.8.1.3	Farms and operations can improve stakeholder mapping and documentation of key issues (e.g. list of stakeholders, resource use patterns of each stakeholder, and their interest in the resource, documentation of progress and issues)	✓	✓	✓
I.8.1.4	Farms and operations can embark on expanded, more gender-sensitive risk mappings that focus on identifying gender specific work streams, gender-specific risks, needs and opportunities	✓	✓	✓
I.8.1.5	Farms and operations can promote fishing and aquaculture farming communities' social and cultural rights to maintain their identity, for example through supporting and promoting research and documentation, advocacy for fishers' and farmers' cultural rights and cultural activities within communities	✓	✓	✓

#	Improvement options	<i>Small farms – no hired labour</i>	<i>Small farms – hired labour</i>	<i>Large farms/ operations</i>
I.8.1.6	Farms and operations can undertake a food and nutrition insecurity assessment, and implement initiatives to improve any shortcomings, including among disadvantaged and/or vulnerable groups <sup>39</sup> .	✓	✓	✓

<sup>39</sup> Examples of food and nutrition insecurity assessments include Food Insecurity Experience Scale (FIES) and the Minimum Dietary Diversity Indicator for Women of Reproductive Age (MDDI-W). Initiatives to improve food and nutrition security could include nutrition education, training and/or provisioning for household gardens, and engaging entire households in nutritional decisions, among others.

# ASIC SHRIMP DEVELOPMENT STEPS

## DEVELOPMENT STEPS FOR ASIC SHRIMP 2013-2016

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### **Initial process consultations in key Southeast Asian countries.**

In late 2013, regional stakeholder meetings across the shrimp aquaculture industry were held in Thailand, Indonesia, and Vietnam. The primary objective was to present the background and rationale for the initiative to govern sustainable shrimp aquaculture development, and enlist Steering Committee members to serve in furthering the working draft(s).

### **Benchmarking of Good Aquaculture Practices and other Certification Schemes in Southeast Asia and 1<sup>st</sup> Draft of the Southeast Asian Shrimp Aquaculture Improvement Protocol.**

In late 2013, an assessment of the congruence of Good Aquaculture Practices (GAP) developed by individual Southeast Asian countries (Thai GAP, Indo GAP, Viet GAP, and the Thai Code of Conduct), the regional ASEAN Shrimp GAP, and key sustainability requirements was completed. All of the existing GAP Standards were compiled together to create a 1<sup>st</sup> working draft of the Southeast Asian Shrimp Aquaculture Improvement Protocol that was presented to interested stakeholders for review at a first steering committee meeting in December 2013.

### **1<sup>st</sup> Steering Committee meeting.**

On December 13 – 14, 2013, the 1st Steering Committee Meeting was held in Bangkok, Thailand. Fourteen people representing NGOs, certification bodies, processors, shrimp farmers, and association members met to discuss the process and the 1st working draft of the standard. Substantial input and revisions were collected and used to develop the 2<sup>nd</sup> working draft of the standard.

### **2<sup>nd</sup> Working Draft of Southeast Asian Shrimp Aquaculture Improvement Protocol.**

After the steering committee meeting in December 2013, the 2<sup>nd</sup> working draft of the protocol was created based on input collected from the stakeholders present. Edits and modifications were made to raise the environmental performance bar based on the Monterey Bay Aquarium's Seafood Watch® Program's sustainability assessment criteria.

### **National Public Consultations on the 2<sup>nd</sup> Working Draft.**

The goal of the public consultations was to generate a broader awareness and buy-in of the goals of the Southeast Asian Shrimp Aquaculture Improvement Protocol, the steps for development, and to collect feedback on 2<sup>nd</sup> draft of the protocol. At the meetings, 130 stakeholders from the shrimp aquaculture industry from Southeast Asia were briefed on development steps, timeline, and goals of the process. All comments were collected and shared with the Steering Committee for their consideration in developing the next draft of the standard for the first public comment period. Public consultations were held in:

General Santos, Philippines on February 18, 2014

Can Tho, Vietnam on February 26, 2014

Surabaya, Indonesia on April 23, 2014

### **2<sup>nd</sup> Steering Committee Meeting.**

A 2<sup>nd</sup> Steering Committee was convened in Ho Chi Minh City, Vietnam on July 14-15, 2014. Twelve steering committee members met to confirm the scope of the Southeast Asian Shrimp Aquaculture Improvement Protocol, discuss the inputs provided during the national public consultations, seek agreement on the terms of reference and working procedures for the Steering Committee, and make plans for the 60-day public comment period. The Steering Committee developed a 3<sup>rd</sup> working draft of the standard that would be released for the first public comment period in August 2014.

### **1<sup>st</sup> Public Comment Period.**

A 60-day Public Comment Period was initiated on August 11 – October 10, 2014. During the 60-day commentary period, stakeholders were invited to submit comments on any part of the draft document. All submitted comments during the public comment period will receive an official reply from the steering committee that will be posted on a public domain. The steering committee is required to review all public comments received, but as the decision making body, they reserve the right to decide on whether the comments are incorporated in the standard. Nine public comments were received on the document.

### **3<sup>rd</sup> Steering Committee Meeting.**

A 3<sup>rd</sup> Steering Committee was convened in Bangkok, Thailand on October 14 - 15, 2014. Eleven steering committee members and two observers met to review the results of the public comment period, draft responses for the public comments received, and to finalize the field-testing phase.

### **Field Testing.**

This phase allowed the Steering Committee to understand the practical application of the standard as applied across a practical, real-time setting with select shrimp farmers in the region. It was designed to test the applicability of the protocol in the field, and to highlight any issues that may require modifications to be made in the protocol. This is a critical part of making sure the discussions and work of the Steering Committee is more easily implementable upon the completion of the process. Assessments were conducted between August and December 2014. The assessed farms cover four different countries (Thailand, Vietnam, Indonesia and the Philippines), and included four different farming intensity levels (extensive, semi-extensive, intensive and super-intensive). Findings from the field tests suggests that compliance levels range from 56% to 91%, and that there are no major differences among the general compliance levels of the farms observed.

#	Country	Location	System Type
1	Indonesia	Aceh	Extensive
2	Indonesia	Kalimantan	Extensive
3	Indonesia	Surabaya	Super-intensive
4	Indonesia	Surabaya	Extensive
5	Philippines	General Santos	Intensive
6	Philippines	Luzon	Intensive
7	Thailand	Chumphon	Intensive
8	Thailand	Khon Kaen	Semi-Intensive
9	Thailand	Sam Roi Yod	Intensive
10	Vietnam	Cam Ranh	Intensive
11	Vietnam	Cau Mau	Extensive

#### **4<sup>th</sup> Steering Committee Meeting.**

The 4<sup>th</sup> Steering Committee meeting was convened in Bangkok, Thailand on January 19-20, 2014. Eight steering committee members and seven observers attended the meeting and met to review the results from the field testing phase, confirm responses to the public comments received, discuss a new name for the process, discuss ideas for the verification, and to discuss pilot projects to the finalized protocol, auditing checklist, and the interest of buyers. The Steering Committee further developed and refined a 4<sup>th</sup> working draft of the standard that would be released for a 2nd public comment period (30 days).

#### **Process Name Change.**

At the 4<sup>th</sup> Steering Committee meeting, the Steering Committee members decided to change the name of the tool from “Shrimp Standard for the ASEAN Region” to “Southeast Asian Shrimp Aquaculture Improvement Protocol (SEASAIP)” as of February 1<sup>st</sup>, 2015. The change of name was made to ensure that the initiative is accurately reflected from its name, and to avoid any confusion with other existing initiatives.

#### **2<sup>nd</sup> Public Comment Period.**

A second public comment period was convened from February 10, 2015 to April 15, 2015 to allow all stakeholders to observe how their initial comments were considered, and also provide another opportunity to comment on the draft protocol. As with the first public comment period, the steering committee will issue an official reply for all comments collected during the public comment period.

#### **Transition from the USAID M.A.R.K.E.T Project to Seafood Watch.**

On May 1<sup>st</sup>, 2015, the USAID M.A.R.K.E.T project ended and the convener role, which is responsible for managing the process including setting up meetings, fundraising, and ensuring that the process moves forward was passed by vote of the Steering Committee to the Seafood Watch Program at the Monterey Bay Aquarium. The ownership and decision making role remains with the Steering Committee and the convener can be changed at any time.

#### **Finalization of Draft #5.**

The present document is the finalized version of Draft #5 which will remain in place for at least 1 year. This draft will serve as the basis for the demonstration phase which will begin later in 2015 and remain in place indefinitely.

#### **Development of the Verification System.**

Once draft #5 is finalized by vote of the Steering Committee then a verification system that ensures that the benchmarks included in ASIC Shrimp will be developed and will need to be approved by the Steering Committee.

#### **Demonstration Phase.**

The demonstration phase will test the ability of the ASIC Shrimp tool to bring producers and buyers together to foster improvements in the Southeast Asian shrimp aquaculture industry. The goal of the demonstration phase is to determine how many farms can be brought into the program immediately at Level 1 vs. how many will need to be improved. In addition, the demonstration phase will test the ability of the verification system to communicate performance and improvements to buyers and the marketplace.

#### **5<sup>th</sup> Steering Committee Meeting.**

The 5<sup>th</sup> Steering Committee meeting was held in Bangkok, Thailand on January 20 – 21, 2016. Agenda items will included checking in on the status of the project, planning the pilot assessments, and identification of next steps. Including: consideration of an internal control system for the process and development of a Level 2 that would be considered a Seafood Watch “Green” or “Best Choice”.





## ASIC SHRIMP STANDARDS

WHITELEG SHRIMP (*L. VANNAMEI*) AND BLACK TIGER PRAWN (*P. MONODON*)

### INTRODUCTION

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ASIC has a range of initiatives to enable the improvement of the seafood industry of Southeast Asia. ASIC Shrimp in particular present a pathway towards improvement as well as a framework to meet the standards of international ratings that will facilitate market access to places like Europe and the US with a high demand for sustainable seafood. ASIC Shrimp is aligned with Monterey Bay Aquarium's Seafood Watch (MBASW) Program, which is well recognized by buyers in the US and globally.

Producers, hatcheries, and feed mills involved in ASIC Shrimp will need to demonstrate compliance with the associated standards via a 3<sup>rd</sup> party audit to make any market claims. For example, if a producer involved with ASIC Shrimp is able to demonstrate compliance with ASIC Shrimp Yellow or Green standards, they are able to make the market claim of a Seafood Watch "Good Alternative" or "Best Choice" respectively.

There are indicators that are specific to each of the two species covered, whiteleg shrimp (*Litopenaeus vannamei*) and black tiger prawn (*Penaeus monodon*). As many of the sustainability principles and metrics are common to all levels and species, many of the indicators apply to both yellow and green standards; the rating of each indicator for each species is indicated by the rating of "Yellow," "Green," or "All" to indicate the applicability to both Yellow and Green requirements.

### T. TRACEABILITY

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By providing traceability for seafood products, consumers will know that the choices they make are not encouraging IUU fishing, forced labor, or other social or environmental ills that undermine the long term management of fisheries. Currently, these facts are hidden due to the lack of demand for transparency and traceability. However, that is changing as consumers become more aware of the impacts of their buying choices.

Traceability in the context of this program is defined as the ability to follow the movement of shrimp after harvest or inputs such as feed and seed, through specified stage(s) of production.

This is a critical component when implementing sustainability improvements to ensure that products were sustainably and responsibly harvested. These standards attempt to highlight the most important traceability indicators that can be audited at the farm level.

## T. ASIC SHRIMP TRACEABILITY STANDARDS

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All Traceability Standards listed below are required of all farms participating in ASIC Shrimp. In order to qualify for either ASIC Yellow or ASIC Green, any operation must meet all standards for traceability.

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
T.1	Legal compliance for farm operations	Evidence of operational legality <sup>1</sup> via certificate, legal document, or other applicable evidence.	Both	Both
T.2	Compliance with Country Good Aquaculture Practice Standard for Shrimp or ASEAN Shrimp GAP	Evidence of compliance with the requirements of the relevant scheme if applicable.	Both	Both
T.3	Farm Profile Document	A farm profile document is available and must include, at a minimum: name of farm, owner and/or manager, membership to farming cooperative or other farmers' union if applicable, GPS coordinates, aerial map, farm size, number of ponds, production volume, and species farmed.	Both	Both
T.4	Identification of Government Enforcement Officials	The name and contact information (e.g. telephone number and/or e-mail address) of the relevant authorities can be identified	Both	Both
T.5	Broker License and/or Registration (if applicable)	Brokers must have a license or be registered with the government, or be an approved supplier for a processor	Both	Both
T.6	Effective system to identify different batches of product from different farms	Broker will have to provide a written description to the farm about how they differentiate different products from different farms.	Both	Both
T.7	Movement of Harvested Shrimp	Movement/sale of all harvested shrimp shall be recorded.	Both	Both
T.8	Data Recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>2</sup> and are available for inspection. Collected data must be available for inspection by auditors and/or ASIC upon request.	Both	Both

<sup>1</sup> Farms have the necessary permits to legally operate as a shrimp farm on that site

<sup>2</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant time frames; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence that data accurately describes the operation and its potential impact

## SECTION I – FARM LEVEL STANDARD

### 1. SHRIMP HEALTH MANAGEMENT

Optimizing health, minimizing stress, reducing shrimp disease risks, and maintaining a healthy culture environment at all phases of the production cycle are critical to minimizing the environmental impacts of disease. This section addresses the monitoring of diseases and the use of chemicals, including antibiotics.

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
1.1	Monitoring of shrimp health and disease prevalence	<ul style="list-style-type: none"> <li>• The farm must routinely examine shrimp for health status and disease prevalence</li> <li>• Records of sampling for disease prevalence inside farm and records noting tests that indicate the presence of disease and detailing subsequent actions</li> <li>• Records for all mortalities on farm (except days of allowable/normal/expected mortalities)</li> <li>• Records of causation analysis and corrective actions</li> <li>• Records show that farmer informed the relevant authority upon evidence of outbreak</li> <li>• Records show that farmers are in regular communication with the farmers surrounding the farm regarding disease occurrence and prevention</li> </ul>	Both	Both
1.2	Monitoring of water quality	<ul style="list-style-type: none"> <li>• The farm must examine and record, at least once weekly, the water quality in shrimp ponds, including, at a minimum: temperature, dissolved oxygen, salinity, pH, and ammonia.</li> </ul>	Both	Yellow
1.3	Handling and disposal of dead/infected shrimp and pond water	<ul style="list-style-type: none"> <li>• Must demonstrate proper<sup>3</sup> disposal of dead/infected shrimp</li> <li>• Must demonstrate how the affected pond water was treated prior to discharge outside of the farm boundary</li> </ul>	Both	Both

<sup>3</sup> No direct disposal of dead/diseased animals of any life stage or age into receiving/source waters or anywhere with connection to wild populations or neighboring farms

1.4	Use of antibiotics	<ul style="list-style-type: none"> <li>Antibiotics highly or critically important for human health<sup>4</sup> are prohibited</li> <li>Prophylactic use of antibiotics of any kind is prohibited</li> <li>Every use of antibiotics at any time must be recorded, including the product name, dose, and route of administration.</li> </ul>	Yellow	Yellow
1.5a	Use of veterinary drugs and chemicals	<ul style="list-style-type: none"> <li>The use of drugs or chemicals banned by the country of production, importing country, or the country of export is prohibited</li> <li>Use of trained staff to administer drugs (i.e. therapeutants) and chemicals according to the instructions prescribed by the manufacturer</li> <li>Every use of therapeutic drugs and chemicals must be recorded, including the product name, dose, and route of administration</li> <li>Any product used for pond preparation must be recorded by product name and sales company/ agent</li> <li>The production is allowed a maximum of 1 chemical<sup>5</sup> treatment per production cycle</li> </ul>	Yellow	Yellow
1.5b	Use of veterinary drugs and chemicals	<ul style="list-style-type: none"> <li>No chemical<sup>6</sup> use is permitted<sup>7</sup></li> <li>Any product used for pond preparation must be recorded by product name and sales company/ agent</li> </ul>	Green	Green
1.6	Use of probiotics and other bioremediation agents	Must have records of use for probiotics and other bioremediation agents (type and dose)	Both	Both
1.7	Implementation of basic biosecurity protocols	Existence of a written health management plan that includes, at a minimum, disease monitoring procedures, disease response, active vector or boundary controls, and disposal of mortalities.	Both	Both
1.8	Infected pond water	Following disease occurrence or emergency harvest due to suspected disease occurrence, pond water must be retained for a period of time <sup>8</sup> prior to discharge to ensure disease is no longer biologically active OR use chlorination	Green	Green

<sup>4</sup> As defined by the World Health Organization

<sup>5</sup> Chemical is defined as those which are applied as therapeutants

<sup>6</sup> A distinct compound or substance, especially one which has been artificially prepared or purified

<sup>7</sup> An exemption may be granted for use of some pond preparation/water treatment that can be demonstrated to have no active chemicals or byproducts before effluent discharge. This may also apply to rainwater if the salinity can be demonstrated to be less than 5 ppt.

<sup>8</sup> 2-week hold time is mandatory unless evidence suggests that more or less is required.

1.9	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>9</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request	Both	Both
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## 2. SOURCE OF STOCK

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This section seeks to address the use of shrimp species in production and ensure that the species used are from sustainable sources.

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
2.1	Sourcing fry or post larvae from wild sources	Prohibited except for passive settlement in extensive systems <sup>10</sup> .	Both	Both
2.2	Movement documents/receipts for seed	Receipts for seed are required from the seed supplier. If farm uses a broker, the farm must have movement documents/receipts from the broker that show the origin of the seed.	Both	Both
2.3	Identification of seed providers	The farm has a name and contact information for any seed company that is used.	Both	Both
2.4	Sourcing of post larvae	Farmers must source seed that is compliant with Principle 7 (Use of Species).	Both	Both
2.5	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>11</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request	Both	Both

<sup>9</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

<sup>10</sup> Low input farming technique using natural (and passive) recruitment of wild juveniles through tidal flushing

<sup>11</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

### 3. FEED SOURCING AND MANAGEMENT

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This section seeks to address the sustainability and efficient use of wild fish resources in shrimp aquaculture feed that can be verified at the farm level.

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
3.1	Use of commercial pelleted feed	Commercial pelleted feed must be purchased from manufacturers/sellers/ importers that have an operational license from the national government.	Both	Yellow
3.2	Use of approved additives and supplements	Feed additives and supplements must be legal/registered. Their use, including name/type and dose, must be identified and recorded.	Both	Yellow
3.3a	Economic Feed Conversion Ratio	Shall be less than 2	Yellow	
3.3b	Economic Feed Conversion Ratio	Shall be less than 1.7	Green	
3.3c	Economic Feed Conversion Ratio	Shall be no greater than 1		Yellow
3.3d	Economic Feed Conversion Ratio	Shall be 0; feed use is not permitted		Green
3.4	Movement documents/receipts for feed	Receipts for feed purchases are required from the feed supplier. If farm uses a broker, the farm must have movement documents/receipts from the broker that show the origin of the feed.	Both	Yellow
3.5	Identification of feed providers	The farm has a name and contact information for any feed company that is used.	Both	Yellow
3.6	Certified feed use	Farmers must use feed that is compliant with Section III (Feed Mill Standard).	Both	Yellow
3.7	Data Recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>12</sup> and are available for inspection. Collected data must be available for inspection by assessors and/or ASIC upon request	Both	Both

### 4. ENVIRONMENTAL IMPACT MANAGEMENT

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This section seeks to manage the impacts that shrimp aquaculture operations can have on biodiversity through activities such as farm siting, predator control, or water quality discharges.

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<sup>12</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

## 4.1 - MANGROVE AND HABITAT IMPACTS

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
4.1.1	Siting in mangroves and other high value habitat <sup>13</sup>	<ul style="list-style-type: none"> <li>• Farms must not have been sited/built in mangrove ecosystems or other high value habitat after 1999 (or earlier according to national regulations, i.e., the Philippines).</li> <li>• GPS coordinates of the farm site are recorded and farms have a document indicating land use from 1999 to the establishment of the farm or historical land use maps/statements. Farms can provide a statement indicating the year of construction of ponds. Farms shall follow local and national regulations about coastal spatial plan if applicable</li> </ul>	Both	Both
4.1.2	Expansion of farms in high value habitat <sup>14</sup>	Prohibited, except for canals <sup>15</sup> , which must provide evidence of successful <sup>16</sup> restoration activity	Both	Both
4.1.3	Siting in Protected Areas (PA)	There is evidence that the farm site or related facilities are not within a national or international Protected Area, unless permitted by the relevant authorities and if an effective management plan exists.	Both	Both
4.1.4	Cumulative Impacts	Any expansion of farms into habitat not previously converted (see 5.1.2 for mangrove exclusions) must consider their contribution to cumulative impacts. This requirement is not applicable for expansion into areas already in use for agriculture. Farms can consider their impact via the use of Environmental Impact Assessment	Both	Both

<sup>13</sup> High Value Habitat includes but is not limited to coastal intertidal areas, estuaries, tidal wetlands and forests, freshwater wetlands, coral reefs, seagrass/ algae beds, freshwater lakes, rivers and streams, and tropical broadleaf mixed forests

<sup>14</sup> High value habitats include: coastal intertidal, coastal/terrestrial shoreline, estuaries, tidal wetlands and forests, freshwater wetlands, coral reefs, seagrass/algae beds, freshwater lakes, rivers and streams, tropical broadleaf and mixed forests

<sup>15</sup> For *high value habitat* removal for canals construction, farms must restore the area being used as much as possible. The restoration could be regreening along the banks of the canal or regreening somewhere else with comparable condition and size.

<sup>16</sup> Successful restoration is defined as 3x the area of the disrupted area. If not on site, the farm must provide sufficient evidence to prove that the restored area is maintained and viable (maps, GPS coordinates, aerial photographs, recent photographs)

## 4.2 – USE AND DISCHARGE OF WATER

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
4.2.1	Use of fresh groundwater (below 5ppt)	<ul style="list-style-type: none"> <li>• Shall not be used in the ponds.</li> <li>• If permitted under national regulations, record of use of fresh groundwater must be kept, and the potential impacts (salinity of surrounding wells and reduced freshwater availability) must be assessed and recorded.</li> </ul>	Both	Both
4.2.2	Discharge of saline water into natural freshwater bodies and agricultural lands	The farm is designed and managed to ensure that saline water cannot be discharged into freshwater bodies <sup>17</sup> or agricultural lands.	Both	Both
4.2.3a	Discharge of water from the farm <sup>18</sup>	<ul style="list-style-type: none"> <li>• Daily average water exchange per farm shall not exceed 10% of pond volume, calculated over the entire production cycle</li> <li>• Records of all water discharge and exchange must be kept</li> </ul>	Yellow	Both
4.2.3b	Discharge of water from the farm <sup>19</sup>	<ul style="list-style-type: none"> <li>• Discharge permitted only after multiple production cycles<sup>20</sup></li> <li>• Records of all water discharge and exchange must be kept</li> </ul>	Green	Green
4.2.4a	Effluent water quality monitoring	<ul style="list-style-type: none"> <li>• Effluent water quality must be tested and recorded over all periods of the production cycle</li> <li>• Records of effluent water quality testing demonstrate compliance with relevant laws and regulations (if applicable)</li> <li>• Visual inspection of sampling procedure confirms testing produces accurate results</li> </ul>	Both	Yellow
4.2.4b	Effluent water quality monitoring	If fertilizers are used, nitrogen (TAN and NH <sub>3</sub> ) concentration in the ponds must not exceed that of the receiving waterbody.		Green

<sup>17</sup> Freshwater lakes, rivers, streams (or canals that connect to these water bodies) including non-surfacewater bodies (i.e. groundwater reservoirs, etc.)

<sup>18</sup> Tidal flow systems are exempted

<sup>19</sup> Tidal flow systems are exempted

<sup>20</sup> Multiple is defined as 2 or more



4.2.5	Disposal of sludge	Dredged sediment from canals, watercourses and ponds is properly contained and/or located to prevent the salinization of soil and groundwater, and does not cause other significant ecological impacts to receiving and/or surrounding environments.	Both	Both
4.2.6	Potential impact of effluent water <sup>21</sup>	<ul style="list-style-type: none"> <li>Effluent water must be treated<sup>22</sup> if the water quality poses a significant risk<sup>23</sup> of impact to the receiving water</li> <li>Records of effluent treatment/water quality control prior to discharge</li> </ul>	Both	Both
4.2.7	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>24</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request.	Both	Both

### 4.3 - PREDATOR CONTROL

#	Indicator	Compliance Criteria	Whiteleg Shrimp Rating	Black Tiger Prawn Rating
4.3.1	Predator control	Active lethal predator <sup>25</sup> (birds, mammals, reptiles) control is prohibited	Both	Both
4.3.2	Protection of listed species	Farming activities must not cause mortality of any threatened or endangered species, as listed by the IUCN	Both	Both
4.3.3	Records of predator <sup>26</sup> mortalities	Any wildlife/ predator mortalities that occur on the farm, regardless of the reason for the incident must, be recorded including the common name of the species, number of mortalities, and cause of mortality	Both	Both

<sup>21</sup>Applicable to semi-intensive and intensive production systems only

<sup>22</sup> Treated is defined as a practice or action that, by acting on and altering constituents and characteristics of pondwater, successfully mitigates its potential to pose a significant risk to a waterbody that receives it.

<sup>23</sup> Significant risk is defined as having reasonable probability that the quality of water or its constituents will, when discharged from the farm site, impact the ecological functionality of the waterbody that receives it (e.g. reducing habitat suitability for resident organisms by inducing algal blooms, creating hypoxic conditions, marked sedimentation, etc.).

<sup>24</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

<sup>25</sup>Active lethal predator control is defined as the killing of predators by firearms, trapping devices and/ or poison, regardless of whether or not there have been attempts to deter them via passive means.

<sup>26</sup> Predator is limited at birds, mammals and reptiles

4.3.4	Predator management	A predator management plan must be in place to ensure that predator mortalities do not occur beyond exceptional cases	Green	Green
4.3.5	Number of exceptional mortalities	Shall be less than 1/ year	Green	Green
4.3.6	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>27</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request	Both	Both

#### 4.4 - ESCAPE MANAGEMENT

#	Indicator	Compliance Criteria	Whiteleg Shrimp Rating	Black Tiger Prawn Rating
4.4.1	Stocking records	The number of pieces and/or volume of shrimp stocked must be recorded at stocking and at harvest	Both	Both
4.4.2a	Escape prevention	<ul style="list-style-type: none"> <li>Farm shall employ appropriate measures to prevent the escape of cultured shrimp, including secondary containment at harvest</li> <li>Appropriate escape prevention measures in place must include double screens or secondary catchment mechanisms on outlet gates that are inspected and maintained regularly, and records of inspection (with any maintenance activity if enacted) are kept</li> </ul>	Both	Both
4.4.2b	Escape prevention	<ul style="list-style-type: none"> <li>Effluent discharge permitted only after multiple production cycles, exchange at harvest.</li> <li>Farms must use fail-safe escape prevention methods or active Best Management Practices for design, construction and management of escape prevention (biosecurity)</li> </ul>	Green	
4.4.3	Escape reporting	<ul style="list-style-type: none"> <li>In the event of a large<sup>28</sup> escape, relevant authorities, including ASIC, must be informed</li> <li>Records (size of animal estimated number of escapees, their size, and estimated recapture if applicable) of any escape event must be kept</li> </ul>	Both	Both

<sup>27</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

<sup>28</sup> Any large-scale escape (>25% of standing stock)

4.4.4	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>29</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request.	Both	Both
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## SECTION II – HATCHERY STANDARD

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One of the most important ways to minimize the environmental impacts of shrimp farming is to ensure that species used in production are sufficiently domesticated, as well as screened for disease. This section is designed to assess hatcheries, and may require a visit by the assessor or an official declaration.

### 5. USE OF SPECIES

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#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
5.1	Health status of post larvae	Must be in compliance with any existing national standards	Both	Both
5.2a	Sourcing of broodstock from wild sources	Prohibited	Both	
5.2b	Sourcing of broodstock from wild sources	Records kept for sourcing of broodstock, including at a minimum: number, location, date, and method of collection		Both
5.2c	Sourcing of broodstock from wild sources	Where wild broodstock are sourced, the fishery must have achieved a Seafood Watch 'Good Alternative' level of performance		Green
5.3	Use of non-native species	Non-native species shall not be used for production unless already established for commercial production <sup>30</sup> and approved by the national government	Both	

<sup>29</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts

<sup>30</sup> NEEDS DEFINING

5.4	Use of native species	All pond stock must be spawned directly by wild-caught broodstock (i.e. F1 progeny from F0 wild-captured parents)	Green	Green
5.5	Movement of broodstock and post larvae-within the country of production	<ul style="list-style-type: none"> <li>The seed supplier must provide a movement document/receipt to the farm/broker</li> <li>Movement of post larvae and broodstock must be in compliance with national and/or regional laws, if applicable</li> </ul>	Both	Both
5.6	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>31</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request.	Both	Both

### SECTION III – FEED MILL STANDARD

The use of fishmeal and fish oil can be one of the most important environmental impacts associated with shrimp production. This section is designed to assess feed mills and requires a visit by the assessor or some sort of official declaration. It is important to ensure that the use of fishmeal and fish oil from illegal, unregulated, or unreported fisheries is minimized or eliminated.

### 6. FEED INGREDIENTS SOURCING

#	Indicator	Compliance Criteria	<i>Whiteleg Shrimp Rating</i>	<i>Black Tiger Prawn Rating</i>
6.1a	Sources of wild fish used as feed	Wild fish sources, including by-products, used as fish meal and fish oil must be identified by species and must not be illegal <sup>32</sup> .	Both	Yellow
6.1b	Sources of wild fish used as feed	Only fisheries byproducts are allowed for use in fisheries ingredients <sup>33,34</sup> .	Green	
6.2	Percent inclusion of fishmeal	Shall be less than 20%, or 25% if fisheries byproducts <sup>35</sup> account for at least 20% of the fishmeal used in the feed formula.	Yellow	Yellow

<sup>31</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high in the quality of the data

<sup>32</sup> Illegal Fisheries fall under the common definition of Illegal, Unreported, and/ or Unregulated.

<sup>33</sup> Note the committee is working on definitions of sustainability for a future version

<sup>34</sup> Byproducts are defined as: non-edible, (i.e. trimmings) or processing wastes

<sup>35</sup> Byproducts are defined as: non-edible, (i.e. trimmings) or processing wastes

6.3	Percent inclusion of fish oil	Shall be less than 4%.	Yellow	Yellow
6.4	Maximum protein in the feed	Shall be less than 40%.	Yellow	Yellow
6.5	Movement of feed products within the country of production	<ul style="list-style-type: none"> <li>• The feed supplier must provide a movement document/receipt to the farm/broker</li> <li>• Movement of feed must be in compliance with national and/or regional laws, if applicable</li> <li>• The name and contact information for all feed ingredient suppliers used by the feed mill must be available</li> </ul>	Both	Yellow
6.6	Data recording and availability	Data relevant to compliance criteria in this section are collected using robust methods <sup>36</sup> and are available for inspection. Collected data must be available for inspection by assessors and/ or ASIC upon request	Both	Both

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<sup>36</sup> Complete, detailed, and available without averaging or aggregation; up to date within reason, and covering relevant timeframes; collected using appropriate methods (e.g., frequency of collection, number of data points, etc.); overall, assessor confidence is high that data accurately describes the operation and its potential impacts



## ACTIVITIES REPORT

### Stakeholder consultation workshop on the Code of Sustainable Shrimp Farming Assessment of training needs on sustainable shrimp farming

#### 1. Objectives:

Assess training needs on sustainable wild shrimp farming to design training modules tailored to the wishes of shrimp farmers, managers, local policymakers and private organizations in the region area.

#### 2. Methodology:

40 interviewees were interviewed on their on their knowledge and experience related to shrimp farming, their training history and lessons learned, their knowledge gap and training need, their suggestion of the training format, duration, and location.

#### 3. Objects:

Tra Vinh Department of Fisheries; Forest Protection Department; Agriculture & Rural development Department; Agricultural Extension Center; Tra Vinh University; Management Board of Long Khanh Conservation Area; Tra Vinh Fisheries and Horticulture Association; Long Thanh Cooperative; Thanh Dat Cooperative; Ngoc Hien private enterprise; Cuu Long Seafood Joint Stock Company; Shrimp farming households in Long Khanh commune, Duyen Hai district.

#### 4. Results:

##### *4.1. Results of discussion and information sharing from participants*

With local experiences, the participants provided information about the MAM2 project, difficulties to move towards sustainable shrimp farming under ecological certification, and suggest solutions to be taken, details are as follows:

##### Difficulties:

- The shrimp farming area of many households in Tra Vinh is very small, about 1 hectare, if shrimp are raised according to the criteria to achieve international certification (Ex. ASIC), the yield is lower than other types of farming, it will not guarantee livelihood for their family
- The investment irrigation system is not synchronized, not meeting the demand for water supply and drainage

- Farmers take advantage of the available area for farming, the shrimp-forest ratio is not satisfactory, the forest rate is low, only 20-20% of the forest area
- Many households have been trained in forest-shrimp farming techniques but have not yet applied the technique due to large capital investment
- There are a number of households raising shrimp spontaneously in ecological farming areas, intensive farming with high density, polluting the surrounding environment, so the farming area is likely to be difficult to achieve ecological certification.
- Farmers harvest and stockpile all year round, do not follow the seasonal schedule, so shrimp farming is not effective, the river rate is low
- The quality of local seed is not guaranteed because the seed is produced by small local establishments and has not been certified to be eligible for sale.
- People are only used to farming, do not have the habit of taking notes, it is very difficult to ask people to follow this rule.
- Some forest-shrimp farming households have supplemented with other food sources thus hindering the achievement of organic shrimp certification
- To get an ecological certificate, many documents are needed, Tra Vinh has done but so far has not obtained the certificate

### **Solutions:**

- To raise shrimp according to ASIC's criteria, the participation of enterprises is required
- It is necessary to communicate and propagate so that people understand the benefits of participating in this ASIC set of criteria
- The set of procedures and papers to apply for ASIC certification should be simple and easy for people to access
- In order to improve the survival rate during stocking and rearing (>90%), shrimp seed should be raised in ponds when reaching the size of 20-30 mm before being released to the outside environment
- Afforestation on the cassette (including choosing the direction for planting) to ensure the creation of living space for shrimp, adequate light, growth and development well, and no greening of shrimp shells.
- Planning is required, to ensure a minimum forest area for ASIC certification
- It is necessary to have a cooperative group (5-6 people) to regularly share and exchange experiences, thereby supporting each other

- It is necessary to coordinate with exporters to get a higher selling price of shrimp, because to obtain certification there will be more costs, if the selling price does not increase, it will be difficult to get cooperation from farmers
- Tra Vinh is currently developing an eco-tourism model, which can be combined with ecological zones to increase the value of black tiger shrimp
- The project needs detailed training on ASIC content

### **Questions:**

The following questions will be discussed in more detail in the upcoming training session:

- Is the extensive farming area interspersed with several intensive farming ponds, is it ASIC certified?
- What solution will be implemented for the intensive farming households in the farming area under ASIC certification?
- What is the difference of ASIC compared to other certifications like Naturland or Organic?

### ***4.2. Results of individual interviews***

The project consulted 40 people, they are representatives of state management agencies (sub-department of fisheries, center of fishery extension, Sub-department of forest protection, Long Thanh Cooperative, Thanh Dat Cooperative), some businesses and shrimp farmers in the area. The content of the consultation is based on the questions that have been set up in the questionnaire, and the results of the consultation are summarized as follows (Details - see Appendix 5):

- Out of 21 interviewees who are shrimp farmers, 6 have not raised shrimp and have experience in state management of fisheries. 10 households have extensive shrimp farming and 5 households have intensive shrimp farming.
- Of all the interviewees, only Cuu Long company has BAD, ASC, Global GAP certificates, the rest do not have any certificates
- Most of the interviewees have a clear understanding of the concept of sustainable forest shrimp farming, the role of shrimp-forest farming in the economy, society and environment.
- Some interviewees do not remember exactly when the local government promoted Sustainable Forest Shrimp Farming. This information is better known to the people through the MAN 2 project of Cuu Long seafood company and the Center for Agriculture and Fisheries Extension, Forest Protection Department, Minh Phu company



- 100% of interviewees know about sustainable shrimp-forest farming from the mass media, short and long-term training courses and from projects such as WB9, MAM 2 implemented locally.
- The training courses that farmers and staff have participated in within the last 5 years related to sustainable forest shrimp farming are: VIETGAP; ecological farming techniques; Clean shrimp; improved edge management shrimp farming techniques certified for ecological shrimp; shrimp farming model.
- The contents of the training are useful to the participants is a farming technique to improve survival rate, the role of the forest in ecological shrimp farming.
- The households have been trained in shrimp-forest farming, have applied some techniques in the farming process, for example: determining the appropriate shrimp-forest ratio; select high-quality varieties; Hygiene techniques, treatment of square bottom farming, however, there is confusion between industrial farming and ecological farming
- 95% of the interviewees wished to receive training on shrimp-forest farming to gain a deeper understanding of farming techniques, especially ASIC standards to achieve higher economic efficiency, more stable income, and to serve the state management.
- According to the interviewees, the factors that help the training session to be successful are practical knowledge, appropriate implementation area and time, experienced and qualified implementing experts and inviting the right participants.
- According to the suggestions of the interviewees, the most suitable training time for local people is October-November 2022, the appropriate training time is 2-3 days. The content of the training course on: Sustainable Forest shrimp farming techniques, Lessons learned on sustainable forest shrimp farming, connecting markets or purchasing companies in sustainable shrimp farming, international certificates in shrimp farming sustainable forest.
- Expected in the next training session to gain knowledge to apply locally, especially knowledge related to the conditions to be certified for wild shrimp, market linkage, the project needs to do a pilot model, then popularize and replicate the model in the area.

## **5. Overall Review:**

- In general, local managers, local private enterprises/companies and farmers understand the role of forests in shrimp farming, Farmers have been trained on sustainable organic shrimp and wild shrimp farming, however, due to farming practices and conditions of households as well as local infrastructure, it is not yet met. Therefore, shrimp-forest farming has not achieved high efficiency, farmers still face many difficulties in the farming process. The local desire is to have a training course related to: Sustainable Forest shrimp farming techniques, Lessons learned on sustainable forest shrimp farming, connecting to a market

or purchasing company in sustainable wild shrimp farming, International Certificate in Sustainable Forest Shrimp Farming (ASIC), especially the project needs to implement a demonstration model for local application and replication in the future. The time to organize the training department is T10-T11, the training time should be about 3 days.



## ACTIVITY REPORT

### TRAINING ON SUSTAINABLE MANGROVE-SHRIMP WITH CERTIFICATION AND FIELD TRIP TO CERTIFIED-SHRIMP MODEL IN BAC LIEU

#### 1. Objective:

Capacity building, awareness and knowledge enhancing for local authorities' staff, businesses and mangrove-shrimp farming households in Tra Vinh towards sustainable shrimp farming with certification.

#### 2. Training format

**Format:** The training course module is designed as a combination of theory - practice and field experience.

- **Theory:** Overview of mangrove-shrimps, causes of mangrove decline associated with shrimp farming, trends and world market for organic shrimp products, sustainability certification systems associated with mangrove-shrimps, ASIC standards for shrimp farming and sustainable shrimp farming techniques. All the content was carefully prepared by the consultant for the participants.
- **Practice:** After learning about mangrove-shrimps theories, participants were divided into groups to practice deficiency assessment and develop a plan in shrimp farming to meet the requirements of certifications.
- **Field trip:** CECAD and the consultants organized a field trip to Bac Lieu with 02 models: 1) a model of sustainable mangrove-shrimps farming toward green economy; and 2) Ecotourism model associated with mangrove-shrimps.

#### 3. Beneficiaries:

- Tra Vinh Sub-department of Fisheries staff;
- Tra Vinh Sub-Department of Forest Protection staff;

- Cuu Long Seaproducts Company staff – Expected company to cooperate with mangrove-shrimps farming households in applying sustainable forest shrimp certification;
- Mangrove-shrimps farming households in Duyên Hải district, Trà Vinh province.

#### **4. Training content:**

- Overview of mangrove-shrimps: Overview of mangrove-shrimps, causes of mangrove decline associated with shrimp farming, trends and world market for organic shrimp products, sustainability certification systems associated with mangrove-shrimps;
- ASIC Standard;
- Sustainable shrimp farming techniques;
- Group discussion on developing a forest shrimp farming plan towards certification;
- Visiting a model of sustainable forest shrimp farming towards green economy;
- Visiting a model of sustainable forest shrimp farming associated with eco-tourism.

#### **5. Overall assessment:**

Tra Vinh is a province in the Mekong Delta (Mekong Delta). Recently, due to the effects of climate change and deforestation for shrimp farming, the area of forest shrimp has decreased much compared to the 1990s and earlier. Local governments and the Department of Agriculture and Rural Development have attempted many measures to restore or increase mangrove tree cover. However, the implementation process faces many difficulties due to: i) climate change in the Mekong Delta; ii) people's awareness is limited; iii) state budget support for planting and protecting forests is low, so it has not encouraged many people to participate in forest planting and protection efforts; iv) The polluted environment hinders the growth of newly planted forest trees.

Through the training course, staff of Sub-Department of Fisheries, Sub-Department of Forest Protection and the local community have a better understanding of: i) the importance and significance of mangrove protection; ii) find a sustainable direction associated with planting - protecting and developing mangrove forests towards sustainable certification, thereby ensuring 03 elements of sustainability: Environment - Economy/Livelihood - Community; iii) Shrimp farming techniques summarized and compiled by consultant also help the farmers and the Sub-Department of Forest Protection

to have a more suitable orientation for their locality and shrimp farming. Techniques can be mentioned such as: choosing trees with higher trunks to reduce the impact of crabs, fiddler crabs, and mosses; zoning for appropriate planting measures to ensure forest coverage and water surface area for shrimp farming; application measures of shrimp breeding at growth stage, and stage dividing to reduce mortality and increase resistance of shrimp to the environment and weather. In addition, the training course also helped staff of seafood company to have better understanding of the certification system associated with mangrove-shrimps as well as effective approaches in connecting with local farmers. For example, selecting certified/tested ecological seed, providing financial support for people to buy seeds, build a roadmap towards and achieve ecological certification for the international market.

The field trip enhanced the participants' understanding of mangrove-shrimps farming methods, two-stage shrimp breeding techniques, and additional feeding management for mangrove-shrimps. The model of ecotourism associated with mangrove-shrimps farming is a new sustainable direction, supporting people to both raise shrimp and benefit from the ecological value of mangrove-shrimps for tourism. Fishery - agricultural products produced in the model when sold to tourists will have higher prices. In addition, the model will also help local people to have more employment opportunities. Staff of Sub-Department of Fisheries, the Sub-Department of Forest Protection and farming households shared that this model was very suitable for Duyen Hai - Tra Vinh toward green and sustainable economic development. Tra Vinh province has been promoting the green economy, many wind power projects have been built, attracting many visitors to work and visit. However, Tra Vinh has not yet adopted ecotourism model similar to the ones in Bac Lieu. After the training course, some farming households plan to develop the model to create more economic value for the locality and community.

## **6. Results:**

- 100% of participants in the training course were enhanced their understanding of mangrove conservation and comprehended the importance of mangroves' role.
- 100% of the participants in the training course gained knowledge about sustainable mangrove-shrimps certification and market opportunities for sustainable mangrove-shrimps products.

- 100% of participants in the training course understood sustainable mangrove-shrimps farming techniques, and techniques to improve survival rate and quality of mangrove-shrimps.
- 100% staff of Tra Vinh Sub-Department of Fisheries and Tra Vinh Sub-Department of Forest Protection gained knowledge and orientation in mangrove-shrimps development.
- 02 participants that are company staff learned the techniques of forest shrimp farming towards sustainable certification and oriented in implementing mangrove-shrimps chain linkages.
- 15% of households participating in the training course gained shared knowledge and experience and were oriented to develop an eco-tourism model associated with mangrove-shrimps.

**7. Pictures:** See Annex 2

**Consultant**



**M.A Đinh Xuân Lập**

**ANNEX 1**  
**AGENDA**  
**TRAINING ON SUSTAINABLE MANGROVE-SHRIMP WITH**  
**CERTIFICATION AND FIELD TRIPS TO CERTIFIED-SHRIMP MODEL IN**  
**BAC LIEU**

**Time:** 8:00 - 11:00, November, 12 - 13, 2022

**Location:** Duyen Hai District, Tra Vinh Province

No.	Time	Content	Note
1	8:00 - 8:15	Registration	
2	8:15 - 8:30	Introduction about the objectives and content of the training course	
3	8:30 - 8:40	Overview of mangrove-shrimp farming in Vietnam	
4	8:40 - 9:00	Introduction of ASIC Shrimp Standard	
5	9:00 - 9:15	Tea break	
6	9:15 - 10:15	Mangrove-shrimp farming techniques towards sustainable standards	
7	10:15 - 11:00	Group discussion on the activities to be implemented in the application of mangrove-shrimp farming according to sustainable standards	
8	11:00 - 11:30	Group discussion results presentation	
9	11:30 - 11:45	Summary	
10	11:45 - 13:00	Lunch	
11	13:00 - 18:00	Transportation: Tra Vinh - Bac Lieu	
12	13/11/2022	Field trip in Bac Lieu	

## ANNEX 2

### PHOTOS OF THE TRAINING COURSE AND FIELD TRIP

	
<p style="text-align: center;">Results of group discussion on development orientation of Tra Vinh mangrove-shrimp</p>	<p style="text-align: center;">Results of group discussion on the orientation of linking the Tra Vinh mangrove-shrimp chain</p>
	
	
<p style="text-align: center;">Field trip to Bac Lieu mangrove-shrimp ecotourism model</p>	





Field trip to sustainable mangrove-shrimp farming model in Bac Lieu

**More photos on website of CECAD:** [Training course on sustainable mangrove-shrimp with certification and field trip to certified-shrimp models in Bac Lieu province](#)



## ACTIVITY REPORT

### POLICY DIALOGUE IN TRA VINH PROVINCE

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

#### 1. Objective:

Policy dialogue serves as a forum for stakeholders to meet and discuss face-to-face, and to learn about the shrimp farmers’ problems. This information will serve as the input for the development of local socio-economic plans, which in return will help local shrimp farmers improve their livelihoods.

#### 2. Workshop time and venue

- Time: 8:30 - 11:30 March 23, 2023
- Venue: 2<sup>nd</sup> floor, Cuu Long Hotel, 210 Nguyen Thi Minh Khai, Ward 7, Tra Vinh city

#### 3. Participants:

- Representatives of the Department of Agriculture and Rural Development of Tra Vinh province
- Representatives of Fisheries Sub-Department of Tra Vinh province
- Representatives of Tra Vinh Provincial Forest Protection Department
- Representatives of Fisheries Association of Tra Vinh province
- Representatives of Tra Vinh Provincial Agriculture and Fisheries Extension Center
- Representatives of the Agriculture Department of Duyen Hai district
- Representatives of Cuu Long SeaPro Joint Stock Company
- Representatives of farmers' association, shrimp farming households in Long Khanh commune and Don Chau commune
- CECAD: Dr. Le Thi Van Hue; Dr. Phan Thi Ngoc Diep
- Ms. Mai Thi Thuy Trang - Director of Tai Thinh Phat Farm Ca Mau Cooperative

#### 4. Meeting notes:

##### 4.1 Introduction:

- Ms. Lam Ha Phuong - staff of Sub-Department of Fisheries introduced the workshop and the participants of the workshop
- Dr. Le Thi Van Hue - CECAD delivered opening speech and presented CECAD’s as well as project’s introduction
- CECAD showed a video summarizing the activities of the project

##### 4.2 Discuss about shrimp farming in Ca Mau province:

- Ms. Mai Thi Thuy Trang shared the story of shrimp farming in Ca Mau, then asked representatives of Cuu Long SeaPro company how important was the seed production

facilities, where they get the seed, and were there any difficulties in produce and hatch the seed.

- Mr. Duong Truong Giang (Cuu Long SeaPro company): The seed are purchased from sale agents and households. However, the shrimp seed have not been certified. We are still purchasing, and there has been no problems reported.
- Ms. Trang: Is the quality of the product and the fishing process controlled?
- Mr. Duong Truong Giang (Cuu Long SeaPro company): The company are purchasing mainly from the sale agents, traceability at households
- Ms. Trang: Customers are now very observant; the shrimp quality must be guaranteed to retain customers. Currently, Tai Think Phat cooperative has 14 products, with types such as frozen (frozen black tiger shrimp), pre-processed and finished processing. For examples, our frozen black tiger shrimp products are fresh shrimp directly collected from farmers, and water supply and freezing process must ensure the freshness, therefore, the quality when delivered to customers is guaranteed. It is important to pay attention from the stages of cultivation, to harvesting and then processing. In addition, our preliminarily processed shrimp products are natural land shrimp. Tai Think Phat cooperative also has crayfish, silver shrimp, and crab. The cooperative regulates the ratio to ensure the safety of both buyers and sellers. When we have fresh crabs, we sell the fresh, raw crabs. If they are not fresh, the crab meat would be separated and packaged, which helps to increase the price of the product. This type of product is for customers who do not have time to cook.

In order to produce products with proper packaging and labels, there must be standards and some other factors. The production facilities must have a safety license according to the Decree 15/2018/NĐ-CP that have clear regulations. Products must have birth certificates, and are tested and announced according to the regulations on microbiology, antibiotics, ... according to Decree 15/2018/NĐ-CP. Farmers can contact the provincial food safety agency for a detailed explanation. For packaging, it is necessary to have colors and designs that attract customers' attention, which also affects their purchasing decisions.

Currently, our products are being sold in many supermarkets and malls such as Mega Market, Aeon Mall, An Nam Market and in some chain of food stores in the city. There was a time when the purchasing unit was worried that the cooperative did not meet the legal requirements for the supermarket system such as invoices or tax codes. Therefore, it should be noted that when establishing a cooperative, you must register for a tax code. Hopefully, farmers will focus on product quality first, and it would not so difficult to promote these quality products. In order to be certified as OCOP product, we have to follow many criteria. For example, in the processing of shrimp broth, there are 90 indicators, but we only need to control the main criteria (9 - 10 indicators) to ensure product quality.

As for packaging, you must also follow Circular 43 on the font format on the packaging, which must be standard, otherwise you have to discard the packaging and cause more waste. Up to this time, Tai Think Phat cooperative has linked many households and many distributors such as supplying crabs for restaurants such as Pizza 4P's and for domestic production and export.

- Ms. Nguyen Thi Nguyet Nga (household in Long Khanh commune) shared thoughts after listening Ms. Trang's story: All things are difficult before they are easy. To create

a brand needs to go through many stages. In Long Khanh commune, there have been many cooperatives established but not yet put into operation with good management. Recently, a new cooperative has just been established but still lacking many things, we are asking the People's Committee for support. There is a cooperative that sells blood clams, but now they only sell the fresh ones, they do not have frozen products, so they need the support from large enterprises. Farmers here are also raising mangrove shrimp with high technology, but they are affected by wastewater discharged into the river when supplying water for shrimp, so the quality is greatly affected. In many shrimp farms, they discharge the dead ones directly into the river, causing a lot of pollution. The percentage of good quality shrimp is small. Only location with high percentage of forest coverage that the quality of the crab is good, the price is high, the life is stable. So farmers rotate shrimp and crab crops to ensure the family's economy. Raising blood clams in the dam is more secure because the amount of water is controlled.

- Ms. Trang: In the past, there were also many farming households in Tai Think Phat cooperative discharging waste directly into the river, they were not controlling the wastewater, and also randomly releasing shrimp without recording the date and the shrimp amount. After that, I explained to the farmers and gave them notebooks to record information on where to buy shrimp, buy nets to stock shrimp, checking daily to see if they were grown enough. All of that to control the shrimp death cause was of the shrimp quality or water conditions. Although there was no immediate effect at first, but then when recording gradually, there will be data to compare, and then change accordingly. The results were shown pretty clearly. Farmers did not have an official source of information to know in which stage they were wrong, so we supported them to record, learned from the elders and then shared it with other households. After that, we set up regulations for farmers. We have a regulation when sucking the bottom water, it must be at the right time, households that did not follow would be fined. Then the quality gradually became different. We also do not allow shrimp-mangrove farming with industrial shrimp, especially for new households.
- Ms. Nga: If there is a good breed, the quality of shrimp will be different, but people did not choose carefully. They only buy cheap shrimps, so the quality is very poor. If they stock shrimps with crabs, they will lose all the shrimps. Some households have come to Ca Mau to observe the farming models there, but each farmer has their own opinion, so it is difficult to change.
- Ms. Trang: People always have their own opinions, so changing them is difficult and takes a lot of effort and time. For example, the story about the process of wearing gloves when peeling shrimp. At first, some workers in our cooperative refused to use them. And I still let them use their bare hands, however, the products they peeled off were placed in a separate corner. After a month, I let them tasted and compared the shrimp they peeled with the shrimps that were peeled properly. The quality was different, that how they realized the difference and after that they agreed to use gloves while peeling the shrimps.
- Mr. Nguyen Van Phung - Deputy Director of Fisheries Department: There are many good stories. In Long Khanh commune now there are many difficulties which are understandable. For example, Minh Phu Company has cooperated to support in evaluate mangrove shrimp many times, but they have not achieved the quality. Because in the mangrove shrimp area, there is also a super-intensive shrimp farming area, and

the wastewater affected the shrimp-mangrove area. However, if people are determined to do it, we can orient them to change direction gradually. It will be very difficult at first, but we will have to overcome, learn slowly and apply. When the evaluation provides many criteria, the quality and the selling price can be improved. For example, mangrove shrimp that with super-intensive shrimp are very difficult to sell, even domestic companies do not buy, let alone export.

#### *4.3 Policy brief introduction and discussion:*

- Dr. Phan Thi Ngoc Diep presented the key findings and policy recommendations
- Ms. Trang: VietGAP was the popular regulations on good agricultural practices for domestic agricultural and aquatic products. Although the criteria to evaluate product quality are adequate, in reality, farmers have not met the standards. In addition, with the Vietnam Certified Organic certification, Tai Tinh Phat cooperative has applied and received a lot of support from the province. There are many different types of certification for us to follow and apply, however, once we understood the items, the instructions, we could do it right.

#### *4.4 After group discussion:*

- Ms. Trang: Group 1 focuses on shrimp quality. After having a sustainable shrimp area, when a company participates in a linkage, it will reduce risks, so it will be more secure for farmers. In addition, when there is a guaranteed quality shrimp area, even if other companies pressure prices when purchasing, farmers can create their own products from the materials they have without difficulty. We understand what we need the most, the government can't understand it yet, so we need to speak up. After having an area of raw materials and products, if selling to customers with difficulties, the cooperatives may cooperate to support each other. Cooperative members in different provinces, living in the city can sell, introduce and recommend to many other people. Good quality products will make them feel different and will come back to buy and we can retain customers.
- Mr. Duong Truong Giang (Cuu Long SeaPro company): If household of the cooperatives have tried and come to the final product, Cuu Long company will ready to buy. The part that needs most effort has already done by the farmers, then Cuu Long company would be ready to support.
- Mr. Nguyen Van Phung - Deputy Director of Fisheries Department: Through the discussion of the two groups, from the state management side, it is proposed that people will have a policy to support them. For example, the mangrove area will have to according to regulations. When there are difficulties, after establish cooperative groups and cooperatives, the state will support. If the policy is not accessible to the people, we will promote the communication activities and organize training to support them. It is suggested that the project support organic certification for consumption in the domestic market first because the shrimp output is not much, then discussing about the association with export companies. The project supported people here to learn from Ms. Trang's experience from processing, packaging, etc. The farmers need to change their mindset, although it is difficult, but they need determination, together with the government to change.

- Ms. Lam Thi Que Huong – A member of cooperative in Long Khanh commune: We are looking forward to participating and learning
- Ms. Nga: Farmers have to ask the government to zone the farming to ensure the quality of shrimp, try to overflow and then proceed step by step.
- Mr. Phung: The government is ready to cooperate with people and provide supports

#### *4.5 Closing:*

- Dr. Le Thi Van Hue delivered closing speech.

The workshop ended at 11:30.

**ANNEX 1**  
**AGENDA**  
**POLICY DIALOGUE IN TRA VINH PROVINCE**

**Time:** 8:30 - 11:30 March 23, 2023

**Venue:** 2nd floor, Cuu Long Hotel, 210 Nguyen Thi Minh Khai, Ward 7, Tra Vinh city

<b>Time</b>	<b>Content</b>	<b>Responsible by</b>
8:00 – 8:30	Registration	CECAD
8:30 – 8:45	Introduction about the objectives and content of the policy dialogue	Fisheries Sub-Department of Tra Vinh province
8:45 – 8:55	Opening speech	Dr. Le Thi Van Hue, CECAD
8:55 – 9:00	Project implementation journey	Ms. Nguyen Phuong Ha, CECAD
9:00 – 9:15	Experience in organic shrimp farming and international certification (ASC)	Ms. Mai Thi Thuy Trang (Tai Thinh Phat Farm Ca Mau Cooperative)
9:15 – 9:30	Group discussion	All participants
9:30 – 10:00	Policy brief on sustainable mangrove-shrimp farming according to international standards	Dr. Phan Thị Ngọc Diệp, CECAD
10:00 – 10:15	Tea break	All participants
10:15 – 11:00	Group discussion	All participants
11:00 – 11:30	Group presentation	All participants
11:30 – 11:40	Closing speech	Dr. Le Thi Van Hue, CECAD

**ANNEX 2**  
**PHOTOS OF THE WORKSHOP**











