

# Needs assessment traceability for aquaculture shrimp and workshop in Java Timur, Indonesia

14 - 18 June, 2010

Java Timur, Indonesia

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## **SUMMARY**

In the second year of the traceability project a needs assessment at supply chain level in aquaculture shrimp has been performed and a workshop has been organized, both in Surabaya area in the week from 14 – 18 June 2010. The needs assessment was aimed at the possibility of implementing a working traceability system, particularly for smallholders.

The site visits took place to selected suppliers and farmers. It appeared that these suppliers already had a simple paper based traceability system in place at direct request of their processor and indirectly by importers from Japan, EU and USA. They have been working with this system now for about three years. However, these systems were isolated and not compatible with each other, leading to inefficiencies in sourcing raw material and a lack of unique identification, which is one of the central pillars of traceability.

Judging from comments of relevant representatives of the supply chain, most processing companies are ready to adopt a more coordinated supply chain approach. Stakeholders and government officials alike realise that standardisation is necessary and are waiting for the government to make a move.

After the site visits, a workshop was conducted, which focused on appropriate traceability systems for shrimp aquaculture and consisted of demonstrations, practical exercises and recommendations. Participants of the workshop included government officials from both national and provincial level and representatives of the supply chain such as processors, suppliers and grow out farmers.

The one day workshop proved a good base for discussions amongst participants after listening to lectures about existing traceability systems for aquaculture and a proposal of a system for their own supply chain. Two exercises proved to be helpful to see how a practical case can highlight critical points of traceability, whilst the participants had to find out for themselves where the challenges were situated.

As conclusions and evaluations have shown the workshop was a success and provided the participants with a framework for setting out to introduce traceability in practice.

The recommendations for the next steps to be taken are focused on the introduction of a regulatory framework, testing the proposal of implementing traceability in aquaculture of shrimp and rollout to a larger scale to provincial or even national level.

Financial aid to carry out these recommendations will be forthcoming from the government in first instance and larger scale rollout will be financed by the industry themselves.

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# 1. INTRODUCTION

## Background

In the bilateral discussion between Republic of Indonesia and The Netherlands in Bandung (Indonesia) 26 – 27 November 2008 on (among others) the subject of food traceability the following preliminary outlines were discussed:

- This project should focus on feasibility study shrimp aquaculture traceability (particularly paper based traceability) at hatchery, farming, veterinary drugs supply, shrimp supplier and establishments.
- Location: Jakarta and Surabaya
- Field visit to hatchery, farming, veterinary drugs supply, shrimp supplier and establishments as a target group.
- Workshop with related stakeholders in Surabaya and Jakarta.
- ***Set up a pilot project for the implementation in the field.***

From the Dutch side the traceability initiative is supported wholeheartedly, with the following points of attention:

- Traceability to be developed for SMEs
- Implementation in practice
- High priority for adequate socialization
- ***Pilot area to be chosen, with shrimp as first priority***

In 2009 the socialization activities were organised comprising of inventory mission and workshops in the main aquaculture regions (Surabaya, Lampung, Bali) and Jakarta. These activities were aimed at improving knowledge on fish traceability in the Republic of Indonesia, especially in upstream fish business operators (FBOs) thus enabling stakeholders in the supply chain of farmed shrimp to introduce a traceability system.

At present the implementation of traceability systems in the processing companies is fragmented and varies according to structure and methodology. In some cases the awareness level with regards to traceability in other links (e.g. suppliers) of the fish supply chain is rather low and needs to improve.

Most legislation (e.g. in EU and USA) stipulates that companies achieve traceability on a one step up and one step down level. The main driver for traceability in legislation is food safety and for exporter the main issue is risk management. The interest of the national government of Indonesia is to ensure export of products without causing Rapid Alerts in the countries of destination, and traceability in this context is part of food safety and quality.

## Aim and objectives of needs assessment

The general aim of the needs assessment mission is to assess the needs of the aquaculture shrimp supply chain with respect to the implementation of a working traceability system, especially taking into consideration the participation of smallholders.

The formulated objectives are:

1. Visit and interview representative farmers, suppliers and processors in order to validate the traceability systems in place.
2. Visit and interview trade / farmer associations in order to facilitate commitment of their members to introduction of traceability systems and confirm information needs.
3. Facilitate workshop and inform participants about:
  - \* assessment of existing traceability efforts for aquaculture shrimp chain
  - \* appropriate traceability system for shrimp in Surabaya area
  - \* demonstrate proposed traceability system
  - \* requirements related to legislation and food safety
  - \* recommendations for next steps to be undertaken
4. Debriefing of mission activities to Ministry of Marine Affairs and Fisheries and agricultural counsellor of Dutch embassy in Jakarta.

### **Training aspects**

The principle behind the training is to act in a customer driven way. The methodologies used in the training will basically consist of lecturers, case studies and group assignments. The lecturers will report both from the Indonesian as well as Dutch and Malaysian experiences in the field of traceability. The group assignments will focus on hands on experience related to implementation of traceability data and documents.



## 2. REPORT NEEDS ASSESSMENT TRACEABILITY AQUACULTURE SHRIMPS

### Site Visit 1

Date: 15.6.2010

Visit to Shrimp Supplier (Jaya Ni'mah) and shrimp farmer

Representative from Shrimp Supplier: Pak Nasri

Address	Office Jl. Raya Betoyo Kauman Manyar - Gresik  House Jaya Ni'mah Jual Beli Udang Segar Jl. Raya Abar-Abir Bungah - Gresik
Tel (Office)	031-7073 8070, 7035 2769
Tel (House)	031-394 1602, 7059 0663
H/P	081 330 229 559
Email	-
Web page	-

### Shrimp Supplier

- Pak Nasri buys shrimp from farmers and sells to processors and he has been in the shrimp business for 40 years. There are about 10 similar shrimp suppliers in Gresik.
- Pak Nasri is the head for the Development Service Unit (DSU) in Gresik. DSU is a private organization in Gresik to help farmers in the district (note: Development Service Unit is different from Shrimp Club. Shrimp Club only help shrimp farmers. Development Service Unit will help all farmers in the district). Each district has its own Development Service Unit.
- Shrimp is sourced from 300 farmers. These farmers grow shrimp in "traditional" way or "organic" where no feed and antibiotic are administered to the shrimp. The shrimp rely on natural feed like algae. Besides sourcing from farmers, Pak Nasri owns 35 ha of "traditional" shrimp farm and the farm is certified Good Aquaculture Practices by the competent authority. None of the farms have been certified organic by third party. No buyers have requested him to produce organic certificate. There are 2 harvesting cycles per year and yield per ha is about 200 kg. Average 1 to 5 ton of shrimp are sourced from farmers in Gresik daily.
- Pak Nasri owns two shrimp sizing facilities. The site we have visited (i.e. refer to location 1) is 100% from "traditional" shrimp farms in Gresik and mainly for export to Japan. The second location (i.e. refer to location 2) which we

have not visited mainly sourced from intensive/semi intensive farms (from different districts / islands) and surplus shrimp from location 1.

- He has started to implement traceability system 3 years ago because buyers from Japan, EU and USA have requested traceability system. Price for traceable shrimp is 20% higher than non-traceable shrimp.
- Any farmers who wish to sell shrimp to Pak Nasri will have to pre-register a day before selling the shrimp. Pak Nasri will contact the processor and the processor will send inspector to visit farms with him. Inspector will check on the shrimp quality, organoleptic (raw), harvesting/handling procedures, time/temperature control, water quality and ice quality.
- Processor will send its own boxes to farms. Each box is sealed and sent to Location 1 for sizing. There are about 10 different sizes of shrimp (for example: 20 pieces / kg, 20 -25 pieces / kg etc). Each size will be kept in different box and size of shrimp will be labelled on the box. No mixing of shrimp from different farm/farmers during the sizing process. Traceability of shrimp is up to farm/farmer.
- Farmers are maintaining the farm records (format provided by Atina) and farm records will be submitted to processor. Non compliance is mainly on foreign matter.
- No operation was observed in Location 1 during the site visit. According to Pak Nasri, Location 1 will operate for 8 days and will have a break for 6 days. Operation is depended on the tidal conditions of the Java Sea.
- Pak Nasri informed that Location 2 operate differently. Shrimp from different farms/farmers and from different districts are mixed. He knows where the shrimp is sourced from but not the processors.
- According to Pak Nasri, shrimp farmers in Gresik have requested the government to maintain the "traditional" way of shrimp farming and not to develop Gresik into intensive / semi-intensive shrimp farms. Shrimp farmers in Gresik practices poly cultures.
- He thinks that it is important to culture shrimp in a sustainable manner. Mangroves are planted along the canal to protect and preserve the area.
- The yield of "traditional" shrimp farm has dropped from 200 kg / ha to 20 kg / ha due to outbreak of diseases. Total shrimp production in Gresik was 25,000 ton / year before the diseases outbreak in 1998 - 2000 versus current production of 5,000 ton / year. Outbreak of diseases likely caused by poor water drainage system and fry from hatcheries.
- The land for shrimp farming has increased from 26,000 a to 30,000 ha because conversion of paddy fields to aquaculture farms.
- Pak Nasri does not use computer or internet for recording or business transaction. Computer is for his children.
- Ardy (inspector from fishery department) informed that only probiotic disease control is allowed to be used, but not antibiotic. Fishery department will



collect 1 kg sample from a location/area for every 1 ton of shrimp produced. Sampling is carried out 3 times per year.

- There are 3 grades of Good Aquaculture Practices certificate issued by the competent authority. Fishery department from Central will carry out surveillance audit every 3 years, 2 years and 1 year for certificate grade A, B and C respectively. Fishery department from province will carry out inspection twice per year.

## **Records obtained from Supplier**

The following are list of records obtained from Pak Nasri during the site visit:

### **A. Reception**

1. Daftar Nama Tambak (Questionnaire for Farmer)
2. Data Pengiriman RM Gresik (RM transport data)
3. Data Pengiriman RM Gresik (RM transport data)
4. Daftar Pertanyaan Tambak Budidaya Udang (Shrimp aquaculture questionnaire)
5. Daftar Pertanyaan Tambak Budidaya Udang (Shrimp aquaculture questionnaire)



Surabaya\_Reception  
\_Record\_100623.pdf

### **B. Process - Sizing**

1. Data Proses ECO (Process data at Supplier)
2. Data Pengiriman ECO Per Gudang (Despatch form to supplier)
3. Data Packing RM Pertamabk (RM Packing data from Farm)
4. Sampling Size dan Grade (Sampling size and grade)
5. Daftar Penerimaan dan Mutu RM ECO (Questionnaire on reception and quality of RM)
6. Temperature Check
7. Shrimp Temperature Check
8. Sanitasi Gudang (Plant sanitation)
9. Formulir Dasar Inspeksi Gudang (Basic form for the inspection on supplier)



Surabaya\_Process\_R  
ecord\_100623.pdf

## Shrimp Farmer

- The shrimp farmer was a graduate from University of Brawijaya.
- He has 3 ha of "traditional" shrimp farm and semi-intensive farm. Besides aquaculture shrimp he also sells fingerling to new farmers who just started shrimp farming business.
- He performs pH, Fe and Dissolved Oxygen checking twice per month in his farm.
- Records of reception of PL is maintained in the farm.
- Shrimp harvested from "traditional" shrimp farm is supplied to Jaya Ni'mah and semi-intensive farm is supplied to other suppliers.
- He has computer knowledge, but farm record keeping is in manual format.

## Pictures



## Site Visit 2

Date: 15.5.2010

Visit to Supplier of PT Kelola Mina Laut and its Shrimp sizing and grading plant

Representative from Shrimp Supplier: Pak Sudi

Representative from Processor (PT Kelola Mina Laut): Pak Kuncoro C. N.

Address	PT Kelola Mina Laut JI. KIG Raya Selatan Kav. C-5 (Kawasan Industri Gresik), Gresik 61121, Surabaya, Indonesia
Tel	62.31.397 6351 -3
Fax	62.31.397 6350
Email	kuncoro@kmlseafood.com
Web page	www.kmlseafood.com

Representative from Shrimp Sizing & Grading Plant: Pak Jogo

### Shrimp Supplier

- Pak Sudi buys shrimp (mainly Black Tiger and Vannamei) from farmers and sells to different processors. PT Kelola Mina Laut is one his main customer who buys Vannamei (100%)
- Shrimp is sourced from 400 farmers. These farmers growth shrimp in "traditional" or "organic" way where no feed and antibiotic are fed to the shrimp. Yield per harvest per farm is between 25 to 500 kg.
- Average 3 to 8 ton of shrimp is delivered to processor daily and about 50 - 60% of the shrimp is delivered to PT Kelola Mina Laut.
- Both manual and electronic record keeping are maintained by Pak Sudi. Information recorded include: Reception record (date, name of farmer, location, box no.) and Despatch record (date, area of harvest, box no., size of shrimp, quantity)
- Traceability at farm level is by farm/farmer, location/area, box no. and traceability at supplier level is by location/area. The processor maps out the location/area using a map and 40 locations/areas have been identified as shrimp production location/area (for example: Gresik is one of the location/area). A code is assigned to each of the location/area.
- The supplier will mix shrimp from different farms within the same location/area but never mix shrimp from different locations/areas.

### Processing Plant

- According to Pak Kuncoro, PT Kelola Mina Luat will process shrimp from different locations/areas separately and internal code will be used for traceability (for example: 9-digits code is created by his company. The 9-digits code include code for processing plant, Julian date and Year, area/location of

harvest, supplier code). Some buyers have requested to print customized batch code besides the 9-digits traceability code or print customized batch code only.

- PT Kelola Mina Laut is BRC, ISO22000 Food Safety Management and ACC certified. Frozen shrimp produced is mainly exported to the USA.
- Shrimp is sourced from "traditional" / "organic" and semi-intensive/intensive farms. All shrimp is marketed as Frozen shrimp (with no mention of "traditional"/"organic" on the label).
- Inspectors from processing plant will visit supplier and farms/famers weekly. QC at processing plant will carry out organoleptic and antibiotic residues test upon reception of shrimp to ensure quality and safety.
- Demand of frozen shrimp from buyers is high but the supply of shrimp has reduced by 20% due to diseases outbreak.

### **Shrimp Sizing & Grading Plant**

- This shrimp sizing and grading plant receives shrimp from Pak Sudi and delivers to processing plant after sizing and grading processes
- About 90% of the Black Tiger is supplied to Atina and 70% of the Vannamei is supplied to PT Kelola Mina Laut.
- The shrimp sizing and grading plant is set up with proper sanitation facilities such as footbath, toilets, hand washing facilities etc and good manufacturing practices such as different boxes with different colour codes. The facility is designed with separate routing for staff coming into the sizing room and leaving the room.
- Incoming shrimp and outgoing shrimp heads/wastes are separated (i.e. with different incoming/outgoing windows)
- Shrimp received is stored in green box and transfers to grey box and workers will carry out sizing on the table. Good quality shrimp will be stored in blue box and rejected shrimp/wastes will be stored in yellow basket. Shrimp in blue box will be transferred to a big light blue transport box before despatch.

Pictures



### **3. REPORT OF WORKSHOP ON FOOD TRACEABILITY**

#### **3.1 Lectures**

##### **FoodReg, Dr. Heiner Lehr**

##### **Traceability in SE Asia. Assessment of existing traceability efforts for the aquaculture shrimp chain**

Traceability systems have been implemented by many countries in the world. The latest examples including Norway, Malaysia and Vietnam. Some countries implement traceability based on government control such as Malaysia and Vietnam and some are based on voluntary industry standards, for example in Norway.

Thailand has implemented e-traceability system for aquaculture farms, Malaysia has implemented traceability pilot project in three sectors (starfruit, livestock and prawn) and Vietnam has engaged experts to carry out assessment on aquaculture prawn traceability in Ben Tre province.

Sime Darby, Malaysia's largest palm oil producer has implemented a traceability system to prove that the origin of his product is from a sustainable source / origin. In the EU, a Precision Livestock Farming (PLF) project has been carried out with the purpose to determine the origin, especially for regional products or products considered potentially unsafe.

Based on the experiences obtained in the above and many other traceability projects, it is recommended that traceability should start simple and get sophisticated over time, automation of data captured is important and inclusion of small holders is the key to a successful implementation, finally, mixed paper-based and electronic system is the best generalized solution.

##### **FoodReg, Dr. Heiner Lehr**

##### **Proposal of an appropriate traceability system for shrimp in Surabaya**

The proposed system consists of three components: a globally unique traceability code (T-code), a pre-printed traceability label which is distributed to all Food Business Operators (FBOs) initially free of charge (or at least for smaller enterprises) and a (paper) traceability form which relates inputs to outputs and which travels with the goods.

The proposed traceability system has to be designed to be compliant with EU, US and Japanese requirements, simple (and therefore limited in scope) and can be easily transportable into an electronic medium for monitoring purposes. Finally, it needs to be affordable and practical for all steps in the supply.

The purpose of the proposed traceability system is mainly to establish the product flow (e.g. for a product recall) and non-essential data is considered a voluntary addition to the product flow data. Identification requires to provide traceability include business locations, trade units and logistic units.

The proposed electronic traceability system is developed with the objective to increase speed of recalls, early diseases detection, provide answer requests from importers and project an image of professionalism on Indonesia's seafood production.

The main users of the system will be the competent authority and importers, with possible uses for consumers and other stakeholders.

### **FoodReg, Miss Audrey Yong Demonstration of the proposed traceability system**

Proposed traceability is an electronic system for processor, competent authority, importers and buyers to retrieve information on the source or origin of materials. It is recommended that all players in Indonesia fishery supply chain should register with competent authority. Upon registration, competent authority will issue traceability code which is unique to each supply chain player.

The procedures involved in the proposed system is very simple: mapping inputs to outputs. For example, when the farmer despatches a batch of prawn to his supplier, the farmer will have to stick his unique traceability code on the traceability form and hand over to the supplier. When the supplier despatches prawn to the processor, he will have to stick the traceability code on the traceability form and hand over to the next supply chain player, the processor.

Processor is the caretaker of the electronic traceability system and he/she is responsible to enter or scan the traceability codes in the system. The electronic traceability system will allow processor, competent authority, importers and buyers to retrieve information on the source or origin of the prawn backward to the supplier and farmer from the electronic traceability system.

A simple electronic traceability system was also developed for prawn processors (including value-added prawn processors). In order for the system to retrieve backward and forward traceability information, the processor has to enter 3 electronic forms: Receive of Material, Process and Despatch in the electronic traceability system. The critical information which allows the system to trace forward or backward is the unique traceability code of the material received and its provider, traceability code of input material received at processing and traceability code of output product at processing and finally traceability code of product despatched and its clients.

### **RIKILT – Institute of Food Safety, Joop van der Roest Information requirements related to food safety**

Legislation is a fundamental basis for requirements related to food safety and traceability. In 2006 legislation for aquaculture in EU was updated and the main objective was to guide production of old and new species of fish in aquaculture as well as preventing outbreak of diseases. Important regulations refer to certificates for moving stock, veterinary drugs and traceability.

The competent authority of the producing countries will play a more significant role in licensing aquaculture holdings and checking all kinds of registrations. Import in EU of products of aquaculture will apply only to countries that are on the 'approved' listing. Many tests for diseases and use of antibiotics are performed at border inspection posts and all incidents are reported on Rapid Alert System, to inform other EU countries.

On the food safety side it appears that no microbiological standards exist for raw products. However for cooked shrimp standards for Salmonella, Staphylococcus and E. coli are mentioned in regulations. Also criteria for chemical hazards like heavy metals, dioxin and PAH are fixed in legislation.

Specific legislation on traceability of aquaculture products is focused on name of country and phase of growth.

The main problems with imported shrimps in EU are: antibiotic residue, heavy metals, microbiological pathogens, undeclared additives, decomposed shrimps, declared weight, lack of documentation. Attention is needed in the whole supply chain of aquaculture to contain these hazards to acceptable levels.

### **FoodReg, Dr. Heiner Lehr Recommendations for next steps**

After assessment at sites, it is recommended that Indonesia develops a traceability regulatory framework which includes one step up, one step down with internal traceability. The proposed traceability system is a mix of paper-based and electronic monitoring system. The paper-based system will be used by those without knowledge or access to computers and electronic monitoring system will enable more control and just-in-time problem detection.

It is suggested to go forward with a country wide traceability system in three steps:

- Step 1: Field test the proposal
- Step 2: Study Compartmentalization
- Step 3: Rollout to a larger scale

One of the main concerns before moving forward will be financial aid. It is recommended that financial aid is provided to the supply chain participating in the initial test of the system for the data capture effort, assistance on the ground and training on traceability and food safety and also companies participating in the large scale pilot.

In summary, Indonesia is ready for traceability. Firstly, the country should start to test the recommended system, secondly, it should study the supply chain in one province and lastly, should implement the system in the province.



## 3.2 Assignments

Participants are divided into 2 groups for the activity. Group 1 consisted of participants from private sector and Group 2 consisted of participants from government.

### Case study fishery supply chain

Participants in Group 1 were requested to draw fishery supply chain for Indonesia and list all important information required for traceability.



Participants from Group 1 have chosen to draw fishery supply chain for aquaculture prawn from farmer to exporter.

Farmer → Supplier (small) → Supplier (big) → Processor → Exporter

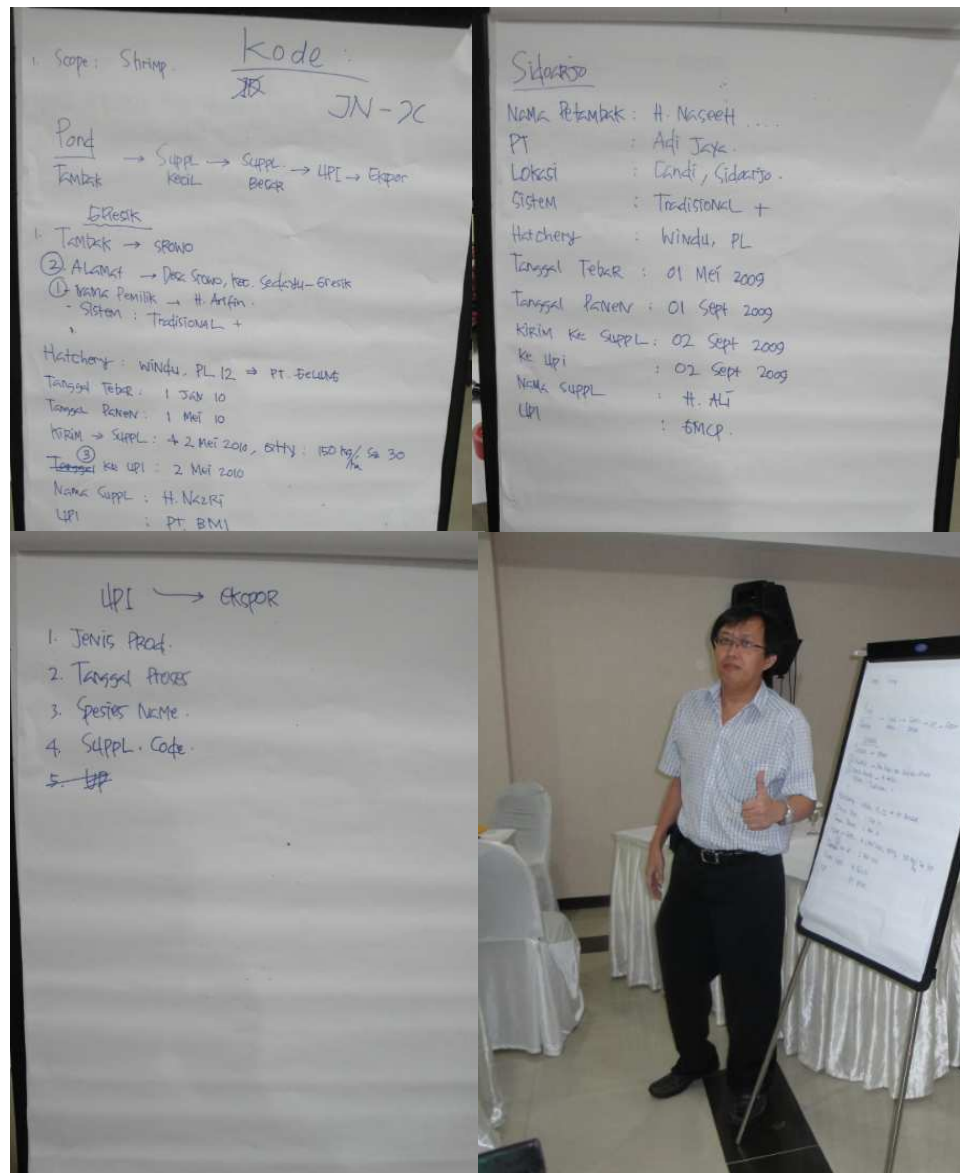
1. Important traceability information passed from farmer to supplier includes:
  - Farm owner
  - Farm address
  - Despatch date
  - Other information includes:
    - Hatchery
    - Date of stocking
    - Date of harvesting
    - Quantity despatch
    - Size
    - Supplier
2. Important traceability information passed from supplier to processor includes:
  - Supplier
  - Despatch date

3. Important traceability information passed from processor to exporter includes:

- Product type
- Date of process
- Supplier code
- Species name

### Summary

Participants from Group 1 were able to draw fishery supply chain for Indonesia and also determine important information required for traceability. The only information which Group 2 (participants from government) pointed out missing in the presentation was unique code for traceability. Group 1 informed that "JN-X" will be used by the supplier as a traceability code (JN=Jaya Nasri, X= unique batch number, for example despatch date).



## Case study unique traceability code

Participants in Group 2 were requested to create unique traceability code for Indonesia.



Participants from Group 2 have created a unique traceability code for Indonesia.

IN-JI-03-05-AR1-12

1. Traceability code created consist of the following components:
  - Country - IN (Indonesia)
  - Provide - JI (Jawa Timur)
  - District - 03 (KAB Gresik)
  - Sub-district - 05 (KEC Bungah)
  - Business site - AR1 (Arif 1)
  - Location - 12 (Petak 12)
2. Heiner Lehr has commented that the traceability code perhaps was too long. It is recommended that the district and / or sub-district code can be removed and the main point is to have sufficient digits to cater for the business operations in each province. Participants from Group 1 informed that there are likely 18,000 farmers and 10 suppliers in the Jawa Timur province.
3. After discussion, unique traceability code for Indonesia has been revised to IN-JI-03-AR1-12 plus serial number.
4. Questions were raised on who will finance the printing of the traceability code and how to further shorten the traceability code? Heiner Lehr believed that the government should finance the printing of the traceability code at the start to make the entry cost low and affordable for all players in the supply chain. Creating unique traceability code for Indonesia is not an easy task. Consultation with stakeholders is recommended.

## Summary

Participants from Group 2 was able to create unique traceability code and creating unique traceability code for a nation is not an easy task. Many aspects have to be taken into consideration from the coding itself, printing, financing etc. Traceability system will not be successful without collaboration between government, private sector and trade association. Consultation with stakeholders on Indonesia fishery supply chain is recommended.



#### 4. CONCLUSIONS AND RECOMMENDATIONS

The conclusions of the field visits/interviews and traceability workshop have been drawn up by the authors of this report and read as follows:

- Interviews with stakeholders and representatives of the supply chain of farmed shrimp were organised by office of Ministry in Jakarta in close cooperation with provincial Fisheries department. Some appointments were however cancelled at the last minute due to unforeseen circumstances.
- Interviews with the suppliers revealed that they have had experience with traceability systems for nearly three years now. The system is paper based and is mandatory upon request of processors.
- Records of one of the suppliers show that a wide range of registration forms are used at farmers and supplier level. At reception and processing (sizing) point of supplier numerous forms are consulted to pass on the correct information to processor of shrimps.
- During the workshop several lectures on existing traceability efforts in the Southeast Asia region and the proposal of appropriate traceability systems to be used in Indonesia were eagerly received. Discussions showed the matter in hand to be understood and participants were made enthusiastic when confronted with the demonstration of the system.
- The practical exercises comprised of drawing a fishery supply chain for Indonesia and list all important information required for traceability on the one hand and creating a unique traceability code for Indonesia on the other hand.
- Participants from the first group (representatives of private sector) were able to draw fishery supply chain for Indonesia and also determine important information required for traceability. Many aspects of traceability through the supply chain from farmer, via supplier to processor were mentioned, with the exception of a unique traceability code (as the other group pointed out).
- Participants from the second group (representatives of government) were able to create a unique traceability code which is not an easy task. Many aspects have to be taken into consideration from the coding itself, printing, financing etc. A traceability system will not be successful without collaboration between government, private sector and trade association.
- In summary the Republic of Indonesia is ready for a small scale traceability pilot in the region of Surabaya. Commitment of the government in financial support is essential, in order to show private enterprise that government believe in the necessity of a efficient running traceability system.

The recommendations of the workshop traceability following the conclusions are:

- Points raised in the evaluation by the participants should be taken seriously by organisers of future workshops. Some valid points have been made with reference to the duration of the workshop (too short), the clarity of lectures (not enough translation in Bahasa Indonesia), feedback of site visits (was lacking) and communication about follow up activities (were missing)
- The recommendations for the next steps to be taken are focused on the introduction of a regulatory framework, testing the proposal of implementing traceability in aquaculture of shrimp and rollout to a larger scale to provincial or even national level.
- After assessment at sites, it is recommended that Indonesia develops a traceability regulatory framework which includes one step up, one step down with internal traceability. The proposed traceability system is a mix of paper-based and electronic monitoring system.
- One of the main concern before go forward will be financial aid. It is recommended that financial aid to be provided to the supply chain participating in the initial test of the system for the data capture effort, assistance on the ground and training on traceability and food safety and also companies participating in the large scale pilot.



## 5. EVALUATION

At the end of the workshop traceability the participants were invited to fill in the so-called evaluation wheel in order to voice their opinion on the venue and content of the workshop. The fixed points feedback from participants in the evaluation were: venue, instructors, exercises, participants, lectures and others. Participants were divided into two groups (i.e. Government and Private Sector), each participant can circle point on the feedback in the evaluation wheel.

Evaluation of workshop Needs Assessment Traceability, 17<sup>th</sup> June 2010, Sidoarjo.

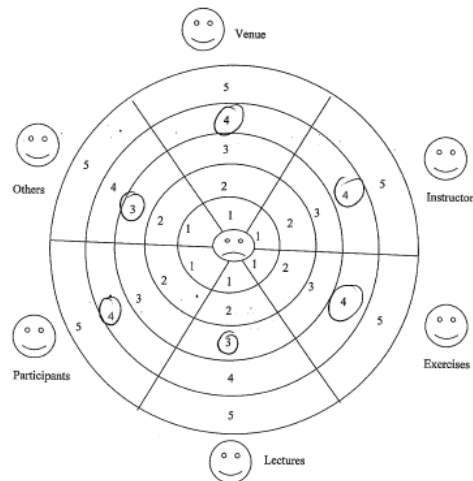
Please, could you answer in short comments the following three questions?  
(Ibu/bapak sila menjawab tiga soalan berikut)

You can answer in Bahasa Indonesia if you prefer.  
(Ibu/bapak boleh menjawab dalam Bahasa Indonesia)

1. Did you miss any subject in this workshop?  
(Apa subjek yang ibu/bapak ingin dimasukkan dalam workshop ini?)  
*Ronaker paku & daya dan nelayan dan kampung lokal.*

2. What would you like to improve?  
(Apa aspek workshop ini boleh ditingkatkan?)  
*Membataskan pelaksanaan traceability dgn soal fokus dan lengkap syafes.*

3. Any other general comment?  
(Apa komentar ibu/bapak yang lain?)  
*Adanya kegiatan lanjutan yg bermanfaat peladik praktis.*



In the table below the results of the evaluation is shown:

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Government)							
	Venue	Instructors	Exercises	Lectures	Participants	Others	
G1	3	4	4	4	4	4	3
G2	4	4	4	4	3	4	3
G3	3	4	3	3	3	3	4
G4	3	4	4	4	4	3	3
G5	3	4	3	3	4	4	3
G6	4	3	3	3	4	4	
G7	4	4	4	4	3	3	4
G8	4	4	4	4	3	2	3
Total	28	31	29	28	27	23	
Average	3.50	3.88	3.63	3.50	3.38	3.29	

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Private Sector)							
	Venue	Instructors	Exercises	Lectures	Participants	Others	
P1							
P2	4	5	3	5	4	5	
P3	5	4	5	5	5	4	
P4	4	4		4	4	3	
P5	3	4		3	5	4	
P6	4	4		5	4	5	
P7	4	5	4	4	4	3	
P8	4	5	4	3	4	3	
P9							
Total	28	31	16	29	30	27	
Average	4.00	4.43	4.00	4.14	4.29	3.86	

## Personal Comments

The following are summary of personal comments from 17 participants of the workshop:

1. Did you miss any subject in this workshop?

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Government)							
Q1. Did you miss any subject in this workshop?							
G1	Smaller aquaculture farmer should be included						
G2	Characteristic of aquaculture farmer and fishermen						
G3	-						
G4	Yes, some of them						
G5	Establishments and aquaculture farmers are working together						
G6	Trace for all Indonesia fishery products						
G7	Technical Handling						
G8	Real examples in Vietnam. What are steps involved in traceability from farmer to user?						

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Private Sector)							
Q1. Did you miss any subject in this workshop?							
P1	Communication between supplier & DKP						
P2	No						
P3	No, I did not						
P4	The workshop should be prepared in Indonesia context (which suites the education level and skill etc) and easier to applied by processor						
P5	Fish/prawn cultivation organization (HPIU / UPP ?..... Name of the organization)						
P6	-						
P7	Model and system must be suitable for Indonesia culture. Can applied manual traceability.						
P8	Expect data base but unit area. Commodities data species less details						
P9	Need Budgeting for implementation of traceability system						

Participants from government have proposed to include real traceability examples of Vietnam, for example steps involved from farmers to consumers, subjects on traceability for all Indonesian fishery products, characteristics of aquaculture farmers and fishermen, technical handling, working together between establishments and aquaculture farmers should be included in the workshop. Small aquaculture farmer should be invited to participate in the workshop.



Participants from private sector have proposed that workshop should be prepared in Indonesia context which will be easier for participants to understand. Model and system proposed should be suitable for Indonesia. Communication session for private sector and government should be included and fish / prawn cultivation organization should be invited to the workshop. Most importantly, financial budget is needed for the implementation of traceability system.

## 2. What would you like to improve?

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoardjo (Government)	
Q2. What would you like to improve?	
G1	Want someone who has directly involve in implementation of traceability system
G2	The participants should be more from small farmer and supplier
G3	Expect this workshop to be improve to invite more participants, especially from the supplier
G4	The implementation of traceability system in Indonesia
G5	Material training should be more practical training on the traceability
G6	Develop access model
G7	Yes, more details and smaller number (of participants) ..... He need more focus for implementation or practical
G8	Aspect on material presentation. Aspect of discussion is less true

Q2. What would you like to improve?	
P1	Boleh
P2	No
P3	1. Choose a bigger room. 2. Need translator for every part of the topic since the participants are not familiar with English 3. Need more samples of traceability implementation, especially in Indonesia & other Asian countries
P4	Can be further improved by providing manual and guidance to famer, supplier and processor
P5	The action after training should be applicable
P6	Yes
P7	The goal of the training should be clear.
P8	Label and coding for farmer
P9	Yes, standardization of traceability system available and especially standardization for whole Indonesia

Participants from government have proposed to include someone who has direct involvement in the traceability system, more small farmers and suppliers should be invited for the workshop. Improve proposed include material used for presentation and discussion, more practical training on traceability and focus on the practical or implementation of traceability system in Indonesia.

Participants from private sector have proposed to select a bigger room for the workshop, to have a translator for every session because participants are not familiar with English and provide more traceability implementation examples of Indonesia and Asian countries. Participants also proposed to provide manual as guidance for farmers, suppliers and processors, standardization of traceability system available for Indonesia and label and coding for farmer. Finally, the goal of training should be clear and follow-up actions after training are needed.

### 3. Any other general comment?

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Government)	
Q3. Any other general comment?	
G1	Activities should cover from aquaculture to exporter, activities should continue
G2	There will be practical training in the future
G3	Easier to understand if there are translator during training
G4	I hope this workshop can conduct longer, may be two days. So, the instructor can explain more detail and deliver the presentation properly.
G5	Although, traceability are very complicated but the activities must be started
G6	-
G7	OK, very much
G8	Number of participants should be increased. When this become requirement, everyone must have knowledge

Feedback on evaluation of workshop Needs Assessment Traceability, 17th June 2010 Sidoarjo (Private Sector)	
Q3. Any other general comment?	
P1	Communication among supplier and MMAF should be continue
P2	No
P3	Thank you for presentation
P4	Expect the traceability system will make the implementation from material origin to shipment easier. Hope to participate from the start.
P5	The observation result were done by the experts at June 15th should be inform to the stakeholders
P6	Next workshop...don't not always be late (I think this comment just for us.....)
P7	Program too short
P8	Expect full certification for the famers
P9	Traceability workshop is good but what we need is to develop traceability system and standard from farm to processor

Participants from the government have proposed that the activities should cover from aquaculture to exporter and activities should be continued. Although traceability is complicated, traceability activities must start. Workshop should be conducted in 2 days, instructor can explain in details and deliver presentation properly and with the present of translator, the workshop will be easier to understand by the participants. It was also proposed to invite more participants when traceability becomes a requirement everyone must have the knowledge.

Participants from the private sector would like to thank you for the presentation but think that the workshop is too short. Participants also expect that the traceability system will be easy to implement from material origin to shipment and propose that traceability system and standard should be developed from farm to processor. Observation by experts on site (15 June) should be communicated to stakeholders and communication amongst supplier and MMAF on traceability subject should continue. Participants also expect full certification for all farmers.

Annex 1

List of attendance of traceability workshop 17th June, 2010, Sidoarjo

**DAFTAR HADIR PESERTA  
WORKSHOP FOOD TRACEABILITY  
The Sun Hotel-Sidoarjo, 17 Juni 2010**

No	Nama	Instansi/ Perusahaan	Tanda Tangan
1	Denok-k	SEKARBUMI	1
2	Dian.w	BMI - Dumpit	2
3	Danny S	BMI - Sby	3
4	Sunarto	ATINA - Sda	4
5	Lia Sugihartini	Dit.PH, Ditjen P2HP	5
6	KURNIA	DIT. PRODUKSI DJPB	6
7	PETER CHUD	PT MUSTIKA AURORA	7
8	Johannes Supriyanto	APSI	8
9	Harti PUTU	sci -	9
10	Tri Handayani	Dit SA - Ditjen P2HP	10
11	Chorim Umam.	Perani PT-ATINA	11
12	A. Jamin Alz	DKPP Gresik	12
13	H. Narsi	upp.	13
14	Suwayy	Suwayy Kulus	14
15	Fatkhur Rosy	komfop sby	15
16	Saadah Mukedzi	DKP prov jatin	16
17	M. ARIF	DKP prov jatin	17
18	H. POSIM	ARG. Sidoarjo	18
19	FALSTHA, SAEAWI	PT. kuu	19
20	Arif bedjanata.	DKP Lamongan	20

- 21. AVIV ZAHONI      Dep. Lamongan.
- 22. Elmy NURPADALINA      PT. GMCP
- 23. FAINUDDIN      supplier
- 24. Inang Tudorini      DKP. Sidoarjo
- 25. Sigit Robiyanto      DKP. PLN

- 21.
- 22.
- 23.
- 24.

## Annex 2

Program of needs assessment and workshop

### **Day 1 – 14 June 2010**

<i>Site visits – information caretakers</i>	
Morning	<ul style="list-style-type: none"><li>• Visit local department responsible for food safety</li><li>• Visit local department responsible for shrimp marketing and trade</li></ul>
Lunch	
Afternoon	<ul style="list-style-type: none"><li>• Visit local trade association or shrimp producer organisation, such as Shrimp Club Indonesia or similar</li></ul>

### **Day 2 – 15 June 2010**

<i>Site visits – information users</i>	
Morning	<ul style="list-style-type: none"><li>• Visit exporting company. The purpose of the visit is to confirm the information needs of exporters. If the exporting company is not a processing company, visit processing facilities for the same purpose.</li></ul>
Lunch	
Afternoon	<ul style="list-style-type: none"><li>• Visit alternative processor to confirm information needs</li></ul>

### **Day 3 – 16 June 2010**

<i>Site visits – information generators</i>	
Morning	<ul style="list-style-type: none"><li>• Visit shrimp producers<ul style="list-style-type: none"><li>○ One smallholder</li><li>○ One larger producer</li></ul></li><li>• Review of operational documentation, assessment of their needs related to traceability</li></ul>
Lunch	
Afternoon	<ul style="list-style-type: none"><li>• Visit shrimp middlemen or traders</li></ul>

### **Day 4 – 17 June 2010**

<i>Time</i>	<i>Topics</i>	<i>Remark</i>
08:45 – 09:00	Opening of the workshop	Ministry of Fisheries
09:00 – 09:30	Traceability in SE Asia. Assessment of existing traceability efforts for the aquaculture shrimp chain	Dr Heiner Lehr, FoodReg
09:30 – 10:00	Proposal of an appropriate traceability system for shrimp in Surabaya	Dr Heiner Lehr, FoodReg
10:00 – 10:30	Tea Break	
10:30 – 11:00	Demonstration of the proposed traceability system	Audrey Yong, FoodReg
11:00 – 11:30	Information requirements related to food safety	Joop van der Roest, RIKILT

11:30 – 12:00	Introduction of practical exercise	Joop van der Roest, RIKILT Heiner Lehr, Audrey Yong, FoodReg
12:00 – 13:00	Lunch break	
13:00 – 14:00	Practical exercise	Joop van der Roest, RIKILT Heiner Lehr, Audrey Yong, FoodReg
14:00 – 14:30	Recommendations for next steps	Dr Heiner Lehr, FoodReg
14:30 – 15:00	Discussion	Participants (facilitator: RIKILT & FoodReg)
15:00 – 15:15	Evaluation	Joop van der Roest, RIKILT
15:15 – 15:30	Wrap up and closure	Ministry of Fisheries
15:30 – 16:00	Debriefing and follow up program for 2011	Ministry of Fisheries

### ***Day 5 – 18 June 2010***

<i>Site visits – presenting results</i>	
Morning	<ul style="list-style-type: none"> <li>• Debriefing in Ministry of Fisheries (only if debriefing on Thursday is not completed)</li> <li>• Visit export/trade/marketing associations, if possible</li> </ul>
Lunch	
Afternoon	<ul style="list-style-type: none"> <li>• Reporting</li> </ul>

Annex 3

List of Participants Organisations workshop

NO.	INSTITUTION, ESTABLISHMENTS	NO. PARTICIPANTS
1	Directorate of Standardization & Accreditation	2
2	Directorate of Processing	1
3	Directorate of Foreign Market Development	2
4	Provincial Fisheries Service of Java Timur	3
5	Head of Laboratory QC	1
6	Shrimp processors	4
7	Shrimp suppliers	3
8	Shrimp grow out farmers	3
9	Processors Association of Java Timur	1
10	Shrimp Club Indonesia, representative Java Timur	1
11	Organizer from Directorate Standardization & Accreditation	4
	Total	25

Annex 4

Impressions of food traceability workshop 17th June 2010, Sidoarjo, Indonesia

