



SEAT is an FP7 funded project



Bangladesh Shrimp and Prawn Value-Chain Stakeholder Workshop



Organized By: Faculty of Fisheries, Bangladesh Agricultural University (BAU), Mymensingh

Venue: Conference Room, Hotel Royal International
Khulna

Saturday, 13 March 2010, 9.30am – 2pm

www.seatglobal.eu

SEAT Project, Bangladesh Agricultural University, Mymensingh -2202



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Plates 1 and 2: Introducing stakeholders to the aims of the workshop.

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Executive Summary

A half-day stakeholder workshop was convened by Faculty of Fisheries (FoF), Bangladesh Agricultural University (BAU), Mymensingh and that was held at Conference room, Hotel Royal International, Khulna. BAU is part of a consortium implementing Sustaining Ethical Aquaculture Trade (SEAT); a large-scale multi-national collaborative multi-national research project (EU FP7) investigating the sustainability of seafood trade between Asia and the EU.

The main purposes of the workshop were to familiarize local stakeholders in the shrimp and prawn value chain with the aims of SEAT project. Moreover, to identify stakeholder perceptions regarding opportunities and constraints for development of an export oriented trade of shrimp and prawn. A final purpose was to gauge potential for collaboration of small and medium enterprises (SME) in an action research component of the project.

After an introductory presentation (Appendix 2), a total of 59 participants were divided into eight groups to discuss constraints and opportunities. The groups were (1) government employees, researchers and academicians (2) feed, ice factory and other input suppliers (3) processors and exporters (4) large-scale shrimp and prawn farmers (5) small-scale shrimp and prawn farmers, (6) depot and commission agents, (7) hatchery owners and (8) NGOs.

Various constraints were identified by different groups regarding prawn and shrimp farming value chain. Presence of nitrofurans in frozen prawn product was the ever present factor resulting in financial loss. As a result, from 2005 to 2009, hundreds of shipments were rejected by EU causing a loss of US\$ 500 million. Lack of good quality post-larvae (PL) and high price of PL was identified by both small - and large-scale shrimp and prawn farmers. Viral disease is the main constraint for shrimp farmers, locally called it as *current virus*, within one or two days all shrimp can die due to this disease. Prawn is less susceptible to disease, however sometimes health problems were attributed to damaging the antenna of prawn.

Sudden natural disaster i.e. cyclone AILA, was a major threat for shrimp and prawn farmers. Feed price has increased and doubled over last 5 to 10 years, but the price of shrimp has not increased with the same trend. Increased number of intermediaries in marketing is a constraint reported by academics, research and Govt. institutions.

The recent development of depots has included improving infra-structure including pure water supply, mosaic floors to keep raw fish hygienically, use of plastic boxes to carry fish etc. Opportunities include farm registration, which is expected to ensure the traceability of the farm producing shellfish being marketed internationally. Awareness has been raised among prawn and shrimp farmers about the use of antibiotics as it is addressed by traceability scheme. The introduction of new machineries in the processing plants and the tendency of value addition to shrimp and prawn products have increased

and in this regards the majority of processing plants adopted HACCP and are thus approved by the EU. Feed quality is improving due to emergence of different feed companies and supply of high quality feeds in the competitive market. Different government projects and NGOs are working with different issues for the development of shrimp and prawn farming sector.

1. Aims of the workshop

The workshop, convened by Prof. Dr. Md. Abdul Wahab, FoF, BAU and chaired by Mr. Md. Abdur Rashed, District Fisheries Officer, Bagerhat had the following aims:

- I. To familiarize stakeholders along the entire shrimp and prawn value-chain in Bangladesh with the aims of the SEAT project
- II. To identify opportunities and constraints for the development of the industry for export market
- III. Identification of SMEs with interest/ potential to participate in action research (WP9).

A list of workshop invitees and participants is given in Appendix 1.

1.1 Workshop schedule

Time	Program
9.30 am	<ul style="list-style-type: none">• Registration
9.55 am	<ul style="list-style-type: none">• Guest take seat
10.00 am	<ul style="list-style-type: none">• Recitation from the Holy Quran
10.10 am	<ul style="list-style-type: none">• Welcome address Dr. Francis Murray, IoA, UoS, UK
10.25 am	<ul style="list-style-type: none">• SEAT project for Sustainable Aquaculture Trade from Asia Dr. Francis Murray, IoA, UoS, UK & Dr. Mohammad Mahfuzul Haque, Associate Professor, FoF, BAU
11.10 am	<ul style="list-style-type: none">• Tea Break
11.30 am	<ul style="list-style-type: none">• Group discussion Facilitators : Dr. Francis Murray, Dr. Mahfuzul Haque, Mr. Golam Rabbani, Dr. Golam Faruk, Utpal, Ripon, Ali, Sadeq, Poly, Rafi Group A- SWOT (Strength, Weakness, Opportunity & Threat) Group B- Feeds, ice factory and other inputs Group C- Processors and export Group D- Large-scale shrimp and prawn farm owner Group E- Small-scale shrimp and prawn farm owner Group F- Depot and commission agents Group G- Hatchery owners Group H- NGOs
12.30 pm	<ul style="list-style-type: none">• Group presentations
12.55 pm	<ul style="list-style-type: none">• Concluding remarks Mr Md. Abdur Rashed, DFO, Bagerhat
1.00 pm	<ul style="list-style-type: none">• Lunch

2. Outcomes of workshop

2.1 SEAT introductory presentation

The presentation given jointly by Dr. Francis Murray, IoA, and Dr. M. Mahfujul Haque (Ripon) – FoF, BAU, is presented in Appendix 2.

2.1.1 Questions/ comments following the presentation

Mr. Ajit Kumar Paul, Quality Control Officer, FIQC, DoF, Khulna

- Research regarding food safety should be done from SEAT project
- Nitrofurans are an issue in prawn export to EU, research should be adapted to identify the source of semi-carbazide.

Mr. Shahidul Islam, Sr. Upazila Fisheries Officer, Paikgacha, Khulna

- Presently there is a burning question of whether shrimp culture will continue or not considering the environmental impact and salinization issues? Will the SEAT project take any initiative on these issues?

Mr. Latiful Islam, Scientific Officer, BFRI, Paikgacha, Khulna

- Incidental stop/ban of shrimp and prawn export from Bangladesh impacted with huge financial loss. About 100 shipments of frozen prawn products exported from Bangladesh were rejected by EU during the period from 2005 to 2009, as a result more than US\$ 500 million of foreign currency earning was lost by Bangladesh. Does the SEAT project have any scope of research to identify how much losses have occurred/happened due to ban?

Mr Ashraf Uddin, PRICE Project, Khulna

- Will any initiative be taken by SEAT project for the negative impact of the presence of nitrofurans in shrimp/prawn through feed?

2.2 Group discussions and presentations

Participants were divided into 8 groups and asked the questions listed in Table 1 with the support of SEAT facilitators. After one hour of discussion – results were summarized on posters and presented back to the reassembled workshop for further discussion. The membership of the different groups is indicated in Annex 1.

Table 1: Stakeholder groups and questions for the discussion activity – ‘opportunities and constraints for development of the sector’

Stakeholder Groups	Questions	Facilitators
A. Academics, research and Govt. Institutions	Problem and opportunities of Shrimp and prawn in local & export market	Mr Rabbani
B. Feed, ice factory and other inputs	<ul style="list-style-type: none"> - Major changes in business last 5-10 years - Factor affecting the export of prawn and shrimp - How would you deal with the following issues and how should export markets develop? <ul style="list-style-type: none"> a. return of consignments due to presence of antibiotics and other contaminants in shrimp and prawn b. meat and bone meal in shrimp and prawn feed c. other contaminants d. indiscriminate use of antibiotics 	Utpal
C. Processors and exporters	<ul style="list-style-type: none"> - Major constraint and opportunities for exporting shrimp and prawn - Factors changing the last 5-10 years 	Francis
D. Large-scale shrimp and prawn farm owner	<ul style="list-style-type: none"> - What are the major factors that affect the shrimp and prawn farming business? - What are the major changes of these factors the last 5-10 years? 	Dr M. Mahfujul Haque
E. Small-scale shrimp and prawn farm owner	As ‘D’ above	Sadeq
F. Depot and commission agent	<ul style="list-style-type: none"> - What are the major changes of your business in the last 10 years - What are the major factors that affect your business and their changes in last 5 years? 	Dr. Golam Faruk
G. Hatchery owners	<ul style="list-style-type: none"> - Changes in business over last 10 years? - Common factors that influence the business over the last 5 years? - Impacts of different rules & regulations: 	Dr. Md. Ayaz Hasan Chisty/Hazrat Ali
G. NGOs	<ul style="list-style-type: none"> - Major factor for the success of shrimp and prawn farmer - Changes the factor over last 10 years 	Ripon/ Poly



Plate 3: Group work, depot and commission agent.



Plate 4: Group presentation of large-scale shrimp and prawn farmers.

2.2.1 Summary of presentations

Group A: Academics, research and government institutions

Presented by: Mr. Sirazur Rahman, Senior Upazila Fisheries Officer, Asashuni, Satkhira

Problem in local market

- Lack of good quality PL
- No seed certification
- Undeveloped water management
- Unplanned development of shrimp and prawn gher and infrastructural problem
- There is no separate zones for shrimp and prawn
- Lack of knowledge of farmer to identify disease and preventative measure
- Lack of technical knowledge about prawn and shrimp farming and insufficient training
- Lack of quality feed and insufficient ingredient and high price
- Lack of quality ice and farmers are unacquainted to use ice during transportation
- Lack of required vehicle
- Insufficient water source due to siltation in the river and canal
- Increase the number of middleman in marketing channel
- Undeveloped communication and lack of power supply
- Reduce quality of shrimp and prawn illegally
- Farmer do not get actual price due to control market price by processing plant
- Lack of hygienic baskets for transporting shrimp and prawn from the farm
- Lack of up to date marketing information at farmer level

Opportunities

- To apply seed certification at hatchery level
- Re-digging river and canal
- Ensure water supply and discharging facilities
- The sluice gate of water development board should be re-activated

- Re-build shrimp and prawn *gher*
- Sufficient training facilities
- Sufficient facilities of disease identification and prevention
- Made feed law and its implementation
- Produce quality ice
- Provide shrimp and prawn transporting vehicle by government and processing plant
- Reduce number of middleman for marketing of prawn and shrimp
 - remove *foria*
 - direct supply shrimp and prawn to processing plant
- Develop road and provide power supply in *gher* area
- Depot, *arat* and *chatal* should maintain quality
- Stakeholder should follow the rules and regulation and they should be honest at all level
- Should be defined and declared the price of shrimp and prawn
- Should be supplied sufficient plastic and insulated handy basket
- Low interest credit facilities to the farmer

Problem in export market

- Reduce the quality of shrimp and prawn illegally
- Use cow-dung, poultry drop, poultry feed etc. in farm as shrimp and prawn feed
- Traceability and HACCAP were not implemented in all level of stakeholders
- Lack of machinery and skilled manpower for identifying disease and antibiotics
- Lack of honesty in businessman (at all level)
- Not maintained the rules and regulation in handling of shrimp and prawn
- Control the price of shrimp and prawn by processing plant and not paid money at due time
- Not maintained the Fish and Fisheries (Inspection and Quality Control) Act 1997

Group B: Feed, ice factory and other inputs

Presented by: Mr. Ranjit Debnath, Sr. Marketing Officer, MEGA Feed, Khulna

Major changes last 5-10 years

- Changes in use of pellet or commercial ready feed instead of loose feed
- Use of zeolite, minerals and chemicals with lime and fertilizer
- Business started with rice bran wheat bran, which was converted in ready feed, medicine and other aquaculture related input business.
- Competition about quality of feed

Factor affecting the export of prawn and shrimp

- The presence of antibiotics (e.g. Nitrofurans, Chloramphenical) in prawn and negative attitude of EU to export prawn from Bangladesh
- There is a good scope of prawn export in international market, if we could maintain the traceability issue correctly
- Different constraints including environmental, food security and white spot disease in case of shrimp

How would you deal with the following issues in export markets development (Table 1)

- Identify the sources of antibiotics and raising awareness among hatchery owner, farmers, medicine supplier, feed producing company
- Take necessary action to stop importing of meat and bone meal and ensure the use of fish meal or alternative source instead of meat & bone meal
- Control the use of pesticides
- Awareness raising among the prawn and shrimp farmers through discussion the negative impact of antibiotic use.
- Facilitate intensive training for related different stakeholders including farmers, feed & medicine company, supplier, hatchery owner, aquaculture specialist etc.

Group C: Processing and export

Presented by: Mr. Ajit Kumar Paul, FIQC, DOF, Khulna

Major constraint and opportunities for exporting shrimp and prawn?

- Lack of raw materials
- Value addition, white fish and vegetable (opportunities)
- Laboratory-accreditation
- Traceability-fragmented farming
- Cluster farming (opportunity)
- Lack of farmer motivation and motivational training
- Technical knowledge constraints
- Training on GAP

Factors changing the last 5-10 years?

- Currently, chemical non-compliance is more importance than microbiological compliance
- The rate of value addition in the final product has increased
- Traceability issues have been introduced
- The training is going on GAP and motivation
- Introduce new machinery

Group D: Large scale shrimp and prawn farmer

Presented by: M. Sazzad Hossain, Kopilmuni, Paikgacha, Khulna

What are the major factors that affect the shrimp and prawn farming business?

- Virus related disease of shrimp
- Natural disaster like *Aila*
- Supply of virus free PL
- Adulterate fertilizer
- Pushing of unwanted materials into the value chain of large shrimp and prawn that impair the quality as well as market price of the product

- The license are issued based the sanitation status of the *gher*
- Water supply facilities has improve due to develop sluice gate under 4th fisheries project
- The soil and water quality were tested by government organization
- Lack of sufficient water at the right time
- NGO (WorldFish centre) provides training
- Farmers need loan and subside from government and non-government organizations
- The price of feed has increased

What are the major changes of these factors the last 5-10 years?

- Disease occur
- Increasing natural disasters
- Though NGO provides training on virus free PL but supply is not sufficient
- The supply of adulterate fertilizer increase day by day
- Though the use of unwanted materials in the value chain of product has reduced but it should be stopped fully
- The number of register farmer has increased
- The production of rice and other crop increased due to develop of sluice gate
- The rate of the testing of soil and water quality increased from 2002
- Water supply reduce due to river siltation
- Farmer are getting training but not sufficient
- The price of fish feed are increasing but the price of shrimp or prawn did not increase

Group E: Small-scale Shrimp and Prawn farm owner

Presented by: Ayub Ali, Shrimp Farm owner , Soladana, Paikgacha and Nirod Roy, Prawn Farm owner , Line Bilpabla, Dumuria, Khulna

Major factors for Shrimp and Prawn culture

- Water availability
- Disease problem

- Increased feed price
- High price of PL
- Lower fish price
- Flood problem

Advantages of Prawn:

- Prawn is less susceptible to disease than shrimp
- Advantages of Prawn/shrimp marketing through *chatal/arot*
- Increased rice production
- Availability of tested PL

Shrimp:

- Lack of water availability during season
- Increased occurrence of disease
- Increased salinity

Advantages

- Short culture period
- Less feed is needed

Changes of factor over last 5 to 10 years:

- Increased feed price
- Increased disease problem
- Increased lease value of land
- Increased employment opportunity
- Increased price of PL
- Increased flood frequency

- Decreasing gher/farm size

Necessary initiative:

- Training
- Credit facility
- Water availability in due time
- Quality PL

Group F: Depot and agent

Presented by: Porimal Debnath, Poly Fish Depot, Kopilmuni, Paikgacha, Khulna

What are the major changes of your business in the last 10 years?

- The large businessman get more benefit and smaller has stopped their business
- Developed depot ground floor using mosaic and tiles
- Use plastic basket
- Purchasing head on shrimp and prawn
- Use good quality water
- Medical facilities for staff

What are the major factors that affect your business and their changes in last 5 years?

- Imbalance in price
- Ice production is problem due to insufficient electricity
- Imbalance in grade
- Improved communication
- Syndicate in the business channel

Group G: Hatchery Owner

Presented by: Dr Md. Ayaz Hasan Chisty, Prawn hatchery owner, Khulna

Changes in business over last 10 years?

- Partial changes of perception in farmers level
- Participation of GO, NGO, and private organizations
- Changes in production system (recirculation system, flow through system)
- Creation of competitive market
- Increase involvement of middle men
- Increase production cost
- Uncertainty of marketing

Common factors that influence the business over the last 5 years?

- Capture of wild PL indiscriminately
- Illegal entrance of foreign PL and marketing
- Uncertainty of power supply
- Abnormal increased of price of fuel and other inputs
- Lack of financial support at Govt. and NGO level
- Seasonal changes

Impacts of different rules & regulations:

- Approval from different government organizations
- Health-safety production system- disease free environment, applied recommended doses of antibiotics
- Suddenly change of government policy
- Political disturbance

Group H: NGOs

Presented by: Mr Ashraf Uddin, PRICE Project, Khulna

Major factors for the success of shrimp and prawn farmer

- Improved training
- Modern technology
- Regular feed application
- Availability of quality PL/fingerling
- Good marketing facilities
- Availability of all sorts of inputs
- Increased survival rate
- Contact farming
- No of *gher*/farm increasing
- Polyculture
- Partial harvesting when necessary
- Careful about farm preparation
- Increased awareness among farmer
- Net profit is increasing

Changes the factor over last 10 years

- The skills of farmers increased through training
- The supply of good quality PL has been increased
- The supply of good quality feed has been increased
- Farmer are now well organized in group
- Farmers have good linkage with different service providers for necessary service and input

- Improve marketing facilities through *depot/arot*
- Increased the availability of ice
- Farmers are more aware to maintain the quality of prawn after harvesting
- Increased awareness among farmers for environment friendly prawn and shrimp culture
- The traceability activities has been started
- Availability of necessary machinery and other inputs.

3. Comments, question and answer session

Depot and commission agent

- What type of prawn is supplied in the processing plant (either head-less or head on)?
- Do the workers use dress/ apron during processing?
- How do you maintain medical fitness of the worker in depot?

Hatchery:

- Which PL source is better (hatchery or wild)?
- Why survival and growth differences vary between hatchery and wild? What measures can be taken to solve this problem?

Processing plant:

- As the processing plants can utilize 12 to 20% of their capacity. So does the processing plants developed in unplanned way?
- If the fish production is less, why sometimes those are dumped?

4. Concluding remarks with vote of thanks: Mr. Md. Abdur Rashid and Dr Francis Murray

Participants were thanked for their active participation in the workshop and for making it productive with valuable information which is needed for the investigation of various work packages within SEAT.

Appendix 1: List of participants, other invitee and membership of discussion group

Group 1. Academics, research and Govt. institutions:

SL. No.	Name and designation	Name of the Institution	Contact Mobile number
1.	Md Abdur Rashed, District Fisheries Officer, District Fisheries office, Bagherhat	DOF,	01716485063
2.	Mr Md Golam Rabbani, AD, Department of Fisheries, Khulna Division, Khulna	DOF, Khulna	01712715430
3.	Mr. Latiful Islam, Scientific Officer, BFRI, Paikgacha	BFRI, Paikgacha	01715645260
4.	Mr. Amirul Islam, Scientific Officer, BFRI, Paikgacha, Khulna	BFRI, Paikgacha	01191521221
5.	Mr Sirazur Rahman, Sr. Upazila Fisheries Office, Asashuni, Satkhira	SUFO, DOF, Satkhira	01712667990
6.	Shankar Chandra Howlader, SUFO, Dumuria Upazila, Khulna	DOF	01711190783
7.	Mr. Chandra Shekhor Nandi, SUFO, Fakirhat, Bagherhat	DOF	01712144720
8.	Md Shahidul Islam, SUFO, Paikgacha Upazila, Khulna	DOF	01711135381
9.	Md. Abdul Mannan, SUFO, Rampal, Bagerhat	DOF,	01717065327

Group 2 : Feeds, ice factory and other inputs:

1.	Utpal Kumar Dutta, Research Associate, SEAT, BAU	SEAT BAU	01712261573
2.	Rafiqul Islam, Area Sales Executives, ACI Ltd, Khulna	ACI Ltd, Khulna	01714092752
3.	Khorshed Alam, Marketing Officer, Quality Feeds Ltd, Khulna	Quality Feeds Ltd, Khulna	01713443543
4.	Mr Ranjit Debnath, Sr. Marketing officer, MEGA Feed, Khulna	Marketing officer	01712192053
5.	Mr. Pervez, Apon Trading, Kalibari Road, Khulna	Input (Feed, Chemical & medicine) Dealer	01916705838 01712996252

Group 3 : Processing and export

1.	Dr Francis Murray, IoA, UoS, Stirling	IoA, UoS, Stirling	
2.	Abdur Razaque, Inspector, FIQC, Khulna	FIQC, DOF/ Processing & export	01712925392
3.	Mr. Ajit Kumar Paul, Quality Control	FIQC, DOF/	01712257206

	Officer, FIQC, DOF, Khulna	Processing & export	
4.	Mohammad Golam Mostafa, Quality Control Officer, FIQC	FIQC, DOF/ Processing & export	01715916066
5.	Abdur Rahim, Commercial Officer, National Seafood Ltd, Khulna	Processor and exporter	01718051927
6.	Mr Abul Hossain, Asian Sea food	Processing plant	01915723327
7.	Mr Sirdhartha Sankar Roy, Atlas Sea Food Ltd, Rupsha Approach Road, Khulna-9100	Processor and exporter	01913580708
8.	Humayun Kabir, Director, BFFEA	BFFEA, Khulna	01712584626

Group 4 : Large-scale shrimp and prawn farm owner

1.	Dr Mahfujul Haque	Associate Professor, FoF, BAU	01712006294
2.	Md Mazibur Rahaman, Rampal, Mongla, Bagerhat	Large Shrimp & Prawn Farm Owner,	01712405585
3.	Md. Ziaur Rahman, Paikgacha	Large Shrimp farm owner	01711668175
4.	Gazi Aktaruzzaman, Shyamnagar	Large Shrimp Farm Owner,	01715339829
5.	S.K. Shahajahan Hossain, Paikgacha, Khulna	Large Shrimp farm owner, Paikgacha	01718868564
6.	Md Moznu, Rampal, Mongla, Bagerhat	Large Shrimp Farm Owner,	01712144681
7.	M. Sazzad Hossain, Kopilmuni, Paikgacha, Khulna	Large Shrimp farm owner,	01715211629
8.	S.K. Rafiqul Islam, Shyamnagar	Large Shrimp farm owner	01820052028
9.	M. M Israfil Ahmed, Paikgacha	Large Shrimp farm owner	01925325465
10.	Tutul Kazi, Paikgacha, Khulna	Large Shrimp Farm owner	01911264377
11.	Anadi Kumar Biswas, Line Bilpabla, Dumuria, Khulna	Large Prawn farm owner	01198079308

Group 5 : Small-scale shrimp and prawn farm owner

1.	Md Sadequr Rahman	SEAT, BAU	01723229101
2.	Rafiul Kabir	BAU	01717005910
3.	Mr Rabiul Islam, Dumuria, Khulna	Small Prawn Farm Owner, Khulna	01925370019
4.	Nirod Roy, Line Bilpabla, Dumuria, Khulna	Small Prawn farm owner	01912857180
5.	Tusher Kanti Sarkar, Chitalmari	Small Scale Prawn farm owner	01719566140
6.	Gitendra Hawlader, Bagerhat	Small Scale Prawn farm owner	01723843267
7.	Nirmal Sardar, Soladana, Paikgacha	Small Shrimp Farm owner	
8.	Md Mamun Ahmed, Soladana, Paikgacha	Small Shrimp farm owner	01917876860
9.	Md. Shafiqul, Khoira	Small Prawn farm owner	01921290757
10.	Ayub Ali, Soladana, Paikgacha	Small Shrimp farm owner	01916058539
11.	Md. Anowarul, Soladana, Paikgacha	Small Shrimp farm owner	01714632446
12.	Md Akram Hossain, Paikgacha, Khulna	Small Shrimp Farm owner	01712336212
13.	Md Abul Kalam, Shyamnagar, Satkhira	Small Shrimp Farm owner	01724704730

Group 6: Depot and commission agent

1.	Dr Golam Faruk, The World Fish Center	The World Fish Center	01714102453
2.	Md Shahin Hossain,	Depot/Arot	01729953216
3.	Mr Munna Commission Agent	Commission Agent	01711298631
4.	Porimal Debnath, Poly Fish Depot, Kopilmuni, Paikgacha, Khulna	Depot/arot	01714083610
5.	Md. Abdur Rashid, New Shibsra Fish, Paikgacha, Khulna	Depot/arot	01720565713

Group 7: Hatchery owner

1.	Hazrat Ali, SEAT BAU	SEAT, BAU	01712308428
2.	Dr Md. Ayaz Hasan Chisty, Fisheries and Marine Science Technology Discipline, Khulna University, Khulna	Khulna University/ Prawn Hatchery owner	01730004141

Group 8: NGOs

1.	Ripon Kumar Adhikary	SEAT, BAU	01911969016
2.	Manzura Khan	BAU	01716803191

3.	Mr Ashraf Uddin, Price Project, Khulna	Price Project, Khulna/NGO	01730056318
4.	Abdul Jalil Sagor, USAID	USAID	01711272457
5.	Ashok Das, Kachua, Bagerhat	Small prawn farm owner	01726260144
6.	Nazmul Alam, World Fish Center, Bagerhat	World Fish Center, Bagerhat	01714022517
7.	Mosharrof, World Fish Center, Paikgacha, Khulna	World Fish Center, Paikgacha, Khulna	01914480552

Invited participants who could not attend:

SL. No.	Name and designation	Name of the Institution	Contact Mobile number
1.	Dr. Zahangir Alam, CSO, BFRI, Paikgacha, Khulna	BFRI, Paikgacha	01715143521
2.	Dr. Moslehuddin Ahmed, Deputy Director, Fisheries Inspection and Quality Control office, Department of Fisheries, Khulna	FIQC, DOF/ Processing & export	01674009078 Fax-041-762073
3.	Absar Ali Morol, Deana, Doulatpur, Khulna	Large Prawn Farm Owner, Khulna	01711899603
4.	Kabir Hosen (Kobu Mollah), Deana, Doulatpur, Khulna	Large Prawn Farm Owner, Fakirhat	01711297344
5.	Kazi Mahfuzur Rahman, Jamuna Feeds Ltd, Hazi Mohsin Road, Khulna-9100	Input (Feed, Chemical & medicine) Supplier	01713412130
6.	Professor Md. Anisul Haque, Head, Dept of FMRT Discipline, Khulna University, Khulna	Khulna University	01914325047
7.	Sheikh Aksir Ahmed Babu, Dealer, Noverties, Quality, Paragon Feed, 155 Sir Iqbal Road, Khulna	Input (Feed, Chemical & medicine) Dealer	01716418642
8.	Md. Al- Masud, Prawn Hatchery owner, Khulna	Prawn Hatchery Owner	01711439584

Appendix 2: Introduction to SEAT-Power point presentation



Background

- Seafood trade - highest value food sector
- Asia main EU supply – rapid growth
- EU standards: food safety, (animal welfare)
- Market standards: environmental, social
- Harmonisation?
- Evidence-based multidisciplinary approach

Project Scope

Country/ Species	Tilapia	Pangasius Catfish	Marine Shrimp	Freshwater Prawns
China	√√	√	√	?
Vietnam	√	√√	√√	(√)
Thailand	√	√	√√	√
Bangladesh	(√)	√	√√	√√
Europe	(√)	(o)	(o)	(o)

Main objectives

- Increase volume and value of trade of four major farmed seafood commodities through:
 - improved scientific, trade and policy linkages between Asia and EU
 - support to SMEs (action research) in Asia and EU
 - Development of Ethical Aquatic Food Index (EAFI) – not a new standard! – a decision support tool for different stakeholders

Demand for Aquaculture Products

(FAO Food Outlook 2008)

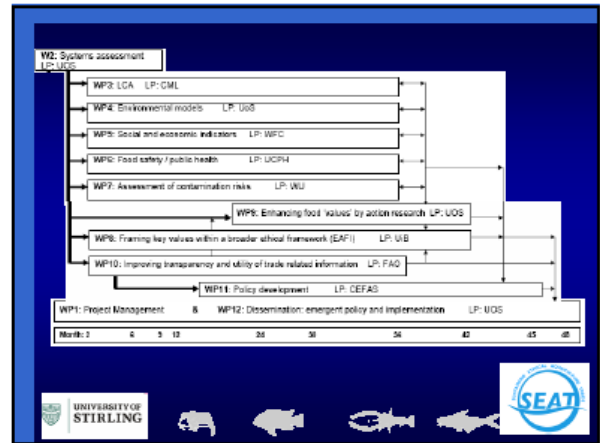
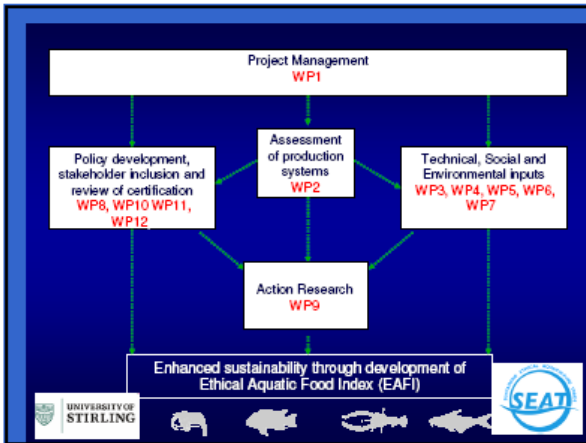
Per caput food consumption: kg/year	2005	2006	2007	07/06 %+
Food fish	16.7	17.2	17.4	1.2
From capture fisheries	9.3	9.5	9.5	0.0
From aquaculture	7.4	7.7	7.9	2.8

Changing markets

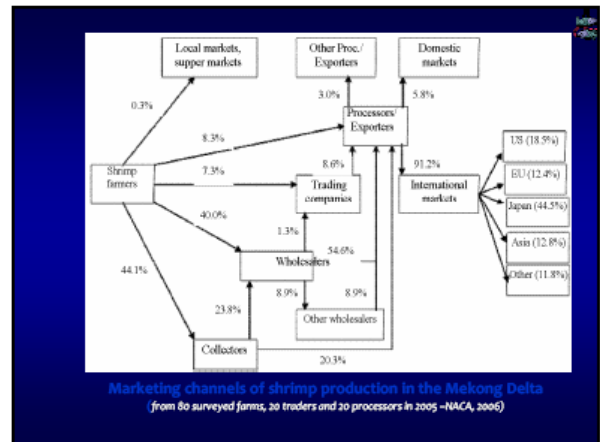
- Demand for seafood reflects changing consumer values
- Food safety still paramount
- Food never cheaper (% purchasing power)
- Emerging values: conserving environment
 - locally e.g. water quality
 - globally e.g. climate change
- Social impacts on those directly involved
- Welfare of animals
- Consumer expectations managed by standards/certification



- ## Work Packages
- Systems analysis
 - Life Cycle Analysis (LCA)
 - Environmental & contaminants modelling
 - Food safety and public health
 - Social and economic issues
 - Action research with SMEs
 - Certification dialogue
 - GVCs & access asymmetries
 - Ethical matrix assessment



- ## The 'value chain'
- Subsistence-immediate production and consumption compare traditional production and consumption to modern for pangasius
 - Global value chains
 - How can they be made fair and sustainable?



Systems analysis

- What is it why we need to do it and how we should do it
- need to understand **the whole picture** as a whole rather than only the 'best bits'
- Scoping study to understand the value chain as a whole – from farm to consumer
- Setting boundaries and basis for prioritising and designing follow-on research

Life Cycle Analysis (LCA)

- Overall picture - beyond economics
- Energy and resources involved in any process
- Boundaries from systems analysis
- e.g. farm – fork or cradle – grave?

Which is better ?

Ceramic cup	Plastic cup
<ul style="list-style-type: none">• 10 kg crude oil• 1 kg iron ore• 5 kg hardwood• 100 l water• 10 kg sand	<ul style="list-style-type: none">• 5 kg crude oil• 2 kg iron ore• 1 kg hard wood• 10 l water• 6 kg sand
<ul style="list-style-type: none">• 100 kg CO₂• 10 kg CH₄• 1·10⁻⁹ kg dioxin• 5 kg NO_x	<ul style="list-style-type: none">• 50 kg CO₂• 10 kg CH₄• 4·10⁻⁹ kg dioxin• 0.1 kg NO_x

Environmental & contaminants modelling



Social and economic issues



Food safety and public health

- Still the main quality requirement for trade with the EU
- EU hygiene package
- Differences in emphasis between US (pathogens e.g. salmonella) and Europe (e.g. antibiotic residues)

Impacts on direct stakeholders

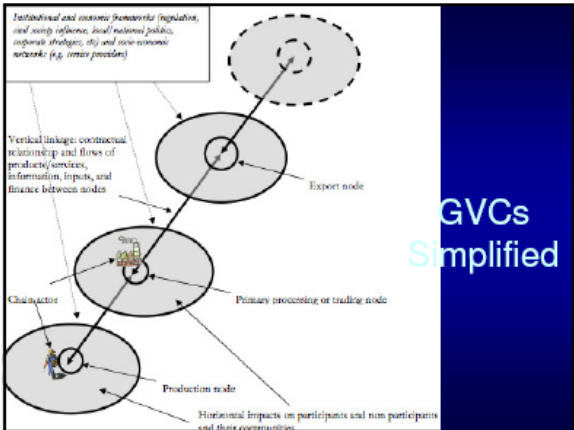
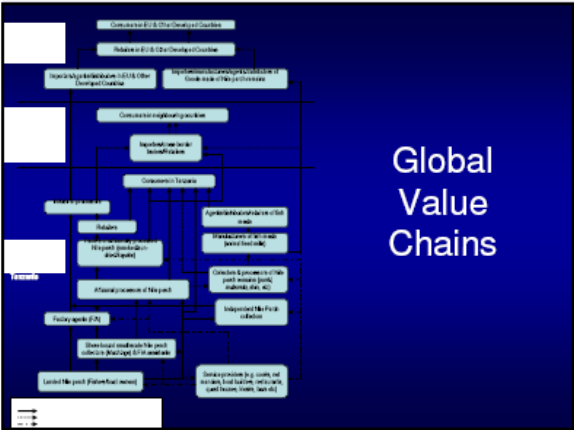
- The value chain—from farm to fork
- Producers—owning/controlling resources and employed
- Processors
- Adding 'value'

Impacts on broader society

- Trade barriers
- Access to information
- EU Hygiene Package
- Certification

Action research

- Supporting beneficial change for micro, small and medium enterprises (MSMEs)
- Private sector and researchers as co-learners
- 'Upgrading' options for value chains



Example scenario - Pangasius

- **Step1 – Diagnostic findings**
 - WP5: Periodic yellow flesh colour – reduces fillet value – possible rejections by processors
 - WP2: Attributed to interactions between diet, infection and pond water quality
 - WP4&7: Increasing frequency of pond water exchange can reduce severity of the problem
- **Research Question**
 - How can the problem be addressed to benefit different stakeholders?

Step 2: - collective assessment
 - list & group interventions
 - Identify best option(s)

- **Hatcheries:** hybrid varieties (e.g. Claresse – Fishion/ Anova, Netherlands)
- **Producers, feed and pharmaceutical companies:** experiment with flushing frequency, diet composition, diagnostic capacity etc
- **Processors, plant suppliers, retailers:** Electro-static smoking process (low yield loss - added value)
- **Consumers, retailers:** Yellow flesh as an ethical food option?

Ethical Framework

1. Practical evidence-based ethical advice
2. Transparent deliberative methods for quality assurance
3. Identifying opportunities for harmonizing ethical standards and certifications
4. Overall ethical aquatic food index (EAFI)

Examples of ethical worries relating to aquaculture - sustainability

- Fish feed → transforming cheap fish into expensive fish → increasing the strain on natural fish resources?
- Fish escapes → genetic threat to wild stocks? → diseases? → threatening cultural identity?
- Environmental discharges -> avoidable?
- Environmental degradation -> bad management schemes? Regulations?



Emergent 'seafood' commodities



Giant Freshwater prawn



Striped river catfish

Photo credit: Francis Murray

From discounted domestic product to export value-add



Tilapia

Photo credit: Peter Edwards

Local or foreign?

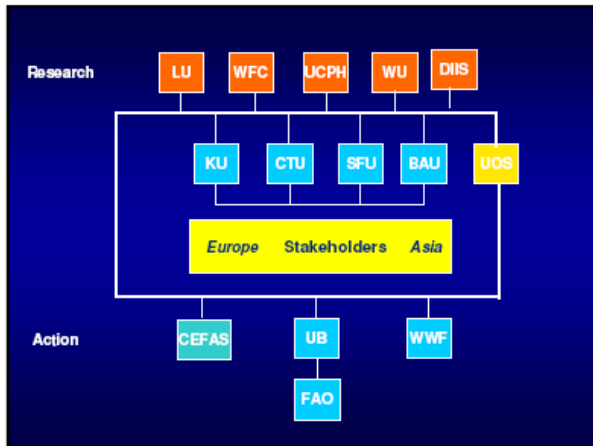


Penaeus monodon



Penaeus vannamei

Photo credits: Jimmy Turnbull



Sustainability

- Sustainability
 - weak and strong
 - production to consumption
- Ethical consumption
 - power relations in producer countries and between consumer and producer networks
- Standards setting and certification-major issues

'Qualities'

- Food safety as given
- A host of ethical and sometimes contradictory qualities
- Deliverable by smaller- scale producers?
- Optimising benefits to poorer actors
- Certification as entry barriers

Reducing risks of global trade

- Trends to consolidation
- Continued importance of family enterprises and MSMES
- Clusters of enterprises-
 - environmental impacts
 - health management issues
 - BUT accessibility to producers

Challenges

- Increasing trust among consumers
- A 'sustainability' and 'QC' culture among producers
- Asymmetries in information flows
- Support a move away from single interest standards
- Two way responsibilities of consumers and producers

Group Sessions

1. Government & Academics
2. Feeds, Ice and other inputs
3. Processing and export
4. Agents and Depots (Arats, Machghar)
5. Large-scale shrimp and prawn farmers
6. Small-scale shrimp and prawn farmers
7. Hatcheries
8. Field NGO's

Group Questions

Group 1: SWOT analysis

Group 3-8:

- Poster 1: What are the major factors affecting the success of your enterprise
- Poster 2: How have these factors changed over the last 10 years

Group 2: As above – Inc. Antibiotics/
Contaminants

All: Differentiate between shrimp and prawn!