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Contact:

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Natural Resources Institute: nri@greenwich.ac.uk

**The Ministry of Agriculture and Rural Development
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**Development of National Strategy to Enhance Trade
Opportunities for Vietnamese Shrimp**

Revised Final Report

June 2009

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The Natural Resources Institute
The University of Greenwich
Chatham Maritime
Kent
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Abbreviations

ACC	Aquaculture Certification Council
ASEAN	Association of Southeast Asian Nations
BAP	Best Aquaculture Practice
BMP	Best Management Practice
BRC	British Retail Consortium
CoC	Code of Conduct
DANIDA	Danish International Development Agency
DAPT	Directorate of Agro Processing and Trade
DARD	Department of Agriculture and Rural Development
DFID	Department for International Development
EU	European Union
EUREPGAP	European Retailer Protocol for Good Agricultural Practice
FITES	Fisheries Services Centre of Vietnam
FSPS	Fisheries Sector Programme Support
GAqP	Good Aquaculture Practices
GSO	General Statistics Office of Vietnam
Ha	Hectare
HACCP	Hazard Analysis Critical Control Point
HCMC	Ho Chi Minh City
MARD	Ministry of Agriculture and Rural Development
MSC	Marine Stewardship Council
NACA	Network of Aquaculture Centres in Asia
NAFIQAD	National Agro-Forestry and Fisheries Quality Assurance Directorate
NIG	National Interpretation Guidelines
NOIP	National Office of Intellectual Property of Vietnam
NTWG	National Technical Working Group
OECD	Organisation for Economic Co-operation and Development
QSP	Quality Seafood Programme
POSMA	Post-Harvest and Marketing Component (of FSPS)
RIMF	Research Institute for Marine Fisheries
RRI	Red River Interactive
SGS	Société Générale de Surveillance
SIPPO	Swiss Import Promotion Programme
SUMA	Sustainable Marine Aquaculture
UK	United Kingdom
UKAS	United Kingdom Accreditation Service
UNDP	United Nations Development Programme
US	United States
VASEP	Vietnam Association of Seafood Exporters and Producers
VIETRADE	Vietnam Trade Promotion Agency
VINAFIS	Vietnam Fishery Association
VND	Vietnamese Dong

Exchange rate (September 2008): 1 \$US = 16,500 VND (*Vietnamese Dong*)

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EXECUTIVE SUMMARY

Background and Fieldwork Results

The consultancy project “Development of National Strategy to Enhance Trade Opportunities for Vietnamese Shrimp” is an activity of the Fisheries Sector Programme Support Phase II (FSPS II) – Post-Harvest and Marketing Component (POSMA), which is based at the Ministry of Agriculture and Rural Development in Vietnam and funded by DANIDA. The consultancy is undertaken by the Natural Resources Institute of the University of Greenwich, UK, in collaboration with local consultants and the company Red River Interactive. The timeframe of the study is August to December 2008. Field survey work was carried out in September and November 2008. The provinces visited during the course of the study include: Ca Mau, Bac Lieu, Soc Trang, Ben Tre, An Giang, Quang Ninh, Hai Phong, and Khan Hoa Provinces. In addition, interviews were held with stakeholders in Hanoi and Ho Chi Minh City.

The focus of the study is on branding of shrimp products, primarily those destined for export. The methodology includes the following:

- Literature survey and analysis of trade statistics;
- Semi-structured interviews with the aforementioned stakeholders;
- Telephone interviews and visit to trade exposition in Europe;
- Analysis of issues related to branding of shrimp products, including recommendations for standards to be followed, and outline of an agricultural and fisheries branding and certification scheme.

Findings of the consultancy were presented at workshops on 15 September 2008 in Hanoi, and on 27 November 2008. The Consultants prepared presentations and handout material for the workshops, which were organised by DAPT and POSMA.

The case for a national shrimp brand

The rationale for developing a national shrimp brand is based on having a quality mark assuring buyers that shrimp produced in Vietnam is of a high standard. The reasoning behind this is as follows:

- Vietnamese seafood exporters often target the lower end of the market, competing more on price rather than quality. As a result, shrimp from Vietnam has an image problem compared to some major competitors such as Thailand;
- There have been quality problems with shrimp from Vietnam in the past (e.g. antibiotics resulting in declining exports to Japan in 2007);
- With quality standards such as GLOBALGAP becoming more important in the international shrimp trade, Vietnamese exporters will be under pressure to comply with these standards;
- With intensive production of *P. vannamei* on the increase, Vietnamese shrimp producers will be more exposed to disease problems if GAP (Good Aquaculture Standards) are not followed.

The national brand name will not replace the brand name or trademark of individual companies. Rather, it is expected to increase the collective level of the quality and image of Vietnamese shrimp production and exports. In addition to the national brand name, there is the option of enhancing the image of certain regions through geographical indication (e.g. shrimp from Ca Mau; or shrimp from mangrove forests in South Vietnam).

During the course of fieldwork, the following answers were provided as to **who should be in charge of the trademark system**:

- Government Departments in Hanoi and the provinces mainly suggested that MARD (e.g. DAPT) should be responsible for the trademark system.
- Small-scale farmers found it difficult to judge – they prefer that government should decide.
- Shrimp processors and exporters made different suggestions, including:
 - VASEP should be in charge
 - Associations should be in charge
 - MARD should be in charge
 - Another option: Mixed set-up including MARD, Associations, and other Ministries

As for VASEP, some processors favour this association as holder of the trademark whilst others are less in favour, saying that the association does not represent all processors and exporters, and does not cover the farm level. Nonetheless, the overall achievements of VASEP in promoting Vietnamese seafood exports are widely acknowledged. As such, VASEP appears to be well placed to play a promotional role for the shrimp brand.

As to **who should be the inspection bodies**, the following replies were obtained:

- Most stakeholders in the government and private sector suggest that NAFIQAD (formerly NAFIQAVED) should be in charge.
- A few suggest that other independent inspection bodies should also be accredited (e.g. international companies such as SGS, and national bodies such as FITES).

As for the **role of associations**, it was suggested that VASEP should be involved in areas such as standard setting, oversight, and promotion amongst members and in overseas markets. VINAFIS should be involved in areas such as standard setting, oversight, and farmer organisation. At the same time, it was also recognised that VINAFIS lacks resources. Given that the bulk of aquaculture shrimp is produced by small-scale producers, it appears important that farmers get organised in groups to implement relevant schemes. This has several advantages, such as improved bargaining power (e.g. for input purchases, and output marketing), and facilitation of extension exercises.

International Market for Vietnamese Shrimp

Key Market Overview

General overview: Shrimp supplies are increasing rapidly because of farming which is making tropical penaeids far more abundant. A result has been the emergence of a highly price-sensitive commodity market for shrimp

Key export markets studied included Europe, the USA and Japan. Their consumption of shrimp is 2.3 million tonnes of whole shrimp.

- USA & EU markets have grown fast at a steady 4-5% annually from 1990-2007 but Japan's market shrank at between 0.2-0.9%pa over this period
- Japan's share of OECD demand has been dropping steadily from 32% to 19%
- The USA's share grew fastest from 35% to 43%, but the EU share also grew fast (from 32% to 38%)
- The decline in the Japanese market is accelerating, and this is believed to be part economic, part a dietary change towards a western meat-based diet
- The US market has peaked and is showing signs of decline
- The EU market lagged behind the US market but has shown most recent growth

Key conclusions Europe : Five countries dominate the EU market – Spain, UK, France, Italy & Germany, three of which are Southern or “Mediterranean” in culture (Spain, Italy and France) whilst two are Northern countries – UK and Germany

- Spain is the largest EU market (22% of total consumption) but is mainly a white shrimp market sourcing from Latin America & China
- France imports raw frozen shrimp to cook and sell “fresh” cooked, and also prefers white shrimp (as does Italy)
- The UK market has been growing latterly and is now second only to Spain in size
- Germany is also a sizable market, but as with UK prefers coldwater shrimp
- Where tropical shrimp is concerned, though, Northern Europe is generally a larger market for black tiger, preferably in processed form
- The Netherlands role is mainly as an entrepôt trader, not consumer
- These points highlight the difference between the shrimp markets of southern (Mediterranean) and northern Europe countries

The overall conclusion reached was that Europe is now the fastest growing market and also the market with the greatest potential for expansion

- EU shrimp consumption is a little over half that of comparable OECD markets
- The new EU countries are getting wealthier rapidly & adopting Western EU tastes
- This is very likely to include greatly increased shrimp consumption
- Also, the diversity of the market provides niches to exploit

The question of whether to opt for **black tiger or white shrimp** has become pressing especially in South Vietnam. Globally there has been substantial replacement of black tiger by white shrimp in most markets with black tiger dropping from 60% to 30% of the global market over the past 6 years. In spite of this, black tiger has gained a price premium over white shrimp (of 10-15%, size for size) recently. However, the future

outlook for the shrimp farming industry overall is for a **significant price squeeze** on producers who will experience lower sale prices whilst costs increase.

The Value of a Vietnamese Brand in Key Markets

The defining feature of **Vietnam's position in the global marketplace** is pre-eminence as a black tiger producer, though this is expressed differently in each major market:

- The **Japanese** market is declining, Vietnam already has a large presence and black tiger is being displaced by white shrimp. Thus though remains a crucial market for Vietnam even though prospects for further growth appear to be limited
- **The USA** market is important for Vietnam, but as a niche provider of large black tiger shrimp. Even so, this amounts to a large tonnage given the size of the USA market.
- **Europe.** Vietnam's shrimp exports to the EU are small in both absolute and relative terms – in direct contrast with those for pangasius. They also counter-trend, with Germany the major recipient and minimal export to Spain (respectively the smallest and largest of the five main markets). This is taken to indicate potential for developing the relatively unexploited EU markets

Important distinctions here are those between (i) **Consumer brands**: targeted on a huge end-user audience, image orientated and very expensive, and (ii) **Trade brands** for a small informed audience, where real issues trump image and which can be standards-based and far less expensive. Secondly, within this context there are (a) **hard brands** related to real quality & food safety, measurable aspects, standards and traceability and (b) **Soft brands** which reflect vague consumer concerns (ethical, environmental, organics), subject to image, fashion and media, so possibly transient

A **Vietnamese shrimp brand** will face a commodity market where price is becoming the key determinant and scope for creating a national consumer brand is limited and would be hugely expensive. This is because consumer branding is done by major processors and retailers in target markets, and so importers do not encourage **consumer brands**.

Certification is the key issue here as EU retailers and caterers insist they are insulated against risk of either food safety or ethical problems and certification provides both protection and an "alibi" should things go wrong. A national brand will not necessarily help in this regard as it (i) is seen by traders as self-certification and so suspect (ii) adds to an already confusing array of standards. There is though real justification for a national brand that is tied in to traceability & upstream quality control. A **trade brand** linked to certification would be appreciated by importers, and should apply to both hard (food safety) and soft (ethical) aspects because

- There is a real need for ***upstream traceability and a Vietnamese brand would have real relevance as a catalyst for developing control & traceability networks***
- This should link farmers to export markets through processors, eliciting a unified response from small farmers to needs for traceability & quality management, and persuading eligible small producers to buy into this
- A Vietnamese national brand would then have real value but more as an internal adjunct to traceability within Vietnam rather than to promote exports directly,

- This brand could though eventually become the “flagship” for raising international awareness about Vietnamese shrimp, eg for environmentally sustainable “mangrove shrimp”

There some other implications that need to be considered. For example, Vietnam may increase production of **white shrimp (vannamei)**, which would be a further move into the bulk commodity market where price, traceability and sustainability will become key factors. This could expand new markets such as Spain and elsewhere in southern Europe. Intensive/commercial producers then stand to gain, especially if they can remain highly cost competitive.

There are also some less positive implications. For example **small scale producers** will be perversely disadvantaged. Although they score highly on ethical grounds (social justice, environment, and organic style production), essential certification and traceability requirements will be crippling expensive, possibly denying them export potential

Production Economics of Vietnamese Shrimp

Indicative estimates were made of the cost of production of various shrimp farming models for Vietnam in order to gauge the degree to which farmers can afford to take on the additional costs of supporting a brand (or of certification). The nub of the issue is what price improvement can the brand generate (or conversely to what degree can it prevent price reduction). The minimum increment a brand would have to generate would then be at least twice its cost ie a sufficient increase to at least restore the margin and boost profits by the same amount. Calculations show that small (1ha) farmers might be able to spend around \$40/year whilst large (100ha) companies could afford \$150-200,000/year. Clearly certification costs will be very challenging for small producers.

Role of Standards for Shrimp Branding

In creating a Vietnamese shrimp brand we want to increase the market share of Vietnamese shrimp products in key international markets such as the EU, US and Japan. To support this objective the Vietnam shrimp brand needs to be more than just an eye catching logo and strong marketing strategy. It is essential that the brand is linked to a set of attributes desired by the customer. Major international buyers are looking for the best quality at the most competitive price, and have high expectations in terms of consistency of quality, timeliness of delivery and reliability in terms of volumes supplied. In addition international buyers have to comply with stringent regulatory frameworks aimed at protecting consumers from foodborne illnesses.

Food safety is the most important requirement for all food businesses, but many businesses also experience pressure from consumer pressure groups focussing on environmental protection, animal welfare and social welfare. The bottom line for all international buyers is to protect their brand image from adverse publicity of any type on any issue and if necessary to have a strong legal position (known as a due diligence defence) in the event of any serious public health problem to demonstrate that they took all reasonable precautions to protect the consumers health.

Official controls give some indication of the performance of management and control systems in the producing countries but can only cover a minute fraction of the total production. For this reason most major food businesses want additional controls with some form of independent verification. This additional level of control is provided by voluntary standards. Participation in a voluntary standard scheme is said to be voluntary but in practice for some of the major standards participation is a de-facto requirement for market access.

Voluntary standards are important as they improve the management and control systems in the supply chain are independently verifiable and provide all players with an increased level of confidence that products will meet customer requirements. A national brand scheme linked to internationally accepted standards such as BRC and GLOBALGAP will be much stronger as the customer is clear what the brand represents in terms of meeting his requirements.

Voluntary standards associated with the Vietnam shrimp brand should cover most conventionally produced tropical shrimp products including all types of added value product. Wild caught products, organic production and dried shrimp processing should be excluded as these will not fit under the standards for conventional aquaculture. The standards that will be used to support the brand-name are of the horizontal type and apply to all forms of shrimp aquaculture and food processing, hence there is no issue of species specificity.

To create the strongest brand image it is vital to take a **farm to fork approach** whereby a package of standards are provided that cover all aspects of production and processing of tropical shrimp through to the point where the consignment leaves the borders of Vietnam. Ideally Vietnam should aim to have a more comprehensive and seamless system than that of rival countries producing similar products. At the present time Vietnam is strongest in the area of shrimp processing. Primary production is much weaker with a lack of standards and low level of traceability raising the risk of problems occurring before the shrimp reaches the processing factory. Standards for processing and primary production are dealt with in separate sections below.

Vietnamese shrimp **processing facilities** exporting to the EU, US and Japanese markets have stringent requirements for export and most have private voluntary standards in place. The most popular and comprehensive standards for total quality management in shrimp processing are the British Retail Consortium (BRC) Global Food Standard and International Food Safety (IFS) standards. Some factories have the SQF2000 generic HACCP standard and a few companies have implemented the processing component of the Best Aquaculture Practice standard.

For shrimp **production** many standards have been developed or are being developed to meet the requirements for good aquacultural practice in conventional production of shrimp. International buyers are only interested in the GLOBALGAP tropical shrimp standard and the Best Aquaculture Practice (BAP) standard run by the Global Aquaculture Alliance. Discussions with customers in the EU, Japan and the US revealed that some buyers were aware of Vietnamese national standards such as VIETGAP and VNGAP but there was no interest from buyers in accepting Vietnamese standards. The Dutch retailers' federation and Heiploeg BV the largest shrimp importer in Europe have both announced that they will require all suppliers to be GLOBALGAP

certified by January 2011. At the 2008 GLOBALGAP meeting retailer members were united in calling for all aquaculture suppliers to be GLOBALGAP certified by 2012. Walmart the worlds largest retailer is backing the Global Aquaculture Alliance and wants all its fisheries suppliers to be BAP certified.

From the information available it would appear that the customer is only interested in GLOBALGAP or BAP. However, this is an oversimplification as BAP is unsuited to smallholder production and implementing GLOBALGAP will represent severe technical and financial challenges for smallholders judging from the types of smallholder production seen during the field visits to production areas in North, Central and Southern Vietnam. It is likely that GLOBALGAP will become the ultimate aim for most hatcheries and shrimp farms but it will be necessary to provide a softer route towards GLOBALGAP certification.

Adaptation of the VNGAP standard might offer one route for Vietnam but it is quite likely that most international buyers will only accept a GLOBALGAP or BAP certificate. For this reason it would be **preferable to work within the GLOBALGAP system**. The starting point for the process would be to have a high quality translation made of the GLOBALGAP control points and compliance criteria and key sections of the general regulations into Vietnamese. This should be followed by establishing a national technical working group (NTWG) and developing a document known as a national interpretation guideline (NIG). The primary objective would be to get GLOBALGAP to accept a national interpretation guideline that adapts the GLOBALGAP control points and compliance criteria into a form that is more practical and cost effective for the large number of smallholder farmers in Vietnam.

An alternative approach would be to benchmark one of the national GAP's. However, this is a complex and expensive route with no guarantee of success. The simplest most effective and least costly approach would be to set up a national technical working group (NTWG) and develop a national interpretation guideline (NIG) for shrimp production in Vietnam. The NIG route has the advantage of having the highest probability of being accepted by international customers.

Implementation of GLOBALGAP by smallholders will take ~18-24 months to complete, and will require extensive support from both public and private sectors and a group based approach to certification to reduce costs to an acceptable level.

Implementation of Shrimp Branding Scheme

The key features of a Vietnamese Agricultural and Fisheries Products Branding and Certification Scheme are outlined below. It must follow national and international rules and regulations. It is envisaged that the scheme will be managed and run by an Agricultural and Fisheries Products Branding and Certification Centre, which is based at MARD / DAPT. This Centre is at the heart of the shrimp branding scheme, and will be the owner of the quality mark.

The Centre will consist of two main elements:

- **Executive board**, which will be in charge of policy decisions, oversight and code of practice. It will be chaired by DAPT. Other board members include representatives from Department of Aquaculture, VASEP, VINAFIS, NAFIQAD, Department of Extension, Ministry of Industry and Trade.
- **Technical Coordination Unit**, which will have the following tasks:
 - It will be in charge of promoting the scheme at international level, together with VASEP and VIETRADE of the Ministry of Industry and Trade. At national level, it will promote the scheme with processors and producers, together with Aquaculture Department, NAFIQAD, and VINAFIS.
 - It will liaise with national and international bodies involved with food standards, certification, and different labelling schemes (environmental, organic, fair trade). It will have the role of an information centre for public and private organisations.
 - It will liaise with individual companies that apply for certification in order to obtain the national shrimp quality mark / logo.
 - As far as required, the unit will arrange for inspection of farms or factories by NAFIQAD or other independent inspection bodies. Where international standards are involved this could mean obtaining proof of certification from relevant international bodies.
 - The unit will ensure that successfully certified enterprises will obtain quality mark / logo according to the standard achieved.
 - The unit has to enforce members' compliance as far as maintenance of standards is concerned.

VASEP and VINAFIS should be members on executive board of the Agricultural and Fisheries Products Branding and Certification Centre, mainly in their capacity as representatives of processors / exporters (VASEP), and aquaculture producers (VINAFIS).

VASEP should play lead role in promoting the standards and the scheme through international trade fairs, their website, trade magazine (Vietfish), etc. Given that VASEP already participates in all major international trade fairs this should not lead to considerable extra-costs. The picture below shows the well presented VASEP stand at the Brussels international seafood exposition in April 2008.

VINAFIS should play role in promoting the scheme at producer level, and be involved in training exercises, together with Aquaculture Department and provincial extension centres. At the same time, it is recognised that VINAFIS lacks resources to play a leading role in this respect.

Involving small producers, who dominate Vietnam's shrimp production, is especially important for the export industry. **The Thai cluster approach** is a possible solution, and is explored in the report. This approach to linking small producers to export involves government, processors, farmers and overseas buyers. Key criteria state that farms should not be larger than 50ha, they should be geographically adjacent, the cluster's combined annual output should not exceed 500 tonnes, and the farmers should have comparable production methods. There should be a legal entity managing them

collectively to ensure adequate operational control and compliance with standards. A standardized procedure was devised to establish these clusters, and this is described.

Appropriate Marketing Options in Key Export Markets

As for **promotional channels in target international markets**, one has to distinguish between trade and retail/consumer brands. Retail brands target the end user (the consumer) and so must address a vast audience. Image may be as important as the actual qualities of a product, and the cost of developing and maintaining these brands can be huge. Trade brands target a limited audience (trade professionals), are relatively inexpensive to develop, but have to realistically and reliably reflect issues of real concern to the traders. In view of this, the study recommends to promote Vietnamese shrimp along the lines of a trade brand.

As part of the promotional strategy, the following should be targeted:

- Advertising and articles in the trade press;
- Product demonstration at trade shows and expositions;
- Participation in trade conferences and seminars;
- Wooing traders through encouraging visits and assisting them in-country;
- Relationships - maintaining a regular dialogue with key traders.

Vietnamese shrimp should be **branded under the overarching banner of “Quality Assured Shrimp from Vietnam”**, highlighting that exported shrimp meet recognised production and processing standards. At the same time, given that different species of shrimp are produced in Vietnam under different production conditions, one should further differentiate between White shrimp (*Penaeus vannamei*) and Black tiger shrimp (*Penaeus monodon*). Black tiger has become a niche product, sold at a premium price because of its stronger red colour (when cooked) and larger size. Also, the speciality extensive “mangrove” farmed shrimp and organic shrimp of the Ca Mau region add further options in this regard.

The following **cost elements** need to be taken into account in order to take the shrimp trade strategy forward:

- Setting up of the Agricultural and Fisheries Products Branding and Certification Centre, as part of the DAPT/MARD structure;
- Certification costs for shrimp producers. The following three categories of players are expected to collaborate to implement GAP certification at producer level: farmers, Government services, and exporters/processing factories.
- The third cost element of the scheme is related to its promotion within Vietnam and in overseas markets. To promote the scheme in Vietnam the following Departments need to collaborate: DAPT, Department of Aquaculture, NAFIQAD, NCAFE, and VINAFIS. Promotion of the scheme in overseas markets should be carried out by DAPT staff in coordination with VASEP. Other Vietnamese Government agencies (eg Vietnam Trade Promotion Agency, or trade attachés in Vietnamese embassies) could also have a role to play. The activities to be envisaged include participation at international seafood trade shows and advertising in the trade press (e.g. Seafood International, Vietfish International).

Details of the costs are presented in Table 4 on Page 79.

INTRODUCTION

Background

Vietnam's fisheries and aquaculture sector has undergone rapid development during the last two decades. It is estimated that the sector accounts for approximately 3% of the GDP and that it provides employment for up to four million people (FAO/World Bank, 2005). Nevertheless, despite the rapid increase of exports, it is important to remember that most fisheries and aquaculture products are consumed on the domestic market.

The consultancy project "Development of National Strategy to Enhance Trade Opportunities for Vietnamese Shrimp" is an activity of the Fisheries Sector Programme Support Phase II (FSPS II) – Post-Harvest and Marketing Component (POSMA), which is based at the Ministry of Agriculture and Rural Development in Vietnam and funded by DANIDA.

Following contract signature by the Danish Ministry of Foreign Affairs, the assignment started on 25 August 2008 and lasts until the end of 2008.

The team composition is as follows:

- Mr Ulrich Kleih, Natural Resources Institute, Team Leader;
- Dr Andy Graffham, Natural Resources Institute, Food Standards Expert;
- Mr Tran Cong Ich, National Consultant, Fisheries Expert;
- Mr Ngo Hung, National Consultant, Trademark Specialist, Lacomis Ltd;
- Mr Nigel Peacock, NRI Associate, Fisheries Trade Expert;
- Mr Soren Johansen, Red River Interactive, Logo Design.

The project ought to be seen in the wider context of efforts by the Government of Vietnam to establish brand names not only for seafood products but also other sectors of the economy.

Methodology

The timeframe of the study is August to December 2008. Field survey work was carried out in September and November. The provinces visited during the course of the study include:

Ca Mau, Bac Lieu, Soc Trang, Ben Tre, An Giang, Quang Ninh, Hai Phong, and Khan Hoa Provinces. In addition, interviews were held with stakeholders in Hanoi and Ho Chi Minh City.

The focus of the study is on branding of shrimp products, primarily those destined for export.

The methodology includes the following:

- Literature survey and analysis of trade statistics;
- Semi-structured interviews with the aforementioned stakeholders;
- Telephone interviews and visit to trade exposition in Europe;

- Analysis of issues related to branding of shrimp products, including recommendations for standards to be followed, and outline of an agricultural and fisheries branding and certification scheme.

Preliminary findings were presented at a consultation workshop on 15 September 2008 in Hanoi, which was organised by POSMA. The Consultants prepared presentations and handout material for the workshop (report available from DAPT and POSMA).

According to the terms of reference, the following main outputs were expected from the consultancy:

Product 1: Key markets and value-added opportunities for Vietnamese shrimp identified. This includes an assessment of the principal markets, their key characteristics, structure of the value chain in these markets, and promotional channels used in these markets.

Product 2 – Shrimp quality standard, quality mark and code of practice to support the strategy developed. This includes an assessment of why branding is important , overview of standards, and main elements required for quality mark.

Product 3 – Appropriate marketing options in key markets developed. This includes an assessment of promotional channels for Vietnamese shrimp in the target markets; including recommendations on the most appropriate commercial promotional activities (channels and methods, targets, and cost effectiveness). Also, ways for small-scale producers (fishermen, fish farmers) to adopt the shrimp quality standard and use it to gain access to more discerning and lucrative markets were to be recommended.

Product 4 – Provision of technical inputs to two stakeholder workshops organised at the beginning and the end of the consultancy. This includes preparation of reports and presentations.

WHY BRANDING?

The case for a national shrimp brand

Vietnam has seen significant increases of shrimp exports during the last two decades, which now stand at about US\$ 1.6 billion per annum. At the same time, it is felt that Vietnamese shrimp is still not sufficiently 'visible' on the international market. For example, competitors such as Thailand are more easily recognised.

Also, Vietnamese exporters are often targeting the lower end of the market and compete more on price rather than quality. To some extent, this has led to an image problem in that buyers in the main markets associate Vietnamese shrimp with lower price rather than high quality. Although traders may know Vietnamese shrimp, they may not associate it with high levels of quality.

For example, there were quality issues over antibiotics found in shrimp and other products, which has led to reduced exports in 2007 to markets such as Japan. This is despite significant improvements in processing technology and quality assurance (through NAFIQAVED, now NAFIQAD) during the last decade.

As a consequence, Vietnam needs to improve its image as a reliable producer of good quality shrimp (and other seafood products). This, in turn, will improve buyers' confidence in seafood products from Vietnam. In this context, the development of a shrimp brand name (quality mark) forms part of the wider seafood export promotion strategy of the country. Value addition is another element of the strategy.

It needs to be clear at this point that the national brand name will not replace the brand name or trademark of individual companies. Rather, it is expected to increase the collective level of the quality and image of Vietnamese shrimp production and exports. Ultimately, the many small-scale operators in the chain will be the beneficiaries of the strategy in that this should lead to improved market access and better income.

In addition to the national brand name, there is the option of enhancing the image of certain regions through geographical indication (e.g. shrimp from Ca Mau; or shrimp from mangrove forests in South Vietnam).

As such, one has to see the national shrimp brand name as the top tier of a branding system involving the following elements:

- National brand name based on a recognised quality mark (focus of this project);
- Geographical indication for specific areas (it is understood that, as yet, there are only plans to devise geographical indication but no concrete measures);
- Individual companies and their already existing brands. Some companies such as INCOMFISH also have brand names for different products (e.g. "Shrimp One", "Saigon Pacific", "Leader Fish", "Uncle Hundreds").

Principles of branding

Brands are based on three related criteria:

- Confidence in a business, product or service doing exactly what the customer believes it will do?
- The emotional response of the customer to purchasing a product or service?
- Most importantly, branding is based on consistently rewarding the confidence and delivering the expected emotional response?

In the case of a national shrimp brand this means that buyers (i.e. importers and traders in the first instance) know they will obtain high standard seafood products from Vietnam and don't have to worry about food safety and other issues (e.g. environmental or social issues in shrimp production). Consistent supply of high standard products will help to build confidence in the brand. At the same time, this also means that poor quality deliveries will damage the brand name and consequently lead to loss of confidence. As a result, consistency is important.

Steps in Brand Name Development

Step 1 – Assessment why we need brand name

The first step in brand name development is to assess why we need a brand. Some of the underlying issues associated with Vietnamese shrimps have been highlighted above. The main reasons for brand name development are usually to stand out as a supplier, increase sales and market share, which in turn will lead to higher income and employment.

Step 2 – Assessment of our image in the market place

In our case this involves an assessment of the image of Vietnam's seafood sector amongst overseas buyers. Some of the key issues in this respect have already been mentioned above. Despite its success in increasing exports, Vietnam is not sufficiently perceived as a supplier of high quality seafood products. This highlights another important point – i.e. perception. Sometimes the reputation of a country's products is not the same as the actually produced and delivered quality. This highlights the importance of "telling" customers that our products are of a high standard and then constantly delivering to that standard (see below).

Step 3 - Creating the brand

For a start, this step involves deciding on the brand identity and the values to be conveyed. In our case, this means conveying the message that Vietnam's shrimp is of high standard and should therefore attract a higher price.

The brand value shouldn't contradict what's actually being produced and exported, meaning that poor quality consignments should be avoided at all cost since they will damage the brand name and ultimately make it worth less.

The customers (i.e. in particular overseas buyers) need to get the message. They need to be "told" through different forms of communication and advertising that Vietnam's seafood exports are of high quality. This also involves targeting a specific group of buyers. In our case we have to distinguish between a "consumer brand" and a "trade brand". In the context of creating a national brand name for Vietnamese shrimp products it appears that a trade brand is more appropriate than a consumer brand. More details about the advantages of targeting traders (rather than directly targeting consumers) are presented in the section on international markets for Vietnamese shrimp.

Vietnamese producers and exporters need to understand and believe in the brand – i.e. they have to "buy into the idea" of a national shrimp brand name in order to make it a success. They therefore need to be convinced of the benefits of having a brand name.

A decision needs to be taken as to who should lead the process. In our case MARD / DAPT appear best placed to drive the process in collaboration with private sector players such as VASEP and individual companies.

Budgets need to be allocated for activities related to brand name development. This includes:

- Setting up a branding and certification system;
- Development of standards and convincing producers to adopt them;
- Implementation of quality control and certification system. Successful applicants will obtain a quality mark in the form of a logo (national shrimp brand logo);
- Promotion of the brand name (i.e. quality mark) amongst buyers of Vietnamese shrimp. In particular, as already indicated this involves targeting overseas buyers (i.e. importers and traders).

Step 4 - Managing the brand

Managing a national seafood brand involves a number of key activities starting with continuous monitoring of how buyers perceive our brand so that corrective action can be taken if required.

Players along the value chain including producers, processors and exporters, need to be kept involved through information sharing, training, and quality assurance / inspections.

New customers should be attracted, which may involve accessing new markets or countries for that matter. Trade fairs, or trade delegations (e.g. at the Embassy of Vietnam) can play a role in this respect.

Think about how new products fit under the current brand or if another brand may be required. For example, a brand name based on geographical indication could be created for shrimp produced in mangrove areas.

The industry should be focused on customers' needs. That means the brand may also have to respond to new consumption trends in a market place.

It is key that the brand message gets delivered consistently. In our case this means producing and supplying high quality shrimp without fail. Consistency means that poor quality consignments are out of question because they will damage the image of Vietnam's shrimp industry and ultimately the value of the brand.

In order to have long-term success the shrimp export industry needs to meet and exceed what the brand promises.

The following sections will show details of the key international markets for Vietnamese shrimp, recommendations on the standard to be used for the quality mark behind the brand name, and the outline of a branding and certification centre for agricultural and fisheries products.

Some Definitions

The national **brand name** for Vietnamese shrimp will be based on a **quality mark** (i.e. in the form of a **logo**) which confirms that the shrimp has been produced to a certain standard.

The brand name (i.e. quality mark / logo) will be registered as **trademark** with the National Office of Intellectual Property (NOIP).

It should be noted that the concept of a brand name and registering it as a trademark is a short-term measure to prevent the unauthorised use of the mark (e.g. by a company that has not met the agreed standards).

On the other hand, branding in itself is a much more long-term concept. As outlined above, building a brand is very much based on buyers' confidence in a product (e.g. shrimp) and the supplier consistently rewarding this confidence. In particular, buyers of shrimp expect that a branded product is always of the same high quality or standard and there are no negative surprises. Buyers will only be prepared to pay a price premium for a product once a brand has proven its worth. Building a brand and acquiring a good reputation for the product tends to take several years.

In the current market climate (i.e. the global economic recession which has started in 2008) branding of a product through the use of a quality mark may first and foremost help accessing markets by distinguishing it from competing supplies.

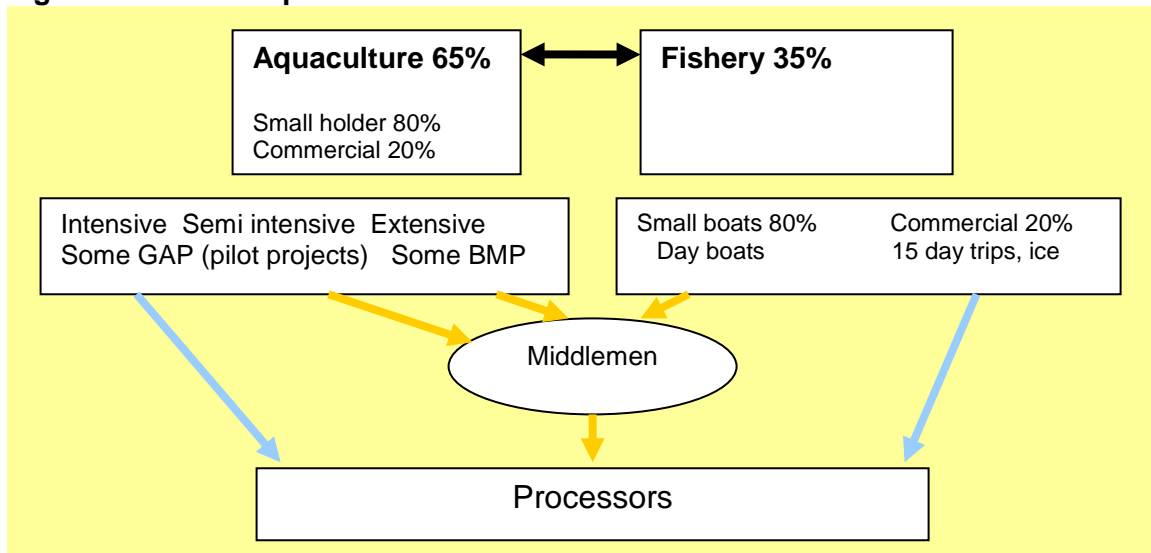
FIELDWORK RESULTS

The following mainly highlights the key findings of the fieldwork carried out at provincial level. As already indicated, interviews were held with fishers, aquaculture producers, input suppliers, seafood traders and processors. In addition, government representatives such as DARD officials and other local government officials were interviewed.

During the fieldwork the team tried to obtain answers to the following questions regarding the shrimp trademark:

- Overview of the shrimp value chain.
- Who should be the owner / holder of the trademark ?
- Who should be the independent inspection body / bodies ?
- Which standard should be used to for the quality mark?
- Role of private sector players, i.e. Associations and individual enterprises?

Figure 1: Shrimp Value Chain in Vietnam



As at September 2008, the **shrimp value chain** can be summarised as follows:

- Whilst catches of marine shrimp are stagnating or declining (due to over-catching or environmental pollution) increasing quantities of aquaculture shrimp are being produced.
- Whilst *penaeus monodon* is the traditional shrimp species Vietnam is famous for, the production of *penaeus vannamei* has started recently, and increasing

quantities of this species will be produced in future. Given the intensive nature of *p. vannamei* production it is felt that good aquaculture practices need to be followed as far as input supply and production are concerned. It is therefore recommended not to highlight one particular species of shrimp. If needed, shrimp from mangrove forests in Ca Mau can have a separate, additional, trademark (for example, geographical indication showing mangrove forest).

- Despite increasing quantities of shrimp being produced by commercial, larger-scale, players, the bulk of the production still comes from smallholders (i.e. estimated 80%). As a consequence, group formation of aquaculture producers is important.
- Intermediary traders (i.e. middlemen and women) play a significant role in linking producers with processors, which complicates traceability. Only the more commercial operators who produce on a larger scale have integrated supply systems.

More details can be obtained from the numerous studies that have analysed the Vietnamese seafood value chain, including the report “Development of Brand Name Strategies by Producer Groups”, by NRI and Lacoms in October 2007 for MARD and POSMA.

As to the question of **who should be in charge of the trademark system**, the following answers were provided:

- Government Departments in Hanoi and the provinces mainly suggested that MARD (e.g. DAPT) should be responsible for the trademark system.
- Small-scale farmers found it difficult to judge – they prefer that government should decide.
- Shrimp processors and exporters made different suggestions, including:
 - VASEP should be in charge
 - Associations should be in charge
 - MARD should be in charge
 - Another option: Mixed set-up including MARD, Associations, and other Ministries

As for VASEP, some processors favour this association as holder of the trademark whilst others are less in favour, saying that the association does not represent all processors and exporters, and does not cover the farm level. Nonetheless, the overall achievements of VASEP in promoting Vietnamese seafood exports are widely acknowledged. As such, VASEP appears to be well placed to play a promotional role for the shrimp brand.

As to **who should be the inspection bodies**, the following replies were obtained:

- Most stakeholders in the government and private sector suggest that NAFIQAD (formerly NAFIQAVED) should be in charge. Representatives of one company

- suggest that in addition to NAFIQAD other Government bodies should also be involved (e.g. VN Chamber of Commerce and Industry).
- A few suggest that other independent inspection bodies should also be accredited (e.g. international companies such as SGS, and national bodies such as FITES).

At the moment there appears to be little between the official government department in charge of quality assurance – i.e. NAFIQAD – and international companies with their branches in Vietnam (e.g. SGS). This raises the question as to the need to have more Vietnamese inspection companies involved in the fisheries sector (and related capacity building).

As to **which standards** to follow for a shrimp quality mark, the following was highlighted:

- Standard for Vietnamese should follow the key steps along the value chain;
- Standard has to reflect market requirements;
- Benefits have to compensate for extra costs.

Several pilot schemes promoting Good Aquaculture Practice (GAqP) have been or are being implemented mainly by NAFIQAVED (now NAFIQAD) in different parts of the country. To some extent this was influenced by FAO guidelines, and regional activities by NACA.

More details about aquaculture production standards are presented below in the section dealing particularly with this topic.

As for the **role of associations**, it was suggested that VASEP should be involved in areas such as standard setting, oversight, and promotion amongst members and in overseas markets.

VINAFIS should be involved in areas such as standard setting, oversight, and farmer organisation. At the same time, it was also recognised that VINAFIS lacks resources.

The scheme will be implemented by individual producers who improve their production standards. They will require support in this from various sources, in particular, Aquaculture Department, extension services, VINAFIS, and processors. The latter are especially important in that they provide the link with the market and obtain feed-back on quality and production standards. They have an interest in improved production standards in order to access markets which place emphasis on these attributes.

Given that the bulk of aquaculture shrimp is produced by small-scale producers, it appears important that farmers get organised in groups to implement relevant schemes. This has several advantages, such as improved bargaining power (e.g. for input purchases, and output marketing), and facilitation of extension exercises. Table 1 provides an overview of advantages and disadvantages of group cooperation, for the groups encountered during the course of the fieldwork.

Table 1: Advantages and disadvantages of different types of producer groups

	Advantages	Disadvantages
Aquaculture management board	<p>Similar to Commune management board – only whit emphasis on water mgt. Therefore there is a certain familiarity</p> <p>Ponds are run on individual basis; therefore success depends on individuals (is this a pro or a con?)</p>	<p>Only lose cooperation (can be advantage or disadvantage)</p>
Team / group cooperation according to decree '151'	<p>Groups facilitate technology transfer and pond design</p> <p>Groups can obtain capital from the bank</p>	<p>Scale of the groups may be cumbersome – e.g. there may be conflicting ideas in larger-size groups (e.g. 300 families)</p>
Cooperatives	<p>They have to follow the regulations and there is therefore a certain structure in place, including chairman and board – this facilitates decision making</p> <p>Cooperatives can be quite large with 1000 or more members</p>	<p>Chairperson and board may lack experience and are not familiar with technology – as a result, a lot of training and handholding may be required.</p>

Box 1

Case Study: Aquaculture Cooperative Team “Nhi Nguyet”, Dam Doi District, Ca Mau Province

Mr Tran Van Quy (Vice-director of Coop team) and Mr Dang Ba Quan (Technical adviser). The two leaders don't have a salary from the cooperative. They have ponds and produce themselves.

This group of aquaculture producers consider themselves as Cooperative team for aquaculture that has been founded under the Decree 151, (i.e. relatively loose cooperation, without the full registration required for full cooperative). There are 70 families in this coop – this always includes men and women, old and young people.

The coop team was established three years ago. There are 70 families in this group, which receive training from the fisheries department and extension centre of Ca Mau province. They have received a certificate for the training obtained from DoFi.

They received GAP related training from fisheries extension centre and NAFIQAVED - the latter's training document was used, a copy of which was later obtained in hard copy and soft copy.

They have a contract with Phu Cuong company for the sale of their shrimp. The total area is over 70 hectares, i.e. about 1 hectare per farmer or slightly above. The pond size is about 3000 sqm.

In their case, GAP involves the following elements: pond design, water supply system, treatment, controlled seed supply (they have contract with two companies that have hatcheries – Minh Phu in Ninh Thuan and Thanh Cong in Nam Can).

They produce 100% monodon. They use PCR to control seed. For feed supply they use a famous supplier “Tom Boy”.

The total production during the last years was as follows;

2007: 250 tonnes / 2 crops;

2008: > 300 tonnes / 2 crops expected;

Shrimp density : 30 pieces / sqm => 30 gr / piece ;
 15 pieces / sqm => 50 gr / piece.

Feed conversion rate. 1.6 / 1.7; i.e. the amount of feed required to produce one kg of shrimp.

Price for smaller shrimp has decreased from VND 120,000 / kg to 84,000 / kg. Price for larger shrimp (about 20 pieces / kg) is still 136,000 / kg.

Profit: used to be 30% of total production costs; but is now only 20% because of increased production costs.

Production costs: per hectare, to produce 3000 kg of shrimp;

Investment: 95 million VND / hectare
Seed: 45 VND per PL piece; 50,000 required per hectare plus about 20% to counter mortality;
Feed : 24,000 / kg of feed => about 40,000 per kg of shrimp
Bioproducts: 10,000 / kg of shrimp
Labour: 10,000 / kg of shrimp
Oil / fuel for aeration: 17,000 / kg of shrimp

Shrimp PL survival rate: 70 – 80%. 1 crop takes about 4.5 to 5 months. Profit: VND 20,000 / kg of shrimp. Price: VND136,000 / kg of shrimp; Pond gate.

Yield: 6 tonnes / crop / hectare => intensive production. They don't use 100% of their area for aquaculture; also the area was increased step by step.

GAP training:

They didn't have to pay for the training, only the factory. This is a pilot project – so all the training is from the Government. In the context of Decree 151, DARD tried to organise farmers accordingly (on a voluntary basis).

Advantages of a cooperative team: technology transfer from Govt.; easier for groups; access to credit for pond construction, e.g. 50 million VND; Govt provides electricity infrastructure; they still have to pay for electricity.

Brand name: They feel they already have brand name (i.e. name of the cooperative) for selling to factory; Coop leader thinks brand name is ok for the country. He believes in a contract – i.e. if they have a signed contract with a company.

They sign contract with company and they have to deliver – but they get 2000 VND more per kg for transport costs which they incur. Sometimes they also sell through agents.

Payment options for GAP: they feel factory should pay. Also, there is no need for farmers to pay if Govt does inspection.

Future of the cooperative: Plans to introduce vannamei. They are applying for vannamei production on 14 hectares.

Source: Fieldwork, September 2008

INTERNATIONAL MARKET FOR VIETNAMESE SHRIMP

Characterisation of the Major Markets¹

Global shrimp supplies are increasing rapidly due to farming which is making tropical penaeids far more abundant. Change stimulated by this includes:

- Key traditional supplies like cold water shrimp have been dwarfed
- The rapid production increase did not undermine price originally
- That changed after 2000 when prices declined and did not recover
- Earlier price stability was probably due to the reducing fishery (then the largest contributor) offsetting increases in farmed output.
- The result has been the emergence of a highly price-sensitive commodity market for shrimp

The main OECD member states were the traditional market for prime shrimp. They still are, but their 85-90% share of the global market has been dropping – to below 60% for the first time in 2007. Table 1 summarises developments in these markets since 2000.

Table 2: OECD Trade in shrimp 2000-2006: (Units tonnes '000s, live weight)

Units: 000tonnes Live weight	Imports	USA Landings*	Total	Imports	Europe EU Landings	Total	Japan Imports	Total OECD Imports	Total OECD supply
2000	620	124	693	541	81	621	466	1,627	1,780
2001	720	119	790	579	81	660	450	1,748	1,899
2002	772	111	831	580	70	650	466	1,818	1,947
2003	907	120	967	673	75	747	450	2,029	2,164
2004	931	122	1,004	668	92	760	479	2,077	2,242
2005	881	123	935	745	88	834	468	2,095	2,237
2006	968	128	1,054	797	86	883	478	2,242	2,415
2007	913	121	979	804	83	887	438	2,155	2,304
Growth	% per year								
1990-2007	4.8%	-0.5%	4.1%	4.5%	0.9%	4.1%	-0.2%	3.3%	3.0%
2000-2007	5.7%	0.4%	5.1%	5.8%	0.4%	5.2%	-0.9%	4.1%	3.8%

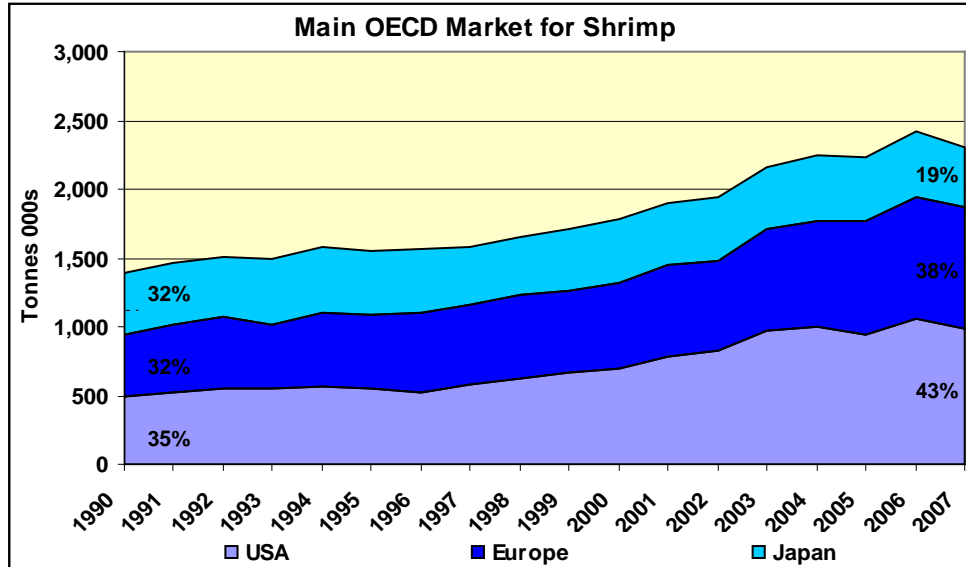
Source: Globefish, Infish, NMFS (USA), Eurostat (EU), FAO production Napfisheries Database

In 1990 the three main OECD markets, the USA, Japan and the EU were approximately equal in size. By 2004 the USA was clearly the leader with 45%, whilst Japan had dropped to 20%. By 2007 Japan had declined further to 19% whilst Europe was narrowing the gap with the USA. The total market has been growing though, so it is only the Japanese market that has been static over the past 18 years. The EU and US

¹ Details of international markets are presented in Annex 3

markets have both been growing at 4%pa over this period, a rate they have maintained over the past 5 years. EU imports are growing slightly faster recently at 5%pa though.

Figure 2



Outside the OECD, it is the Asian tigers, and especially China that are the new expanding markets. However shrimp sales are growing globally including those in Latin America, and the Former Soviet Union including Russia

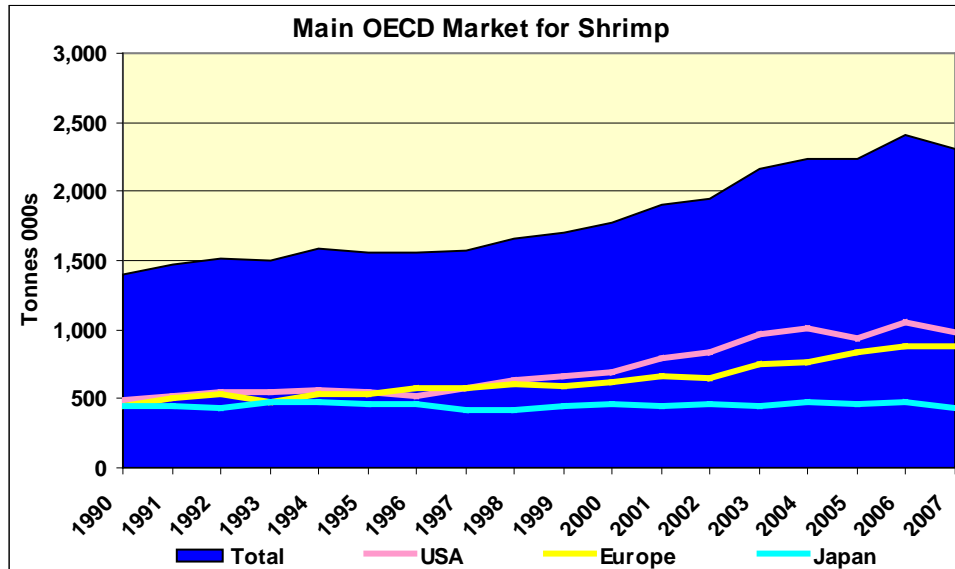
Table 3 provides an indication of the make up of the market for internationally traded shrimp, based upon the sourcing of farmed shrimp. Five years ago black tiger was clearly the predominately farmed species and contributed 54% to OECD supplies. As the table shows, by 2007, the situation had reversed in favour of white shrimp (*P vannamei*) which is now the dominant farmed species (nearly 60%) Cold water shrimp has maintained its position with 16% of the market.

Table 3: The OECD Market for Prime Shrimp: Key Characteristics

Country	Value (CIF) \$billion	Proportion of main shrimp groups in national imports (2007)			Preferred product
		White shrimp	Black tiger	Cold water	
USA	4.1	73%	26%	1%	Favours shell-on tails (HLSO) but added value imports (peeled, breaded etc) are growing
Europe	4.0	45%	21%	34%	Almost as large as the US market but complex and diverse (see below)
Japan	2.1	48%	40%	12%	Favours frozen raw shrimp & black tiger, but is half the US market's size
Total	10.2	57%	27%	16%	Weighted average

Figure 3 gives an alternative presentation of the way OECD trade in prime shrimp has evolved over the past decade and a half. This highlights the way that the Japanese market has faltered, partly due to the lengthy economic downturn in Japan, but also in response to changing Japanese tastes. The way the USA market surged in the early 2000's (as shrimp prices declined) is also clear, as is its subsequent tailing off. It is Europe that has evidently shown growth latterly, as it approaches the USA's level of overall consumption.

Figure 3



Significantly though, individual consumption in Europe at 1.83kg/head/year is approximately 60% that of the USA's 3.37kg/head/year (or that of Japan at 3.44kg). This suggests that not only is Europe now the market growing most rapidly, but also has the greatest potential for expansion. As the subsequent discussion shows, it is also the market that is most diverse and so offers the best potential for niche players with specialised products. The subsequent sections consequently focus more on Europe than the other two markets.

Conclusions re the OECD market's potential for Vietnam

Total OECD (wealthy developed country markets) consumption of shrimp is 2.3 million tonnes in live weight terms (i.e. stated as the equivalent of whole shrimp to allow meaningful comparisons between different categories):

- USA & EU markets have grown fast at a steady 4-5% annually from 1990-2007
- Japan's market shrank at between 0.2% and 0.9% per year over this period
- Japan's share of OECD demand has been dropping steadily from 32% to 19%
- The USA's share grew fastest from 35% to 43%
- The EU share also grew from 32% to 38%
- The decline in the Japanese market is accelerating
- This is believed to be part economic, part a dietary change towards a western meat-based diet

- The US market has peaked and is showing signs of decline
- The EU market lagged behind the US market but has shown most recent growth.

The foregoing shows the Japanese shrimp market to be declining generally whilst the USA market has become both very competitive and difficult, with high technical barriers to entry (country of origin labelling and bio-security). The US market has also started to decline and current economic turmoil is more likely to damage the market for shrimp than improve it (even though the dollar's rise will lower prices). Furthermore the likely continued abandonment of anti dumping tariffs against leading suppliers to the USA will reinforce the strong competition that these countries represent.

In contrast, the EU is a market that shows most promise for Vietnamese shrimp exports, a finding reinforced by the fact that the EU market (i) still seems to be growing (ii) has potential for growth with the relatively low consumption levels (iii) is expanding with the increasing wealth of the new EU members and (iv) is diverse with niches that Vietnamese producers can exploit with their specialised production of large black tiger shrimp.

The Market for Black Tiger vs White Shrimp

Vietnam is currently in the early stages of developing white shrimp culture (*Litopenaeus vannamei*) nationwide. The debate as to which species Vietnam should concentrate upon is then perforce underway and urgent. This has important implications for any branding campaign, because there must be clarity regarding whether either or both should be the flagship species to promote. Accordingly we take a brief look at how the international markets for these two species have developed during this decade.

Global totals are also given in the figure (in shaded areas) and these show an overall decline from 60% to 30% in black tiger proportion of total imports. However growth in the industry overall has tended to offset this percentage decline, and has in fact held the actual volume of black tiger imports at 370,000 tonnes. Thus though black tiger has become a relatively niche product, this niche remains large.

Value Chain and Price Structure in Key Markets

Shrimp prices have been falling as production expanded, but the underlying price structure has remained intact with size grade differentials maintained. Some niche products have fared better (eg large whole shrimp) and although black tiger prices are largely simply a result of larger average size, a qualitative premium over white shrimp (10-15%) has developed latterly.

The future outlook for the shrimp farming industry is for a significant price squeeze on producers who will experience lower sale prices whilst costs increase. The rise in the dollar will alleviate this in international markets, but probably only temporarily. Therefore competition will increase, especially in the commodity segment, and price seems likely to become the dominant determinant provided critical hygiene and quality thresholds can be met. A period of difficulty as markets adjust to these realities (as well as a likely global recession) seems to be inevitable.

THE VALUE OF BRANDS IN KEY MARKETS

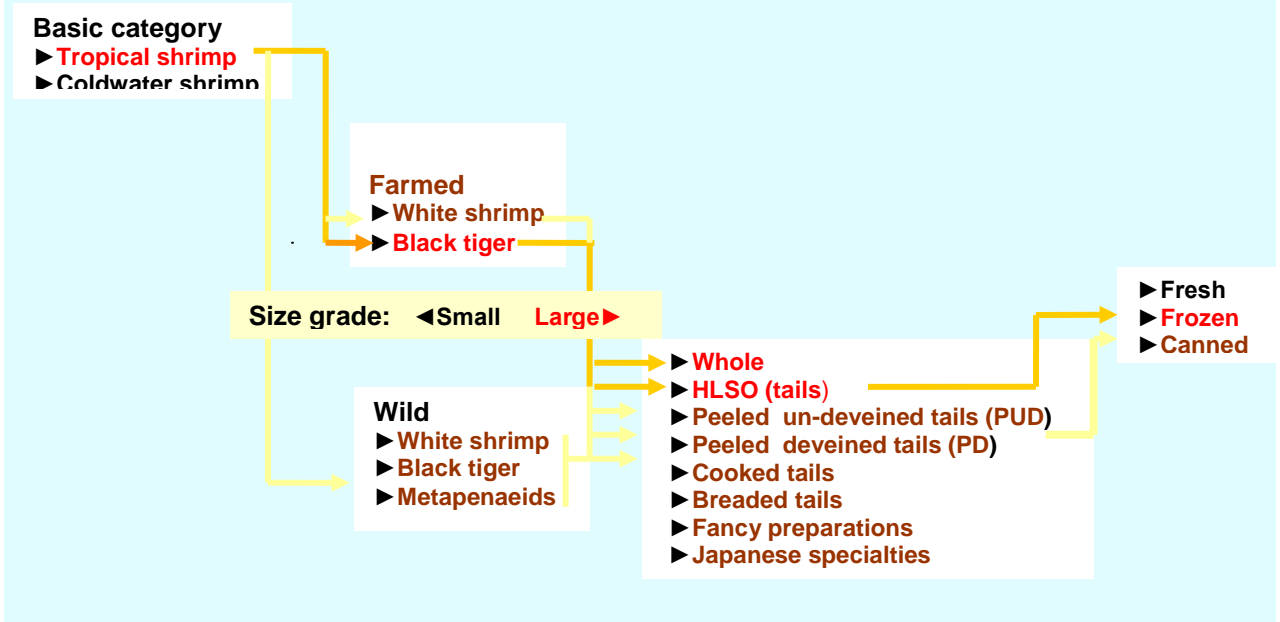
The preceding sections review the global market for shrimp, and especially that for species produced by Vietnam. This section takes that as a contextual basis for more specific investigation of the implications for branding Vietnamese shrimp. Firstly this involves assessing the market from a different perspective – that of Vietnam as an exporter. The intention is to establish Vietnam's position within the global marketplace in order to establish which markets should be addressed and what approach is most appropriate.

Subsequently we look more closely at both the international market's view of Vietnamese products and at traders and commentators views of the prospects for a national brand. This was seen as particularly important - because these people are those most critical to any branding campaign. Accordingly we interviewed as many key individuals as possible (given the limited time available) – concentrating on Europe for reasons discussed above. We took advantage of a conveniently timed seafood expo in Spain (Conxemar, Vigo) to cover Southern European markets and further interviews with leading UK, German and Dutch firms were held to assess the North European markets as were a few with US and Japanese companies. This represented a slight deviation from the Term of Reference, but was seen to be crucial and announced as such during the Briefing Workshop in September.

Positioning Vietnam in the Global Market Place

So where is Vietnam positioned in this market as an exporter? For all that it has become a commodity market, shrimp is in fact a complex product involving a wide range of species, size grades, product styles and processing categories. Understanding these is the first step here, and Figure 16 sets the scene for so doing.

Figure 4: Shrimp product matrix showing Vietnam’s position as a supplier

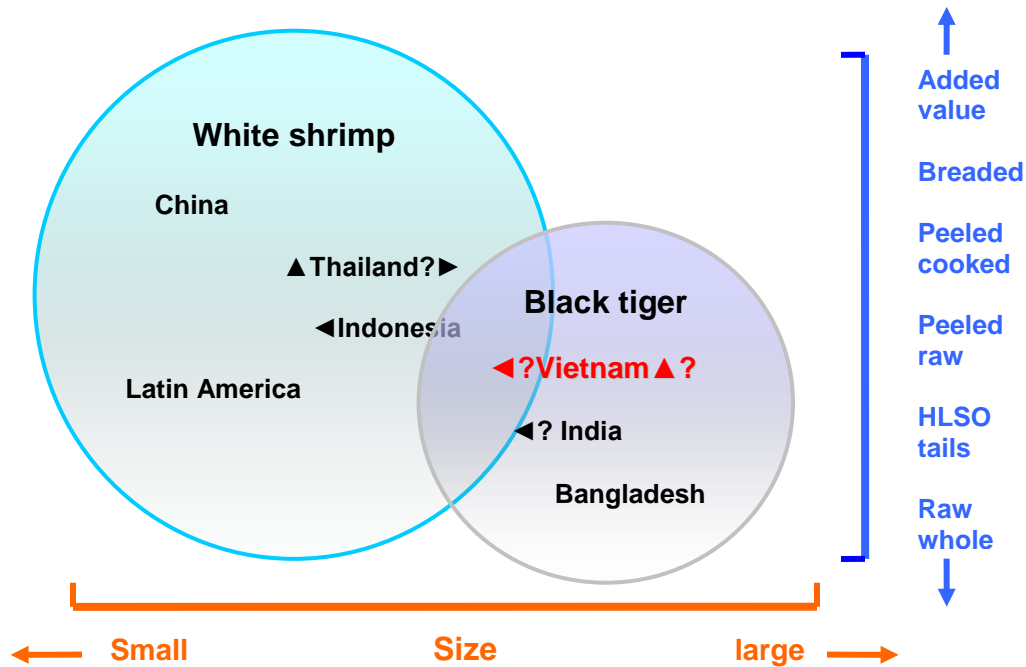


This figure lists most major categories that traded shrimp can belong to, following the value chain in the format of a “critical path” through the options. Items shown in the figure in red and connected by thick lines are those most applicable to Vietnamese shrimp, whilst those in brown and linked by pale lines are also relevant. Large farmed black tiger, frozen whole as shell-on tails is clearly the “signature” product for the Vietnamese industry. The question is then, how does this position Vietnam within the global market for shrimp. Figure 17 is a diagrammatic representation of the positioning of most of the leading shrimp producing regions/countries. Collectively they are responsible for over 90% of all farmed shrimp production.

The diagram segregates the industry into white and black tiger (with area diagrammatically reflecting the approximate 72.5% to 27.5% current split between the two), and has two axes. One axis denotes size grade, the other shows levels of value added, from raw whole shrimp to sophisticated processed products. These determine the countries’ positions on the matrix – For example China and Latin America are both white shrimp producers, but at opposite ends of the processing spectrum, whilst Bangladesh solely produces black tiger. The status of other countries is in flux, with India considering a move to white shrimp, a process already well advanced in Thailand and Indonesia. However, Thailand is now said to be considering reverting to black tiger to some extent (chasing better prices), whilst at the same time increasingly moving up the value added chain.

So where does Vietnam fit in this picture? Dynamically would seem to be the answer moving both towards the white shrimp segment as vannamei production increases and up the value added chain. Branding decisions then need to take due note of this potential repositioning of Vietnam’s shrimp industry.

Figure 5: Vietnam’s Position Amongst the Major Shrimp Producers



Conclusions for Vietnamese Shrimp Export

Vietnam’s position in the global marketplace is complex. This is because it differs considerably between the major markets, and apparently lacks a distinct international profile. The principal common factor is Vietnam’s pre-eminence as a black tiger producer of course, but this is expressed differently in each major market as the following demonstrates.

- Japan:** Vietnam has become the lead contributor to Japanese shrimp supplies (around 20%), but this is a market subject to three indicators that are signalling decline – (i) the size of the shrimp market overall, (ii) the proportion of black tiger in this market and (iii) Vietnam’s contribution to supplies (in both proportionate and absolute terms). Japan does clearly remain a crucial market for Vietnam, but one where further growth in sales will evidently be challenging given (i) the likelihood of continued contraction, both overall and of the black tiger proportion and (ii) Vietnam’s already large presence in the market.
- The USA:** Vietnam’s position in the US market differs radically from that described above for Japan. Vietnam is a relatively minor player (7% of imports) targeting a specific niche – that for the largest shrimp size classes, a niche that Vietnam dominates. The antidumping campaign has no doubt held Vietnam back as a supplier and the slow abandoning of this will help future development of the market. However, the challenge will be to adapt to the strength that some entrenched exporters have gained in the market (Thailand, Indonesia and Ecuador) and adjust to

this market's reorientation towards white shrimp. In short, Vietnam will have to become a highly cost effective producer of white shrimp, able to satisfy US quality and related standards.

- **Europe.** The situation in Europe is of course more complex, reflecting the level of internal diversity described above. Some general points can be made though. Firstly, Vietnam's shrimp exports to the EU are small in both absolute and relative terms – at around 30,000 tonnes (live weight) and 2-3% of this region's total shrimp import. Given Vietnam's success with pangasius this is strange. When Spain is considered it is even stranger – Spain being the largest EU market for shrimp but a minimal importer of shrimp from Vietnam, in spite of proving highly appreciative of Vietnamese pangasius. Vietnamese shrimp has made more progress in some other "southern" countries – Italy and France, but it appears to be the northern markets that are most susceptible, with Germany, Netherlands, Belgium and UK all amongst the top five markets. The result is then a rather anomalous situation where the smallest shrimp market amongst the EU's "big five" economies – Germany – is at the same time the largest market for Vietnamese shrimp. Taken together this suggests that there are imbalances in the EU shrimp market where Vietnam is concerned. The underlying thesis here is that this should provide opportunity.

Previous characterisation of these markets earlier in this report had already suggested that there are reasons for seeing the EU market as offering the best prospects for Vietnam's shrimp exporters. The conclusions reached immediately above regarding Vietnam's position in the global shrimp marketplace support that view. They point to a market that is relatively unexploited by Vietnam as yet. It is also a diverse market open to the sort of niche development that might suit Vietnam well (eg black tiger, large shrimp). This then focused subsequent canvassing of market opinion regarding branding upon the EU, and this is the subject for the ensuing sections.

The Market's Opinion of a Vietnamese Shrimp Brand

Branding seafood. Seafood trade in the main OECD markets is very complex, and although the major linkages have been outlined above (section 1.1), the descriptions greatly simplify the reality. Faced with this complexity, this section has to restrict its focus to aspects of particular relevance here – ie those that relate to shrimp branding and its implications for Vietnamese producers and exporters.

A previous study of branding of Vietnamese seafood made a clear distinction between consumer or retail brands and trade brands, along the following lines:

- **Consumer or retail brands** are widely recognised "household name" brands that depend upon widespread advertising and promotion. *This tends to be hugely expensive to both build the brand and to maintain it.* Image is crucial and media coverage is essential - indeed in some cases the actual substance of the product is far less important than the image (eg designer-label items).
- **Trade brands** are much narrower concepts, targeted very specifically on those within the industry. *This means that only a few hundred or at most, thousands of people need to be influenced rather than millions.* The focus is accordingly much

tighter, concentrating upon technical rather than image based aspects. Furthermore, the cost is of course far lower.

As mentioned before, the distinction between trade and retail branding is partially a function of the stage along the value chain that is involved. Trade brands target the stages in the value chain that precede sale to the end user- whilst consumer brands target the end user. We start by considering the role of brands in the key markets below.

The Role of Processors and Retail Brands in Key Markets

The point has already been made repeatedly that Europe is a highly diverse market that resists attempts to treat it as a single market. There are common trends though: For example there is the general move towards frozen products rather than fresh, whilst convenience is increasingly replacing home preparation as the norm. Even the parts of the EU where traditional approaches to food prevail are seeing the rise of the time-poor cash-rich syndrome that favours both eating out and use of ready meals at home. South/north differences remain important though and this section looks at these two broad regions separately, starting with the North and with trade brands.

Northern markets. It is the northern European markets that import most Vietnamese shrimp (over 70%) and so are particularly relevant here. There have been some significant changes in these markets from a branding perspective, and the impact of this upon **trade brands** is instructive. A past study on branding for POSMA distinguished between “hard” and “soft” branding, the former relating to measurable quality and hygiene aspects, the latter to consumer perceptions and concerns – typically regarding the environment, social justice or naturalness of farmed seafood (organics). “Hard” criteria will remain highly relevant, but some “soft” aspects are beginning to lose their effectiveness in the market. A case in point is organic shrimp, where UK traders report a collapse in demand in response to harsher economic conditions – customers are simply not prepared to pay the premium for organics now.

This is not universal though, as the ethical imperative retains its market potency in some northern markets. The reason for this is quite simple - major retailers are very keen to avoid the embarrassment that media or NGO campaigns can cause when an ethical scandal arises. Environmental concerns led the way, but latterly it has been social justice issues (eg child labour, land grabs) that have taken centre stage. Indeed the particular issue that has gained most credence at the consumer level lately has been FairTrade, thanks to extensive publicity and rapport with the public. These issues can be disproportionately damaging to a large retailer’s image when they become major news stories. This has led to moves to ensure that the retailers have a fall back position when such a crisis occurs, ie the ability to rely upon convincing answers from suppliers which exonerate the retailers, and are backed by relevant ethical certification.

This is then the principle role of ethical branding in north European markets. It puts the onus upon the suppliers, i.e. traders, including importers and processors. These have to become the buffer between the large retailers (and foodservice companies) and the overseas producers - a buffer with the expertise to deal with these issues. Put bluntly the retailers want to have someone to sue should things go wrong. However this is not entirely fair, as some players are genuinely concerned about ethical standards and

indeed in some segments of the market there is reward for virtue – ethical labels allow a price premium. This means two things: (i) traders have a key role in this market (ii) traders tend to be EU based companies, because the retailers have no wish to deal with the overseas suppliers if problems arise. Indeed, there is now a trend for trader/processors in the EU to reinforce their links with suppliers through setting up subsidiaries in the key shrimp producing territories like Thailand (ie the reverse of the US situation where Thai companies are buying US distributors).

The problems of confusion about (and duplication of) standards experienced by producers are familiar to EU traders. They appreciate the way that this increases producers' costs and it causes problems downstream – eg buyers being unclear what some accreditation means. For example, some don't realise that the ACC certifies plants and farms separately, falsely believing that accredited plants source purely from similarly accredited farms.

There is then the other main type of branding to consider– the **consumer or retail brand**, and the driving factor here has been the rise of the major retail chains – now huge global companies that dominate food retail in OECD markets. The outcome has been what is called the “wineglass market” with thousands of products funnelled through a very few retailers to millions of consumers. The retailers (as the “stem” of the wineglass) consequently have immense power in the marketplace, power they use ruthlessly to enforce their requirements back up through the value chain - to suppliers at every level. The principle consumer brand that imposes itself upon the consumers' collective consciousness is then of course that of the retailer. Any suppliers (eg processor or trader) who hope to promote their brand effectively in this environment have then to be very large and prepared to spend hugely on advertising to prevail.

As a result, shrimp products are primarily branded either by the retail chain (own label) or by only the largest of processors (traders per se tend not to develop retail brands). The balance between the two in the UK frozen seafood market was 48% processor brands (Young's and Birdseye) and 52% retailers (Tesco, Iceland, Asda) In both cases, the fact that large companies with high spends on advertising are involved has implications for what is a relatively small market segment like shrimp. In short, shrimp has to become just one part of a much broader mix if it is to achieve the economic critical mass to warrant promotion. Put another way, the message presented relates to the company rather than the product, and so shrimp has to “piggyback” on, say, a supermarket label (eg Sainsbury or Waitrose) or that of a large processor (eg Young's or Lyons). This is discussed in more detail below as a promotional issue.

Southern Europe The Southern European “Latin” markets are culturally different from those of the north, and this is reflected in their response to shrimp consumption. Latin consumers tend to be less inclined to buy processed or packaged seafood, preferring fresh whole products. This means that whole shrimp or shell-on tails are popular, sold fresh or cooked. Sales are consequently often made “loose”, ie unpackaged. Scope for conventional branding is then limited because the whole ethos of the offer is that it reflects traditional sale - as by the fishmonger. This is changing somewhat though as Anglo-Saxon marketing approaches become more prevalent (as discussed above) but prospects for branding are still arguably far more limited than in the north.

There is also another negative factor at play. Shrimp is a well established product in these markets, already well supplied by entrenched traders. Former colonial links used to be important, with Spain supplied from Latin America whilst France sourced from Madagascar and French West Africa. This has changed with the rise of highly competitive commodity shrimp where the most cost effective supplier wins – a move that saw China and Brazil take leading roles. This has become the key trend in the southern European markets – ie what matters is price and subject to adequate quality, this is now the key market driver as loyalty to producers has evaporated.

International Standards versus a Vietnamese Alternative

Northern Europe The logical conclusion is that the markets most likely to respond to branding of the sort considered here are those of northern Europe. These are then the main focus of discussion in this section, and the principle issue for the major Northern European retailers and caterers appears to be reassurance regarding all criteria that could pose a risk to them – principally food safety and ethical scandal (involving environment or social justice). Quality and meeting specification are of course important, but are increasingly being seen as a given (ie most suppliers can achieve the required standard). Supplier differentiation then tends to come down to risk management, and this is the aspect investigated here.

The key issue here is then how Vietnam is placed in this regard. Generally speaking, Vietnamese processors and exporters score reasonably highly with European importers, and there is widespread recognition that Vietnamese shrimp is priced competitively. There are however a number of issues that are germane:

- One major concern involves traceability back to the primary producer, ie the farmer or fisherman. Where the processors own their own farm, this is not a problem. Where they rely upon independent small farms it is, because importers do not believe that there is adequate control to ensure compliance with standards. The lack of adequate traceability compounds this by denying the ability to identify sources of problems when these arise. Central American producers are able to provide traceability back to hatchery broodstock and this is setting the standard, as are the cluster based schemes being established in Thailand.
- This concern applies also to the situation where a processor supports small farmers (ie finances their costs in return for guaranteed supply) where again the perception is that control is inadequate. This is because buyers in northern Europe suspect that this arrangement is frequently less close than is claimed.
- This applies to food safety and quality issues of course, but now also to the ethical arena. The reasons for this are set out in the preceding section – it has become clear that some ethical aspects are now becoming high profile concerns, especially for the major retailers in northern Europe and the USA.
- This does not apply to all segments of the market, though. The “ethnic” sector in particular is far less concerned about traceability, whilst ethical issues are simply not seen as relevant. Reputedly, major ethnic users (eg Indian and Chinese catering)

are content provided that product can” get through the port”, ie they accept the EU Commission (DG Sanco) standard as wholly sufficient.

- There is respect in some quarters for the emerging Vietnamese standard (VietGap) which is credited with improving food safety under guidance of Nafiqaved/Naviqad – giving traders comfort regarding Vietnam’s internal quality management systems.

These considerations colour the views of importers regarding the value of a Vietnamese national shrimp brand. Its value would essentially lie in the degree to which it provided convincing reassurance that internationally accepted standards were being met. In short, its credibility would depend entirely upon mirroring these standards closely - which would suggest redundancy (ie pointless duplication of the established systems).

There is a more important point though in that a national scheme would be viewed by some as self-certification and thus fundamentally suspect in principle. The Thai scheme (Thai Top Quality Product, “Q” mark) is for example not highly regarded by all, in spite of the vigorous support it receives from the Thai government. Interestingly, though, importers who are experienced traders in South East Asia felt that a ***national brand could have value “upstream”*** as a device to encourage small farmers to buy into quality cluster schemes.

Southern Europe: The overwhelming response to questions about Vietnamese shrimp from the Latin market (Spain and France) is that it represents excellent value for money. Opinion of Spanish and French importer/processors was less consistent regarding other aspects. The quality of Vietnamese shrimp was questioned, with more criticism of the quality of white shrimp than black tiger. Those most disparaging about Vietnamese shrimp tended to source elsewhere though, and perhaps understandably those who sourced in Vietnam were far more positive, especially concerning Vietnamese black tiger. Quality concerns raised by those familiar with the Vietnamese market related to the links between processors and the farms who supply them, and there were also issues regarding consistency of supply.

There was much greater consensus regarding what traders see as key issues. Tellingly, the “soft” ethical issues appear to have made little impression on these markets. The one such aspect that had some currency in Spain and France is fair-trade. It is clear that quality, and above all food safety are the aspects that traders and processors concentrate upon, with HACCP and DG Sanco the most valued quality assurance guarantors, followed by BRC and IFS. GLOBALGAP, GAA/ACC or a Vietnamese equivalent is all deemed to be less relevant. These markets then do differ significantly from those of northern Europe where branding is concerned.

The USA. The US market in many ways reflects that of northern Europe, with the common Anglo-Saxon heritage in evidence. Hard branding issues like quality and food safety have become “givens” – after all the USA both invented HACCP and were the first to apply it to seafood. Ethical soft issues have also begun to emerge in this market, much enhanced by the adoption of MSC and ACC accreditation as requirements by Wal-Mart the top retailer and its seafood foodservice equivalent, Dardens.

Resistance to farmed seafood as opposed to wild alternatives is another factor, but the degree to which these niceties will survive a possibly extreme economic downturn is a

very legitimate question – and one hard to answer as yet. The likelihood is that macro-effects of this sort are going to dominate the market for some time with increasing barriers to trade a real possibility. Antidumping action, higher duties as well as non-tariff barriers like bioterrorism legislation may then become the overriding concerns for exporters. This means that competing on price – surely now emerging as a crucial theme worldwide – will carry extra risk – ie that it could engender a protectionist response. Vietnam is of course all too familiar with just such a reaction to its seafood exports to the USA.

Japan: The way that the Japanese shrimp market is largely controlled by major trading companies has already been described. These companies deal directly with the processors and apply their own criteria, field their own inspection teams and monitor product quality rigorously in-house. Unlike Europe where *process* is the key issue (ie the state of the processing plant HACCP etc), Japanese importers concentrate on the *product* itself. Their concerns are with its quality and especially freshness – the distance between primary source and processing plant being a key issue. It is then not easy to see how a Vietnamese brand would be much more than duplication, and so be sufficiently relevant to add value to this trade.

There are quality issues for this market though as demonstrated by recent antibiotic contamination of squid and shrimp, and the negative impact that this had. Indeed, traceability back through the supply chain was specifically mentioned by Japanese traders. They see dual advantages in this – a direct advantage in reducing risks of contamination and an indirect one in easing compliance with the expanding bureaucratic requirements for importing seafood. If a national brand were to be instrumental in improving this situation through encouraging better management practices, then this would have real relevance here. Interestingly this reflects the views of some EU traders who see this as being the principal potential value of a national brand.

Key Conclusions Regarding Branding Vietnamese shrimp

The essential result to emerge from this enquiry is that there was neither clear justification for a major Vietnamese shrimp export brand on the basis of precedent or other justification, nor much of a welcome by OECD importers for such a brand. ***The shrimp market has become increasingly commoditised, and this has raised the importance of price, subject to reaching essential quality thresholds.***

This is essence of the situation, especially where **consumer/retail brands** are concerned, but there are a number of important qualifications:

- The commodity nature of the market is now extending to niche products like large black tiger. Price stood out as the key determinant here as well.
- Shrimp is an established product so scope for re-branding it or creating a positive national association (eg a “lotus” or “dragon” brand) seems to be limited.
- Doing so would anyway require the huge costs of consumer branding – a real risk in a market where it seems that “shrimp is shrimp” in the consumer’s mind, and what matters is size grade and price rather than specific origin.

- Where there is consumer branding of shrimp, this tends to be that of either the major processors or the huge retail chains, in the target markets. I.e. branding is not based upon the concept of “shrimp” per se, but the name of the processor or retailer.
- This is the way traders see the market, and so they are understandably generally unenthusiastic about a national Vietnamese shrimp brand.
- The situation regarding **certification** is different and has important implications for Vietnamese producers. This applies to hard (food safety) and soft (ethical) aspects, and requirements for both are increasing, especially in the Northern EU and US markets.
- What is driving this is retailers’ insistence that they are insulated against risk of either food safety or ethical problems. Certification provides both protection and an alibi should things go wrong.
- A national brand will not necessarily help in this regard either as it (i) is seen by traders as self certification and so suspect (ii) adds to the already excessive number of standards in play (redundancy) and (iii) would have to fight for retailer recognition in competition with established alternatives (Eg BRC, IFS, GLOBALGAP, GAA-ACC).
- This is clearly driven by the **external** factors of the international market. There is however a crucial **internal** dimension for Vietnam and this relates to **upstream traceability**. This is already a significant issue and is set to become more so.
- This has particular relevance to the northern European markets regarding both food safety and ethical matters - the EU markets where Vietnamese shrimp is most popular. It is also important for US and Japanese importers.
- It is in this connection that a **Vietnamese brand emerged as having real relevance – as a catalyst for developing traceability networks** and other quality related systems that link farmers to the export markets through the processors. VietGAP was mentioned by some traders positively in this regard.
- An “internal” **Vietnamese brand could help in eliciting a unified response from small farmers to the requirement for traceability** as well as persuading eligible small producers to buy into the concept.
- The irony is then that a Vietnamese national brand would have real value, but as an internal adjunct to traceability within Vietnam rather than as an external flag to bolster exports.

This should be viewed in the context of the possible increase in Vietnamese production of white shrimp (vannamei). If this becomes a major element of Vietnamese shrimp output, then the industry will be moving further into the bulk commodity market. This will reinforce most of the points made above, especially the key trio of price, traceability and sustainability. It could also open new markets to Vietnamese exports such as Spain.

The segment of the Vietnamese industry that will seemingly be perversely disadvantaged by these trends will be the artisanal producers. Whilst they score highly on ethical grounds (social justice, low environmental impact, low yields and an organic style of production etc), certification and traceability requirements will be cripplingly expensive. Resolving this in an economically viable manner will be challenging given OECD markets current preoccupations with control and traceability.

However, the more intensive and commercial producers stand to gain, especially if they can maintain Vietnam's status as a highly competitive producer. Taken together this must all signal scope for Vietnam's shrimp industry to emulate at least some of the success of pangasius, especially in Europe.

MAKING A STRONG BRAND THE IMPORTANCE OF STANDARDS

In creating a Vietnamese shrimp brand we want to increase the market share of Vietnamese shrimp products in key international markets such as the EU, US and Japan. This would involve international buyers making Vietnam their country of choice rather than favouring sources of supply in rival countries. To support this objective the Vietnam shrimp brand needs to be more than just an eye catching logo and strong marketing strategy. It is essential that the brand is linked to a set of attributes desired by the customer, and to be competitive Vietnam must be better at achieving these customer requirements than rival countries.

Buyer requirements

Major international buyers are always looking for the best quality available at the most competitive price, and have high expectations in terms of consistency of quality (reliable quality control systems must be in place), timeliness of delivery and reliability in terms of volumes supplied.

In addition major international buyers in the EU, US and Japan have to comply with stringent regulatory frameworks aimed at protecting consumers from foodborne illnesses. For fisheries products these are partly controlled by official procedures administered by the competent authorities in Vietnam and the target market. However, the food businesses in the importing country have legal responsibilities and market reputation to protect and normally have their own systems for food safety management.

Food safety is the most important requirement for all food businesses, but many businesses (especially those in the EU and US) also experience pressure from consumer pressure groups focussing on environmental protection, animal welfare and social welfare. Adverse publicity can seriously damage the brand reputation of the importing company, for this reason many importers are looking for guarantees that the shrimp producers protect the environment (avoid pollution, protect mangroves, avoid degradation of land), ensure animal welfare (optimal stocking densities and pond conditions, avoid “cruel” practices such as eye cutting and unnecessary stress during harvesting) and demonstrate corporate social responsibility for worker health and safety, support for local communities and avoid undesirable practices such as forced and child labour.

The bottom line for all international buyers is to protect the reputation of their brand image from adverse publicity of any type on any issue and if necessary to have a strong legal position (known as a due diligence defence) in the event of any serious public health problem to demonstrate that they took all reasonable precautions to protect the consumers health.

Legal requirements for exports to major markets (Official controls)

All governments have a duty of care to put in place systems for protecting consumer health. The EU, US and Japan have all created sophisticated national food control systems that take account of the need to extend their systems to third countries outside of their national or regional jurisdiction. In practice the governments of the major markets have regulatory frameworks, management, inspection, monitoring and surveillance systems that link to those operated by the competent authorities in Vietnam. For all of these markets processing facilities require prior approval and registration to export to the desired market. Processing facilities must have a functional HACCP (Hazard Analysis Critical Control Point) system for food safety management in place. Vertical and horizontal traceability systems are required to enable any food safety problems to be traced back to their point of origin. The government of the exporting country must have a competent authority (NAFIQAD in Vietnam) with adequate facilities for managing the local national food control system. The exporting countries national food control system must have suitable systems for inspection and monitoring of food businesses, national testing programmes, laboratories and staff that meet international standards (such as the ISO17025 laboratory standard). A system must be in place for rapid notification of potential public health problems between the producing and importing country.

In the case of the EU responsibility for inspection of third countries wishing to export to the EU rests with the Food and Veterinary Office (FVO) of the European Commission. The FVO makes periodic visits to countries to inspect facilities and publishes reports that give an idea of the performance of different supplier countries national food control systems. Recent FVO reports for Vietnam indicate that official controls of shrimp exports are operating quite well with a reducing incidence of detections of banned chemicals in shrimp over the last 4 years. Detections of non-conformances during pre-export testing were at 0.7% in 2006 and only 2 non-conformances were detected by authorities in the EU. This compares well with Bangladesh (another major producer of *Penaeus monodon*) whose pre-export testing programme had a non-compliance rate of 43% in 2006. In 2006, EU authorities detected 27 and 30 non-conformances for banned chemicals in shrimp imported from Bangladesh and India respectively.

Voluntary standards

Figures obtained from pre-export testing programmes give some indication of the performance of management and control systems in the producing countries. However, an element of caution is required as these figures represent an indirect measure of the existence of management systems and testing programmes only cover a minute fraction of the total production. For this reason most major food businesses want additional controls with some form of independent verification. This additional level of control is provided by voluntary standards. These are often called private voluntary standards as the majority of standard schemes are privately owned and operated. However, this need not be the case as in Vietnam the government is in the process of creating a government owned standard for Good Aquacultural Practice. Another example would be the Polish

Integrated Production standard. The Integrated Production standard is owned and operated by the Government of Poland but participation in the standard is voluntary. This is in contrast to legal requirements where compliance is mandatory. Participation in a voluntary standard scheme is said to be voluntary as the producer or processor can choose whether to participate or not. However, in practice for some of the major standards participation has often become a de-facto requirement for market access. For example virtually all processors of fresh vegetables in Kenya supplying major EU retailers are BRC or IFS certified. The majority of farms supplying these processors are GLOBALGAP certified.

Why are standards important for a strong brand image?

Voluntary standards schemes add an extra cost to production and processing of any product, for this reason farmers and food processors commonly ask the question why do we need these standards? In many cases stakeholders will point out that there has never been a major public health problem in the supply chain as a reason for not investing in private standards.

Voluntary standards do create extra costs and the operation of standards schemes has become a business in its own right. However, voluntary standards are important as they improve the management and control systems in the supply chain are independently verifiable and provide all players with an increased level of confidence that products will meet customer requirements. A national brand scheme linked to internationally accepted standards such as BRC and GLOBALGAP will be much stronger as the customer is clear what the brand represents in terms of meeting his requirements. Ideally the customer will recognise the Vietnam shrimp brand as representing excellent quality competitively priced products that are extremely unlikely to cause any damage to the customers brand reputation.

The risks associated with not having adequate standards in place are best illustrated with a couple of case studies. In the UK, John West is a well respected brand of canned fish products. This brand used to dominate sales of canned salmon in the UK with a large market share and excellent level of consumer confidence in the safety and quality of all John West products. In 1978, twenty people died from botulism poisoning after consuming canned salmon produced by John West. The company had quality management and end-product testing systems in place in all their processing plants. However, a simple design fault in plants in Canada and Chile created an opportunity for contamination with *Clostridium botulinum* with fatal consequences. This incident ruined the brand image of John West and it took approximately 15 years for the company to regain their reputation for safety and quality.

Many food companies around the world have been affected by the recent melamine poisoning scandal in China. A lot of companies using Chinese milk powder as an ingredient in their products felt that they had adequate food safety management systems in place. However, the problem was associated with lack of management systems at the level of primary production and consolidation of raw product. This incident has seriously undermined global confidence in China as a reliable supplier of food products. It also illustrates the importance of having standards in place throughout the supply chain (a farm to fork approach).

Suggested coverage for the shrimp brand

Before looking at which standards would be appropriate for a Vietnam shrimp brand it would be useful to define the coverage of the brand as this will influence the choice of standards. The Vietnam shrimp brand should cover most (see exclusions) conventionally produced tropical shrimp products including all types of added value product. The standards that will be used to support the brand-name are of the horizontal type and apply to all forms of shrimp aquaculture and food processing, hence there is no issue of species specificity.

Exclusions from the shrimp brand

Although it would be desirable to have an all inclusive brand for Vietnam shrimp there are three categories of product that should be excluded from the main brand. Dried shrimp processing should be excluded from the Vietnam shrimp brand as this product is typically prepared by small artisanal processors under very unhygienic conditions. These processors do not operate to the high standards found in the large shrimp processing factories that export to EU, US, Japanese and Korean markets. The majority of these processors lack the capital required to upgrade their operations and hence could not meet any of the standards required for access to the Vietnam brand. A lower category could be created for these processors but this would tend to degrade the value of the main brand and create a risk that problems in these factories might come to be associated with all Vietnamese shrimp due to customers being unable to distinguish between the different types of shrimp processor.

Organic production such as the eco-shrimp farming seen in Ca Mau produces a high value specialist product that should be clearly distinguished from lower value conventionally produced products. Organic production merits its own brand with strong marketing placing special emphasis on the uniqueness of the product and the environmental benefits associated with this type of production. In order to access the organic brand producers would have to provide evidence of having a international organic certification such as the Naturland Organic Aquaculture standard. In order to comply with regulatory requirements organic production must be processed and packaged separately on clearly designated lines at the processing factory. Organic products must comply to the Codex Alimentarius Commission guidelines for organic production (GL32-1999 rev1-2001) and any market entry requirements such as the regulations required for importation of organic products into the EU (EC/2092/91 as amended by EC/1804/99).

Wild caught shrimp is no longer a significant source of shrimp for export processing industries in Vietnam but still exists as one of the routes of supply for local markets and many of the dried shrimp processing industries. Wild caught shrimp should be excluded from the Vietnam shrimp brand as the required management and control systems associated with aquaculture standards cannot be applied to wild caught material and traceability is limited.

Farm to fork approach for standards compliance

To create the strongest brand image it is vital to take a farm to fork approach whereby a package of standards are provided that cover all aspects of production and processing of tropical shrimp through to the point where the consignment leaves the borders of Vietnam. Ideally Vietnam should aim to have a more comprehensive and seamless system than that of rival countries producing similar products. At the present time Vietnam is strongest in the area of shrimp processing. Primary production is much weaker with a lack of standards and low level of traceability raising the risk of problems occurring before the shrimp reaches the processing factory. Standards for processing and primary production are dealt with in separate sections below.

Voluntary standards for shrimp processing

All shrimp processing facilities exporting to the EU, US, Japanese or Korean markets have to meet the legal requirements of their target market and be registered with the competent authorities of the target country or region. In every case registration is only granted following inspection by representatives of the importing countries competent authorities. In every case the factory must demonstrate that they have a functional food safety management system based on the Hazard Analysis Critical Control Point (HACCP) system. The legal minimum for market access is designed to ensure that all processing meets the minimum standards for food safety in the target market. However, food businesses in these markets are legally responsible for ensuring that products they sell are safe and they also have a brand reputation to protect. For this reason many importers of fisheries products require that the processing plants obtained certification to internationally accepted standards for safe food processing. Many of these standards exist but three major standards dominate the world of fish processing.

BRC & IFS

The British Retail Consortium (BRC) Global Food Standard and International Food Safety (IFS) standard are British and German standards for total quality management in food processing that include pre-requisite programmes, HACCP and a range of other topics aimed at providing a comprehensive food safety and quality management system for the factory. The content of both standards is extremely similar covering HACCP, quality management systems, factory environmental standards, product control, process control and personnel issues such as training, hygiene, medical screening and protective clothing. In theory factories only need one of these standards. However, in practice some buyers ask for BRC whereas other prefer IFS, for this reason many factories have both BRC and IFS certificates in operation. This does not involve extra systems in the factory but adds extra costs as the factory must prepare for two audits and pay two sets of certification fees.

SQF2000

The safe quality food (SQF) family of standards is owned by the SQF Institute a division of the Food Marketing Institute in the USA. There are two SQF standards (1000 and 2000) to cover primary production and processing. These standards are very similar in layout and content with relatively minor differences to take account of the different operating environments. Both standards are generic codes for implementation of pre-requisite programmes, HACCP and risk management procedures as part of a food safety management system. Each standard has three levels and users can only use the SQF1000 or 2000 logo when they pass the highest level of the standard. Level one focuses on pre-requisite programmes (good manufacturing and good hygienic practices), level two deals with HACCP and level three involves using risk assessment and management techniques to complete the design and implementation of a food safety management system. Both SQF standards have additional “voluntary” modules dealing with environmental and social practices. The term voluntary is used in this case to imply that passing these modules is not a condition of obtaining any of the levels of the standard. SQF2000 offers independent verification that the factories pre-requisite programmes for food hygiene, HACCP plan and procedures for risk assessment and risk management are functionally correctly. The standard is well constructed and is quite popular in US and Australian markets. However, it seems to be considered by many buyers to lack sufficient depth to meet their requirements for total quality management within the factory. Most factories visited during the field work showed no evidence of having SQF2000 in place. One factory had files for SQF2000 on the shelf in the quality managers’ office. The manager reported that major buyers were unsatisfied with the content of the SQF standard so the factory had upgraded to both BRC and IFS standards to meet the requirements of different markets.

Global Aquaculture Alliance standard for Best Aquacultural Practice (BAP)

The Global Aquaculture Alliance is a US controlled standard owned by 11 of the major US fish importers and having a buyer membership of 20 US food companies, 2 Canadian and 2 British food businesses. Certification is administered by the Aquaculture Certification Council (ACC). The BAP standard is divided into three parts to cover hatcheries, shrimp farms and shrimp processing facilities. In Vietnam 6 of the larger companies had obtained BAP certification for their processing plants by August 2008. The overall content of the standard is similar to that of BRC or IFS but the layout is very different as BAP is a specific standard for shrimp processing with detailed and quite prescriptive controls. In contrast BRC, IFS and SQF2000 are generic in nature being intended for application to any food processing plant. With BAP it is only necessary to follow the criteria stated in the standard to complete certification. For any of the generic standards it is necessary to determine what the specific requirements are for tropical shrimp processing and then incorporate these into the factories management system.

Linking existing process standards to a Vietnam shrimp brand

Many of the processing factories already have voluntary standards in place and hence there is no need to select a particular processing standard. To be inclusive of the legal minima and existing voluntary standards it would be desirable to create a set of levels for the brand with appropriate coloured backgrounds to the main logo to denote the level of standard in use in the processing factory. Three levels could be envisaged, bronze,

silver and gold. Bronze level factories must meet the legal minimum for export to the EU, US, Japanese or Korean markets. Silver level factories would have SQF2000 in place and gold level factories would need to demonstrate that they had a valid BRC, IFS or BAP certificate. If SQF2000 is found to be redundant within the industry it would be possible to reduce to just two levels for the processing side of the brand. The processing logo with colour coding to indicate level of standard in place would be the logo seen by the customer on packaging, documentation and promotional material. The link between the processing standard and primary production is discussed in a later section of this report.

Voluntary standards for conventional shrimp production

Many standards have been developed or are being developed to meet the requirements for good aquacultural practice in conventional production of shrimp. A summary of the most important standards for Vietnam is given below with recommendations as to which standards would be most appropriate to link to a national shrimp brand.

GLOBALGAP Tropical Shrimp standard

The GLOBALGAP family of standards managed by Food-Plus GmbH are the most advanced and comprehensive farm-gate standards available and cover a very wide range of food products. GLOBALGAP traces its origins back to 1996 when 11 British and Dutch retailers met to discuss the need for a single standard for fruit and vegetable production. In its current form GLOBALGAP is controlled by 39 retailer members from the EU, Japan and USA. There are more than 100,000 GLOBALGAP certified producers operating in 85 countries. The GLOBALGAP tropical shrimp standard is quite new, development started in 2005 and the final version of the standard was released in April 2008. Two certifying bodies have registered to provide certification services and more are likely to follow as certifications start to occur. GLOBALGAP has strong retailer support and will become an important standard for primary production of tropical shrimp. A detailed assessment of GLOBALGAP and comparison with the US BAP standard are provided in annex 1. GLOBALGAP has advantages over BAP in having options for group certification aimed at supporting small-scale growers. There is also a smallholder taskforce charged with looking at difficulties faced by small-scale producers in meeting GLOBALGAP requirements. GLOBALGAP is a big challenge for smallholders and this topic will be discussed in more detail later.

Global Aquaculture Alliance (GAA) standard for Best Aquaculture Practice (BAP)

The Global Aquaculture Alliance is a US controlled standard owned by 11 of the major US fish importers and having a buyer membership of 20 US food companies, 2 Canadian and 2 British food businesses. Certification is administered by the Aquaculture Certification Council (ACC). The BAP standard is divided into three parts to cover hatcheries, shrimp farms and shrimp processing facilities. In Vietnam 2 large hatcheries and 2 large-scale farms had obtained BAP certification for their facilities by August 2008. The structure and content of the BAP standard is discussed in detail in annex 1 which also provides a comparison between BAP and the GLOBALGAP tropical

shrimp standard. In brief, BAP is quite similar to GLOBALGAP in most respects but some aspects of the standard are less well developed and the auditing and certification system is not compliant to ISO Guide 65 / EN45011 raising concerns that the verification process might not be completely independent and transparent. This potential problem has been recognised by GAA and ACC and ACC is now in process of getting ISO Guide 65 accreditation. BAP is written for single farms and hatcheries and makes no provision for group certification. This is a major limitation when considering small-scale production as individual farmers would struggle with the technical content and could not possibly afford US\$500 for annual registration plus an unspecified amount of fees for auditors costs and laboratory analyses.

What topics are covered by the GLOBALGAP tropical shrimp and Best Aquaculture Practice standards?

The content of these standards is quite similar although layout and regulation of the operation of the standards is quite different. The core elements of both standards are traceability, HACCP and good hygienic practices for both animal and human health. Vertical traceability is ensured via coding systems operating to farm or pond level. These unique identifying codes are reproduced on documentation and packaging allowing the final customer to trace product back to the producer's farm and even to pond level in the case of larger operations. The same coding system is linked to requirements for detailed documentation and record keeping on the farm. This allows for horizontal traceability as the customer can not only trace the origin of the product but also determine what happened to the product, when it happened and who was responsible for problems occurring. For example if a approved veterinary drug is detected at concentrations above permitted levels, the customer can determine from the records which drugs were used, the date of applications, persons responsible for authorising use and administering drugs, details of required withdrawal period and actual harvesting date. In this case it is most likely that premature harvesting has occurred and corrective actions can be applied by re-training of personnel responsible for authorising harvesting and factory staff who approve consignments of raw material arriving for processing.

Other topics covered by the GLOBALGAP and BAP standards include:

- Fish welfare
- Farm chemicals
- Veterinary medical drugs
- Analytical test programmes
- Fish feeds
- Records and documentation
- Training of staff
- Chemical storage
- Hatcheries
- Site management
- Quality management systems
- Harvest practices
- Worker health

- Protective clothing and equipment
- Social welfare
- Environmental protection and conservation
- Waste disposal
- Pest control
- Complaint procedures (GLOBALGAP only)

SQF1000

The safe quality food (SQF) family of standards is owned by the SQF Institute a division of the Food Marketing Institute in the USA. There are two SQF standards (1000 and 2000) to cover primary production and processing. These standards are very similar in layout and content with relatively minor differences to take account of the different operating environments. Both standards are generic codes for implementation of pre-requisite programmes, HACCP and risk management procedures as part of a food safety management system. Each standard has three levels and users can only use the SQF1000 or 2000 logo when they pass the highest level of the standard. Level one focuses on pre-requisite programmes (good manufacturing and good hygienic practices), level two deals with HACCP and level three involves using risk assessment and management techniques to complete the design and implementation of a food safety management system. Both SQF standards have additional “voluntary” modules dealing with environmental and social practices. The term voluntary is used in this case to imply that passing these modules is not a condition of obtaining any of the levels of the standard. The generic approach is appropriate for the SQF2000 processing standard but has limitations when applied to the SQF1000 primary production standard. In this case generic means that a single set of rules is being applied to horticultural production, meat, poultry, dairy, eggs, coffee, cereals, fishing and aquaculture. There is nothing wrong with generic HACCP but simply having a HACCP system on the farm is not sufficient for most international buyers and hence the SQF1000 is not a suitable standard for the Vietnam shrimp brand.

VNGAP - NAFIQAVED

NAFIQAVED took the lead in developing a pilot version of a standard for good aquacultural practice with the support of NACA and making use of the FAO Guidelines for Good Aquacultural Practice. The NAFIQAVED pilot standard had three levels known as Better Management Practice (BMP), Good Aquacultural Practice (GAqP) and Code of Conduct (CoC) to take account of the capacities and levels of resources of different scales of aquaculture operation. BMP is the most basic level of the standard covering basics of food safety management and is intended for smallholder farmers. GAqP is the mid level of the standard and covers food safety management and environmental protection, CoC is similar to GAqP but adds controls for aspects of social welfare. GAqP is intended for medium and large-scale operations and CoC is only intended to be suitable for large farms. The pilot version of GAqP was successfully implemented at sites around Vietnam and ~6 medium and large-scale farms had been certified under the pilot standard by the end of 2007. Evaluation of the pilot version of the BMP standard on small-scale hatcheries and farms is ongoing and is due for completion by September 2009. During the fieldwork the consultants visited two farms that had obtained

certification under the GAqP level of the pilot standard. These were both large commercial operations and showed many features of good aquacultural practice in operation. However, many omissions were seen and it was clear that much work is still required in order to optimise practical implementation of good aquacultural practice on the farm.

On one of the GAqP certified farms visited during the fieldwork a copy of a production protocol was obtained that gave details of the requirements for the GAqP standard and how the farm had complied with the various controls. This document was combined with the field observations to enable a comparison to be made between the GAqP level of the pilot version of the VNGAP standard and the GLOBALGAP tropical shrimp standard. A detailed evaluation is given in annex 2 but a few comments will be made here. Practical aspects of site design and management were well covered and the GAqP standard was strong on fish health. Environmental issues such as protection from spillages of fuel oil and correct storage of chemicals were well covered. The standard appeared to be strong on record keeping and had adequate systems for vertical and horizontal traceability. However, other areas of the GAqP standard were weak and would not meet international requirements. Most notably the standard was weak on food safety management especially during harvesting and post harvest handling, staff competency and training were omitted, worker health and safety and protective clothing requirements were not covered. Fish welfare as opposed to fish health was not included and there was no provision for protection or regeneration of mangrove swamps. In fact one of the farms visited had been built at the expense of some ~200ha of mangrove forest which had been bulldozed and destroyed within the last 3-5 years. During one of the visits the farmer complained of the high cost of certification, this seemed surprising until it was explained that visits had been made by NAFIQAVED staff every two months during implementation to take samples for analysis. The high costs were due to fees for analytical procedures. This end product testing focussed approach is not appropriate and would not be the approach favoured by any of the major commercial standards. The pilot version of GAqP was less comprehensive than GLOBALGAP but contained many useful features and would form a strong basis for further development of an aquaculture standard.

Following on from the pilot version of the VNGAP standard the government of Vietnam has issued two decisions that establish the legal basis for development of a national standard for good aquacultural practice. These are Decision QD06.2006 of 10th April 2006 establishing the need for safety management of shrimp aquaculture areas and farms and Decision QD56.2008 of 29th April 2008 establishing the need to make a technical standard for good aquacultural practice. Under Decision QD56.2008 NAFIQAVED (now known as NAFIQAD) is mandated as the standard owner with responsibility for inspection and certification (model templates are provided for a farmer application form and a certificate). The department of aquaculture is mandated with the role of setting up and preparing the technical content for the new aquaculture standard.

VIETGAP - VASEP

VASEP report that they are developing a standard for good aquacultural practice in production of tropical shrimp which will be known as VIETGAP. The consultants were not shown a copy of the standard but were informed that the standard document is in its

second draft. VASEP are communicating with FoodPlus GmbH the managers of the GLOBALGAP family of standards and hope to get the VIETGAP standard benchmarked against the GLOBALGAP standard for tropical shrimp. The benchmarking process involves making a detailed comparison between the two standards (made by an ISO 65 / EN45011 accreditation body) to see if the control points in the two standards represent an equivalence of system. If the two standards are equivalent they would be said to be benchmarked as equivalent. Holders of a VIETGAP certificate would then be in a position to claim that they operate a standard equivalent to that of GLOBALGAP. Benchmarking is expensive and quite time consuming (around 2 years to complete) and has to be updated every 3-4 years when GLOBALGAP introduces the next version of their standards. It has advantages where buyers accept the equivalence, but this is not guaranteed and in some cases buyers have still asked for a GLOBALGAP certificate as this is the standard that they trust. We will return to the topic of GLOBALGAP benchmarking in the section dealing with ways to adapt GLOBALGAP for use in Vietnam later in this report.

FAO Guidelines for Good Aquacultural Practice

In 2006 the Food and Agricultural Organisation (FAO) of the United Nations published a set of guidelines for Good Aquacultural Practice working in collaboration with the Network of Aquaculture Centres in Asia-Pacific (NACA), UNEP, World Bank and the World Wildlife Fund (WWF). This document is not a standard in itself but rather is a set of general principles and general advice on how to develop a standard for Good Aquacultural Practice. These principles were used by NAFIQAVED as a basis for the pilot version of the VNGAP standard.

Which GAP standards are favoured by international buyers of tropical shrimp?

As part of the field work members of the consultancy team visited the annual GLOBALGAP meeting in Cologne in October 2008, conducted telephone interviews with major fisheries importers in the EU, US and Japan and checked the internet for announcements regarding buyer support for good aquacultural practice standards. Buyers responding to telephone interview questions indicated that they were happy with either GLOBALGAP or the Global Aquacultural Alliances Best Aquacultural Practice (BAP) standard as these offer very similar levels of management and control. Some expressed concern over the possible proliferation of GAP standards, a few suggested that GLOBALGAP and GAA might join forces to form a single standard. Many were aware of the development of national GAP schemes but there was no support for national GAP schemes such as VNGAP or VIETGAP. This is partly related to concerns over proliferation of standard, but is also due to a desire to have single standard that applies to all supplier countries rather than a series of national GAP schemes that might be difficult to assess for equivalence. The Dutch retailers' federation and Heiploeg BV, the largest shrimp importer in Europe, have both announced that they will require all suppliers to be GLOBALGAP certified by January 2011. At the 2008 GLOBALGAP meeting retailer members were united in calling for all aquaculture suppliers to be GLOBALGAP certified by 2012. Walmart the worlds largest retailer is backing the Global Aquaculture Alliance and wants all its fisheries suppliers to be BAP certified. Overall there appears to be a strong demand from EU and US buyers for aquaculture

suppliers to comply with internationally recognised GAP standards within the next 3-4 years.

Primary production - which GAP should we use?

In choosing a standard for good aquacultural practice (GAP) three factors are of primary importance and these are:

- The ultimate choice will be made by the customer
- The standard should be cost-effective
- Ideally the standard should be capable of application to all types and scales of production

From the information available it would appear that the customer is only interested in GLOBALGAP or BAP thus making the choice of GAP standard for the Vietnam shrimp brand GLOBALGAP or BAP. However, this is an oversimplification as BAP is unsuited to smallholder production and implementing GLOBALGAP will represent severe technical and financial challenges for smallholders judging from the types of smallholder production seen during the field visits to production areas in North, Central and Southern Vietnam. It is quite likely that GLOBALGAP will become the ultimate aim for most hatcheries and shrimp farms but it will be necessary to provide a softer route towards GLOBALGAP certification. This might be most readily achieved by adapting the draft VNGAP standard to reflect GLOBALGAP structures and controls familiar to international buyers. This idea is discussed in more detail in the next section.

How can GAP systems be developed to be inclusive of all types and scales of farming?

International buyers are keen to have a limited number (in theory just one GAP standard!) of standards for good aquacultural practice that can be applied to production in any of their supplier countries. Most want to stick with a comprehensive standard with a familiar layout and content. For this reason national schemes are normally ignored as their structure and content is unfamiliar and the buyer cannot readily determine if the national GAP certificate represents a real indication of the desired level of management and control being in place on the farm or hatchery.

The government of Vietnam's VNGAP standard is of great interest for small-scale producers as it offers several levels of compliance. However, to have any chance of acceptance by international buyers this standard needs to be restructured so as relate the controls in the different levels of the VNGAP standard to the control points and compliance criteria in the GLOBALGAP tropical shrimp standard. The BMP, GAqP and CoC standards should be structured to provide a ladder towards attaining GLOBALGAP with a clear understanding of what each level represents in terms of progress towards compliance with the GLOBALGAP standard. It is recommended that BMP should cover 40% of GLOBALGAP with emphasis on key controls for food safety management, GAqP would cover 60% and CoC would cover 80% of the content of the GLOBALGAP

standard. The remaining 20% would include recommended control points and less important aspects of the GLOBALGAP social criteria module.

If this system was promoted to buyers as part of the Vietnam shrimp brand it is quite possible that some buyers would accept the lower levels of compliance offered by BMP and GAqP as being sufficient and thus obviate the need for many of the smaller farms and hatcheries to become GLOBALGAP certified.

Can GLOBALGAP be adapted to meet the requirements of Vietnam shrimp production?

Adaptation of the VNGAP standard might offer one route for Vietnam but it is quite likely that most international buyers will only accept a GLOBALGAP or BAP certificate. In this case it would be preferable to work within the GLOBALGAP system. The starting point for the process would be to have a high quality translation made of the GLOBALGAP control points and compliance criteria and key sections of the general regulations into Vietnamese. This would make understanding of the standard easier for field personnel. However, this would not change the content of the standard.

The second step would be to form a national technical working group (NTWG) to develop a document known as a national interpretation guideline (NIG). The NTWG can include any number of interested parties but the host organisation must be a member of GLOBALGAP and be present in Vietnam. Any private organisation or government body could join GLOBALGAP as an associate member and take on this role. The national interpretation guideline is more than just a translation of the control points and compliance criteria. Extra notes and interpretations can be included alongside the original text. This may provide practical advice on how to implement the standard in Vietnam, they may refer to legal requirements that pertain in Vietnam or they may allow for interpretations of the content of the control points that make them more friendly to smallholder farmers. In discussions with senior management of GLOBALGAP the consultant dealing with standards confirmed that it will be necessary to establish an NTWG in Vietnam to develop a national interpretation guideline for the social criteria section of the shrimp standard as this cannot be applied as a generic document. It would also be advantageous to develop more smallholder friendly interpretations of the control points although it must be understood that the guidelines content must be agreed with the owners of the GLOBALGAP standard.

The other step that might be taken would be to develop a national GAP and have it benchmarked against the GLOBALGAP standard. Full benchmarking is a complex and expensive process. As an alternative a lower level of benchmarking might be used which is known as the approved modified checklist or AMC approach. In the AMC approach the checklist of the national GAP is benchmarked against GLOBALGAP and the general regulations of GLOBALGAP and management systems are used to provide an integrity system that is acceptable to the international customer. This process is simpler, and a little less costly and time consuming. However, on balance the simplest and most effective approach would still be to set up an NTWG and develop a national interpretation guideline for shrimp production in Vietnam. The NIG route is the simplest,

quickest and least costly option and has the highest probability of being accepted by international customers.

Group certification

GLOBALGAP is too expensive for smallholder farmers and sometimes farmers struggle with some of complexities of the management systems required. A way to make GLOBALGAP easier and more affordable (that could also be built into VNGAP) is to go for group certification (known as option 2 in GLOBALGAP). For group certification farmers need to form a farmer owned and managed (can be exporter owned and managed) Primary Marketing Organisation (PMO). The PMO manages implementation of the standard and takes legal responsibility for the management systems. Under the PMO the farmers are arranged into groups of 20-60 (no fixed number) individuals often according to geographical location. Each farmer signs a legally binding agreement to abide by the rules of the GLOBALGAP compliant production scheme. Many of the management systems are administered centrally by the PMO and in many schemes the PMO has a role in centralised procurement and storage of farm inputs. When it comes to certification the PMO is inspected along with a random sample of the farms thus dramatically reducing certification costs for large schemes with many members. Members need to work together to ensure that all farms are compliant as there is no advance warning of which farms will be selected for the annual certification audit.

Potential benefits from group certification

Group certification schemes have many potential benefits, reductions in audit and certification costs are the most obvious and these have already been described. Production costs can be reduced if the PMO operates a centralised system for bulk purchasing of inputs as prices are usually lower for bigger purchases. If the PMO or groups have centralised storage facilities for chemicals it is possible to reduce the high capital cost of every farmer having their own chemical store. A large well organised PMO with a strong relationship to an export company is often in a better position to access micro-finance and credit for its members. In some cases PMO's have been able to cut out middlemen by selling directly to the exporter as the collective production of the group is similar to that of a large commercial farm. Having a strong farmers' organisation makes training easier to implement as the farmers are already organised into groups and can more readily adopt field level approaches to training such as the farmer to farmer system. The PMO and farmer group organisation greatly facilitates traceability and improves the confidence of the buyer in the safety of products purchased from smallholders. Improved traceability is a key point as traceability of individual small farms and hatcheries is one of the biggest challenges facing Vietnam in introducing GAP standards.

Potential for cost sharing

African smallholder farmers have had mixed success in dealing with GLOBALGAP standards for fresh fruits and vegetables with some groups making profits and praising GLOBALGAP and others failing to complete the certification process or being unable to re-certify after one year as GLOBALGAP certified producers. All of the failed schemes were either relying entirely on their own funds or participating in donor funded projects

running from 2-5 years. Once donor support was lost the system collapsed as the farmers lacked the necessary resources to pay to maintain the GLOBALGAP certificate. In contrast all of the African success stories involved cost sharing partnerships with the export company. Typically the exporter meets part of the investment and recurring costs of compliance of the scheme either in the form of direct support or loans set against delivery of the final product. In the largest (1,000 – 8,000 farmers per scheme) and best managed schemes the exporter provides most of the extension and training services and controls the more complex aspects of the management system. This is a reflection of financial resources and management skills typical of African smallholders and is not necessarily the case elsewhere in the world. In Turkey for example a group of 4,000 smallholder cherry farmers maintain and operate a GLOBALGAP compliant export scheme. These farmers operate under similar conditions to the African farmers but are better educated and have higher household incomes. Another important feature of the Turkish scheme is the employment of professional staff for key functions such as marketing and management rather than relying on farmer members of the PMO to fulfil these roles.

Implementing standards for good aquacultural practice

To implement any standard for good aquacultural practice it is necessary to have a detailed roadmap for implementation starting with raising awareness among the farmers and finishing with successful completion of the external inspection or certification audit. The process of obtaining certification for a group of farmers under option 2 of the standard takes time. For the first groups between 12 and 18 months (sometimes as much as 24 months) will be required depending on the level of commitment of the farmers, how quickly they grasp and implement key concepts and the time needed to form the PMO and farmers groups. With later groups of farmers the time between starting implementation and certification reduces to between 7 and 10 months as the support personnel have gained valuable experience on how best to develop GLOBALGAP compliant farm schemes.

An outline road-map of the steps required for certification of groups of farmers under option 2 of GLOBALGAP is provided as a series of short bullet points below:

- Step 1 Conduct awareness sessions for farmers in the target area to raise awareness of GLOBALGAP, benefits and costs associated with compliance, rationale and approach for obtaining certification.
- Step 2 Conduct farmer profiling activities to build up basic data on each farm which can be used to identify needs and also part of the documentation of the GLOBALGAP farming scheme.
- Step 3 Organise meetings for farmers to seek commitment (sign up) to the GLOBALGAP scheme
- Step 4 Establish PMO and associated farmer groups.

Once the PMO and farmer groups are established a number of actions are required for the PMO/groups and separate actions are required on the individual farms. These actions run concurrently and practical judgement is required to determine when to initiate particular actions and what pace to set. For the individual farms it is very important to break the standard down into small parts and avoid overloading the farmer with

additional tasks, new concepts and extra costs. For both individual farms and the PMO/group organisation a high level of support is required from the extension team in terms of training, practical advice and inspection of progress.

PMO/group actions

- Step 5 Develop and establish a GLOBALGAP compliant quality management system for the option 2 scheme (The QMS establishes all the policies, procedures and work instructions that will ensure delivery of GLOBALGAP compliant product to the processors).
- Step 6 Develop a manual to cover the requirements for the social criteria section of the tropical shrimp standard.
- Step 7 Develop a detailed production protocol for to be used by all farmers.
- Step 8 Develop a system of farmer files for records and documentation (copies to be held on farm and at the offices of the PMO to prevent accident loss of key data).
- Step 9 Develop training materials for use in farmer to farmer training sessions.
- Step 10 Develop a farming manual containing all essential information on the scheme (copies to be issued to every farmer).
- Step 11 Train up a GLOBALGAP adviser within the PMO, farm inspectors and internal auditor. The staff who become farm inspectors can be drawn from within the farmers group but an element of external monitoring must be built in to ensure independence and objectivity. In many cases the farm inspectors are specially trained extension personnel involved in supporting the GLOBALGAP scheme. The internal auditor must be external to the group, if the internal auditor belongs to the extension service it must be somebody who is not involved in training or advisory activities for the group.
- Step 12 Support PMO and group organisation to establish centralised facilities such as centralised chemical storage.

Actions for individual farms

- Step 13 Support farmers to make the necessary upgrades to farm infrastructure.
- Step 14 Support farmers to establish records and coding systems to ensure the required level of vertical and horizontal traceability.
- Step 15 Conduct training sessions (see details of approach in next section) on key topics such as food safety management, good aquacultural practices, chemical safety and first aid).
- Step 16 Support farmers in collecting samples for essential analytical tests.

Final steps

- Step 17 Develop simplified inspection list to enable farm inspectors to conduct routine inspections on a monthly or bi-monthly basis. This checklist should be shorter and simpler than the GLOBALGAP checklist but cover essential control points. The farm inspectors should conduct full audits using the full GLOBALGAP checklist on a six monthly basis and always within 6 weeks prior to an internal audit.
- Step 18 Approximately 2 months prior to the external audit the internal auditor must conduct a full pre-audit using the full GLOBALGAP checklist and following the GLOBALGAP regulations for auditing exactly as they would be applied for the external audit.

- Step 19 Register with GLOBALGAP via an approved certifying body and apply for a certification (external) audit.
- Step 20 Approved certifying body conducts the external audit and issues the certificate if the scheme is found to be GLOBALGAP compliant. It is very important for the farm inspectors and PMO GLOBALGAP adviser to visit all farms and scheme offices prior to the external audit to make sure that everything is ready for the external audit. The PMO's management team should be trained on how to prepare for the QMS component of the external audit and especially on ways to organise and manage documentation during the audit.

A key area for consideration is transfer of information, most problems on farm occur because the farmer is unaware of the problem and does not understand why the problem needs to be addressed. Getting the right approach to training and using the correct staff is of key importance. Farmer training should be highly practical and visual in nature and present concepts in an easily understandable form. Practical training sessions should be conducted in small groups of 10-15 farmers per group. Groups of 25 or more should be avoided for anything other than introductory awareness meetings as uptake of information by individuals is very poor in large groups. The length of each training session should not be more than 10-15 minutes although several sessions can be run together to give a total duration for each training of 1 hour. Ideally training sessions should take the form of discussion groups focussed around posters of pictorial information covering the topic under discussion. Frequent repeat trainings are needed to improve knowledge retention and understanding by the farmers. For the initial trainings sessions can be conducted by professional extension staff from government or private sector. However, the early training sessions should be used to identify and train up farmers or farm staff who will then conduct future training sessions on farm. This approach known as farmer to farmer training has proved highly effective and works especially well when farmers create their own training materials using a database of line drawings and support from the professional extension staff. Avoid trainings with large groups, classroom type sessions and use of university academics and researchers as trainers as their approach to training is unlikely to meet the needs of farmers and farm workers.

Linking standards for primary production and processing to make a strong brand image

As with the processing standards the level of standard seen on a farm can be denoted by applying a different coloured background to the Vietnam shrimp brand logo. Farmers holding BMP certification would have a logo with a bronze background, silver would denote GAqP, gold for CoC and platinum for either GLOBALGAP or BAP. The farm scheme would not be in direct contact with the international buyer, but the processor / exporter would be in a position to say that all production in this batch comes from silver standard farmers for example. No mixing would be allowed within a batch thus a batch of shrimp would not contain a mix of product from GLOBALGAP certified and GAqP certified farms. This is quite a normal practice and GLOBALGAP rules clearly state that GLOBALGAP certified and non GLOBALGAP certified produce must be kept separated at all times.

IMPLEMENTATION OF SHRIMP BRANDING SCHEME

This section covers the following:

- Outline of an Agricultural and Fisheries Products Branding and Certification Scheme;
- Roles of different players in this scheme;
- Which standards to use to obtain the quality / logo of the national shrimp brand;
- Key steps for implementation.

Figure 6 shows the key features of a Vietnamese Agricultural and Fisheries Products Branding and Certification Scheme. It indicates at the top that the scheme must follow national and international rules and regulations. This includes the Law on Intellectual Property, Decree No. 63/CP dated October 24, 1996, and Decree 06/2001/ND-CP dated February 01, 2001.

Agricultural and Fisheries Products Branding and Certification Centre

It is envisaged that the scheme will be managed and run by an Agricultural and Fisheries Products Branding and Certification Centre, which is based at MARD / DAPT. This Centre is at the heart of the shrimp branding scheme, and will be the owner of the quality mark.

The Centre will have the following task, of managing and coordinating certification and branding of agricultural and fisheries products.

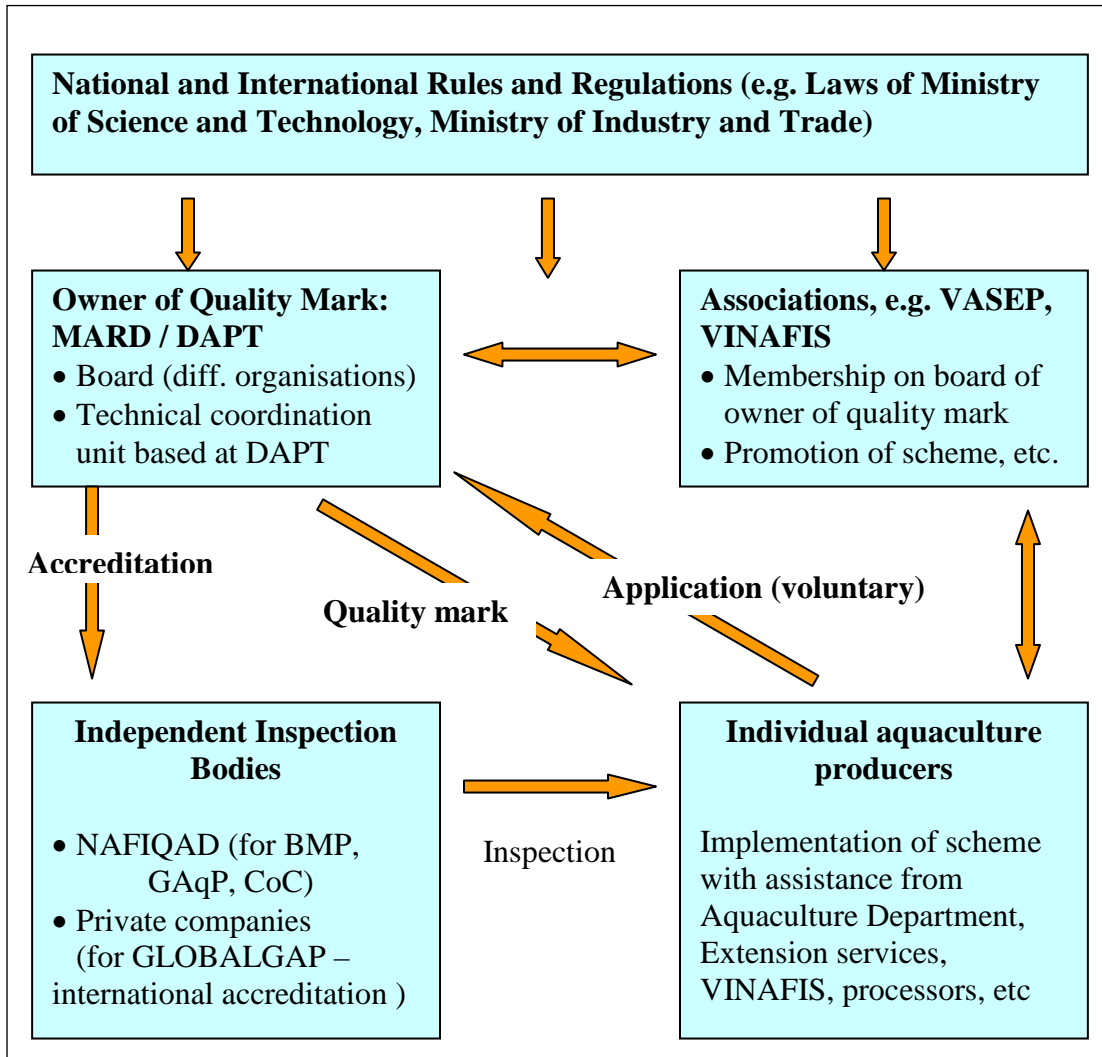
The Centre will consist of two main elements:

- **Executive board**, which will be in charge of policy decisions, oversight and code of practice. It will be chaired by DAPT. Other board members include representatives from Department of Aquaculture, VASEP, VINAFIS, NAFIQAD, Department of Extension, Ministry of Industry and Trade.
- **Technical Coordination Unit**, which will have the following tasks:
 - It will be in charge of promoting the scheme at international level, together with VASEP and VIETRADE of the Ministry of Industry and Trade. At national level, it will promote the scheme with processors and producers, together with Aquaculture Department, NAFIQAD, and VINAFIS.
 - It will liaise with national and international bodies involved with food standards, certification, and different labelling schemes (environmental, organic, fair trade). Given that in the past some stakeholders have expressed concern that there is a lack of coordinated information flow regarding these schemes, it will have the role of an information centre for public and private organisations.
 - It will liaise with individual companies that apply for certification in order to obtain the national shrimp quality mark / logo. This involves establishing a

data base of companies which have applied for certification and those which have obtained it. The data base should indicate what level of standard an enterprise has achieved.

- As far as required, the unit will arrange for inspection of farms or factories by NAFIQAD. Where international standards are involved this could mean obtaining proof of certification from relevant international bodies.
- The unit will ensure that successfully certified enterprises will obtain quality mark / logo according to the standard achieved.
- The unit has to enforce members' compliance as far as maintenance of standards is concerned. If companies are unable to meet the standards then they will no longer be allowed to use the quality mark. This will be published in a register.

Figure 6: Outline of Agricultural and Fisheries Products Branding and Certification Scheme



Standards

Regarding shrimp production standards, as already indicated, BMP, GAqP, and CoC are being implemented by MARD as part of Decision 56 of April 2008. They are derived from FAO Guidelines.

GLOBALGAP includes a shrimp component and is expected to become the main standard for exporters selling to supermarket chains, especially in Europe. BAP is another international standard primarily targeting the North American market.

As for food safety and seafood processing, it is HACCP, SQF 2000, BRC, IFS, and BAP that are the most common standards.

The standards and their levels can be summarised as in Table 4. Platinum is the highest level, and bronze the lowest. It is envisaged that the quality mark / logo will be coloured accordingly, indicating the standard an enterprise has achieved.

Table 4: Levels of standard for production and processing

Level	Producers / hatcheries	Processors
Platinum	GLOBALGAP, BAP	BRC, IFS, BAP
Gold	CoC	SQF 2000
Silver	GAqP	HACCP
Bronze	BMP	

Logo

Those companies that have achieved a certain standard will be allowed to use the quality mark in the form of a logo on their shrimp consignments, stationary etc. Three different options of the logo have been presented in different colours at the national stakeholder workshop in HCMC on 27 November 2008. The following provides an example of some of the logos (i.e. 12 in total) prepared for discussion.



03



06



12

Inspection Bodies

As for production standards, NAFIQAD is the Government appointed inspection body for BMP, GAqP, and CoC. For GLOBALGAP and BAP, inspection companies have to be internationally accredited.

Given that it represents the legal minimum in most importing countries (including EU), HACCP inspections are being carried out by NAFIQAD in its role as competent authority. BRC, IFS, and BAP, on the other hand, mainly rely on international inspection bodies or their in-country branches (e.g. SGS).

The building of more national capacity to undertake certification is an option to be considered.

Inspection bodies have to be independent in order to avoid bias.

Associations

VASEP and VINAFIS should be members on executive board of the Agricultural and Fisheries Products Branding and Certification Centre, mainly in their capacity as representatives of processors / exporters (VASEP), and aquaculture producers (VINAFIS).

VASEP should play lead role in promoting the standards and the scheme through international trade fairs, their website, trade magazine (Vietfish), etc. Given that VASEP already participates in all major international trade fairs this should not lead to considerable extra-costs. The picture below (Plate 1) shows the well presented VASEP stand at the Brussels international seafood exposition in April 2008.

VINAFIS should play role in promoting the scheme at producer level, and be involved in training exercises, together with Aquaculture Department and provincial extension centres. At the same time, it is recognised that VINAFIS lacks resources to play a leading role in this respect.

Individual companies

The following shows the main steps for **shrimp farming enterprises** to follow, as part of the national shrimp brand name:

- Shrimp farmers form group. See above as for the option of having GLOBALGAP certification through Primary Marketing Organisation (PMO).
- Application (voluntary) to MARD / DAPT for certification. International application for GLOBALGAP.
- Receive training from Aquaculture Department, extension centres, VINAFIS, RIA, processors ...
- Make improvements to their production system;
- Will be inspected by NAFIQAD or private companies;

- Obtain quality mark / logo showing which standard they have achieved;
- Comply with the rules of the scheme, and endeavour to move to the next level standard.



Plate 1: VASEP stand at Brussels international seafood exposition in April 2008.

As for **shrimp processors / exporters**, they have the following role to play:

- Promote scheme in their brochures and with international buyers;
- Assist aquaculture farmers in improving their standards and obtaining certification;
- Comply with the rules of the scheme, and continue to improve their own standards and obtain higher certification;
- Have to indicate on each consignment the source of raw material and standard of production.

Action Checklist for MARD

The following are the main steps to follow for MARD / DAPT to set up an Agricultural and Fisheries Products Branding and Certification Scheme.

- Put in place Agricultural and Fisheries Products Branding and Certification Centre – at DAPT as outlined.
- Prepare manuals for production standards (BMP, GAqP, CoC) by Aquaculture Department. Ensure these standards are compatible with GLOBALGAP. The processing standards already exist.
- Register national shrimp brand name / logo as a trademark with National Office of Intellectual Property (NOIP). The Director of NOIP is in favour of a certification trademark, which would be the first of its kind for NOIP. The other types of trademark are individual and collective trademarks. See below for steps involved in trademark registration.
- Prepare information packages for awareness raising at producer, processor and buyer levels. This may involve different language versions for different markets.
- Organise awareness raising events to promote the scheme in provinces. Arrange for training by relevant organisations (e.g. Aquaculture Department, extension centres, RIA, VINAFIS / FITES, ...).
- Liaise with producers and processors who apply for national shrimp brand name (quality mark). Prepare data base of applications.
- Arrange for inspection by NAFIQAD, and provide certification to successful applicants. This entitles them to use the quality mark / logo.
- Enforce members' compliance (no brand name / logo for those who don't respect the rules).

Practical Steps involved in Trademark Registration

The following laws are relevant in relation to trademarks:

- Law on Intellectual Property;
- Decree No. 63/CP dated on October 24, 1996;
- Decree 06/2001/ND-CP dated on February 01, 2001 by the Government

The following institutions are dealing with trademark matters:

- Ministry of Science and Technology;
- National Office of Intellectual Property;
- Market control force (in case of infringement)
- Economic Police (in case of infringement and having signal of crime)

The general steps for filing registration of a trademark involve the following:

- Conducting pre-search
- Filing application at National Office of Intellectual Property
- Publication
- Registration (After paying grant fee)

The following documents are required:

- Sample of mark
- List of goods covering the trademark
- Information concerning applicant (address, name)
- The rule on using trademark

Small Farmer Involvement – The Thai “Cluster” Approach

One of the most important issues facing Vietnamese exporters is the need to involve small producers. Small farmers dominate Vietnam’s shrimp production, and are consequently important for the export industry. The essential requirement here is then for a system that facilitates their involvement. There are two imperatives here - (i) to achieve the required standards and (ii) to be able to demonstrate having done so, and this means convincing arrangements to ensure traceability. The underlying challenge is to link these small-scale farmers to modern western markets where demands and standards are becoming ever more stringent.

This means finding a model that encourages farmers to participate, and allows them to do so. A number of such models have been tried - the nucleus-satellite system being a case in point. This involves a large company providing the facilities that requires financial critical mass – eg processing plants, hatcheries, central water supply networks. The farmers then own or rent production ponds tied into these facilities. This system – which has been adopted in Indonesia by leading shrimp farmer Charoen Pokphand (CP) – is termed the “plasma” system there. It was built into the CP project when it was developed and arguably the farmers’ status is closer to that of employees than independent entrepreneurs. However, what limits its wider application is the very fact that it is built in – ie it is difficult to apply to farming communities that are already well established with developed infrastructure.

Producer cooperatives may provide a valid alternative, but a more relevant option is that currently being pioneered in Thailand. The shrimp industry here has many parallels with that of Vietnam, not least in the predominance of small growers. Only 4% of Thai farms are large (ie producing more than 250 tonnes/year) although they do collectively produce 37% of the national total. Conversely 57% of Thai farms are small (ie less than 25 tonnes/year) but they collectively produce only 13% of the total out put. The conundrum was how to allow these small farmers to participate in a trade where hygiene, environmental & certification demands are increasing.

The answer is believed to be through forming associations devoted to attaining the required standards – groupings termed “clusters”. These have been supported by both government and the processors, support which seems to be crucial. There is a Shrimp Board which advises the government, whilst a Shrimp Information Network Co acts as a facilitator linking the farms to government (working with the Thai Department of Fisheries). In parallel, local auditors have emerged able to assess compliance with standards such as GAA/ACC’s BAP. The Thai government has also been developing national standards to support the Thai “Q” logo quality mark, including a DoF’s Good Management Practice (GMP) coupled with HACCP for the processors and DoFs Good Agri/Aquaculture Practice (GAP) and Code of Conduct (CoC) for the farmers. There is one further partner in this integrated system alongside (i) DoF (government), (ii) the processors and (iii) the farmers – and this has been (iv) overseas buyers. It has been this combination that has proven to be effective.

The mobilizing entity that this system chose was the “cluster” of small farmers. Under their BAP criteria each farm should (i) not be larger than 50ha, (ii) should be geographically adjacent within a 25km radius and (iii) the cluster’s combined annual output should not exceed 500 tonnes. It is particularly important for all farms to have comparable production methods and there should be a legal entity managing them collectively to ensure adequate operational control and compliance with standards. A standardized procedure was devised to establish these clusters, and this in sequence was as follows.

- Enlist a processor interested in sourcing through a cluster
- Draw up a short list of potential member farms (around 100 farms)
- Select farms that fit the cluster criteria (noted above)
- Produce manuals covering cluster administrative & operational control measures
- Make the investments required to meet BAP criteria
- Seek auditing for certification
- Maintain periodic auditing to ensure continued compliance

As an example, clusters selected in Thailand included 4 to 8 farms, each of which operated from 1 to 12 ponds. Such a cluster might have 4 farms with a total of 20 ponds covering 22ha, and with an annual output of about 500 tonnes. The belief in Thailand is that these systems are working as intended. International importers are less convinced, supporting this approach but not entirely sure that it is robust, and pointing out that few such clusters are actually in full operation as yet.

APPROPRIATE MARKETING OPTIONS IN KEY EXPORT MARKETS

Promotional Channels in Target International Markets

A previous study on branding in Vietnam (Development of Brand Name Strategies by Producer Groups²) analysed what a brand actually is, concluding that it was a notion *“that resides in the collective consumers mind – and is fundamentally a form of recognition – recognition that a given item is an acceptable or better response to a given need. The wider the recognition, and the more hard-wired the message – the stronger the brand”* The analysis also described how aspects that are thought of as brands (eg a logo, distinctive packaging) are not brands, but rather part of the tool kit for brand building.

One other distinction made in that report (and mentioned above) is also relevant – ie the distinction between trade and retail/consumer brands. The former target a limited audience (trade professionals), are relatively inexpensive to develop, but have to realistically and reliably reflect issues of real concern to the traders. The latter, retail brands, target the end user (the consumer) and so must address a vast audience. Image may be as (or indeed more) important than the actual qualities of a product, and the cost of developing and maintaining these brands can be huge. These two categories of branding are the main subject for this section.

Retail/consumer brands: In most western markets there are two types of retail brand – those owned by the importer or processor (manufacturer’s brands) and those owned by the retailer (termed “own label” or “private label”). The former appear in a diverse range of retail outlets whilst the latter are of course restricted to the retailer/owner. The result is that for many branded products, the offer to consumers is now presented as a direct comparison between manufacturer and own label brands, set side by side on the same supermarket shelf, with own label usually undercutting the manufacturer’s brand. The fact that both are frequently manufactured by the same company, to the same specifications, is telling – this is often a presentational rather than genuine quality issue.

The tools that are used to promote these brands fall into two broad groups – those that are directly under the auspices of the company (ie manufacturer or retailer) such as product appearance or labelling and those that take place externally in the market place, for example advertising.

Internal

- **Name and logo**, as the “flag” for the brand
- Distinctive **presentation and packaging**, which are themselves forms of logo

² *Development of Brand Name Strategies by Producer Groups*. Final Report, October 2007. Undertaken by: The Natural Resources Institute, The University of Greenwich, Chatham Maritime, Kent, United Kingdom; and Lacoms Ltd., Hoan Kiem District, Hanoi, Vietnam. Funded by the Ministry of Foreign Affairs of Denmark, Agreement No. KK2007/288/2 (FSPS-II Activity POSMA 2007/1.4.1.1.)

- Instructive attractive **labelling**, eg with recommended recipes

External

- **Traditional advertising**
 - Via the **general media** – TV, radio, press adverts, and more recently the internet
 - Via **targeted media** eg via the cookery articles of women’s magazines, sponsored cookery programmes, etc.
 - Via **Public Relations-related campaigns** – eg product placement in films, raised profile through product mentions during TV cookery or lifestyle programs favourable press comment etc
- **Point-of-sale promotion**, including sales literature in shops and their internet equivalents of dedicated web pages “pop-ups” and banners.
- **Event sponsorship** where the name/logo is highlighted during sports or other popular spectator attractions (“eyeball-rich environments”)
- **Promotional campaigns** coupling some or all of the preceding techniques in an integrated manner with eye-catching price reductions
- **Gift campaigns** – analogous to the “packet-top” offers where rewards are given for demonstrable repeat purchase of the product
- **Individually targeted promotion** – mail shots (junk mail), and the internet equivalent (including spam though this is avoided by reputable firms)

These external promotion mechanisms are of course mostly highly expensive options, with a degree of proportionality between cost and impact. In short the larger your target market and the number of individuals you hope to influence, the higher the cost. This inevitably sets strict limitations on the media chosen and breadth of cover for relatively speciality items like shrimp. The question of cost effectiveness of such costly campaigns is very real and likely to dissuade many from contemplating them - a typical UK major advertising campaign costs around \$0.5-1 million to make the advert and then a further \$2-5m for media exposure (ie TV with press back up).

One option for overcoming this problem can be to “piggyback” shrimp promotion on a wider advertising campaign – eg where, say, a supermarket is adverting itself, then the products presented by the campaign might include shrimp. This does not come without cost though, as the lead advertiser is likely to expect contributions from the producers of the featured products.

Another option is the national campaign where costs are shared by contributing producers from one country or region. In the past there were examples of strong **national export brands** such as those for example like Kenya coffee, South African orange juice, Norwegian salmon etc. There have also been **national loyalty brands** (eg Buy British in the UK), and in both cases these tended to be state supported and well funded by both the state and the industry (involved through their trade association for example). Latterly these campaigns have become far less frequent, and there are probably a number of reasons for this:

(i) Firstly, amalgamation and growth has enabled the private sector/multinational entities (processors and retailers) to become far more powerful in the market place. This is especially true in the USA and Japan. (ii) Secondly, the general economic ethos is now

far more private sector orientated, preferring private sector to state involvement in activities that are essentially commercial. (iii) Finally, it can fall foul of WTO rulings regarding state support of export industries – with the threat of antidumping penalties if these are infringed. Further advances in progressing free trade – should these occur - will enhance this (the Doha Round negotiations being a case in point). National campaigns have then increasingly become the preserve of industry, and given the high level of internal competition (and jealousies), have frequently struggled to find sufficient common support to overcome this internal competition.

There are though still some location-based brand options in the European market at least. These include the Protected Designation of Origin (PDO) and the Protected Geographical Indication (PGI). Both PDO and PGI have been fully explored, and examples given, in the report mentioned in the footnote above. These designations however apply to products with specific traditional links to a location (eg Champagne) and so are not particularly relevant to the devising of a novel brand, especially for a product that has become a commodity. Shrimp products from Vietnam target the mainstream consumer, and therefore PGI and PDO, while they have a possible role, are likely to remain marginal for VN shrimp exports.

Trade brands. The alternative to retail branding is the trade brand. This, as has been already described above, has a far smaller audience to address and so costs are far lower. The audience in question is limited to traders, processors, retail or foodservice chains and key commentators in the target markets (ie hundreds of individuals rather than millions). However it is important to understand that this audience is a great deal more informed than the general public, and so this is not an arena where the image (or consumer perception of quality) is more important than the actual qualities of a product. Traders are primarily concerned with reliability regarding quality, hygiene, pricing and relevant ethical aspects (eg effects on the environment due to production/processing, fair treatment of workforce, etc) as well as consistency of supply.

The role of the trade brand is therefore to reinforce traders' perception that the product in question meets these expectations. However, there is a crucial imperative – the product must “keep its promise” ie it needs to deliver in all key regards, consistently and reliably. The trade brand then, above all, represents confidence by those in the industry that a product will meet its specifications. This, then, is the essence of a trade brand, but if messages that have real meaning in the retail market can be linked to it, then so much the better. Examples would include environmental sustainability (eg pangasius taking pressure off wild caught white fish stocks) or social justice (eg fair-trade).

Brand Positioning of Vietnamese Shrimp

Vietnamese shrimp should be branded under the overarching banner of “**Quality Assured Shrimp from Vietnam**”, highlighting that exported shrimp meet recognised production and processing standards. The different standard options are outlined above in the report.

At the same time, given that different species of shrimp are produced in Vietnam under different production conditions, one should further differentiate between White shrimp (*Penaeus vannamei*) and Black tiger shrimp (*Penaeus monodon*).

White shrimp – *P. vannamei* is now a commodity product. This means that there is little scope for differentiation as the market is mainly focused on price at acceptable quality. Blanket ethical issues (environment, social) are becoming a “given” requirement by some major users. These are all aspects dealt with by GLOBALGAP (or GAA-ACC) and so this appears to be the critical issue here. There seem to be few alternative national characteristics that Vietnam could exploit – no history of producing *P. vannamei* which comes from Latin America, and no reason to believe that that it would be of any higher quality than any other producer – e.g. Thailand. Vietnam’s advantage here would be their ability to produce *P. vannamei* more cost effectively than their competitors because of their high-quality low-cost labour. This is the message embodied in the recommendations made concerning Good Aquaculture Practice (GAqP) or GLOBALGAP, and the associated logo (“quality assured shrimp - Vietnam”).

Black tiger – there is a different story here. Vietnam is one of a few major producers of *P. monodon* (Bangladesh and India being the competition – a competition that struggles to achieve exportable quality standards). Vietnam is also a traditional producer of black tiger, and much of the national output comes from small producers and so covers social aspects. As a result, there is a story to tell, but it is one that has niche rather than main market appeal. Black tiger has itself become a niche product, sold at a premium price because of its stronger red colour (when cooked) and larger size. The speciality extensive “mangrove” farmed shrimp and organic shrimp of the Ca Mau region add further options in this regard. This could be covered by the Protected Designation of Origin (PDO) and the Protected Geographical Indication (PGI) options discussed in this report and the one of 2007³. There could then be a case for promoting this as a small premium niche - “mangrove forest shrimp” – i.e. an environmentally friendly product that also has social benefits (fair trade).

Medium-term Marketing Plan to Promote Shrimp in Vietnam’s Main Markets

The essential result to emerge from the above analysis is that there was neither clear justification for a major Vietnamese shrimp export brand on the basis of precedent or other justification, nor much of a welcome by OECD importers for such a brand. ***The shrimp market has become increasingly commoditised, and this has raised the importance of price, subject to reaching essential quality thresholds***⁴.

³ There are two options to implement a PDO/PGI scheme – i.e. national certification through an Agricultural and Fisheries Products Branding and Certification Centre (to be established at MARD), or submitting an application to the European Commission and following their procedures for registration of geographical indication or designation of origin.
(http://ec.europa.eu/agriculture/foodqual/protect/thirdcountries/index_en.htm)

⁴ Commoditised – ie has become a commodity or a basic product (usually a precursor for further value adding, rather than a finished product that can be retailed), usually sold in large volume.

This is the essence of the situation, especially where **consumer/retail brands** are concerned, but there are a number of important qualifications:

- The commodity nature of the market is now extending to niche products like large black tiger. Price stood out as the key determinant here as well.
- Shrimp is an established product so scope for re-branding it or creating a positive national association (eg a “lotus” or “dragon” brand) seems to be limited.
- Doing so would anyway require the huge costs of consumer branding – a real risk in a market where it seems that “shrimp is shrimp” in the consumer’s mind, and what matters is size grade and price rather than specific origin.
- Where there is consumer branding of shrimp, this tends to be that of either the major processors or the huge retail chains, in the target markets. In other words, branding is not based upon the concept of “shrimp” as such but the name of the processor or retailer.
- This is the way traders see the market, and so they are understandably generally unenthusiastic about a national Vietnamese shrimp brand.
- The situation regarding **certification** is different and has important implications for Vietnamese producers. This applies to hard aspects (eg food safety) and soft aspects (eg ethical) and requirements for both are increasing, especially in the Northern EU and US markets.
- What is driving this is retailers’ insistence that they are insulated against risk of either food safety or ethical problems. Certification provides both protection and an alibi should things go wrong.
- A national brand will not necessarily help in this regard either as it (i) is seen by traders as self certification and so suspect (ii) adds to the already excessive number of standards already existing in the marketplace (redundancy) and (iii) would have to fight for retailer recognition in competition with very-well established standards such as BRC, IFS, GLOBALGAP, GAA-ACC, that are all already well-accepted in the major markets.
- This is clearly driven by the **external** factors of the international market. There is however a crucial **internal** dimension for Vietnam and this relates to **upstream traceability**. This is already a significant issue and is set to become more so.
- This has particular relevance to the northern European markets regarding both food safety and ethical matters - the EU markets where Vietnamese shrimp is most popular. It is also important for US and Japanese importers.

The key implication is that price is crucial and the opportunity to differentiate your product from others on any grounds other than price is limited.

- It is in this connection that a ***Vietnamese brand emerged as having real relevance – as a catalyst for developing traceability networks*** and other quality related systems that link farmers to the export markets through the processors. VietGAP⁵ was mentioned by some traders positively in this regard.
- An “internal” ***Vietnamese brand could help in eliciting a unified response from small farmers to the requirement for traceability*** as well as persuading eligible small producers to buy into the concept.
- The irony is then that a Vietnamese national brand would have real value, but as an internal adjunct to traceability within Vietnam rather than as an external flag to bolster exports.

This should be viewed in the context of the possible increase in Vietnamese production of white shrimp (*P. vannamei*). If this becomes a major element of Vietnamese shrimp output, then the industry will be moving further into the bulk commodity market. This will reinforce most of the points made above, especially the key trio of price, traceability and sustainability. It could also open new markets to Vietnamese exports such as Spain.

The segment of the Vietnamese industry that will seemingly be perversely disadvantaged by these trends will be the artisanal producers. Whilst they score highly on ethical grounds (social justice, low environmental impact, low yields and an organic style of production etc), certification and traceability requirements will be cripplingly expensive. Resolving this in an economically viable manner will be challenging given OECD markets current preoccupations with control and traceability.

However, the more intensive and commercial producers stand to gain, especially if they can maintain Vietnam’s status as a highly competitive producer. Taken together this must all signal scope for Vietnam’s shrimp industry to emulate at least some of the success of pangasius, especially in Europe and other rapidly-developing markets for Vietnam such as Russia, Poland, Brazil and the Middle-east.

As for **promotional channels to enhance Vietnam’s shrimp trade brand**, the fact that a smaller and less diverse audience is involved means that a far narrower focus is appropriate. This means that there is no need to use highly expensive mass media, but rather targeted low cost means, such as:

- Advertising and articles in the trade press
- Product demonstration at trade shows and expositions
- Participation in trade conferences and seminars
- Wooing traders through encouraging visits and assisting them in-country
- Relationships - maintaining a regular dialogue with key traders, informing them of any change well in advance (“no surprises”)

The diversity of seafood and the relatively small volume of sales of each product category limits the amount companies can afford to spend promoting these products at

⁵ For a distinction between VietGAP and VNGAP see above in the Section “Making a Strong Brand the Importance of Standards”

retail level. Consequently trade brands play a particularly important part in seafood promotion. Consumer advertising tends to be limited to major retail, foodservice or processing companies, usually in their home territories. Furthermore, seafood generally tends to be an adjunct to such campaigns (it is the retailer processor being promoted after all). This relative importance of the trade brand is then understandable.

Costs and Funding Options for Strategy

The following costs need to be taken into consideration in order to take the shrimp trade strategy forward:

(a) **Setting up of the Agricultural and Fisheries Products Branding and Certification Centre.** It is assumed that this Centre, details of which are explained above and also in the aforementioned report (NRI and Lacoms, 2007) will be based at MARD / DAPT, and as thus form part of the Government structure. It is assumed that the Centre will require about 5 staff, i.e. one team leader and four technical staff carrying out the activities as outlined above.

(b) **Certification costs for shrimp producers.** One of the reasons to implement standards (ie VNGAP) that lead to and are compatible with GLOBALGAP is to keep certification costs low. As a result, the bulk of the pre-assessment and audit activities will be undertaken by a local inspection body (eg NAVIQAD), and only those that wish to be fully GLOBALGAP certified will require the involvement of companies that are GLOBALGAP accredited (ie at present a few international companies that have been provisionally approved) at a late stage⁶. Certification by international companies can cost US\$3,000 per farm inspection, and US\$ 5,000 for processing factory inspections. In addition, membership fees of the order of US\$ 500 are to be paid.

However, in order for the scheme to succeed it is important that costs are kept low. This is important under any circumstances but even more so in the current economic climate where shrimp farming and processing enterprises struggle to make profits. During the course of the field survey some processing companies stated that they had been charged high fees during pilot projects to introduce GAP a few years ago. For example it was suggested that one company had been charged about VND 500 million for a GAP pilot project on 10 ponds (0.5 hectares each). This would correspond to US\$ 30,000 in total or US\$ 6,000 per hectare. It seems that some of the costs were incurred due to excessive laboratory testing. In light of this, it is important that protocols are followed that avoid excessive laboratory and other costs.

At the same time, as outlined above, experience with the implementation of GLOBALGAP in other parts of the world (eg horticultural exports from Africa) shows that schemes are most successful when exporters are actively involved in their implementation.

⁶ Provisionally approved certification bodies for GLOBALGAP shrimp can be found at www.globalgap.org (Home page > Services > Certification), or at: <http://www2.globalgap.org/applebs.html?countryid=0&continentid=0&ScopeID=31>

As for farmers, it needs to be borne in mind that in addition to pre-assessment and assessment costs, the bulk of the costs at the farm level will be incurred as a result of improvements to production infrastructure (eg water supply and discharge system) and processes (eg record keeping). For example, producers in Ben Tre Province estimated that these improvements can cost about VND 50 - 100 million for one hectare of ponds. The construction of traditional ponds costs a lot less than GAP certified ponds (e.g. VND 50 million / hectare without certification compared to up to VND 150 million / hectare with certification).

As a consequence, farmers should not be expected to pay high fees for certification and related assessments. In particular Government services (e.g. Provincial NAVIQAD and aquaculture extension services) should be in charge of training farmers and implementing the scheme in the Provinces. Other organisations (e.g. private sector service-providers) will only be required in areas where Government services face capacity shortages.

In summary, the following three categories of players are expected to collaborate to implement GAP certification at producer level: farmers, Government services, and exporters/processing factories.

(c) The third cost element of the scheme is related to its **promotion within Vietnam and in overseas markets**. To promote the scheme in Vietnam the following Departments need to collaborate: DAPT, Department of Aquaculture, NAFIQAD, NCAFE, and VINAFIS. They need to prepare information material for dissemination at provincial level. In addition to technical information, this includes material explaining how the scheme functions.

Promotion of the scheme in overseas markets should be carried out by DAPT staff in collaboration with VASEP. Other Vietnamese Government agencies (eg Vietnam Trade Promotion Agency, or trade attachés in Vietnamese embassies) could also have a role to play, but coordination through VASEP would make good sense in view of VASEP's knowledge of seafood export markets and active role in addressing them. As indicated above, the latter is experienced in promoting Vietnam's seafood exporting sector and as an association is well respected in the major target markets. As a result, it is recommended that DAPT participate in activities organised by VASEP, such as expositions in Vietnam itself or participation in overseas trade fairs. The additional costs for these exercises would be small, given that DAPT would mainly have to prepare material promoting the Vietnamese shrimp brand, and cover its travel costs. In addition to leaflets, the shrimp brand can be promoted in Vietfish (VASEP's trade magazine) and on their website as well as that of the Ministry. This may attract some costs to be negotiated with VASEP.

The above cost elements can be summarised as shown in Table 4.

Options for Small-scale Producers

Different options for producer group involvement are outlined in the report.

GLOBALGAP is too expensive for smallholder farmers and sometimes farmers struggle with some of the complexities of the management systems required. A way to make GLOBALGAP easier and more affordable (that could also be built into VNGAP) is to go for group certification (known as option 2 in GLOBALGAP). For group certification farmers need to form a farmer owned and managed (can be exporter owned and managed) Primary Marketing Organisation (PMO). For more details see above.

Another option highlighted is the Thai “Cluster” approach. This model is based on forming associations devoted to attaining the required standards – groupings termed “clusters”. These have been supported by both government and the processors, support which seems to be crucial⁷. The mobilizing entity that this system chose was the “cluster” of small farmers. Under their BAP criteria each farm should (i) not be larger than 50ha, (ii) should be geographically adjacent within a 25km radius and (iii) the cluster’s combined annual output should not exceed 500 tonnes. It is particularly important for all farms to have comparable production methods and there should be a legal entity managing them collectively to ensure adequate operational control and compliance with standards. A standardized procedure was devised to establish these clusters. Details of the Thai “Cluster” approach are presented above.

The main approach adopted here for the Vietnam shrimp branding scheme was to use the brand internally to persuade smaller producers of the advantages of participating in certification schemes (and to accept the resultant higher costs). It is in this connection that a Vietnamese brand emerged as having real relevance – as a catalyst for developing traceability networks and other quality related systems that link farmers to the export markets through the processors. The benefits of a Vietnamese GAqP scheme were mentioned by some traders positively in this regard. An “internal” Vietnamese brand could help in eliciting a unified response from small farmers to the requirement for traceability as well as persuading eligible small producers to become committed to the concept.

Appropriate Commercial Promotion Activities

As for appropriate commercial promotion activities to enhance Vietnam’s shrimp brand this encompasses activities associated with a trade brand. As highlighted above, this means that there is no need to use highly expensive mass media, but rather targeted low cost means, including:

- Advertising and articles in the trade press
- Product demonstration at trade shows and expositions (e.g. as part of VASEP activities)
- Participation in trade conferences and seminars

⁷ Relevant references concerning the Thai cluster systems include the following: Infofish Magazine 2/08 Mar/Apr p8 Thai shrimp farm clusters, www.shrimppnetwork.com, www.thefoodschoo.net

- Wooing traders through encouraging visits and assisting them in-country
- Relationships - maintaining a regular dialogue with key traders, informing them of any change well in advance (“no surprises”).

Advertising and trade show participation are the obvious options that could be promoted by MARD or other Government organisations, as the other three prospects are essentially matters for individual firms.

Advertising in the trade press. There are a number of seafood publications that are widely read in the main OECD markets. Some of these specifically target traders and processors, and these represent a cost effective approach for Vietnam. Examples would include Seafood International and Seafood Processors in UK and the EU (50% of Seafood International subscribers are in mainland Europe). Seafood Business in the USA is an equivalent for that market. As an indication of costs, advertising charges for the monthly trade magazine Seafood International are \$3,490 for a single issue ¼ page full colour advert or \$6,350 for a full page version (content/artwork costs in addition of course).

VASEP’s Vietfish International magazine is well regarded especially for its excellent factual content concerning Vietnamese producers and high quality presentation. An alternative approach might then be funding to increase its circulation amongst OECD importers, processors and retailers.

Finally, the internet does of course provide additional alternatives now. Targeted advertising through widely visited specialist web sites like Intrafish.com for the EU and SeafoodSource.com in the USA are relevant examples. In addition, advertising on the VASEP website (www.vasep.com.vn) should be envisaged. An advertisement on the web site www.intrafish.com costs about US\$1,000 – 2,600 per week.

Demonstration at trade shows. There are a number of major international seafood trade shows or expos during the year. The Vietnamese industry is already represented at many of these by VASEP, and key examples would be the European Seafood Expo (ESE) in Brussels and the Boston Seafood Show on the USA’s East coast. Of course, the Vietfish International Exhibition in HCMC in June provides an additional major opportunity to showcase Vietnamese shrimp. Costs for these expos are exemplified by those for ESE Brussels (perhaps the largest such venue) where a partitioned booth costs between \$4,500 and \$7,500. In addition, costs of promotional material and other facilities in the booth (e.g. chill cabinet or cooking equipment) have to be added as do the travel and subsistence costs for the staff attending the booth. No doubt attending under the VASEP banner and within the VASEP pavilion is a cost effective option to advertise the Vietnamese shrimp brand.

Table 4: Costs of Shrimp Branding and Implementation of GAqP Standard

Activities	Costs
Setting up of the Agricultural and Fisheries Products Branding and Certification Centre, to be based at DAPT/MARD.	Five government staff, including one team leader
<p>Certification of shrimp producers (GAqP)</p> <ul style="list-style-type: none"> - Government staff such as NAVIQAD and Provincial aquaculture extension services (ie NCAFE); - Exporters and processors contribute to training and capacity building measures; - Shrimp farmers pay for improvements to their production infrastructure; - Shrimp farmers pay nominal fee for certificate, which is renewable on annual basis 	<p>Normal costs for staff and transport</p> <p>VND 15 – 20 million per hectare of farms supplying the factory</p> <p>VND 50 – 100 million per hectare of shrimp farm</p> <p>VND 1 million for farms smaller than one hectare; VND 2 million for farms larger than one hectare</p>
<p>Promotion of shrimp brand</p> <ul style="list-style-type: none"> - Promotion within Vietnam - Promotion in overseas markets (preferably in conjunction with VASEP activities at trade fairs) 	<p>VND 200 million p.a. for travel VND 100 million p.a. for material VND 200 million p.a. for workshops in provinces</p> <p>US\$ 7,500 p.a. for five overseas flights US\$ 7,500 for travel expenses (US\$ 150 per day for 50 days)</p> <p>US\$ 20,000 – 30,000 p.a. for advertising in Seafood International and Vietfish International trade magazines, and on Intrafish.com, Vasep.com.vn, and SeafoodSource.com websites</p>
Other costs, e.g. registration of logo / trademark with the National Office of Intellectual Property (NOIP)	Nominal fee

NB: The costs are for DAPT staff unless indicated otherwise. The costs do not include certification by international companies, which cost about US\$ 3,000 per farm inspection, and

US\$ 5,000 for processor inspections. In addition, membership fees of the order of US\$ 500 are likely to be due.

ANNEXES

ANNEX 1: References AND DATA SOURCES

GENERAL SOURCES

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GLOBALGAP: www.GLOBALGAP.org

Draft texts on aquaculture standards in Vietnam, e.g. NAFIQAVED pilot standard for Good Aquaculture Practices (GAqP)

SUDA Report 3.5.5/2008 - Promotion of better management practices (BMP), good aquaculture practices (GAP) and Code of Conduct (COC) for shrimp aquaculture systems.

MARD Regulation (draft, 29 April 2008); Conditions for sustainable black tiger shrimp (*P. monodon*) and white leg (*P. vannamei*) shrimp aquaculture

SOURCES USED FOR THE MARKET ANALYSIS

Key Trade Data Sources

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FAO Globefish,
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Seafood Intl Jan 07p28
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Shrimp News–Roseberry Jul-Oct 06

ANNEX 2: ITINERARY OF CONSULTANCY

Date	Persons / organisations met
Phase 1	
31/8/2008	Arrival of A. Graffham and U Kleih in Hanoi
1/9/2008	Meeting with National Consultants, Mr Ich and Mr Hung to discuss work programme
2/9/2008	National Holiday, reading of background material, Arrival by N Peacock in Hanoi
3/9/2008	Meetings at MARD/POSMA; VASEP; Department of Science and Technology
4/9/2008	Meetings with NAFEC, DAPT, VINAFIS / FITES
5/9/2008	Meetings with Mr Phuong, Vice Minister MARD; Department of Aquaculture, SUDA, Fisheries Resources Management Department
6/9/2008	Meeting at AQUAPEXCO, Quang Ninh Province
7 - 8/9 / 2008	Team 1 (Hung, Graffham, Peacock): Quang Ninh Province – work with AQUAPEXCO hatchery staff; POSMA Manager, DARD, Halong City; FSPSII POSMA Smallholder shrimp project in Yen Hung District; shrimp processors in Cam Pha.
7 - 8/9 / 2008	Team 2 (Ich, Kleih, DAPT Officer): Quang Ninh Province – work with AQUAPEXCO hatchery staff; Haiphong - RIA 1 Fieldstation, RIMF, DARD.
8/9/2008	Both teams flight from Hanoi to HCMC
9/9/2008	Both teams flight to Ca Mau
9 - 12/9/2008	Team 1 (Hung, Graffham, Peacock, DAPT Officer) – Travel to Bac Lieu Province to work with DARD; Viet Cuong Seafood; Shrimp farmers in Truc Anh and Trach Bong Commune. Soc Trang Province to work with DARD, STAPIMEX, An Giang Province to work with DARD, POSMA, Pangasius farmers in Long Xuyen Commune; NTACO Processors,
9 – 12/9/2008	Team 2 (Ich, Kleih, Hang, Huong) – Work in Ca Mau with DARD, POSMA, Minh Phu Seafood Corporation, CAMIMEX, Nhi Nguyet Aquaculture Cooperative; Flight to HCMC on 11/9 and travel to Ben Tre Province to work with DARD, FAQUIMEX Office and farm in Thanh Phu

	District, Shrimp farmers in Binh Danh District.
13/9/2008	Both teams travel to HCMC and flight to Hanoi
14/9/2008	Preparation of workshop material
15/9/2008	Workshop in Hanoi to present preliminary findings to stakeholders
16/9/2008	Meetings with MARD/POSMA, National Office of Intellectual Property, and Ministry of Trade
16/9/2008	Departure by Graffham, Kleih, and Peacock to UK; arrival in London on 17/9/2008.
Phase 2	
10/11/2008	Arrival A Graffham in Hanoi
11 – 14/11/2008	A Graffham; meetings with POSMA and Mr Ich to work on standards section of report;
13/11/2008	Arrival U Kleih in Hanoi
14/11/2008	Meeting between Kleih, Graffham, Ich and Hung to discuss project progress, Meeting with MARD/POSMA/DAPT
14 – 18/11/2008	Graffham and Ich, visit to Khan Hoa Province for meetings at DARD, RIA 3, Hatchery, Feed mill and aquaculture producer; Then return to Hanoi.
14 – 25/11/2008	Kleih and Hung work in Hanoi; Meetings with MARD (Vice Minister Phuong, Dr Nga, Ms Mieng, Ms Hang, Ms Huong, Mr Nichols), NOIP, Red River Interactive – Logo Design. Report writing, preparation of presentations, arrangement of translations.
18 – 21/11/2008	Graffham and Ich work in Hanoi, Report writing
21- 24 /11/2008	Graffham and Ich flight to HCMC and Ca Mau to work with DARD, and shrimp producers and processors in mangrove areas of Ca Mau/Nam Can.
24/11/2008	Graffham travel to HCMC; Ich travel to Hanoi
25/11/2008	Peacock arrival in HCMC (from United Kingdom), Kleih arrival in HCMC (from Hanoi)
26/11/2008	Workshop preparations
27/11/2008	National stakeholder workshop (chaired by Vice Minister Mr Phuong), in HCMC
28/11/2008	Wrap-up meetings
29/11/2008	Return to UK, Graffham and Peacock from HCMC, Kleih from

Hanoi; Arrival in London on 30/11.

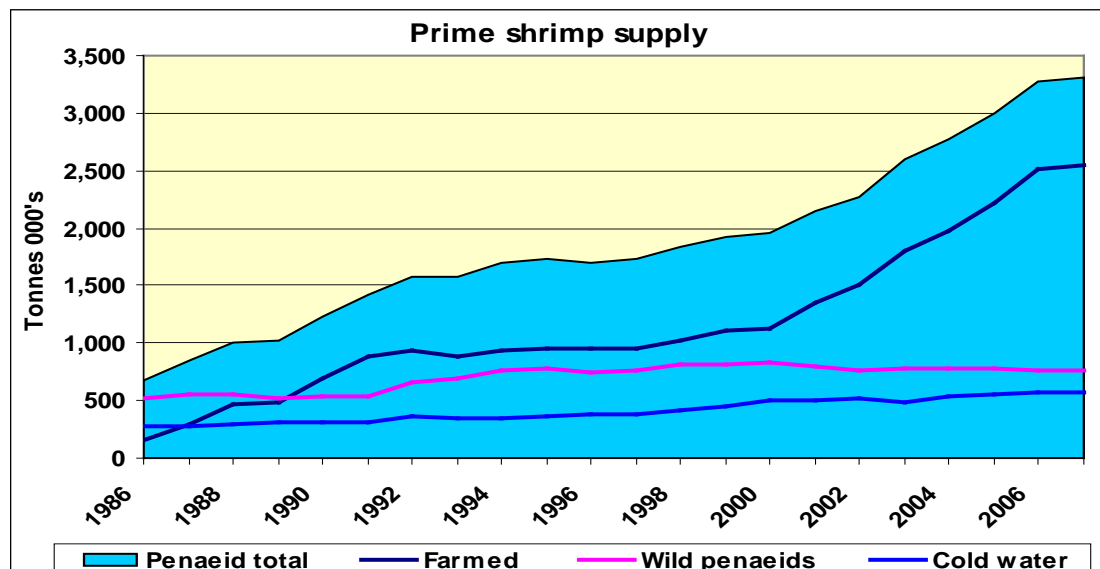
ANNEX 3: KEY MARKET OVERVIEW

Structure and Organisation of Key Markets

Context - the Rise of Commodity Shrimp

World shrimp supplies have been rising rapidly. This is the result of a single factor - the success of tropical shrimp farming. As Figure 1 demonstrates, it is farming alone that has provided nearly all the additional supplies over the past decade. The shrimp species involved have been those of better quality that are traded internationally – ie the *Penaeids*, *Metapenaeids* and related large warm water shrimp, as well as cold water genera like *Pandalus* and *Pleoticus*. Catches of Chinese akiami shrimp and similar small low quality species are ignored because they do not compete in this market.

Figure 1

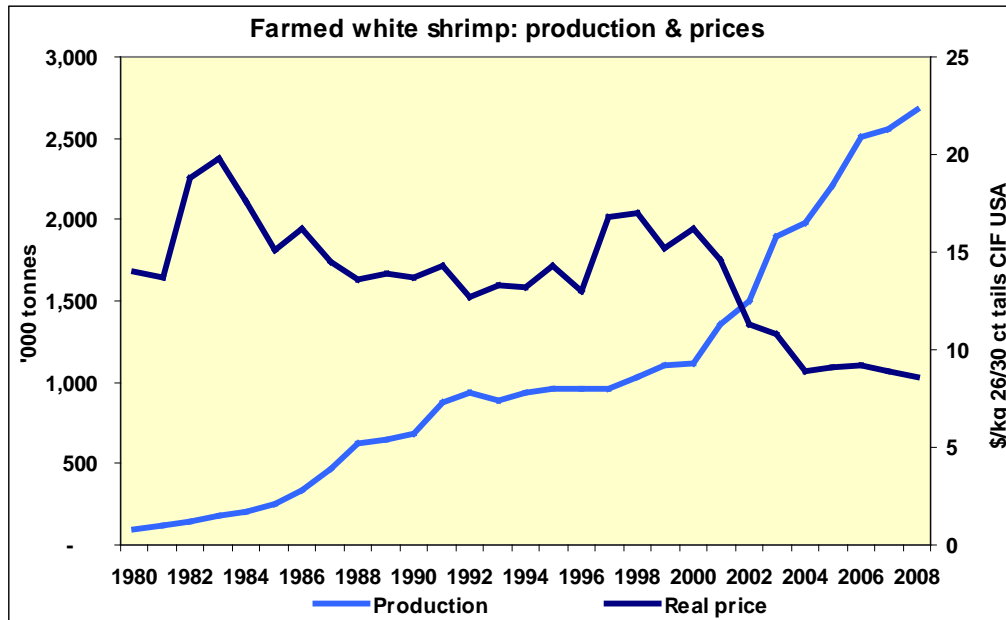


One inevitable result of the success of shrimp farming has been a fall in price. What had been a luxury product that was becoming increasingly expensive to produce (as catch rates declined whilst trawling costs increased) became widely available at much lower cost. The market accordingly expanded rapidly whilst prices fell by over 40%. There were two reasons for this – (i) the continued rapid increase in of supplies began to damage the market, even at the lower price levels and (ii) farmers proved able to produce shrimp much more cheaply than the overstretched trawler fleets. Less efficient farmers were also losers, especially those hit by disease, but it was the fleets that really suffered.

However farming did not lead to immediate price reductions and the reason for this lies in the fisheries. Some of these responded to pressure from farmed supplies through a reduction in capacity (and thus landings) as fishermen adjusted to the need for higher yields (catch rates) to make up for lower prices – a process that continues. This had a “buffering” effect on prices for a period as falls in wild catches (then the larger contributor

to supplies) offset rises in farmed output. This held prices relatively stable during the early stages of shrimp farming as the fishermen were the price setters. It also made shrimp farming by the better producers highly profitable.

Figure 2



The situation has now changed with farming clearly the price determinant. What this heralded was the rise of commodity shrimp – mass produced mid-sized white shrimp (*P vannamei*). And the defining characteristic of this shrimp has been its declining cost of production by the industry’s low-cost leaders – now \$US 2-2.5/kg of whole shrimp. This is a market segment that only the most efficient with the best environmental conditions can hope to compete in. One alternative for those who can’t is to opt for niche markets where specialised forms of shrimp can achieve premium prices. Another is to move down the value chain to produce added value processed shrimp. Both options are considered below.

The European Market

The American and Japanese markets for shrimp share a further characteristic – each is relatively homogenous. Europe is not – it is diverse with very differing national characteristics – regarding preferred species and product type, culinary traditions etc. Table 1 summarises this diversity for the six key EU markets, showing how they differ in degree of preference for white shrimp and product type.

Table 1: The European market for Shrimp: National Characteristics

Country	Growth in consumption 2000 to 2007	Proportion of white shrimp in penaeid imports 2002	Preferred product type
Spain	2%	85%	Whole shrimp
France	5%	72%	Whole shrimp for cooking
Italy	5%	73%	Whole shrimp
Belgium	2%	47%	Whole shrimp & tails
UK	6%	53%	Peeled & shell-on tails
Netherlands	Entrepôt	61%	Shell on tails
Germany	6%	45%	Peeled & shell-on tails
Other EU	5%	52%	Various
Average EU	5%	68%	

Source: Eurostat

Table 2 defines the European market in terms of consumption of shrimp of all types (including coldwater species). From this it is clear that: four countries are particularly important where shrimp are concerned: Spain, France, UK and Italy

- **Spain** is the major market, and has been so for most of the past decade. Spain has a particular preference for (i) whole shrimp and (ii) white shrimp, which dominate this market more than that of any other major OECD country. Large shrimp are also popular for showy specialities like paella and so this has all created a niche for large white shrimp. The bulk of imports are in raw frozen form, with whole shrimp believed to account for 80% to 90% of the total. Coldwater shrimp are also important at over 40% of the supply.
- **France** is another specialised market, this time with a marked preference for cooked whole shrimp, sold widely as fresh (although the raw material was probably frozen). Again white shrimp is the preferred species.
- **UK** is a complex market, formerly focused on small coldwater shrimp. It still does to a large degree as these may account for over 70% of the market. However, latterly larger tropical species have become much more important as a taste for shrimp sandwiches & cocktails (small coldwater shrimp) has been augmented by one for large “king” prawns (penaeids). Peeled tails are the presentation of preference in both cases, and black tiger is popular in UK.
- **Italy** is the third Mediterranean member amongst the four key players identified, and Italy follows its Mediterranean neighbours in preferring whole white shrimp. Coldwater shrimp are particularly important in this market at between 50% and 60% of the total.
- The **Netherlands** are not amongst the lead consumers but are also important, playing a role as entrepôt traders in tropical and other imported shrimp. Consumption is low (and favours cold water species like crangon) but the Dutch presence in this market place is substantial.

- The only other substantial EU market is **Germany**. Like the UK, this has been one of the faster growing markets, and again like UK, cold water shrimp is important (also over 70%). As subsequent sections show, Germany is of particular interest as it is the largest EU importer of Vietnamese shrimp.

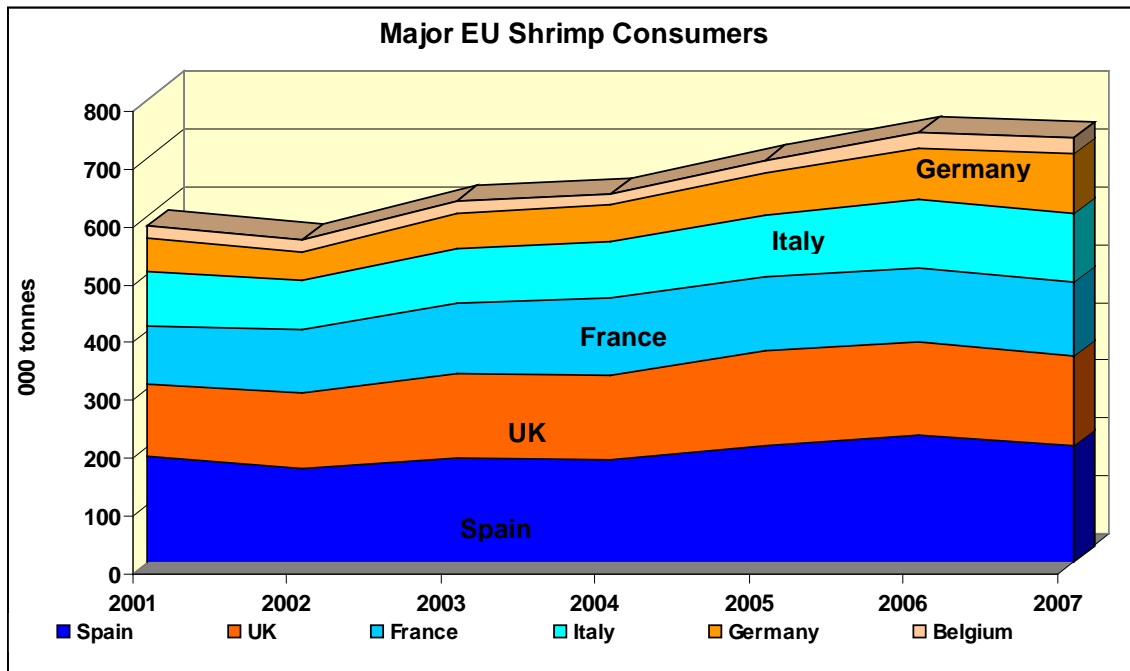
Table 2: Overall shrimp consumption by major EU countries (live weight)

Unit: 000 tonnes	2001	2002	2003	2004	2005	2006	2007	% 2007
Spain	183	161	180	177	199	220	199	22%
France	103	111	124	133	129	129	129	14%
Italy	94	84	95	98	107	119	120	14%
UK	123	130	144	146	165	160	156	18%
Germany	59	49	59	64	72	87	101	11%
Belgium	20	21	23	19	21	29	30	3%
Other	59	77	102	102	119	116	129	15%
Totals	660	650	747	760	834	883	887	100%
Growth annually	6%	-1%	15%	2%	10%	6%	0%	

Source: Eurostat data

Consumption growth in the EU market has averaged between 4% and 6% over the past decade (depending upon the exact period chosen) and in the longer term seems set to continue similarly. It would though be foolish not to acknowledge that the current economic difficulties, especially in Spain, are likely to interrupt growth in the near term. Shrimp is still a relatively expensive option, in spite of the success of farming in bringing prices down. This will probably mean reduced consumption this and next year, but thereafter Europe appears to be the most promising major OECD prospect for increasing shrimp sales

Figure 3



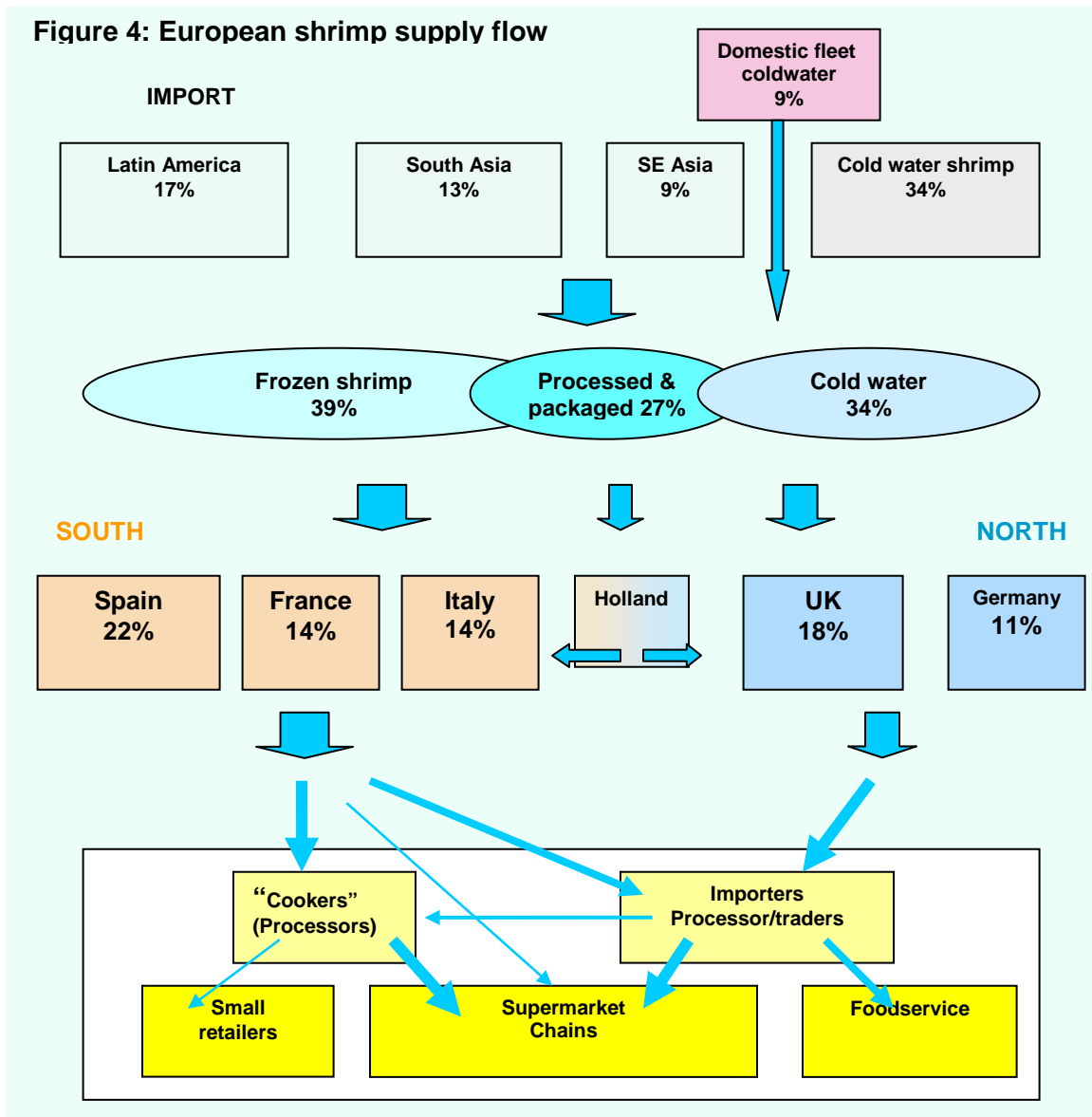
Comparing European consumption per head of shrimp to that in other OECD markets makes a telling point. Average live weight shrimp consumption in Europe is 1.83kg/head/year, which is approximately 60% of that of USA consumption (3.37kg/head/year⁸) or of that of Japan (3.44kg/head/year). I.e. Europe is consuming only a little over half as much shrimp as the other two major OECD markets. Furthermore the EU now includes 12 new, mostly Eastern European, member states which present a new, virtually untouched, market where shrimp consumption is still very low.

Figure 4 attempts to summarise the supply pattern and net trade flows within the EU shrimp market. That this is a highly complex situation, were the markets in the various member states differ - often to a large degree - has already been stressed. So, taken as a whole, the EU market is immensely complex and the diagram below inevitably hugely over-simplifies the system. It does however help to make some useful general points

- The EU **domestic supply** (mostly coldwater shrimp from Denmark, Netherlands and Germany) is small but significant.
- In the **northern EU markets** there are a range of intermediaries involved including dedicated traders as well as trader/processors who import and add value. Some of these are now large companies (eg Youngs, Heiploeg and Lyons) and specialisation has become a major factor in some cases.

⁸ NB not to be confused with USA NMFS data showing 4.1-4.4lbs/head consumption which is calculated on product not live weight (ie HLSO and peeled shrimp etc)

- In these markets there is reluctance by the retail and foodservice majors to deal directly with overseas suppliers - they prefer to use specialised importers from whom they have recourse should a hygiene or ethical problem arise.
- The southern markets are of course different: the **Spanish** market is both fragmented and subject to rapid change. Barriers to entry are now low and so traders are continually entering and leaving the market opportunistically – creating a seemingly unstable and unstructured market.
- The Spanish market can be divided into three main categories, with retail and foodservice the principle outlets (the other being processing). Retail (supermarkets especially) accounts for the greatest volume of sales but margins are better in foodservice and so this is expected to grow.
- The main driver of the **French** market is the preference for cooked shrimp – with the done in France so the product can be retailed “fresh” (reputedly accounting for 70% of the market). Imports are then dominated by raw frozen shrimp destined for these “cookers”. Traders believe that 85% of French shrimp is subsequently retailed (80% through the super/hypermarkets alone) with only 10% sold via caterers.
- The result is a more structured market which is dominated by the major retail chains. These tend to source through traders, but this is not universal - Carrefour have recently announced the intention to import directly from Thai farms.
- **Italy** is the other significant southern market, and is again very different. Here, the preferred product is raw shrimp (whole or tails) and small specialist retail still plays a much larger role, possibly accounting for 40% of the trade. The balance is sold though hyper and supermarkets. Distribution is also fragmented with a complex network of importers and “agents” (distributors) involved, serving their local hinterlands.



Key conclusions: Five countries dominate the EU market – Spain, UK, France, Italy & Germany, three of which are Southern or “Mediterranean” in culture (Spain, Italy and France) whilst two are Northern countries – UK and Germany

- Spain is the largest EU market with 22% of the market.
- However Spain demands white shrimp, preferably whole from Latin America & China
- France imports raw frozen shrimp to cook and sell “fresh” cooked, and also prefers white shrimp (as does Italy)
- The UK market has been growing latterly and is now second only to Spain
- Germany is also a sizable market, but as with UK prefers coldwater shrimp
- The other significant markets are Belgium & Portugal (both 30,000 tonnes)
- Northern Europe is a better market for black tiger, preferably in value added (peeled) form

- The Netherlands have a key trading role in the EU shrimp market but do not actually consume much shrimp
- These points highlight the difference between the shrimp markets of southern (Mediterranean) and northern Europe countries
- The importance of traders and trader/processors in the supply chain is evident, as is the role of the major retail chains. Other supply links exist, especially in the South, and there are indications of direct purchase by supermarkets, but specialist traders and processors do appear to be the dominant force in these markets.

The data suggests that not only is Europe now the market growing most rapidly, but also has the greatest potential for expansion

- EU shrimp consumption is a little over half that of comparable OECD markets
- The new EU countries⁹ are getting wealthier rapidly & adopting Western EU tastes
- This is very likely to include greatly increased shrimp consumption
- The diversity of the market provides niches to exploit.

The United States of America Market & Main Trade Channels

The US market is - and has for most of the past 20 years been - the world's leading market for tropical shrimp. Shrimp consumption led the national seafood league at close to 2kg per head per year. Indeed, it could be said that the US market was the driver of shrimp farming in its early stages, especially in South America. As Table 5 shows, shell-on tails (HLSO) was the principal product category, but has been declining as imports of more processed forms have increased, especially peeled raw shrimp. There have also been more significant recent changes.

Firstly the USA's pre-eminence as a shrimp importer was undermined by the antidumping campaign it waged against most of its key suppliers (8 countries responsible for nearly 70% of all farmed shrimp). The motivation for this was the desire to protect the American domestic shrimp fishery. This fishery in fact contributes less than 10% of US supplies - ie 90% plus is imported - and so unsurprisingly the antidumping campaign wasn't particularly effective in raising domestic shrimp prices. Furthermore, successive challenges by exporters (to the USA) are now eroding the effectiveness of the campaign with WTO rulings that the continuous bond (the "C-bond" that is required as security for possible future duties) infringes WTO regulations. In short, the campaign failed to halt imports and seems likely to become increasingly ineffective generally.

However, it did lead to significant structural change within the US market. China and Brazil were major losers with high penalties adjudged. Brazil virtually dropped out of the USA market to be replaced by Ecuador (low duties) and Mexico (duty free). China chose to adapt rather than leave the US market, opting for value added products that escaped penalties under the system (Chinese exports of which shot up from 8,000 to 40-60,000 tonnes after 2004 when antidumping duties came in). Added value products did not increase overall, though, suggesting that this was a very specific effect). Indonesia, as the only major Asian country to avoid penalty also doubled sales to the USA.

⁹ Estonia, Latvia, Lithuania, Poland, Czech, Slovakia, Hungary, Romania, Bulgaria, Slovenia, Malta, Cyprus

Table 3: Breakdown of US imports of shrimp by Product Category

Percent of total	2005	2006	2007	2008
Shell on tails HLSO frozen	47%	43%	42%	42%
Peeled raw PD, PUD frozen	28%	27%	32%	32%
Cooked etc frozen	16%	20%	18%	16%
Breaded frozen	8%	8%	7%	9%
Other	1%	1%	1%	1%
Total	100%	100%	100%	100%

Source: NMFS data Napfisheries analysis

However the financial and economic chaos that developed during 2008 seems likely to overshadow all these changes, but quite how this will play out is very hard to say. Falling incomes will reduce demand for luxuries and eating out – whilst against this the rising dollar should lower costs of imported shrimp, making it an affordable indulgence.

Figure 5: USA shrimp supply flow chart

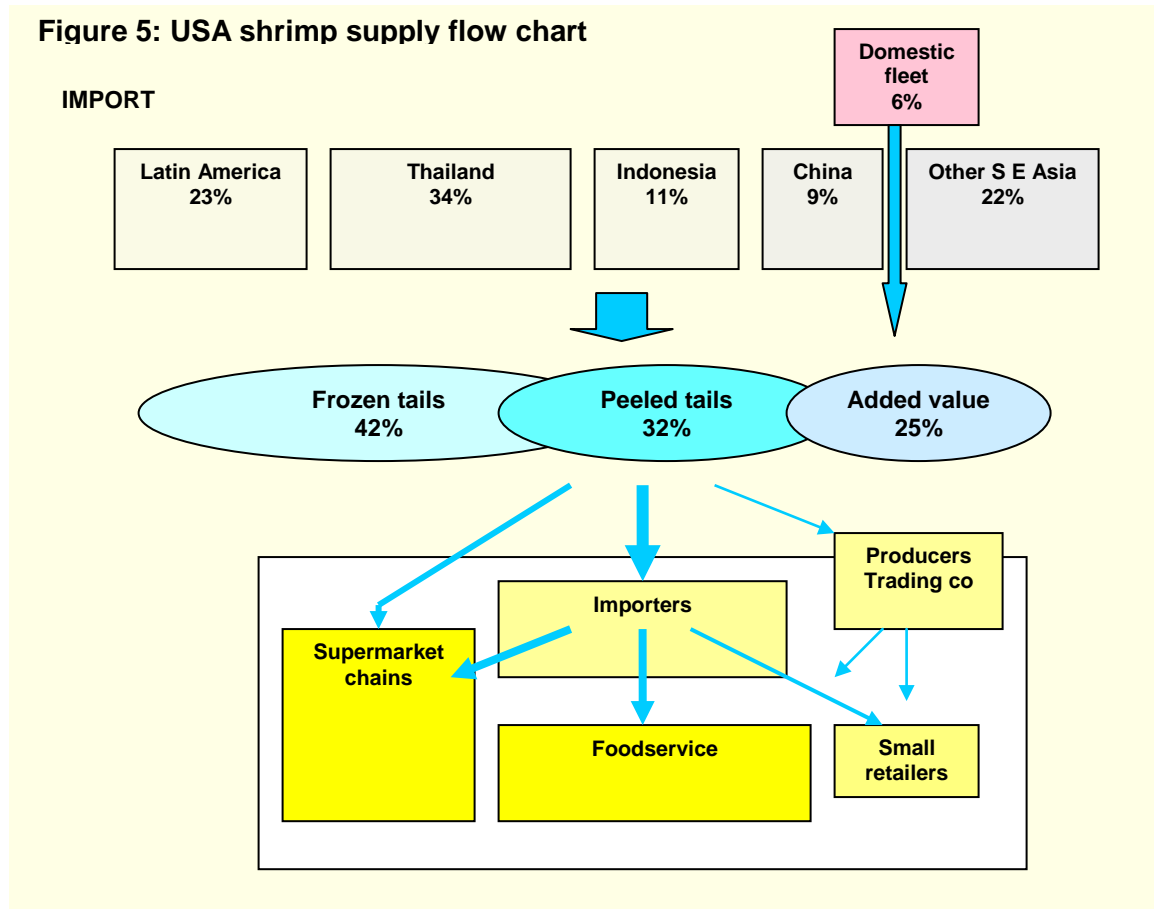


Figure 5 summarises the US shrimp supply situation. The great bulk of supplies – all but around 6% - are provided by imports, mostly from South East Asia. The main interface with the US market itself are importers – specialised companies who are expert at dealing with the complexities involved (non tariff barriers, antidumping duties/bonds, inventory management etc). Most are US seafood companies but some are now owned

by producers. In some cases the producers set these companies up, in other cases they buy-in (eg Thai Union acquiring Empress to improve their access to their most important market).

These importers supply the main retail chains through long standing relationships (eg Rubicon Resources supplies Wal-Mart and Kroger's whilst Orion supplies the huge Darden restaurant chain). This is the structure of the high volume segment of the market, a segment that Thailand and Ecuador have clearly addressed very effectively (both increasing market share in spite of antidumping duties). There is also a complex net work of other supplier linkages which deal with a multitude of other markets segments – small “mom & pop” stores and “convenience” retailing, the whole ethnic market (which tends to source separately through family connections), “high-end” dining, organic food stores etc.

The Japanese Market & Main Trade Channels

The Japanese market has also been changing, and again the trend is away from raw shrimp and towards added value processed items. Even so, Japan remains a market that is dominated by raw shrimp, this accounting for 75% of imports. There has been an increase in some added value items, as suppliers learn to process Japanese specialities (eg nobashi and sushi formats) but this has made little impact on imports overall.

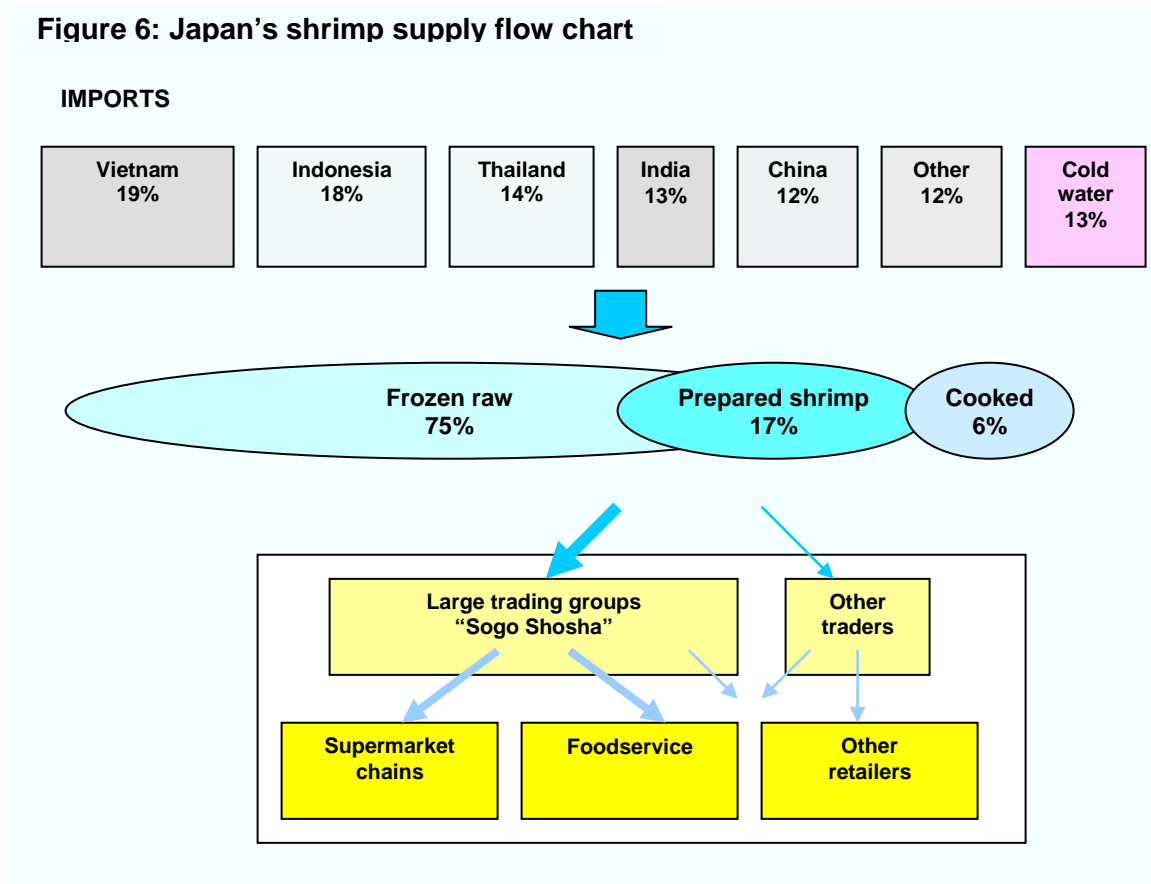
Table 4: Breakdown of Japanese imports of shrimp by product category

Percent of total	2002	2003	2004	2005	2006	2007
Frozen raw (tails, whole)	85%	82%	80%	79%	76%	75%
Prepared & preserved, inc canned	9%	12%	13%	14%	17%	17%
Cooked	5%	5%	6%	6%	6%	6%
Dried, salted & smoked	1%	1%	1%	1%	1%	1%
Other (live, fresh & sushi)	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Source: Infofish, Japanese trade data

Figure 6 summarises the Japanese shrimp trade flows. Unlike the EU and the USA Japan's own fisheries make a marginal contribution to shrimp supplies, landing only a few thousand tonnes. Imports are then overwhelming the key source of supply, and for tropical species (nearly 90% of the market) nearly all come from Japan's South and SE Asian neighbours. Here it is the huge integrated trading and manufacturing companies (sogo shosha) that take a dominant role. These companies control much of Japan's import of seafood, with Maruha, Sumitomo, Mitsubishi, Hangwa (supermarket??), Mitsui, Sojitz (Nissho Iwai & Nichimen), Taiyo, C Itoh etc involved. Many of these companies are active in the shrimp trade

Figure 6: Japan’s shrimp supply flow chart



The presence of these major Japanese trading groups in this market determines how this market operates. Because these companies have such comprehensive capabilities (eg being able to bank with themselves using their in-house bank) they tend to exert overall control. They have sufficient scale to be able to install their own quality management regimes, fielding teams to their exporter partners. Quality control then tends to be a corporate issue rather than one for state regulation, and here the focus is upon freshness and the shortest lines of supply. This means that the barriers to entry for smaller traders are very high in Japan.

The Market for Black Tiger vs White Shrimp

Vietnam is currently in the early stages of developing white shrimp culture (*Litopenaeus vannamei*) nationwide. The debate as to which species Vietnam should concentrate upon is then perforce underway and urgent. This has important implications for any branding campaign, because there must be clarity regarding whether either or both should be the flagship species to promote. Accordingly we take a brief look at how the international markets for these two species have developed during this decade.

The defining feature here has been a rapid and continual substitution of black tiger shrimp (*P mondon*) by white shrimp (*L(P) vannamei*) over the past seven years. This has been led by the USA who have taken advantage of the resurgence of Latin American white shrimp production as well as Thailand’s near total replacement of black tiger with

white shrimp. A 70%:30% split in favour of black tiger has been more than reversed to nearly 75%:25% in favour of white shrimp globally (Table 5). This change also has been reflected in Japanese trade, but to much less extent, with black tiger losing only ten points from 60% to 50% over this period. Europe has followed suit, again with a ten point decline, but in this case this occurred from a lower starting point ie from 40 to 30% ie the drop is more significant.

Table 5: White & Black Tiger Proportions in Key Markets Shrimp Imports*

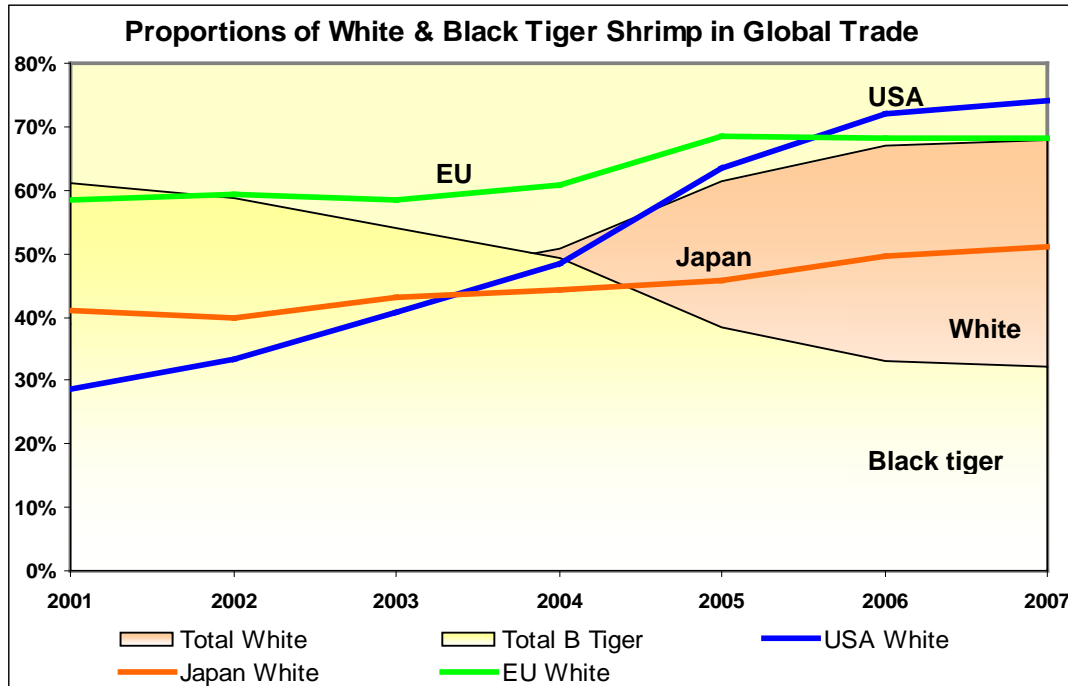
Unit: 000 tonnes	2001	2002	2003	2004	2005	2006	2007
USA							
White shrimp	29%	33%	41%	48%	63%	72%	74%
Black tiger	71%	67%	59%	52%	37%	28%	26%
Japan							
White shrimp	41%	40%	43%	44%	46%	50%	51%
Black tiger	59%	60%	57%	56%	54%	50%	49%
EU							
White shrimp	59%	59%	58%	61%	69%	68%	68%
Black tiger	41%	41%	42%	39%	31%	32%	32%
Key Market Totals							
White shrimp	39%	41%	46%	51%	62%	67%	68%
Black tiger	61%	59%	54%	49%	38%	33%	32%
Trade volumes (tonnes 000s)							
White shrimp	317	330	452	472	652	783	776
Black tiger	496	470	529	459	408	388	366
Total trade	813	799	981	931	1,061	1,170	1,142

Source: Napfisheries research, NMFS, Eurostat & Infofish

* Tropical shrimp only (ie no coldwater shrimp, so this table does not match table 2 above)

Figure 7 expresses this diagrammatically. Interestingly, although the EU has traditionally favoured white shrimp (and has swung further in that direction) the move away from black tiger has stalled recently and may have even reversed. The result is that the EU has become close to the USA as an importer of black tiger in absolute volume terms (ie 125,000 tonnes versus 140,000 tonnes for the USA in 2007). Both exceed Japan's 100,000 tonnes import of black tiger.

Figure 7



Global totals are also given in the figure (in shaded areas) and these show an overall decline from 60% to 30% in black tiger proportion of total imports. However growth in the industry overall has tended to offset this percentage decline, and has in fact held the actual volume of black tiger imports at 370,000 tonnes. Thus though black tiger has become a relatively niche product, this niche remains large.

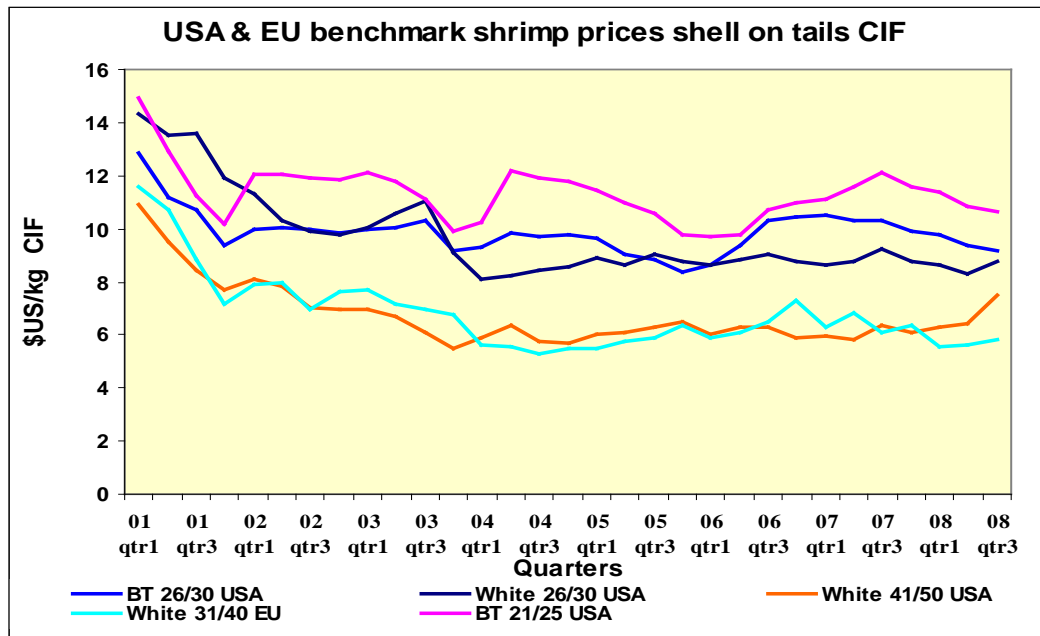
Value Chain and Price Structure in Key Markets

This section concentrates on price and price trends in the international shrimp market. Central to this is analysis of price series for key shrimp products. These have to be defined very specifically because, as this section goes on to show, prices vary greatly for different products. Shrimp may have become a commodity item, but it remains highly complex and segmented from a price perspective.

So why does this require analysis here? The answer is because this will be crucial for decisions regarding which markets the Vietnamese industry should opt for and where Vietnam should be positioned in these markets. Future revenue levels likely to be available to pay for branding are at the heart of this, of course. Figure 10 looks at the USA, traditionally the global leading shrimp consumers. Prices have declined over the past eight years, but most of the fall occurred in 2001. Thereafter, whilst there was volatility, prices broadly stabilised, at least in nominal terms (meaning of course a slow decline in “real” deflated terms). Black tiger does achieve higher prices than white shrimp, but this is evidently mainly a function of size grade. Where similar size grades

are compared (26-30 count) then prices are close though over time, black tiger has still managed to maintain a slight edge of several percent. This has though widened in black tiger's favour lately, reaching 14% over the past two years.

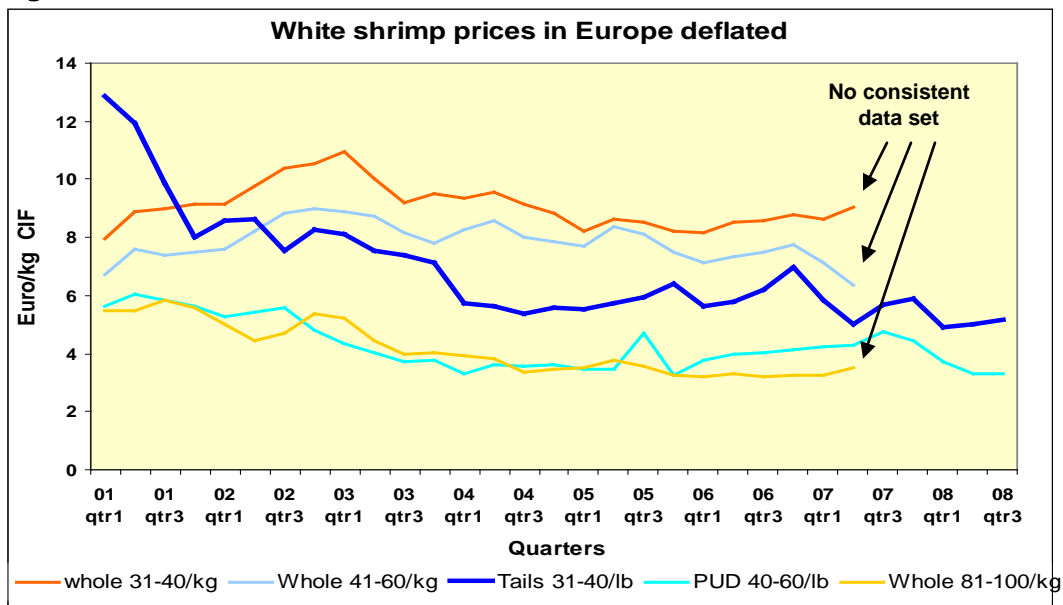
Figure 8



Source: Infish, Napfisheries research

The graph above focuses upon what has become the most typical traded shrimp product – the frozen shell-on tail (HLSO). Figure 9 looks at what are perhaps the most common alternative shrimp products – whole shrimp and peeled tails.

Figure 9

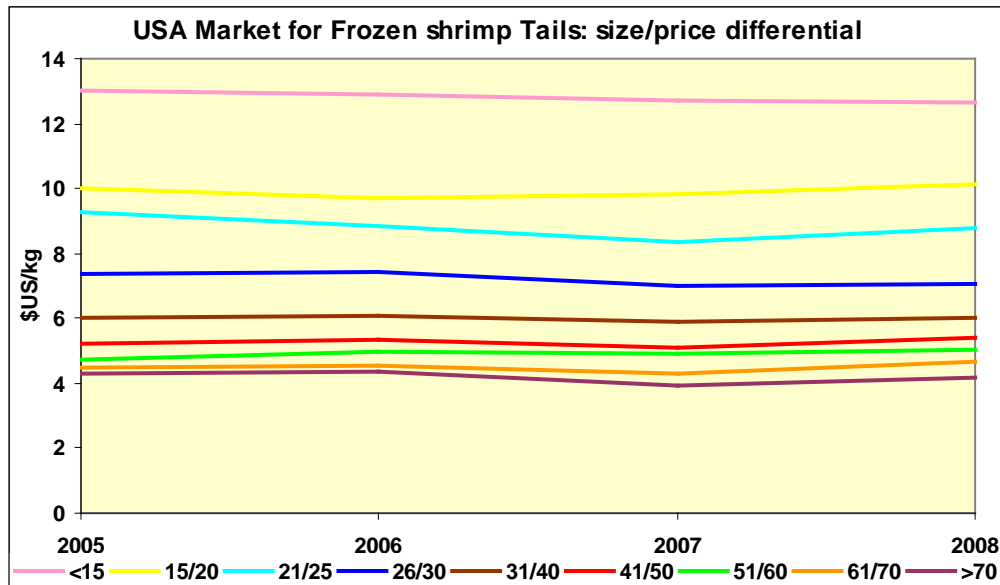


Source: Infofish, Napfisheries research

In this graph prices are quoted for trade with the EU as this is a major whole shrimp market. Also, prices have been deflated (ie are stated in real terms). The graph compares whole shrimp prices with the standard product (HLSO). What becomes clear is that whole shrimp didn't suffer the same severe declines at the beginning of the decade, and have tended to maintain prices over the period rather better than HLSO shrimp

The previous figures show how stratification of the shrimp market has led to wide price differentials between products. Table 7 and Figure 10, (which expresses the differential in terms of percentages) shows how this is largely a function of size grade. These differentials have evidently been maintained over recent years, although there has been a small decline in the premium for larger shrimp, whilst differentials have tended to widen slowly for smaller shrimp

Figure 10



Source: US Govt. NMFS

This size-price relationship is important because as a black tiger producer, Vietnam is automatically opting for the upper size niches Figure 10 shows how this differential has been a reliable feature of the market over recent years, in spite of overall price declines. It is also significant in some cases, and especially so with the larger shrimp where a 12-30% premium can result from a single upward jump in grade.

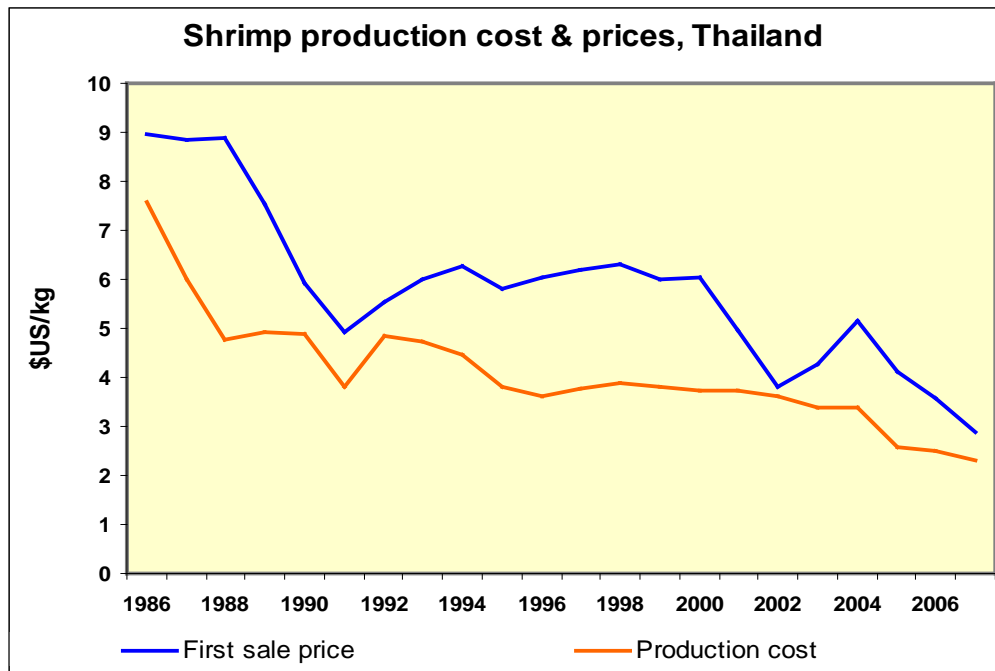
Table 7: Price differential between price grades in the US market

Tails Count/lb	2005	2006	2007	2008	Average
<15					
15/20	30%	33%	29%	25%	29%
21/25	8%	10%	18%	15%	12%
26/30	26%	19%	20%	24%	22%
31/40	23%	22%	19%	18%	20%
41/50	16%	14%	16%	11%	14%
51/60	10%	8%	3%	7%	7%
61/70	6%	9%	14%	9%	9%
>70	4%	5%	9%	11%	7%

Source: NMFS

Price projections: These price analyses are all historic, but it is future trends that matter here. Clearly, guidance on future price movements for farmed shrimp is required, and an indication is provided by producer price and cost trends. This is the basis for Figure 11 where the overall trend of prices declining with expanding production is hardly unexpected. However, the curves generated do provide an independent basis for quantifying possible future price movements. This is done here, but firstly, trend analysis of global farmed shrimp production over a 10 year horizon suggests that growth will continue at 4-5% annually. This of course means that future price declines are likely, irrespective of the current economic upheaval.

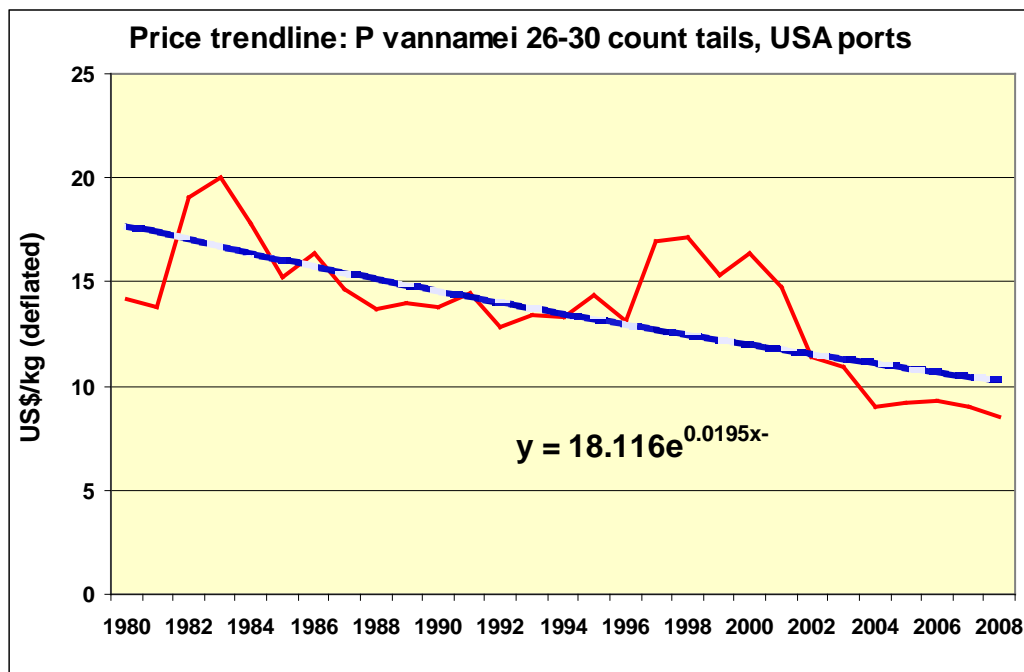
Figure 11



Source: Napfisheries research, Thai DOF

Furthermore, it is fairly clear that the high margins formerly achieved by shrimp farmers have been replaced by a more competitive relationship where production costs are arguably setting a price floor. This might then become a better indicator of future prices. Thailand has been amongst the market leaders as a global shrimp supplier for longer than most, and so is taken as the example here. Figure 11 shows how both prices and production costs have moved (in real terms) over the past 20 years – most of the shrimp farming industry’s existence. This production cost (COP) decline does include the switch from black tiger (with higher COP) to white shrimp latterly so exaggerating the COP decline but then that does reflect reality within the industry. The following two figures (14 & 15) are partially based on this to provide trend line analyses of first revenues and then production costs

Figure 12



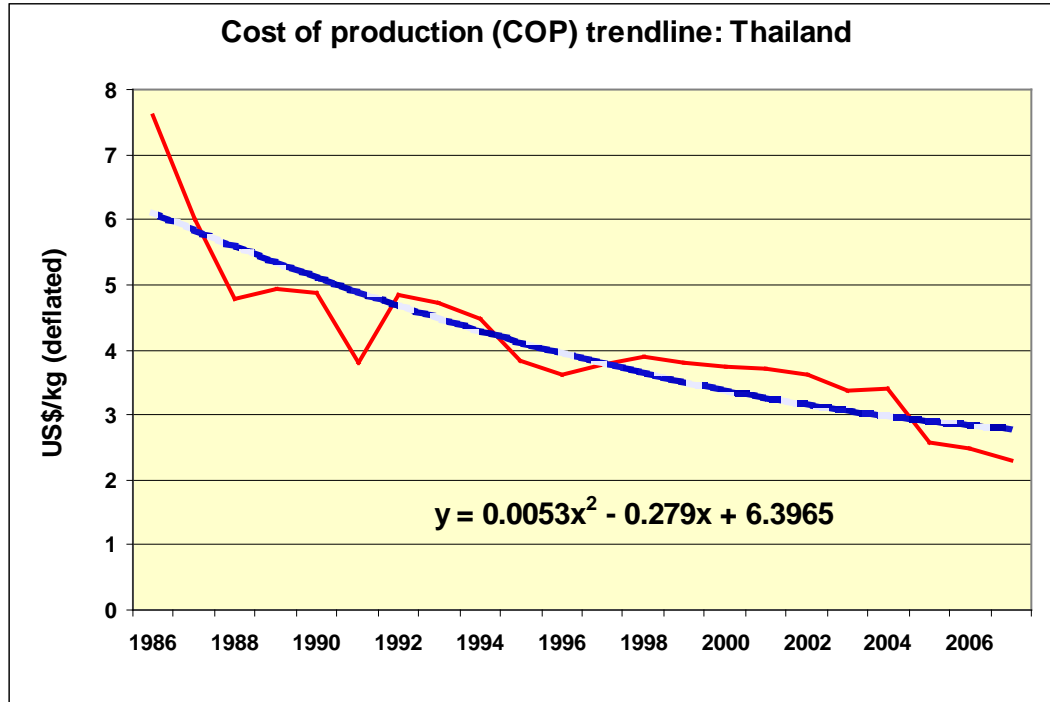
Source: Napfisheries analysis

These three figures all show that costs have been following prices down consistently over the past 20 years, but it seems that this could be about to change. The production cost trend line has started to curve upwards, and this is understandable – labour costs have been rising in Thailand as it industrialises, whilst other input costs (feed and energy especially) have also been rising strongly. However, sale prices show no such upwards trend, though the recent rise in the value of the US dollar is having an equivalent effect in most producer countries, at least for the near term.

The equations in Figures 12 and 13 suggest, respectively, that price will decline at 2-3% per year over the coming decade whilst production cost rises at 1-3% per year (ie shrimp that now costs \$2.7/kg to produce will cost \$3.4 in 10 years, whilst prices decline by over 20%. This will obviously be unviable and the price trend will have to reverse direction – ie production cost must logically eventually put a floor under sale price, even though a

period of painful adjustment (whilst price undershoots production cost) is certainly likelihood.

Figure 13



Source: Napfisheries analysis

Vietnam's Profile in the Key Markets

This section studies Vietnamese shrimp exports to its main international markets, basing analysis on export data from the recipient markets. It is clear that Japan and the USA are Vietnam's main markets, but exports to both are in decline (Figure 14). In direct contrast, relatively little Vietnamese shrimp goes to the EU but this market has shown signs of growth.

Figure 14

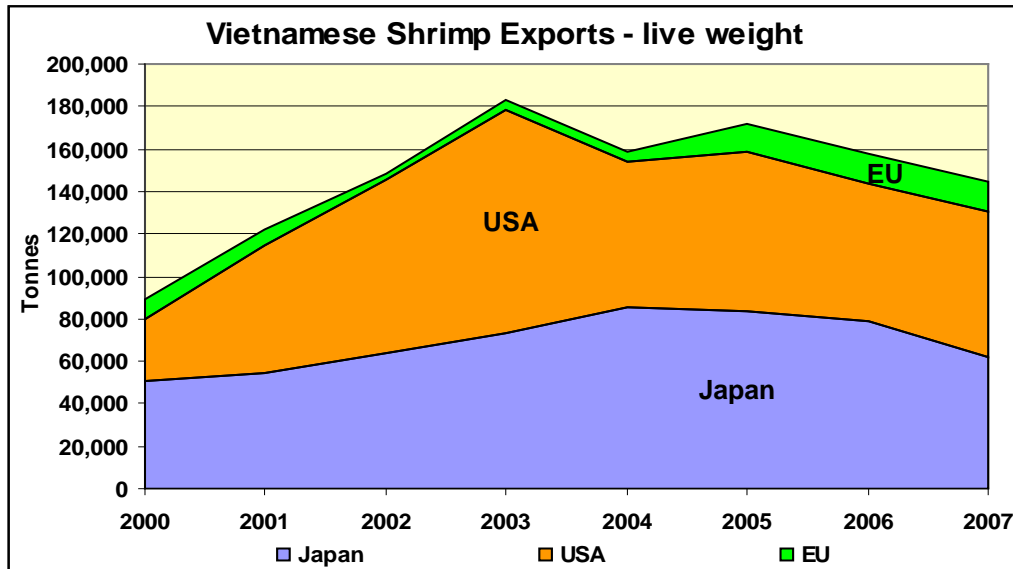
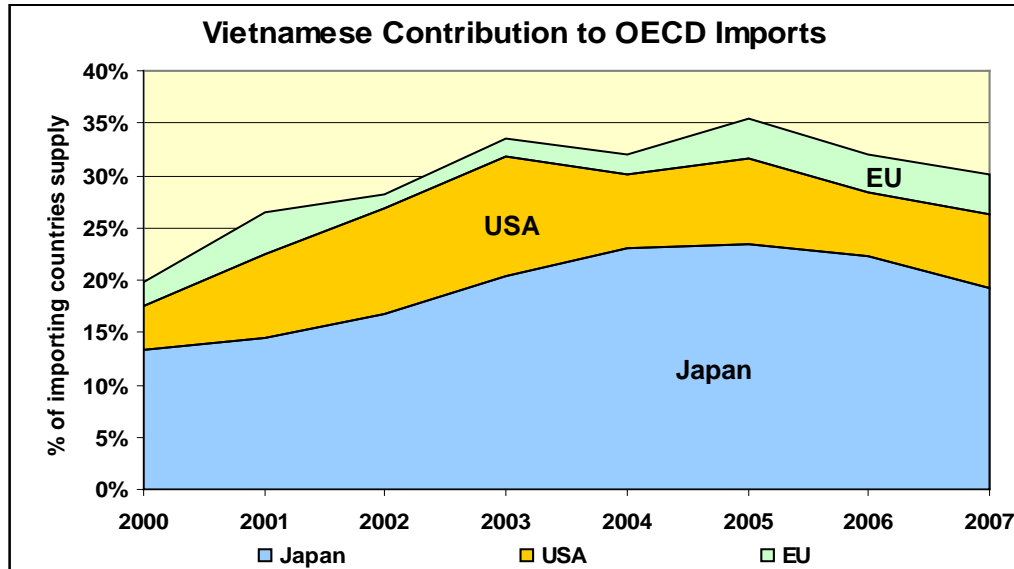


Figure 19 looks at the same data slightly differently, measuring the relative contribution Vietnamese exports make to supplies in each major market (expressed as a percentage of total imports by the market in question).

Figure 15



Japan again ranks highest (and again appears to be in decline), but it is apparent that Vietnam is a relatively small contributor to US supplies, even though the absolute quantity is large. The proportion has dropped 40% from the peak that preceded the US antidumping campaign, suggesting that the campaign has had a significant impact. This figure also confirms the minor contribution made to EU shrimp supplies by Vietnam, showing this to be low proportionately as well as in absolute quantity. The contrast with Vietnamese success in the EU whitefish market is then marked.

Vietnamese Shrimp Exports to the EU

Tables 8 to 10 show how Vietnamese shrimp sales to the EU have developed over the past five years. EU import statistics distinguish between three main product categories – fresh, frozen and packaged (which includes canned and added value shrimp). The latter two apply here and are shown in tables 9 and 10 respectively. Table 11 gives the combined total.

Raw frozen shrimp is the principal Vietnamese shrimp export to the EU (70% of the total) leaving imports of packaged shrimp (canned and added value shrimp) at 30%. It is the latter category which is growing faster, though, at 50% annually (compared with 33% for frozen products).

Table 8: EU Frozen Vietnamese shrimp exports to the EU

Unit: tonnes	2003	2004	2005	2006	2007	2007%
Spain	297	250	269	361	120	1%
France	251	778	2,006	2,213	2,103	14%
Italy	458	645	2,723	3,070	1,896	13%
UK	1,224	1,064	1,794	1,407	1,018	7%
Germany	537	1,206	1,990	2,233	2,584	17%
Belgium	1,498	1,677	2,502	2,094	2,160	15%
Netherlands	200	228	811	1,247	2,741	19%
Other	276	315	889	1,410	2,183	15%
Totals	4,741	6,163	12,984	14,035	14,805	100%
Growth annually		30%	111%	8%	5%	

Source: Eurostat, Napfisheries analysis

However, the most noteworthy aspects of this trade is the fact that there are virtually no exports to Spain, even though this is (i) the largest EU market for shrimp and (ii) already the recipient of large quantities of pangasius catfish so clearly no stranger to Vietnamese seafood (pangasius “panga” imports have been growing at 70% annually for the past three years).

	2005	2006	2007
Spanish pangasius imports	12,391	25,090	36,133 tonnes

Germany is in fact the major market (taking nearly 30% of the overall total) followed by France, Netherlands and Belgium, with the UK and Italy somewhat behind.

Table 9: EU Packaged/added value Vietnamese shrimp exports to the EU

Unit: tonnes	2003	2004	2005	2006	2007	2007%
Spain	6	0	2	3	9	0%
France	144	423	605	804	1,119	19%
Italy	1	2	183	182	265	4%
UK	528	924	1,483	1,559	1,289	22%
Germany	52	251	1,167	1,193	1,678	28%
Belgium	300	445	720	921	846	14%
Netherlands	124	128	314	454	352	6%
Other	34	44	164	272	350	6%
Totals	1,189	2,217	4,638	5,388	5,908	100%
Growth annually		86%	109%	16%	10%	

Source: Eurostat, Napfisheries analysis

The success of pangasius in Spain does pose a question that is highly relevant to the promotion of Vietnamese shrimp - does this suggest that a national shrimp brand could achieve the same success? The answer is probably no, because pangasius is an entirely novel product in Spain, popular as a cheap whitefish substitute (especially for hake the preferred whitefish in Spain). Vietnamese shrimp can claim no such unique novelty – it is merely shrimp from one source amongst many.

Table 10: Total Vietnamese shrimp exports to the EU, ranked by size

Unit: tonnes	2003	2004	2005	2006	2007	2007%
Germany	589	1,457	3,157	3,426	4,262	21%
France	395	1,201	2,611	3,017	3,222	16%
Netherlands	324	356	1,125	1,701	3,093	15%
Belgium	1,798	2,122	3,222	3,015	3,006	15%
UK	1,752	1,988	3,277	2,966	2,307	11%
Italy	459	647	2,906	3,252	2,161	10%
Spain	303	250	271	364	129	1%
Other	310	359	1,053	1,682	2,533	12%
Totals	5,930	8,380	17,622	19,423	20,713	100%
Growth annually		41%	110%	10%	7%	
Live weight equiv	8,304	12,138	25,506	28,320	30,322	
% of total EU import	1%	2%	3%	3%	3%	

Source: Eurostat, Napfisheries analysis

The other OECD markets – USA and Japan

Table 11 records **American** shrimp imports of Vietnamese shrimp over the past eight years, segmenting this by main product category. The data shows that the recent overall decline in imports that has been noted above has affected all products. This probably reflects the general slowdown in the US market, and was no doubt exacerbated by the US anti-dumping campaign from 2004 onwards. The only area of relative stability in the USA market has been the raw peeled category, which had grown rapidly though not consistently. Thus, even before the current economic upheaval, the US market was showing few signs of being capable of rapid expansion by Vietnamese exporter

Table 11: Vietnamese shrimp export to the USA by product category

Units Tonnes	Shell-on Tails*	Peeled raw	Peeled/PTO Raw/cooked	Total	% all US Imports	Live weight Equivalent
2000	5,553	6,958	3,348	15,859	4%	29,801
2001	12,361	13,686	6,696	32,743	8%	61,129
2002	13,171	19,820	11,017	44,008	10%	83,692
2003	19,728	25,514	11,778	57,020	11%	107,252
2004	10,510	14,968	11,332	36,810	7%	70,229
2005	13,773	19,622	9,428	42,823	8%	81,013
2006	9,603	18,790	8,111	36,504	6%	70,010
2007	13,086	20,332	5,177	38,595	7%	72,715

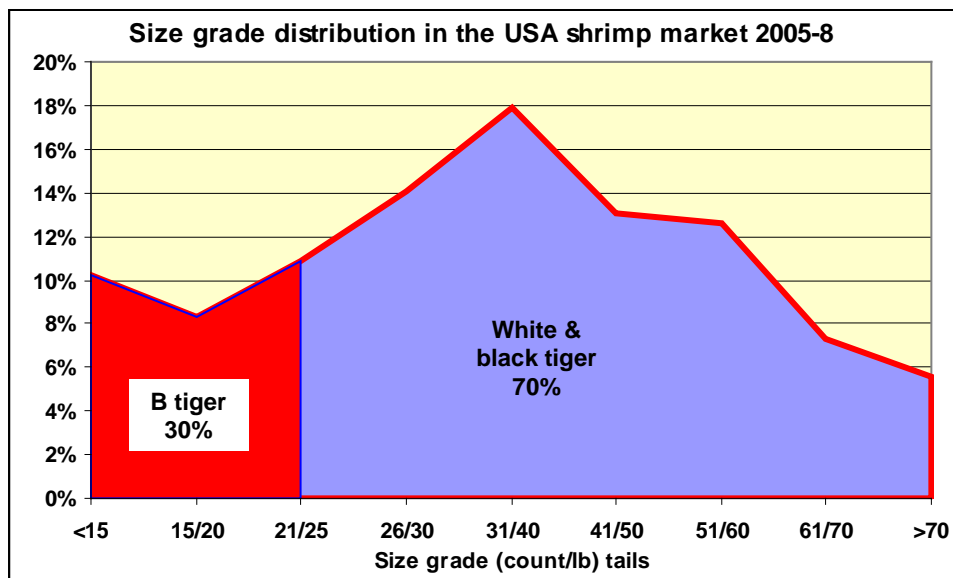
Source NMFS, Infofish

In fact, it seems that Vietnam has had a specialised role in the US market. US trade data (which distinguishes between individual size grades) shows that Vietnam has been

a specialist supplier of large shrimp. Indeed Vietnam is the leading supplier of shrimp of 15 count (tails/lb) or larger with 22% market share. Vietnam is also a major contributor to the 15-20 count grade with a 12% share. These showings are clearly disproportionate to the overall contribution of Vietnam to the US market of 6-7%. Thus as a black tiger specialist, Vietnam has clearly focused on providing expensive large shrimp to the USA, a role shared with Mexico and Bangladesh (also a black tiger producer).

Figure 16 puts this in context, showing the make up of the total US import of shell-on tails (HLSO) by size grade (count per lb) The top three grades which equate to whole shrimp sizes of 30 to 50 gm (30 to 20/kg) account for a combined 30% of the US import of frozen shrimp tails, averaged over 2005-08. This equates to over 70,000 tonnes of tails (114,000 tonnes live weight equivalent) – a sizable market

Figure 16



Source: US Govt. NMFS

The **Japanese** market has been the main recipient of Vietnamese shrimp exports for most of the last decade. Or so the raw data suggests, but when product weights are converted into live weight, it seems that in fact the US had been taking as much or more until 2005. This highlights an emerging difference between these two markets – the rising demand for processed shrimp in the USA whilst Japan mostly imports raw shrimp.

Table 12: Vietnamese shrimp export to Japan by product category

Units tonnes	2000	2001	2002	2003	2004	2005	2006	2007
Frozen raw (tails	33,098	35,664	41,516	47,626	55,506	54,511	51,133	40,041
% Japanese import	13%	15%	17%	20%	23%	23%	22%	19%
Live weight equivalent	50,920	54,868	63,871	73,271	85,394	83,863	78,666	61,602

Source: Infofish

Vietnam's position in the Japanese shrimp market remains strong. Three countries (Vietnam, Indonesia and India) are the major exporters to Japan, jointly accounting for 50-55% of supplies. Vietnam became the leading supplier in 2004, and has held that position since. However new challengers - Thailand and China – are now making significant inroads. This reflects a changing market where white shrimp is slowly displacing black tiger, which was formerly very much the dominant product. It is worth noting that the three current market leaders are, or have been, black tiger specialists. In 2007, black tiger imports as a proportion of the total fell below the 50%. There are then future threats to Vietnam's predominance of the Japanese market, a situation not helped by recent seafood contamination scares.

Production Economics of Vietnamese Shrimp

Branding and certification initiatives cost money. The certification processes themselves can be expensive, but frequently the largest costs are the investments and higher operating costs required to achieve the required standards. Consequently, the economics of the Vietnamese shrimp farming industry are very relevant, and thus the focus for this section. The findings are based upon interviews with farmers of all types (from smallholders to small entrepreneurs and large commercial enterprises) as well as processors and officials dealing with the sector.

There are three key distinctions that characterise Vietnamese shrimp farming: (i) that between black tiger and white shrimp, (ii) that between extensive/artisanal and commercial intensive ventures and (iii) that between the south and north of Vietnam where growing conditions differ significantly. It is the distinction between the black tiger and white shrimp which is currently particularly apposite as Vietnam decides whether to re-orientate its southern industry more towards white shrimp farming.

Table 13: Key parameter and cost factors for Vietnamese shrimp farmers

Factor/item	Black tiger (monodon)				White (vannamei)		
	Extensive North	Extensive South	Semi intensive South	Semi intensive South	Semi-Intensive North	Intensive North	Intensive South
Physical factors							
Harvest size (gm)	25-33gm	30gm	33gm	50gm	10gm	14-17gm	10-11gm
Crops/yr	1 to 2	1	2	1	2	2	
Yield tonnes/ha/yr	0.6 -0.9	0.6	4	4.5	5 to 9	22 -25	
Farm size	2 - 5 ha	1 ha	5-100ha	5-100ha			
Stocking rates pl/m ²			25-50	25	50		100
FCR	-		1.6 to 1	1.6 to 1	0.95 to 1		
Survival			80%	80%	90%		
Growth rates PL-harvest			4-6 months	8 months	3.5 months		
Postlarvae/kg		42	38	25	111	74	
Feed protein %	-		40-42%	40-42%	38-45%	40-45%	
Cost factors							
Feed cost/kg	-		\$1.37	\$1.37	\$1.27	\$1.27	
Postlarvae cost/1000	\$2.24	\$2.91	\$2.56	\$2.56	\$1.52	\$1.52	
Labour/kg	Family	Family	\$0.61	\$0.61	Family		
Energy/kg	-		\$1.03	\$1.03			
Probiotics/kg	-		\$0.21	\$0.28			
Capital costs/ha		\$13,000	\$10,040	\$10,040	\$9,000		
Total COP per Kg	\$4.25	\$3.94	\$4.19	\$5.66		\$1.97	\$2.12
Sale price per kg	\$7.27	\$4.71	\$4.97	\$8.35	\$3.00	\$3.03	\$3.18
Margin per kg	\$3.02	\$0.77	\$0.78	\$2.69		\$1.06	\$1.06

Source: farmer & processors interviews

Table 13 summarises the data collected during this study, showing (i) key physical parameters, (ii) Current costs for key inputs and (iii) Producers estimates of average production costs and first hand sale prices. The fact that prices are current is important, as substantial adverse movements of both production costs and farm gate prices since 2007 were reported.

Table 14: indicative cost models for Vietnamese shrimp culture variants (VND)

Production cost	Black tiger	Black tiger	White	Black tiger	Black tiger	White
Cost item	Extensive	Semi intensive	Intensive	Extensive	Semi intensive	Intensive
	VND/kg	VND/kg	VND/kg	%	%	%
Postlarvae	2,017	1,605	1,856	3%	2%	5%
Feed	22,605	36,168	24,866	34%	52%	69%
Energy	-	14,850	3,713		21%	10%
Labour	16,500*	10,065	3,355	25%	15%	9%
Other/probiotics	-	4,125	1,031		6%	3%
Direct cost total	41,122	66,813	34,820	62%	96%	97%
Maintenance	7,150	828	297	11%	1%	1%
Depreciation	17,875	1,657	743	27%	2%	2%
Overhead total	25,025	2,485	1,040	38%	4%	3%
Production cost	66,147	69,298	35,860	100%	100%	100%
Sale price	77,715	82,005	51,150			
Margin	11,568	12,707	15,290	17%	18%	43%

* Family labour – so assumed. Source: farmer & processors interviews

An alternative cost estimate is presented in Tables 14 and 15, where the factors and unit costs shown in table 13 are used to create the production cost model that best reflects the data. These analyses also tested the validity of the overall production costs quoted by those in the industry. The wide range of Vietnamese production techniques has been resolved into three paradigm models which are seen to best represent the Vietnamese industry: black tiger reared (i) extensively and (ii) semi intensively and (iii) intensively reared white shrimp. Values are stated alternatively in Vietnamese dong and US \$.

The outcome of these analyses was that the production cost of average sized black tiger of 30gm (30-35/kg) is VND66-70,000/kg which at current prices generates a margin of VND12-13,000/kg. Intensively farmed white shrimp (vannamei) production cost is substantially lower at VND36,000/kg for small shrimp (10-15gm, 70-100/kg) but so are prices and so the margin per Kg is not greatly higher at VND15,000/kg. However, when seen in percentage terms, the higher profitability of white shrimp becomes apparent – the margin is 40% of production costs as opposed to around 18% for black tiger.

Table 15: indicative cost models for Vietnamese shrimp culture variants (\$US)

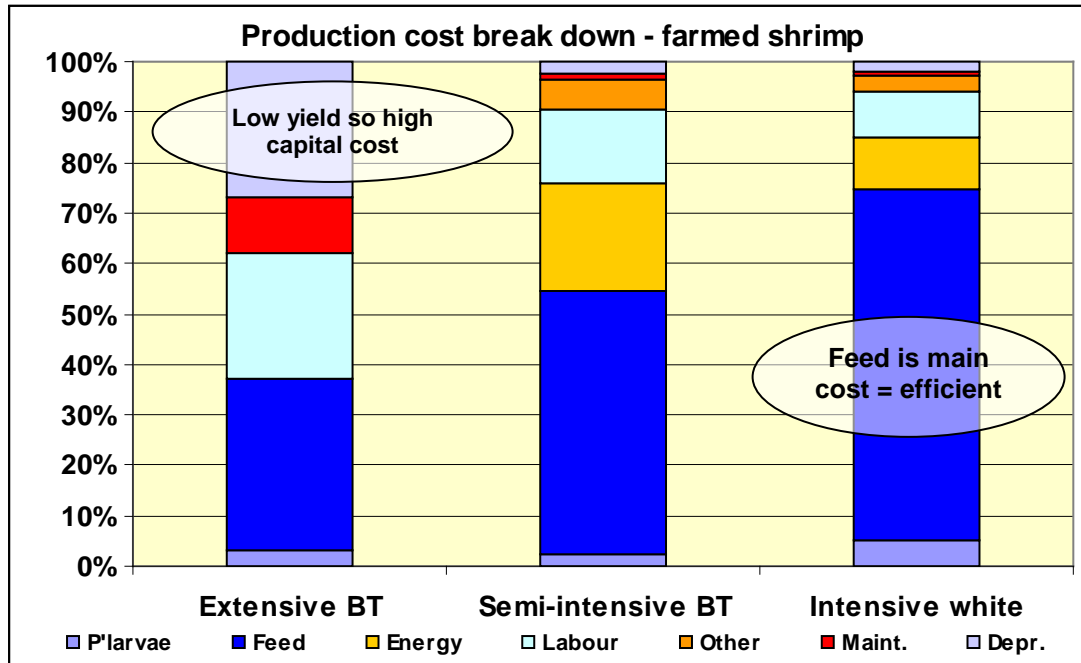
Production cost	Black tiger	Black tiger	White
Cost item	Extensive	Semi intensive	Intensive
	\$/kg	\$/kg	\$/kg
Postlarvae	0.12	0.10	0.11
Feed	1.37	2.19	1.51
Energy	-	0.90	0.23
Labour	1.00	0.61	0.20
Other inc probiotics	-	0.25	0.06
Direct cost total	2.49	4.05	2.11
Maintenance	0.43	0.05	0.02
Depreciation	1.08	0.10	0.05
Overhead total	1.52	0.15	0.06
Production cost	4.01	4.20	2.17
Sale price	4.71	4.97	3.10
Margin	0.70	0.77	0.93

Source: farmer & processors interviews

The most profitable option though appeared to be producing very large black tiger (50gm, 20/kg). Whilst production costs are much higher, so are prices, which apparently have not seen the falls experienced by those for 30gm black tiger. Black tiger reared extensively in Northern Vietnam also appeared to be exceptionally profitable but this is illusory as (i) labour costs are excluded (provided by “family” labour), and (ii) the high sale price relies upon sales direct to restaurants. So both of these apparently more profitable options will be highly sensitive to a future price decline – a decline that seems fairly likely as the price differential (between 50gm and 30gm shrimp) seems to be excessive.

The three paradigm models are compared in Figure 17, which shows significant differences in cost breakdown. Capital costs are relatively high for extensive or artisanally produced shrimp because the low yields (600kg/ha/year) mean that the high cost of pond construction and maintenance has to be carried by relatively little production. Energy costs become more of a cost consideration as intensity increases, but white shrimp production stands out as being dominated by feed costs. This normally signals efficiency in agriculture, because the best livestock farming is, at its irreducible minimum, defined as the most efficient conversion of feed to saleable meat. High FCR and low non-feed costs are signs that this has been achieved here.

Figure 17



Source: farmer & processors interviews

The principal objective of this section has been to gauge the degree to which farmers can afford to take on the additional costs of supporting a brand. The nub of the issue is what price improvement can the brand generate (or conversely to what degree can it prevent price reduction). Margins are currently VND12-15,000/kg (\$0.7-\$0.9/kg) and this arguably defines the quantum of funds potentially available for brand support. The minimum increment a brand would have to generate would then be at least twice its cost ie a sufficient increase to at least restore the margin and boost profits by the same amount.

Table 16: Indicative model of potential funding available for a branding campaign

Farm type	T/ha/year	Size farm (ha)	Output year (Tonnes)	Total margin	Branding Budget 10%
Extensive farm	0.6	1	0.6	\$420	\$42
Semi intensive BT	4	5	20	\$14,000	\$1,400
Semi intensive BT	4	75	300	\$240,000	\$24,000
Intensive white	20	100	2,000	\$1,800,000	\$180,000

This provides a basis of some sort to estimate the quantum of acceptable cost involved. If, for the sake of argument, acceptable branding costs are 10% of margin (ie VND 1-1,500/kg, \$0.07-\$0.09/kg) then it is possible to make an indicative estimate of the sort of funding that might be available for branding. This is done in table 16 which although a purely academic exercise, does make a crucial point – the importance of critical mass.

Larger farms can afford meaningfully substantial sums for branding, small farms can only do so by aggregating – and in very large numbers. It would take nearly 600 extensive black tiger farms to match a single commercial scale semi intensive farm, on this calculation. This is surely an unmanageable number, and perhaps raises questions about the practicability of branding the artisanal segment.

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ANNEX Table 1

Units: Tonnes Live weight	USA Imports 0.56	USA landings 0.625	USA Exports 0.625	USA Total	Europe EU Imports 0.83	Europe EU landings 1.00	Europe EU Total	Japan Imports 0.65	Total OECD imports	Total OECD supply
1990	409	131	47	494	379	71	450	450	1,238	1,393
1991	440	123	47	517	421	77	498	451	1,312	1,466
1992	486	111	46	551	450	77	526	433	1,368	1,510
1993	490	102	47	544	405	69	474	477	1,372	1,495
1994	512	102	46	568	460	75	534	481	1,453	1,583
1995	487	111	49	549	466	71	537	465	1,418	1,551
1996	475	102	55	522	496	82	578	458	1,430	1,559
1997	529	96	48	576	487	90	577	424	1,440	1,578
1998	568	107	47	628	498	110	607	423	1,489	1,658
1999	596	114	48	663	508	84	592	454	1,559	1,709
2000	620	124	51	693	541	81	621	466	1,627	1,780
2001	720	119	49	790	579	81	660	450	1,748	1,899
2002	772	111	52	831	580	70	650	466	1,818	1,947
2003	907	120	60	967	673	75	747	450	2,029	2,164
2004	931	122	49	1,004	668	92	760	479	2,077	2,242
2005	881	123	69	935	745	88	834	468	2,095	2,237
2006	968	128	42	1,054	797	86	883	478	2,242	2,415
2007	913	121	54	979	804	83	887	438	2,155	2,304
Growth	% per year									
1990-1995	3.6%	-3.3%	1.2%	2.1%	4.2%	0.0%	3.6%	0.7%	2.8%	2.2%
1995-2000	5.0%	2.2%	0.7%	4.8%	3.0%	2.6%	2.9%	0.0%	2.8%	2.8%
2000-2007	4.3%	1.0%	-2.4%	4.2%	4.7%	0.8%	4.2%	0.9%	3.6%	3.5%

Source: Globefish, Infofish, NMFS (USA), Eurostat (EU), FAO production Napfisheries Database

ANNEX 4: COMPARISON OF THE NAFIQAVED¹ PILOT STANDARD FOR GOOD AQUACULTURAL PRACTICE (GAQP) WITH THE GLOBALGAP² AQUACULTURE STANDARD FOR TROPICAL SHRIMP V1.0-APR08

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Type of standard	Primary production (farm-gate) standard covering all aspects of the production of tropical shrimp. Did not cover processing or any off farm activities.	Primary production (farm-gate) standard covering all aspects of production of foods of plant and animal origin on farm. Does not cover processing or any off farm activities.
Ownership of standard	Government of Vietnam, pilot standard was mainly developed and piloted by NAFIQAVED with involvement by the Department of Aquaculture.	Private sector ownership by 37 EU supermarket retailers / groups in 11 countries, 1 Japanese retail group & 1 US retailer. Management is provided by Food-Plus GmbH in Germany
Basis	<p>Standard has been under development since 1994 but pilot version seen in the field was based on the FAO Principles for Good Aquacultural Practice of 2006 adapted and expanded to suit Vietnamese requirements.</p> <p>The pilot standard is being developed into a full standard mandated under Vietnamese law as specified under Decision QD 56 of the Government of Vietnam issued on 29th April 2008 that specifies the need to prepare a technical standard for GAP. This decision supplements Decision QD06 of 10th April 2006 that covers safe management of shrimp aquaculture areas & farms.</p>	EU law for food safety with additional requirements of supermarket owners that go beyond EU legal minima especially for animal welfare, environmental management & corporate social responsibility. The source material for the compliance criteria must be very wide but these are not specified in the GLOBALGAP documentation.

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
International applicability	Production protocols seen on farms refer to standards and regulatory requirements for aquacultural feeds and veterinary drugs issued by Government of Vietnam that have been accepted by competent authorities of EU (FVO) and US (USFDA) as meeting their requirements for third country suppliers of fisheries products.	EU legal requirements meet (and often exceed) the minimum requirements established under the SPS agreement (using CAC, OIE & IPPC as the reference standards) administered by WTO and thus compliance with a private voluntary standard deriving from EU law will meet the minimum entry requirements of most WTO member states including the USA. Specific information should be obtained on MRL requirements for Japan as these can sometimes be stricter than those set by the EU.
Geographical scope	Vietnam	Global
Languages	Vietnamese	Shrimp standard is very new and is only available in English & Spanish so far. Fruit & vegetable standard, the longest established GLOBALGAP standard is available in 20 languages including Chinese & Thai but NOT Vietnamese.
Technical scope	<p>Pilot standard covered tropical shrimp species.</p> <p>Full standard under development will have a wider coverage to include other aquacultural products.</p>	229 named fruits, vegetables, combinable crops & herbs. Other scopes include coffee (green), tea, flowers & ornamentals, cattle, sheep, dairy, pigs, poultry, farmed fish (salmon, trout, tropical shrimp), plant propagation material, livestock transport and compound feed manufacture. The feed standard is linked to the aquaculture standard as GLOBALGAP compliant shrimp farms must source all feed ingredients from a GLOBALGAP certified feed manufacturer {standards for Pangasius & tilapia are under development}.
Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08

Recognition of the standard by third parties	<p>Some EU and US importers indicated awareness of the pilot GAqP and one UK retailer was said to be accepting GAqP as an appropriate standard for GAP.</p> <p>In telephone interviews many of the major buyers expressed a preference for GLOBALGAP and the US GAA/ACC standard as these are more comprehensive and internationally accepted allowing for harmonisation of standard requirements for suppliers in different countries.</p>	<p>Mandatory requirement for 39 retailer members and commonly specified as a supplier requirement by major food businesses in the EU and high-end businesses outside the EU for the fruit & vegetable, combinable crops, livestock & salmonid standards. The shrimp standard is new and has little recognition so far, however, in August 2008 the Dutch retail organisation CBL that represents 99 retail chains committed to GLOBALGAP tropical shrimp standard for all purchases by January 2011. Dutch shrimp importer Heiploeg BV (~50,000MT shrimp imports /annum) took the lead in developing the shrimp standard.</p>
Participation in the standard	<p>The GAqP was a pilot standard but ~6 larger farms had adopted the standard and received certification from NAFIQAVED by the end of 2007.</p>	<p>>100,000 producers of various products other than shrimp in 85 countries, no certified tropical shrimp producers as of November 2008.</p>
Smallholder involvement	<p>There does not appear to have much involvement of smallholder farmers to date and the version of the standard seen in the field was not adapted for application to small-scale aquaculture. However, the standard includes design elements aimed at making the standard more accessible to smallholders (see options for certification).</p>	<p>Problems encountered with technical and cost issues for smallholder farmers needing to comply with fruit and vegetable standard. Aquaculture standard has been developed with large-commercial operations in mind and was successfully field tested on a farm in Sumatra having 3,441 ponds of 0.5ha each and fully integrated intensive operation employing 6,000 people. Social criteria module was field tested with small-scale producers in Thailand, few details available and no evidence that costs have been calculated.</p> <p>GLOBALGAP established a smallholder taskforce in October 2007 and is beginning to look seriously at problems faced by smallholders. This is a difficult area with no easy solutions as both</p>

<p>Criteria</p> <p>Fees associated with compliance and certification</p>	<p>NAFIQAVED pilot standard for GAP (GAqP)</p> <p>There was no definite information available on fees or costs associated with GAqP. However, it is clear that the pilot phase of development has been subsidised by government thus reducing the costs for the producer.</p>	<p>smallholder and retailer must be happy with the outcome of any proposals for change.</p> <p>GLOBALGAP Shrimp Version 1.0-Apr 08</p> <p>Producer is responsible for all costs associated with training and documentation, analytical sampling, registration, licensing and cost of audit. GLOBALGAP registration fees range from €3 to €30 (70,500-705,000 Dong) according to farm size, licence fee is €20 (470,000 Dong) for individual farm certification (farmer groups are charged €20 (470,000 Dong) x square root of the number of farmers in the scheme, hence for 100 farmers the charge is 20x10 = €220 / 5,170,000 Dong) and registration fee is €5 (117,500 Dong). Audit and analytical fees will vary according to choice of certifying body and laboratory. All fees are paid annually.</p>
<p>Criteria</p> <p>Number and type of control points</p>	<p>NAFIQAVED pilot standard for GAP (GAqP)</p> <p>It was not possible to access copies of the standard documents and hence the detailed content of the control points and sanction matrix of the pilot standard could not be determined.</p> <p>However, government sources said that the full version of the pilot standard covered food safety management, fish health, environmental protection and social welfare in 4 modules.</p>	<p>GLOBALGAP Shrimp Version 1.0-Apr 08</p> <p>The tropical shrimp standard is divided into 5 modules known as the All farm, Aquaculture base, Shrimp module, Chain of custody & Social criteria modules. Each module contains specific control points with compliance criteria known as control points. The social criteria module contains 21 control points which must be evaluated but findings for each CP do not determine pass or failure in the certification audit (However, the customer has access to the audit results and can choose between producers on ethical grounds and thus</p>

The pilot standard had three levels (see options for certification) known as Best Management Practice, Good Aquacultural Practice and Code of Conduct to enable different scales of farming operation to attain certification.

Some idea of the content of the standard was gained from detailed examination of production protocols obtained from certified farms during the field work (see production protocols).

might drop suppliers who get consistently low scores in the social audit). The other 4 modules have 275 control points. 169 of these are rated as major musts all applicable major musts must be compliant on the day of the audit. 87 CP's are rated as minor musts, 95% of the applicable minor musts must be compliant on the day of the audit. The remaining 18 CP's are rated as recommended controls. Compliance status for recommended CP's has no influence on the outcome of the certification audit.

Non-applicability (if justified) is possible in theory for 122 control points (62 major and 60 minor musts respectively). However, in practice very few control points will be not applicable for each farm.

For certification of farmer groups, the group must demonstrate compliance with 139 additional control points under a quality management system & 32 control points dealing with operation of the certifying body during the audit. There is no flexibility for non-compliance on the QMS control points.

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Flexibility for compliance	No details were available as to how the standard operates.	Relatively little flexibility for compliance, farmer must demonstrate 100% compliance with all major control points and 95% of minor control points on the day of audit. No options for deferred certification.

Certification	Annual certification of the farm by NAFIQAVED, certification is conditional on passing the annual external inspection / audit.	Annual certification of producer or producer group sites for all product types requested by producer. Certification is conditional on passing the annual external inspection / audit and registration with GLOBALGAP prior to certification.
External inspection / audit	Annual audit of the farm by inspectors from the competent authority NAFIQAVED.	Annual audit of producer or producer group by recognised certifying body with option for surveillance audit of selected growers.
Certification bodies	<p>Inspection and certification was controlled by NAFIQAVED as the competent authority in Vietnam. NAFIQAVED is self accrediting and is not ISO Guide 65 / EN45,011 accredited. NAFIQAVED is also responsible for sampling and laboratory analyses.</p> <p>The lack of independent accreditation would be seen as a cause for concern by many international buyers. It would be better for NAFIQAVED to be the accrediting body and licence other public or private sector bodies to conduct inspections and issue certificates under the authority of NAFIQAVED. However, Decision 56 makes NAFIQAVED responsible for inspection and certification of the new GAP standard.</p>	<p>140 independent accredited certification bodies based in 30 countries around the world. Certifying bodies must be ISO Guide 65 / EN45,011 accredited and auditors (inspectors) working for the certifying body must be ISO 19,011 certified and have relevant qualifications and experience. Certifying bodies must be accredited for each scope and option that they wish to certify. Auditors working for certifying bodies must attend annual GLOBALGAP training courses and other training seminars to obtain and maintain accreditation to audit a particular scope of the standard. As of November 2008, there were 2 certifying bodies (SGS-New Zealand and Control Union Certifications BV of the Netherlands with provisional accreditation to conduct certification audits for the GLOBALGAP tropical shrimp standard. In contrast the longer established salmonid standard has 5 accredited certifying bodies and 1 provisionally accredited certifying body.</p>

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Options for certification	<p>The standard is divided into three levels.</p> <p>Better Management Practice (BMP) is the most basic level only covers basic food safety management and is intended to be suitable for smallholder farmers.</p> <p>Good Aquacultural Practice (GAqP) is the main level of the standard and covers food safety management, fish health and environmental protection. This level is intended for medium and large-scale commercial farms.</p> <p>Code of Conduct (CoC) is the highest level and includes all aspects covered under GAP plus an additional module on social welfare. This level would only apply to large farms.</p> <p>The certified farms visited during the fieldwork were GAqP certified.</p>	<p>Individual (option 1) or group (option 2) certification. Other certification options involving multi-site certifications and combinations of options 1 & 2 are theoretically possible and GLOBALGAP is working on several of these as potential cost saving options aimed at smallholder schemes with large numbers of smallholders.</p>
Benchmarking	<p>There are no facilities for benchmarking other standards against the Vietnam GAqP standard. However, government is concerned over the proliferation of aquacultural standards and considers the GAqP as the minimum legal standard for GAP in Vietnam.</p>	<p>Facility for benchmarking of other standards against GLOBALGAP to demonstrate equivalence of system for the purposes of mutual recognition.</p>

Government would like to “benchmark” other standards against GAqP, standards that fall below the requirements of GAqP should not be allowed in Vietnam.

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Production protocols	<p>There were no formal production protocols under the pilot standard, but the certified farms visited during the fieldwork had prepared detailed production protocols which had been approved and signed off by NAFIQAVED as part of the certification process.</p> <p>On one farm the protocol was available in both Vietnamese and English so as to facilitate understanding by customers’ representatives.</p> <p>The protocol had been constructed to reflect the requirements of the standard and was divided into 8 sections to cover aspects of pond preparation, stocking, feed management, veterinary drugs, pond management, fish health, harvesting & storage and waste management. Detailed evaluation of the production protocol was used to provide comments on the coverage of the standard in the sections below.</p>	<p>No formal production protocols under the standard, but producers normally create their own protocols ensuring that the content reflects the requirements for GLOBALGAP compliance</p>
Training	<p>Training and competence of workers was not mentioned in the production protocol for GAqP other than to state that high risk actions such as authorising use of</p>	<p>Any worker handling chemicals or operating dangerous machinery must have valid certificates of competence. First aiders must have valid</p>

veterinary drugs were restricted to the farms Chief Technician.

certificates and personnel handling crops must receive basic hygiene training

Training on GAP was provided by the Government of Vietnam as part of introducing the GAqP standard, farmers were happy with this training but government staff commented on budget restrictions that they felt would adversely affect wider adoption of the standard.

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Documentation & record keeping	Detailed documentation is required for key aspects of production such as veterinary drugs, feed, water quality and harvesting. A pre-printed book was provided for farmers to record details on a pond by pond basis so as to facilitate traceability.	Detailed documentation required for all aspects of production on farm, no format given for record keeping but all requirements specified under the standard must be met on the day of audit
Traceability & chain of custody	Vertical and horizontal traceability are ensured via a pond level coding system, detailed records and labelling of all produce at point of harvest with pre-printed indelible labels.	Full vertical and horizontal traceability to farm level, traceability of all inputs and purchases from hatcheries. The shrimp standard includes a chain of custody module that recognises that record keeping and traceability systems are not enough. Provision is made to trace production from raw material input to processing. All components with chain (ie hatcheries, transporters, processors etc must be registered with a unique GLOBALGAP identification number prior to certification of the farm. GLOBALGAP certified and non-certified materials and products must be segregated.

Fish welfare	<p>Detailed provisions for stocking densities, water quality parameters such as temperature, dissolved O₂ and CO₂, pH, nitrogen content and suspended solids.</p> <p>GAqP is focussed on fish health and is strong on disease prevention, avoiding stress during stocking and providing optimal conditions for growth but does not cover animal welfare concerns such as causing pain or injury to the shrimps.</p>	<p>Criteria include correct stocking densities, water quality parameters such as temperature, dissolved O₂ and CO₂, pH, nitrogen content and suspended solids. Workers demonstrate that they avoid causing stress, pain, injury or disease to fish.</p>
Site management	<p>Practical aspects of site management are well covered but GAqP does not require Quality Manuals or associated documents such as policies, procedures and work instructions.</p>	<p>Detailed Quality Manual is required for all sites, includes policies, procedures and work instructions for key areas of production activity, ISO compliant document control procedures are required.</p>

Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Complaints	<p>No provision was made for a customer complaints procedure.</p>	<p>Must have complaints procedure and forms and proof of functional system for corrective actions including testing of product withdrawal procedures.</p>
Hygiene	<p>The pilot standard was strong on zoosanitary aspects of pond hygiene to avoid introduction and spread of shrimp diseases.</p> <p>However, the standard was weak on many aspects of food safety management especially in the area of harvesting, handling and storage of shrimps. There were no mentions of potability requirements for ice and iced water, general statements were made such as “workers must ensure hygiene during harvesting” but</p>	<p>HACCP based pro-active management systems in place and demonstrate working.</p>

	<p>this was not explained.</p>	
Worker, health, safety & welfare	No specifications for worker health, safety or welfare were seen in the pilot GAqP standard.	Risk assessments, proper training, management responsible for issues, provision of toilets, hand-wash, eating and locker facilities, potable drinking water.
Hatcheries, nauplii and post-larvae sources	Seed must only come from a registered hatchery, no wild caught post-larvae are allowed.	Detailed provisions for facilities, no wild caught material, within 12 months of first certification must demonstrate that only source material from GLOBALGAP certified sources.
Environment	<p>The production protocol covered aspects of water quality, pond management and waste management in detail.</p> <p>Specific mention was made of using bunded hard stands for oil and fuel storage and machines such as pumps to prevent contamination of the environment with petroleum products due to accidental spillage.</p>	Proof that new sites are not in protected areas, high conservation value areas or mangrove ecosystems, older sites must show restoration and rehabilitation programmes in place.
Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Feeds	All pelleted feed must be obtained from registered suppliers and meet the government requirements defined under 28 TCN 102:2004. This standard specifies banned ingredients such as 4 named antibiotics banned internationally from use in aquaculture. Supplemental feeds may only be used according to permits issued by the competent authority.	All feed from supplier approved by competent authority, in future will be mandatory to source only from GLOBALGAP certified compound feed manufacturers (CFM). The CFM standard was not operational as of November 2008, but 7 aquaculture feed manufacturers in Norway, Denmark, France, Ireland and the USA had successfully completed self assessments of compliance to the CFM standard by 19 th August 2008.

Use of chemicals	Use of veterinary drugs can only be authorised by a responsible person (defined as the Chief Technician of the farm), no routine prophylaxis is allowed, withdrawal periods must follow label instructions and if these are not clear an automatic 4 week withdrawal period is applied.	All drugs, antibiotics, chemical treatments & therapeutics must meet legislative requirements, veterinary health plan in place and demonstrate application including withdrawal periods.
Medicines	Only approved compounds may be used and only within the restrictions given under use of chemicals. Banned antibiotics must not be used and detailed records of all applications must be kept.	Only approved compounds as per national and international requirements, demonstrate compliance with MRL's, detailed records and demonstrate safe disposal of obsolete material.
Chemical storage & disposal of empty containers and obsolete materials	All chemicals must be kept in appropriate (details of requirements given for feed and veterinary drugs) storage facilities. Storage requirements for feeds are similar to the requirements of GLOBALGAP. There was no mention of disposal of empty containers in the production protocols seen but one of the certified farms was clearly operating a policy of rinsing out old containers and storing empty containers separately for disposal. There was no evidence of re-use of containers on this farm.	All chemicals must be kept in appropriate (according to detailed specifications) storage facilities, including means to deal with accidental spillages & properly calibrated equipment for measuring and mixing. Safe disposal of obsolete material and empty containers, no re-use of empty containers.
Criteria	NAFIQAVED pilot standard for GAP (GAqP)	GLOBALGAP Shrimp Version 1.0-Apr 08
Protective clothing	No mention made of protective clothing in the production protocols provided by the certified farms.	Complete sets of appropriate protective equipment, evidence that all items are kept clean and in working order.
Waste management	Detailed provisions are made for sludge and effluent treatment and correct disposal of diseased stock.	Key requirement is to keep farm tidy, avoid litter and waste that provide breeding areas for vermin.
Pest control	Measures must be taken to prevent access by pests such as birds and rodents to diseased materials prior to	Pest control systems with bait stations and

	burning to prevent spread of disease.	recording systems in place.
Harvesting	Sampling controls cover correct use of ice and iced water, maximum time between harvest and delivery to processing facility, labelling for traceability purposes and maximum temperature for transportation.	Numerous controls for temperature, quality of ice, hygiene, labelling and traceability including GPS coordinates entered into database.
Sampling & testing	Sampling and testing is required for water quality and the production protocol obtained during the fieldwork referred to the need for pre-harvest sampling for food safety checks that would determine if a batch could be harvested and supplied to a customer.	Sampling and testing plan with detailed records according to national and customer requirements, batch level sample traceability, for feed, raw materials and product. All laboratories ISO17,025 certified or equivalent, provide evidence that laboratory participates in recognised proficiency testing scheme.

¹ – Note since the completion of the work on pilot versions of GAP standards NAFIQAVED has changed its name to NAFIQAD

² – Note on 7th September 2007, EurepGAP changed its name to GLOBALGAP

All Information correct as of November 2008

All costs based on rate of €1 = 23,500 Vietnamese Dong

ANNEX 5: COMPARISON OF THE GLOBAL AQUACULTURE ALLIANCE STANDARDS FOR BEST AQUACULTURAL PRACTICE (BAP) WITH THE GLOBALGAP¹ AQUACULTURE STANDARD FOR TROPICAL SHRIMP V1.0-APR08

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Type of standard	Integrated standard covering both primary production (farm-gate) and processing of shrimp. Standards for production of Pangasius and Tilapia are being developed.	Primary production (farm-gate) standard covering all aspects of production of foods of plant and animal origin on farm. Does not cover processing or any off farm activities.
Ownership of standard	Private sector ownership via the Global Aquacultural Alliance (GAA) which was founded in 1997 by 11 US companies involved in purchasing and retailing of fisheries products. These companies form the controlling board of GAA. Management of the standard is provided by the Aquacultural Certification Council (ACC).	Private sector ownership by 37 EU supermarket retailers / groups in 11 countries, 1 Japanese retail group & 1 US retailer. Management is provided by Food-Plus GmbH in Germany.
Basis	The GAA standards are intended to meet US market entry requirements and derive from US legal minima (USFDA, USDA, CFSAN, USEPA, and the US Code of Federal Regulations 21 –Part 110 covering the use of drugs in food) and additional market requirements for environmental management, animal welfare and corporate social responsibility derived from international organisations, NGO's and research institutes (FAO, WHO, CAC, OIE, ILO, UNICEF ICES, RAMSAR, National Seafood HACCP Alliance, International Society for Mangrove Ecosystems, Department of Fisheries of the Government of Thailand and the US Army Corps of Engineers.	EU law for food safety with additional requirements of supermarket owners that go beyond EU legal minima especially for animal welfare, environmental management & corporate social responsibility. The source material for the compliance criteria must be very wide but these are not specified in the GLOBALGAP documentation.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
International applicability	<p>US legal requirements meet (and often exceed) the minimum requirements established under the SPS agreement (using CAC, OIE & IPPC as the reference standards) administered by WTO and thus compliance with a private voluntary standard deriving from US law will meet the minimum entry requirements of most WTO member states. However, some sections of the standard would need upgrading to meet additional requirements of some WTO members that exceed the minima set under the SPS. In the context of the GAA standard reference is made to US legal requirements for maximum residue limits (MRL) of chemicals in food. The EU and Japan have more strict MRL regimes with mandatory compliance required for entry to these markets.</p>	<p>EU legal requirements meet (and often exceed) the minimum requirements established under the SPS agreement (using CAC, OIE & IPPC as the reference standards) administered by WTO and thus compliance with a private voluntary standard deriving from EU law will meet the minimum entry requirements of most WTO member states including the USA. Specific information should be obtained on MRL requirements for Japan as these can sometimes be stricter than those set by the EU.</p>
Geographical scope	Global	Global
Languages	<p>All documentation provided on the GAA and ACC websites is in English.</p>	<p>Shrimp standard is very new and is only available in English & Spanish so far. Fruit & vegetable standard, the longest established GLOBALGAP standard is available in 20 languages including Chinese & Thai but NOT Vietnamese.</p>
Technical scope	<p>Currently limited to production and processing of shrimp but GAA & ACC are developing standards for Pangasius and Tilapia.</p>	<p>229 named fruits, vegetables, combinable crops & herbs. Other scopes include coffee (green), tea, flowers & ornamentals, cattle, sheep, dairy, pigs, poultry, farmed fish (salmon, trout, tropical shrimp), plant propagation material, livestock transport and compound feed manufacture. The feed standard is linked to the aquaculture standard as</p>

GLOBALGAP compliant shrimp farms must source all feed ingredients from a GLOBALGAP certified feed manufacturer {standards for Pangasius & tilapia are under development}.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Recognition of the standard by third parties	The GAA standard is widely recognised by US importers and retailers of fisheries products going much wider than the founding membership of GAA. Currently 20 US, 2 UK and 2 Canadian food companies recognise the GAA shrimp standard. Walmart the worlds' largest supermarket has been backing GAA certification for all of its shrimp supplies since November 2005.	Mandatory requirement for 39 retailer members and commonly specified as a supplier requirement by major food businesses in the EU and high-end businesses outside the EU for the fruit & vegetable, combinable crops, livestock & salmonid standards. The shrimp standard is new and hence has little recognition, however, in August 2008 the Dutch retail organisation CBL that represents 99 retail chains committed to the GLOBALGAP tropical shrimp standard for all purchases by January 2011. Dutch shrimp importer Heiploeg BV (~50,000MT shrimp imports /annum) took the lead in developing the shrimp standard.
Participation in the standard	Between May 2003 and August 2008, ACC certified 88 shrimp processing plants, 61 shrimp farms and 23 shrimp hatcheries in the major producer countries around the world. In Vietnam between October 2005 and August 2008, ACC certified 6 processing plants, 2 farms and 2 hatcheries representing the operations of 6 large-scale shrimp production and processing companies.	>100,000 producers of various products other than shrimp in 85 countries, no certified tropical shrimp producers as of November 2008.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Smallholder involvement	The GAA standards do not appear to have been designed with the needs of smallholders in mind. The certification system is designed for single certification of each farm which would be too costly for small-scale farmers.	Problems encountered with technical and cost issues for smallholder farmers needing to comply with fruit and vegetable standard. Aquaculture standard has been developed with large-commercial operations in mind and was successfully field tested on a farm in Sumatra having 3,441 ponds of 0.5ha each and fully integrated intensive operation employing 6,000 people. Social criteria module was field tested with small-scale producers in Thailand, few details available and no evidence that costs have been calculated.
Fees associated with compliance and certification	The register for certification under the GAA standards it is necessary to fill in the appropriate form(s) and send US\$500 (8,250,000 Dong) to the ACC for each standard required. As the system has three parts basic fees could range from US\$500 to US\$1,500 (8,250,000 to 24,750,000 Dong). No information is given on the website regarding any additional fees associated with the audit, but the farmer, hatchery operator or processor would expect to pay the auditors costs plus the cost of any laboratory analyses commissioned by the ACC auditor as part of the certification audit.	GLOBALGAP established a smallholder taskforce in October 2007 and is beginning to look seriously at problems faced by smallholders. This is a difficult area with no easy solutions as both smallholder and retailer must be happy with the outcome of any proposals for change. Producer is responsible for all costs associated with training and documentation, analytical sampling, registration, licensing and cost of audit. GLOBALGAP registration fees range from €3 to €30 (70,500-705,000 Dong) according to farm size, licence fee is €20 (470,000 Dong) for individual farm certification (farmer groups are charged €20 (470,000 Dong) x square root of the number of farmers in the scheme, hence for 100 farmers the charge is 20x10 = €220 / 5,170,000 Dong) and registration fee is €5 (117,500 Dong). Audit and analytical fees will vary according to choice of

certifying body and laboratory. All fees are paid annually.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Number and type of control points	<p>The GAA standard for Best Aquacultural Practice (BAP) is divided into three components so as to cover hatchery, farm and processing operations. Applicants are only certified on the components that apply to their operations. The processing component is similar in content to other factory process standards such as the British Retail Consortium Global Food Standard and is divided into 6 sections (referred to rather confusingly as “standards” in the ACC documentation). The processing component is not dealt with in detail here as it has no direct relationship to GLOBALGAP.</p> <p>The hatchery and farm components are divided into 10 and 13 sections respectively to cover issues relating to food safety management, environmental protection, animal welfare and corporate social responsibility. There is a lot of duplication between the two components with seven of the sections in the farm standard being similar or identical to sections contained in the hatchery component.</p> <p>Detailed guidance documents are available on the ACC website but there is no public access to the inspection checklists hence it is not possible to know the total number of control points or the level of compliance required for BAP certification under the GAA standard.</p>	<p>The tropical shrimp standard is divided into 5 modules known as the All farm, Aquaculture base, Shrimp module, Chain of custody & Social criteria modules. Each module contains specific control points with compliance criteria known as control points. The social criteria module contains 21 control points which must be evaluated but findings for each CP do not determine pass or failure in the certification audit (However, the customer has access to the audit results and can choose between producers on ethical grounds and thus might drop suppliers who get consistently low scores in the social audit). The other 4 modules have 275 control points. 169 of these are rated as major musts all applicable major musts must be compliant on the day of the audit. 87 CP’s are rated as minor musts, 95% of the applicable minor musts must be compliant on the day of the audit. The remaining 18 CP’s are rated as recommended controls. Compliance status for recommended CP’s has no influence on the outcome of the certification audit.</p> <p>Non-applicability (if justified) is possible in theory for 122 control points 62 major and 60 minor musts respectively). However, in practice very few control points will be not applicable for each farm.</p>

For certification of farmer groups, the group must demonstrate compliance with 139 additional control points under a quality management system & 32 control points dealing with operation of the certifying body during the audit. There is no flexibility for non-compliance on the QMS control points.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Flexibility for compliance	Without access to the audit checklists and general regulations for the standard it is impossible to assess fully the level of flexibility for compliance. However, the guidance documents mention some provisions for flexibility. For example in the effluent management section of the hatchery component hatcheries are allowed 5 years to comply fully with the water quality specification.	Relatively little flexibility for compliance, farmer must demonstrate 100% compliance with all major control points and 95% of minor control points on the day of audit. No options for deferred certification.
Certification	Annual certification of hatchery, farm or processing unit. Certification is conditional on passing the annual external inspection / audit and registration with ACC prior to certification.	Annual certification of producer or producer group sites for all product types requested by producer. Certification is conditional on passing the annual external inspection / audit and registration with GLOBALGAP prior to certification.
External inspection / audit	Annual audit hatchery, farm or processing unit by an ACC approved evaluator.	Annual audit of producer or producer group by recognised certifying body with option for surveillance audit of selected farmers to strengthen integrity of the system.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Certification bodies	<p>GAA has a single certifying body known as the Aquaculture Certification Council (ACC). The ACC is not ISO Guide 65 / EN45,011 accredited but started the accreditation process in late 2007. The ACC operates via trained and licensed auditors known as evaluators', there are currently 84 active evaluators in 24 countries including 5 in Vietnam. To become an ACC evaluator it is necessary to pay a US\$500 (8,250,000 Dong) registration fee and US\$1,800 (29,700,000 Dong) to attend a 5 day course covering HACCP, traceability and environmental protection. In addition to passing the ACC course, evaluators must have an appropriate university degree, a minimum of 5 years aquacultural or shrimp processing experience, no conflicts of interest, no criminal record and be fluent in English. There is no requirement to have an auditor qualification such as ISO 19,011 certification.</p>	<p>140 independent accredited certification bodies based in 30 countries around the world. Certifying bodies must be ISO Guide 65 / EN45,011 accredited and auditors (inspectors) working for the certifying body must be ISO 19,011 certified and have relevant qualifications and experience. Certifying bodies must be accredited for each scope and option that they wish to certify. Auditors working for certifying bodies must attend annual GLOBALGAP training courses and other training seminars to obtain and maintain accreditation to audit a particular scope of the standard. As of November 2008, there were 2 certifying bodies (SGS-New Zealand and Control Union Certifications BV of the Netherlands with provisional accreditation to conduct certification audits for the GLOBALGAP tropical shrimp standard. In contrast the longer established salmonid standard has 5 accredited certifying bodies and 1 provisionally accredited certifying body.</p>

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Options for certification	<p>The GAA/ACC standards are intended for individual certifications of hatcheries, farms and processing operations. Additional guidance documents are provided for application of the standard to small-scale operations. However, the standard is evidently aimed at large-scale commercial operators as the content of the standard relates to large-scale intensive operations rather than small-scale extensive operations with one or two ponds.</p> <p>Certification costs could be an issue for small-scale farmers as there is no cost saving option for group certification under the GAA/ACC standard.</p>	<p>Individual (option 1) or group (option 2) certification (option 2 is the favoured route for certification of groups of small-scale producers). Other certification options involving multi-site certifications and combinations of options 1 & 2 are theoretically possible and GLOBALGAP is working on several of these as potential cost saving options aimed at smallholder schemes with large numbers of smallholders.</p> <p>The GLOBALGAP shrimp standard was developed and field tested on a large-scale commercial farm in Sumatra and reflects conditions in large-scale intensive operations. This Sumatran farm produces 45-50,000MT of Vannamei per year under intensive conditions. The farm has 3,441 HDPE lined ponds of 0.5ha each and employs 6,000 workers. The total area of the company farm is 6,000ha. The company has its own hatchery, feed mill and processing plant. In addition they buy produce from 1,500 small-scale producers, 600 of these own their own ponds the rest are tenant farmers.</p>
Benchmarking	<p>There are no options for benchmarking of other standards against the GAA/ACC standards.</p>	<p>Facility for benchmarking of other standards against GLOBALGAP to demonstrate equivalence of system for the purposes of mutual recognition.</p>
Production protocols	<p>No formal production protocols under the standard, but producers create their own protocols ensuring that the</p>	<p>No formal production protocols under the standard, but producers create their own protocols ensuring</p>

content reflects the requirements for GAA/ACC compliance.

that the content reflects the requirements for GLOBALGAP compliance.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Training	Necessary technical training must be provided for all workers and appropriate first aid training on various issues such as electric shock, bleeding and drowning must be provided for workers. Regular refresher courses are an essential part of the farms worker training programme.	Any worker handling chemicals or operating dangerous machinery must have valid certificates of competence. First aiders must have valid certificates and personnel handling crops must receive basic hygiene training
Documentation & record keeping	Detailed documentation required for all aspects of production on farm, formats are given for record keeping forms.	Detailed documentation required for all aspects of production on farm, no format given for record keeping but all requirements specified under the standard must be met on the day of audit
Traceability & chain of custody	Full vertical and horizontal traceability for hatchery operations with chain of custody and forward traceability to the farm/farms that purchase product from the hatchery. Farms require full vertical and horizontal traceability to pond level including backwards trace to hatchery and forwards trace to processing plants. An electronic traceability database is included within the standard.	Full vertical and horizontal traceability to farm level, traceability of all inputs and purchases from hatcheries. The shrimp standard includes a chain of custody module that recognises that record keeping and traceability systems are not enough. Provision is made to trace production from raw material input to processing. All components with chain (ie hatcheries, transporters, processors etc must be registered with a unique GLOBALGAP identification number prior to certification of the farm. GLOBALGAP certified and non-certified materials and products must be segregated.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Fish welfare	No specific measures given on fish welfare, but detailed requirements are given for veterinary health in both the hatchery and production standards to limit incidence of disease.	Criteria include correct stocking densities, water quality parameters such as temperature, dissolved O ₂ and CO ₂ , pH, nitrogen content and suspended solids. Workers demonstrate that they avoid causing stress, pain, injury or disease to fish.
Site management	Legality of operations and compliance with environmental laws.	Detailed Quality Manual is required for all sites, includes policies, procedures and work instructions for key areas of production activity, ISO compliant document control procedures are required.
Complaints	No specific measures for handling complaints.	Must have complaints procedure and forms and proof of functional system for corrective actions including testing of product withdrawal procedures.
Hygiene	Microbial sanitation are of primary importance, must demonstrate systems in place to prevent contamination of shrimp ponds with domestic sewage or animal manure. Domestic sewage must be treated using facility to prevent contamination of surrounding environment.	HACCP based pro-active management systems in place and demonstrate working.
Worker, health, safety & welfare	Must demonstrate compliance with labour laws and provide adequate living and working conditions.	Risk assessments, proper training, management responsible for issues, provision of toilets, hand-wash, eating and locker facilities, potable drinking water.
Hatcheries, nauplii and post-larvae sources	No wild caught post-larvae are allowed.	Detailed provisions for facilities, no wild caught material, within 12 months of first certification must demonstrate that only source material from GLOBALGAP certified sources.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Environment	<p>Mangrove conservation and biodiversity protection are of key importance, no farming is allowed in mangrove swamps, protected areas and high value conservation areas. Rehabilitation programmes are essential and must demonstrate systems to prevent escape of farmed shrimps.</p> <p>Soil and water conservation management is required to prevent salination problems and depletion of groundwater supplies in the area surrounding the farm.</p> <p>Sediments must be managed with a system of canals and settling ponds so as to prevent salination or other ecological problems from occurring in the surrounding environment.</p>	<p>Proof that new sites are not in protected areas, high conservation value areas or mangrove ecosystems, older sites must show restoration and rehabilitation programmes in place.</p>
Feeds	<p>No specific standard for compound feed manufacture or requirement to source from approved suppliers.</p>	<p>All feed from supplier approved by competent authority, in future will be mandatory to source only from GLOBALGAP certified compound feed manufacturers (CFM). The CFM standard was not operational as of November 2008, but 7 aquaculture feed manufacturers in Norway, Denmark, France, Ireland and the USA had successfully completed self assessments of compliance to the CFM standard by 19th August 2008.</p>

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Use of chemicals	Drug and chemical management systems are required, banned antibiotics, drugs and chemicals must not be used. No routine prophylaxis allowed.	All drugs, antibiotics, chemical treatments & therapeutics must meet legislative requirements, veterinary health plan in place and demonstrate application including withdrawal periods.
Medicines		Only approved compounds as per national and international requirements, demonstrate compliance with MRL's, detailed records and demonstrate safe disposal of obsolete material.
Chemical storage & disposal of empty containers and obsolete materials	Safe storage conditions (secure with spillage containment and clean up facilities) are required for all hatchery and farm inputs to meet environmental, food and worker safety criteria. Inputs include agrochemicals (antibiotics, medicines, therapeutics, feed & cleaning agents), fuel and lubricants. Storage separation is required according to the hazards associated with the materials. Separate stores are required for fuels and lubricants, fertilisers, toxic chemicals such as pesticides and veterinary drugs. Safe disposal of obsolete materials and empty containers, no re-use of empty packaging.	All chemicals must be kept in appropriate (according to detailed specifications) storage facilities, including means to deal with accidental spillages & properly calibrated equipment for measuring and mixing. Safe disposal of obsolete material and empty containers, no re-use of empty containers.
Protective clothing	Where necessary adequate protective clothing and equipment must be provided for workers to complete assigned tasks.	Complete sets of appropriate protective equipment, evidence that all items are kept clean and in working order.
Waste management	Detailed requirements for effluent management, farms must meet GAA specifications for water quality within 5 years. Effluent management requirements are more stringent for shrimp hatcheries.	Key requirement is to keep farm tidy, avoid litter and waste that provide breeding areas for vermin.
Pest control	No specific requirements for pest control.	Pest control systems with bait stations and recording systems in place.

Criteria	Global Aquacultural Alliance standard for BAP	GLOBALGAP Shrimp Version 1.0-Apr 08
Harvesting	Numerous controls for temperature, hygienic practices and labelling to indicate if potentially allergenic post-harvest treatments such as sulphites have been used.	Numerous controls for temperature, quality of ice, hygiene, labelling and traceability including GPS coordinates entered into database.
Sampling & testing	Need to demonstrate testing programme for pesticide residues, poly-chlorinated biphenyls (PCB's) and heavy metals. Maximum Residue Limits (MRL's) are based on USFDA specifications as opposed to Codex Alimentarius Commission guidelines or EU regulatory values.	Sampling and testing plan with detailed records according to national and customer requirements, batch level sample traceability, for feed, raw materials and product. All laboratories ISO17,025 certified or equivalent, provide evidence that laboratory participates in recognised proficiency testing scheme.

¹ – Note on 7th September 2007, EurepGAP changed its name to GLOBALGAP

All Information given in this table was correct as of November 2008. However, as private voluntary standards are constantly evolving it would be advisable to check for the latest information on GAA and ACC at www.gaalliance.org & www.aquaculturecertification.org and www.GLOBALGAP.org for GLOBALGAP

All costs based on rate of €1 = 23,500 Vietnamese Dong & US\$1 = 16,500 Vietnamese Dong

**ANNEX 6: REPORT OF STAKEHOLDER BRIEFING WORKSHOP IN HANOI (15/09/2008)
AVAILABLE SEPARATELY**

**ANNEX 7: REPORT OF NATIONAL STAKEHOLDER WORKSHOP IN HO CHI MINH CITY
(27/11/2008) AVAILABLE SEPARATELY**