

POTENTIALS AND CONSTRAINTS OF FAIRTRADE CERTIFICATION SCHEME FOR SHRIMP (*Penaeus monodon*) IN THE PROVINCE OF PAMPANGA, PHILIPPINES

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1 Introduction

The province of Pampanga has always been a centre for aquaculture; with the introduction of the tiger shrimp in the 80's, the area has gained a new dynamic. Failing to rear the shrimp in intensive systems, the province has become a major centre of production within the Philippines with its polyculture system, associating the shrimp with milkfish – the traditionally reared fish in the Philippines – and sometimes tilapia and/or crabs. The French Agricultural Research Centre for International Development (CIRAD) has been working for over 10 years in Pampanga, in close relationship with the farmer, studying their farming systems but also their relationship with land. CIRAD therefore has a strong and valuable pool of knowledge on aquaculture in the province.

The Fairtrade Foundation is developing standards for Fairtrade shrimp with the aim of selling the first Fairtrade shrimp on the UK market at the end of 2006.

A Fairtrade certification of Pampanga province's tiger shrimp may offer a future prospect of wider markets in Europe whilst improving the livelihoods of farmers. This report intends to give an overview of the potential for and constraints to Fairtrade certification in the tiger shrimp industry of Pampanga province by looking at the farming practices, the different links in the commodity chain and the livelihoods of the stakeholders/farmers.

2 The Filipino context

2.1 Country overview

Situated on the western edge of the Pacific Ocean, also called the Ring of Fire, the Philippines is the second-largest archipelago on the planet, with 7,107 individual islands. With no direct borders with other countries, the Philippines has an area of 300,000 km², of which 1,830 km² are covered by water and 39,289 km of coastline {CIA 2005 #109}, making of the Philippines a very fisheries-orientated country. Arable land covers 18.95% of the surface of which 16.77% is covered by permanent crops (land cultivated that are not replanted after each harvest) {CIA 2005 #109}. The climate is tropical, the monsoon occurring from November to April in the North-eastern areas and from May to October in the Southwest {CIA 2005 #109}, the rains of the monsoon have an important impact on the salinity of the water in the ponds and therefore on the growth of the shrimp.

Natural hazards in the Philippines are many, and include cyclonic storms, landslides; active volcanoes; destructive earthquakes and tsunamis {CIA 2005 #109}.

Uncontrolled deforestation especially in watershed areas, soil erosion, air and water pollution in major urban centres, coral reef degradation and increasing pollution of coastal mangrove swamps that are important fish breeding grounds, are amongst the current environmental concerns in the Philippines {CIA 2005 #109}. The Filipino government is taking an active part in protecting the environment. It is a member of many international agreements on issues such as biodiversity, climate change, marine dumping, ozone layer protection, ship pollution, including assignation to international agreements such as the Kyoto Protocol, Tropical Timber 83 and Tropical Timber 94 {CIA 2005 #109}.

2.2 Macroeconomic context

In 1997, 36.8% of the Filipino population was living below the poverty line (income of 13,823 PhP¹ per year), increasing to 39.4% in 2000 {Saint-Macary 2003 #107} and to 40% in 2005 {CIA 2005 #109}. The poor are mostly found in the rural areas where they represent 51% of the population {Saint-Macary 2003 #107}. Although there is an important variation from one region to another, in Central Luzon where the province of Pampanga is located, the percentage of the population living below the poverty line falls below 20% {Irz & Stevenson 2005 #101}.

¹ 1 PhP (Philippines pesos) = £0.0110806

Between 1994 and 1997 economic growth resulted in an increase in income and spending i.e. increase of purchasing power, but the years 1997-2000 saw slower growth {Saint-Macary 2003 #107}. The average income of a Filipino worker in 2000 was 94,576 PhP per annum {BFAR 2004 #123}.

The Filipino GDP has been estimated at £245.3 billion in 2004 (£2,848.68/capita), made up by agriculture (14.8%), 31.9% by the industry and 53.2% by the service sector {CIA 2005 #109}. Around 35.86 million (40.8% of the population) of Filipinos are working, 36% in the agricultural sector, 16% in industry, and 48% in the service sector; 11.7% of the population is unemployed {CIA 2005 #109}. The main agricultural products are: sugarcane, coconuts, rice, corn, bananas, cassavas, pineapples, fish, mangoes, pork, eggs, beef; and the main industries are: electronics assembly, garments, footwear, pharmaceuticals, chemicals, wood products, food processing, petroleum refining and fishing {CIA 2005 #109}.

Exports represented and estimated £22 billion in 2004; the main export commodities were electronic equipment, machinery and transport equipment, garments, optical instruments, coconut products, fruits and nuts, copper products and chemicals. Commodities are exported to Japan (20.1%), US (18.2%), the Netherlands (9%), Hong Kong (7.9%), China (6.7%), Singapore (6.6%), Taiwan (5.6%) and Malaysia 5.2% (2004) {CIA 2005 #109}. The majority of markets for Filipino goods are in Asia.

2.3 The Role of Fisheries/Aquaculture in the Economy

In the top ten agricultural products exported by the Philippines in 2003, three are from fisheries and/or aquaculture; tuna with a 6.9% share of the exports, shrimp and prawns 5.43% and seaweeds and carageenan 3.47% {Department of Agriculture 2004 #102}.

Fisheries including aquaculture, contribute to 2.2% of the total GDP of the Philippines at current prices and 15.1% of the GVA (Gross Value added) in agriculture {BFAR 2004 #123}. The sector employed 990,872 people in 2002 (2.8% of the labour force), of which 26% was made up by aquaculture employment {BFAR 2004 #123}. Find out percentage people working in aquaculture in Pampanga, and if possible working in shrimp farming only.

As 80% of the population is catholic, a lot of fish is consumed especially during the Holy Week and in December for Christmas. Less is spent on fish when children return to school i.e. when they have less money to spend on food due to the additional expense. The price of milkfish varies according to demand. A Filipino ate an average of 36kg of fish/year in 1993 {FNRI 2002 #116}, although per capita consumption figures are variable with other sources citing 23.75kg/year in 1993 and 22.08kg in 2000 according to the Philippine Bureau of Agricultural Statistics {Saint-Macary 2003 #107}.

2.4 Institutional Framework

2.4.1 BFAR

The Bureau of Fisheries and Aquatic Resources (BFAR) is the government agency, under the Department of Agriculture, responsible for the development, improvement, management and conservation of the country's fisheries and aquatic resources {BFAR 2003 #112}. CIRAD works in close relationship with BFAR.

A short meeting with the director of BFAR, Malcolm Sarmiento, had been organised to inform him about the meaning of Fairtrade. He had not heard about Fairtrade/Fair Trade before, although he is familiar with the eco-labelling. The concept of Fairtrade and organic farming was explained to him.

He asked if Fairtrade was an NGO. It was explained to him that it is neither governmental, NGO nor business but a non-profitable certification body. The Director was worried that Fairtrade certification would not be involved with BFAR as many NGOs currently are and that the Fairtrade Foundation would also complain about government actions similarly to pressure groups such as Greenpeace.

BFAR has many offices and research stations all over the Philippines. In Pampanga province, due to the predominance of aquaculture, the town of Sasman has its own extensionist from BFAR - Marita Ocampo. She knows and supports many farmers. Her office would perhaps be a good focus point to start implementation of Fairtrade standards.

2.4.2 PCAMRD

Philippine Council for Aquatic and Marine Research and Development (PCAMRD) is the sectoral council of the Department of Sciences and Technology (DOST) tasked with the formulation of strategies, policies, plans, programs and projects for science and technology development. They are also responsible for programming and allocation of government and external funds for research and development, monitoring and evaluation of research and development projects and generation of external funds {DOST 2001 #125}.

The PCAMRD is based in Los Banos, in the Southern part of Luzon. It does not have any other research stations. It is therefore less significant in terms of reach and influence than the BFAR in Pampanga and consequently, a less appealing partner for the implementation of the standards, if Fairtrade was to be set up in the Province.

2.5 Aquaculture in the Philippines

Aquaculture represents 43.73% of total fish production in the Philippines, of which 30.69% is made up by seaweeds, but correspond to only 32.28% of the value, {BAS 2005 #118} due to the low price of the algae on the international market. Within the aquaculture systems, brackishwater ponds are the most widespread with 6.69% of the fish production in the Philippines in 2004, followed by freshwater cages/pens (2.68%), freshwater ponds (1.92%) and marine cages/pens (0.96%) {BAS 2005 #118}. Within the fish species farmed, milkfish represents 55.4% of the production, tilapia 29.2% and shrimp 8.9% {Grandmougin 2003 #103}.

Penaeus monodon or tiger shrimp (sugpo in Tagalog), was introduced in the country in 1982 and cultivated both in intensive monoculture systems and polyculture systems (with milkfish). When the production started and the opening of the international market in 1980's, the production increased but the exporters did not follow and the prices on the internal market fell in 1993. i.e. production increased but this was followed by a decrease in prices on the international market???. During the disease outbreak crisis in 1990's, most exporters refused to buy shrimp {Saint-Macary 2003 #107}. Following an eruption of Mount Pinatubo which caused a change in the ecosystem and following the disease outbreak, a change in production strategy has been observed. Rearing of shrimp in polyculture with milkfish, tilapia and sometimes crabs became popular {Grandmougin 2003 #103}. Nowadays, there are three main regions producing shrimp in the Philippines (Figure 1): Central Luzon (region III) to which the province of Pampanga where this study is located belongs to, Zamboanga Peninsula (region IX) and Northern Mindanao (region X). The production of tiger shrimp in the Philippines is summarised in Table 1. Production has stagnated over the last three years: 35.5 MT in 2002, 35.0 MT in 2003 and 35.9 MT in 2004 {BAS 2005 #119}. Central Luzon region represents only 0.5% of aquaculture production in the Philippines {BAS 2005 #121} but is the first producer of shrimp, this shows the predominance of shrimp farming in the region.

Table 1. Tiger shrimp production (2002, in million tons)

Regions	Region names	Production
TOTAL		35,493
III	Central Luzon	15,164
IX	Zamboanga Peninsula	7,083
X	Northern Mindanao	5,674
XIII	Caraga	1,741
VII	Central Visayas	1,609
IV	Calabarzon and Mimaropa	1,342
VI	Western Visayas	767
XII	Soccsksargen	634
V	Bicol Region	507
ARMM	Autonomous Region in Muslim Mindanao	314
VIII	Eastern Visayas	247
I	Ilocos Region	217
XI	Davao Region	91
II	Cagayan Valley	66
NCR	National Capital Region	37

(Metro Manila)

Source: {BFAR, 2004, #117}

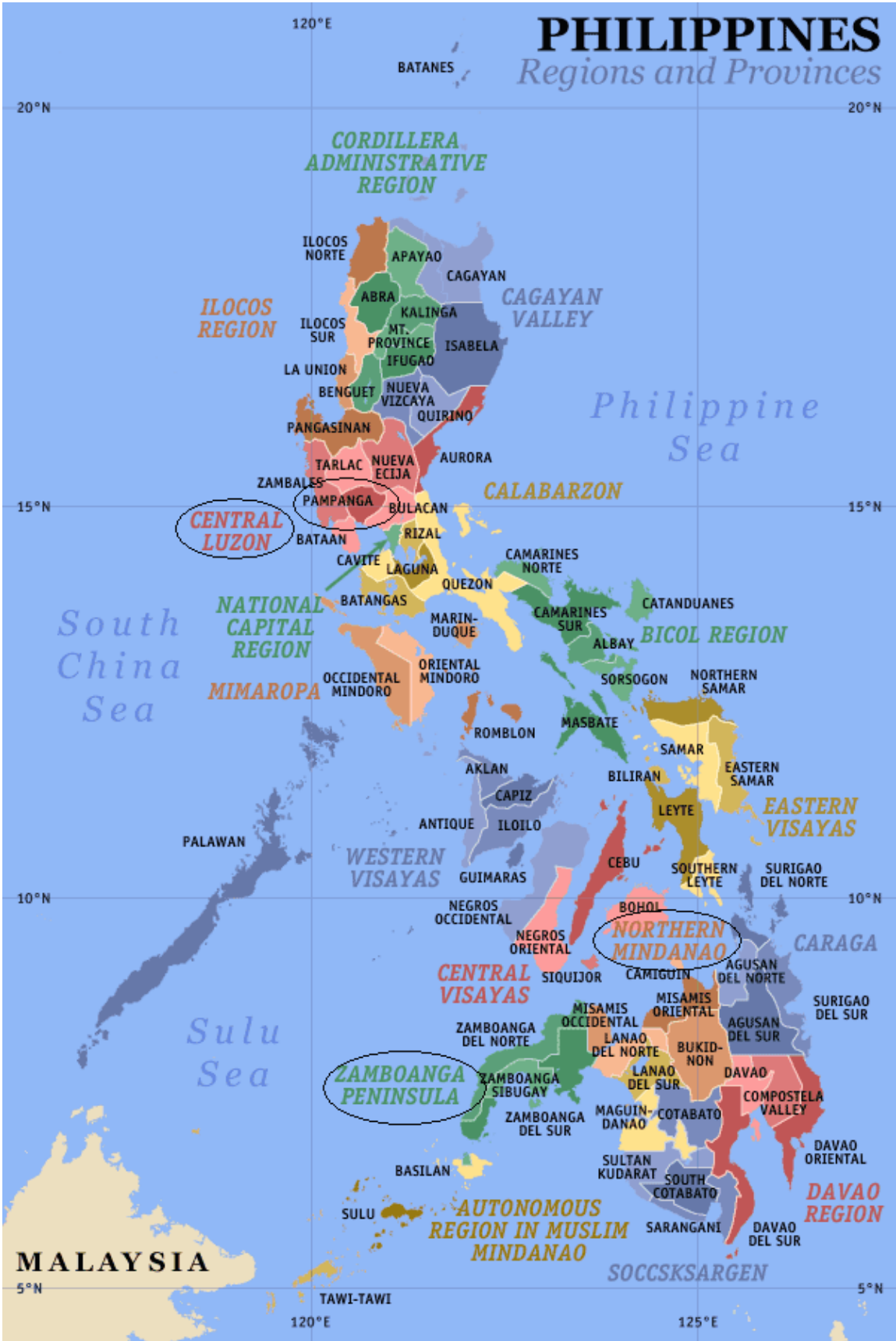


Figure 1 - Map of the Philippines showing study location

Source: Wikipedia

2.6 Marketing systems

The different stakeholders involved in the marketing chain are as follows {Saint-Macary 2003 #700}:

- Consignation
- Transporters
- Wholesaler
- Retailer
- Exporters

The marketing system is very effective. The product is sold on the same day as it is harvest and prices fetched are those of the previous day. Therefore, the system is very adaptable to the game of offer and demand {Saint-Macary 2003 #107}.

3 Fairtrade requirements

The standards start by saying that: "Fairtrade is a strategy for poverty alleviation and sustainable development". Its purpose is to create opportunities for producers and workers who have been economically disadvantaged or marginalised by the conventional trading system. If fair access to markets under better trade conditions would help them to overcome barriers to development, they can join Fairtrade {FLO International 2005 #113}.

Fairtrade Labelling Organisation (FLO) standards need to be met by producer groups, traders, processors, wholesalers and retailers. One small-scale farmer or one worker in a plantation cannot apply on his own. Several farmers, if working with small-scale farmers, need to work together in an organisation proven to be democratic and having a role in the socio-economic development of the community. In the same range of ideas, workers have to be organised in unions and be supported by the company they work for {FLO International 2005 #113}. There are two set of generic standards for those two cases. There are also a set of standards specific to each product: those for shrimp are being developed as this report is being written. Although the thread of the standards can be known (examples from other Fairtrade products and other standards for sustainable shrimp production), the system in Pampanga province cannot be weighed against them until they are published (expected end 2006).

In addition to the FLO standards, small farmers and workers organisations must comply with national/local legislations. If those groups were to set regulations higher than the FLO standards, those standards should prevail {FLO International 2005 #114}.

The standards are split into minimum and progress requirements. Minimum requirements are the requirements to be met for certification; the standards set those as: {FLO International 2005 #114}:

- Fairtrade benefits reach the small farmers and/or workers.
- The small farmers' organisation and/or the workers has/have potential for development.
- Fairtrade instruments can take effect and lead to a development which cannot be achieved otherwise.

FLO requires improvements, towards working conditions and product quality, to increase the environmental sustainability of their activities and to invest in the development of the organisations and their producers/workers, to be made each year: those are the progress requirements {FLO International 2005 #113}.

In the context of farming *Penaeus monodon* in Pampanga province, the system is based on hired labour rather than on small farmers (operators even small ones are not the working on farms) and therefore the hired labour set of standards would apply. Those state mainly that employers pay decent wages, guarantee the right to join trade unions and provide good housing where relevant {FLO International 2005 #113}, partially pay in advance when producers ask for payment and sign contracts that allow for long-term planning and sustainable production practices {FLO International, 2006, #113}. It is not the intention of these standards to prevent the certification of producers because of their lack of capacity at the start of their relationship with FLO and some flexibility of interpretation is required.

A more detailed summary of the standards main points indicating socio-economic and environmental requirements can be found in Annex 1.

4 Farming practices in Pampanga

Sasmuan has 7,228 ha of ponds shared between 613 operators, making an average of 19 ha per farm {Grandmougin 2003 #103}. Over the province of Pampanga, there are 26,354.25 ha of ponds of which 6,569.56 ha are freshwater and 19,784.69 ha are brackishwater {Hejdova 2002 #104}. The ponds were constructed during the Spanish colonial period more than 300 years ago {Grandmougin 2003 #103}. It is not unclear if those areas were covered by mangroves in the past; few areas subsist further away from Sasmuan towards the sea.

A small central pond is the centre of the farm where the water can go in and out and is also used as a nursery. It is typically surrounded by bigger ponds: feeder and/or on-growing ponds {Hejdova 2002 #104}. To facilitate management of ponds, many operators have divided their biggest ponds into two smaller ones.

After emptying the pond for harvest, farmers use sodium cyanide to disinfect the ponds {Hejdova 2002 #104}. The use of sodium cyanide is theoretically illegal with less and less farmers using it (93% of farmers in 2001 and 36% in 2003) {Grandmougin 2003 #103}. Sodium cyanide has been replaced by the use of tea grain and sometimes probiotics are used by the better-off operators (30%) as it costs 1,625 PhP/kg {Grandmougin 2003 #103}. The fish left over after harvest or treatment with sodium cyanide are sold on the market. The pond is refilled after 15 days. Farmers believe that sodium cyanide is not toxic to humans, although an increase in skin allergies has been observed {Hejdova 2002 #104}. Sodium cyanide is on the WHO list of forbidden pesticides which is followed by FLO. Use of lime is also decreasing with 70% of farmers in 2001 compared with 30% in 2003 using lime to control pH. {Grandmougin 2003 #103}. Some farmers use fertiliser (14-14-14 and urea) {Grandmougin 2003 #103}.

The renewal water occurs 4 to 10 times per month when the farmer judges the water quality in the canals adjacent to the pond as good i.e. not reddish colour or smelly {Grandmougin 2003 #103}. In 1999, producers were affected by water pollution coming from an alcohol fermentation industry upstream. They formed an association and complained, achieving redress for their losses.

Being an extensive system, farmers do not feed the fish and shrimp in their ponds with commercial feed which would increase the cost of production. Fish and shrimp feed on the phyto- and zooplankton in the pond as well as on the self-recruiting invertebrate species entering the ponds during water renewal. Three species of algae are also proliferating in the ponds: lablab, lumot and digman {Grandmougin 2003 #103}. Lab-lab is the Filipino term for a dense mat of microbenthic organism communities, composed of algae and diatoms that rest on the pond floor (Sumagaysay-Chavoso & San Diego-McGlone, 2003 cited in {Irz & Stevenson 2005 #101}). Lumot is the Filipino term for filamentous algae {Irz & Stevenson 2005 #101}, digman is also filamentous algae. Farmers add gastropods (susos) and bivalves as feeding, those are bought or collected by the daily workers if farmers evaluate the market price as being too high {Grandmougin 2003 #103}. Digman causes problems to the farmers as the shrimp get caught in it and cannot be harvested. One of daily workers' main jobs is to remove these unwanted algae. One advantage of practicing polyculture with tilapia is the biological control of the algae as tilapia can feed on it.

The polyculture system of milkfish, tilapia and shrimp can achieve around 2.93 production cycles per year with a yield of shrimp of 90kg/ha/cycle {Grandmougin 2003 #103}.

Being an extensive system, the costs for labour are the most significant, accounting for 40% of the total costs of production. This is followed by the costs of fry (34%) due to high shrimp mortality (93%) and finally feed and other inputs (26%) {Grandmougin 2003 #103}. The high mortality of shrimp is one of the major constraints of the system. Similarly to other countries, producers in the Philippines might switch to the more reliable and disease resistant *Penaeus vannamei*, once its introduction to the country is allowed.

The taxes in the Philippines are quite high at 125,000 PhP/year plus 34% of the total benefits if earnings exceed 500,000 PhP per annum {Grandmougin 2003 #103}. However, farms get taxed only if they are registered and most farms are not. It is mandatory to be registered to have access to a loan

from the bank, but as interest rates are high, people often borrow money through non formal channels such as relatives or better-off people within the community {Grandmougin 2003 #103}.

Most operators employ family members on their ponds (family includes compadres). The Lacap family, one of the wealthiest in Sasman, on the other hand, avoids this as family members always ask for benefits and favours and problems are more difficult to resolve (if they need to fire them for example). The Lacap's had thieves on their ponds, but as everyone knows everyone and due to word of mouth, they found out very quickly who was responsible and took action. To solve the problem, they employed guards from areas other than Pampanga, therefore reducing the possibility of allowing their friends to steal fish or shrimp from the ponds.

5 Shrimp commodity chain models

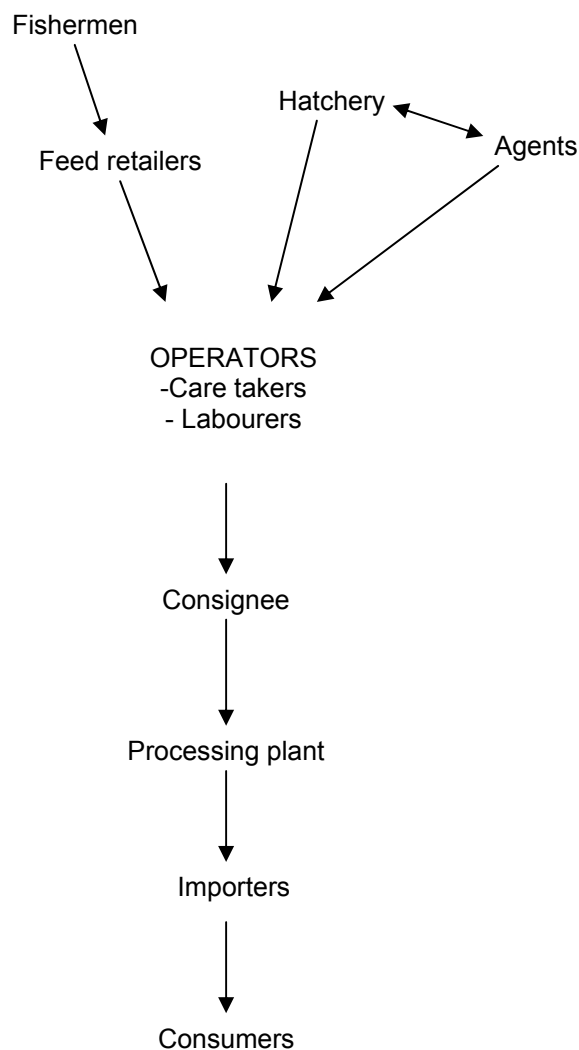


Figure 2 - Shrimp commodity chain model in Pampanga, Philippines

The shrimp commodity chain in the region of Pampanga is the same than the commodity chain for fish (tilapia and milkfish mostly) as described in Figure 2. As the system is extensive, there are few inputs or feed. The farms themselves are managed by operators, either owning or renting the ponds or both for the largest farms. They employ care takers and daily labourers. All the production is sold through a system of consignee, although some processing plants are now by-passing the consignations to avoid (bacteriological) contamination at this stage.

Most of the people in the chain are linked to an operator or a consignment for loans or other types of arrangement. Many are also linked via the compadre system (similar to godfather/mother). In this way a pond owner might lease his or her ponds to someone he/she likes best and at a reduced rate.

5.1 Hatchery, feed and other inputs

The cycle of reproduction of *Penaeus monodon* has not been closed yet so many farms rely on capture of broodstock in the wild. The fry need to reach a certain size before they can be stocked into the ponds. This is done in the hatchery. Some of the largest operators have their own hatchery. Other operators have their own suppliers for seed and other inputs.

5.2 Shrimp farms

5.2.1 Operators

The average size of a shrimp farm in Sasmuan is 19 hectares, however, the size from one farm to another varies considerably {Hejdova 2005 #126}:

- 4 major operators who are profit orientated operate farms up to 500 hectares, they usually own some ponds but rent most of it;
- Other operators have farms which are profitable but are also vital to their subsistence. Their ponds also help them to maintain their social status (such as sending the children to school);
- Small operators (3-4 ha) whose livelihoods are dependant on the profit from pond farming (is there a difference between this one and the one above?).

Limitations imposed by the Filipino government restrict ownership of ponds to a maximum of 50 hectares {Grandmougin 2003 #103}, therefore ponds must be rented if operators have larger area to farm.

Operators are the ones managing the farm, the ones who have the responsibility of the production, they do not live on farm and visit the farm every so often: once to twice per week for Mr Sunga, one of the largest operators of Sasmuan. They have a relation of “master” (amo-tauhan) with their care takers {Hejdova 2002 #104}.

The system is extremely flexible to the constraints of the environment and the objectives of the operators {Grandmougin 2003 #103}. The role of the operators is to provide the care takers with the inputs i.e. feed and fry and guarantee an outlet at the consignment {Grandmougin 2003 #103}. The largest operators are business men; they invest in shrimp farming because it can be a very profitable activity if all goes well.

All the ponds in Sasmuan and surrounding area are not farmed; some are waiting to be rented out. However a pond does not lie vacant for long before it is leased out by an operator (only a few weeks) {Hejdova 2005 #126}.

5.2.2 Care takers

The role of the care takers is to distribute inputs, take care of the pond dikes and renew the water when needed {Grandmougin 2003 #103} i.e. they look after the few ponds they are in charged of and work to maximise the yield. On farms where more than one care taker works, they collectively undertake their daily work {Hejdova 2002 #104}. Work starts at 6-7am (4-5am during harvest) until 11am, during which the labourers work on the pond. They have their lunch break and rest from 11am to 1pm {Hejdova 2002 #104}.

The care takers do not sign a contract with the operators employing them and rotate a lot from farm to farm. Facing this precariousness, care takers usually don't want to take initiatives on pond management, in case it goes wrong so they do not have to bear the responsibility, even though they are aquaculture trained (by experience), are on the ponds and probably know more than operators.

The houses of the care takers are on the dikes of the ponds. Children live with their parents until they create a family of their own and find a job in another farm. Fish farming families in Sasmuan typically have between 3 and 10 children {Hejdova 2002 #104}. Out of 31 families of care takers interviewed in Guagua {Grandmougin 2003 #103}, the average number of children was 4.4 and 4.5 in Sasmuan. 80% and 100% of the children are working on the farm respectively {Grandmougin 2003 #103}.

As care takers change the location of the ponds where they are working every few years, they do not have the time to set up a home garden or do not see the point as they won't be able to benefit from it for very long. Some care takers have chickens and/or goats but they usually belong to the operators.

For the care takers originating from the area, some have a house in Sasmuan, where they return a few times each week. Their houses are usually very basic; tin roof, floor partially concreted and no real toilet. Some have a water pump on-farm, the others bring large kegs of drinking water. There is

electricity on farms for those living close to town, some of the others have a car battery they use for the radio or to charge their mobile phone. Operators give a mobile phone to their care takers to follow what is happening on their ponds more closely, other use walkie-talkie to communicate with operator or other care takers, others do not have any communication means but to wait for the habitual visit of their operator or to go to see them in town.

Some care takers have a pirogue (small canoe used for transportation and fishing), lent by the operator, others can walk to town along the dikes of the ponds. When interviewed, the wife of a care taker would say she goes a little as once a month to town to buy food (although this seem very few, and might go more often). Care takers can fish for tilapia in the pond but not the other species (milkfish, shrimp and crabs) as the tilapia are of low value in the marketplace. They can also collect small crabs called “talankas” in tagalong around the ponds {Hejdova 2002 #104}. Care takers always have a source of fresh protein at hand.

The different care takers working on the same farms have contacts between each other, so do their wives: it is their social circle as on the ponds they are quite isolated from town life.

The care takers get their salary paid every month: ~4,000-4,200 PhP plus a percentage of the profit of the harvest, which is usually around 10% shared between the care takers working on the same farm (it can reach 40-50,000 PhP per year) but some care takers do not receive any share of farm profits {Hejdova 2002 #104}. This yearly salary (48,000-50,400 PhP) places the care takers well above the national poverty line (13,823 PhP), especially if they are included in a profit sharing deal. However this salary is still beneath the average income of a Filipino worker (94,576 PhP). However, compared to the minimum average wage rates for agricultural activities of 68,072.5 PhP {www.gov.ph 2005 #115}, the care takers earn less.

Many inhabitants on the Philippine Visayas, where shrimp farming is widespread, have migrated to work on the ponds in Pampanga and on Luzon, attracted by the increased earnings differentials (2,500 PhP/month in the Visayas and sometimes no percentage on the benefits of the harvest).

Very few care takers have a family abroad i.e. they do not receive any remittance to help them with living costs, in fact they are already struggling to send their children to school. Visayans send money back to their families in the Visayas from savings made from their salaries.

The operator may act as a lending source for care takers (for example for school fees or medical visits). The money lending system in the Philippines is indeed fairly inaccessible and stakeholders rely on better off relatives for borrowing money.

All the care takers interviewed aspired to be an operator.

5.2.3 Daily labourers

Their job is to collect the digman in the ponds, cut the grass on the dikes, clean the nets and prepare the tool required for the harvest {Hejdova 2002 #104}. They are employed on a day to day basis, they usually do not have work everyday.

The daily labourers' teams generally come from the same barangay (sub-division of a town in the Philippines). Some operators are in contact with one or several head workers, depending on the size of their farm. Each head worker can have a team of 60 to 100 workers. They select the workers needed for the job requested by the operators. On other farms, the daily workers can be the children of the care takers or family members of the operators; they are typically 16 to 23 years old. Their salary is around 150 PhP per day, 210 PhP on harvesting days when they get fed on the farm {Hejdova 2002 #104}. Their salary is lower than the average minimum wage set by Filipino law (187 PhP), except on harvest days {www.gov.ph 2005 #115}.

Similar to the care takers, no contract is signed between the daily labourers and the operators. The entire system relies on trust.

5.3 Consignees/consignations

After harvesting, production of either fish or shrimp goes to the consignment which is equivalent to the wholesale market place. The market places for shrimp used to be Orani and Hagonoy – two towns near Sasmuan on the bay of Manila, but since the eruption of Mount Pinatubo, there has been a shift towards Hagonoy (10-12 tons/day in 2003) {Saint-Macary 2003 #107}. In the consignment, there are

several consignees. Each farm is linked to one consignee to which they sell their entire harvest. The largest operators have their own consignment. There used to have 7 consignees in Sasmuan in 2000 which rose to 20 by 2003 {Saint-Macary 2003 #107}. After unloading the pirogue, a rough grading is done by the consignment staff, on the floor of the market place (floor not always tiled).

The shrimp are split into three grades:

- grade 1: 20-25 pieces/kg
- grade 2: 30-35 pieces/kg
- grade 3: 60-80 pieces/kg

Although it operates at a high standard, the consignations in Pampanga province do not follow the requirements set by the European Commission to meet import regulations for the European Union (Fairtrade standards take for established that the product applying for Fairtrade certification follow the import requirements of each country where it is exported to). Aware of this problem, the Lacap family is building its own consignment following the requirement of the European Commission. The other consignations do not see it as a threat as Europe only represents 10% of their export market. The USA and Japan are indeed not checking *in situ* that these requirements are fulfilled, contrary to the European Commission. However, it is likely that this check will be implemented in the near future.

The consignee tries to confuse the buyers by mixing the grades a little and therefore get a better price overall. The system works like in an auction, buyers gather around a few crates of shrimp (same system for fish – milkfish and tilapia) and bid (price per kilo). The highest bidder gets the lot. The consignment pays the operator cash, but they themselves have to wait for a week to get the money from the wholesaler {Hejdova 2002 #104}.

The system is highly based on loyalty (*suki*, name of the loyal client in tagalog). Most of the interviewees did not know the price of their competitors although they are all on the same open market place {Saint-Macary 2003 #107}. There is some competition within the consignment in Sasmuan {Saint-Macary 2003 #107} for quality when high level of production, on marketing techniques when high production i.e. low price, quality, payment by instalments and on marketing techniques when low production, in creating facilities to develop loyalty of the clients i.e. loan, payments in cash, little presents. The market place is therefore dynamic.

The consignations also act as a money lenders to the care takers and operators (for the smallest), charging no interest. However then care takers and operators become tied to that consignment. The client is therein bound to sell at the consignment he borrowed money from. The system would not work without the consignations as everyone is indebted to them.

Consignations must be registered with BFAR to be able to sell on the export market. BFAR's presence at this stage highlights that they may be a good partner for implementing Fairtrade standards. In Sasmuan, an association of the consignee was created in 2000. All consignations are members. The association is, in theory, responsible for making the laws and regulations for the market place but in practice does not achieve or execute much.

Consignment cannot be considered as intermediaries between the workers and the export market, taking advantages from the producers; they are indeed selling (and not buying) their product with their marketing skills and prices are set by the buyers not themselves. this bit needs to be split up and rephrased. message not clear. A wee bit confusing. How make money? Withholding %?

5.4 Processing plants

At the consignment of Orany, two processing plants, HJR and AA, are the largest buyers of shrimp. The processing plant HJR was visited. It opened in 2001 and had just finished upgrading its facilities to comply with EU regulations and was awaiting and inspection by the European Commission.

The processing plant operates with one team of workers that work 6 days per week, ~8 hours per day (sometimes 6 or 10h). Their market is shared between the EU (10%), the USA (20%) and Japan (70%). They have four farms supplying them in Pampanga but also in Cebu. Shrimp are sourced directly from the farms without going through the consignment system to avoid contamination. However, as most operators are tied to a consignment (through indebtedness), it may be difficult for operators to sell directly to processing plants.

The traceability system is in place (each farm has a colour code), however, they do not have a laboratory for micro-bacterial contamination, but send their samples to BFAR before every shipment. The processing plant check water quality themselves every week (water is chlorine treated). The final product is in blocks (i.e. seafood that has been placed in a form or carton and frozen in a plate freezer) for the Japanese and American market and in semi-blocks (similar to blocks but with less water) for the European market. They are not thinking of carrying out IQF (Individual Quick Freeze) as there is no demand for it so far. Shrimp and prawns are usually sold in tail-off shell-off IQF in the supermarkets in the UK.

5.5 Exporters

Shrimp from the Philippines are exported to three major countries {Saint-Macary 2003 #107}: Japan 70%, US 20% and EU 10%.

With the visit from European Commission, originally planned for December 2005 but delayed, the exporters are very much in the centre of the set-up: they can put pressure on the shrimp commodity chain for changes to comply with EC regulations, i.e. they can refuse to buy the product is not up to export standards.

6 Potentials and constraints for Fairtrade certification

6.1 Strengths

The Philippines has 39,289 km of coastline. Aquaculture in ponds has been performed for many centuries and is a traditional activity. Milkfish culture predominates. The profit tiger shrimp can generate attracted many operators who switched to intensive *Penaeus monodon* culture. However, following a disease outbreak in the 1980's, the culture of tiger shrimp became unpopular. Some operators abandoned aquaculture, others turned to polyculture of tiger shrimp with milkfish and/or tilapia and crabs in order to mitigate their losses. This move improved the longer term sustainability of the system and has been socially accepted as a good risk minimising strategy for aquaculture. Even after the disease crisis, shrimp and prawn remained an important export commodity for the Philippines, ranking 5th in value in 2004. Many households in Pampanga and more specifically in Sasmuan are dependent on shrimp farming for income. The introduction of a Fairtrade certification would mean the improvement of the living standards of many in the area. Barangays have become wealthier where shrimp operators have been successful due to the creation of employment although most of this is daily wage labour.

The Fairtrade standards stipulate that the company must have the logistical, administrative and technical means to bring a quality product to the market. The largest operators have their own consignment, the others all sell to the ones on the market place of Hagonoy or Orany. The smaller operators do not have the means to employ administrative staff but the consignations do. Their staff are based in the market place and many of them have knowledge of accountancy. Operators supply cool boxes and ice for transporting the goods which occurs as soon as the harvest is over. The journey to the consignment can take a few hours by pirogue. On arrival, the shrimp are sorted straight away and auctioned within the hour. The traceability system is implemented by the consignations, which separate the shrimp from the different farms in different crates. Each crate is labelled (farm name and grade) so the buyer can easily see where the shrimp were grown. The processing plant visited was able to tell the difference between the produce from different farms. For each batch of shrimp, records were kept for outlining each step of the process each frozen block was labelled (with the size category and farm name). Therefore, assuming Fairtrade certification was implemented, the processing plant visited would be capable of isolating and processing the Fairtrade shrimp separately, to make sure that they were produced under Fairtrade standards.

The Government, through its membership of various international agreements, is committed to environment protection and therefore could back environmentally friendly initiatives and potentially help implement the environmental standards of Fairtrade.

Polyculture in Pampanga province is carried out by a few big operators but also by many smaller operators, themselves employing numerous care takers. The livelihoods of those operators are highly dependent on the results of the harvest and on the price obtained at the consignment. Fairtrade could focus on these operators, providing they organise themselves in some type of association.

FLO follows ILO convention 111 on ending discrimination of workers. Although no discrimination was observed during the visit, this requires further investigation.

6.2 Weaknesses

The natural hazards in the Philippines are plentiful. Although they do not have a major impact on shrimp culture, they can result in an unstable production such as high mortality rates. Despite the apparent Government commitment to the environment, the Philippines continue to face many environmental problems such as uncontrolled deforestation, soil erosion, air and water pollution in major urban centres and increasing pollution of coastal mangrove swamps. In Pampanga it is uncertain if mangrove ever covered the area as ponds were built around 300 years ago. Many shrimp standards for sustainable production and/or organic production request the replanting of mangroves in the ponds. This could be very difficult to achieve, as it means changing the traditional aquaculture techniques and could be a problem for the other species in the ponds (milkfish, tilapia) or when salinities in the ponds decrease after the monsoon (discontent of mangrove in low salinity water).

Fairtrade exists to create opportunities for producers and workers who have been economically disadvantaged or marginalised by the conventional trading system. In Pampanga, the trading system via consignations is open to everyone and the auction system for the sales creates healthy competition at the point of sale. Processing plants are sending their buyers straight to the consignations, so there are no intermediaries between the processing plants and the producers.

Along these lines, Fairtrade is a strategy for poverty alleviation. However, in Pampanga, less than 20% of the population is under the poverty line and care takers earn wages around 3.5 times higher than poverty line. Furthermore, if Fairtrade certification was granted to some operators in Pampanga, care takers would benefit if they remained at the same farm but it would be difficult to target labourers as they do not work every day and characteristically rotate from farm to farm. Therefore only a small number of people may actually benefit from the system.

The lack of community as care takers live at great distances from one another and may comprise of both local and Visayan migrant workers may mean that the focus for Fairtrade efforts becomes more decentralised. The issue of wider poverty alleviation may not be able to be addressed by the system in this context.

Europe is a small market share of the shrimp export at the moment (10%) and the UK is not an established export destination for shrimp produced in the Philippines. This means the marketing chain from the processing plants to the consumers would have to be entirely set up (finding importers and retailers interested) making it more difficult than switching an already established chain to the Fairtrade system. In this situation, certifying shrimp as Fairtrade for the UK marketplace would be an attempt to create a niche in an already small market.

Presently, shrimp volumes exported to Europe might not be sufficient to cover any increase in demand stimulated by the implementation of the Fairtrade system. If Fairtrade certification holds an economic as well as a social incentive for farm owners, they may adopt the system. This would cause some redistribution in the destination of shrimp in the export market. Under this scenario, overall production may need to increase to accommodate developing Fairtrade markets whilst supplying existing demand. This would have to be met through either increasing the area under production rather than intensifying culture system. In both cases, environmental impacts of expansion or intensification must be taken into account.

6.3 Opportunities

Operators usually have a good relationship with their care takers who may be family members or compadre. Under those circumstances their personal relationships with care takers would influence their interest to improve their living standards through the Fairtrade scheme. Although the care takers earn on average 3.5 times more than what is considered to be the Filipino poverty line, their salary is still below the minimum Filipino wage for similar activities. As Fairtrade certification dictates that the salary paid to the workers is equal to or exceeds the national minimum wage, care takers and labourers would see their salary increase. (although need to check if percentage on profit of harvest is taken in account by the Fairtrade system).

A Fairtrade certification would also help to improve the housing conditions of the care takers as their accommodation is provided by the operators. Improvements that could be made are installation of water pump for access to drinking water on farm, house with concrete flooring and toilets facilities. As there is normally no formal contract signed between the care takers and their operators, there might be a need for it as one of the most important parts of the Fairtrade system is to provide the workers with contracts that will bring more security in the long term. This may act as a disincentive for owners as they cannot get rid of staff when there is no work.

The visit from the European Commission (EC) to inspect the hygiene of the premises where the shrimp are landed and processed, should push towards the development of a benchmark of the commodity chain. The Lacap family is already building a brand new consignment following the norms of the EC. The USA and Japan are not asking for this status yet but it should come into force in the future. Once authorised for exports to the European Union, there are large possibilities for development of the market in as it only represents 10% of the export market at the moment. Once developed, the Fairtrade standards are the same for all export countries. If the market for Fairtrade shrimp in the US and Japan was to develop, the operators would be ready for this new market as well. It would be possible to get good support from BFAR to set up the Fairtrade channel if profitability for farmers is demonstrated.

6.4 Threats

Some operators are profit orientated business men who may be less motivated by the ethical aspects of Fairtrade certification.

Fairtrade stipulates that workers should be organised in unions, however the freedom of association and collective bargaining is not in the mentalities in the Philippines –do you have evidence of this. I think this is probably something you should take out as there are likely to be loads of unions and organised groups of people in the Philippines. I know that on the ships for example whole groups of people from villages get organised and work on the same ships in the merchant navy. The association of consignations in Sasmuan is an example of the failure of such type of group. It might be difficult to group large operators to work together for Fairtrade, as they are in competition with each other and do not like to share information.

The production system is also facing some environmental issues. The use of sodium cyanide, which is not believed to be harmful to humans, poses some concern. Farmers also like to experiment with fertilisers, pesticides and other chemicals. The shrimp are feed with suso (gastropod). Decreased availability of suso followed by an increase in its price has been observed over the last few years i.e. use of wild caught feed puts pressure on natural resources. For the reproduction cycle of *Penaeus monodon* has not been closed in captivity and the system still depends on wild caught broodstock, amounting to another pressure on the natural resource. This problem might fade away with the authorisation of introduction of *Penaeus vannamei* in the Philippines, a more domesticated shrimp, which fry can be produced in hatchery. A limitation of this approach is that this species has a lower market price and might attract fewer operators.

7 Conclusions and recommendations

1. Although aquaculture is a traditional activity in the Philippines, shrimp and tilapia culture is recent (~25 years) and operators and care takers are still fumbling with production techniques, particularly with their use of chemicals. This could have a negative impact on the good image extensive polyculture has in terms of sustainability and environmental protection. One of the aspects of Fairtrade is to show how to produce more efficiently and in a more environmentally friendly manner. This could be a very useful support for the long term development of shrimp farming in Pampanga province.
2. The marketing system of the shrimp in Pampanga province is already well established. Traceability is set up although some progress to be made in the consignment if the export rights to the European Union are to be granted. Those areas in need of attention are the provision and use of sorting tables instead of grading on the floor, adequate head, mouth and hand protection for graders, closed areas, lamp covers, etc. The upper links of the commodity chain i.e. hatchery and

other inputs sources need to be further investigated to check if traceability is possible along the entire chain. It is not clear at this stage how the operators keep records of what and where they are buying seed, feed and fertiliser. Margins of the processing plants and of the importers (Europe based) should be investigated to establish how fair the price paid to farmers actually is.

3. If Fairtrade certified, the commodity chain could have to change a little; this might be difficult according to the suki (loyal client) system in place; one is linked to another, at present producers are indeed linked to consignations and must sell their product to him/her in return for a no interest loan.
4. The intended beneficiaries of Fairtrade may be difficult to target due to their transitory livelihoods. Options exist to work with one or two large operators – although they may not be interested in adopting in Fairtrade practices (need to check benefits to owner). Several small operators whose livelihoods rely on shrimp farming may be interested in Fairtrade. The care takers are not the poorest although there is room for improvement in their salaries to bring them up to the level of the minimum Philippine wage. Fairtrade would bring more security to farm care takers by introducing a contract between them and their operators, although this may be unacceptable for the operators. The optimum size of the operator groups or individuals needs further investigation.
5. As care takers do not belong to established communities or unions presents potential logistical problems of investing the premium paid on Fairtrade products. Despite the logistical constraints, investment in transport would make a real difference to the lives of workers as many are currently isolated from life in towns. An investment of this type may improve access to schools.
6. There is a need for a more coherent database of information on the socio-economic levels of the stakeholders in the shrimp commodity chain model in Pampanga province. Data from a DFID/AFGRP and an anthropological PhD study is presently under review.
7. The involvement of two key institutions, CIRAD and BFAR in Pampanga province would facilitate the development of a Fairtrade certification.

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Annex 1. Main points of Generic Fairtrade Standards for Hired Labour

Source: FLO International (2005). Generic Fairtrade Standards for Hired Labour.

1 Social Development

1.1 Development Potential and Capacity Building

Fairtrade should contribute to the social welfare and empowerment of workers. The company must have the logistical, administrative and technical means to bring a quality product to the market.

1.2 Freedom from Discrimination

FLO follows ILO Convention 111 on ending discrimination of workers. The Convention rejects “any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation” (Art. 1).

1.3 Freedom of Labour

FLO follows ILO Conventions 29, 105, 138 and 182 on child labour and forced labour. Forced or bonded labour must not occur. Bonded labour can be the result of different forms of debt owed by the workers to the company or to middlemen. Children may only work if their education is not jeopardised by them doing so. If children work, they shall not execute tasks that are particularly hazardous for them because of their age.

1.4 Freedom of Association and Collective Bargaining

FLO follows ILO Conventions 87 and 98, and Recommendation 143 (protecting the rights of workers’ representatives) on freedom of association and collective bargaining. Workers and employers shall have the right to establish and legalise and/or to join organizations of their own choosing and to draw up their constitutions and rules, to elect their representatives and to formulate their programmes. Workers shall enjoy adequate protection against acts of anti-union discrimination in respect of their employment. The term ‘workers’ organization’ as used below refers to any organization of workers for furthering and defending the rights and interests of workers. FLO enshrines the rights of freedom of association and collective bargaining and considers independent trade unions the best means for achieving this. Workers shall be trained to understand their legal rights and duties.

1.5 Conditions of Employment

FLO follows ILO Conventions 100 on equal remuneration and 111 on discrimination as well as ILO Convention 110 in the case of plantations. All workers must work under fair conditions of employment. The producer organization must pay wages in line with or exceeding national laws and agreements on minimum wages or the regional average. FLO expects that the progress requirements where applicable will be dealt with annually in the collective bargaining process.

1.6 Occupational Health and Safety

FLO follows ILO Convention 155 which aims “to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.”

2 Economic Development

The money paid for Fairtrade products includes a premium. This Fairtrade Premium is to be used for improvement of the socio-economic situation of the workers, their families and communities. Workers and management decide jointly about the use of the premium. Procedures, roles and responsibilities are laid down in a separate guidance document available at FLO, which must be adhered to. The employer and Joint Body (JB) must have the commitment and capacity to administer the Fairtrade Premium in a way that is transparent for workers and the certification body.

Guidance for procedures related to the Joint Body and the premium is provided in a separate document as part of this standard.

3. Environmental Development

Companies are expected to protect the natural environment and to make environmental protection a part of company management. Companies are expected to develop, implement and monitor an operational plan with the aim of establishing a balance between environmental protection and business results through the use of a combination of measures including crop rotation, cultivation techniques, crop selection, careful use of inputs such as fertilizers and pesticides and, as relevant, shade production. Companies are expected to minimize the use of synthetic and other off-farm fertilizers and pesticides, partially and gradually replacing them with non-synthetic and on-farm fertilizers and biological disease control methods. FLO encourages companies to work towards organic practices where socially and economically practical. Companies are encouraged to minimize the use of energy, especially energy from non-renewable sources.