Indonesia: Mounting tensions over industrial shrimp farming

Shrimp farming has been practised in Indonesia for hundreds of years. Shrimps were traditionally cultivated in paddy fields or in ponds combined with fishes, without significantly altering the mangrove forest. Due to recent increase in market demand, the method has been changed into intensive and semi-intensive, with much less respect to local ecosystems and people.

The introduction of modern technology started in 1971, when the Indonesian government built the first hatchery in South Sulawesi. With the support of the FAO and UNEP, the government set up The Brackishwater Aquaculture Development Center (BPPP) in Jepara (Central Java) in 1974. By 1989, more than one hundred hatchery units had been established in the country.

In 1984 the Indonesian government initiated a national program, known as INTAM (Intensify Tambak --shrimp pond), to intensify shrimp farming and at the same time to expand shrimp ponds in new locations. Between 1983 and 1984, the Asian Development Bank and the World Bank financially assisted several major shrimp farming projects. By the end of the 1980s, the Nucleus Estate Smallholders Scheme (NESS, see below) was introduced into shrimp farming and very large scale shrimp farms started to be planned and developed. The area covered by ponds increased from 174,600 hectares in 1977 to 231,460 in 1989 and 305,500 in 1998.

In recent years, single shrimp farms covering up to 170,000 hectares have been planned and the government said that 860,000 hectares of mangrove forests (about 25% of Indonesian mangrove forest) are available to be converted into shrimp ponds. According to the government program Protekan 2003 (Program to Increase Fishery Export), the Agricultural Department intends to achieve an export volume of approximately 677,800 tonnes by 2003 against 97,228 tonnes in 1989 and 117,847 tonnes in 1998. One reason for such expansion is that shrimp exports earned precious foreign currency to Indonesia during the financial meltdown of 1997-98, so the government wants now to exploit as much as possible the foreign currency potential of shrimp farming, while ignoring the severe impacts on the local environment and people that are associated with industrial shrimp farming.

While traditional ponds were mostly located in Java Island, most of the new ventures are being developed in the outer islands of Sumatra, Kalimantan, Sulawesi and Irian Jaya, often associated with controversial transmigration programmes. The main markets of Indonesian shrimp have been Japan, Hong Kong, Singapore, Malaysia and USA, but new markets might be emerging in Europe.

While traditional ponds were individually or communally owned, new ventures tend to concentrate ownership into the hands of few companies. Currently, the three biggest shrimp breeding companies that are operating through the NESS model are PT Central Pertiwi Bratasena (PT.CPB), PT Dipasena Citra Darmaja (PT.DCD) and PT Wahyuni Mandira (PT.WM). PT.CPB, which is 31% owned by the shrimp multinational Charoen Pokphand from Thailand, owns an area of 10,500 hectares and has plans to expand by a further 15,000 hectares in the same location. PT. DCD and PT.WM are owned by Gajah Tunggal Group, located in South Sumatra and Lampung with an area of 16.500ha and 30,000ha (6,000ha are in operation) respectively. In 1996, PT.CPB exported 17,000

tonnes of shrimp with a value of US$114 million. Meanwhile, in the same year, PT.DCD produced 19,853 tonnes, of which 13,423 tonnes were exported. PT.WM started operating at the end of 1996 and has just started its maximum production stage. Each of these three big companies contribute 20-30% of Indonesian's shrimp export. It can be said that almost 70-80% of Indonesian shrimp export is in the hands of three companies (PT.DCD, PT.WM, PT.CPB).

Foreign investment is present but not in directly running the farms, apart from Charoen Pokphand in Bratasena and a French company in Sulawesi. Most of foreign investment in the shrimp industry is into shrimp feed, medicine and technology. Charoen Pokphand, Cargill, Comfeed are the biggest supporting industries.

Since 1992, shrimp production has been affected by virus attacks as in many other countries. Many ponds have been abandoned in Java and South Sulawesi, and shrimp investors are looking for new places to exploit. As a respond to virus attack, the government decided to import the species Penaeus Vannamei from South America, a controversial decision given that not enough studies have been conducted on the potential impacts of introducing a new species in the country.

Concerning the main environmental impacts of shrimp farming, documentation collected by NGOs and academics point to uncontrolled shrimp farming as a major threat to mangrove forests (due to conversion into ponds) and even to productive paddy fields and fruit orchards (due to freshwater salinisation). Shrimp farming has also been causing coastal erosion, sedimentation, and water pollution, thereby affecting coral reefs, seagrass beds and the productivity of coastal waters. Rehabilitation of abandoned ponds due to soil acidification is too costly for local people and government units.

Regarding social impacts, shrimp farming has generated severe tensions and conflicts between local people and outside workers, within communities, and between local people and investors/companies. One of the main reasons for conflict has been land grabbing and stealing. Supported by government agencies and police, companies force the local people to give up their land with inappropriate compensation or even with no compensation at all.

One of the unique characteristics of shrimp farming in Indonesia is the application of the 'Inti-Plasma' or NESS (Nucleus Estate Smallholders Scheme). A company converts large tracts of land (often mangroves or other wetland ecosystems) into shrimp ponds and then sets up agreements with smallholders, who buy all the input for farming one or a few ponds from the company and then sell the harvest to the company. Theoretically, the smallholders are expected to pay back their debt to the company within 7-8 years and to become independent owners of the pond and a small home. In reality, all the conditions and prices are set by the company, the accounts are kept by the company and the smallholders get trapped into a vicious cycle of poverty and debt. Even the social lives of the smallholders become totally controlled by the company: they can leave the 'shrimp estate' only for a few days per year and only for certain reasons approved by the company, they are penalised if they are late to return. When a shrimp harvest fails all the burden falls on the smallholders, who sink into even deeper debt. Smallholders live in a state of total dependency of unfair and shady company practices and in condition of semi-slavery.

The application of the NESS model to large-scale shrimp farming has caused severe social conflict and human rights violations. A geographical concentration of shrimp farming conflict is in South Sumatra. Three of the largest shrimp farming operations are located in adjacent areas in Sumatera (Wahyuni Mandira in South Sumatera, Dipasena and Bratasena in Lampung). All of them are facing strong protests by local people due to land rights issues and human rights violations.

Wahyuni Mandira Co. now possesses 30,500 hectares and is planning to expand to 170,000 hectares. Prior to its operations in 1997, part of the land belonged to the local people and the other was a conservation area. 2,200 farmers were forced to give up their land for very small compensation, as the Provincial Government claimed that the land was a government asset and the local people didn't have land rights. Only 10% of them were invited to become smallholder farmers and the others were asked to migrate. More than one thousand resisted and stayed on in neighbouring land and in mangrove areas.

Then, in November 1998, about 1,600 farmers (smallholders) protested against the conditions imposed by the company. Frustrated by lack of response by the company, the National Parliament in Jakarta, the Regional Government of South Sumatera, and the National Commission on Human Rights, the farmers started to demonstrate in front of the farm management office and the situation went out of control, degenerating into riot. Minutes after the riot started, the farm was surrounded by military, while the farmers were trapped inside the farm with no food for several days. At the end, more than 30 farmers were arrested, 16 of them sentenced to prison for periods from 6 months to 5 years. The court never considered that there was strong evidence that the riot was set up by the company.

In order to expand the farming operation to 170,000 hectares, during the year 2000 the company built water canals through local people's lands, creating further tensions and conflict. Some of the local people run traditional shrimp farming. The company moved in with the protection of the army and police.

Similar stories have been unfolding in Dipasena Farming, a nearby shrimp farm under the same holding company, where more than 1,700 farmers (smallholders) protested for the same reason and the same demand, and in Shrimp Banggai Sulawesi farm, a 100 hectare joint venture between an Indonesian and a French company. The local people have filed a case against the companies, but are still waiting for a response from the Lower Court. Other well-documented similar cases have taken place in Maluku, Papua, and other locations in Sumatera. Resistance from the communities is not only related to land rights, but also to environmental impacts. The community in Bengkulu, Sumatera, opposed the construction of a shrimp farm in their area because of environmental concerns.

More recently, on August 15, 2001, Central Pertiwi Bahari (CPB), also known as Bratasena Farming, in Lampung Provinces was recently charged by 147 local people for land rights conflict over 347 hectares of land. The local people claimed that their land had been occupied by the company in 1995 without any compensation. The local people complained about the case to the company, local government and National Parliament at that time, but there was no response. The company now insists that it will respond to the claim if asked to do so by the government.

The NESS system is also very biased against women. In large-scale shrimp farming only adult and educated men can hope to get a job. In case of death or inability to work of the smallholder males, women must leave the farming estate, leaving behind all the assets that they had been paying for by credit instalment.

Impact on health and education can also be considered serious, particularly on children. During the El Nino of 1999, malaria spread in South Sumatera partly due to abandoned shrimp ponds, which became an optimal environment for larva of Anopheles mosquito. The lack of drinking water has caused a number of people in Wahyuni Mandira Farm, Sumatera, to suffer of pneumonia due to drinking rain water.

In conclusion, the change from traditional to industrial shrimp farming that is rapidly taking place in Indonesia might in the short term benefit the government and the large-scale shrimp investors due to foreign currency generation, but the environmental and social costs associated with the industry by far outstrip the benefits. Local communities are particularly marginalised and exploited in large-scale NESS farms and local social structures are threatened by growing tensions and conflicts.