Responsible Shrimp Culture Improvement
Program
RSCIP – Indonesia

Responsible shrimp farming through coastal restoration, improved environmental and social management practices, and improved equity in market relations

Program Summary
The Responsible Shrimp Culture Improvement Program (RSCIP) Indonesia is an initiative which aims to bring together a multi-stakeholder group of public and private partners to improve Indonesia/Netherlands cultured shrimp supply chains to the level of transparent, participatory, multi-stakeholder standards addressing food safety, ecosystem and social impacts thereby improving local livelihoods and governance, restoring and conserving coastal ecosystems, and channelling improved market practices. The program intends to be collaboration between NGOs in the Netherlands and Indonesia, and private sector in both countries.

Background

IUCN NL and Oxfam Novib have been working for a number of years to help the Dutch shrimp industry minimise the ecological and social impacts of their businesses. The Indonesian shrimp industry has strong ties and has been a long term supplier of farmed shrimp to the Netherlands. Oxfam Novib and IUCN NL, together with their strategic partners in Indonesia (Wetlands International, WWF, Telapak), have carried out research on the shrimp sectors in Indonesia and the Netherlands, and held consultations with a variety of private and public actors. This research and consultations form the backbone of this program.

On the basis of extensive partner-networks among civil society in developing countries, as well a proven track-record of constructive engagement with the private sector (see annex), Oxfam Novib and IUCN NL bring specific expertise to debates around aquaculture on issues and concerns around small and traditional farmers viability and the opportunities, risks and impacts to ecosystems and the livelihood of rural communities around the farms.

The shrimp processors in both the Netherlands and Indonesia see a possible business case in supporting sustainable supply chains, and the development and implementation of certification tools, principally GlobalGAP and ASC, in achieving this. They would like to anticipate the standards, assess and prepare the local capacity and economic feasibility of suppliers and farmers to achieve them, and identify innovative ways to finance these improvements. Civil society see a development and conservation case in supporting sustainable shrimp supply chains, as well as the role that certification can play in this. In order for farmers to comply with the best aquaculture practices that are implied by new standards in the market, these standards need to lead to feasible and viable operations.

IUCN NL and Oxfam Novib developed initial profiles for a variety of sites and companies, and identified a number of sites of interest for this program: Banyuwangi/Gresik/Lamongan in E Java; the Mahakam delta and Tarakan in E Kalimantan, Aceh and South Sulawesi. All sites have: links with Dutch buyers; interested processors and farmers; presence of capable local organisations; various ecological and socio-economic sustainability issues; display different models of farming (traditional to semi-intensive).
Oxfam Novib and IUCN NL are building a unique partnership of environmental, development, private, government and scientific organisations to help implement RSCP. Such an approach encapsulates the stakeholder model needed to address the complex challenge that is responsible production and trade.

**Program Summary**

Population growth and consumer preferences have pushed demand for seafood to record heights. To come close to meeting this demand in a sustainable and responsible way, a transition must occur: fish catches must be brought back within sustainable limits and aquaculture must have lower environmental and social impacts. Tropical shrimp is a headline species in this transition, accounting for 20% of the total value of internationally traded fishery products.

Shrimp aquaculture is currently the fastest growing food production sector in the world. The majority of the production comes from developing countries. Whereas the developed markets (EU, US, Japan) are big importers of the commodity. The large majority of the production is (still) coming from small-scale aquaculture farms. In economic (export) terms, the sector is more important to developing countries than coffee, tea, and sugar combined.

Shrimp is produced in the coastal regions of many tropical countries, but traded internationally for consumption in North America, the EU and Japan. In Indonesia as in many shrimp producing countries shrimp aquaculture has provided economic benefits for certain groups in society but has also been associated with ecological damage, consequent marginalization of local people, and numerous disease and food safety problems. In the last few years credible certification and eco-labelling, such as the newly formed Aquaculture Stewardship Council, has emerged as one of the potentially most effective instruments to capture the power of markets and address these issues.

IUCN NL and Oxfam Novib propose to establish a multi-year shrimp improvement partnership program in the Netherlands, Indonesia and SE Asia, based on several years of work in this field, and research and consultations carried out during a development.

The overall goal of this program is: “to improve the ecological and socio-economic responsibility of shrimp aquaculture and ensure it does no harm to surrounding communities and ecosystems while optimising its economic potential”

The program has three main objectives:

1. Identify and develop a clear business case for broad industry ecological and socio-economic improvements at the shrimp farm level in Indonesia with private sector co-investments from different buyers and markets in the Netherlands and the EU
2. Improve small scale, traditional, and semi-intensive shrimp farming practices towards GlobalGAP food safety and ASC ecological and social standards, and develop equitable and enduring relationships in a number of existing shrimp supply chains in Indonesia

3. Assess and improve the feasibility, viability and effectives of ASC and GlobalGAP as market based tools

The program will work in two phases over four years:

**Assessment Phase: (Approx 1 year)**

This stage will focus on carrying out assessments on small-scale and traditional aquaculture around selected sites using criteria and indicators that the Shrimp Aquaculture Dialogues have developed. These include, but are not limited to, the social and socio-economic criteria that Oxfam Novib has helped develop, and the ecological and siting criteria that IUCN NL has helped to develop. As part of this stage an assessment will be facilitated on the basis of GlobalGAP food safety criteria. In this way a gap-analysis is made on existing aquaculture as to its potential to comply to (future) ASC and GlobalGAP standards, as well as what it will take to make small-scale aquaculture viable for the global market without having negative impacts (or, as the case may be, with appropriate impact management in place).

Gender differentiations over the control of property and assets, as well gender division in labor, have put women as the most disadvantaged in the sector. Around the farms, women are the most affected by the negative impacts of the unsustainable farm practices. As putting women and their rights at the heart of the program is significant to achieve a sustained improvement, gender specific considerations will be internalized at all stages, including in the assessment phase.

The result of this stage is a report which includes the description of a ‘business case’ that can be put before potentially interested private sector. The report will also demonstrate what ASC criteria and indicators ‘look like’ in real life, and provide insights as to how certification (in particular ‘measurement and auditing’) can be done.

**Implementation Phase: (1–3 years)**

Informed by the ‘business case’ descriptions developed during the first stage, actual on–hands and local improvement programs will be undertaken; including technology improvements, farming infrastructure improvements, farmer organising and capacity building, (participatory) social and environmental impact management, and the development of a structure and agenda through which negative impacts (if any) can be resolved fair and equitably. This will be done with active cooperation with, and co–investments from, the private sector because (next to social and environmental responsibility) the economic viability of the improvements will be crucial to their enduring success.

The result of this stage will be several ‘real life’ examples of how small-scale shrimp aquaculture can be done in an environmentally and socially responsible manner, and be economically viable to
small-scale farmers. As this stage progresses, examples and case studies will be disseminated to help others follow this approach and scale up improvements to other farming areas.

Oxfam Novib, IUCN NL and partners have selected six sites in Indonesia to work on the improvement of aquaculture and build or ensure their link to the global market. Between the sites variations exist in terms of scale (mix of small and large), technology (‘no feed–no aeration’ and ‘feed–aeration’), site conditions, and shrimp species (Vannamei sp. or white-leg shrimp, Monodon sp. or black tiger shrimp). The ongoing results and lessons learnt from these pilots will inform the strategic and investment decisions made by the partners.

On three sites (Banyuwangi in E Java; the Mahakam delta in E Kalimantan, and South Sulawesi) IUCN NL will work in partnership with Wetlands International (Indonesia office), WWF Indonesia and Telepak. On the other three sites (Gresik/Lamongan in E Java; Tarakan in E Kalimantan, and Aceh) Oxfam Novib will work in partnership with WWF–Indonesia, Wetlands International (Indonesia office) and Telapak; all locally ‘grounded’ NGOs. During the assessment stage, the five NGOs will assist each other on the basis of demands for the specific expertise each of them holds. (See Annex 1 for more details on sites)

These partnerships and collaborations will guarantee that all necessary local and international expertise is available to do comprehensive assessments on social and environmental criteria and indicators of performance of the farms. The ‘social’ expertise to engage and research at community level, the ‘social’ expertise to assess and interpret ‘social’ observations, the ‘ecological’ expertise to ensure a robust scientific approach and assess ecological and environmental parameters, and the ‘technical expertise’ to do enterprise development, cooperative formation, and introduce best aquaculture management practices (BMPs) is available within the NGO–partnership. Oxfam Novib and IUCN NL will add to this their knowledge on international trade and value chains.

The program will focus on four major aspects of ecological and social improvements identified by sustainability standards: 1) Using mangrove and wetland restoration and conservation as a tool to: a) improve farm management and comply to best standards; b) offset previous conversion, and c) entice innovative investment opportunities (e.g. carbon offset and REDD). 2) Using locally grounded community engagement processes to a) assess associated impacts to neighbors and their livelihoods and ecosystems; b) identify ways to avoid, mitigate or compensate negative impacts; c) reduce risks of conflicts to both farm and community 3) Identifying and using improvements to the buying and/or contract arrangements needed to ensure equitable and enduring relationships. 4) Improving shrimp farming techniques towards more efficient, effective and responsible resource use. The program also recognizes the importance of product quality to the market and buyers, and whilst not a specific objective to the NGOs in this program, this will be addressed as a necessary element to farmers and buyers during the improvements projects.

In the Netherlands and Europe, IUCN NL and Oxfam Novib will work with processors and retailers to establish a standing working relationship with broad industry players on issues of joint interest
in responsible production. The program can support buyers to identify and develop preferred markets for ASC, and integrate the data and conclusions of the site level assessments into potential business plans. The program intends to identify investors and consortiums to carry out these improvements, from both private and public investors, as well as other innovative financial mechanisms.

The program targets a number of stakeholders, but principally three groups: shrimp farming communities, to support them find and integrate a farming and business model that most fits their long term livelihood and development needs; the major buyers of shrimp to identify and strengthen a business case, and to act responsibly in investing in and sourcing from responsible and sustainable shrimp farming; and surrounding communities in which shrimp farming takes place to ensure they are free from negative farm-related impacts or duly compensated.

IUCN NL and Oxfam Novib form the core executing and management team of the program, with Wetlands Indonesia and WWF Indonesia coordinating activities in Indonesia. The first stage, the assessment phase, is scheduled to start in December 2010 with financial support from Oxfam Novib and IUCN NL. The second stage, the improvement phase, is scheduled to start from mid 2011 onwards. Funding for this part of the program will be achieved via both private and public contributions, and aims to share the costs equally over the full lifetime of the program.

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Profiles of lead organisations

Oxfam Novib in shrimp aquaculture

Oxfam Novib is one of fourteen Oxfams world-wide that make up Oxfam International. The Oxfams stand for global equity and an end to poverty and injustice. The Oxfams see the manner in which global food production systems are developing as a specific concern that sometimes positively and sometimes negatively affects the poorest people. Oxfam Novib understands aquaculture as a rapidly growing food production industry that has potential to generate much needed incomes for developing countries and rural communities, but current aquaculture practices have significant negative impact on the environment and livelihood earning potential of marginalized rural poor communities. The costs of aquaculture to the rural poor, those involved in as well as those living around the aquaculture farms, is larger then its benefits to them. Oxfam Novib seeks to change that into a positive cost–benefit.

Prompted by partner–organisations in SE Asia, Oxfam Novib has become engaged in shrimp aquaculture since 2004. Several NGOs in the region advocated on the extensive damage this rapidly growing industry was doing to coastal environments and coastal rural livelihoods (fisheries, agriculture). Until Oxfam Novib became involved in aquaculture, the agendas in debates on ‘damage control’ around the sector had been dominated by environmental impacts (such as mangrove conversion and surface water use). But there are also social and socio–economic implications to millions of rural poor people.

Based on local campaigns of NGOs in production countries calling to governments for improved regulations, Oxfam Novib started engaging the importers of shrimps in the Netherlands and the EU to trigger positive responses from their side. Together with Friends of the Earth Netherlands and Both Ends, Oxfam Novib produced brochures and flyers explaining the issues behind the commodity and visited several companies to make them aware of the issues. Together with IUCN–Netherlands and WWF–US, Oxfam Novib participated in FAO Expert meetings in drafting an FAO Code on aquaculture certification. Together with IUCN–Netherlands, Oxfam Novib persuaded GlobalGAP to pay attention to environmental and social issues around aquaculture in food safety protocols.

Meanwhile Oxfam Novib continued to support partners in their advocacies to governments in producing countries. Together with SEAFish for Justice (in SE Asia) Oxfam Novib published a generic cost–benefit analysis of the industry to ASEAN society as a whole. Oxfam Novib assisted ISANet, MAP, and EJF in consumer campaigns in US and UK as well. When WWF–US initiated the Aquaculture Dialogues to produce better alternatives to existing aquaculture certification standards, Oxfam Novib became member of the Global Steering Committee that formulates the standard on shrimps.
IUCN NL in shrimp aquaculture

IUCN, the International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. It supports scientific research, manages field projects all over the world and brings governments, non-government organizations, United Nations agencies, companies and local communities together to develop and implement policy, laws and best practice. IUCN is the world’s oldest and largest global environmental network – a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more than 160 countries. IUCN’s work is supported by over 1,000 professional staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world. The Union’s headquarters are located in Gland, near Geneva, in Switzerland. See www.iucn.org for more information.

The members of the International Union of Conservation of Nature (IUCN) established in the Netherlands are united in the IUCN National Committee of the Netherlands (IUCN NL). The Dutch state and 34 organizations and institutions constitute the Committee. IUCN NL aims at contributing from its specific Dutch situation and context to the conservation and sustainable management of nature and natural resources in an international perspective, based on the views, mission and policy of IUCN (or The World Conservation Union), as well as the results and policy recommendations from the Millennium Ecosystem Assessment (2005) of the United Nations. It fills a unique niche in the Dutch social field. See www.iucn.nl for more information.

IUCN NL has been working on sustainability of shrimp farming for the last 5 years. We have acted as both researchers of shrimp farming sustainability as well as conveners of multi-stakeholder meetings and advisor to shrimp companies themselves. We have a broad network of both private and public stakeholders, and are in a unique position to understand the needs of diverse groups in order to identify paths to mutual sustainable development. Establishing a ‘business case’ for sustainability is one of the biggest challenges of our generation, and IUCN NL is doing just this, learning by doing, one shrimp chain at a time.

About the partners

Wetlands International Indonesia Program (WIIP) has been operating in Indonesia at the invitation of (MoU with) the Ministry of Forestry, since 1986. WIIP is a member of global NGO (Wetlands International) dedicated to the wise use and conservation of wetlands. In Indonesia, WIIP is the member of National Wetlands Committee that currently led by the Ministry of Forestry and Ministry of Environment, as well as the member of National Mangrove Working Group led by Ministry of Forestry. General activities of WIIP include: Linking poverty reduction and environment restoration, Wetlands Conservation and Management, Capacity Building and training experience, and disaster risk reduction. See www.wetlands.or.id/ for more information.

WWF Indonesia has been a partner of Oxfam Novib and IUCN NL since 2005, in implementing the Greencoast programme (2005–2009) in Aceh (with Wetlands International). With support from
Oxfam Novib, WWF Indonesia is currently implementing the Green Investment Activities and supporting a community-level network (KuALA) for the period of 2009–2011. WWF is a leading member of IUCN. WWF has on–hands experience in developing Best Management Practices (BMPs) for shrimp farming in Aceh and Tarakan (East Kalimantan). To ensure sustainability of these programs, WWF has made a significant effort to create market linkages between the small shrimp farmers and national and international buyers, through the collaboration with local processors. WWF succeeded to secure the link between farmers in Tarakan to Japanese buyers. WWF Indonesia is well–known at a national level by the shrimp industry and therefore opens up possibilities to work with other local processors in the country, such as in East Java.

Telapak is a member of the Indonesian fisheries advocacy network KIARA, also one of Oxfam Novib and IUCN NL’s partners. Telapak has a solid history on developing social and environmental certification standards that are applicable to small–scale fishermen in the ornamental fish industry. Telapak also has a good track–record in social enterprising within ethical (social and environmental) norms in a variety of commodities. The organisation promotes sustainable logging and sustainable marine coral farming. Telapak operates in 23 out of 33 provinces in Indonesia and as social entrepreneur owns and operates café’s, radio stations, and agricultural enterprises. Although new to the shrimp sector, Telapak has added value to the program through its expertise on community organizing, social enterprise development, cooperative organizing, and participatory impact assessment methodologies. Telapak will play significant role to steward assessment process to its commitment to social and equitable outcomes.
Annex 1 - Program sites overview

*Tegal Pare, Banyuwangi, East Java*

The shrimp farms are stretched along 4 km in the coast of Pampang Bay, the Java side of Bali Strait. Shrimp farmers in Tegal Pare culture Vannamei species and the majority of farmers apply semi-intensive level of technology and production inputs. It’s estimated that the range of production level is about 1–2 MT/ha/cycle or about 3–6 MT/ha/year. Production inputs used by farmers are shrimp artificial feed and chemical fertilizer. However, farmers strongly avoid the use of chemical pesticides as it believed to loosen the pond dikes. Harvested shrimp is sold and transported to processor companies (cold storages) in Banyuwangi (one hour from the farm) or to Surabaya, about 6–7 hours of driving.

*Mahakam Delta, East Kalimantan*

Mahakam Delta is the largest traditional shrimp farm complex in Indonesia, estimated to cover about 80,000 ha of shrimp farm. Majority of farmers in Mahakam Delta applied extensive Black Tiger culture combined with “passive aquaculture” of Blackpink (Metapenaeus monoceros). Passive aquaculture is one of the main methods in East Kalimantan and West Coast of Sulawesi, where fry of wild shrimp (Blackpink) will enter the pond freely through pond’s water gate during high tide. The wild shrimp will be kept inside the pond for 2–3 months and harvested after it reaches its commercial size. Both passive and extensive cultures in Mahakam Delta, almost completely avoid the using of additional feed or fertilizer input to their pond. Shrimp pond productivity in Mahakam Delta is quite low, only about 40 – 80 kg/ha/year for both Black pink and Black tiger. Harvested shrimp is delivered/sold to PT. Samsurya Mandiri the only local shrimp processor in Anggana, near Samarinda.

*Maros, South Sulawesi*

Shrimp farms of Maros are located along the west coast of Sulawesi, about one hour drive from Makassar, the capital of South Sulawesi. Shrimp farmers of Maros culture Black tiger through extensive “plus” level of production inputs. Extensive plus means shrimp is fed with additional artificial feed but the farms are not supported with paddle wheels. Additional feed makes production level of shrimp farms in Maros relatively higher, about 150 – 300/ha/year, compared to Mahakam Delta shrimp farms. Shrimp harvested from in Maros are sold to shrimp processors in Makassar. Some of farmers are applying poly-culture by combining Black tiger shrimp and Millk fish to minimize risk as Milk fish is relatively easy to cultured. Productivity of milkfish is about 1–2 MT/ha/year and the harvest is sold to local markets (Maros, Makassar).

*Gresik/Lamongan, East Java*

Gresik/Lamongan is part of an existing supply chain of EU/Dutch importers.

In Gresik/Lamongan exists a combination of large, medium, and small aquaculture farms. There is also a wide variety of technology (extensive to intensive). The aquaculture includes the culture of both *vannamei* and *monodon*. In general there is good infrastructure (roads, electricity, etc.). Many hatcheries and processors/packers exist closeby, of which two large processors/packers have had experience delivering to EU buyers. Both these processors purchase from small farmers.
in the area, and have interest in the development of improved practices. The companies have facilitated GAA/ACC certification of some farms. But neither company has undertaken elaborate capacity building programs. On *vannamei*, a large Surabaya–based company has done work in the past to organise *vannamei*-farmers around Standard Operational Procedures in contract-farming relationships.

**Aceh**
Small farms in the districts Bireun, North Aceh, and Pidie in Aceh come from recent small-scale aquaculture rehabilitation efforts and may possibly be a new value chain to EU/Dutch importers. The area in Aceh consists of small farms rehabilitated after the 2004 tsunami. The dominant form of aquaculture is small–scale extensive (up to semi-intensive). The dominant species is *monodon*. In many farms shrimps are only cultivated in the warmer part of the year (with tilapia and milkfish as preferred species in the colder part of the year). Farmers have benefited from capacity building efforts of FAO, ADB, NACA, WFC, OISCA and WWF; and are organised in clusters. But the capacity is assessed as ‘not yet quite consistent enough’ for reliable performance. The limited availability of good quality fry, shrimp disease vectors, and the absence of a local freezing plant are mentioned as barriers. Two processors purchase in the area, one of which has experience in exporting to US and EU markets.

**Tarakan, Kalimantan**
This site in North–east Kalimantan is under consideration. Small farms are relatively isolated from populated areas, but already organized in clusters. The cultivation is still extensive with low stocking densities and minimal technological inputs. Most of the *monodon* sp. production is sold on the Japanese market where it is considered high quality. Some of the importers have been involved in supporting mangrove rehabilitation activities and an aquaculture farming improvement program. An EU–based importer has expressed interest in developing a trade relationship with these farmers.

**Annex 2 – Information on the Industry related to the program**

**Some key data on Indonesian shrimp aquaculture**

- Production area: approximately 400,000 hectare
- Assumed a total of 350,000 farmers
- But one company takes up 40% of total production
- Export value (2007) estimated at 2.3 billion US$
- Export markets (2007): USA 30%, EU (17%), Japan (25%), Asia & Middle East (28%)
- Domestic value not really known
- Average life–time shrimp ponds estimated at 4–7 years (excluding CP Lampung)
- In 2009 white spot disease brought production back to approximately 60%
- Indonesia regularly faces export bans or restrictions to US, EU, Japan.