

IMPACT SHEET • SWITCH-ASIA PROJECT  
**ESTABLISHING A SUSTAINABLE PANGASIOUS SUPPLY  
CHAIN IN VIETNAM (SUPA)**

# Enabling sustainable development in Vietnam's pangasius industry



**The project supported 225 pangasius producers, processors, and farms to obtain resource efficiency and sustainable certification which strengthened exports and reduced CO<sub>2</sub> emissions by 21 000 tonnes annually**



## The Challenge

The pangasius industry plays an important role in Vietnam. From 2000 to 2012, output increased from 37 500 to 1 119 000 tonnes annually and production turnover from EUR 35 million to 1 500 million. The industry has helped create vast employment, strongly effecting the country's development, especially in the Mekong Delta region. Such rapid growth, however, has prompted concerns about the environmental and social impact of pangasius farms and processing facilities, and about how to secure long-term sustainability. The high quantity of waste from pangasius farms not only affects the surrounding environment but also the industry itself (e.g. the health of fish, long-term problems with output). In addition, sufficient knowledge on how to achieve sustainable production is often lacking.

## Objective

The objective of *Sustainable Pangasius (SUPA)* project was for the pangasius producing, processing and exporting sector in Vietnam to be environmentally, economically and socially sustainable by 2020.

### The specific objectives were, that by the end of the project:

- at least 70% of the targeted middle to large pangasius producing and processing SMEs were actively engaged in resource efficiency and cleaner production (RE-CP);
- 30% of feed producers and small independent production enterprises were actively engaged in RE-CP;
- at least 50% of the targeted processing SMEs were providing sustainable products to European and other markets compliant with the ASC (Aquaculture Stewardship Council)

### TARGET GROUPS

- 1 000 hatchery units
- Producing SMEs (around 750 small independent and 150 medium to large producers)
- Processing SMEs (around 100 companies, some of which were also producing SMEs and/or feed producers)
- Feed producers (around 200 companies)
- The Ministries of Agriculture and Rural Development, Environment, Finance, Industry & Trade, seafood associations and environmental agencies

## Activities / Strategy



### Deploying Market Pull Strategies

To strengthen the market for sustainable pangasius products, the project involved some European buyers and one leading Vietnamese processing company to demonstrate the benefits of sustainable practice. These benefits were communicated through awareness-raising activities, which established green market links between European buyers and Vietnamese pangasius producing and processing SMEs. The buyers were also involved in Design for Sustainability (D4S) activities to help the SMEs integrate the requirements of the European market into their new packaging, branding and (by) products. A model farm was established that serves as a training centre. Study tours were organised among SMEs in order to replicate best practice. The project also leveraged support from European experts in developing a legislative framework to support sustainable pangasius production.



### Implementing Market Push

The project provided support for ASC certification to the producing SMEs. Combined training and in-company implementation programmes were conducted on RE-CP, D4S and Sustainable Production Innovation (SPI), each of which was adapted to the needs of the project target groups. These programmes were implemented in two rounds. The first round involved a limited number of SMEs to test the concepts, to train the trainers and experts, and to develop training materials. The second round was to implement the concept in a larger number of SMEs. The D4S approach was implemented after the training and in-company programmes. The cross-cutting e-platform facilitated the sharing of information and experience throughout the supply chain, purchasing and selling in groups (for small independent producing SMEs), and traceability and transparency efforts.



Feeding the pangasius

# Scaling-up Strategy



## Linking with Existing Programmes

The project aligned its activities with those of other related programmes, for example the WWF, Sustainable Trade Initiative (IDH), and GIZ programmes, as well as with the Green Office of the SWITCH-Asia *SPIN* and *Get Green Vietnam* projects. These linkages enabled knowledge exchange benefitting the pangasius industry.



## Mainstreaming RE-CP and SPI

The aquaculture, RE-CP and SPI experts trained through the project, as well as the MSc and PhD students from the Hanoi University of Science and Technology and Can Tho University who were involved in R&D activities at the model farm, will integrate their new expertise and skills in their research and services, ensuring continued application beyond the scope of the project. A do-it-yourself toolkit in Vietnamese was distributed widely via CD and available for free download from the website of the project partner, VASEP. This allowed SMEs to apply simple RE-CP and SPI approaches with minimal external support.



## Reaching Out to International Audiences

The project website, with comprehensive reciprocal links, remains in operation and makes all documents permanently accessible to Vietnamese, as well as international, target audiences. The model farm and training centre were made self-sustaining and deliver consultancy and training services to experts and SMEs. The tools, training



*The SUPA project has supported Vietnam's pangasius industry by addressing not only the supply chain but also applying 'push' and 'pull' strategies in the form of sustainable production and market promotion. The project also applied research-based RE-CP approaches.*



*Assoc. Prof. Dr. Tran Van Nhan  
Director of Vietnam Cleaner  
Production Centre (VNCPC)*



materials, manuals and other outputs were made available as blueprints for other Asian countries and beyond, as well as in other aquaculture and fisheries sub-sectors. The project disseminated project results and proven approaches through the global network of National Cleaner Production Centres (UNIDO/UNEP programmes), as well as the global WWF network in more than 100 countries.



# Results



### Stronger Market Links between Market and Production Sides

The image of Vietnam’s pangasius products was improved through the implementation of SCP measures and ASC standard which has been adapted to local needs. Target SMEs applied SCP measures which improved their sustainability status while meeting international requirements. This was reflected in an increase in production and demand facilitated through field visits to national pangasius farming areas as well as project participation in promotion fairs. 12 representatives of Vietnamese SMEs gained better understanding of the EU market after attending the World Seafood Expos in Brussels (2014, 2015). A Belgian supermarket already started procuring sustainable pangasius products from a Vietnamese enterprise. Dialogues between EU retailers, importers and Vietnamese authorities and pangasius SMEs were facilitated through two dialogue forums in Vietnam with 300 participants and two roundtables in Europe with 100 participants.



### Submitted Policy Recommendations

The project published its study results on the current Vietnamese legislations related to pangasius sector development and policy gap analysis comparing Vietnam’s legislation with the EU and other Asian exporting countries. It organised consultancy workshop prior to submitting the policy recommendations to Vietnamese authorities.



### Pangasius Model Farm Combined with Training Centre

A model farm was constructed in a 2.4 ha area in Tan Phu district, included 10 experimental 200 m<sup>2</sup> ponds, two brood stock 1 000 m<sup>2</sup> ponds, two feeding 1 000 m<sup>2</sup> ponds, one settling pond and one treatment pond. In the model farm, SCP measures such as those to increase the pangasius fertilisation rate and the hatchery survival rate were applied and demonstrated during on-site training. This resulted in farmers and producers improving their hatchery and pangasius quality, reducing feeding time, tackling fish diseases, minimising feeding cost as well as optimising feed, maximising profits and contributing to reduced environmental impacts. Technical staff of Department of Fisheries and research institutes visited the model farm and received information about the SCP measures used. With the approval of the EU Commission, SUPA project later donated funds from the sales of pangasius to 108 poor families in the Tan Phu district, thus contributing to local livelihoods.



### Pangasius Processing SMEs to Mainstream RE-CP

The project conducted RE-CP assessment and promoted improvement options to 72 processing factories in An Giang, Dong Thap, Vinh Long, Hau Giang, Tien Giang, Ben Tre and Can Tho. Out of 72, 54 factories were involved in full RE-CP assessment and 300 technical staff were trained on RE-CP. On average, each of target SMEs has implemented 15 RE-CP options: 50% simple housekeeping, 30% better process control and 20% new equipment. On average, each company saved 18–20% of electricity, 26–30% of water, and reduced production costs from VND 2 to 5 billion (EUR 75 000 to 185 000) per year. SMEs now have the capacity to implement RE-CP, improve production efficiency and reduce environmental impacts. Six SMEs have been supported in developing bankable projects to obtain financing from banks.



### Sustainable Product Innovation (SPI)

The project implemented SPI to develop value-added products, reduce waste, and decrease adverse environmental impacts in pangasius sector. It organised co-creation workshops with two consumer groups in Europe and 20 in Vietnam. This resulted in 10 new products and 10 re-designed products, such as pangasius collagen, smoked sausage, and smoked fillet. Seven SMEs received training on how to produce the 20 sustainable products, where nothing is wasted. Instead, waste becomes added-value products, such as seasoning powder from pangasius bones, snack from the skins and pate from pangasius liver for domestic market.

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*Since our company, ACOMFISH, participated in the Resources Efficient and Cleaner Production programme of the SUPA project, we have achieved cost savings in our production, specifically, a reduction in energy consumption by 7–8 % per year, which is equivalent to VND 1 billion (EUR 40 000). We also reduced water consumption by 5–6%, which is equivalent to VND 50 million (EUR 2 000) per year.*



*Mr. Nguyen Duc Long,  
Director of Production Service  
Sector, Asia Commerce  
Fisheries Joint Stock  
Company  
(ACOMFISH)*

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# Impact in Numbers

<p><b>Economic Impact</b></p> 	<ul style="list-style-type: none"> <li>Achieved monetary saving up to VND 5 billion (EUR 185 000) across 54 SMEs after implementing RE-CP options.</li> <li>Facilitated business linkages: one Vietnamese company obtained a contract from a Belgian supermarket to supply pangasius products.</li> <li>7 SMEs involved in developing and testing 10 new products and re-designed 10 by-products to avoid waste, which are more sustainable.</li> </ul>	<p><b>Green Finance</b></p> 	<ul style="list-style-type: none"> <li>Six enterprises received support in developing bankable projects that enable them to approach financial institutions for new investment in RE-CP technology.</li> </ul>
<p><b>Environmental Impact</b></p> 	<ul style="list-style-type: none"> <li>Based on RE-CP assessment, 54 processing factories achieved reduction of water consumption of 937 420 m<sup>3</sup>/year in the range of 26–30% (14 m<sup>3</sup> per tonne to 35.6 m<sup>3</sup> per tonne pangasius).</li> <li>Through the implementation of SCP measures, i.e. resource efficiency and cleaner production, reduction of GHG emissions, biodiversity loss, and natural resource depletion could be achieved.</li> <li>Reduced total phosphor (TP) in water discharged from farm up to 19% (before: 1.88 mg/litre; after: 1.52 mg/litre).</li> </ul>	<p><b>Target Group Engagement</b></p> 	<ul style="list-style-type: none"> <li>The project engaged with:                             <ul style="list-style-type: none"> <li>72 processing SMEs in RE-CP assessment;</li> <li>120 farms in quick RE-CP assessment;</li> <li>33 hatcheries and production SMEs that achieved ASC certification;</li> <li>22 consumer groups in co-creation and SPI;</li> <li>other five stakeholders, i.e. Department of Fisheries, aquaculture research institutions, Pangasius Association, Sub-Department of Fisheries, and Can Tho University through technical trainings, study tours, workshops, and forums.</li> </ul> </li> </ul>
<p><b>Social Impacts</b></p> 	<ul style="list-style-type: none"> <li>Improved the living environment by reducing discharge of waste water and solid waste;</li> <li>Enhanced public awareness on sustainability;</li> <li>Increased the income of pangasius producers.</li> </ul>	<p><b>Policy Development</b></p> 	<ul style="list-style-type: none"> <li>The project conducted four policy dialogues with policymakers to create enabling environment for a sustainable pangasius industry in Vietnam;</li> <li>Submitted policy recommendations to amend Decree 36 Article 6/3b on maximum glazing limit and Article 6/3c on maximum water content in fillet to increase the threshold of product moisture content from 83% to 84%, allowing small enterprises to stay in the business.</li> </ul>
<p><b>Climate Benefits</b></p> 	<ul style="list-style-type: none"> <li>Reduced electricity consumption by 18-20% per SME over 54 SMEs. Before RE-CP introduction, 1 600 kWh was consumed to produce one tonne of pangasius fillet. After RE-CP adoption, 1 300 kWh was consumed per tonne of pangasius fillet.</li> <li>In total, 54 processing factories achieved electricity saving of 33 676 MWh/year and CO<sub>2</sub> reduction of 21 168 tonnes/year.</li> </ul>	<p><b>Europe-Asia Cooperation</b></p> 	<ul style="list-style-type: none"> <li>The project facilitated two buying missions, bringing European buyers to Vietnam and Vietfish International Exhibition in 2014 and 2016;</li> <li>Conducted two joint workshops at the World Seafood Expo in Brussels in 2014 and 2015.</li> </ul>



**Legend**

- Eligible countries for the SWITCH-Asia Programme
- Non-eligible Asian countries for the SWITCH-Asia Programme

**Project implementation area**

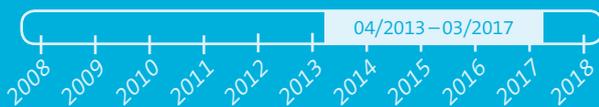
- City
- Region
- Country

*The boundaries shown on this map do not imply on the part of the European Union any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.*

**OBJECTIVES**

By 2020, the pangasius producing, processing and exporting sector in Vietnam to be environmentally, economically and socially sustainable. By end of the project in 2017, at least 70% of the targeted middle to large pangasius producing and processing SMEs, and 30% of the feed producers and small independent production SMEs were actively engaged in resource efficiency and cleaner production (RE-CP). At least 50% of the targeted processing SMEs provided sustainable products compliant with the ASC standard to European and other markets.

**DURATION**



**PROJECT TOTAL BUDGET**

EUR 2 372 437 (EU contribution: 80%)

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**PARTNERS**



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WWF Austria



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WWF Vietnam