Aquaculture Program Summary

Over half of the seafood we consume is farmed, therefore there is a growing demand for responsible practices in the aquaculture sector. In 2009, the IDH Aquaculture Program was designed to accelerate transformation towards sustainable aquaculture practices. One of the first activities of the aquaculture program was co-founding the Aquaculture Stewardship Council (ASC) together with the WWF. During the first years, the program focused on mainstreaming ASC compliance of pangasius producers and creating European market demand for ASC-certified seafood. In 2013, IDH broadened the scope of the program, embracing a standard-neutral approach to increase impact on three species: shrimp, pangasius and tilapia. To increase the impact even more, zonal management was included in the approach of the program in 2014. The Aquaculture Program proved to be a strong example of IDH's innovative strategy for implementing transformation through convening in order to drive progress. The goal of most field level projects was to help producers get certified or promoting best practices. While the volumes of responsibly labeled seafood sold to or purchased by program partners were lower than expected, the volume of responsibly produced seafood and the number of farmers and workers benefiting from improved practices far exceeded expectations. This document provides an overview of IDH's initiatives in the aquaculture sector and it serves to share learnings that can be drawn from the program.

The program in a glimpse

Main sustainability issues targeted:

- Water pollution
- Farm siting and biodiversity
- Social responsibility
- Workers and communities

Role of IDH in the aquaculture sector

IDH's Aquaculture Program aims to accelerate a shift in production practices, by leveraging both the retail and trade demands for responsibly produced seafood. The program aims to demonstrate the business case for responsible on-farm health and feed management, and engages the sector around a strategy to address these challenges.

The co-financing mechanism

Through co-financing private sector investments, IDH has been able to leverage change and thereby increase the scope of change towards more responsible sourcing practices.

Focus species of the IDH aquaculture program:

- Shrimp
- Pangasius
- Tilapia

Focus countries of the IDH aquaculture program:

- Vietnam
- Thailand
- Indonesia
- Ecuador
- China

Theory of Change

Reduce negative impact of farmed seafood by increasing production and consumption of ASC-certified seafood. Drive change by leveraging demand from retail and trade and supporting farmers.

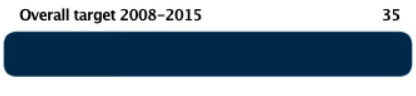
Private Program Partners:

Anova Seafood, Binca, CBL. DKSH, Femeg, Foppen, GSSI partners, Lyons Seafood, Mayonna, Nordic Seafood, Queens, Royal Greenland, Seafarms, Seafood Connection, Tesco, Thai Union, The Fishin' Co..

Facts & Figures

Volumes (MT) of responsibly produced wholesale fish (shrimp, pangasius and tilapia)

Volumes (MT) of responsible feed produced



# of seafood buyers committed of partners in program

The ASC Accelerator

In 2012, IDH set up the ASC Accelerator to help the Vietnamese pangasius industry transition towards ASC certification. ASC certification is an approach to warrant the social and environmental sustainability of aquaculture products throughout the value chain. The ASC Accelerator was set up as a public-private coalition, where IDH co-financed the private sector to initiate the transition trajectory towards ASC certification. The first ASC standard that was developed, was the pangasius standard. IDH convened European seafood buyers to demand ASC-certified pangasius, thereby incentivizing producers to upgrade to ASC certification. European traders were challenged to work together with their producers to jointly follow the steps towards ASC certification. The other key role of IDH in the ASC Accelerator was accommodating critical services for certification (e.g. GAP analysis, impact assessments, preferred list of suppliers etc.) through trusted local partners. 37 of the largest pangasius producers of Vietnam were involved in the project. The result of the ASC Accelerator was remarkable; there was an increase from no ASC-certified exports in 2012 to 20% of all Vietnamese exports ASC-certified by 2014. The speed and relatively low cost of the transition was enabled by the scalability of the project that IDH helped to mobilize through creating a strong demand for ASC-certified pangasius, convening large players in the industry and taking away the bottleneck of critical service provision.

Learnings

- Providing services and covering half of the expenses was enough to stimulate farmers to get certified, because there was sufficient market demand.
- The consolidated retail demand for ASC-certified pangasius incentivized many large-scale producers to change production practices. The market drive for certification was high enough for producers to want to get certified without direct engagement of a trader.
- The precompetitive nature of the ASC Accelerator combined with the convening role of IDH created the right atmosphere for change in practices.
- Having a third party manage the fund locally restrained build up of trust between IDH and producers. It also complicated expanding to other countries.
- In the ASC Accelerator, the public-sector contributions were quite high for the relative amount of change. This is why IDH reorganized the fund in a more efficient way which eventually evolved into the FIT Fund.
- Over the duration of the ASC Accelerator the Vietnamese pangasius industry consolidated. As companies vertically integrated production and processing, many smaller farmers presumably switched to working in production or processing of those larger companies.

"When public and private investments are bundled, transition of farmers towards ASC certification can be achieved at lower cost and effort."

- Ted van der Put, former executive director aquaculture IDH

Executed by:

powered by idh SNV

Partners of the ASC Accelerator:

BINCA · MAYONNA BV · DKSH · NORDIC SEAFOOD · WWF · VASEP · Femeg · Queens taste of royalty · Seafood Connection · ANOVA

ASC Accelerator
Country: Vietnam
Implementing partner: SNV
Species: *pangasius*
Targeted volume: 100.000MT
Achieved volume: 214.000MT
# of farmers invloved: 37
# of traders involved: 7
Project duration: January 2012 – December 2014

The FIT-Fund

To support farmers in the transition towards responsible practices, IDH launched the Farmers in Transition (FIT) Fund in 2013. Instead of solely targeting certification, the FIT Fund used the intrinsic business case for more responsible production practices to help improve sourcing practices globally. By improving farming practices, the production efficiency of (small-scale) producers can be improved greatly. The Fund was of a much larger scale than IDH's previous initiatives, as it accepted applications from all parts of the world to improve practices in the value chains of shrimp, pangasius and tilapia. IDH co-financed measurable and meaningful steps towards more responsible production (including certification by different certification schemes). Trading companies, seafood producers and processors or NGOs with links to the private sector could apply for co-funding of private investments that lead to more responsible farming practices. Through the Fund IDH supported 19 field level projects (FLPs) in 11 countries on different continents. The joint investments of the FIT Fund and the private sector partners were used to accelerate the transition of seafood farmers towards responsible farming. The FLPs that were co-financed by the FIT Fund supported over 28,000 farmers and workers in implementing better practices and bringing 250,000 MT of more responsibly farmed aquaculture products to the market.

Private partners:
AAC, Anova Seafood, Asda, Belize Shrimp Growers Association, Blueyou Consulting, Chicken of the Sea, the Co-operative, DKSH, FEMEG, Foppen, Lyons Seafood, Marks & Spencer, Mayonna, Morrisons, Nordic Seafood, Omarsa, Royal Greenland, Sainsbury's, Seafarms, Seafood Connection, Tesco, Thai Union, Waitrose, Queens, 13 Vietnamese shrimp-producing companies, 41 Vietnamese pangasius-producing companies and GSSI partners

Other partners:
ASC, China Blue, GAA, GIZ, GSSI, ICAFIS/VINAFIS, Issara Institute, New England Aquarium, SFP, SNV, UPEI, VASEP, WorldFish, WUR and WWF

Governmental partners:
FAO Member Countries, Vietnam (MARD), Indonesia (MOMAF) and Ecuador (ProEcuador)

Learnings

- The FIT Fund showed that improving production practices leads to cost reduction. This provides a business case for (small-scale) producers to improve practices without market demand.
- Fragmentation in the value chain resulted in responsibility on the account of the producer/exporter. IDH learned that buyers only take limited accountability.
- Due to the market recognition of certification, the FIT Fund applicants mainly addressed certification in their projects. However, there remains a need to address the other 95% of the market.
- The main issues in the sector (health and feed management) have not improved measurably over the duration of the FIT Fund.
- Health issues might not be solvable on farm level. One approach to solve these issues could be through zone management with a data-driven approach.

Impacts

- Better water management
- Improved use of antibiotics (regulated by certification standards)
- Lower Feed Conversion Rates
- Use of more responsible feed
- Improved farm management
- More responsible farming
- Improved labor condition; especially for large farms (workers now have contracts, insurance, transparency on wages etc.)

The FIT Fund projects per region

Indonesia – Aceh

In 2014, IDH partnered with WorldFish to support the Aceh Aquaculture Cooperative (AAC) and its smallholder members through the FIT Fund. During the project, the AAC was transformed into a self-sustaining organization that promotes best management practices and offers services to its members. The commercial capacity of the AAC was improved through transfer of technical knowledge and capacity building, combined with teaching the business skills that are required to manage an ongoing enterprise. The ambition of the project was for the AAC to develop sufficiently to be able to deal directly with international buyers. Unfortunately, this did not work out because the challenging landscape and infrastructure in Aceh remain bottlenecks. However, the professionalization of the AAC and implementation of responsible farming practices has resulted in successful application for a microfinancing scheme with the Rabobank Foundation. This resulted in a stronger bargaining position for the AAC and it allows farmers to switch to a semi-intensive production system, which will provide them with higher incomes.

Aceh Zonal Management & Micro Credit

Country: Indonesia, Aceh
Species: *L. vannamei* and *P. monodon*
Targeted volume: 9,000 MT (small-scale farms)
Implementing partner: Worldfish Malaysia
Project duration: November 2014 - December 2016

Adopting a Zonal Management Approach for shrimp farmers

Countries: Thailand and Indonesia
Species: *L. vannamei* and *P. monodon*
Targeted volume: 38,500 MT (small- and large-scale farms)
Implementing partner: SFP
Project duration: April 2015 – September 2016

Aquaculture Improvement Project to ASC

Country: Thailand
Species: *Litopenaeus vannamei*
Targeted volume: 7,000 t (large-scale and small-scale farms)
Implementing partner: WWF- US
Project duration: December 2014 – December 2017

China – Hainan

This project aimed to explore a zonal management approach to strengthen the collaboration between farmers and supply chain members by promoting a Code of Good Practices. There was a large drive from within the sector to improve practices, so this alliance (the Hainan Tilapia Sustainability Alliance) was set up by the industry itself. The Alliance offers transparency to buyers, which improves the investment climate. However, even after the implementation of the project the cooperation between different stakeholders within the zone is still complex. The collaboration is mainly driven by the private sector, which results in the local governance to holding back some aspects of responsible development. The project started with 10 pilot farms and the formation of the Alliance in July 2014. Over 500 farmers have received technical and institutional capacity training from the Alliance. The Alliance has developed into a prime example of how industry collaboration can drive promotion of better management practices that is recognized by international buyers.

Tilapia Code of Good Practice through zonal management approach

Country: China, Hainan
Species: *tilapia*
Targeted volume: 4,500 MT (small-scale farms)
Implementing partner: SFP
Project duration: July 2014 – June 2016

Aquaculture Improvement Project to ASC, China and India

Country: China, Hainan and Guangdong; India, Kerala and Tamil Nadu
Species: *tilapia*
Targeted volume: 7,000 t (large-scale and small-scale farms)
Implementing partner: WWF- US
Project duration: December 2014 – December 2017

"Education and training are the key elements of supply chain success at farm level. The speed of success is increased a lot when IDH joins a project."

- Manish Kumar, CEO of The Fishin' Co.

Malawi – Chikwawa

The FIT Fund supported the fish farm component of the Phata farmer cooperative. The cooperative was set up with EU funding to improve the local economy and livelihood of farmers. The project supported the setup of an aquaculture farm to provide income and nutritional security to the members of the cooperative and it's surrounding communities. The farm consists of ten ponds on a 1.2ha site, which are stocked with tilapia at low densities. A feeding system that allows the fish to feed on a combination of algal blooms and local and on-farm ingredients, such as rice bran, was developed. The farmers of the cooperative were trained in aquaculture practices, which they were unacquainted with. Through intensive connections with the cooperative, our implementing partner Imani managed to improve the self sufficient capacity of the farmers. This project showed that relationship building is essential for establishing sustainable systems in rural areas. Even after this relatively short project the skills-base of the farmers is sufficient for them to now serve as an educational centre for prospective outgrowers in the surrounding region, both as a source of extension services, training and skills development, but also as source of fingerlings.

Improving standards in Egypt's farmed tilapia value chain
Country: Egypt, Kafr El Sheikh, Behera and Fayoum
Species: *Tilapia*
Targeted volume: 10,000 MT (large-scale farms)
Implementing partner: Worldfish Egypt
Project duration: August 2014 – July 2017

Best Management Practices for tilapia farmers
Country: Malawi, Chikwawa District
Species: *Tilapia*
Targeted volume: 5 MT (small-scale farms)
Implementing partner: Imani Enterprise Ltd
Project duration: January 2016 – December 2016

"The farming of fish offers a reliable form of low-cost animal protein and an alternative source of income for the cooperative members."

- Luca Desideri, Agricane

Ecuador – Gulf of Guayaquil

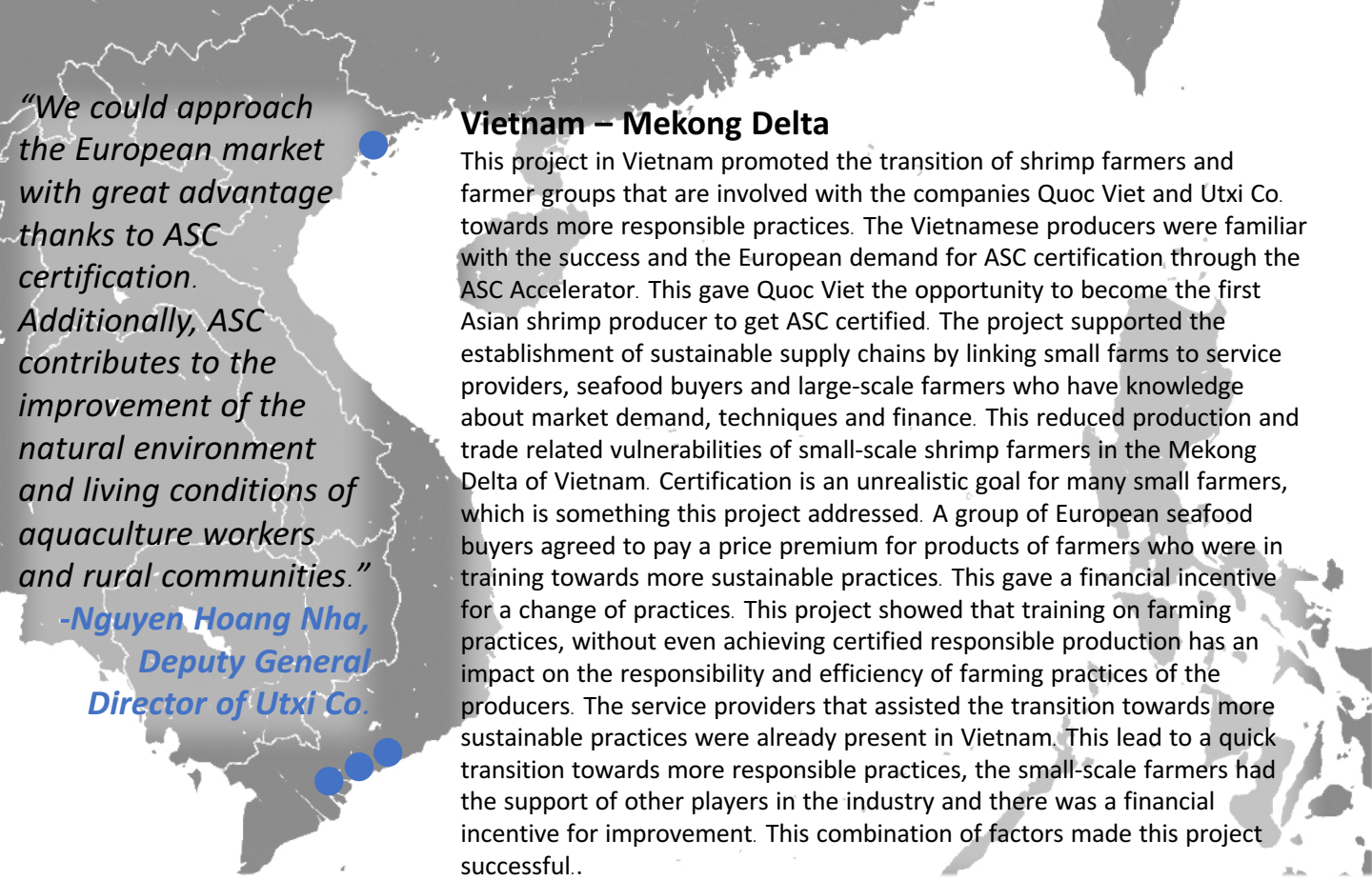
For this project, Pro-Ecuador, GeaConnection, Sociedad Latinoamericano Acuacultura (SLA) and farmers in the El Oro province jointly worked towards achieving ASC certification. The trainings that were given to this purpose were all recorded and they were made publicly available. This enhanced the transfer of knowledge of sustainable aquaculture practices in the region but also outside the focus area. The project encouraged smallholders to achieve ASC certification to improve their communal competitive advantages. The production system in Latin America is very different than in Asia. It is less intensive and the competition is on country level rather than on farm level, which stimulates the sharing of learning between producers. As the SLA continues to make the trainings available, the impact of the project is likely to continue after the exit of IDH. This makes the project to a success, as the environmental and social issues will proceed to decrease after the official end date.

ASC certification for tilapia farmers in the state of Rio de Janeiro
Country: Brazil, state of Rio de Janeiro
Species: *Tilapia*
Targeted volume: 600 MT (small-scale farms)
Implementing partner: Igara Consultoria
Project duration: January 2016 – September 2016

Shrimp Aquaculture Improvement to achieve ASC certification
Country: Ecuador, Gulf of Guayaquil
Species: *Litopenaeus vannamei*
Targeted volume: 5,400 MT (large-scale farms)
Implementing partner: Blueyou Consulting LTD
Project duration: June 2013 – December 2014

ASC shrimp certification
Countries: Ecuador, Guay aquil & Honduras, Gulf of Fonseca
Species: *Litopeneaus vannamei*
Targeted volume: 31,026 MT (large-scale farms)
Implementing partner: WWF
Project duration: January 2016 – June 2017

ASC certification for Belize Shrimp Growers Association
Country: Belize
Species: *Litopenaeus vannamei*
Targeted volume: 10,000 MT (large-scale farms)
Implementing partner: WWF
Project duration: January 2014 – December 2015



"We could approach the European market with great advantage thanks to ASC certification. Additionally, ASC contributes to the improvement of the natural environment and living conditions of aquaculture workers and rural communities."

-Nguyen Hoang Nha, Deputy General Director of Utxi Co.

Vietnam – Mekong Delta

This project in Vietnam promoted the transition of shrimp farmers and farmer groups that are involved with the companies Quoc Viet and Utxi Co. towards more responsible practices. The Vietnamese producers were familiar with the success and the European demand for ASC certification through the ASC Accelerator. This gave Quoc Viet the opportunity to become the first Asian shrimp producer to get ASC certified. The project supported the establishment of sustainable supply chains by linking small farms to service providers, seafood buyers and large-scale farmers who have knowledge about market demand, techniques and finance. This reduced production and trade related vulnerabilities of small-scale shrimp farmers in the Mekong Delta of Vietnam. Certification is an unrealistic goal for many small farmers, which is something this project addressed. A group of European seafood buyers agreed to pay a price premium for products of farmers who were in training towards more sustainable practices. This gave a financial incentive for a change of practices. This project showed that training on farming practices, without even achieving certified responsible production has an impact on the responsibility and efficiency of farming practices of the producers. The service providers that assisted the transition towards more sustainable practices were already present in Vietnam. This lead to a quick transition towards more responsible practices, the small-scale farmers had the support of other players in the industry and there was a financial incentive for improvement. This combination of factors made this project successful..

ASC shrimp for Minh Phu Seafood Corporation

Country: Vietnam, Kien Giang province
Species: *L. vannamei and P. monodon*
Targeted volume: 3,000 MT (large-scale farms)
Implementing partner: ICAFIS
Project duration: May 2014 – December 2016

ASC shrimp for Minh Phu Seafood Corporation & Vinh Thuan Co.

Country: Vietnam, Soc Trang province
Species: *L. vannamei*
Targeted volume: 6,000 MT (large-scale farms)
Implementing partner: SNV
Project duration: March 2014 - December 2015

ASC shrimp for Sao Ta (Soc Trang farm)

Country: Vietnam, Soc Trang province
Species: *L. vannamei* (527 MT) and *P. monodon* (4 MT)
Targeted volume: 1,200 tonnes (large-scale farm)
Implementing partner: ICAFIS
Project duration: October 2014 - October 2016

ASC shrimp for Thong Thuan and Thong Thuan Cam Ranh

Country: Vietnam, Binh Thuan province and Khanh Hoa province
Species: *Litopenaeus vannamei* (3,100 MT)
Implementing partner: ICAFIS
Targeted volume: 4,500 MT (large-scale farming). ThongThuan Binh Thuan 3,000 MT and Thong Thuan Cam Ranh 1,500 MT
Project duration: September 2014 – June 2016

Promoting better management practices and ASC for shrimp producers in the Mekong delta

Country: Vietnam
Species: *Shrimp* (3,300 MT)
Target volume: 4,300 MT/year (2 large-scale farms producing 780 MT, 30 farmer groups of small-scale farms producing 3,520 MT)
Implementing partner: WWF- Vietnam
Project duration: April 2014 - March 2016

Selva Shrimp® Aquaculture Improvement Program

Country: Vietnam, Kien Vang Forestry Area
Species: *P. monodon*
Targeted volume: 3,000 MT (small-scale farms)
Implementing partner: Blueyou Consulting LTD
Project duration: Jun 2013 – Dec 2016

Supporting aquaculture producers in the Mekong Delta towards ASC

Country: Vietnam, An Giang, Dong Thap, Ben Tre, Soc Trang, Bac Lieu, Kien Giang and Ca Mau province
Species: *Pangasius, Tilapia, L. vannamei, P. monodon*
Targeted volume: 46,800 MT (pangasius), 10,000 MT (tilapia), 9,250 MT *(Litopenaeus vannamei/Penaeus monodon*)
Implementing partner: WWF- Vietnam
Project duration: December 2014 – December 2016

Learnings and achievements

Market drive

The aquaculture program has focused on certification and large-scale producer support for implementing more responsible practice. However, the global market demand might not be a sufficient drive for change.

- Certification is a widely recognized market tool to acknowledge responsible practices. However, only 5% of global aquaculture production is currently certified as sustainable.
- Without robust demand, the business case for certification is not always clear and especially challenging for small-scale producers.
- Cooperation between smallholders and larger companies can enhance market access for smallholders, which might encourage them to implement more responsible production practices.
- The aquaculture program boosted the demand for certification as farmers have experienced market success of producing certified seafood.
- Consolidated retail demand is critical for driving change towards more responsible practices.

Smallholders

Some of the projects in the FIT Fund showed that working with smallholders is very different from working with large companies.

- Smallholders are less professionalized than large companies, so it took larger investments for smallholders to implement better practices.
- Smallholders can achieve a large difference in efficiency by reducing the Feed Conversion Rate and mortality rates when implementing better practices. This creates an intrinsic business case for smallholders to improve their production practices.
- There was a lot of energy for transitioning towards more responsible practices within smallholder communities. However certification was not always reached as this is relatively expensive for smallholders.
- The cause of differences in success between different smallholder cooperatives is hard to define**.**

Scalability

The program was very successful at supporting diverse activities and creating a large scale appetite for certification and implementation of better practices.

- The availability and affordability of services are critical for swift transition towards more responsible practices. This is why service providers are essential for scaling up the transition towards sustainability.
- For changing practices on a large scale, insight in challenges for production practices can be very useful. These insights can be gained through analyses of production data.
- The biggest sourcing risk in aquaculture is related to the outbreak of diseases. This issue is not fully addressed through farm level certification, therefore approaches such as zonal management should be further explored.

Impact

The impact of the aquaculture program was measured with a set of Key Performance Indicators, however the scope of the impacts might be larger than these indicators imply.

- The implementation of sustainability standards has created change in farming practices and decreased the negative impact of aquaculture both in social and environmental perspective.
- There was no large scale impact study to provide insight in the sustainable impact of the program, which was mainly generated through helping farmers getting certified or implementing better practices.
- Feed ingredients are a large part of the social and environmental footprint of aquaculture, but certification standards only partly address these issues.
- Standards provide rules, if these rules are followed the farming practices should be more responsible. However, it is hard to measure the exact impact IDH had on this change through the aquaculture program.

Key achievements of the Aquaculture Program

- IDH's continuous support of the ASC has helped the ASC become the leading label for responsibly farmed seafood in Europe. The Dutch retail sector is close to meeting their target of 100% ASC-certified seafood.
- Vietnam, which produces 95% of global pangasius exports, has been able to certify over 20% of its export volume in accordance with the ASC standard. IDH worked with the VASEP, MARD and the WWF to enable this transition within just 1.5 years. The commitment of these parties safeguards further increase of ASC-certified products in the future.
- The initiatives in the aquaculture program brought scalable improvement in understanding and implementation of responsible practices to the sector. The program also stimulated many farmers to implement these improved practices, thereby decreasing the social and ecological footprint of the aquaculture sector.

Moving forwards

From 2017 onwards, the IDH Aquaculture Program is taking on a new approach based on the learnings from the ASC Accelerator and the FIT Fund. The program succeeded in supporting many different projects and thereby achieving a large scale, but most projects were aimed at certification which did not generate the impact IDH aimed at. Therefore, the Aquaculture Program has set more specified goals and will start prototyping new ideas. The Program will focus on addressing issues regarding responsible health and feed management. There is no general understanding of what good practices are concerning these issues, even though the issues with health and feed are sector-wide. IDH will start working with the industry on adopting a data-driven approach to optimize production efficiency and mitigate disease risks through zonal management. The Aquaculture Program will co-finance adoption of better disease management practices based on data analyses at zone level. Additionally, the Aquaculture Program will contribute to increased transparency in the aquaculture value chain. The lack of transparency is currently holding back sector development because there is low trust of consumers and retailers in production and processing practices. IDH will join and scale up initiatives that improve transparency in the sector by sharing knowledge of convening. In addition to this, IDH aims to accelerate investments in critical bottlenecks in the aquaculture supply chain in Sub-Saharan Africa. The aquaculture sector in this region is often sub-optimally developed, while fish is an important protein source for many local people. The main issues seem to be availability and affordability of quality feed and fingerlings and lack of insight in good management practices. Through co-investments IDH aims to remove critical bottlenecks to unlock private sector investment to further develop the industry.

Focus on health and feed management

1. **Supporting a global, multi- stakeholder platform**
   Operating through development and adoption of sourcing guidelines, including specific feed and health management best practices.
2. **Improving feed and disease risk mitigation**
   Supporting the implementation of data-driven responsible feed and health management best practices in the focus countries (Vietnam, Thailand, Indonesia and Ecuador).
3. **Triggering investments in Sub-Saharan Africa**
   Improving availability, affordability and quality of feed and seed supply with a focus on responsible health and feed management in Ghana.