IDH Aquaculture program in China

China is by far the biggest producer of farmed fish, producing more fish for food than the rest of the world combined for 25 year in a row. China is also the world's largest producer of Tilapia, by contributing 32% of global production. Tilapia is the second most farmed food fish species in the world and a species that is playing a key role in food security, thanks to its low cost and high efficiency. Put differently, lowering the environmental impact of China's aquaculture sector has massive environmental impact, and if successful, the sector has the potential of becoming the provider of sustainable and cheap protein for a growing domestic and world population. To reach this potential, IDH pilots an aquascape approach in China.

Since 2010 IDH is orchestrating change towards responsible aquaculture. We co-founded the ASC together with WWF and accelerated ASC certification. We upgraded 630.000 MT, an equivalent of 250 Olympic swimming pools, of shrimp, pangasius and tilapia production towards sustainability.

IDH, The Sustainable Trade Initiative

IDH brings together businesses, companies, governments and NGOs to combine their interests and power in sustainable production and trade of tropical commodities. We co-finance new approaches to sustainable production and trade, and when successful organize new financial arrangements that mix public and private investments to scale them. By working together with companies, we ensure that new models are economically viable and replicable. We make sure there is sufficient demand for sustainable products.

We are endorsed and (financially) supported by numerous European governments and global institutions. Our head office is in the Netherlands. The goal of the IDH Aquaculture Program is to **develop** and **mainstream** responsible aquaculture that feed people and has social benefits and low environmental impact. We focus on the top 2 challenges in the sector: diseases and feed related issues.

Diseases result in loss of income, waste of inputs, water pollution and irresponsible practices like the excessive use of antibiotics. Diseases hamper producers to think long term, as disease occurrence threatens their long-term business. As a result, investors are reluctant to make long term (sustainable) investments.

Feed is most often the biggest cost in aquaculture production, but it is often used inefficiently. Feed often consists of marine ingredients such as fish oil and fish meal, which may be caught through illegal, unreported and unregulated practices (such as overfishing or illegitimate labor practices on vessels).

Aquascapes

Building on experiences with our landscape and commodity programs we are developing **aquascapes**. A geographical area where aquaculture farmers are connected through proximity, jurisdiction or by using the same water.

In these aquaculture areas, we improve production by strengthening **partnerships** as to develop joint strategies that tackle diseases and feed-related issues. We organize cooperation between (e.g.) producers, input suppliers, service providers and local governments and in the supply chain with traders, brands and retailers. We support **innovation** by promoting the use of technology and data to increase sector efficiency, traceability and transparency.

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By strengthening **partnerships** and **innovation** we can reduce production risks, hence attracting **investments**. Together with financial institutions we can share risks and increase the profitability of an aquascape.

At the same time we encourage **market recognition** of better aquaculture areas, leading to Verified Sourcing Areas which enable buyers to effortlessly source sustainable products.

Track Record in China

IDH has partnered with **China Blue** and the **Sustainable Fisheries Partnership** from 2014 to 2016 in a project on tilapia farming in Hainan. The project created and developed the Hainan Tilapia Sustainability Alliance, an Industry Alliance including diverse actors of the value chain. The alliance implemented a locally-developed Code of Good Practice (CoGP) for tilapia farming, thereby improving management practices and sustainability at the farm level. The farmers participating in the project have increased their survival rates from 50% to 76% and have reduced their Feed Conversion Ratio from 1.55 to 1.45, saving considerable feed costs. These figures show that the project improved the efficient use of natural resources.

One of the major lessons from the project was that diseases were still occurring frequently, although farmers implemented the Code of Good Practice. Disease risks remain high as the manually collected data could not provide enough and timely guidance for precaution measures.

Partners

Private
ProGift
Xiang' Tai
Joann IT
Yu2Le
The Fishin' Company
Hainan Tilapia Sustainability Alliance
Maoming Tilapia Association

Other
China Blue Sustainability Institute
Sustainable Fisheries Partnership

Current Program in China

Since 2018, IDH is partnering with **China Blue** in a three-year project that aims to demonstrate that collaboration and data use can contribute to disease control and consequently feed efficiency. The project is mainly implemented in Hainan Province.

The project aims to improve collaboration by sharing information along the value chain. All value chain players, such as farmers, agents, processing plants and hatcheries share information into one aggregated information platform. All stakeholders receive performance and growth data of the fish. This enables for example the hatchery to understand how his fish performs, and it provides the processing plant information on when and what volumes to expect for the harvest.

Additionally, technology solutions are placed in the tilapia ponds such as automated sensors that measure water quality. These sensors also provide data to the farmers and to the information platform. The farmers learn when to adjust their water quality, and the sector as a whole learns what water quality problems need to be addressed for a stable production.

This information system can lead to improved practices by the individual value-chain players, as well as provide information to the market by creating transparency. The system also enables financial institutions to understand the risk levels of the sector, and to identify well performing farmers that can become their future clients.

Currently the project is focusing on including more data and technology solutions to increase the efficiency of Tilapia farmers. Several technologies will be piloted amongst farmers and together we learn on how to make more efficient use of resources.

IDH aims to learn how these solutions piloted under this project can be scaled so that the Chinese aquaculture industry, and the global aquaculture industry can become a sustainable sector, providing food for a growing world population without negatively impacting the environment.

More Info?

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