



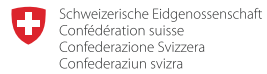
# Licensing Fish Brood Import

a mini case study

Implemented by



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Photo Credit: Wahid Adnan/Drik

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## Licensing Fish Brood Import

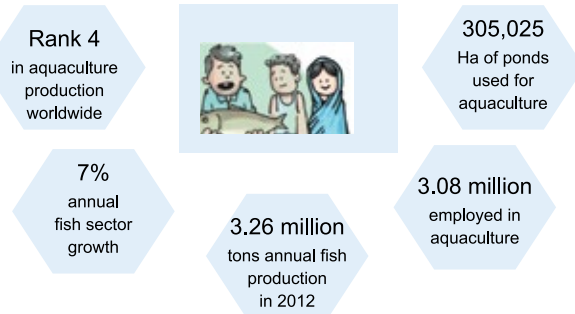


Bangladesh is ranked fourth in global aquaculture production. Fish plays a significant role as protein supplier for poor households as it is relatively convenient to cultivate and to purchase. It is estimated that fish consumption will almost double until 2020 so that fish production will have to grow considerably. One of the major constraints is the low quality of brood fish and the poor management of mother fish at hatcheries. Therefore, Katalyst decided to work along the fish value chain together with hatcheries. Since 2008, the project promoted high-yielding fish species, e.g. Koi, Tilapia and Pangus. Selected regional hatcheries were linked with quality brood sources from the Philippines, Thailand and Vietnam. Culturing these high-value fish leads to higher and more stable income for hatchery owners and farmers. There was no coherent procedure for hatcheries and their associations to procure brood fish from abroad, and no legal framework for import. The government played a vital role in fish brood import through their wise guidance.

### Addressing the challenges

Other than local carp species cultured in small ponds for household consumption, Tilapia, Koi and Pangus are very popular in Bangladesh. Low-quality brood stock led to low growth rates and low quality meat. The quality of fingerlings in hatcheries and farms was low, too, resulting in high mortality rates. The brood stock of Koi, Tilapia and Pangus, imported in the 1980s, was outdated and needed replenishment.

### Bangladesh Fish Sector at a Glimpse



### The Project

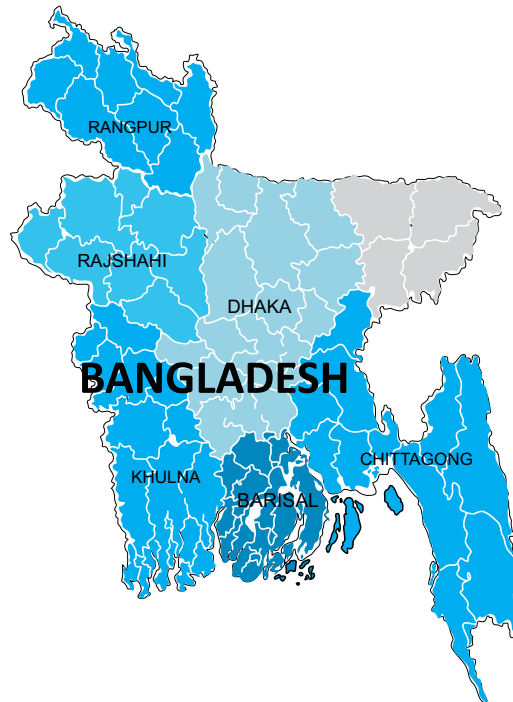
The Agri-business for Trade Competitiveness Project, branded as Katalyst, is one of the largest market development initiatives in Bangladesh. Working together with various market actors, the project generates new income opportunities for small and poor farmers across the country.

Katalyst is co-funded by the UK Government, Swiss Development Cooperation (SDC) and Danida, and implemented by Swisscontact under the umbrella of the Ministry of Commerce, Government of Bangladesh.



Around 300 Tilapia, Koi and Pangus hatcheries country-wide are organized in a number of district level associations. Farmers intent on culturing fish can obtain fingerlings from hatcheries in their close proximity. Katalyst identified that main constraints for high-value fish production were inbreeding, low quality of brood fish, hatchery management, and a lack of technical knowledge. Also, communication between hatcheries and relevant stakeholders was poor. Importing high-quality brood was not possible as there was no clear government regulation or framework to get a respective permission. It was not clear how brood import could be facilitated.

Therefore, the Katalyst team facilitated a network of 14 hatchery owners from several districts, Department of Fisheries (DOF) officials, the Bangladesh Fish Research Institute (BFRI) and several hatcheries and research facilities in Vietnam and the Philippines. The partners



from Bangladesh selected and procured high-quality brood of Koi, Tilapia and Pangus species. These high-value species has lower mortality rates and higher growth rates than local fish species. Instead of just one growing cycle per year, two batches can be cultured annually, which leads to higher and more stable income for hatchery owners and farmers.

Importing livestock, in this case fish brood, can be a sensitive issue. Good quality brood stock is necessary to ensure better quality fingerlings. Hence, Katalyst realized the necessity of a standardized procedure that allows hatcheries to continue importing and maintaining good quality brood stock. Maintaining good quality brood stock will ensure better quality fingerlings, which help farmers culture fish and meet the growing demand for fish in the future.





## Vision for Farmed Fish Sector in Phase 3

*Small fish farmers increase their income by diversifying into more profitable species and practices.*

### Bringing about change

In Phase 3, Katalyst continued facilitating the linkage between local hatcheries and international brood sources in a more structured way. This time, the project initiated a discussion among personnel from DoF, hatchery owners, BFRI and the Bangladesh Fisheries Research Forum (BFRF) on how to import brood in a more legalized manner. DoF suggested the need of an association, which would apply for the brood permission on behalf of hatcheries. DoF also suggested a brief guideline and checklist that states the documents which are required to get permission to import brood.

At that point a regional hatchery association was formed, which submitted proper documents to DoF in order to get the permission: pro-forma invoice, health and origin certificate of broods, health certificate for the mother fish etc. After scrutinizing the documents, DoF provided permission to the hatchery association to import Koi, Tilapia and Pangus brood on behalf of the hatcheries.

Katalyst continued facilitating exposure visits for hatchery owners to Vietnam, Thailand and the Philippines so that they could buy fresh stock of high-quality Koi, Tilapia and Pangus. At the time,

around 50 hatcheries imported brood from the above mentioned countries. The hatchery owners received training on proper brood management. In addition to the regional association a National Hatchery Association was founded in the end of 2014, which provides a platform for hatcheries across the country.

In 2015, the national association received permission to import Snakehead brood from Vietnam by following the DoF checklist and submitting proper documents on behalf of 26 hatcheries to DoF. The National Hatchery Association facilitates brood import by obtaining permission from DoF. It also provides a knowledge and networking platform, and functions as a source of information among relevant stakeholders of the fish value chain.

Together with DoF, Katalyst developed a standard operational procedure for brood import in Phase 3. Since 2014, hatcheries need a permission letter from DoF to be able to import the brood. Once imported to Bangladesh, the brood is tested by BFRI. A reference manual for all stakeholders involved has been developed that explains all steps and documents needed for obtaining brood import licenses.







"I was one of the hatchery owners who went to Vietnam to select improved brood fish to be shipped to Bangladesh. Our priority was Tilapia and Pangus species but when we saw the size and quality of the Vietnamese Koi, we decided to import this brood as well. The Vietnamese Koi has a better growth rate than the Thai Koi and the brood mortality rate is near zero. For the fingerlings that I sell to farmers, the mortality rate is only around 2%. Before, nearly 20% of local brood fish died and between 30-40% of the fingerlings. Overall, I am very happy that I decided to import imported brood fish from abroad."

**Md. Abdul Kadir Tarafdar**  
Hatchery Owner, Mymensingh

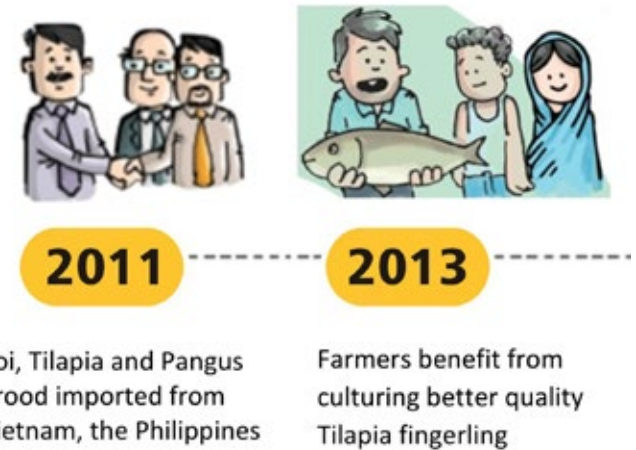


## Evidence of impact

During project Phase 2 and 3, Katalyst has contributed significantly to close the predicted gap between supply and demand of fish. Thousands of additional farmers access to quality species from imported brood enables them to earn higher yields and productivity.

Most of all, small farmers benefitted from the changes the project helped induce. Aiming at poverty reduction by overcoming market constraints in cooperation with the government and the private sector, the following evidence of impact could be observed:

- ✓ In 2015, more than 22,000 fish farmers benefitted from cultivating Vietnamese Koi imported during Phase 2. This attained BDT 36,000 additional annual income per farmer.
- ✓ The newly established National Hatchery Association is continuing to play a vital role in brood import. In late 2015, the association facilitated the government's permission to import Snakehead brood from Vietnam.
- ✓ Central and regional hatchery associations are monitoring the inter-regional brood exchange and quality of brood stock.



- ✓ Hatcheries are enthusiastic to invest more and import different species from abroad. This is assisted by DOF, BFRI and the National Hatchery Association.
- ✓ District-level hatcheries were in a position to put quality fingerlings on the market for lead farmers, and from 2011 on, to smallholders as well.
- ✓ An impact assessment conducted in 2013 showed that 12,215 farmers benefitted from the reduced mortality of Tilapia imported in Phase 2. The additional annual income is BDT 8,000 per farmer.



**2013**

Farmers benefit from culturing better quality Tilapia fingerling



**2014**

DoF provides guideline, National Hatchery Association established



**2014**

50 hatcheries import brood helped by newly founded association



**2015**

Association imports Snakehead brood from Vietnam

### Way forward

Katalyst and several companies improved the know-how of hatchery owners through trainings. This enables them to run their own brood banks, so that they do not rely on brood imports anymore. First attempts have been started at several research institutes such as the BFRI to improve brood quality. The government plans to further enhance their laboratory network to ensure reliable testing of brood stock and fry.

Currently, it is government officials at the upaliza level or aqua-chemical companies that disseminate know-how on quality brood to farmers.

In future, a certification system for quality brood could be established for hatcheries. More-over, trainings to involved companies will be extended so that input supply companies can act as a know-how transfer gate between farmers and hatcheries.

As the import of improved Koi, Tilapia and Pangus species has been so successful, there are plans to broaden the cultivation towards species such as eel and crab that could be marketed outside of Bangladesh. Such species are high in demand in Southeast And East Asian markets, especially in South Korea, China and Japan.

