

# Business opportunities for aquaculture in Ethiopia



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# Summary

## Business opportunities for aquaculture in Ethiopia

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# Summary

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## S.1 Key results

**While the supply from capture fisheries is lagging behind, the demand for fish is growing in Ethiopia. This offers opportunities for aquaculture businesses to play a role in improving food security. Much land is suitable for aquaculture in earthen ponds.**

The National Aquaculture Development Strategy of Ethiopia consists of detailed actions for both the government and the private sector. Due to constraints in human and financial resources, only fragments of the strategy have been implemented. The only option for a fast development of aquaculture in Ethiopia is through the private sector.

Aquaculture needs certain basic resources and inputs, such as feeds, fingerlings, suitable land and water, markets and research and governmental support. Many of these requirements are lacking or underdeveloped.

For the development of aquaculture in Ethiopia, the establishment of a few intensive fish farms is crucial. There are opportunities for two specific business models:

1. Large scale intensive commercial fish production;
2. Semi-intensive small-scale commercial fish production.

Farming of tilapia could be a viable business proposition under certain circumstances.

Although fish culture in the Netherlands is a small industry, the Netherlands based supportive aquaculture industry is large and international oriented. It not only includes multinationals like Nutreco (feeds), Hendrix Genetics (breeding) and Intervet (vaccines and medicines), but also smaller companies that supply complete fish farms, farming systems and water treatment systems. These companies could supply products, technology and knowledge and could also invest in Ethiopian farms.

To facilitate the development of fish farming the Embassy of the Netherlands in Addis Ababa is advised to take the following immediate actions:

- awareness raising through an Aquaculture Event;
- investigate the feasibility of the local production of quality fish feeds for tilapia and African catfish;

- support for pioneer fish farms in the initial stage of development through action research activities involving both Dutch and Ethiopian research institutions, businesses and private sector associations.

The following complementary actions are recommended:

- Implementation of the National Aquaculture Development Strategy;
- Exemption of import tax on imported feeds and feed ingredients;
- Establishment of multi-stakeholder innovation platforms for development and dissemination of best practices;
- Improvement of the business environment.

## **S.2 Complementary findings**

Small numbers of tilapia fry and fingerlings can be obtained from research stations under the Ministry of Agriculture. Mono-sex tilapia fingerlings are not available, nor are African catfish fingerlings.

Feed ingredients of plant origin such as corn, soybean, cotton seed, wheat, and by-products such as oil cakes, bran, et cetera are locally available. Bone- and meat meal are locally available but the supply is limited and variable. Since fish are processed mostly on an artisanal way there is no reliable source of fish meal available.

Fish products need to be tailored to the specific customer requirements of a particular market segment. It is not sufficiently clear what market segments (potentially) exist and what the customer requirements are for each segment.

Several Ethiopian universities provide education and research related to fisheries and aquaculture. Fisheries research is organised at the Federal (Sebeta Fisheries and Aquaculture Center) and Regional level (Amhara, Oromyia and Southern Regions); however few of these are involved with aquaculture research.

Cage farming requires low investments and little extra input, but sites for this activity will be limited in Ethiopia. Intensive systems for tilapia in tanks and Recirculation Aquaculture Systems (RAS) don't seem to be viable, due to the high costs for investments and the costs for generating electricity. Farming of African catfish is not a viable option yet as market prices for this fish are relatively low. These are general observations. Costs may differ depending on the site characteristics and fish prices are likely to continue to rise in the near future.

A pilot system for tilapia could serve as a nucleus to resolve the uncertainties surrounding fish farming in Ethiopia. Intensive commercial farms will result in spin-offs (facilities for hands-on training, farm action research, source of fingerlings, technology development). This will accelerate the development of the entire aquaculture sector. In this way the private sector plays a catalyst function. However, in order to fulfil this role, these farms need support.

### **S.3 Methodology**

This research project was conducted in two stages:

- A desk study of public databases and reports on aspects importantly related to aquaculture development in Ethiopia.
- A fact-finding mission in Ethiopia, which included interviews with key informants and was rounded off with a validation workshop.