Opportunities for aquaculture in Ghana

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1. Aquaculture value chain in Ghana
Economic importance of fisheries

- Contributes 3-5% to GDP
- Per capita fish consumption of ~25 kg/year
- 60% of total animal protein consumption consists of fish
- Fish accounts for 22.4% of household food expenditures
- Fish deficit: 50% dependent on import
Fisheries and aquaculture in Ghana

- Marine fisheries: 314,868 MT (73%),
- Inland: 86,741 MT (20%)
- Aquaculture: 32,512 MT (7%)
- Marine fisheries production declining
  - Fishermen moving from marine areas to inland waters.
  - Increasing pressure on inland waters
- Import of fishery products declining since 2007
- Is aquaculture an opportunity?
Aquaculture production

- Increasing production: + 360% over the last 10 years
- Tilapia: over 90% of total production
- Cage farming: average annual growth: 73%
- Cage farming contribution: >88%
Aquaculture production systems

1. Extensive: dams, dugouts, ponds and small reservoirs (North)

2. Semi-intensive: small to medium scale commercial ponds (98% of fish farms), mainly tilapia and other species (South and Central Belts)

3. Intensive cage farms (2% of fish farms, >88% of production), only tilapia (Eastern Region)
Tilapia value chain

**Artisanal value chain** (fisheries, small scale aquaculture)

- Lakes, Rivers
- Small scale farms
- Retailers
- Processors
- Consumers

**Modern value chain** (medium & large scale aquaculture)

- Hatchery/Fingerlings
- Cages/Grow-out
- Wholesalers
- Retailers
- Consumers

Flow of inputs (fingerlings, feeds)

- Feeds
  - Imported/Local
  - Raanan Feed

Flow of fish products

- No cold chain
- Full cold chain
Permit procedures

ENVIRONMENTAL PROTECTION AGENCY (EPA)
ENVIRONMENTAL PERMIT

FISHERIES COMMISSION
AQUACULTURE OPERATIONAL PERMIT

WATER RESOURCES COMMISSION
WATER USE PERMIT

VOLTA RIVER AUTHORITY (VRA)
VRA PERMIT
(if operations within VRA)

DISTRICT ASSEMBLY
OPERATIONAL PERMIT
Institutions and regulations

- Private sector led development
- Target 100,000 tonnes by end of 2016
- Aquaculture fund and subsidies from government
- Increased availability high quality feed and seed
- Enhancement of genetic quality broodstock
- Technical and administrative support by government
- Ban on Tilapia imports
MINISTRY OF FOOD AND AGRICULTURE  
FISHERIES COMMISSION  

Ghana National Aquaculture  
Development Plan  
(GNADP)  

March, 2012
Bottlenecks

- Quantity and quality of feed (30 kT), fingerlings
- No competition in local feed production
- Imported feed 30% more expensive
- Devaluation of GH₵
- Access to suitable locations
- Bureaucracy in policy & permitting
- Knowledge, experience, expertise, skills
- Equipment, logistics, infrastructure
- Akosombo vs. GIFT strain
- Lack of investment capital for Ghanaian producers
Fish farmers appeal to government for cheaper feed

By Kwadwo Baffoe Donkor,
DOMEABRA

Fish farmers in the Ashanti Region have appealed to the government to come to their aid in getting cheaper feed for their farms.

They claim that due to the continuous depreciation of the cedi against the dollar, the price of the feed they use keeps rising on daily basis; thus increasing the cost of doing business.

They believe that if the government could get them a guaranteed price for the commodity, which is mostly imported, it would go a long way to help them to produce to meet the local demand for fish.

The Chairman of the Ashanti Regional Fish Farmers Association, Nana Kwaku Sia, made the appeal on behalf of the members when the Minister for Fisheries and Aquaculture Development, Nyon Bilijo, met the members of the association during his tour of the region.

Nana Sia, who is also the Managing Director of Kumah Farms at Domeabra in the Ejisu-Juaben Municipality, said the high cost of feeds was one of the main challenges facing the farmers, besides getting available market for their produce.

As a result of the high cost of the feed, he said some of them had resorted to producing their own feed, which, he said, do not contain the right nutrient to get the fish to grow into the right sizes.

Currently, the country produces only 40 percent of the total consumption, with the rest being imported. As at 2012, the total fish consumption of the country was 880,000 metric tons, with the local production around 420,000 metric tons.

Mr. Bilijo said the ministry, as part of its programme to promote aquaculture in the country to boost the local production of fish, was devoting its attention to the sector this year.

As part of the programmes to promote aquaculture, he said the ministry would establish nucleus fish farms along the Volta Lake.

He said each nucleus farm would have between 10 to 15 out-grower or satellite farms attached to it and the ministry would be providing fingerlings and also help train others to set up their own fish ponds.

He said these nucleus farms would also help in the marketing of the fish, as it would buy them from the satellite farms for distribution.

According to him, Ghana is the leading fish consumer in Africa and if "we don't find ways to increase the local production, we will end up spending lot of foreign exchange in importing more to meet the local demand."

The objective of the nucleus farm project, he said, is to increase the fish production in the country, reduce the high import bill and also improve food security in the country.

The project is expected to be implemented within the next 30 months.

Quick read

1. Fish farmers in the Ashanti Region have appealed to the government for assistance to enable them to have access to constant and cheaper supply of feed for their fish.

Mr Bilijo said the government was in the process of developing a concept paper and ways of funding the project. He was, however, unable to tell where the funding for the project would come from. According to him, talks are still ongoing and will not want to
AKOSOMBO/GIFT STRAINS
Opportunities

Business cases

1. Hatchery
2. Feed mill
3. Capacity building
2. Potential business cases
Business case 1: Fish feed mill

- Market requires more feed of a reliable quantity & quality
- Only one local producer, producing 30,000 tons/yr
- Need for additional 20-30,000 tons
- High protein feed needed for hatcheries
- Required investment is 4.2 million USD
- Net. profit of 1 – 3 million USD / yr, depending on # shifts
Business case 2: Hatchery

- Market needs fingerlings with reliable quantity & quality
- < 30 hatcheries, lack of business & management skills
- Need for additional 50,000,000 5g-fingerlings/year
- Affordable high protein feed needed
- Investment is 1.3 million USD (pond) / 3.1 (RAS)
- Net. profit 1.5 million USD (pond) / 1 (RAS)
Business case 3: Training & education

- Increase production & demand for feed & fingerlings
- Knowledge, experience & skills for more professionalism
- Aim is to work towards profitable long term business
- Focus specifically on government & Ghanaian producers
- Training 400 farmers requires investment of 400 kUSD
3. Conclusions and recommendations
Conclusions and recommendations

Conclusions:
- Bottlenecks: feed, fingerlings & knowledge
- Opportunities: feed mill, hatchery, trainings

Recommendations:
- Ghanaian Government:
  - Policy regulating fish farming permits
  - Policy on import/farming of performant fish strains
- Public Private Partnerships:
  - Private sector, research institutes in Ghana and the Netherlands, investments funds
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