CONSTRUCTS AND OPPORTUNITIES IN CAGE AQUACULTURE IN GHANA

Gifty Anane-Taabeah, Emmanuel A. Frimpong, Stephen Amisah* & Nelson Agbo

*Kwame Nkrumah University of Science and Technology
Department of Fisheries and Watershed Management
Ghana
Aquaculture in Ghana has been predominantly land-based even though the country offers significant opportunities for water-based activities.

- Area of Ghana is 238,533 km²
- Land is 227,533 km²
- Water is 11,000 km²
Current state of aquaculture in Ghana

- 50% deficit in fish supply
- Fish constitutes 60% of animal protein in the diets of Ghanaians
- Over 2800 land-based fish farmers
- 2006 < 1% of total local production
- Figures are lumped with capture fisheries production
Cage aquaculture

The Future?

- Anticipated to compensate for the 50% of deficits in supply
- Enhance food security
- used for other non-traditional species in addition to tilapia and catfish
- contribute to achieving 20% of local production similar to global mean equivalence sought by government
Why Cage aquaculture?

- **water availability**: abundant water resources in country
- **Reduce pressure on land and facilitate conservation**
- **intensive production enhanced and potential jobs, income, livelihood**
  - e.g. A single farm produced 950 tons of tilapia in 2004 (21% of total aquaculture production)
  - Over a decade of adoption in Ghana but total aquaculture production is still insignificant
Constraints to aquaculture in sub-Saharan Africa

- Lack of feed/suitable feed
- Lack of seed (fingerlings)
- Lack or inadequate funds
- Lack or restricted knowledge

Which of these constraints are specific to cage aquaculture in Ghana?
Goal

To examine reasons for the low contribution of aquaculture to local fish production in Ghana although cage aquaculture has a potential to increase production.

Objectives

• Identify the main constraints in cage aquaculture in Ghana

• Identify opportunities that may be exploited to enhance cage aquaculture development
Study area

- Lake Volta fringe communities
- 52 communities
- Population size is 80,000
- Livelihood opportunities
  - riparian farming
  - fishing
Methodology

- **Structured questionnaires**

- **106 respondents**
  - Adopters (current cage farmers), 43
  - Potential adopters, 31
  - Abandoned, 20
  - Fisheries Commission, 1
  - Regional and District Officers, 5
  - Financial institutions, 6

- Interviews: 3 govt & research institutes
Surveys and interviews

- Both questions specific to groups and questions common to groups: Participatory approach
- Close-ended and open-ended responses to identify constraints and opportunities
- Nine constraints were identified and scored on a four-point interval scale ranging from “not important” to “very important” modified from Vagias (2006) level of problem type-scale based on responses from pre-testing of questionnaire
Data collection – summer 2010
Figure 1.- Mean rankings of nine constraints for Adopters, Abandoned and Potential Adopters. The ranking is based on a 4-point scale from not-important to very-important. Total sample size (n) for Adopters, Abandoned and Potential Adopters are 43, 20 and 31 respectively. Error bars are 95% confidence intervals.
Lack of funds: a vicious cycle

- Adopters are unable to expand production
- Potential adopters cannot adopt
- Abandoned cannot resume

Figure 2.- Proportion of respondents who provided additional information about other factors they considered constraints in relation to lack of feed and good quality feed, and lack of market. Sample size n = 15 and 7 for lack of fee and lack of market respectively.
Opportunities identified

- High interest among potential adopters (97%) and abandoned (100%).
- Feed production plant in Ghana by a private enterprise
- Willingness of financial institutions to provide loans
- Government initiatives including training potential adopters and microloans facilities accessible to farmers
Lack of funds and lack of government extension services are the main constraints in cage aquaculture in Ghana.

Fisheries Commission should work with the financial institutions to help determine farmers’ ability to repay loans and guarantee loans made by the financial institutions.

There is a need for a more specialized aquaculture extension service accessible to farmers to help with technical issues built on the model of agricultural extension services in Ghana.
Thank You for your attention

“Shie Shia”
The AquaFish CRSP is funded in part by United States Agency for International Development (USAID) Cooperative Agreement No. EPP-A-00-06-00012-00 and by US and Host Country partners.

The contents of this presentation do not necessarily represent an official position or policy of the United States Agency for International Development (USAID). Mention of trade names or commercial products in this presentation does not constitute endorsement or recommendation for use on the part of USAID or the AquaFish Collaborative Research Support Program. The accuracy, reliability, and originality of the work presented are the responsibility of the individual authors.