

AN OVERVIEW OF AQUACULTURE TRAINING IN KENYA

**INTERNATIONAL WORKSHOP
SUSTAINABLE USE OF COASTAL AND MARINE RESOURCES IN KENYA:
FROM RESEARCH TO SOCIETAL BENEFITS**
October 27-29, 2014, North Coast Beach Hotel, Kilifi County, Kenya

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Introduction: Defining aquaculture

Aquaculture

- The farming of aquatic organisms namely, fishes, algae
- Is a professional discipline with interdisciplinary industrial approach/leanings
- Involves capital investments and management

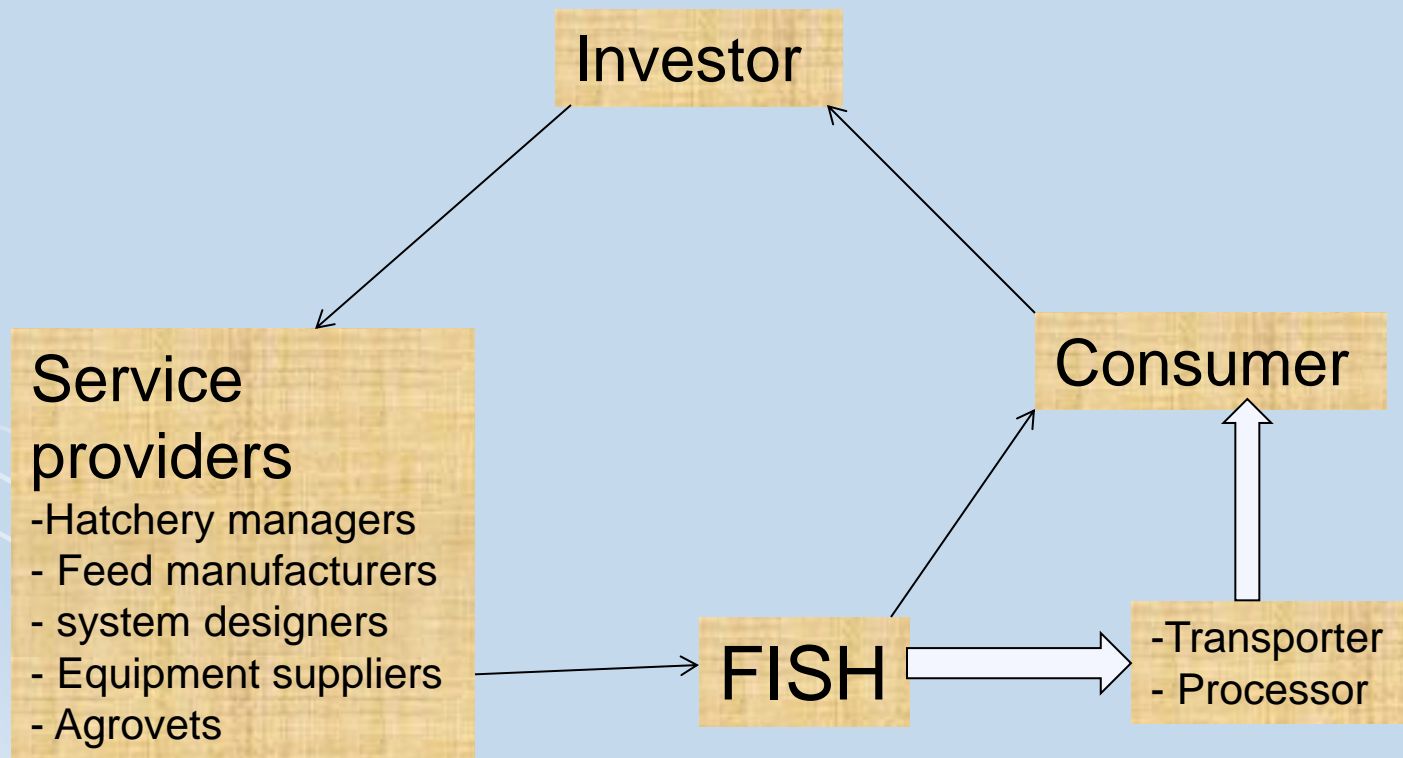
Aquatic science

- The study of various aspects of the ecology of the aquatic environment

Introduction: Contextualizing Sustainable aquaculture

- The development of a sustainable aquaculture industry is largely dependent on the core principle of good management practice, that can only be derived from well trained/skilled manpower
- Has three key pillars:
 - The investor/facilitator
 - The service providers
 - The consumer

Introduction: Cash flow in aquaculture




Introduction: Drivers of sustainable aquaculture development

- Availability of qualified manpower to manage the farming facilities
- Availability of inputs in the form of quality seed and feed necessary for sustainable aquaculture production
- Access to ready market and proper marketing strategies for farmed produce
- Technical competencies to handle issues on progressive development of the industry in the face of changing market demands and sophistication

Introduction: Role of training in aquaculture development

- Hatchery operators: require multidisciplinary skills/technical knowledge in fish biology, water quality analysis, feed and feeding strategies, some aspects of engineering (most aquaculturists have engineering background)
- Feed manufacturers: must have good knowledge of fish nutrition
- Systems designers/Constructors: must have design and construction concepts
- Fish processors: must have skills in post harvest handling of fish

Questions to be addressed

- Are there enough qualified personnel to service the revamped Kenyan aquaculture industry?
 - Are there in place training programs for aquaculture in Kenyan universities and other training institutions?
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Objectives of the review

- To give an overview of the institutions and curriculums for aquaculture training in Kenyan institutions of higher learning
- To offer proposals on possible improvements to the curriculums and their modes of delivery



Aquaculture training in Kenya: Institutions; current programs; technical capacity

- Many universities offer basic courses in aquatic science or aquatic biodiversity conservation with some aquaculture input
- Several universities offer a combined fisheries and aquaculture degree course:
 - Moi University
 - Nairobi University
 - Maseno University
 - Eldoret University
- No university offers a specific aquaculture program either at the Bachelors or Masters level

Aquaculture training in Kenya: Institutions; current programs; technical capacity

- Few of the academic staff teaching the aquaculture courses have background training in aquaculture and cannot effectively train competent aquaculture graduates
- Except for Moi University (pond based system) and Maseno University (Greenhouse recirculation system), the universities lack basic farming systems for on farm training
- Non of the universities have adequate laboratory capability for handling research related to aquaculture

General conclusions

- There are not enough qualified personnel to manage the aquaculture industry in Kenya
- The Kenyan Universities have neither the appropriate curriculum nor the technical capacities to handle meaningful aquaculture training
- There is urgent need to formulate and actualize meaningful programs for aquaculture training in Kenya

Framework for appropriate aquaculture training in Kenya: The interactive learning concept

- Involve all the players in the aquaculture value chain
- Use the bottom-up demand oriented process in curriculum development
- Develop adequate infrastructure; demonstration farms, pilot recirculation hatchery systems, laboratories, etc.
- Engage experts, international partners and local entrepreneurs in curriculum development

Framework for appropriate aquaculture training in Kenya: Laudable initiatives

- Moi University demonstration farm
- Maseno University recirculation system hatchery
- The Kenya Markets Trust-linked Maseno University training-of-trainers program
- South Eastern University engagement with international experts in curriculum development

Thank you!

