Government intervention for aquaculture development in Kenya

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Background

• Renewed interest in aquaculture following dwindling capture fishery in the East and Central African region

• Currently fish production stands at 186,969 MT;
  ① Inland capture fisheries- 139,232 MT (70.5%)
  ② Aquaculture fisheries– 48,790 MT (25%)
  ③ Marine capture fisheries- 8,947 MT (4.5%)

• Kenya has experienced unprecedented growth in aquaculture in the past five years (4000-48,000 MT)
Aquaculture production in Kenya between 1950 and 2010 (FAO)
Aquaculture growth in Indonesia …

![Aquaculture Production Chart](chart.png)

- **Freshwater**
- **Brackishwater**
- **Mariculture**
- **Total**

<table>
<thead>
<tr>
<th>Year</th>
<th>Freshwater</th>
<th>Brackishwater</th>
<th>Mariculture</th>
<th>Total</th>
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<tr>
<td>2001</td>
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<td>5,478</td>
<td>8,544</td>
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Characteristic reasons for Success

- Active involvement of government and private sector
  - Adoption of aquaculture specific policy and legislation
  - Infrastructure development,
  - Increased funding

- Regional and international interventions

- Transformation from subsistence to commercial ventures

- Culture species and systems diversification (from pond to tank and cage)

- Increased investment into quality seed and feed production and distribution
Reasons for low production...?

- Lack of effective aquaculture policies and strategies
- Subsistence mentality
  - No structures for commercialization
- Lack of services
  - Lack of quality seed
  - Lack of affordable feeds
  - Inadequate extension
- Low public funding of the sector
- Low investment in aquaculture by private sector
- Weak linkages between research and extension
- Dependence on a few species
Kenyan story?

- One of the fastest growing rates in Sub-Saharan Africa
- Directorate of Aquaculture formed 2008
- National Aquaculture Development Strategy and Plan developed
- Instituted Fish Farming Enterprise Productivity Programmes (FFEPP) under Economic Stimulus Programme
- Kenya Government spent approximately Kshs. 6 B or US$72.3 M on aquaculture development in 3 years
- FFEPP was mooted to stimulate demand for inputs and spur growth
Fish Farming Enterprise and Productivity Program

- Constructed over 48,000 ponds in prime and arid lands
- Supported farmer cluster formation e.g. Aquaculture Association of Kenya
- Improved extension: distribution of motor-cycles and employing and training of extension officers country-wide
- Supported a selective breeding program at Sagana
- Established 4 mini-processing and cold storage facilities
- Promotion of local and export markets through trade fairs, village shows, field days and “eat more fish campaigns
- Developed fish feed and seed standards, accreditation
Breeding nucleus - Sagana
Breeding nucleus - Kiganjo
Feed production - Kenya
Achievements

• Number of ponds rose to over 100,000
• Number of farmers rose from 7000 to over 38,000
• Number of accredited hatcheries rose to 150 currently from about 20 in 2009
• Number of large commercial fish feed producers increased from 1 in 2009 to about 10 in 2011
• Production rose from 4000 to estimated 48,000 MT
• Spurred interest into cage culture and recirculation systems
Fish farmers benefit from ESP cash boost

Production has increased from 4,000 to 19,000 tonnes since 2009 and is set to rise

BY STELLA CHEONO AND VALENTINE OBARA

Fish production has increased over the last ten years, as revealed yesterday.

Fisheries PS Japheth Mutua said the country produced 10,600 tonnes of fish last year compared to 4,000 in 2009.

However, this is only two per cent of the country's potential.

The numbers were boosted by Economic Stimulus Programme (ESP) that helped build fish ponds across the country.

He added that water bodies such as Lake Turkana remain underutilised.

Other areas with potential include deep sea fishing in the Indian Ocean and other addition of fish especially in regions which have a high concentration of fishermen.

The fishing industry, which is valued at Sh5 billion, continues to face challenges that lower production volumes and quality.

“Lack of feeds, poor quality fingerlings and pond management techniques and bad marketing has affected the industry,” he said.

According to the PS, Lake Turkana has the potential to produce over two million metric tonnes of fish per year, but this has been affected by the region's isolation from major trading centres and poor infrastructure.

On the other hand, it has become difficult to tap into the potential of deep sea fishing due to lack of appropriate personnel in the area.

Mr Mutua was speaking during the official opening of a workshop on the filleting value chain in Kenya.

The workshop seeks to come up with plans on how to scale up fish production and value chain by attending to constraints from the German and Israeli embassies.

The German embassy's head of development cooperation Natascha Felenius said that Sh55 million has been set aside for agricultural development in the country for the three years.

Officials from the Kenyan government to initiate fish farms through the ESP were a boost to the country's economy, she said.

The ESP saw the construction of 360 ponds in 2005 out of 200 constituencies.
Donor Support

- Several organizations augmented government efforts
  - KCDP
  - ASARECA
  - KAPAP
  - ASDSP
  - MESPT
  - KMT
  - VLIR-UOS
Artemia ponds in salt works - Kenyan coast
Modern Recirculation Aquaculture System
Recirculation system Kenya
Intensive tilapia nursing system
Cluster owned fish marketing and value addition facility
Challenges

- Sustaining the momentum
  - Devolution
  - Inputs and equipment
- Market development and market information flow
- Weak research support
  - Socio-economics
  - Emerging fish health issues
  - Seed improvement programs
- Ecosystem threat and conservation of Biodiversity
Potential aquaculture species: food species

- **Schilbe mystus**
- **Labeo victorianus**
- **Bagrus docmac**
- **Oreochromis variabilis**
- **Protopterus aethiopicus**
- **Oreochromis esculentus**

[Images of the species mentioned above]
Ornamental species

- *Synodontis afrosfischeri*
- Elephant trunk fish
- *Barbus spp*
- *Synodontis victoriae*
- *Haplochromis sp*
- Banner fish
Way forward…

- Get the Market right: Value chain development approach and focus on end-product
- Well funded research for development
- Enhanced public private partnerships
- Standards: facilities, processes and products
- Diversification of culture systems
- Diversification of culture species
- Develop Centres of Excellence
Asante sana!