

## • Marine aquaculture:

- Intensive systems, requiring significant capital and technical expertise;
- Major role for foreign investors;
- Production of high value species intended primarily for export markets, leading to income generation and thereby improved livelihoods.

#### Freshwater aquaculture:

- Primarily community-based, co-operative activity;
  Extensive, labour intensive methods;
- Production destined primarily for local markets;
- Main focus on direct food security, improved rural livelihoods (and income generation).







# 2001 Aquaculture Policy:



Towards the Responsible Development of Aquaculture

2002 Aquaculture Act, promulgated in 2003

Comprehensive Act prescribes, inter alia,

- procedure for obtaining aquaculture licences
- monitoring and regulation of all activities
- environmental safety measures
- consumer health and safety issues
- establishment of appropriate institutional arrangements maintenance of genetic diversity and the integrity of the aquatic ecosystem

In summary this Act regulates responsible aquaculture production practices.

# Aquaculture Act 2002:

Part IV: MANAGEMENT AND CONTROL MEASURES: sections 27, 28:

"Introduction and transfer of aquatic organisms"

> - Strict control of introduction, transfer, movement of any aquatic organism;

consultation with any other law of the country

#### Aquaculture Licensing regulations 2003

"Regulations concerning aquatic organisms health management shall be in conformity with internationally accepted standards relating to aquatic organisms health management, and consistent with Namibia's rights and obligations arising from its membership of the Word Trade Organisation (WTO), and the Office International des Epizooties (OIE, the World Organisation for Animal Health)."

Regarding disease reporting and drug use:

- immediate reporting of suspected disease
  NO DRUG USE without Minister's approval

Disease control: outbreaks, spread, environmental damage are all addressed in these regulations.

#### Import-Export Regulations 2010

- more explicit regarding introduction and movements of aquatic organisms
- address the importance of disease surveillance programmes related to trade

#### Significantly they

- require registration of importers and exporters of live aquatic organisms and commodities, with permits required for each consignment
- outline criteria for quarantining of risk imports and provide specifications of quarantine facilities

# In summary:

Namibia sees aquatic animal health as fundamental to successful aquaculture:

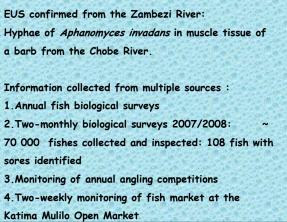
- Many aspects addressed in the Aquaculture Act and its regulations
- > Obligation to the OIE
  - > (national contact point: Veterinary Services within the Ministry of Agriculture, Water and Forestry; in 2008 the Ministry of Fisheries and Marine Resources was appointed focal point for aquatic animal health).
- > Disease surveillance programme mandatory for export of aquaculture products - affects mariculture industry

What is Namibia's experience with aquatic disease?

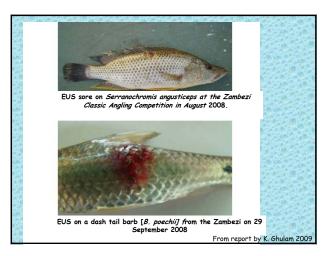
### In last 5 years:

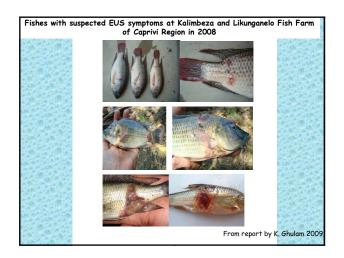
- 1. Outbreak of EUS along our northern border river
- 2. Checks on commercial shellfish production



















# Progress in aguatic health 2008 and 2009:

- Freshwater survey for EUS, with treatment in farms
- Intensified vigilance about transfer of animals
- Survey of Namibian farmed shellfish
- intensified scrutiny of health certification of incoming spat/ species (legal mandate)
- Pro-active support for national hatcheries, feedproduction
- Planning of disease analytical laboratories capacity to be developed

# Driving force

- 1. Energetic and enthusiastic Aquaculture sector
- 2. Outbreak of Epizootic Ulcerative Syndrome along the northern border
- 3. Sponsorship of regional activities (SACAU, OIE, FAO) to establish aquatic animal health expertise
  - Appointment of aquatic animal health focal points; attendance at the OIE General Sessions 2008, 2009
  - > Training workshops
    - Zambia, March 2008 FAO Mozambique, June 2008 OIE
      Malawi 2009 OIE
      Namibia 2009 FAO/OIE
      Namibia 2010 OIE

Disease not confined to aquaculture!! - Indigenous aquatic fauna not disease-free. e.g. Microsporidia in monkfish



e.g. Gross pathology of Spraguea lophii infection of spinal ganglia of Lophius sp.

In the aquatic environment containment of disease is not easy!

Cysts of Spraquea lophii in anglerfish brain (Giemsa )

# What needs to be done, now?

- Establish a basic understanding of the disease risks associated with movements of aquatic animals
- Establish basic disease surveillance: look out for sick animals and report immediately

• Establish the scientific expertise to screen for disease in key aquatic resources

>

- Keep vigilant: > Apply legislation > Control movements > Recognize disease outbreak early > Report quickly

