



AFRICAN UNION
INTERAFRICAN BUREAU FOR
ANIMAL RESOURCES



European Union

The AU-IBAR FISHGOV Program on Aquatic Animal Disease Control and Biosecurity

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www.au-ibar.org



The African Union initiatives for the transformation of aquaculture

CAADP

- Major Goals: Agricultural transformation, wealth creation, food security and nutrition, economic growth and prosperity for all
- Increase agricultural production by 6%

CAMFA I and II

- Concern about poor performance of fisheries and aquaculture given their potential to contribute to the CAADP
- Seek political solutions to major challenges: weak institutional and human resource capacity, inappropriate technology and limited resources

PFRS

- Overall objective is to transform Africa's fisheries and aquaculture for food livelihoods and wealth
- Strategic aquaculture is to '**Jumpstart market-led sustainable aquaculture through a variety of strategies appropriate interventionist approaches, strong strategic and implementation plans**'.



The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS)

Overall goal:

Creating a conducive and enabling environment for the fish sector to create equitable, social and economic development in Africa

Objective

Provide structured guidance to Africa's fisheries to facilitate reforms towards coherent national and regional policies for sustainable social, environmental and profitable outcomes for Africa and its peoples





Purpose of the PFRS

Facilitate transformation of Africa's fisheries and aquaculture for food, livelihoods and wealth. Specifically the PFRS, among others:

- elaborates and make explicit essential guiding principles for good governance of Africa's fisheries for increased coherence and coordination of the sector
- assists AU Member States, RECs and RFBs to develop realistic fisheries and aquaculture policies
- helps facilitate regional collaboration and integration in shared fisheries and aquaculture resources management
- provides appropriate guidance on how to implement reforms for fisheries and aquaculture development



Policy Areas of PFRS

1. Conservation and Sustainable Resource Use:
2. Small-scale Fisheries Development:
3. Sustainable Aquaculture Development:
4. Responsible and Equitable Fish Trade and Marketing:
5. Strengthened Regional and Sub-regional Cooperation:
6. Awareness Enhancing and Human-capacity Development;
7. High Seas Fisheries:
8. Cross-cutting issues
 - Strengthening resilience and reducing vulnerabilities to climate change
 - Gender and Youth
 - Private sector investments & financing mechanisms



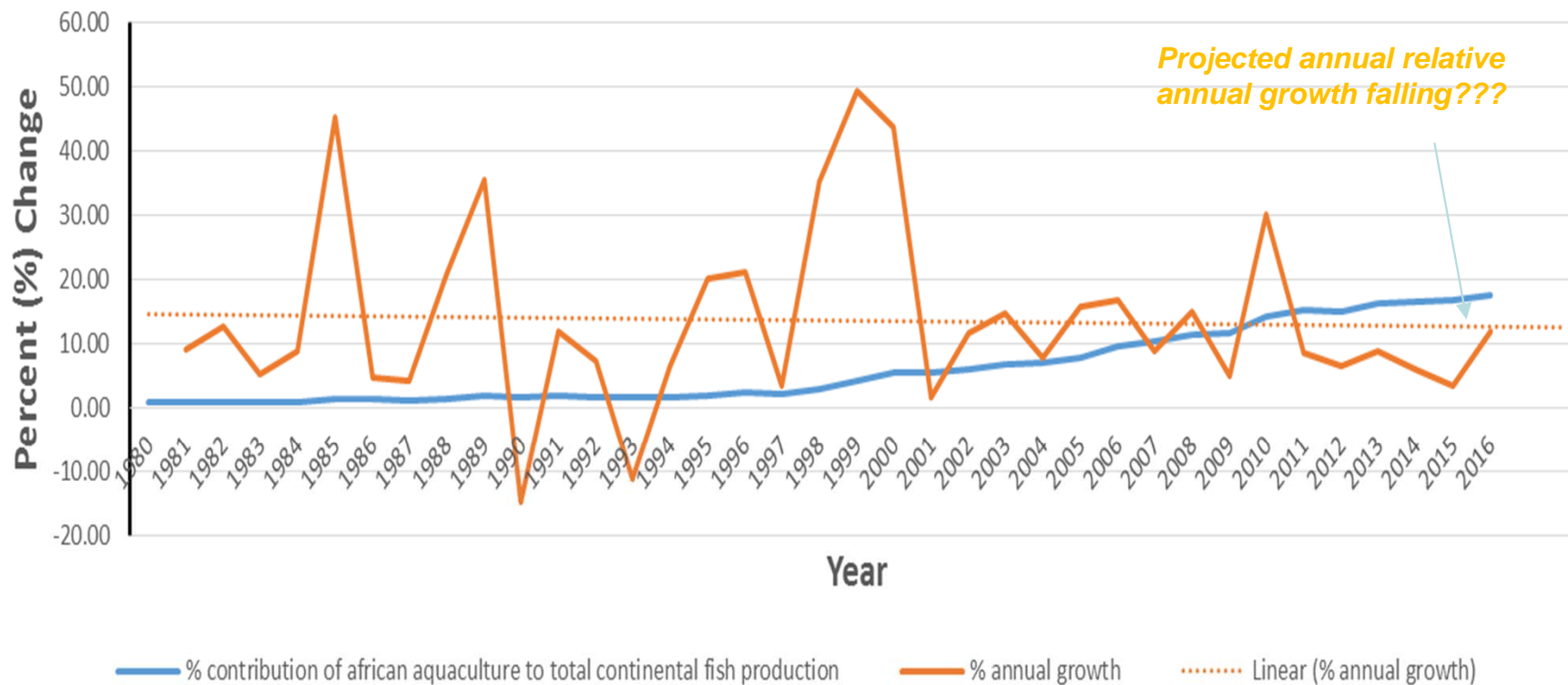
Implications of the PFRS on aquatic animal health and biosecurity

- **The PFRS and CAADP goals entail:**
 - (i) increased aquatic animal production,
 - (ii) increased accessibility to markets and enhancing trade in aquatic animal products,
 - (iii) improved aquatic animal food safety,
 - (iv) biosecurity, and
 - (v) ecosystem health



African Aquaculture Growth Trends

African Aquaculture Growth



Current aquaculture contribution to total fish production
Global 50%
Africa 18%

% increase in production 2007-2016
Global 60%
Africa 142%

% change in aquaculture production between 2015 to 2016:
Global 5.2%
Africa 11.9%

Relative % average annual growth per year 2007-2016:
Global 5.4% p.a.
Africa 10.4% p.a.



The Fisheries Governance Project

- => create a conducive environment for implementing the PFRS
- **Objective** => Enhance the institutional capacity of the fisheries and aquaculture sector for increased benefits to the Member States of African Union.
 - **Four main components:**
 - (i) Strengthen the institutional of the sector for effective governance
 - (ii) Support sustainable small-scale fisheries management and development
 - (iii) Promote sustainable commercial aquaculture development
 - (iv) Improve evidence based decision making.



The Fisheries Governance Project

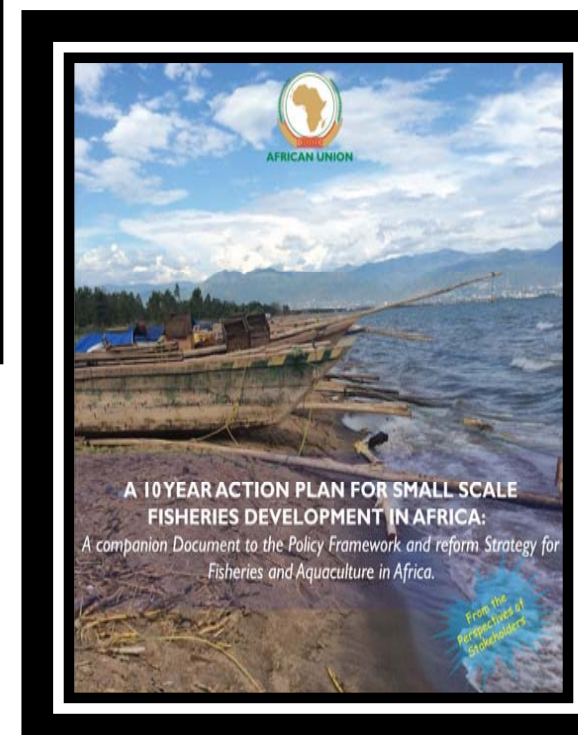
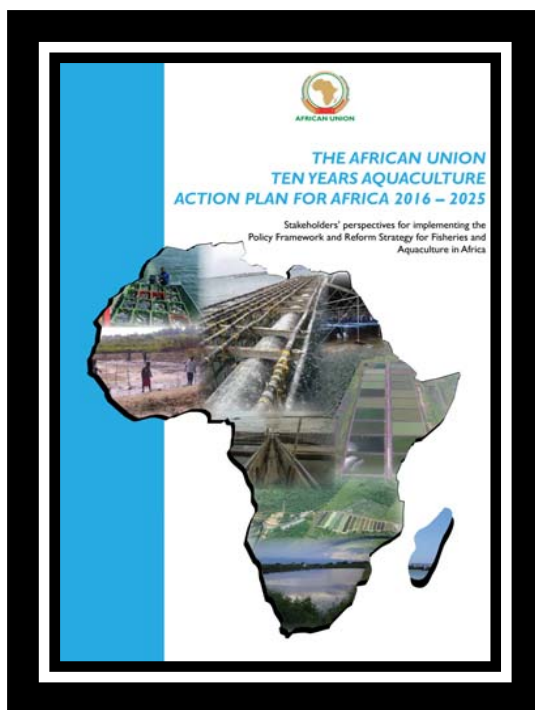
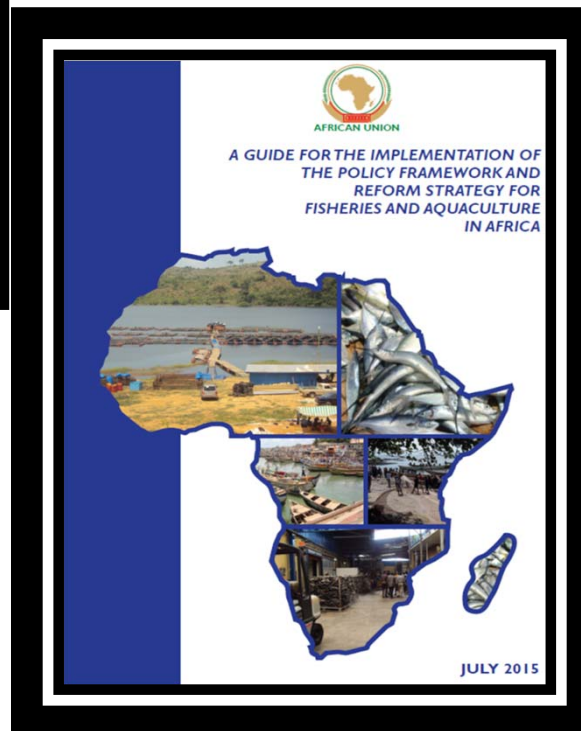
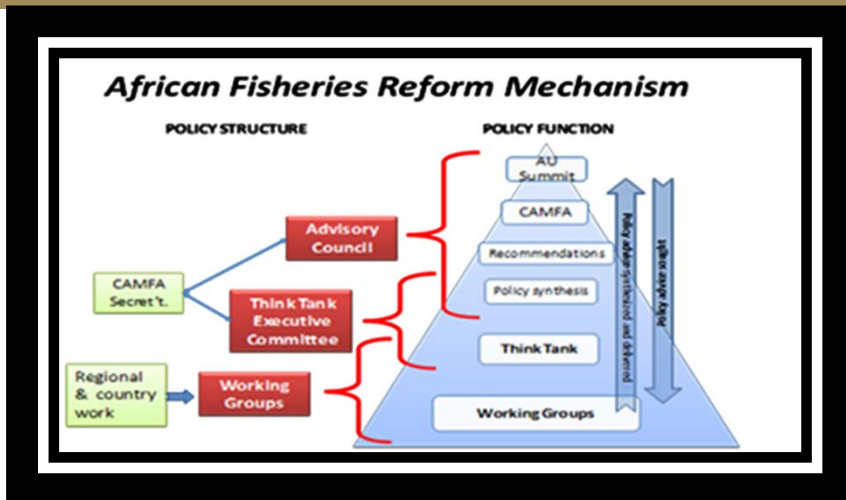
... emerging TAADs (EUS, WSSV, TiLV, KHV,), expansion of aquaculture, increased levels of transboundary fish trade...

Result 1: frameworks for sustainable fisheries management improved

1. Enhance capacities for fisheries diseases surveillance and control, timely collection, analysis and sharing of accurate sanitary information and biosecurity
2. Strengthen capacities for Access to Market



Implementing PFRS Tools





The approach:

- ... put in place robust biosecurity frameworks as a mechanism to:
- (i) Safeguard aquatic animal production (*hence livelihoods, food and nutrition security*),
 - (ii) Protect the environment from problems associated with aquatic diseases, pests and plants.
 - (iii) Improve access to markets (*livelihoods, food and nutrition security*)
 - (iv) Ensure food safety (*hence human health*),



The approach

Reg/int

Protect industry, rules and mechanisms of trade

- **Competence levels of governments to implement legislation, surveillance and testing**
- **Compliance to OIE Aquatic Code**

National

Sanitary status, surveillance

- **Establish sanitary status and compartments**
- **Develop and implement national biosecurity protocols (trade, production).**
- **response to disease outbreaks**

Producer

Implementation => BMPs

- **Develop and implement appropriate SOPs/BMPs**



Think tank recommended actions:

No	Priority Activities	Milestones	Mid-Term Success Indicators	2025 Targets	Entity Responsible	Budget Estimate	Time Frame (2016-2025)
4.	TRANS-BOUNDARY ECOSYSTEM MANAGEMENT FOR AQUACULTURE						
4.1.	Environmental Management						
	Regional Activities						
	(i) Develop and implement regional environment management frameworks for aquaculture	• Validate and endorse draft regional environment management frameworks for aquaculture by 2017	• All RECS endorse regional environment management frameworks for aquaculture by 2017	All RECs implementing regional environment management frameworks and BMPs for commercial aquaculture in shared ecosystems	AUC/DREA MS RECS/RFBs Development Partners Private Sector CBOs/NSAs		ST
	National Activities						
	(i) Adopt, mainstream and implement regional environment management frameworks for aquaculture into national policies and plans	• Adopt, mainstream and implement regional aquaculture environment management frameworks into national policy by 2019	• 20% of MS mainstream regional aquaculture environment management frameworks into their national policies by 2020	60% of MS adapt national policies to regional aquaculture environment frameworks and guidelines Environmental monitoring of commercial aquaculture operation in 50% of MS	AUC/DREA MS RECS/RFBs Development Partners Private Sector CBOs/NSAs		ST
4.2	Aquatic Animal Disease Control and Surveillance						
	Regional Activities						
	(i) Develop and implement regional aquatic animal health management, surveillance and biosecurity control frameworks for aquaculture	• Develop and endorse regional aquatic animal health, surveillance and biosecurity control frameworks for aquaculture by 2017	• All RECS endorse regional disease control and surveillance frameworks 2017	Adoption and implementation of Regional Aquatic animal disease control and surveillance frameworks and guidelines in all RECs.	AUC/DREA MS RECS/RFBs Development Partners Private Sector CBOs/NSAs		ST
	National Activities						
	(i) Adopt, mainstream and implement regional biosecurity and fish disease control frameworks for aquaculture into national policies and plans	• Adopt, mainstream and implement regional aquaculture biosecurity frameworks into national policy by 2019	• 30% of MS mainstream regional aquatic animal disease control frameworks into their national policies and plans for aquaculture by 2019	60% of MS implementing aquatic animal disease control and surveillance policies, plans and strategies that are harmonised with the regional aquatic animal disease control and surveillance frameworks	AUC/DREA MS RECS/RFBs Development Partners Private Sector CBOs/NSAs		ST



FISHGOV approach

• **Map the aquatic animal diseases**

• **Assess the aquatic animal disease diagnostic and surveillance capacity of member states.**

• **Train animal health practitioners and managers to improve their knowledge and skills in aquatic animal health management and biosecurity control.**

• **Develop continental, regional and national aquatic animal health biosecurity frameworks and plans**

• **Establish continental database and network of aquatic animal health personnel and facilities.**



I. Mapping of Aquatic Animal Diseases

Objectives

1. Determine the current status of aquatic animal diseases within countries.
2. Establish the production systems (fisheries and/or aquaculture) where they occurred.
3. Establish factors that influenced the occurrence and spread of these diseases.
4. Establish the geographical areas where these diseases have occurred.



ETUDE CARTOGRAPHIQUE DES
MALADIES DES ANIMAUX AQUATIQUES EN AFRIQUE
REGION DE L'AFRIQUE CENTRALE



Findings of the Mapping Studies

1. Issues with the quality of information, status of reporting and level of public awareness
2. Pathogens of potential economic significance and production systems at risk
3. Capacity building
4. Approaches, policies and strategies for aquatic animal disease control



Findings – Quality of Information, Reporting and Public Awareness

- Most literature provided qualitative taxonomic information of potential pathogens
- Very little concrete documented information on whether or not, and under what circumstances these potential pathogens could have been responsible for observed aquatic animal disease incidences, except for aquatic animal notifiable diseases
- Reports of disease incidents provided little information on the type of surveillance, diagnostic tests, quarantine and control/eradication protocols
- Most information was in custody the Universities was generally not shared with the responsible national departments, field practitioners or producers
- No national fisheries disease data collection systems on the ground in most countries, nor tool (data) entry templates. Some countries enter on WAHIS
- National focal points on fish disease not active.



Findings – Quality of Information, Reporting and Public Awareness

=> need for improved diagnostic services to ascertain causes of disease

=> appropriate sets of harmonized data criteria facilitate the surveillance and development of evidence-based disease control strategies supportive to Africa's rapidly growing and transitioning fisheries and aquaculture sectors.

=> Improve networking and sharing of information as current status resulted in the low levels of public awareness and response even in crises.

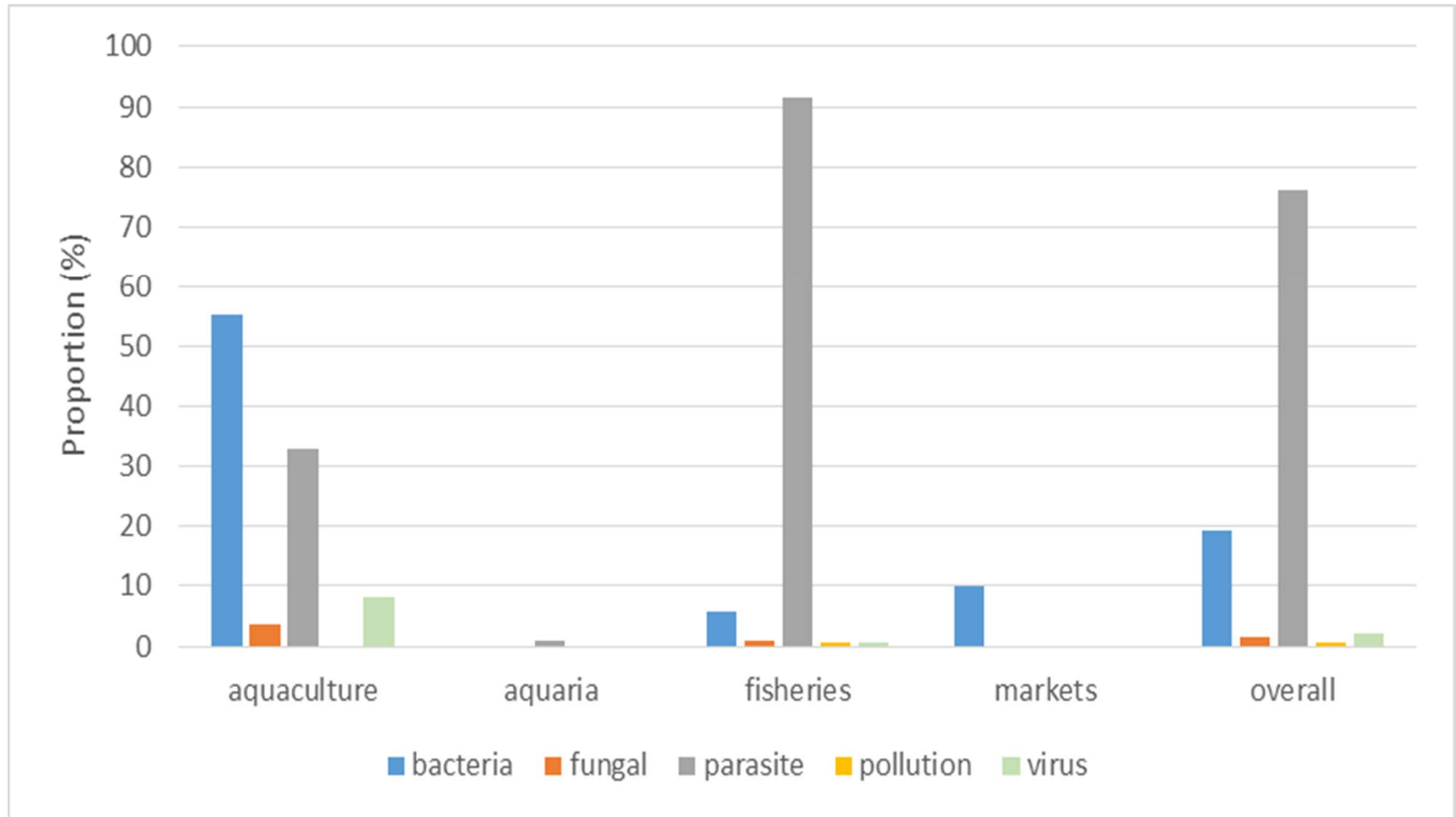


Findings – Pathogens of Economic Significance

- Most of the work on aquatic animal pathogens has been done in the fisheries (wild).
- Only 5% of the total number of pathogens listed in the study were linked to the occurrence of disease
- parasites overall constituted the dominant category of potential pathogens identified on aquatic animals
- Differences between the different production systems of the value-chain

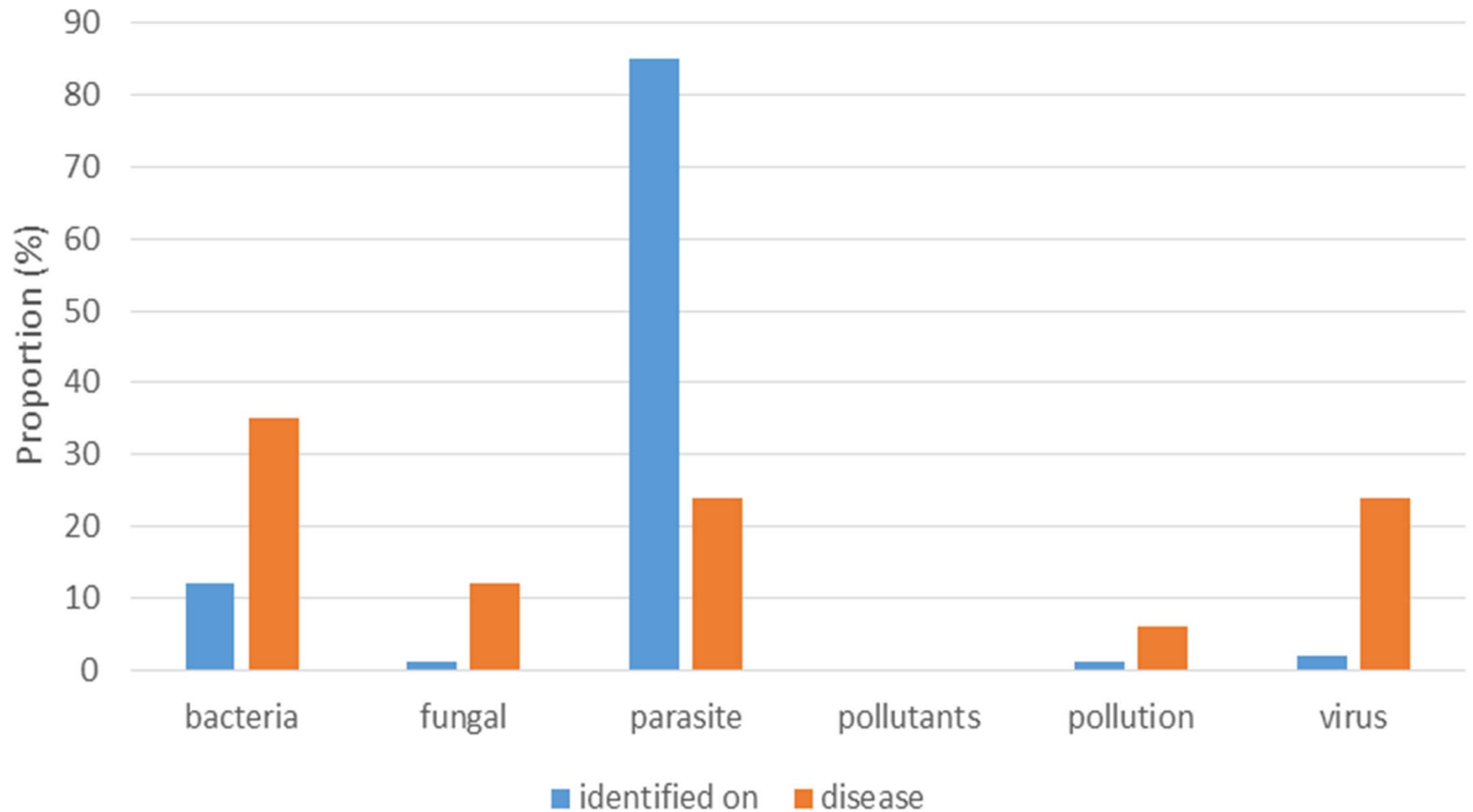


Potential pathogen vs. production system



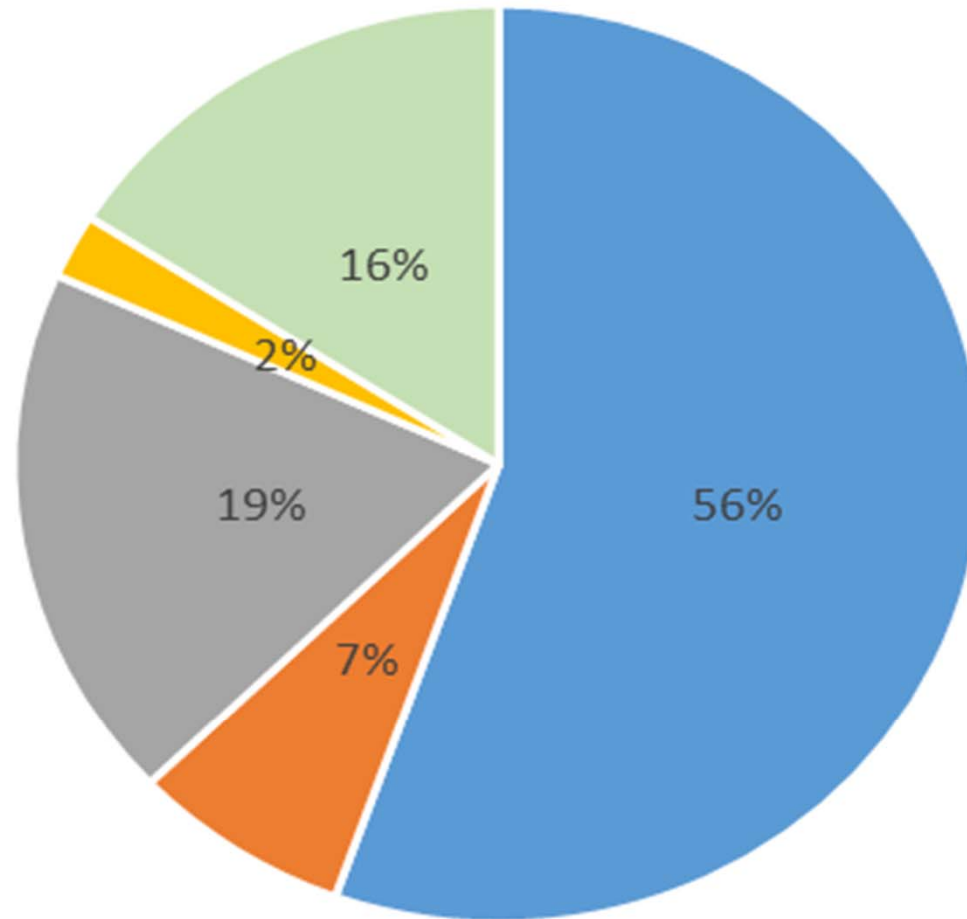


Pathogen Group identified vs. cited with disease





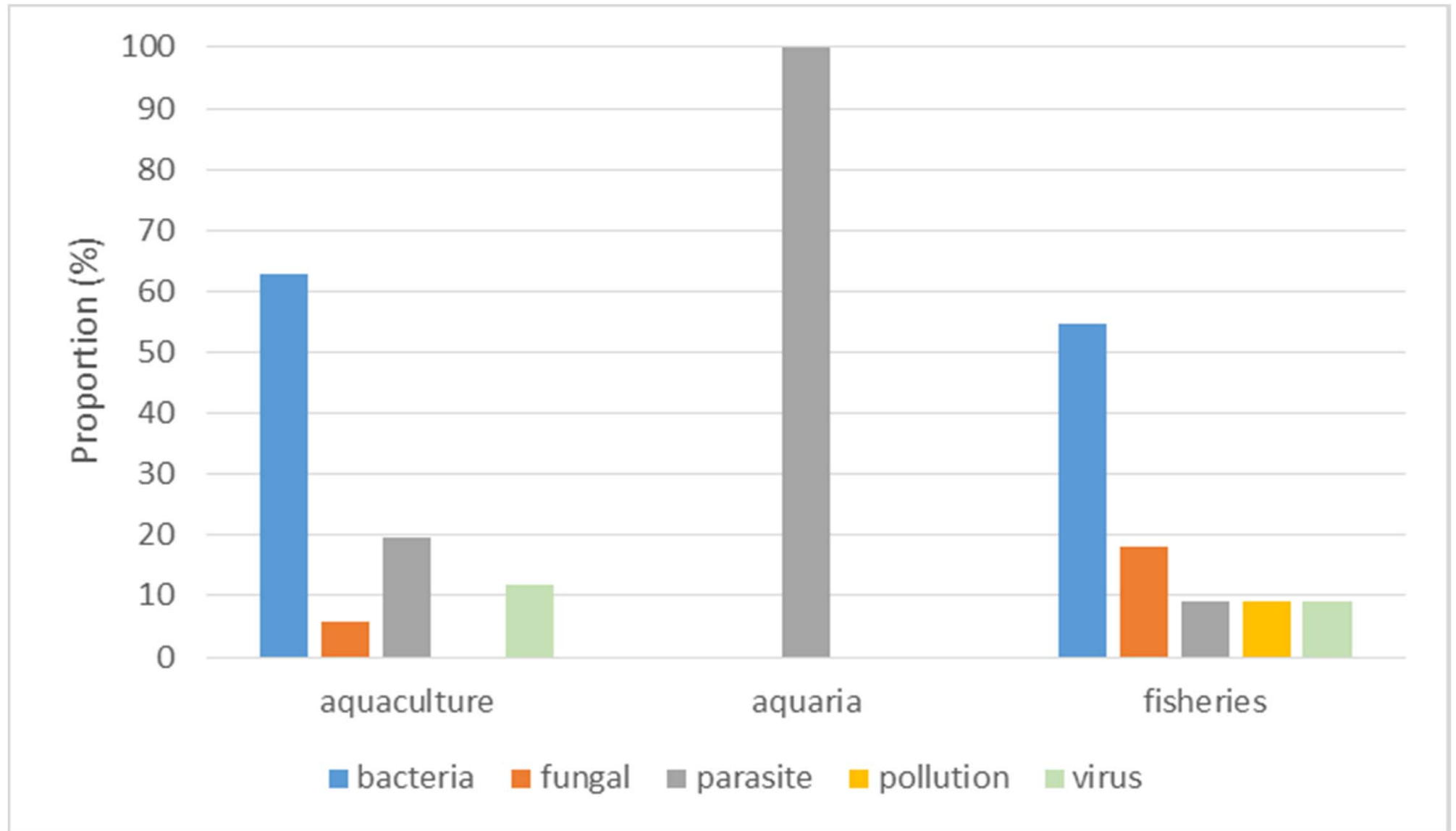
Pathogens associated with disease incidence



■ bacteria ■ fungal ■ parasite ■ pollution ■ virus



Causes of disease in the different production systems





Findings – Capacity Building

- need to raise human, institutional and infrastructural capacity for aquatic animal disease control
- strategy - build on existing strong and efficient veterinary service and laboratory network that has the capacity to detect both known and unknown pathogens early in order to identify pathogens with potential for severe morbidity and mortality
- Regional centers of excellence/reference labs for more specialized work
- strengthen the capacity of all stake-holders right across the value-chain (i.e. producers, processors, traders, consumers, professionals, public, etc.) and respective institutional linkages between all actors

LEVEL I: Observation of the Animal and Environment

1. Farm, wild, hobbyist

- Species, cohort characteristics eg. age, source, etc.
- Environmental and human activity changes within watershed and around farm, climatic and weather changes,
- farm location, farm set up, water source, water reticulation on-farm, quality of water at source
- details of affected production units (e.g. ponds, tanks, etc.)

2. Evaluation of affected population and animals

- species and age affected
- fish behaviour,
- history of feeds and feeding, water quality in units, disease onset and progression, production management activities, previous treatments

3. Evaluation of affected animals

- selection of appropriate animals from population with varying progression of clinical signs
- Observation of clinical signs (behaviour e.g. loss of schooling behaviour and appetite, external lesions, changes in body colour, lesions, etc.)
- Observation of gross external and internal pathological signs (e.g. nature of skin lesions), external and internal parasites, etc.
- tentative diagnosis and differentials

LEVEL II: Samples for Traditional Laboratory Diagnosis (parasitology, bacteriology, mycology, virology, histopathology first level labs for traditional tests)

1. Based on diagnoses prepare required selected samples for laboratory analyses (live/preserved animal specimens, feed, water quality, tissues, etc.).
2. Label all samples
3. Ship to laboratory (if possible call prior)
4. Provide case details to lab and lab requests
5. Institute control measures and supportive therapy (e.g. ensuring optimal water quality, minimise handling, etc.) while awaiting results

Suspect notifiable diseases (LEVEL III and reference laboratories*)

1. Notify relevant authority through official channels
2. Follow procedures for control. Usually national central animal health diagnostic laboratory will follow-up with investigations and advise further.

LEVEL III: Advanced confirmatory techniques PCR, EM, Immunology, molecular biology

Confirmed Diagnosis.

Institute appropriate control measures (treatment, management changes, disinfection of premises, other biosecurity measures, etc.). In case of a notifiable disease this may include instituting of quarantines, etc. When notifiable disease institute the recommended control measures



Summary of outcomes and recommendations from mapping studies

Outcomes and Recommendations

1. Gave information on reported diseases
2. Revealed and clarified the nature of gaps in aquatic animal disease control
 - the information available was highly variable and not of the quality that permitted epidemiological assessment for disease control and surveillance.
 - Hardly any systems on the ground linking and coordinating the aquatic production and health units both at regional and national level.
 - Strengthen data collection
 - Improve performance of National focal points on fish disease.
3. Informed ensuing training and development of mechanisms for regional aquatic animal disease control



Training of Veterinarians and Fisheries Officers in Aquatic Animal Disease Control

Objectives

1. Impart practical knowledge and skills to veterinarians to improve their capacity to diagnoses, prevention and control of fish diseases within their respective regions.
2. Strengthen the capacity of regional and national veterinary services to supervise and implement fish disease prevention and control measures.





Training of Veterinarians and Fisheries Officers in Aquatic Animal Disease Control

Outcomes and Participants Recommendations

1. Tailor manual to (a) veterinarians (b) Fish Technicians and Extension Services (c) producers
2. Develop / revise the regulatory and legislative framework for the diagnosis, prevention and control of aquatic animal diseases
3. Improve data collection and transmission of aquatic disease data should be in conformity with AU-IBAR and OIE requirements for epidemiological surveillance
4. Improve collaboration and exchange of information between veterinary and fisheries departments
5. Revise the curriculum in veterinary and science training schools
6. Capitalize on existing animal health diagnostic infrastructure and disease control mechanisms as well as establish reference laboratories (eg. laboratory and epidemiology networks)
7. Develop an approved list of appropriate aquatic animal veterinary drugs, disinfectants and medications for the continent (to be coordinated by AU-IBAR in collaboration with RECs and MS);
8. AU-IBAR to coordinate the compilation of a continental list of reputable suppliers for aquatic animal diagnostic kits and other veterinary products for aquatic animal production and disease control.



Aquatic Animal Health Data Collection

- Improve reporting to AU-IBAR and OIE and participation in OIE deliberations
- Harmonize data collection and reporting mechanisms between MS and RECs
- Revised aquatic animal health module in ARIS to support the continent's needs
 - Young growing industry
 - Both endemic and notifiable diseases
 - Production systems
 - Environmental conditions
 - Movement of fish and fish products

AU-IBAR

Specifications

Animal Resource Information System

COMMON POSITIONS OF AFRICA'S OIE DELEGATES TO BE PRESENTED AT THE 85th WORLD
ASSEMBLY OF DELEGATES OF THE OIE: PARIS, FRANCE: 21 to 26 MAY 2017

Aquatic Code Commission - Wednesday 24th May from 4.45 pm to 6.15 pm						
STANDARD	ANNEX	CHAPTER	PROPOSED FOR ADOPTION	AFRICA POSITION	SPEAKER	ALTERNATE



Regional Aquatic Animal Health Networks and integrate as component of RAHN

Objectives

1. Improve the sharing of information on aquatic animal diseases, their surveillance and control, particularly with regard to TAADs.
2. Enhance the capacity for regional co-ordination in aquatic animal disease control, including in terms of response to outbreaks of disease.
3. Strengthen the capacity for development of harmonized epidemiological reporting and laboratory information management systems.
4. Collate information to advice industry and policy on regional aquatic animal health capabilities as well as identify regional R&D needs and strategies.
5. Build Public awareness.

=> to be anchored into the RECs



Aquatic Animal Welfare



AFRICAN UNION
INTERAFRICAN BUREAU
FOR ANIMAL RESOURCES

ANIMAL WELFARE STRATEGY FOR AFRICA (AWSA)

EXECUTIVE SUMMARY



Integrating the Welfare Interests of Human and Animals in Africa



AFRICAN
UNION
الاتحاد الأفريقي



UNION AFRICAINE
UNIÃO AFRICANA



Aquatic Animal Welfare

Role of Animal Welfare in
Transforming Africa's Development

Continental Conference on Animal
Welfare – Nairobi, Kenya, 30
November/1 December, 2015



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Rationale for Aquatic Animal Welfare

Develop value-chains and domestic, regional and international market access while meeting welfare expectations

Ensuring:

- ✓ **Optimal animal health & minimizing disease**
(implementing biosecurity)
- ✓ **Sufficient, safe & wholesome aquatic animal food production**
(implementing food safety – HACCP, product appeal)
- ✓ **Economically sustainable development in the African context**
(implementing practical, efficient & realistic approaches)



Regional Aquatic Animal Disease Control Frameworks

Objectives:

1. Provide a mechanism to protect the industry and environment against threats from aquatic diseases and pests.
2. Establish harmonised rules and mechanisms of trade between countries producing and trading similar aquatic animal products based on regional and international standards (i.e. implementation of OIE, FAO standards, data collection on aquatic animal diseases (ARIS))
3. Provide guidance for the development and implementation of national disease control frameworks and plan, notably in terms of:
 1. Defining national aquatic animal disease biosecurity objectives, scope, expected outcomes and key principles (pillars).
 2. Developing national systems that will protect national aquatic animal industries, the aquatic environment and economies against threats from aquatic diseases and pests.

=> *to be anchored into the RECs*

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Regional Aquatic Animal Disease Control Frameworks and manuals

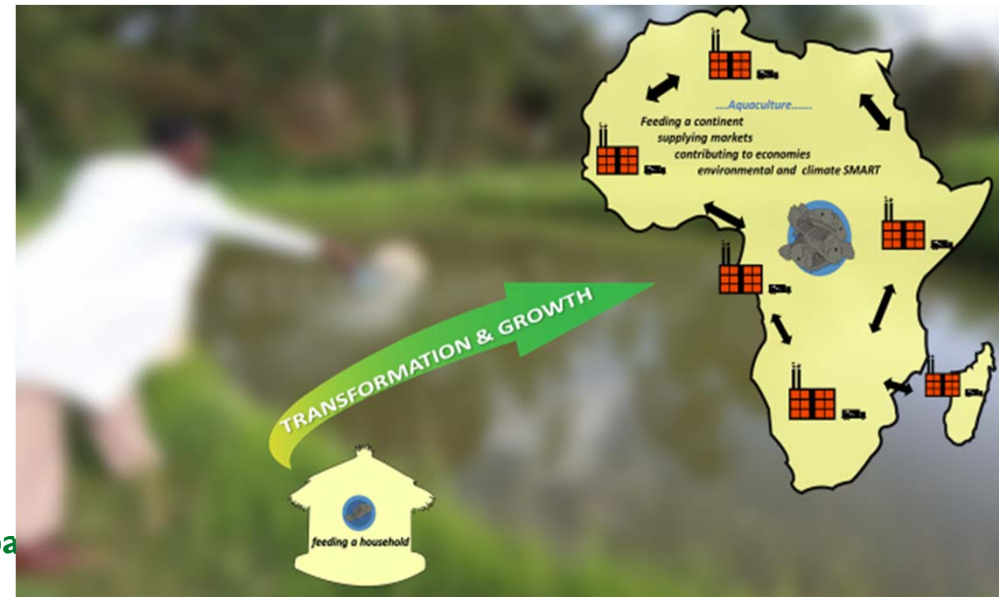
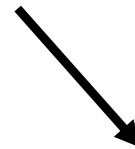
Issues	Guidelines Developed	Expected Outcomes
General lack of capacity for the detection, control and surveillance of aquatic animal diseases in Africa	<i>Training and field manuals on the detection and control of aquatic animal diseases in Africa</i>	<ol style="list-style-type: none">1. Reference manuals to guide professional and producers respectively in the detection and control of aquatic animal diseases.2. Improved reporting and response to aquatic animal diseases3. Increased awareness of aquatic animal diseases and their impacts
Weak institutional capacity for the control and surveillance of endemic and transboundary aquatic animal diseases	<i>Regional frameworks for the control of aquatic animal diseases in Africa</i>	<ol style="list-style-type: none">1. Region specific framework to guide regional coherence and cooperation in the detection, control and epidemio-surveillance of aquatic animal diseases2. Enhanced and effective biosecurity controls to protect Africa's aquatic animal production systems from threats attributable to diseases, pests and invasive species.3. Safe aquatic animal products4. Safe trade of aquatic animals and their products and improved access to markets5. Improved sharing of phyto-sanitary information among stakeholders



Access to markets

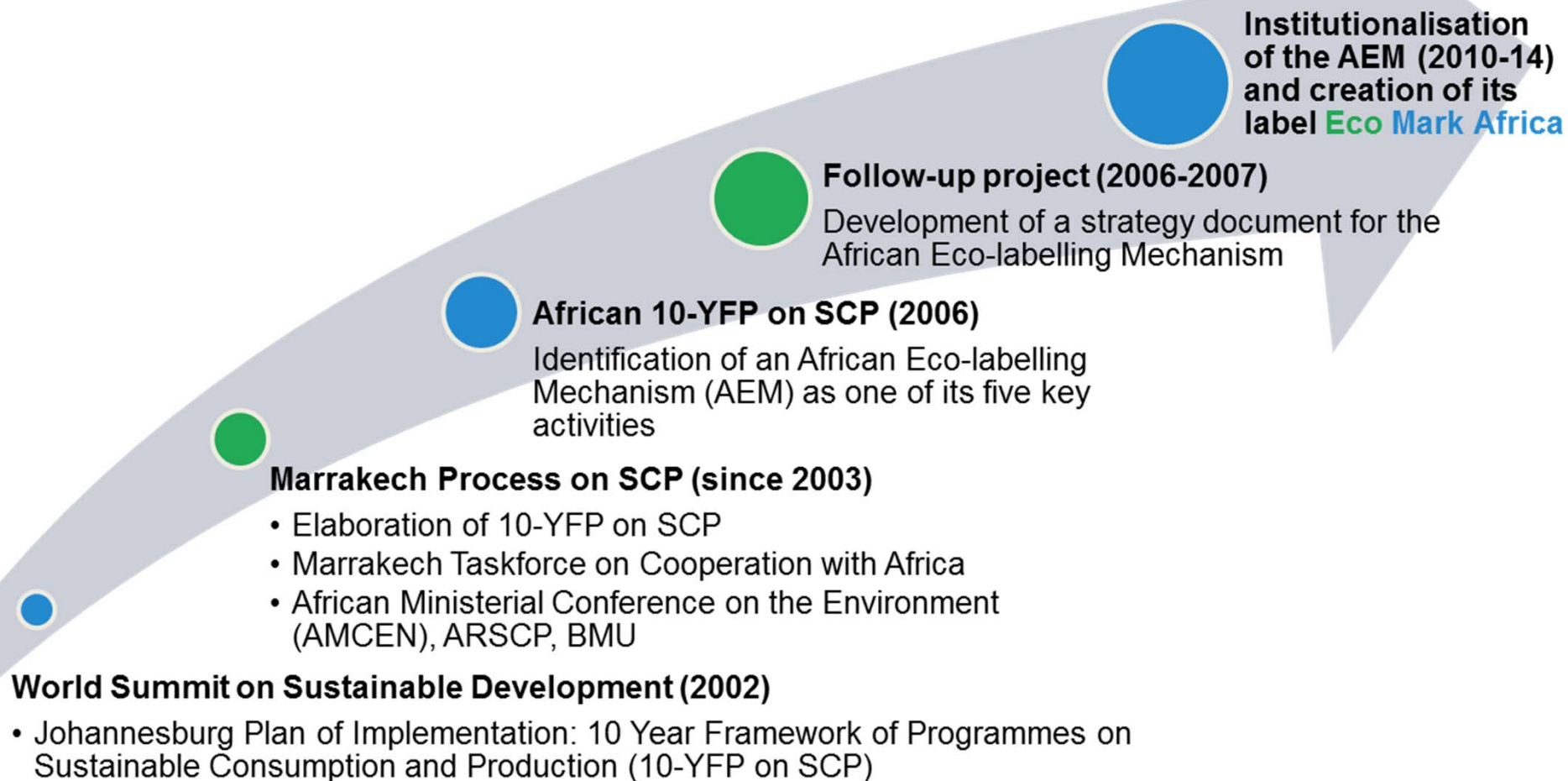


**Wholesome and competitive products
....safe trade
.....ecosystem integrity**





Enhancing Access to Markets for the Sector: Africa's Eco-Label 'Eco Mark Africa'





Enhancing Access to Markets for the Sector: Africa's Eco-Label 'Eco Mark Africa'

Principles	Agriculture	Fisheries	Forestry	Tourism
Legal Compliance	✓	✓	✓	✓
S & E Management System	✓	✓	✓	✓
Good Social Practices	✓	✓	✓	✓
Conservation of Biodiversity	✓		✓	✓
Stock Management		✓		
Soil Management	✓	✓		
Water Management	✓	✓	✓	
Energy Efficiency	✓	✓	✓	✓
Air and GHG Management	✓	✓	✓	✓
Pesticide Management	✓	✓	✓	
Waste Management	✓	✓	✓	✓
Good Business Practices	✓	✓	✓	✓



Principals of the 'Eco Mark Africa' aquaculture and fisheries standards

- **Principle 1:** Legal compliance
- **Principle 2:** Responsible environmental management
- **Principle 3:** Conserve water resources
- **Principle 4:** Conserve species biodiversity and wild populations
- **Principle 5:** Use resources responsibly
- **Principle 6:** Biosecurity and fish welfare
- **Principle 7:** Be socially responsible
- **Principle 8:** Economic sustainability



The relevance of aquatic animal disease control, maintaining biosecurity and thus the significance of competent and effective OIE aquatic animal focal points cannot be understated if the objectives of PFRS, and consequently the AU's CAADP, AIMS 2050 and Agenda 2063 are to be achieved and sustained.

Thank You



AU-IBAR: Providing leadership in the development of animal resources for Africa