



Role of Research Institutes in Mapping Knowledge on Fish Diseases in Southern Africa Aquaculture

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Background



- Development of SADC AAH Strategy(2016-2026)
- Continental mapping of fish diseases in RECs, including SADC (AU-IBAR, 2016)
- Implementation of SADC AAH Strategy:
 - Active surveillance of EUS and other listed disease outbreaks
 - Domestication and alignment of regional strategy by MS
 - Revision and updating of fish diseases map
 - Development of AAH training resources
- Role of research institutions:
 - Extensive data generation and processing
 - Capacity building
 - Multidisciplinary collaboration and funding opportunities
 - Centres of excellence / reference & collaborating laboratories





Objectives of Presentation



- To address the following section of the SADC Regional AAH Strategy, *viz a viz* the proposed network:

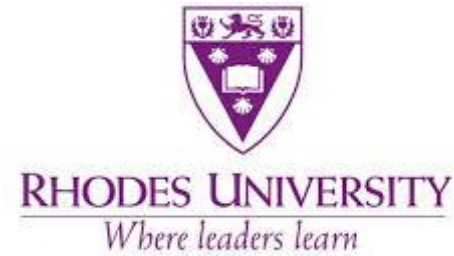
- **4. PROGRAMME COMPONENTS**

- ***4.8 Programme 8: Research and Development***

- *Activity 26: Identify and prioritize aquatic animal health research and development programmes for the region and nationally (including research on emerging pathogens)*



Some AAH Research Centres



LUANAR



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Launch of the Regional Aquatic Animal Health
Network for Southern Africa (RAAHN-SA)
Lusaka, Zambia (23-25 July 2023)





Centres of Excellence



AFRICA CENTRE OF EXCELLENCE FOR INFECTIOUS DISEASES OF HUMANS AND ANIMALS (ACEIDHA)

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Programmes

- ❖ Doctor of Philosophy in Emerging and Zoonotic Bacterial Diseases Including Antimicrobial Resistance
- ❖ Doctor of Philosophy in Emerging and Zoonotic Viral Diseases
- ❖ Doctor of Philosophy in Neglected Tropical Diseases
- ❖ Doctor of Philosophy in Vector-borne Zoonotic Diseases
- ❖ Master of Science in Ecology & Ecosystems Health
- ❖ Master of Science in Infectious Diseases and Zoonosis
- ❖ Master of Science in One Health Analytical Epidemiology
- ❖ Master of Science in One Health Food Safety
- ❖ Master of Science in One Health Food Safety & Risk Analysis
- ❖ Master of Science in One Health Laboratory diagnostics

Africa Centre of Excellence for Infectious Diseases of
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**SOKOINE
UNIVERSITY OF
AGRICULTURE**

**Southern African Center for
Infectious Disease Surveillance
(SACIDS) - Africa Center of
Excellence for Infectious Diseases of
Humans and Animals in Southern
and Eastern Africa (SACIDS-ACE)**



**AQUACULTURE AND FISHERIES SCIENCE
(AquaFish)
CENTER OF EXCELLENCE**



**Joint Launch Workshop (AquaFish & ACEPHEM)
BICC, Lilongwe, Malawi
1st March, 2017**



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Topical areas for multidisciplinary collaboration & funding



- One Health – transboundary zoonotic AADs (inland and coastal)
- Implementing biosecurity measures in aquaculture
- Screening and surveillance of notifiable diseases:
 - *Batrachochytridium dendrobatidis* (Amphibia)
 - *Aphanomyces astaci* (Crayfish)
 - EUS, TiLV, IHNV (Fish)
- Antimicrobial resistance (AMR)
- Cross cutting issues in AAH:
 - Food safety/risk analysis
 - Water/environmental quality
 - Livelihoods, gender, policy, etc.





Contents lists available at [ScienceDirect](#)

Genomics

journal homepage: www.elsevier.com/locate/ygeno



Original Article

Mosaic or melting pot: The use of monogeneans as a biological tag and magnifying glass to discriminate introduced populations of Nile tilapia in sub-Saharan Africa[☆]

Mare Geraerts^{a,*}, Tine Huyse^b, Maxwell Barson^{c,d,e}, Hassan Bassirou^f, Charles F. Bilong Bilong^g, Arnold R. Bitja Nyom^{f,h}, Auguste Chocha Mandaⁱ, Armando J. Cruz-Laufer^a, Clément Kalombo Kabalikaⁱ, Gyrhaiss Kapepula Kasembeleⁱ, Fidel Muterezi Bukinga^j, Samuel Njom^f, Tom Artois^a, Maarten P.M. Vanhove^{a,k}



Contents lists available at [ScienceDirect](#)

International Journal for Parasitology

journal homepage: www.elsevier.com/locate/ijpara



Sharing is caring? Barcoding suggests co-introduction of dactylogyrid monogeneans with Nile tilapia and transfer towards native tilapias in sub-Saharan Africa

Mare Geraerts^{a,*}, Tine Huyse^{b,c}, Maxwell Barson^{d,e,f}, Hassan Bassirou^g, Charles F. Bilong Bilong^h, Arnold R. Bitja Nyom^{g,i}, Auguste Chocha Manda^j, Armando J. Cruz-Laufer^a, Clément Kalombo Kabalika^j, Gyrhaiss Kapepula Kasembele^j, Fidel Muterezi Bukinga^k, Samuel Njom^g, Maarten Van Steenberge^{c,l}, Tom Artois^a, Maarten P.M. Vanhove^{a,c}



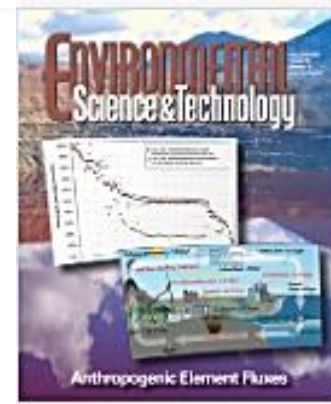


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Prevalence of Antibiotic Resistance Genes in the Bacterial Flora of Integrated Fish Farming Environments of Pakistan and Tanzania

Syed Q. A. Shah^{*†}, Duncan J. Colquhoun[‡], Hamisi L. Nikuli[§], and Henning Sørum[†]

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Towards One Health disease surveillance: The Southern African Centre for Infectious Disease Surveillance approach

Authors:

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Nick Short⁴
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Mark M. Rweyemamu¹

Africa has the highest burden of infectious diseases in the world and yet the least capacity for its risk management. It has therefore become increasingly important to search for 'fit-for-purpose' approaches to infectious disease surveillance and thereby targeted disease control. The fact that the majority of human infectious diseases are originally of animal origin means we have to consider One Health (OH) approaches which require inter-sectoral collaboration for custom-made infectious disease surveillance in the endemic settings of Africa. A baseline survey was conducted to assess the current status and performance of human and animal health surveillance systems and subsequently a strategy towards OH surveillance system was

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Regional Expertise in Fish Health



Veterinarians	Dr D. Huchzermeyer	Private – South Africa
	Prof D. Scharfe	Unive. Of Pretoria, South Africa
	Dr Marc Le Greumellec	Consultant - Mauritius
	Dr G. Taylor	Univ. of Pretoria – South Africa
	Dr. B. Spolander	Private – South Africa
	Dr. M. Essa	CSIR – South Africa
	Dr. S. Tabei	Amanzi Biosecurity – South Africa
	Dr M. Songe	Central Veterinary Lab - Zambia
	Prof M.B. Mudenda	University of Zambia
Scientists	Dr K. Christisson (parasitologist)	DFFE – South Africa (WOAH AAH Standards Commission member)
	Prof M. Barson (parasitologist)	University of Botswana (former WOAH AAH Standards Commission member)
Other Scientists	Parasitologists, microbiologists, biochemists, pathologists	Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe
Other Vets	AAH National Focal points	All SADC member states

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Recommendations



- Need for member states to adopt and internalize the SADC AAH strategy – prioritizing research
- Need for intraregional research clusters – making use of ACEs
- Networking events:
 - scientific conferences
 - Existing societies (WAS, PARSA, WaterNet, AASA)
- Capacity building:
 - Training programmes availed by SADC & partners
 - WOAH capacity building initiatives
 - Regional expertise, centres of excellence, reference laboratories.

