

WOAH Collaborative Centre Reports Activities 2023

Activities in 2023

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Centre Information

Title of WOA Collaborating Centre	Epidemiology and Risk Assessment of Aquatic Animal Diseases (Europe)
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Name Director of Institute (Responsible Official):	Øyvind Fylling-Jensen
Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):	Saraya Tavornpanich
Name of the writer:	Maria Fernanda Serrano De La Maria Cruz

TOR1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Category	Title of activity	Scope
Epidemiology, surveillance, risk assessment, (true)	Fish for Development program	Providing epidemiology knowledge and support for carrying out scientific studies and risk assessment: - "A baseline study to map the disease occurrence in tilapia farms on the Lake Volta", Ghana. - "Molecular epidemiology and current management of Infectious Spleen and Kidney Necrosis Virus (ISKNV) infection in Ghanaian cultured tilapia", Ghana - Field epidemiology and economics survey tools for Aquaculture in Ghana and Kenya (data collected and will be analysed in 2024) - Two missions to the facility Tilapia de l'est in Madagascar: a risk assessment of the biosecurity plan/-system was performed and a baseline study was done to look for possible pathogenic agents in fish farms population.
Training, capacity building (true)	Fish for Development program	- Providing trainings in disease diagnoses, epidemiological surveillance, Best Management Practices and farm level, biosecurity, outbreak investigation, risk assessment, and data analyses as part of Fish for Development program for building capacity and knowledge in health management and epidemiology of aquatic animal diseases for Competent Authorities as the Ministry of Fisheries

		and Aquaculture in Ghana, the Colombian Agricultural Institute in Colombia, and East and West Africa focusing on Productions of fresh-water fish (tilapia, catfish, and trout).
Aquatic animal diseases (true)	Fish for Development program	- Online seminar on diagnostics of Francicella in tilapia held online and support with the analysis of samples in the Norwegian Veterinary Institute Laboratory for the diagnosis of this agent in a case of unusual mortality in Colombia. - Knowledge exchanges and discussion regarding the outbreak situation of Streptococcus agalactiae strain Ia in Colombia, including the risk assessment and control measures that were taken by the ICA.

TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area
Quantification of aquaculture biosecurity measures	Development of tools for quantification of aquaculture biosecurity measures	Training and education

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOA?H?

Yes

Research need : 1

Please type the Research need: How to calculate/estimate and report to WAHIS in a more accurate way of the data related to outbreaks in Aquatic Animal Populations such as total of susceptible animals, total of disease /infected animals (with or without clinical signs), total of dead animals.

Relevance for WOAH Capacity Building, Standard Setting,

Relevance for the Codes or Manual Code,

Field Epidemiology and Surveillance,

Animal Category Aquatic,

Disease:

Kind of disease (Zoonosis, Transboundary diseases)

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer:

Notes:

Answer:

4. Did your Collaborating Centre maintain a network with other WOA?H Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOA?H CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Aquatic Collaborating Centre Network	Virtual	Africa Americas Asia and Pasific	Enhance the networking between WOA?H aquatic CC's and also between the aquatic CC's and others in the WOA?H

		Europe	community.
WOAH Collaborating Centre for Economics of Animal Health.	UK	Europe	The Centre is part of the Consortium for WOAHC CC for Economics of Animal Health, focusing on aquaculture.
WOAH Collaborating Centre for Epidemiology and Training on Emerging Avian Diseases.	Italy	Europe	The Centre has been involved as the external advisor of the project "Strengthening Capacity on Aquatic Animal Health and Epidemiological Surveillance (AquaStrength)" with Scientific Coordinator Dr. Amedeo Manfrin and Project Manager Dr. Nicola Ferre
Network of Aquaculture Centres in Asia-Pacific (NACA)	Thailand	Asia and Pasific	A member of the Centre is co-opted member and presented at the annual meeting of the Asia Regional Advisory Group on Aquatic Animal Health.
WorldFish	Malaysia	Africa Asia and Pasific	Collaboration in a Capacity Building project AquaHealthAfrica (AHA)
FAO	Italy	Europe	Collaboration with Sub-commission in aquaculture as a technical working group in the development of PMP/AB
The Royal Norwegian Society for Development (Norges Vel)	Norway	Africa	To support implementation of farm-level biosecurity and surveillance program in Tilapia production in Mozambique and Madagascar.

TOR4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAHC Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOAHC CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
COST (European Cooperation in Science and Technology).	EU	Europe	Participating in BETTER (Biosecurity Enhanced Through Training Evaluation and Raising Awareness) COST Action 20103 to reduce the risk of infectious disease introduction and spread by improving implementation of biosecurity measures in animal production systems both Terrestrials and Aquatics.

COST (European Cooperation in Science and Technology).	EU	Europe	A core group member in the HARMONY COST Action 18208 (the Novel tools for test evaluation and disease prevalence estimation) to coordinate and promote the implementation of Bayesian Latent Class Models (BLCMs) through networking and knowledge transfer.
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TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOA?H?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Dr. Saraya Tavornpanich	Technical advice	Technical Committee Member, Aquatic Middle East Network (AQMENET)
Dr. Saraya Tavornpanich	Technical advice	Expert Group to the WOA?H Observatory
Dr. Kristine Gismervik	Contribute to a talk at Regional Workshop for WOA?H National Focal Points for Aquatic Animals IV Cycle, Europe	"Fish welfare from farm to fork - Welfare indicators in use in Norway

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

Share expertise knowledge regarding of the outbreak situation of Streptococcus agalactiae strain Ia in Colombia, including the risk assessment and control measures that were taken by the Instituto Colombiano Agropecuario - ICA

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA?H, to personnel from WOA?H Members?

Yes

a) Technical visit : 21

b) Seminars : 13

c) Hands-on training courses: 122

d) Internships (>1 month) : 0

TYPE OF TECHNICAL TRAINING PROVIDED (A, B, C OR D)	CONTENT	COUNTRY OF ORIGIN OF THE EXPERT(S) PROVIDED WITH TRAINING	NO. PARTICIPANTS FROM THE CORRESPONDING COUNTRY
A	Technical Visit at the Norwegian Veterinary Institute Laboratory in As, Norway, to strengthen the competence and capacity of the Instituto Colombiano Agropecuario - ICA to diagnose important fish diseases	Norway	4
A	Technical Visit at the Norwegian Veterinary Institute Laboratory in Bergen, Norway, to strengthen the competence and capacity of the Instituto Colombiano Agropecuario - ICA to diagnose important fish diseases –	Norway	17

	Pathology and bacteriology techniques.		
B	Monthly online seminar for master students participating in Aquatic Animal Health Africa (AHA) project including thesis progress presentations for peer discussions and technical feedback	Norway, Kenya, Ghana	13
C	Organized epidemiology, biosecurity and outbreak investigation courses in Nairobi (15-17th March) and in Accra (17-19th April) for key stakeholders.	Norway, Kenya, Ghana, South Africa	21
C	Training in epidemiology survey tool for data collection in Nairobi, Kenya (14-15th March) and Accra, Ghana (16-17th April) for key stakeholders.	Norway, Egypt, France, Malaysia	37
C	Two capacity building training sessions of stakeholders from East and West Africa at Abbassa, Egypt with 21 participants in March and 25 participants in September	Norway, Egypt, Kenya, Ghana	46
C	Training course in fish autopsy and sampling for disease investigation	Norway, Egypt	18

TOR8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?H

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	Participation in the 2nd Aquaculture Africa Conference (AFRAQ23) held in Lusaka (13-16th November)	African Chapter of the World Aquaculture Society (WAS-AC)	2023-11-13	Lusaka, Zambia	1200
International	3rd Global conference in Aquatic Animal Epidemiology (AquaEpi III).	Indian Council of Agricultural Research (ICAR), New Delhi.	2023-11-29	Lucknow, India	200
International	Regional Workshop for WOA National Focal Points for Aquatic Animals IV Cycle	WOAH	2023-10-18	Chioggia (VE), Italy	55
International	Aquatic Middle East Network (AQMENET) Technical Committee meeting	WOAH	2023-06-06	Dharan, KSA	30
International	Regional Aquatic Animal Health Laboratory Network for Africa (RAAHLN-AF)	WOAH	2023-12-05	Pretoria, South Africa	100

TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA?H that may be useful to Members of WOA?H

a) Articles published in peer-reviewed journals:

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- Aydin A, Sudagidan M, Mamatova Z, Yurt MNZ, Ozalp VC, Zornu J, Tavornpanich S, Brun E. (2023) Bacterial Skin Microbiota of Seabass from Aegean Fish Farms and Antibiotic Susceptibility of Psychrotrophic *Pseudomonas*. *Foods*. 2023; 12(10):1956. <https://doi.org/10.3390/foods12101956>
- Zornu J, Tavornpanich S, Brun E, van Zwieten PAM, van de Leemput I, Appenteng P, Anchirinah J and Cudjoe KS (2023) Understanding tilapia mortalities and fish health management in Lake Volta: a systematic approach. *Front. Sustain. Food Syst.* 7:1249898. doi: 10.3389/fsufs.2023.1249898
- Zornu, J, Oyih, M., Binde, M., Viglo, J, Agbekpomu, H., Nkansa, M. et al. (2023) Stakeholder perspectives on the 2023 Ghana National Aquaculture Development Plan: an integration within the ecosystem approach framework. *Aquaculture, Fish and Fisheries*, 3, 459–471. <https://doi.org/10.1002/aff2.135>
- Zornu J, Tavornpanich S, Shima AE, Addo S, Nyaga P, Dverdal MJ, Norheim K, Brun E and Cudjoe KS (2023) Bridging knowledge gaps in fish health management through education, research, and biosecurity. *Front. Sustain. Food Syst.* 7:1256860. doi: 10.3389/fsufs.2023.1256860
- Dorotea T, Riuzzi G, Franzago E, Posen P, Tavornpanich S, Di Lorenzo A, Ferroni L, Martelli W, Mazzucato M, Soccio G, et al. (2023) A Scoping Review on GIS Technologies Applied to Farmed Fish Health Management. *Animals*; 13(22):3525. <https://doi.org/10.3390/ani13223525>

b) International conferences:

- Saraya Tavornpanich. Biosecurity measures in aquaculture, and how we quantify them. *The 6th Australasian Scientific Conference on Aquatic Animal Health and Biosecurity*. Cairns, Qld, Australia. 3-7 July, 2023
- Edgar Brun. Vaccination - an important tool in aquatic animal biosecurity. *AquaEpi III*. Lucknow. India. 29 November - 1 December, 2023.
- Saraya Tavornpanich. Utilizing benchmarking to assess and quantify biosecurity in aquaculture. *AquaEpi III*. Lucknow. India. 29 November - 1 December, 2023.
- Kristine Gismervik. Fish welfare from farm to fork - Understanding welfare indicators, and their use in Norway. *AquaEpi III*. Lucknow. India. 29 November - 1 December, 2023.

c) National conferences:

d) Other (Provide website address or link to appropriate information):

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

Members of the Centre attended workshops and trainings in the area of epidemiology and data analyses including: use of basic epidemiological tools, analysis of data, risk analysis, outbreak investigation, assessment of epidemiological surveillance and biosecurity in Aquatic Animals.

12. Additional comments regarding your report: