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World Class Science for the Marine and Freshwater Environment

FAO Reference Centre for Bivalve Mollusc Sanitation

Pan-African Regional Workshop on Bivalve Mollusc Sanitation

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The FAO Reference Centre for Bivalve Mollusc Sanitation is funded by the Department of Food, Environment and Rural Affairs (Defra) and the Food Standard's Agency.

Contents

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Foreword

This document summarises relevant information from the workshop hosted by Cefas as the FAO Reference Centre for Bivalve Mollusc Sanitation at the Ole-Sereni Hotel, Nairobi, Kenya 11th – 12th November 2019. It includes the workshop agenda, delegate contact information, workshop minutes, and the resolutions agreed by the meeting, plus feedback scores and comments from the delegates.

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Delegate List

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Agenda for the 1st Workshop of the FAO Reference Centre for Bivalve Mollusc Sanitation

Dates: 11th and 12th November 2019 (1.5 days)
Venue: Ole-Sereni Hotel, Nairobi, Kenya
Start time - 13:30 11th November End time – 17:00 12th November

Day one – Lunch 12:30 – 13:30. Meeting start time 13:30

- Security briefing of the Ole-Sereni Hotel (10 mins) [hotel]
- Opening (FAO and Government official)
- Welcome and introductions, to include round table introductions (30 mins) [EGG/RH]
- Introduction to the scope of the workshop (10 mins) [RH]
- Introduction to the role of the FAO Reference Centre for Bivalve Shellfish Sanitation and Cefas (30 mins) [RH]

Break 15:00 – 15:20

- Summary of questionnaire responses (20 mins) [RH]
- **Break out session 1** (4 groups each with a Cefas/FAO person to moderate and act as rapporteur) to identify and discuss questions.

Day two – Meeting start time 9:00

- Recap on yesterday, setting the scene for the day (10 mins) [JL]
- Overview of hazards associated with bivalve mollusc consumption – Hazard characterisation and risk assessment (20 - 30 mins) [JL]
- Overview of Growing Area Risk Profile (minus hazards), (20 - 30 mins) [MPH]

Break – 10:00 – 10:20

- **Break out session 2,** Developing an area risk profile

Lunch – 12:30 – 13:30

- Overview of Growing Area Assessment (20 - 30 mins) [MPH]
- Growing area monitoring and classification (20 - 30 mins) [RH]
- Sample collection, transport, analysis and quality of test results (20 - 30 mins) [LS]

Break 15:00 –15:20

- Plenary of what we have covered (10 mins) [MPH]
- Round table discussion on future plans, training provisions and support that the Reference Centre can provide (20 - 30 mins) [RH]
- Web resources (10 mins) [LS]
- Sources of additional funding UK and target countries [RH]
- Mechanisms to request technical assistance from FAO [EGG]
- Closing remarks from FAO [EGG]

Meeting close 17:00

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Minutes of the 1st Workshop of the FAO Reference Centre for Bivalve Mollusc Sanitation, 11th – 12th November, 2019

Opening
Dr Barrack Okoba, Resilient Food and Livelihood Systems Sub-Programme Leader for the FAO in Kenya welcomed the delegates to Kenya and the workshop, explained the FAO's rationale in appointing a Reference Centre (RC) for Bivalve Mollusc Sanitation, and in particular its role in development of the sector in Africa, providing an overview of the situation regarding bivalve production in Kenya for illustration. He expressed his wishes for a fruitful meeting.

Welcome and introductions, to include round table introductions
Round table introductions were carried out, and the delegates representing African countries provided in addition overviews of their countries' diverse bivalve production and monitoring capabilities and ambitions. Dr Esther Garrido Gamarro of the FAO Fisheries and Aquaculture department (project officer responsible for the RC) was unable to attend and forwarded her apologies.

Introduction to the scope of the workshop
Dr Rachel Hartnell (RH), as director of the RC introduced the agenda and outlined the central aim of the workshop, namely, to help the delegate countries achieve **enhanced production of safe bivalve molluscs.**

Introduction to the role of the FAO Reference Centre for Bivalve Shellfish Sanitation and Cefas
RH provided information on Cefas, as the organisation designated as the RC, including an overview of its international activities in a diverse range of countries around the globe. She further explained the importance of seafood in general and bivalves in particular in terms of helping to provide a sustainable and healthy source of food for the global population, whilst highlighting the various challenges in providing bivalves that are safe to eat, and to international trade in this commodity. In this context the role of Cefas as the FAO RC (supported by funding from the United Kingdom government) was outlined.

Summary of questionnaire responses
RH provided a summary of the responses given to a questionnaire distributed by the RC to delegate countries prior to the workshop. Responses were received from 9 different countries and covered topics such as bivalve production (volumes and species), exports, responsibility for and organisation of Official Controls, laboratory capacity and bivalve-related illnesses. In addition, the priority areas for assistance as identified by the responding countries were shown. RH explained that this priority list was used to help develop the workshop agenda.

Break out session 1
Delegates were divided into 4 groups of around 4 people (each led by a rapporteur from the RC). Delegates were asked to outline their National ambitions for bivalve production, and to identify the major challenges facing them in achieving these. Each group then agreed on a top 5 list of challenges to present to the other groups. After these were presented, each individual delegate could vote for the 5 challenges from the complete list of 20 that they felt deserved the highest prioritisation.

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Dr James Lowther (JL) from the RC presented the collated votes at the start of day 2 of the workshop. The most significant challenges emerging from the exercise were training (particularly for competent authorities and laboratories), funding and development of production systems (see Figure 1).

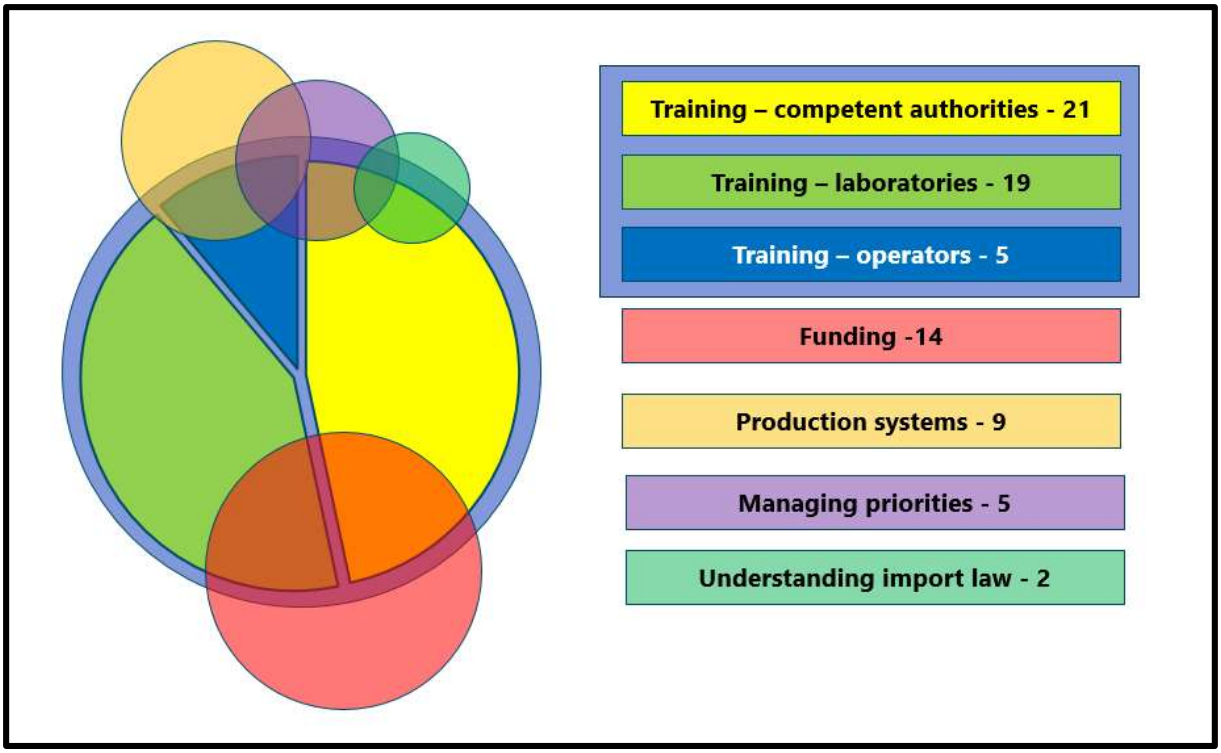

Figure 1; Visualisation of the results of break out session 1, showing the areas for prioritisation as identified in the exercise, and how they interact.

Overview of hazards associated with bivalve mollusc consumption – Hazard characterisation and risk assessment

JL provided information on the main hazards associated with bivalves, with particular emphasis on microbiological hazards including *Salmonella* spp., *Vibrio* spp., norovirus and hepatitis A virus. Evidence of the occurrence of these pathogens in Africa was presented. The need to assess the potential contribution of different hazards as part of the Growing Area Risk Profile (GARP) was presented, as was the possibility of including a hazard survey (direct testing of shellfish or water samples for pathogens) as part of the Growing Area Assessment (GAA). Delegates noted the importance of both microbiological and toxin (derived from harmful algal blooms (HABS)) hazards associated with bivalve production. JL agreed but identified that the scope of both this workshop and the reference laboratory was restricted to microbiological contaminants. It was further noted that the Cefas laboratory had substantial skills, knowledge and experience in HABS and would, potentially be able to provide limited assistance to FAO member countries subject to agreement.

Overview of Growing Area Risk Profile

Michelle Price-Hayward (MPH) of the RC provided an introduction to the concept and stages of the GARP as described in the FAO/WHO Technical Guidance for the Development of the Growing Area Aspects of Bivalve Mollusc Sanitation Programmes document. The GARP is the initial information

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gathering stage of the assessment of a newly proposed bivalve production area; the bases for making the go/no-go decision on a full assessment were described.

Break out session 2

The delegates were split into several small groups (each led by a rapporteur from the WRC) and provided with packages of documents pertaining to a hypothetical proposal for a new bivalve production area. The groups were asked to complete a GARP, assessing whether the supporting information in a variety of categories (e.g. legal framework, epidemiological data, hydrodynamics, programme capabilities etc. etc.) was of good, adequate or poor quality. Finally the groups decided whether they would recommend proceeding directly to the next stage of the assessment, whether more information was required at the initial stage, or whether it was clear from the information gathered that the area was not suitable for production (the go/no-go decision).

Overview of Growing Area Assessment

MPH gave a presentation on the requirements for a full GAA of a new production area, as described in the FAO/WHO Technical Guidance. This is a more in depth procedure than the GARP, involving a more through collection of information, plus the generation of new data through shoreline and hazard/indicator surveys. The different types of data analysis (descriptive/semi-quantitative/quantitative) were described, and the outcome, in terms of accurate mapping of the proposed area, and a primary monitoring plan including defined sampling points was explained.

Growing area monitoring and classification

RH explained the need for both primary and ongoing monitoring (using microbiological testing) of bivalve production areas, and the principles of classification (particularly the distinction between areas where bivalves are judged fit for consumption raw without the need for treatment after collection, and areas where treatment is required). The different benefits of monitoring using indicator organisms or pathogens, and shellfish flesh or water samples were detailed. The different choices in designing a monitoring and classification system were illustrated with reference to the United States (US) and European Union (EU) systems.

Sample collection, transport, analysis and quality of test results

Louise Stockley (LS) of the RC provided an overview on the requirements for sample collection, transport and analysis, in order to guarantee high quality information is used for monitoring and classification. The requirement for fixed protocols for sample collection and submission was explained. Technical details on reference and alternative methods for the indicator organisms *E. coli* and FRNA bacteriophage were given. Finally, the value of laboratory accreditation and regular proficiency testing in guaranteeing the quality of test results was demonstrated.

Closing

RH led a round-table discussion on the future plans of the RC, its potential to further assist the network of African countries with the development of shellfish sanitation programmes and potential funding routes to help with this aim. A short list of workshop resolutions was agreed by the delegates. The meeting concluded with RH thanking the delegates for their attendance and engagement with the RC in helping to ensure a successful first workshop.

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Resolutions of the 1st Workshop of the FAO Reference Centre for Bivalve Mollusc Sanitation, Ole Sereni Hotel, Nairobi, Kenya, 11-12th November 2019

1. The FAO/Cefas Reference Centre team thanked the representatives from the Member Countries of **Angola, Cameroon, Ghana, Gambia, Djibouti, Kenya, Madagascar, Mauritius, Mozambique, Senegal, South Africa, and Sudan** for their participation in the workshop and for their high level of engagement throughout the two days.

2. The representatives of the Member Countries agreed that they **shared the goal** of the **development and enhancement of microbiologically safe bivalve molluscs production**, and that this goal would be best achieved through the building of **scientific collaborations** and supporting **networks**.

3. Further to the above, the **FAO/Cefas Reference Centre team** confirmed **the intent to support the development of scientific collaborations and supporting networks**, and that this workshop and the **formation of this group** was a first, important step in developing these collaborations and networks.

4. The representatives from Member Countries identified their key challenges with respect to the further development and enhancement of safe bivalve shellfish following **priorities for further support and development**:

    a. **Training of Competent Authorities** in all aspects of bivalve mollusc sanitation programmes.

    b. **Training of laboratories** in testing of microbiological (and other) determinants as used in bivalve mollusc sanitation programmes.

    c. Access to **project funding** in order to further development of bivalve sanitation programmes to achieve the goal identified in Resolution 2.

5. The representatives from Member Countries agreed the **FAO Reference Centre for bivalve mollusc sanitation** could play an **important role in the provision of training and further development of programmes**, but it was acknowledged that to maximise this additional project funding would be required.

6. The representatives from Member Countries also identified a need for information, **technical assistance** and **training** in other aspects of bivalve mollusc safety such as **marine biotoxins**.

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Benefits and impact assessment - 1st Pan African workshop of the FAO Reference Centre for Bivalve Mollusc Sanitation

INPUTS

Selection of appropriate delegate countries through a selection matrix
Production of the Workshop agenda
Content of the Workshop presentations
Planning of the Workshop breakout sessions
Analysis of the delegate questionnaire responses

OUTPUTS

Results of the delegate prioritisation exercise (break out session 1)
Resolutions of the Workshop
Minutes of the Workshop
Anonymous feedback from workshop participants

OUTCOMES

Formation of a network of Competent Authorities across sub-Saharan African nations with responsibility for the development and operation of bivalve mollusc sanitation programmes

IMPACTS

Helping the delegate countries achieve enhanced production of safe bivalve molluscs
Development of an industry with environmental and societal benefits
Provision of safe and nutritious food products for domestic consumption
Increase in international and intercommunity trade opportunities, GDP increase

Aim Enhanced food security through capability and capacity building for bivalve mollusc safety supported by FAO and UK government

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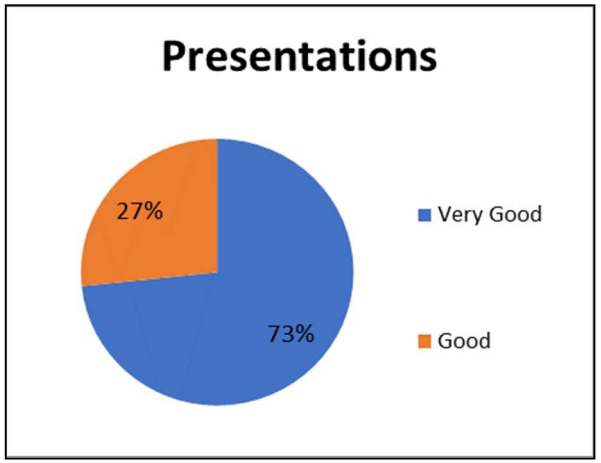
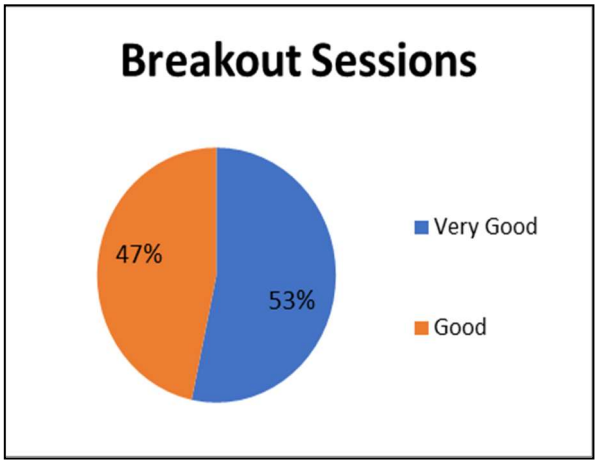
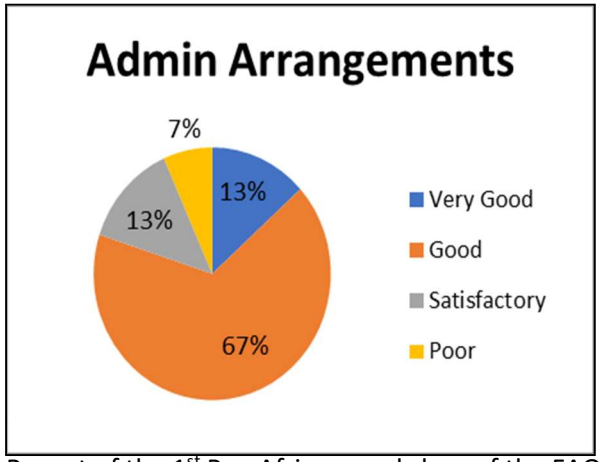
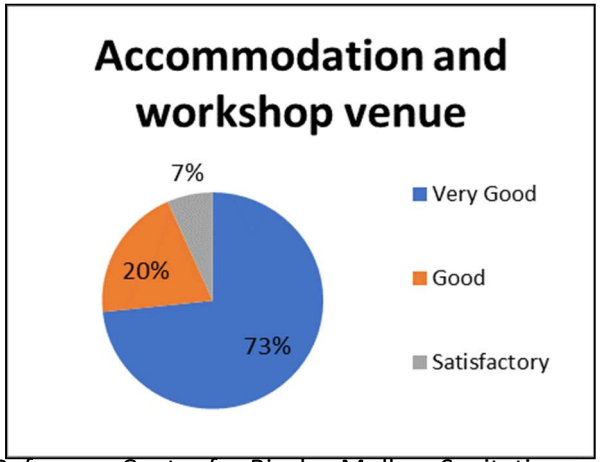
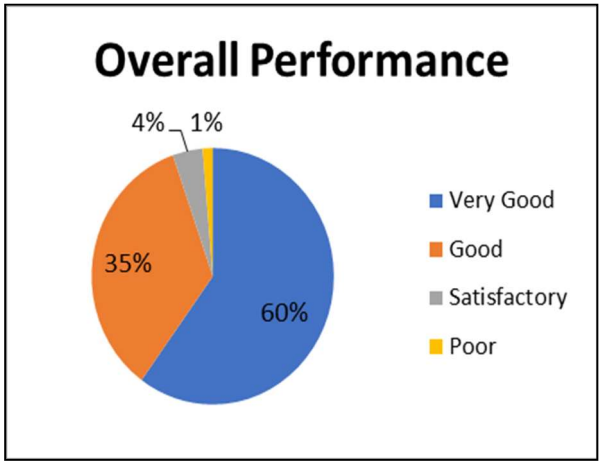
Confidential Participant Feedback Results











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1. It's very good.
2. a. Struggled to sleep due to external noise.
   b. Thank you for the great effort and look forward to working with you in the future.
3. Normally per diem is paid to participants at the close of the workshop. Please consider it next time.
4. a. To visit bivalve mollusc farming and laboratory.
   b. But it is the first workshop, the time is a very short.
5. The per diem as stated in the letter (e-mails) were not paid in cash to participants which demoralised members in the meeting. Next time, it must be considered well and clearly stated how it will be paid.
6. Very pleasant facilitators. Thank you all.
7. a. One and a half day looked too short. Maybe if it was 2 day or even 2 and half days would have been better to cover all aspects in more detail, and maybe add one or two more breakout sessions.
   b. Maybe arrangements could have been made to cover all costs (airport transfer, meals) directly instead of the participants having to pay themselves and then redeem reimbursements.
8. a. Making presentations in bilingual would be a plus.
   b. More field visit.
9. a. Very well planned and excellently executed.
   b. Thanks for this first ground breaking experience and hope it continues.
10. It is important to inform all participants about the conditions related to arrangements before the meeting. Things like itinerary transfers from airport to the hotel and the time to reimburse

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- other scientists from research councils, universities and EU research programmes.
- NGOs interested in marine and freshwater.
- local communities and voluntary groups, active in protecting the coastal, marine and freshwater environments.

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