

Aquaculture and African Food Systems

Date & Location: December 2-4 Dar Es Salaam, Tanzania

Target audience: Farmers, agricultural extension agents, researchers, policy makers and industry experts.

Session Chair: Professor Nazlin Howell

Session convener: INNOECOFOOD

Date: 3 December 2024

Venue and Time: TBA (See Program Grid)

Session Outline

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Addressing food and protein security in Africa requires the use of sustainable farming and processing methods and efficient use of valuable resources like water, land, energy and fertilisers. Often, the land and soil are unsuitable for agriculture, or marine/river/lake fish supplies are under threat. Fish aquaculture provides an excellent supply of nutritious food but has been marred by an uncontrolled growth of cage aquaculture resulting in pollution of lakes and rivers.

The INNOECOFOOD project, jointly funded by the EU and UKRI, with a multidisciplinary team of 20 e xpert participants from ***six African and four European countries*****,** addresses the above concerns. The first part of the session will describe the building of innovative sustainable ECOHUBS using freshwater aquaculture (RAS and IPRS) connected with smart technology to living lab cage aquaculture, in diverse agro-ecological regions (Kenya, Uganda, Tanzania, Ghana, Namibia, and Egypt). The Ecohubs produce aquaculture catfish and tilapia (20% protein and other nutrients) using novel fish feed and water recycling, as well as spirulina and insects.

The second part of the session, focuses on innovative solar drying and extrusion technologies with AI and IoT to process new traditional food products with added novel protein sources from the Ecohub namely spirulina (60%) and crickets (40%). In addition, novel products made with fish waste, as well as sustainable fish meal can reduce waste of valuable nutrients, and pollution whilst contributing to the circular economy. The Ecohubs and living labs are actively engaged with local schools and communities. INNOECOFOOD is impacting rural populations by producing cheap, nutritious food sustainably to mitigate hunger and malnutrition; providing education and training and by improving livelihoods.

Please visit the INNOECOFOOD team at booths 37 and 38.

Talks will be 15 min followed by 5 min of Q and A.

Session Agenda

List selected talks

Time: 14H00 – 17.50

14.00 – 3.40 pm

1. MARIA LEONOR NUNES (CIIMAR). Integrated aquaculture, spirulina and insect production for sustainable food and nutrition security in Africa. The INNOECOFOOD Project.
2. ETORNYO AGBEKO (CSIR). Developing sustainable aquaculture ecohubs in Africa: Performance potential, economic viability and implementation barriers in Ghana, Kenya, Egypt and Tanzania.
3. GODFREY KUBIRIZA. (MAKERERE) Bridging the readiness-capacity in smallholder aquaculture, training exposure, stated technology.
4. SEYIT YUZUAK (BMAEU). Isolation and molecular characterization of spirulina type cyanobacteria from alkaline lakes in Kenya and Tanzania . SUBMITTED
5. EVANS B NSAFOAH (U of Ghana). Farmers perceptions and factors influencing willingness to adopt edible insect and spirulina-based fish feed. TO BE CONFIRMED

Break 3.40-4.00 pm

4.00-5.40 pm

6. NAZLIN HOWELL (NKSB). Addressing food insecurity and malnutrition through innovative processing of aquaculture fish and novel protein sources into food products in Africa by multidisciplinary teams.
7. MARY NAMWANJE.(MAKERERE). Nutrient dense snack bars from stunted farmed Nile Tilapia, spirulina and house cricket and local composite agro-food ingredients.
8. MARIA LEONOR NUNES Development and evaluation of protein enriched biscuits using Tilapia protein hydrolysates , spirulina and cricket protein. TO BE CONFIRMED
9. CHARLES TORTOE (U of Ghana). Consumer acceptance of Novel Foods in the Adentan and GA South Municipalities of Ghana.
10. JOSEPH LUOMBA. (TAFIRI) From nutritional innovation to market adoption.: Consumer acceptance, purchase intention and willingness to pay for spirulina-enriched foods in Tanzania.

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https://was.org/meeting/code/AFRAQ26

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