AfriMAQUA - Integrated Aquaculture Training Workshop

Mauritius, 18th – 22nd July 2022

Integrated Multi-Trophic Aquaculture (IMTA) represents a sustainable production method that can reduce the environmental impacts of aquaculture, facilitate species diversification, and increase production. In IMTA, complementary aquaculture species from varying trophic levels are co-cultured and by-products from one species are recaptured as a resource for use by another, thereby reducing waste but also providing valuable additional feeds/fertilizers. For example, waste (particulates) excreted by abalone or sea urchins can serve as a food source for sea cucumbers, while the dissolved nutrients (ammonia) can fertilize seaweeds, which act as a bio-filter so that water can be recirculated in the system and the seaweed can be used as a feed. IMTA therefore not only improves the environmental footprint and circularity of the system, but allows for diversification of monocultures to multiple species, increasing the number of products produced or providing supplementary feed.

This training workshop will further explore marine aquaculture and the implementation of IMTA in Mauritius and South Africa, and globally, as a means to improve the sustainability of aquaculture. The workshop is funded and organised by the AfriMAQUA Network (https://afrimaqua.cnrs.fr) and will be hosted by the University of Mauritius. The workshop will include a lecture by Dr Maria Darias (French National Research Institute for Sustainable Development) and Mr Nadeem Nazurally (University of Mauritius) as well as lectures by South African Scientists from the University of Cape Town (Prof. John Bolton & Dr Marissa Brink-Hull) and the Department of Forestry, Fisheries and the Environment's Directorate of Aquaculture Research and Development (Dr Brett Macey and Dr Mark Cyrus). The workshop will cover a variety of topics, including seaweeds in integrated aquaculture, feeds and nutrition of aquatic organisms and its impacts on humans, as well as lectures on biosecurity, probiotics, disease, the roles of microbiomes in IMTA systems and the future of marine aquaculture.