

ASSG27: WIOMSA symposium – Discussing the impacts of shipping noise on marine mammals in the Indian Ocean

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Introduction

The Western Indian Ocean Marine Science Association (WIOMSA) symposium brings together marine scientists, policy makers, and the Western African coastal community to exchange information, strengthen regional collaborations, identify current stressors and threats, and prioritise specific research areas to support sustainable development in the Western Indian Ocean using a multidisciplinary approach.

During this 12th edition of WIOMSA which took place in October 2022 in Port Elizabeth, South Africa, the Quieter Western Indian Ocean (QWIO) project was introduced to the WIOMSA attendees. QWIO is a new project which aims to describe the overlap between underwater shipping noise and large marine vertebrates in the Southwest Indian Ocean (SWIO), identify areas where mitigation measures would be beneficial, and work with governments and stakeholders across the region to implement these measures if and where necessary. A meeting for all QWIO implementing partners was organised during WIOMSA to discuss project logistics and future directions.

WIOMSA was also an opportunity to hold the annual meeting of the IndoCet (Indian Ocean Network for Cetacean Research) consortium, regrouping most marine mammal researchers in the Western Indian Ocean. The aim of this meeting was to discuss existing and future regional projects on marine mammals, and introduce new projects, such as my PhD study on killer whales, to the research community.

QWIO Workshop

My PhD at the University of St Andrews focuses on investigating the distribution, abundance, and foraging behaviour of killer whales (*Orcinus orca*) in the tropical Southwest Indian Ocean. As part of this, I am involved as a partner in the QWIO project and will analyse recordings from passive acoustic monitoring throughout the region for killer whale presence. In addition, I will be involved in analysing marine mammal boat survey data from two locations and model the preferred habitat for target species.

Two full day meetings took place with QWIO partners during WIOMSA. The aim of these meetings was to discuss the start and development of the project, including an introduction of the project's specific aims from the project leader, soundscape theory, and presentation of all partners and their involvement in the project. In addition, discussions were developed around the compilation of all existing datasets from partners for this project, methods to put in place (including field work planification for hydrophones deployments and analyses), and next steps going forward. The multi-disciplinary approach of this project lead to stimulating and constructive discussions, which will lead to a successful project implementation.

IndoCet Workshop

The full day IndoCet workshop was joined in-person by over twenty marine mammal scientists working in the region, as well as by several collaborators online. It was a fantastic opportunity for me to present my PhD project to the IndoCet community, and to describe how local researchers can contribute to increasing killer whale knowledge regionally. Several other regional projects were presented (Sousa Consortium Initiative, DeCLIC, QWIO, COMBAVA), which provided an overview of the research IndoCet members have been involved in in the last few years. The recent stranding network of IndoCet presented their first results, highlighting an increase in cetacean stranding in the last few years. Finally, a group discussion took place, reflecting on the usage of a dedicated platform for humpback whale photo-identification studies across the SWIO, and comparing two existing platforms: FlukeBook and HappyWhale.



Conclusions

Attending this multi-disciplinary symposium in-person after several years of collaborating remotely with regional colleagues was highly beneficial. Not only did it reinforce existing collaborations, but it offered me a chance to meet new contributors to the field of marine mammal science in the Southwest Indian Ocean and to build new collaborations. I am looking forward to my involvement in the QWIO project and to sharing future results of my thesis with colleagues, as well as with local and international researchers.