

**2025 POGO-OceanX-OceanQuest Fellowship for Shipboard Training on the
Around Africa mission aboard the OceanXplorer**

Report

Name of Trainee: Doreen Walter Mushi

Name of Supervisor (Parent Institution): Dr Magreth kyewaylwanga

Supervisor (Host Institution): Dr Lara Atkinson

Dates of Training: 29 January 2025 to 23 February 2025

Topic of Training: Around Africa Expedition (science leg)

Section A

(To be completed by the fellow)

It is the responsibility of the trainee to forward this form to the host and parent supervisor, and to submit a fully completed version to the POGO Secretariat. Please note that the complete report will be made public on the OTP website; Private comments should be included in a separate confidential form.

1) Please provide a brief description of activities during the training period:

During the fellowship aboard the OceanXplorer, I participated in an intensive multidisciplinary program that exposed me to deep-sea science, including acoustic seafloor mapping, remotely operated vehicle (ROV) operations, and biological sampling. I was involved in multibeam sonar data collection and backscatter interpretation to explore seafloor morphology and habitat types. Additionally, I gained hands-on experience with CTD deployments and learned how to log environmental parameters at different ocean depths. I also contributed to sample collection for genetic and biodiversity analysis and engaged in science communication activities documenting our findings. Being part of a diverse team of experts allowed me to build collaborative skills and gain mentorship from world-class researchers in oceanography, marine biology, and technology.

2) What applications of the training received do you envision at your parent institution?

I plan to integrate the acoustic mapping techniques and environmental data analysis skills I learned into my current research on pelagic fish distribution in the Zanzibar Channel. The exposure to real-time data collection and mapping will enhance my ability to use tools like depth loggers and digital catch monitoring systems in small-scale fisheries research. Additionally, I will share this knowledge with students and colleagues at my institution, strengthening our capacity in oceanographic research and supporting marine spatial planning initiatives in Tanzania.

3) Please provide your comments on the Fellowship Programme.

The POGO-OceanX-OceanQuest Fellowship was a transformative experience that bridged my academic background with practical, high-tech marine science. It empowered me as a young African researcher to engage with cutting-edge exploration tools and inspired my passion for seafloor mapping and deep-sea science. The mentorship, inclusivity, and technical depth of the programme have left a lasting impact on my career goals and capacity as an early-career ocean professional. I highly recommend this fellowship for aspiring scientists across the Global South.

PRINT NAME

DOREEN WALTER MUSHI

Date: 9 / 5 / 2025

Section B

(To be completed by the host supervisor and returned to the trainee)

Please note that the complete report will be made public on the OTP website; Private comments should be included in a separate confidential form.

1) Please provide your comments on the performance of the trainee.

Ms. Doreen Mushi was our youngest member of the team (celebrating her birthday whilst at sea) and excelled in her enthusiasm and participation in all aspects of the research undertaken during the Science Leg 1 of the OX-OQ Around Africa Expedition (30 Jan - 23 Feb 2025). Doreen mostly focused on learning seafloor mapping processes and techniques and showed great interest and dedicated in this component. She however was always present and involved when any of the other research was being undertaken including ROV surveys, sample processing, water filtering etc. Doreen also showed immense maturity and courage in requesting to give a presentation to everyone on board about her research being done in Zanzibar, Tanzania. She took full use of the opportunity of having other researchers present to improve on her presentation skills and I found this truly remarkable. It was such a pleasure to have Doreen participate with us on this expedition and I sincerely hope for ongoing collaborations with her. Doreen's approach to life will destine her for success.

2) Is this exchange likely to lead to future collaboration with the trainee's parent institution? If so please give example(s) of how this collaboration may be pursued.

Collaboration with the University of Dar Es Salaam, through Doreen's involvement is hoped to continue in the form of ongoing data processing, analysis and manuscript publishing of outputs from the Expedition. This collaboration may open up further opportunities to collaborate on other projects and having a contact with the University is invaluable for future project and opportunity planning.

3) Please provide your comments on the Fellowship Programme.

This was my first experience with the POGO Fellowship Programme and I was very impressed with the level of structure, organisation and clear process applied. I was particularly impressed with the willingness to engage with local scientists and take their views into account. This shows respect and consideration of the local setting and trust in those who are deeply embedded in the context. From my experience with the POGO Fellowship Programme, I will certainly be recommending further engagement with this programme to others. Thank you for this opportunity, it was very rewarding and enriching.

PRINT NAME

Dr Lara Atkinson

Date: 09/ 05 / 2025

SECTION C

(To be completed by the parent supervisor and returned to the trainee)

Please note that the complete report will be made public on the OTP website; Private comments should be included in a separate confidential form.

1) Do you agree with the above comments and do you have any additional feedback you wish to provide?

I fully agree with the comments provided by Dr Lara Atkinson and am proud of Doreen Mushi's performance during the POGO-OceanX-OceanQuest Fellowship. Her active participation in a wide range of scientific activities from acoustic seafloor mapping to biological sampling demonstrates her dedication, adaptability, and growing expertise as a marine scientist. Her initiative to present her own research during the expedition highlights her confidence and commitment to academic growth. I believe this fellowship has significantly contributed to her professional development and will strengthen future collaborations between our institution and the OceanX/POGO networks, particularly through ongoing data analysis and potential publications.

PRINT NAME

Dr Magreth kyewaylwanga

Date: 10/ 5 / 2025