

NF-POGO-SeaNetwork-UCT Shipboard Training aboard the *RV Agulhas*- SEAmester cruise hosted by University of Cape Town (UCT)

Report

Name of Trainee: BILOUNGA ULRICH JOEL FELICIEN

Name of Supervisor (Parent Institution): Prof. ONANA FILS MAMERT

Supervisor (Host Institution): Prof. ISABELLE ANSORGE

Dates of Training: 18 June 2024 to 28 June 2024

Topic of Training: Tools of the trade: Data analysis and Marine Instrumentation

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:

Activities during the training period could be classified into two categories: courses (or lectures) and Deck activities. Beside these categories we had evening talks, a mini project to realise under the supervision of a lecturer and “Sea the Day” modules with artistic activities.

Lectures was about physical oceanography, particularly ocean global circulation and its impact on climate whether, features of the Agulhas current, hydrography tools from surface to the seafloor, atmospheric observation and whether forecasting and GIS. Each day began with a morning class on one of those subjects after the daily debrief.

Deck activities was dedicated to practices. Each day we have to pass in each laboratory to learn on what is going on there and participate in some activities. It was during deck works that we laid our hands on the CTD and followed deployments activities of others sensors and instruments like the Argo float, the XBT sensors, the deployment of Bongo nets and the collection and conservation of plankton samples. We also go through all the process of data collection and quality control made by scientist on the deck and how deployed sensors and equipment are followed. In the Geolab we learned with Boris, an incredible engineer, how to design and create a useful object for scientists using simple materials and machine tools. After each activity, the student has the opportunity to come back to the lab during his free time to continue or complete an activity he had begun or deepen his knowledge on a particular aspect.

Evening talk was organized each day on a particular topic conducted by an expert to open students minds in others topics like astronomy (discovery of stars constellation, and different technological progress in this incredible science), bioluminescence phenomenon by marine organisms,

archaeology through the discovery of the South African maritime and underwater cultural heritage, learn about seabirds, Sea rescues etc.

Each student had to present as part of group work, a mini project on one of the proposed subjects, under the supervision of a lecturer or any other scientist onboard. This was the opportunity to practice or to deepen our knowledge in a particular research interest or technique with discussion and exchanges with a lecturer and classmates.

SEA the DAY was the artistic part of the cruise where each student has to choose two combined activities between doing a mosaic, ocean rhythms or sketching science. During the ocean rhythms sessions, we learned how to write a song and contribute to create one that was executed at the closing ceremony. During sketching sessions, we learned about different techniques for drawing and painting.

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

During my time in the chemistry lab, I learned a simple but very accurate method of measuring dissolved oxygen that I will suggest in our lab in my return. I also learned about Argo data, and will look how to integrate the use of these data in my current work to have a regional view of some ocean features in my region.

3) Please provide your comments on the Fellowship Programme.

I would like to thank SeaNetwork, NF-POGO and UCT for the opportunity of this wonderful experience I had onboard the SA Angulhas II. SEAmester programme is a unique mixture of oceanography lectures, seagoing experience, practical learning, cultural and social experience with people coming from different background, different origin, different study level, different work field and different nationalities. All this diversity makes the programme an open laboratory of ocean sciences for the world, opening minds of young students for ocean science and ocean career, giving early career scientist and research students an opportunity to obtain seagoing experience, learn from well-established scientists and laid their hands on instruments and techniques used in the open ocean observation. It's an experience I strongly recommend to anyone who want to learn about ocean and ocean science in a multicultural context.

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Ulrich Joel F. BILOUNGA

Date: 21 / 07/2024

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.

Ulrich Bilounga, from the University of Douala in Cameroon, recently participated in the SEAmester VII Voyage onboard the SA Agulhas II between 18th – 28th June 2024. Ulrich was one of 49 students from over 23 tertiary institutes across South Africa and represented POGO's inclusion via the @seaNetwork into this programme. Ulrich proved to be a very charismatic and eager student and demonstrated a

great deal of interest in all the sciences in and out of his stream as well as working closely with scientists and fellow peers. As with Pamoda, Ulrich's experience was marked by a hands-on approach to marine science, allowing him to apply theoretical knowledge in practical settings. During his time on the vessel, he engaged actively with lecturers and fellow students. His interactions with experts in oceanography and marine research not only broadened his understanding of the field but also fostered valuable connections with fellow student participants that will benefit his future studies and career. I particularly enjoyed watching his interaction with fellow African students and how the diverse cultures and life experiences across the vessel all came together to form remarkable long-lasting friendships.

Overall, Ulrich's performance on the voyage highlights the spirit of curiosity and commitment that the SEAmester program sets out to achieve in postgraduate students and early career researchers. I truly believe that Ulrich gained great experience in seeing how ocean research is conducted and this has certainly helped him continue with his own research and collaboration in West Africa.

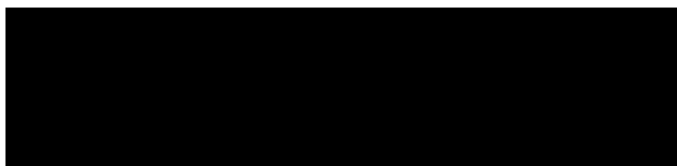
2) Is this exchange likely to lead to future collaboration with the trainee's parent institution? If so please give example(s) of how this collaboration may be pursued.

Ulrich is very keen to advertise the programme within his own institution and I hope that we will receive other applications. It is important to the programme that South African students are exposed to other countries in Africa offering marine science degrees at postgraduate level and Ulrich is certainly a wonderful ambassador for the programme in West Africa.

3) Please provide your comments on the Fellowship Programme.

The programme is in its 7th year and has proven to be extremely successful with over 260 students from 26 tertiary institutes trained onboard the SA Agulhas II. As with all student programmes it is important that students gain experience across all marine disciplines, learn the value of teamwork and build up a network of friendships across all universities. Having international students participate is important as it forms friendships outside of south Africa and builds on potential opportunities to study overseas. For this reason, the POGO/@seaNetwork is an excellent platform to advertise these programmes.

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Date: 26 / 7 / 2024

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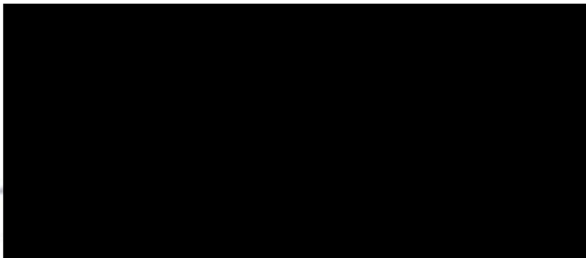
(To be completed by the parent supervisor and returned to the trainee)

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

I agree with the above comments and I am particularly amazed by all the tools and instruments to which Ulrich has been exposed. This confirms the high quality of the programme and the opportunity it offers our student to broaden his skills in oceanographic research. I would like to take this opportunity to thank Prof. Isabelle Ansorge from the University of Cape Town, who hosted our student, and the POGO and @Seanetwork team for the opportunity offered to our student. We hope to see other students from the University of Douala benefit from this program.

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Associate Professor
Ph.D in Hydrobiology and Environment
Email: filsonana@yahoo.fr
Phone : +237 696165293

Date: 29 / 07 / 2024