

**NF-POGO-IEO Shipboard Training Fellowship – RADMED cruise hosted by the Instituto Español de Oceanografía (IEO), Spain.**

**Fellowship Report**



**Name of Trainee: Salma Aboussalam**

**Name of Supervisor (Parent Institution): Khalid Elkalay**

**Supervisor (Host Institution): María del Carmen García Martínez**

**Dates of Training: 22/06/2023 to 13/09/2023**

**Training topic: Mediterranean Oceanography and Marine Ecology**

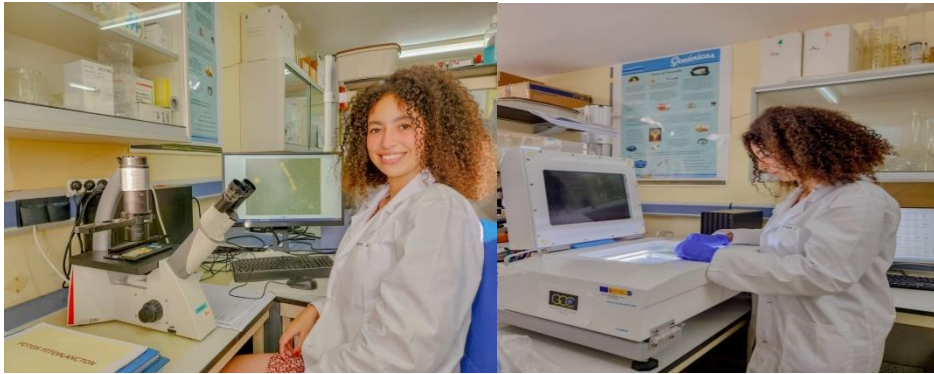
**Section A**

**(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:**

Participating in the fellowship program proved highly advantageous as it provided me with practical skills like water sampling and using an algae lab analyzer to measure chlorophyll concentration. Additionally, I engaged in daily activities involving the identification and quantification of phytoplankton species, expanding my familiarity with various species. The program also fostered proficiency in utilizing specialized tools such as ZooSCAN and the Ecotaxa website for zooplankton identification, enhancing my comprehension of marine ecosystems. Additionally, it included participation in research cruises, both in preparation and analysis, with a special mention of a one-day sampling cruise in the Bahía of Málaga within the context of a Citizen Science project. Overall, the training provided a holistic understanding of the marine ecosystem and its unique dynamics in the Spanish Mediterranean Sea region. Moreover, I benefited from networking opportunities with experts and peers, while also honing my research and analytical skills, collectively advancing my expertise in the realm of marine biology and environmental science.



Working on Phytoplankton identification  
(@Nazir Ahmed)

working on ZooScan(@Nazir Ahmed)

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

The training I have received holds great potential for valuable applications at my parent institution. Specifically, the skills and knowledge acquired, such as water sampling, chlorophyll concentration analysis through the algae lab analyzer, and expertise in phytoplankton and zooplankton species identification can greatly enhance our institution's capabilities in environmental research and assessment. This newfound proficiency can be employed to conduct in-depth studies on local aquatic ecosystems, aiding in water quality monitoring, pollution mitigation, and informed decision-making for sustainable land-use practices. Furthermore, the utilization of advanced tools like ZooSCAN and the Ecotaxa website can bolster our institution's capacity for zooplankton research, facilitating a deeper understanding of ecological dynamics, which can in turn support fisheries management, biodiversity conservation efforts, and comprehensive ecosystem assessments. Overall, this training equips our institution with the expertise needed to expand research endeavors, forge collaborative partnerships with environmental organizations, and make significant contributions to the preservation and sustainable management of our regional aquatic resources.

**3) Please provide your comments on the Fellowship Programme.**

As a Ph.D. student specializing in modeling the Moroccan Mediterranean Sea, I would like to express my appreciation for the Fellowship Programme. This comprehensive program, which covered various facets of marine biology, environmental science, and oceanography, has been instrumental in augmenting my expertise and skills. The practical training, including water sampling, algae lab analysis, and species identification, has significantly enriched my knowledge base. Additionally, my active involvement in the preparation and execution of research cruises, including the analysis of collected samples, has provided invaluable hands-on experience relevant to my doctoral research. Furthermore, the program's emphasis on advanced tools like ZooSCAN and the Ecotaxa website aligns well with my work in modeling marine ecosystems. Overall, this program has not only deepened my passion for marine conservation but also equipped me with the necessary tools and insights to excel in my Ph.D. studies focused on the Moroccan Mediterranean Sea.

**PRINT NAME**  
**Salma Aboussalam**

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Date:24/09/2023

### 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.**

Salma has done a very good work during her stay at the Oceanographic Centre of Malaga (Spanish Institute of Oceanography). She has been trained in multiple laboratory tasks: inverse microscopy, flow cytometry, zooscan, pH determination, chlorophyll a, etc. She has also worked in the preparation of the RADMED cruise in which she has participated being very active and helpful for the rest of the team. She also has been involved in the analysis of the samples collected during the cruise. She also participated in one day sampling cruise in Bahía of Málaga, in the context of a Citizen Science project that the Climate Change group is developing.

During her fellow training Salma gave a talk to the IEO staff (in person in Malaga) about her work in her parent institution.

**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.**

This exchange is a good starting point for future collaborations with her parent institution. Her expertise is really interesting. She is the second POGO fellow from CadiAyyad University (Morocco) that has been working at Oceanographic Center of Málaga, and we would like to continue this collaboration.

**3) Please provide your comments on the Fellowship Programme.**

In my opinion this type of programme allows international collaborations that would not otherwise be possible. It is a fantastic way to establish contacts with other researchers working in similar lines of research, and to compare different working methodologies.

**PRINT NAME**

**Dr María del Carmen García Martínez**

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Date: 06/09/2023

### 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?**

Salma Training opens for our laboratory at Cadi Ayyad University the door for new skills as the marine zooplankton determination, which one of the tasks really needed.

This training is the second one for our PhD student was very successful and it should open new collaborations with POGO and with Spanish institution.

We hope and we are planning in the near future at our university to have our marine centre in Essaouira (Atlantic coast). So the collaboration with POGO and Spanish marine centre will be for as for a great help which can offer a new study area.

**PRINT NAME**

**Khalid Elkalay**

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**Date: 03 / 10 / 2023**