Final Evaluation Report

Your Details	
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Project Title	Assessment the presence of dugongs in the suitable habitats in the Egyptian Red Sea
Application ID	39309-D
Date of this Report	July 30, 2024

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
1. Improve Citizen Science Program to report dugong sightings				As we created a link (https://www.ecopro-eg.co/survey.html) for reporting dugong encounters, and promoting more (i.e. website, posts on social media, webinars and workshops), but unfortunately few data were received. I can see interview survey get more information.
2. Visiting few remote areas in Nabq Protected area (South Sinai) and Northern Islands Protected Areas (Hurghada)				By interview survey, new sightings of dugong were reported in the suitable habitats based on the prediction maps. One dugong was sighted within the boundary of Nabq Protected Area near to the mangrove trees, and another sighting reported 5km south, which is famous by dugong house. Three records for mother-calf pair were sighted in new habitats, which will update the spatial range of dugong in the area.
3. Dugong survey on the shore of Qosseir, Marsa Alam and Wadi El Gemal National Park (WGNP)				Due to the **flood** event in November 2023, most of the bays are turbid the seagrass disappeared for six months, and no dugong sighted in this period. Later in May and June, only few sighting were reported in Marsa Asalaya, Hermez and Marsa Mobarak, where dugong encountered once per month.

4. Measuring the feeding trails using underwater laser photogrammetry				It takes place only offshore around Wadi El Gemal Island using Manta Tow, and along the shore beyond the fringing reef, where all bays are turbid by flood. We spotted the two laser dots in three parts of the trails (i.e. start, middle and end), then average trail widths take place. This techniques was fluid to measure more trails from the surface in a short time.
5. Identification of new dugong individuals using Photo-ID				Due to the **flood** event in November 23, we can't photograph the dugong from underwater because of water turbidity and absence of dugong most of the time in this conditions.
6. Dugong sighting from the surface using a professional camera + SLR lens.				It was a challenge to document the dugong at surface in seconds before disappear again. During the flood event, this technique played an essential role offshore.
7. Offshore survey				A total of 8 surveys using speed boat were conducted around the islands of Wadi El-Gemal National Park and south of Wadi Lahmi. Few dugongs were sighted in a new suitable habitats including mother-calf pair and one pregnant female, which added new records for our database.
8. Reporting a conservation plan for dugongs in Marsa Alam and Wadi El Gemal National Park to the Ministry of Environment				Due to the flood event, limited data was collected that not enough to assess the status of dugong in a final conservation plan report. At the same time, a primary report will prepare to open the door on dugong conservation in the two regions.

2. Describe the three most important outcomes of your project.

a). Document dugong mother-calf pair more times than before.

b). Confirm presence of dugongs in new sites based on our prediction model maps.

c). Measuring more feeding trail widths in a short time using Underwater laser photogrammetry techniques.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

The flood was the most unforeseen difficulty. This nature impact increased the sedimentation rate in most of our study sites in Marsa Alam and Wadi El Gemal National Park regions. During shore diving, we found no seagrass beds, so no dugong was encountered from underwater. Also, by using the speed boat along the shore, dugong sighting was rare as well.

I extend the survey area beyond the shore and the study area, and go inside the sea a little bit far from the suggested study sites. We sighted the dugong around some offshore reef and islands, which confirmed the presence of dugong in alternative sites. These records were included in our prediction maps, which confirm the suitable habitats expected from the modelling of our previous project.

I shifted some of the fieldwork activities beyond the end date of the project in July to try collect some data after the recovery of seagrasses due to the flood event.

4. Describe the involvement of local communities and how they have benefitted from the project.

Manager of diving centre and their guides are involved in our fieldwork activities to understand our work, so they can report sighting in the future and send us the information. We delivered public awareness about the effect of flood on the seagrasses and when we expect to recover again.

5. Are there any plans to continue this work?

SURE, after the flood event, we are planning to study the "Status of the Egyptian Dugong: Implication for Conservation". The main project of the next project will be deciding exactly the current situation of dugong population in Egypt. The main objectives will be; 1) re-using the IUCN/ CMS Standardized Questionnaire survey but only for the previous 10 years, as we have data until 2016 only; 2) marine survey in offshore remote areas as alternative sites and the current known sites after the recovery of seagrasses due to flood event, and 3) Final Conservation Plan for Dugong in Egypt.

6. How do you plan to share the results of your work with others?

During the project, I already shared some results with the following: 1) NEOM marine managers, where we met online and they happy with our project and they looking

forward to do the same on the other side of the Red Sea within NEOM project in Saudi Arabia; 2) Prof. Helene Marsh worked with CMS to update the report of dugong status in the world after the previous report in 2002, our results included in the new report of 2024, in the Red Sea Chapter (Reference attached).

7. Looking ahead, what do you feel are the important next steps?

I am afraid that dugong population is decreased quickly due to increasing the tourism activities in addition to the natural impact of the flood which not recorded few decades ago. I can't decide from the current project because may be dugongs went to any alternative sites. So – honestly – the next step need to study the Status of the Egyptian Dugong in Egypt, then create the conservation plan. After that, we will have the full experience of success with dugong and will be delighted to share it with other countries in the region to apply (i.e. Saudi Arabia, Sudan and United Arab Emirate).

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, on the presentation and sighting record poster. Yes, it received publicity especially with NEOM project marine team in Saudi Arabia.

9. Provide a full list of all the members of your team and their role in the project.

- Dr. Ahmed Shawky, project manager and main researcher.
- Mahmoud Basioni, Citizen Science program.
- Ayman Nasr El-Dien Morad, research assistant at Qosseir, Marsa Alam, and Wadi El Gemal National Park for dugong monitoring (surface and underwater), feeding ground monitoring, photography, and logistics for fieldwork.
- Mohamed Saleh, Egyptian Dugong Team and PADI Dugong Conservation diver, surface and underwater observations in Marsa Alam region.
- Tarek Noaman, Egyptian Dugong Team and PADI Dugong Conservation diver, surface and underwater observations in Marsa Alam region.
- Farag Saad, Bedouin Local guide/ driver at Marsa Alam.
- Mohamed, Bedouin Local guide/ driver at Marsa Alam.
- Ahmadany, Boat captain at Wadi El Gemal National Park.

10. Any other comments?

The flood event, was the most difficulty in the project, so further project is essential to apply as soon as possible to study the Status of the Egyptian Dugongs to assess the recovery after the flood and complete the final conservation plan for dugong in Egypt.