

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Dr Aylin Akkaya
Project title	Advancing Knowledge from Coastal to Pelagic Waters for the "Species Conservation Action Plan of Turkey": A Tool to Prioritise Measures Against Population Decline
RSG reference	27028-B
Reporting period	November 2018-November 2019
Amount of grant	£9,845
Your email address	info@dmad.org.tr or akkayaaylinn@gmail.com
Date of this report	21/01/19

1. Please 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
-Identified critical habitats will be extended, covering both coastal and pelagic zones of Turkey.				Both coastal and pelagic species were targeted during the study which resulted with precise and accurate critical habitat identification.
-Baseline information of each species will continue to be collected				Current study is a part of a long-term project started with Rufford in 2015. Each year contributes to reach more accurate understanding of a long-lived species like cetaceans. Current project forms the one and only dedicated and seasonal survey effort from the eastern Mediterranean Sea therefore provides the baseline information not only for Turkey but for the entire region it belongs.
--Unknown by-catch rates of species will be examined				Interview with fishermen from multiple locations within the Turkish eastern Mediterranean coast has taken place during the current study. Yet, the results are open to discussion as trusting on personal interviews are highly doubtful as there is a chance of hidden truths. DMAD plans to purchase GPS loggers and on-board observers to reach more realistic conclusions on the fishing impact on cetaceans.
-Vulnerable and endemic habitats will be seasonally surveyed for the first time as proposed project extends its coverage from coastal bays to the undiscovered but extremely vulnerable habitats of deep-sea canyons; Finike Seamounts, the east of				Each season the survey was conducted in vulnerable and endemic habitats, forming the first cetacean data collection from these unique habitats.

Hellenic Trench.				
-Acoustic and behavioural patterns of local populations of sperm and beaked whales will be examined for the first time in Levantine.				Behavioural patterns of sperm whales have been examined and send for publication currently. Yet due to the high number of acoustic recordings, acoustic patterns still need post-analysis.
-The diet of sperm whales will be examined through faecal sampling to understand the genetic diversity.				Unfortunately, we couldn't manage to get the necessary permissions to collect faecal sampling.
-Created documentary movie of cetaceans and deep-sea habitats of Turkey will increase the awareness and caution of public.				Short movies and several media posts were realised during the surveys which helped us to reach wider range of public. Yet our public outreach has to continue to increase its effect even after the project.
-The long-lasting bridge between institutes and government bodies will be strengthen for the common goal: "Species Conservation Action Plan" that will form an important reference guide for knowledge, threat analysis and management strategies.				DMAD has built a really strong and respectful relationship with the international and local NGOs that works on marine protection. Species Conservation Action Plan has been drafted but still needs considerable work to be presented to the policy makers. DMAD is going to finalise the report and distribute the proposed Action Plan to the policy makers within the first 2 months of the 2020.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

1. Faecal sampling couldn't be carried out due to the difficulties on obtaining the necessary permissions. While the collection can be carried on with local researchers, its genetic analysis have to send to the international experts which ultimately created a problem to get the permission. Therefore we couldn't collect the faecal sampling for genetic analysis.
2. The Cetacean Conservation Action Plan took longer than anticipated as it needed a team of dedicated researchers for the entire duration only on the action plan but should be completed by the end of February 2020.
3. Some activities targeted towards the decision makers and companies were not as successful as the research part of the project. We will be strengthening our strategies. Specifically, our attempt on the necessity of following the regulations and mitigation measures on the seismic activities either with oil

and gas companies or with the decision makers were failed. However, DMAD has prepared booklets and information notes to the stakeholders and will secure a meeting with the decision makers within the early 2020.

4. Due to the limitation of the budget, the proposed wooden board for species information was designed but couldn't be installed, however, this is still in the agenda of DMAD and will be completed.

3. Briefly describe the three most important outcomes of your project.

1. Eastern Mediterranean Sea holds the least studied region of the entire Mediterranean for the marine top predators. Current project is a continuous chain of research effort that started only in 2015 with the support of Rufford Small Grant and since then developed its survey techniques and increased its survey reach and target species. As our target animals are k-selected species with long life span and late maturity ages, the research targeting these animals has to be continuous in multi-years for more precise and accurate interpretation of the population and its status. Current project forms the one and only dedicated survey effort in the area with seasonal approach (covering the colder months as well) and revealed important habitats for sperm whales, beaked whales and Delphinidae species in previously unknown location.
2. First acoustic pattern and photo-identification catalogue of sperm whales and bottlenose dolphins have been started within the eastern Mediterranean Sea. The results are going to be revealed if there are regional acoustic variations between species. Additionally, photo-identification catalogue will be shared with neighbouring waters to understand their movement patterns.
3. All the target species shows a declining population trend due to the human pressure. Yet the effect strength of these human pressures are mostly unknown within the entire Mediterranean Sea. Current research collected the critical scientific data to quantify the impact of marine traffic, fishery interaction and seismic and sonar activities which ultimately going to form the base of the conservation and management plans.
4. Relevant stakeholders and the local community were involved in every step of the process, developing a feeling of "community buy-in" and encouraging a bottom-up approach to conservation.
5. Local capacity has been developed during the training workshops held by DMAD (photo-identification and mapping through ArcGIS workshop and ACCOBAMS High Quality MMO and PAM operator course). These workshops involved more than 40 participants, which resulted with increased interest from researchers. Currently a dozen of researchers and students actively joins to DMAD's research, conservation and outreach activities.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

As well as the aforementioned capacity building directed to the researchers and students, fishermen formed the most important stakeholder of the project. Despite the pre-judged negative approach of fishermen to the marine top predators, it was

revealed that fishermen were well educated and knowledgeable about the importance of marine fauna on their catch rate. They ended up, especially the ones in Antalya, one of the biggest supporters of the project.

5. Are there any plans to continue this work?

The project is going to continue for at least 5 more years to understand the patterns and to interpret the results accurately. Since the target species are long lived and late matured species, long-term studies can only reveal the truth about their population status and the effect of potential threats on the species.

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

- The results of the current project have already prepared for a publication for a peer-reviewed journal and results from previous surveys were presented at “5th Important Marine Mammal Conference” in Greece, April 2019 and preliminary results were presented at the “ACCOBAMS Meeting of the Parties” in Turkey, November 2019, “Mediterranean Protected Areas Network (MedPAN) workshop” in Turkey, November 2019 and two presentations at the “World Marine Mammal Conference” in Barcelona, December 2019.
- The results will also be included in DMAD’s annual report for Turkey that will be disseminated to relevant stakeholders and be publically available on DMAD’s website for free.
- Additionally, DMAD have shared our databases to contribute to Mediterranean basin-wide studies on the “TursioMed” platform (A network for bottlenose dolphin photo-identification throughout the Mediterranean Sea) and the “OBIS-SeaMAP platform (cetacean sighting network throughout the globe).
- DMAD designed a brochure entitled, “IT’S TOO LOUD!” to serve as a guide on what seismic is, its denied and ignored consequences and how it can be minimised. The brochure will be shared with the companies, policy makers and the public with further requests for meetings until the seriousness of the subject, not only for cetaceans, but for all marine fauna has been understood.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The Rufford Foundation Booster Grant was utilised across a 12-month period in line with the anticipated length of the project. Each activity was taken place on time. Nonetheless, we were delayed on finalising the Species Conservation Action Plan.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

The exchange rate GBP 1 = TL 6,83, which was T.C. Ziraat Bank's rate on 10 Jan 2019 and on that day the project amount has been converted to TL for project activities, was used.

Item	Overall Budget	RSG Budgeted Amount	Actual Amount	Difference	Comments
Meeting with Directorate of Nature Conservation and National Parks	120	60	105	+45	Two researchers have travelled to Ankara for the meeting with the National Parks
Meeting with the NGOs and sneaks during the meetings	390	200	88	-112	Informal meetings have been organised in Istanbul with the local NGOs and the left-out budget was spent for the survey effort
Questionnaires preparation, printing, analyses	70	70		-70	
Team training	800	800		-800	
Boat surveys and team training	7000	5200	9281	+4081	It includes four seasonal boat surveys, its fuel, accommodation before and after the surveys, meals in the boat
Interviews with fishermen	175	75	190	+115	Includes the transportation to the fishermen cooperatives, meals and printing cost of questionnaires'
Designing and printing of posters	150	50	132	+82	Awareness posters were authorities, fishermen and school kids
Designing and printing wooden board	60	60		-60	The wooden board couldn't be completed due to the budget limitations and the proposed budget spent for the survey cost
Acoustic analysis	350	350	695	+345	Includes the acoustic

					analysis and the extra tools that has to be purchased for the acoustic system
Documentary production	250		250	+250	360 Video has been produced and used in school events
Zoom lens	150	150	266	+116	Binoculars have been bought for the survey instead of the zoom lens and zoom lens was donated to DMAD from WWF-Turkey
Field laptop	150	150	400	+250	
Deep sea sampling, dipnet storage tubes	420	260		-260	Due to the permission limitation, sampling couldn't be carried, and the left-out budget has spent for the binoculars and laptop
Designing and printing of Action Plan	370	370		-370	The budget will be used to print the Action Plans
Habitat Modelling workshop	700	100	1119	+419	Includes the transportation of the lecturers, conference hall, sneaks and accommodation of five local students
Publication	500	250	439	+189	
Passive Acoustic Monitoring Kit	1000	1000	878	+122	The left over spent for the extra acoustic kits in the acoustic analysis budget
Passive Acoustic Monitoring Kit Shipping	650		571	+571	The left over spent for the extra acoustic kits in the acoustic analysis budget
Consultancy	700	700	500	-200	The left over spent for the survey effort
Transportation of the experts and volunteers to the project sites			807	+807	It includes the transportation of acousticians and volunteer arrival to the project site
Rufford Budget Total		9845	15721	+5876	
Overall Total	14005		15721	+1716	-The boat surveys were the main activity that caused the unbalanced in the project budget

				<p>due to the unpredictable changes on the rental cost and fuel consumption.</p> <p>-The extra costs during each activity, including the boat surveys, has been spent from DMAD's budget.</p> <p>-The budget for Action Plan is still in the DMAD's account and will be spent once we are in the printing stage.</p>
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9. Looking ahead, what do you feel are the important next steps?

- Cetacean are k-selected species therefore they have a long-life cycle with late maturity rates. Therefore, any short-term study wouldn't reveal realistic results on the ecology or the conservation status of the target species. For accurate interpretation of the data, the research has to be dedicated with multi-year sampling occasions, covering both warmer and colder seasons. Therefore, survey effort has to continue in addition to the baseline information that has already collected. Our project forms the one and only dedicated surveys in the entire Levantine Sea. Through the ongoing survey effort, we won't be only filling the data gaps within the eastern basin but will contribute on the understanding on accurate basin-wide population size estimation. A comprehensive data set will help to understand the population status and assist the policy makers for effective conservation decisions.
- Despite the increase in survey effort within Turkey, the involvement of authorities on the conservation initiatives were relatively indifferent. Eastern Mediterranean Sea is currently under heavy human pressure from navy exercises to seismic explorations, with none of them employing mitigation measures. Therefore, the future project has to focus on the capacity building of decisionmakers as well as the related companies.
- Capacity building and equally important capacity development of general public must continue in Turkey to increase the longevity of this project.
- Transboundary project has to be developed between the neighbouring countries in the Levantine Sea for the understanding of basin-wide movements.

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

Yes, all presentations, both verbal and poster-based contained the Rufford Foundation logo. At the end of any submission for a peer-reviewed journal, the

Rufford Foundation is always acknowledged and thanked for their contribution. Similarly, any documentation distributed related to the project also has the logo on.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Dr. Aylin Akkaya – Project coordinator who was responsible for conducting/supervising the project's core team and activities such as scientific marine mammal surveys, scientific marine mammals survey technique trainings, data analysis and writing of scientific paper. Lectured on DMAD's "ACCOBAMS High Quality MMO and PAM operator course" and "Photo-identification and mapping through ArcGIS workshop".

Patrick Lyne – MMO/PAM specialist responsible for assembling and operating the PAM system as well as teaching interns/volunteers how to use it. Lectured on DMAD's "ACCOBAMS High Quality MMO and PAM operator course". Presented DMAD's work in place of Dr. Aylin Akkaya at the World Marine Mammal Conference in Barcelona in December 2019.

Professor Jonathan Gordon (University of St Andrew's, UK) – Provided equipment and technical assistance.

Emine Ulusoy – Worked on a number of outreach projects for DMAD and was integral in the organisation of DMAD's "ACCOBAMS High Quality MMO and PAM operator course".

Cansu İlkılınç – Worked as a researcher during expeditions and on a number of outreach projects for DMAD.

Belen Yıldırım - Worked as a researcher during expeditions and on a number of outreach projects for DMAD.

Tim Awbery – Assisted in the coordination of research expeditions. Lectured on DMAD's "ACCOBAMS High Quality MMO and PAM operator course". Presented DMAD's work at the ACCOBAMS Meeting of the Parties in Istanbul in November 2019 and presented a workshop on bottlenose dolphins in Turkey in place of Dr. Aylin Akkaya at the World Marine Mammal Conference in Barcelona in December 2019.

12. Any other comments?

We would like to thank The Rufford Foundation for the invaluable contribution they have made to not only our project but to conservation work in Turkey. Without the initial and following up support and trust of Rufford, it wouldn't be possible to reach our goals on cetacean conservation in the least studied regions of the Mediterranean Sea. Currently, Turkey takes its place in the maps on the cetacean research and conservation.