

The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants 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	Fethi Bengil
Project title	The forgotten species: Marine mammals in the Turkish Aegean Sea
RSG reference	11408-1
Reporting period	12 Months
Amount of grant	£5990
Your email address	fethi.bengil@deu.edu.tr
Date of this report	25 th October 2013

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
To document marine mammal species regularly occurring the area;			x	
To provide abundance estimates for these species;			x	Weather condition and high price in gasoline limited us for photo identification but we also applied distance sampling method to estimate abundance.
To identify key areas used by different species			x	There is only one species (<i>Tursiops truncatus</i>) that uses the area regularly, thus we evaluated the results for this species.
To identify potential threats.			x	We concentrated method on abundance estimation, so potential threats were identified sporadic observation during efforts. Additionally, we did information network for local fishermen and interviews with touristic boat owners.

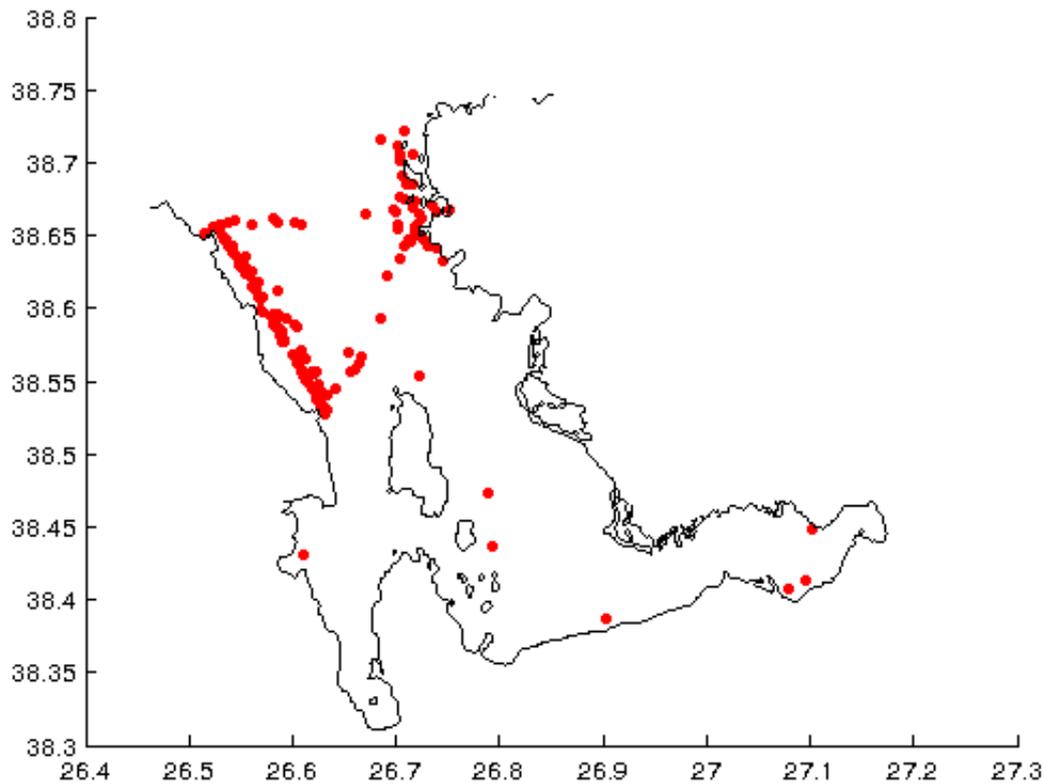
2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Local support for our project let us to stay in study area for long period of the project duration. Our plan about the field study was not sufficient for the long period. On the other hand, weather conditions (strong and continuous summer winds) in spring and especially in summer limited us to carry out well photo-identification with small boat. This fact prevents us to estimate abundance by photo-id in short research period for studies of marine mammals. To increase our sea day during study period, we also applied distance-sampling method by public transportation that has triangulated route in outer side of Izmir Bay between early summer and early autumn. We believe using public transportation is the revolutionary for marine mammal's studies which have high cost to obtain data. We achieved 70 efforts in 37 days additionally by this application.

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

1) Population of Bottlenose dolphin: population of bottlenose dolphin is only resident cetacean species in Izmir Bay. Based on our results, its population in Izmir Bay (outer part) are estimated as 190 individuals. Even it has small population, encountering was high during our efforts. An average individual number of unit effort was 5, when it was 21 in maximum and 0 in minimum as output of a total of 3850 km of our effort. Observations are denser in coastal regions more than middle water of Izmir Bay. Photo-identification part of our study concentrated in Foça SPA (special protected area) and its surrounded waters. During photo-identification efforts, we found a group of 45 individuals in

maximum and 11 of them were identified as well marked in this region. Distribution map of our observations from sea effort, land and sporadic observations are below.



2) Might Karaburun Peninsula be a new marine protected area? Our results indicate that a high proportion of the population uses the coastal waters of Karaburun Peninsula. Our approximate estimation about the number of the dolphins in Karaburun region is 55. When comparing to our results in Foça region where we know 45 individuals of bottlenose dolphin at least use, coastal waters of Karaburun Peninsula have similar number of individuals of bottlenose dolphin which use the region. Additionally, during our efforts, we observed frequently fish that are predator such as tuna fish and swordfish in that area. This fact indicates us, coastal waters of Karaburun Peninsula might have special biodiversity which is worth to protect. So, we suggest that the area needs to study in detailed in further studies.

3) Key Habitats and Threats: Being closing to land made impossible to use remote sensing data for evaluate effect of physical and biological parameters on distribution of the dolphins and continues artisanal fisheries activity in the area was another limitation to evaluate natural distribution. But it is obvious that coastal waters of Izmir Bay are the most important area used by dolphins. Small populations of the species is the reason vulnerable interaction (such as destroying fisheries equipments) between fishermen and dolphins and non bycatch record in Izmir Bay during our study. Destroying of fisheries equipment by dolphins are recorded in Foça and Karaburun regions. Thus, it is required to inform fishermen about dolphin behaviour and their importance in ecosystem. Interviews by touristic boat owners show that there is no interaction between them excluding some

encounters without touching. There was only one stranding record and it was in coast of Karaburun Peninsula. The individual was killed by gun and there was no evidence why or who had done.

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

Local people showed interest in our project and always helped us they always asked us about dolphins and give us their dolphin records. Local communities were included in the project in different ways. Municipality Foça helped us to organised meetings with stakeholders and children; they also provide a place for our research base (caravan) and allow us introducing our project to local people in town centre. Fisherman and fisheries cooperatives were in collaboration for information network about interactions and inform us of sightings when fishing. Ministry of Environment allowed us to use their office and documents about Foça SPA. Cafes, bars and restaurants encourage us to put our posters and flyers on their walls and stands.

5. Are there any plans to continue this work?

Yes there are. Population studies need long time research to understand trends and structure of populations and thus, it can be used for determining function of management plans. Revolutionary method that is implemented by using public transportation allow to obtain data with low costs. Addition to this photo identification finds more meaning by monitoring individuals in long time to understanding population demography.

Interest of local people and managers showed us educational and awareness activities should be more frequently in coastal town. We believe next studies should include a part about these activities, especially for children as future managers and stakeholders of marine environment. Documentaries of underwater and above water can be strong tool for this propose.

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

We already have had website by courtesy of our local supporter society (SAD) so we have chance to share our news about the study. It will continue after this project. We also have a group in social media to share our outputs.

<http://www.sad.org.tr/arastirma-gruplari/demag/izmir-korfezi-yunuslari/>

<https://www.facebook.com/groups/izmirdolphinproject/>

We published some articles about progress about the project in Sualtı Gazetesi web portal and short interview about the project.

<http://www.sualtigazetesi.com/denizkizi/?p=1860>

A short report which summaries the outcomes of the study is going to sent to The Ministry of Environment. The report is offered about the situtation of Karaburun and describe the population in Izmir Bay and identified individuals in Foça MPA. We also plan to give a presenation about the outcomes of the project in municipalities.

Posters put in relevant towns around Izmir Bay to present our project, contact points (such research base) for collecting sporadic observation in the name of documentation of species occurred in the bay.

We started to prepare a scientific article and two poster presentation in some conferences in 2014. We believe that beside our outcomes, our revolutionary method is worth to share to spread it to different locations.

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

As we proposed, we did the project in three phases. First phase is meetings and consultations with the local stakeholders. During this phase, fieldwork sites and logistics determined. It was from beginning to May. Second phase was field study from May to September. Third phase was analysis. This phase started when data has been collected and ended in September for reporting.

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.

Local exchange rate: 1£=2.86 TL

Item	Budgeted Amount	Actual Amount	Difference	Comments
Nikon D200 Camera	450	475	-25	
AF Zoom-Nikon 70-300mm f/4-5.6 G Lens	275	152	123	
Barska Deep Sea 7x50 Waterproof Binocular w/ Internal Rangefinder & Compass	175	143	32	
Caravan transfer for accommodation	750	850	-100	
Fuel, Gas and boat expenses (22 sea days x £147)	3600	3234	366	We reduced expenses for other method and unexpected printing stuffs
Ticket coasts for steamship	0	508	-508	Mostly 2 people (sometimes 3) for distance sampling effort. (a total of 70 efforts)
Printing t-shirts	0	125	-125	
Printing flyers	0	82	-82	
Printing banners and office supplies	0	150	-150	
Research team travel and food expenses	700	520	180	
Scientific and technical books	40	0	40	
Total	5990	6239	-249	

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

The project was the first systematic study on marine mammals in Turkish Aegean Sea, also was first for application of distance sampling and photo-identification. Thus, the study needs to carry out for long time to understand population structure and trend in this area.

Results imply us the Karaburun Peninsula with its relatively dense individual numbers of cetaceans and other animals such as tuna and swordfish. Coastal waters of Karaburun Peninsula might have special biodiversity that is worth to protect. Therefore, we suggest that the area needs to study in detailed in further studies.

Another important part to continue the study is photo-identification. Izmir Bay is known legal captures of dolphins before 7 years. After this short-term legal permission, most of fishermen mention that it continues sometimes as illegally in the area. Such a catalogue about the individuals in Izmir Bay will help to prove such an illegal capture activities. Thus, larger database of identified of individuals are required.

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

We used the logo in our products, on flyers, posters, banner, t-short, walls of caravan, boat, field forms, presentations and website. You can see some products on the link below and in our update report.

<http://www.sad.org.tr/arastirma-gruplari/demag/izmir-korfezi-yunuslari/314-izmir-korfezinin-yunuslari-projesinde-arazi-calismalar-basladi>

<http://www.sad.org.tr/anasayfa>

<http://www.sualtigazetesi.com/denizkizi/?p=1860>

<https://www.facebook.com/groups/izmirdolphinproject/>