

## The Rufford Foundation

### Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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| Grant Recipient Details    |  |
|----------------------------|--|
| <b>Your name</b>           | Abhishek Jamalabad   |
| <b>Project title</b>       | Fisheries and Coastal Cetacean Interactions and Livelihood-based Solutions to Mitigate Impacts and Potential Conflict near Karwar, Karnataka |
| <b>RSG reference</b>       | 17217-1  |
| <b>Reporting period</b>    | 12 months (extended by request to 16 months)   |
| <b>Amount of grant</b>     | £2273  |
| <b>Your email address</b>  | abhishek.jamalabad@gmail.com   |
| <b>Date of this report</b> | 7 <sup>th</sup> March 2017   |

**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 investigate the nature of interactions between coastal cetaceans and purse seines |              |                    |                | A preliminary understanding of the extent and nature of these interactions was achieved via boat-based surveys. As with most fishery-dependent research, continued monitoring (not within the scope of the present project) will supplement this information. |
| To explore traditional knowledge of these interactions via interviews                |              |                    |                |   |
| To collect opportunistic data on seabirds  |              |                    |                | Data collected includes the first regional records for a number of birds, and the first record in India of one of these. Being a strictly opportunistic activity, 'complete achievability' was not the aim for this objective.                                |
| To initiate community-based marine debris management                                 |              |                    |                | Logistical difficulties undermined the implementation of this plan. However, we have recently been in touch with a local waste management organisation that we hope to partner with and achieve this objective in the future.                                 |
| To initiate a community-based cetacean sighting/stranding reporting network          |              |                    |                | Sightings of relatively rare cetaceans are being reported by some of the fishing crews to date; many records even include footage taken on cell phones.   |

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

A halt in fishing activity during the proposed study period required me to pause field surveys and resume them the following season, leading to an unforeseen extension of the study period and a delay in reporting.

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

(1) The project accomplished its primary objectives of identifying the nature of interactions between fisheries and cetaceans in the region, documenting a sufficiently large number of such events, and also understanding local perceptions of cetaceans – primary steps essential to informing future conservation outcomes.

(2) The project effectively enlisted the participation of sea-going fishermen to report sightings of cetaceans in relatively distant offshore waters, a zone that is logistically difficult for researchers to survey. Their ongoing reports, each of which is submitted along with relevant associated data and undergoes verification and corroboration, have already contributed immensely to our knowledge of marine mammals in these waters. Moreover, with their assistance, I was able make a few opportunistic visits to offshore zones to systematically record and photograph the little known species found here.

(3) A number of associated incidental sightings during these surveys are regional records of significance. Three cetacean species (Bryde's whale, common dolphin and spotted dolphin) were recorded for the first time in the region; the latter two are very significant photographic records for the entire west coast of India, including a well-documented first-hand account of incidental dolphin entrapment in an offshore purse seine. A number of valuable seabird records were also made; among these were the second-ever record of the black tern in India, and the first ever record of a white-eyed gull within Indian limits.

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

The surveys conducted as part of this project were heavily reliant on the local fishery operators and fishing crews, as we used active fishing vessels as survey platforms. These personnel also furnished a lot of relevant information that helped shape a complete understanding of the scenario from a fisheries perspective – this was the primary goal of the project. Their aforementioned active participation in cetacean monitoring and reporting has provided invaluable information to us, and their inputs continue till date.

We strongly believe that conservation, especially in marine habitats that are difficult to monitor independently, has to involve the communities that utilise these spaces the most. We feel that the opinions and continued participation of fisheries personnel would go a long way in achieving the essential balance between conservation and continued utilisation of these spaces.

#### **5. Are there any plans to continue this work?**

Yes. This project establishes a preliminary, broad baseline of information (including associated fisheries and seabird information), upon which it is possible to expand as well as study more specific aspects. I personally plan to expand my studies of coastal cetacean-fishery interactions to cover a larger region, more fishery types (which were not studied during this project), and to consider social and economic factors that might influence such interactions.

Towards the end of this project, we attempted to try out acoustic pingers as a measure to deter depredating dolphins, but time and prevailing field constraints did not allow us to accomplish this, and we hope to do so in the near future.

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

I have already written a few popular articles based on significant parts of my work during this project. In addition to these, I hope to also complete a popular article describing at length the primary findings of the project.

In February 2016, when the project was underway, I presented my ongoing work at the UNDP's 'National Workshop on Cetacean Research Methods' in Mumbai, India. I shall be presenting at the upcoming Rufford India conference, and hope to also do so at other conservation-themed conferences in India.

A full-length scientific paper is likely to require additional data that was beyond the scope of this project, but we hope to continue work in this direction.

Some records of uncommon species that were sighted during the field work for this project have already been published in scientific journals, while others are in the course of being written/published.

**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 grant, which funded field work for this project, was utilised from October 2015 to December 2016. This exceeded the proposed period by 4 months, as a result of unforeseen delays in field work (described previously).

**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.**

| Item   | Budgeted Amount | Actual Amount | Difference | Comments  |
|--|-----------------|---------------|------------|---|
| Lodging for 2 volunteers   | 451             | 551           | 100        | Due to extension of field work.   |
| Meals for 2 volunteers   | 406             | 605           | 199        | Due to extension of field work.   |
| Garmin Echosounder   | 100             | 214           | 114        | More suitable model available at the time of purchase. (Bill of purchase available.)  |
| Salinity Refractometer   | 27              | 20            | -7         | Price drop at time of purchase.   |
| GoPro camera   | 401             | 366           | -35        | Bought at a better deal than the budgeted price.  |
| Live Vests (3)   | 75              | 69            | -6         |   |
| Payment to boat crews for surveys                                | 451             | 310           | -141       | Fewer different boats were used for our boat surveys than we had initially estimated, resulting in the participation of fewer crews in these primary field surveys. Hence, the amount spent was smaller than estimated. |
| Monetary incentives to fishing communities for debris collection | 362             | 160           | -202       | The difference is due to logistical constraints halting this exercise. Part of this difference was used for extended field work expenses as listed above.   |
| Anemometer   | 0               | 25            | 25         | Field equipment not initially budgeted for.   |
| <b>TOTAL</b>   | <b>2273</b>     | <b>2320</b>   | <b>47</b>  |   |

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

This project sheds light on more facets of this topic than we set out to document.

We found that there may be more factors influencing cetacean-fishery interactions than we initially presumed – such as the varied local perceptions of these animals, and economic structure of the fishery. These need to be investigated in detail.

The associated data we collected pertaining to fisheries also revealed new, dynamic fishing trends that appear to be worth studying in detail from a fisheries management perspective, for fisheries researchers who may be interested in taking this up.

The initiative to have fishermen report their cetacean sightings has proven to be very effective and invaluable, and it would be of immense importance to expand on this approach for wide-scale documentation of offshore cetaceans.

Lastly, conflict mitigation measures such as acoustic pingers, which could not be tested during the course of this project, need to be tested in field before they are ruled out or implemented on a large scale.

**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. The logo was used on all images in relation to this project that were posted to social media or used in popular articles. Where watermarks were not allowed on images in print, credit to the Rufford Foundation was mentioned.

The Rufford Foundation was credited in all popular and scientific articles in relation to this project published so far.

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

I, Abhishek Jamalabad, was the principal investigator for this project. I co-designed the study, organised, coordinated, and conducted the field work and data management, and am currently sharing the analysis and writing tasks. All writing done so far in relation to the project has been done by me.

Mridula Srinivasan is the co-investigator for this project, and helped design the study and is sharing the data analysis and writing tasks. She also provided equipment that is not accounted for in this grant.

**12. Any other comments?**

The readiness of the Rufford Foundation to accept an extension of the project duration was very helpful to me, as it enabled me to overcome the hurdle of an unforeseen field work gap, compensate for lost time and conclude with a more complete study.