

**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	Sapna Jayaraman
Project title	Bridging the gap between fisheries regulations and implementation in Gujarat
RSG reference	14419-1
Reporting period	December 2013 – May 2015
Amount of grant	£5997
Your email address	sapna.jayaraman@gmail.com
Date of this report	14/01/16

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
Building a database on fish species found in the study area and their breeding cycles			X	A list of species and breeding cycles for different species was compiled based on fish monitoring data and secondary data available.
Engaging with government fisheries officials in order to identify causes of implementation failure.			X	Interviews and discussions were conducted with government fisheries officials and hurdles to implementation of existing legislation were identified.
Engaging with local fishermen to understand socio-economic barriers to policy implementation			X	Fish catch was monitored, and discussions were conducted with fishermen to understand socio-economic barriers to implementation. Several important causes were identified and communicated to fisheries department officials through meetings and presentations.
Disseminating information regarding sustainable fishing practices to fishermen and sustainable fish consumption to consumers		X		Information regarding sustainable fishing practices was disseminated formally and informally through discussions throughout the study period. Popular articles will be published in newspapers and journals to disseminate information to consumers regarding sustainable seafood choices.

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

Four study sites were initially proposed for the study, Okha, Jamnagar, Veraval and Porbandar but sampling was conducted in only two, Okha and Dwarka. Despite going through well-established contacts of high social and political standing, sexual harassment and molestation were a serious issue for sampling in field sites other than Okha and Dwarka. Therefore, intensive sampling was undertaken at these two field sites instead of the initial four proposed. This has generated important and comprehensive data for these field sites which gives us a detailed insight into the fisheries of this region.

Due to the proximity of the study sites to the Pakistani border, fishermen were suspicious of the study despite there being no questions asked about illegal fishing by the fishermen and despite

going through established contacts who extended a vote of confidence towards the study. There were initial hurdles in gaining access to fish landing sites to monitor fish catch due to the suspicion that my intention may not be research but that I may be a spy for the Indian or the Pakistani government. These suspicions were worked around by spending the first 3 months only observing the fish catch without collecting data or taking pictures and engaging in conversations regarding fisheries and acquainting them to myself and my previous work. As a result of this, data collection was commenced in March instead of January as initially planned

As the study continued and intensive sampling was done (10-15 hours a day) the fishermen grew suspicious about my presence and the nature of my work again and I received several subtle but clear death threats towards the end of my study period in November 2014. Given the circumstances, the last few months of sampling were left unfinished and the field work terminated. I tried to tackle these issues through several channels including the Coast Guard and important political figures in the area, but the work environment turned more hostile with every sampling season. I continued sampling till I had at least a year of data and then ended field work.

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

- 1) Identifying and quantifying species in fish catch and documenting breeding cycles for commercial fish species: This study is the first intensive survey of the fisheries in the study area and has helped identify species caught in this region using different fishing techniques. It has also helped identify breeding cycles of several species previously undocumented from this area.

The data generated through this study enables the breakdown of catch into species caught, proportions of different species in catch, size classes caught and value of each species and size class. It also tracks down how each species is processed and where and how it ends up in the market. There is a disturbing trend of an increasing number of species being converted to products for non-human consumption. Contrary to earlier data from this region, a significant amount of the fish now being landed at the study site is sold for non-food purposes.

- 2) Understanding shifts in target species and fisher perceptions on fish availability: Interview results suggest that there have been shifts in species caught as the abundance of a particular target species decreases. However, other species take their place and fetch a price either in the food but increasingly in the non-food market creating an illusion of plenty while in reality the fishers jump from one species to the next, sustaining the ever increasing demands and the growing fishing fleets.
- 3) Gaps in policy implementation: While the legislation allows for fisheries officers to regulate fishing activities based on breeding cycles, spawning activity and other factors, very little of that power is exercised on ground. This is mainly due to a) a lack of on-ground personnel analysing the situation on a regular basis and b) the inability of willing and knowledgeable fisheries officials to exercise their power due to political and bureaucratic pressures.

The bigger and more powerful trawl boat owners choose to willingly flout the rules for higher short term profits relying on their political power to safeguard them against legal repercussions while the smaller gill net fishers use nets which naturally result in very little

juvenile catch but still end being at the receiving end of policy crackdowns with their issues never voiced and considered during the policy making process. This reveals a lack of fisher participation in the framing of fisheries policy which renders fisheries policies ineffective on ground no matter how well they are framed.

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

Local field assistants were trained in the data collection process and educated on the importance of sustainable fishing practices. The local forest department staff were also involved in this process to enable better understanding of the fisheries of this region and teaching them sampling methodology.

During the study period, fishing communities voiced their concerns regarding the state of the fishery itself and issues with existing fishing policy. This feedback is extremely important to ensure a fair policy framing process in the future which benefits the fishing communities in this region.

5. Are there any plans to continue this work?

As of now, there are plans to continue investigating fisher compliance and issues with fisheries policy in Gujarat and in other parts of India but for reasons of safety, different field sites will be chosen.

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

A detailed final report will be submitted to the Rufford Small Grants Foundation. This report will also be submitted to the Gujarat Forest Department. The results of the study will be presented at conservation conferences and published as papers in peer-reviewed journals. Articles in popular media will be written to create awareness regarding issues of fisheries policy making and implementation in Gujarat. Infographics based on the important outcomes of the study are being designed to disseminate information regarding the state of the fishery and fishing policies and the way forward.

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 grant was used from December 2013 to May 2015, two months longer than the initially proposed timeline of December 2013 – March 2015.

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
Travel overnight – between residence and field sites	270	489	-219	Field travel was more expensive than the budgeted amount due to in availability of trains without a few months prior booking. Travel

				to and from field sites was by bus which incurred higher costs but was the only option available.
Local travel between field sites	198	620	-422	Local travel between field sites was expected to be by bus but fish landing times were early in the morning and went on till late at night. Buses were not available for these times and hiring local transportation was more expensive but the only option as field sites were 30 km apart and had to be sampled on the same day.
Voice recorder	70	0	70	We did not have to buy a voice recorder since it was provided by an equipment grant received after this grant
GPS	150	0	150	We did not have to buy a GPS since it was provided by an equipment grant received after this grant
Food expenses for field assistants, volunteers	1035	1960	-925	Sampling was intensive and I required two field assistants instead of one to photograph and weigh large quantities of fish catch.
Living expenses for principal investigator – food and rent	2070	2578	-508	Rent was extended for 2 months beyond the estimated time adding to the initially estimated cost. Cost for living also had to include cooking equipment since there were very limited and very expensive alternatives available and cooking at the field station was the cheapest option.
Conducting workshops – renting space	1256	0	1256	Discussions were held with fishermen every week at the fish landing sites and informal setups worked better than formal setups, so we did not need to rent space for workshops.
Consumables – buying fish for dissecting to check gonad maturity	768	0	768	Fish dissections were not carried out due to budget restrictions. Fish caught in this region are labelled for export and buying with limited funds would not have yielded enough samples to check

				for gonad maturity
Poster design and printing	110	150	-40	In progress. Designing five instead of three which incurred a higher cost.
Miscellaneous expenses	70	200	-130	Stationery, internet and phone charges, first aid, sampling equipment – spring balances, tarp sheets, baskets and rope.
Total	5997	5997	0	Exchange rate when grant was received £ 1= Rs 98.94

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

There are two important steps to be taken after the completion of this project:

- 1) Disseminating the results and creating awareness about issues with existing fishing practices and fisheries policy
- 2) Initiating a conversation with policy makers regarding policy framing keeping in mind the interests of all stakeholders and the economic constraints of policies to ensure successful implementation of fisheries policies in Gujarat and in India

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

The RSGF logo has been used in presentations given to forest department officials regarding the project. It will also be used in the final report sent to the Forest Department. The logo is being used for the infographic posters being designed.

11. Any other comments?

I am deeply grateful to RSGF for providing financial support for this study. I am also thankful for the patience and flexibility provided by the grant which were crucial given challenging field conditions.