

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. 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. 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	Darlington Saykay Tuagben
Project title	Assessing the Vulnerability of the Coast of Liberia to Marine Oil Spills: Implications for Biodiversity and Renewable Natural Resource Utilisation
RSG reference	10488-1
Reporting period	September 19, 2011 to September 19, 2012
Amount of grant	£5894
Your email address	d.tuagben@gmail.com
Date of this report	October 19, 2012

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
Produce a sensitivity map of the coastline including human settlements, major biotic communities and areas of particular conservation concern		X		The project, which worked in seven coastal counties of Liberia, experienced difficulties in acquiring geospatial data and data collection was carried out during the rainy season when accessibility was difficult and in most instances, impossible. However, I acquired few data which I amended with ground-truthing exercise to develop a low quality sensitivity map.
Assess the potential impact of oil spill on coastal biodiversity, especially coastal birds and sea turtles, and produced suggestions for management/mitigation approaches			X	

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

The study was undertaken during the rainy season in Liberia when roads become impassable. This was the case of most rural coastal communities where I had to walk three to four hours to do ground-truthing and household interviews. Also, the study was undertaken during the period of electioneering in Liberia when communities were always expecting cash reward for their time. In some communities, we experienced the presence of politicians who had gathered all of the communities for their campaign messages thus preventing us from conducting our interviews.

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

Three most important outcomes of this project are:

- The project provided a clear understanding of the potential impact of oil spills on coastal resource users at both the community and national levels. This study found that although oil wealth contributes to the growth and development of nations, it may have negative impacts on the environment and socioeconomic/cultural activities of people who rely heavily on potentially affected natural resources for their livelihoods. This is most likely to be the case of inhabitants (predominantly fisher folks) in the study area whose lives are intertwined with the health of these environments and the natural resources on which they rely. Any case of an oil spill along the coast of Liberia will result in loss of income in the tune of thousands of dollars per household from various natural resources, especially fishing, which contributes significantly to household incomes. Most rural households have an extended family system, in which, for example, a fisherman is relied upon to provide fish for 30-40 individuals, while

they might supply him with crops and other products. In the worst case scenario, a huge spill such as occurred in the Gulf of Mexico in 2010 would have devastating impacts on the lives of not only the fishermen, but also their extended families. Such a situation will exacerbate existing poverty.

- The study also provided a clear understanding of the level of vulnerability of coastal and marine environments to oil spills at the community and national levels. Oil spills at sea have their greatest impacts on the biological resources in shallow, near-shore communities. Mangrove forests, estuaries and coastal wetlands are particularly vulnerable to oil spills. Given the prevailing southerly (onshore) wind and wave conditions at sea off the coast of Liberia, any event of an oil spill is most likely to impact coastal biodiversity, the environment and socioeconomic activities of coastal inhabitants and resource users. The coastal environments (beaches, wetlands, lagoons and estuaries along with their associated mangrove resources) are particularly sensitive to oil spills which will render them vulnerable and deprive the poor and vulnerable rural people of their livelihood and basic human rights
- This study further clarified the potential sources of oil spills and gave a clear recommendation on how to respond to minor spills as fishermen whilst waiting for national and/or international oil spill response teams in the case of large spills. Oil spills are likely to result from two major sources: shipping accidents and exploration and production operations during drilling and well testing. Shipping accidents have been a major concern in the past and is still continued to date. Chevron Liberia, for example, intends to use the port of Takoradi, Ghana, as its main supply base while drilling in Liberia. Equipment and materials required to support drilling are expected to be delivered from Platform Supply Vessels (PSVs) sailing between Liberia and Ghana. This highlights the likelihood of potential oil spills from shipping during drilling operations. In addition, minor oil spills may occur during transfer of fuel to the drilling rig. However, the most significant impacts are likely to come from a major spill during exploration or production.

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

With the exception of those communities that were coincidentally engaged with election campaign programmes, every other community surveyed were very appreciative of such a study which gave them a clear understanding of the pros and cons of oil. We ensured the recruitment of community members as part of the survey team (guards) who were educated on the objectives of the study. During the study, we took off time before the interview to explain the planned oil exploration activities by the government and assured communities that the government has assured its people that best practices will be applied in Liberia. Admittedly, over 95% of the communities did not know about the planned oil exploration in Liberia. We were the news breaker but also educators as well. Most town hall meetings held before our interviews were led by the chiefs and leadership of the communities who we've taken off time to educate on our mission. Result of the study was shared with the National Oil Company of Liberia (NOCAL), the Environmental Protection Agency (EPA) and several conservation NGOs in Liberia. I, unfortunately, could not revisit the studied communities to share the results as a result of lack of resources.

5. Are there any plans to continue this work?

Yes

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

I have already given copies to the EPA, the FDA, Conservation International, the National Oil Company of Liberia and other environmental NGOs operating in Liberia. I have also publicly informed other interested stakeholders in Liberia about this work and I'm prepared to share it electronically to anyone groups or individuals wishing to use it. I would have really appreciated to send hard copies to local authorities in the studied communities but I'm faced with constraints.

7. Timescale: Over what period was the RSG used?

September 2011 to January 2012 was used for intensive data collection and the report was completed by the end of June.

How does this compare to the anticipated or actual length of the project?

The Project was actually completed in advance (nine months) of the anticipated one year but I think I worked overtime especially during the desk study and data collection period.

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
Transportation (Air and land)	7,051.04	1,615.38	5,435.66	This included an economic class student return ticket and ground transportation (vehicle hiring) during the course of the data collection period. The National Oil Company of Liberia contributed the difference and also paid for the hiring of an additional research assistant which was not initially included in the budget.
Field Cost	3,461.29	3,461.29	0	This amount was for the payment of stipend for principal researcher, research assistants and local guards at various sites. This amount also included food and lodging for the entire team. I initial proposed one assistant but later realized that I need another person who I hired
Communication	225.68	225.68	0	This amount was used to purchase an internet modem and recharge cards for communication during the course of the study.
Field equipment	591.65	591.65	0	This amount was used to purchase a set of a GPS, a digital camera and assorted

				stationery
TOTAL	11,329.66	5894	5,435.66	The exchange rate used was: US\$1.00= £0.613

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

This study recommends several actions to be undertaken by the Government and conservation NGOs including the need to conduct a nation-wide awareness and sensitisation campaign on the pros and cons of the oil production in Liberia. The study also recommends the development of an effective National Oil Spill Contingency Plan (NOSCP) that will define the role of the Government of Liberia in respect of its responsibility as the environmental conscience of the nation regarding all spillages of oil, whether accidental or deliberate, from whatever source and of whatever size, which will threaten the Liberian environment. The NOSCP of Liberia should outline Liberia's arrangements for responding to oil spills in the marine environment, with the aim of protecting against environmental pollution as a result of oil contamination and where this is not possible, minimise the effects. The study further recommends the development of individual oil spill contingency plans by all oil companies in Liberia which will be integrated into the NOSCP and as well ensure the training of rapid response teams, including local people in coastal communities, to respond to localised spills and concluded with the need for further investigations into the potential impacts of oil spills on the coastal environment of Liberia since this study was just a reconnaissance study.

10. Did you use the RSGF logo in any materials produced in relation to this project?

Yes, the RSGF logo was use on the draft and final reports and all power point presentations on this study.

Did the RSGF receive any publicity during the course of your work?

Yes, I made it my duty to always emphasize on the important role played by RSGF in the successful implementation of this study. This was attested by the presence of RSGF logo on the report and the PowerPoint presentations.

11. Any other comments?

I wish to officially take this time to thank the RSGF for your support and contribution to the success of this study and also the success of my MSc. Conservation Biology degree from the University of Cape Town. A field-based research was a requirement for the completion of the course and RSGF was the first to agree and contribute funding to this study before the Government of Liberia came in lately. I am very grateful to you for the support