

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	Andrea Izquierdo
Project title	Scenario-based conservation planning of Argentine High Andean wetlands: geographic patterns, climate change and mining prospects.
RSG reference	12769-B
Reporting period	February 2013 –February 2014
Amount of grant	£12,000
Your email address	aeizquierdo@gmail.com
Date of this report	12nd February, 2014

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
1) Mapping and characterisation of High Andean wetlands			X	A map of High Andean peatbog was developed and characterised. I additionally performed a map of lakes and saline areas.
2) Describing biophysical parameters heterogeneity			X	This analysis was completed based on peatbog map, biophysical parameters and landscape indices.
3) Climate change, grazing and mining threat maps		X		I completed grazing and mining threat maps and a preliminary climate threat map. However, I would like to improve the climate change models used for mapping this threat.
4) Generating spatially explicit models of conservation strategies based on Marxan analysis complemented with expert's workshop.		X		I completed a preliminary model including the preliminary climate change threat map which is going to be updated when climate change databases are improved. Meanwhile, however, some of these analyses were finished and published with mining and grazing threat maps. Additionally, I hope to summarise all this information in a document sent to decision makers, which will be finished soon.

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

As expected in the proposal, the main difficulty was the coordination of the stakeholder's workshop, especially with the mining sector, due to their complicated work schedule (i.e. in mining activity people work in a systems of "guards" on the field).

I solved this problem by developing a Delphi survey (questionnaires) with them, for its parameterisation in Marxan's. This is an alternative approach to workshops to help set targets for each of the features. I interviewed many experts in their work place who independently assigned value for all parameters, and I then used the average target and range of targets from all experts to set the model.

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

1. The most important outcome of this project has been the wetlands map. This represents a very relevant information not only for this project, but also for the National Wetlands Inventory promoted by the recently sanctioned National Wetlands Law.

2. Another important outcome has been the Environmental Risk Surface (ERS) for High Andean wetlands by mining. The wetlands map was based in Maximum likelihood classification of Landsat (30 x 30 m resolution) images. The ERS was developed by assigning different intensity values and influence distances to indirect (i.e. roads) and direct threats, considering visual impact and a characterisation of each mining project and their prospect (i.e. exploited material, type of work, state, production) and summarising the overall contribution of mining impacts in a final risk spatial raster model. Finally, we analysed the overlay with the wetlands, also using ERS, and calculated a risk rating for each wetland. These results were published in the "GLOBAL LAND PROJECT OPEN SCIENCE MEETING. Land transformations: between global challenges and local realities." 2014. Berlin, Germany.

3. Finally, I think that the interaction with and between different sectors of stakeholders is also an important outcome that might generate other future outcomes.

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

Communities have been involved in this project especially through the exercise of Marxan's parameterisation. Although we did not perform the complete stakeholder's workshop, the parameterisation process was an opportunity to promote an interdisciplinary High Andean regional network, integrating multidisciplinary research projects, policies and decision makers, local community and the productive sector (e.g. agents of the mining industry).

5. Are there any plans to continue this work?

Yes, of course. I will definitely continue working in this project and will conclude the updated climate change models and Marxan analyses and will finish the final report for decision makers. I additionally obtained two grants applied when applying Rufford: 1- Pict2012 FONCYT (£50,000, to be implemented 2014-2017); and 2- a FOA of Galicia Bank by £7,150. These grants will allow me to continue with this project and even perform further objectives.

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

I am publishing the first results of this project in an important meeting this year (2014 Global Land Project Open Science Meeting). Also, I am finishing a scientific article using High Andean peatbog maps that I will be sending to Applied Geography or Mountain Research and Development in the next months. Finally, I hope to conclude the report for stakeholders this year.

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

The RSG was used between February 2013 and February 2014. The timescale was more or less accomplished as anticipated but I will improve some data (climate change models) so that many results will improve in the next months. The edition of the final document to stakeholders, however, did take more time than anticipated.

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
GIS Assistance (£450 *6 MONTHS)	2700	3301	-601	GIS assistance cost was increased due to inflation in Argentina, but we did not use the field assistance budget, so the difference in this item was reduced.
Field assistant (£29*15DAYS)	435	0	435	
Logistic and administrative staff	6000	5000	1000	We did not use all the money in this item yet (i.e. we do not have a ticket by £1000). But we kept this difference to be used for printing the final document for decision makers, which will be finished by May.
Gasoline and vehicle maintenance	225	602	-377	Since we changed the proposed methods for parameterisation of Marxan analyses, especially with stakeholders mining sector (see point 2), we needed to travel to some mining projects and offices, for which the costs of both items slightly increased
Food/per diems (15 field days)	1200	1500	-300	
Insurance by vehicle	300	322	-22	This cost increased slightly than the budgeted
Library, and suppliers and materials	500	603	-103	This cost slightly increased too.
TOTAL	12000	11328	672	Some items increased while other items reduced in comparison with the budgeted, and this helped us to keep within the budget. There is a difference that has not been used yet, but it will shortly be, in order to print a final document to transfer the results to decision makers.

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

The more important step coming next is concluding the final report to decision makers and, with this, transferring the results to decision makers and stakeholders in general.

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?

I used the RSGF logo in the printed interviews for mining stakeholders and in the poster presented in GLP Science Meeting in Berlin. I will include RSGF name in agreements on the future scientific articles and in the final document to decision makers. I will send you updates about our publications.