

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	Luis Suarez
Project title	Trans-boundary air pollution in western Peruvian Amazon, Peru
RSG reference	16.10.07
Reporting period	February 2008 to December 2008
Amount of grant	£ 4984
Your email address	luchinsuarez@yahoo.com
Date of this report	20th December 2009

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
Implement a local research group on air pollution			X	
Implement three monitoring sites			X	
Air sampling for evaluating seasonal variation			X	
Water sampling for evaluating seasonal variation		X		
Disseminate the information to policy-makers		X		
Work with locals for continuous monitoring	X			
Publication at scientific journal	X			

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

The most complicated was to work with 3 monitoring sites simultaneously. The logistic aspects were complicated considering that some of these places were quite far from urban populations. We really have to coordinate with assistants in order to fulfil the adequate monitoring plan.

Also we were not able to deal with locals in order to disseminate the information to local authorities and they can use this information for some policies or for environmental information. We were not able to promote among them with the possibility of implement a permanent station. We had meetings with them but they were not able to assume the costs of this sampling.

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

Implementation of a basic research group on air monitoring. It includes equipment (photometers and air sampling pumps) and knowledge (ground sampling and satellite information management).

Quantitative information about air pollution covering all the Amazon of Peru. We were able to quantify and identify air pollution sources of this pollution. Also we used a modern analytical technique for elemental composition of air pollution.

Collect a database for research. During the development of our research we were able to gather information for supporting policies and promote research on air pollution over Amazon.

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

N/A

5. Are there any plans to continue this work?

Actually, I am as head of the School of Environmental Engineering of the Private University Peruvian Wings at Huancayo, Peru. They have special interest on continuing this research as they can show practical work to students and local communities. This university will provide funding for continuing

only part of the proposal considered under this grant and it will involve students from this University.

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

We have three main groups:

- 1) The locals: we consider that they will be interested in the results as they can show something about the air quality of their location. So we provide them with periodical results from the monitoring and they can show it to their community and share with them about the concerns about changes in air quality.
- 2) The scientific community: we could share this information with researchers from Brazil and USA to say that there is a scientific interest about air pollution (aerosols and tropospheric ozone) over Amazon of Peru. We also are expecting that this research could permit us to be included in the scientific groups dealing with research over Amazon basin where most important researchers are working.
- 3) The Minister of External Affairs: as they have technical cooperation with Brazil and also are part of agreements for protecting Amazon basin. We talked with them about our results and that we provide them information about the trans-boundary air pollution among Peru, Brazil and Bolivia. A similar situation happened in Europe, having to Sweden with acid rain problems because trans-boundary air pollution coming from England.

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

We used for almost all 2008, as we had the field campaigns during this period. The project had a longer length but the main part took part during that period, because was the part to implement monitoring sites and take the air samples for later analysis.

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
Equipment	1840	2250	410	We have to pay some additional money for shipment of equipment and also taxes.
Lab material and supplies	340	500	160	We have to pay for some consumables for analysis and for maintenance of equipments.
Samples chemical analysis	1200	2500	1300	There was the need to cover additional expenses for chemical analysis of samples, including as we added water samples
Fieldwork and research assistant	860	1580	720	For logistical reason we had to pay some additional staff for helping during fieldwork days

Trips	400	800	400	There was the need of more money to cover the expenses during fieldwork.
Printing and courier services	344	344	0	
TOTAL	4984.0	7974	2990	

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

I consider that the most important next steps are:

- Continuation of the air sampling for a whole year.
- Involve local government in this sampling and obtain funding from them for make it permanent.
- Finish the Draft about a National Plan for Forest Fires and also publish the results in a scientific journal.
- Increase research capabilities on the local research group with support of the University.
- Take advantage of satellite information for air pollution monitoring.
- To be included on A-1 research groups doing high level field campaigns dealing with air pollution over Amazon
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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?

Sure, I used on some scientific events that I attended, especially at Alcoa Foundation meeting at Barcelona, Spain on Dec 2008 and also, during presentations on academic events in Peru.