

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	Nestor Ignacio Gasparri
Project title	Mapping and monitoring conservation priority areas in Argentina Chaco forest.
RSG reference	RSG.10.12.05
Reporting period	From April 2006 to April 2008
Amount of grant	£4,839
Your email address	ignacio.gasparri@gmail.com
Date of this report	5 th May 2008

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
Forest plot network			x	40 plots were planned, and we install 50 plots.
Forest structure map			x	Biomass map available. Biomass map were obtained by regression analysis with Terra/MODIS NDVI of two dates. The model was feted with 34 field samples and evaluated with another 16 field samples. Statistics of the regression are significant and the model precision 5%.
Student participation with side projects		x		Participation of three students was planed but only two students participate in all the field work. Both students are making their undergraduate thesis related to the RSG project. One thesis is about forest composition mapping and the second is about optimization of land use In the Wichí territory of Formosa province

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

In the Chaco region field work is strongly conditioned by season. Only autumn and winter (March-September) have the adequate conditions (low temperature and dry season) to facilitate the field work and minimize accidents risk (snake pits). I submitted my project in December and I knew the decision about my project in April, but administrative restrictions in Argentina delayed the availability of the money until July 2006. This situation determinates that I could not make the field work in the 2006 winter season as I originally proposed. On the other hand, the conditions and availability for the pick-up that I planned to rent changed and I was forced to look alternative way. Finally, in June 2006 I had a surgery intervention and the medical prescription indicated that I was not in condition to make the field work. In consequence, I decided to postpone the field work until next dry season (winter 2007).

To compensate for this inconvenient, I used the 2006 winter season to develop more strong links with local organizations working in my study area (including National Parks Administration, INTA and NGO working with *Wichi* communities). Finally, I designed a sampling scheme, by sectors with a principal local partner in each sector. The field work crew moved by bus to each sector (e.g Las Lomitas) and the local partner provided mobility in the sector and introduced my project and people to local communities. This scheme was very effective since it a) reduced transportation cost (some organizations only want that the RSG project cover the fuel and small additional cost); b) the project was benefited by the local knowledge of the area and the communities facilitated the access to sampling plots and c) in some case one person of the local partner participated of the sampling of the area and made the field work easier.

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

- 1- A remote sensing approach for mapping forest structure with potential to be replicated and used for monitoring degradation of Chaco forest.
- 2- Maps of forest structure condition (e.g. Biomass or Basal Area of principal tree species) for an extensive sector of Chaco forest in 2007 (14 million hectares), that could be used to prioritize sites for conservation applying different criteria.
- 3- A permanent forest plot network (50 units) covering different ecological situation of Chaco forest, for field-based monitoring of forest change across the region.

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

From a total of 50 clusters, 16 were located in *Wichi* communal lands, 18 in protected areas and 16 in private properties. In all 16 clusters located in *Wichi* communal land, at least two people of each communities participated of the fieldwork. Additionally, we use time to talk about the project with referents persons and gave a briefly presentation of the project to the communities. People from the National Parks administration also participated in field task.

Communities have started using the forest structure maps in political discussions for coming. In December 2007 a new forest protection national law was approved, requesting a forest classification (indicating forest available and not available for clearing) resulting from a participatory process. In this context, maps from this project could be used for different actors to identify priority areas for conservation but specially could be used by *Wichy* organizations and NGO's partners to support a regional reclamation for a key forest sites to ensure the natural resource availability for the communities. Preliminary products were used in this way in early discussion (April 2008) in Formosa province.

5. Are there any plans to continue this work?

Future plans to continue this work include two complementary lines.

- 1) At regional scale works will be done, our lab (LIEY) was just awarded two major research projects (one approved by the National Agency of science and technology of Argentina and the second with partners from the Universidad de Barcelona with sources from the BBVA foundation) that will be focus in relationship between biodiversity and land use in the Chaco, and will allow me to expand and deepen the approach generated in this project, and will use outputs of the RSG grant (maps and forest permanent plots) as starting points for new research lines, including detailed biodiversity modelling, trends in land use change, and forecasting of future land use scenarios.
- 2) I plan to work more intensively in the *Wichi* territory. The *Wichi* territory covers next to 5 million hectares and include most of the best forest sites. Communal lands are spread in the area and include more than 60 properties (200.000 ha). I want to evaluate the role of these communal lands for biodiversity conservation and designed a conservation network sites based in communal lands. We start the works in that direction with a GIS information compilation and analysis

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

- I will prepare diffusion material including paper dossiers, maps and technical documents in PDF format that will be available in an institutional web page. Additionally this data will be sending to key institutions (e.g. Dirección de Bosques de la Nación, Fundación Vida Silvestre, Greenpeace, Parques Nacionales (biodiversity information system; <http://www.sib.gov.ar/>)
- I will send the forest plot data of each sector for the local partner to be used without restriction always with reference of the project and the RSG program.
- I hope to submit two articles to scientific journals. One of them, about remote sensing methods to estimate forest structure and the second one about forest condition at regional scale and its relation to cattle ranch and communal lands.
- I will make available my dot GIS files. Raster files will be accessible in two alternative formats: a) full data for partners with spatial resolution of 250 m and non-categorized variables and b) Categorical data with spatial resolution of 1 km for general public.

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

- April 2006 to June 2006: Administrative steps in Argentina for grant accreditation and a field trip to recognize sites and field checking of preliminary maps.
- July 2006 to February 2007: field work preparation and development of the local collaboration network
- March 2007 to September 2007: Filed work divided in four trips of 20- 25 days each one
- October 2007 to April 2008: data analysis

This timescale is longer than the anticipated. Administrative restrictions in Argentina delayed the availability of the money until July 2006. This situation determinates that I could not make the field work in the 2006 winter season as I originally proposed. But finally, the time used for the project implementation was next to one year but during 2007.

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.

Exchange rate of £ sterling to Argentinean \$ used was 5.62 (exchange rate at the moment of the grant accreditation in the bank account).

Item	Budgeted Amount	Actual Amount	Difference	Comments
Subsistence payment for local team	2225	2110	110	Minor differences in operative costs
Transport (including car rental and fuel)	1550	775	775	Reduction of cost by local partners. Major travel were made by bus

Metric tape	24	0	24	Covered by other source
Sunnto clinometer	70	70	0	
Sunnto compass	70	58	12	Price difference
Diameter tape (2units)	60	30	30	Price difference
First Aids Kit	40	9	31	Price reduction and partially cover with other sources
Aluminium tags	60	86	-26	Price difference
Roll flagging	120	16.75	103.25	Price over-estimated in budget by mistake.
Sending cost of forest equipment	0	84.7	-84.7	Not contemplated in budget
Palm	400	383	17	Price difference
Office material	20	46	-26	Additional computation consumables were covered for image processing (e.g. DVD-R) and bibliography
Camping set	200	184	16	Price difference
Photography equipment	0	297	-297	Not contemplated in budget and covered with other costs saved.
Communications	0	53	-53	Not contemplated in budget and covered with other costs saved. Necessary to coordinate with local partners
Administrative	0	271	-271	Not contemplated in budget. Include domestic taxes, bank account maintenance and insurance for field work team.
Diffusion material	0	98	-98	Not contemplated in budget and covered with other costs saved. still not used and planned to cover print cost of diffusion material in next months
GIS assistance	0	267	-267	One-person (part time three months) work to assist in image processing and recompilation of information to start work about <i>wichi</i> territory.
TOTAL	4839	4839	0	

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

I think the most important next step is an efficient transference of the RSG project outputs to potential users. Especially it is important the incorporation of the forest structure maps in the forthcoming politic discussion about the Chaco forest regional planning in the frame of the new national forest legislation.

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 RSG logo for preliminary maps of priority areas of forest conservation in west Formosa. Additionally, as part of my project, in 2006 I elaborated a map with cattle ranch *puestos* in Chaco forest. The RSG project partially covers the cost of a trip for field checking and start contact with local institutions. Posterior the puestos map was used for a publication (*) and RSG program was included in acknowledgements.

(*) Grau H.R; N.I. Gasparri y T.M. Aide. 2008. Balancing food production and nature conservation in the Neotropical dry forests of northern Argentina. *Global Change Biology* 14: 985-997