
Agroforestry manual using native species, Vallegrande, Bolivia

A project funded by the Darwin Initiative, Department for Environment,
Transport and the Regions (DETR), United Kingdom

Final report

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DARWIN INITIATIVE

FINAL REPORT

1. Basic Project Details

- Project Title: Agroforestry manual using native species, Vallegrande, Bolivia
- Contractor: University of Reading, UK
- Host country collaborating institute(s): Fundación Amigos de la Naturaleza (FAN) and Centro de Investigación Agrícola Tropical
- Grant Round: 5
- Grant Value: £11 021

2. Project Expenditure

- Total grant expenditure: £11 021
- Breakdown of expenditure (using expenditure categories in the original application form):

	1997-8	1998-9
Rents, rates, heating, lighting, cleaning		
Postage, telephone and stationery		
Travel and subsistence		
Printing		
Conferences, seminars etc.		
Capital items, (please specify)		
Other (please specify)		
Fuel for collecting trips		
Materials for botanical collection		
salaries		
Total of spend		

- Explain any variations in expenditure +/- 10%

3. Project Background/Rationale

· Why was the project needed? Please explain the project development process. There is strong local demand for assistance with identification of native tree species and a guide to their use in agroforestry systems, amongst both individuals and development organisations which are increasingly working on soil conservation, watershed protection and timber cash crops for community development. There is also a need for assistance to the previously neglected semi-arid Andean foothill

region (most forestry aid has gone to lowland Bolivia). The idea was entirely the initiative of foresters and extension workers in Vallegrande, but was modelled on a similar manual for the lowlands of Santa Cruz (Lawrence, Pennington and Johnson, 1994). CIAT staff requested technical assistance based on this earlier experience. Development workers and researchers in other government and non-government organisations also indicated their concern about the difficulty of using native species when they cannot easily be identified. Discussions with other CIAT staff and British foresters indicated that the manual should focus exclusively on native species which are poorly recognised and used, and that the format should be cheaper and more easily reproduced than the previous one, to facilitate diffusion.

How was it related to conservation priorities in the host country?

The Vallegrande area is on the edge of the Amboró National Park, a recognised area of very high biodiversity of world significance. Nevertheless Vallegrande itself has no protected areas, and the manual explicitly contributes to the demand for protection of the flora in this area.

How was the project intended to assist the host country to meet its obligations under the Biodiversity Convention?

The project contributes to national commitments under the CBD, i.e.:

Article 8: respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities ... relevant for the conservation and sustainable use of biological diversity;

Article 10: sustainable use of components of biological diversity

Article 12: research and training

Article 17: exchange of information

Was there a clear 'end-user' for the project in the host country? Who?

Yes: agricultural, forestry and veterinary extension workers, as well as school teachers and literate farmers. Extension workers were the primary focus as they will catalyse the use of such species through their regular interactions with farmers.

In order to understand extension workers requirements, the project included a small survey to invite them to clarify their needs in terms of species identification and knowledge, and to critique descriptions and drawings from the earlier manual. This provided valuable criteria to guide us in drawing up the current manual.

4. Project Objectives

What were the objectives of the project (as stated in the original application form)?

The project will lead to the publication of a manual of native trees and appropriate agroforestry systems for the mesothermic valleys of Santa Cruz department.

It will do this by

- covering the costs of fieldwork to collect and identify specimens and document knowledge
- funding the printing of 1000 copies of the manual

Were the objectives of the project revised? If so, how?

No.

Have the objectives (or revised objectives) been achieved? If so, how?

The manual is ready for publication and the final copy is enclosed; it is with the printers in Santa Cruz, and publication is expected within a month of the date of this report.

The manual has the ISBN 99905-801-1-1

These objectives have been achieved through the planned project activities, i.e. interviews with farmers, collection of botanical specimens, commissioning of drawings, description of the species and identification of specimens, as well as searching the international literature.

If relevant, what objectives have not been achieved, or only partially achieved, and why?

Not relevant.

5. Project Outputs (see the attached list of project outputs which we would like you to use in compiling this section of the report)

What output targets, if any, were specified for the project? (Please refer to the project schedule agreed with the Department where relevant.)

Date	Output Ref. No.	Details
1998/ 1999		
January	10	Manual on native species published

Have these been achieved?

Yes although with some delay owing to institutional changes leading to staffing losses.

If relevant, what outputs were not achieved, or only partially achieved, and why?

Not relevant.

Were any additional outputs achieved?

One botanical database enhanced (at FAN).

If output targets were not specified, please state the outputs achieved by the project. As far as possible, we would like you to work through the list of outputs attached to this paper and to report on those which are relevant to your project.

6. Project Operation / Management

Research projects - please provide a **full** account of the scientific work undertaken, outlining the methodology adopted, the staff employed and the research findings. The extent to which research findings have been subject to peer review should be addressed.

The project was principally a documentation / dissemination project, but based on research to collect the necessary information.

Methodology:

1. prioritise species to be included by ranking useful species with villagers;
2. revise and add to the list with species considered important botanically;

3. interview villagers about the uses, ecology and phenology of the selected species.
4. review state of botanical knowledge for these species, collect specimens where necessary, check identification of species with botanical experts.
5. Use the validated scientific name to search international databases (particularly those held at the Royal Botanic Gardens, Kew) and bibliographies, for further information relevant to the manual.
6. Draw each species; in particular profiles of the trees were added, and photos of the bark were included where that was a particularly important identification criterion.
7. Collate all information, review and distribute to foresters and other potential users for review.
8. Evaluate drawings with potential users.
9. Contract a professional communicator, to edit and ensure ease of use of the manual.

Finally it should be noted that through a new DFID-funded research project (see below, question 8) the manual has recently been evaluated among potential users. The outcome of this review will be included in a fieldwork report expected from CIAT in January 2000. Hence there has been considerable collaboration between projects, and between institutions.

Staff employed

Collaborators included Ing. Israel Vargas, botanist / agronomist; Ing. Miguel Eid, agricultural extension worker, and Lic. Roxana Loaiza, social communicator.

Research findings

Although not a research project *per se*, the project produced two significant research outputs:

1. the methodology outlined above, which has been used as the starting point for a new DFID-funded research project (see below)
2. the utility of accessing scientific information internationally, through the use of properly-determined scientific names. Approximately 25% of the species included in the manual had uses or other useful information documented in the international literature. The search also emphasised the importance of this initiative in showing that about half of the species had not been written about in literature accessed internationally.

Training projects - please provide a **full** account of the training provided. This should cover the content of the training, arrangements for selecting trainees, accreditation, etc.

Not a training project.

Did any issues or difficulties arise in running and managing this project?

Loss of staff named on the original proposal due to political changes influencing staffing procedures at CIAT.

7. **Project Impact**

To what extent has the project assisted the host country to meet its obligations under the Biodiversity Convention, or to what extent is it likely to do so in the future? Please take account of the following in preparing this section of the report:

The project has particularly assisted Bolivia to fulfil its obligations to preserve and maintain knowledge, innovations and practices of indigenous and local communities, and to promote the sustainable use of components of biological diversity

The way in which research findings have been **used** to address biodiversity objectives. What actions have been taken, or are expected to be taken, as a

result of the project? How will these contribute towards the conservation of biodiversity in the host country concerned?

It is anticipated that the manual will help extension workers to support farmers' interest in cultivating (and thereby conserving) native trees species; furthermore such cultivation and / or protection will contribute to the other high conservation priority in the temperate valleys: soil conservation. Higher attention paid to native species will raise interest in them, and trigger further work. Numerous discussions with NGO and government staff (including the newly appointed municipal extension workers) indicate that this information is eagerly awaited and will be put to good use. If possible an assessment will be carried out in two years' time to evaluate the use of the guide and revise it for a further edition (FAN and CIAT have expressed interest in doing this at their own expense).

The extent to which training provision has improved the capacity of the host country to conserve biodiversity in the future, and the extent to which the training has addressed real skill needs. Information should be provided on what **each** student/trainee is now doing (or what they expect to be doing in the longer term), and the extent to which their skills are being used in a positive way to promote biodiversity conservation in the host country.

No training was funded through this project, although the experience provided has been an important learning experience particularly for the lead collaborator who is now in a position to oversee publication of further guides within FAN.

The wider impacts of the project in terms of the level of collaboration achieved between UK and host country institutions, and the prospects for greater joint working/information exchange in the future. To what extent has good collaboration been achieved?

Collaboration was excellent, to the extent that the three institutions are now involved in a larger project building on this one. See below for details.

8. Sustainability

Did the host country institute(s) contribute resources to this project (these may have been provided in-kind, for example staff, materials etc)?

Yes: staff, office space, accommodation; vehicles for field access.

If so, what is the monetary value of the resources committed to the project by the host country institute(s)?

£4200

To what extent was Darwin funding a catalyst for attracting resources (including in-kind contributions) from other sources? Please provide details on the other sources from which resources were secured for this project.

DFID Forestry Research Programme provided funds to contract a local illustrator.

What is the monetary value of resources generated for the project from other sources (please provide an estimate for each funding source)?

£800.

- To what extent is work begun by the project likely to be continued in the future (if this is relevant - some projects may come to a natural end at completion)? This is more likely to be relevant for research-based projects.

It is intended to revise the guide as more information becomes available, and based on feedback from users.

- Has the project acted as a catalyst for other projects/initiatives in the host country? Is it likely to do so in the future?

Our project experience has led directly to the initiative for a larger DFID-funded research project, through the Forestry Research Programme: R7475 'Developing a global methodology and manual for biodiversity guides suitable for use in rural development'. It has expanded from the three collaborating institutions in the Darwin project, to include four others in Brazil. This new project, because methodological, will in turn have a very wide catalytic effect in enabling institutions around the world to write new guides of relevance to rural development.

The project summary is as follows:

'This project will produce a globally-useful methodological manual for authors of biodiversity guides. It will enable guides to be written in any context, to benefit rural livelihoods and biodiversity, and effectively combine scientific and local knowledge in an accurate and usable way.'

A process approach will lead to practical guidelines in the manual, through:

- *analysing impact of existing guides on livelihoods and biodiversity*
- *working with diverse users to define their information needs*
- *developing guides for four specific user-groups, two guides from each of two data sets generated in different countries and contexts, allowing controlled comparisons. '*

9. Outcomes in the Absence of Darwin Funding

- Had Darwin funding been unavailable for the project, what would have been the most likely outcome:

The project would not have proceeded.

- Had this project not been undertaken, how would the users/beneficiaries of the project have met their requirements? Would other organisations/ initiatives have been able to meet their needs (at least to some extent)?

The importance of collaboration between local and international staff strongly suggests that they would have had to find another international collaborator with access to databases / bibliographies. There was no obvious alternative funding source to support such a small project, so the role of Darwin Initiative was essential.

10. Key Points

- What would you identify as the key success factors of this project?

Demand came from local staff. All collaborators were knowledgeable, highly committed and respected both local and scientific knowledge.

- What were the main problems/difficulties encountered by the project?

Staffing changes and political uncertainties. Also insufficient time budgeted by the lead collaborator.

- What are the key lessons to be drawn from the experience of this project? Please try to provide as much information on this point as you can so that others can learn from the experiences of your project.

The links between scientific and local knowledge have provided a unique and valuable product. Involvement of local stakeholders (farmers and extension workers) in the planning, information gathering and evaluation mean that it will be relevant and useful.

It is important to make sure sufficient time is allocated by collaborators, which in most cases means paying for either their time or that of a research assistant.

- Does the experience of this project imply a need to review arrangements for developing and managing projects funded as part of this Initiative?

No.

11. **Project Contacts**

To assist future evaluation work, please provide contact details (name, current address, tel/fax number, e-mail address), for the following:

- UK project leader (and other key UK staff involved in the project)

Dr Anna Lawrence
Senior Research Fellow, Agricultural Extension and Rural Development Department,
University of Reading, RG6 6AL, UK

- Host country project leader/co-ordinator (and other key people involved in the project at the host country collaborating institute)

Ing. Israel Vargas, Depta Ciencias, Fundación Amigos de la Naturaleza, Casilla 2241, Santa Cruz, Bolivia

- 'End users' for the output produced by the project in the host country (i.e. government departments, agencies, universities, local communities etc)

as for project leader. He can supply contacts with extension agencies etc.

- Project trainees/students
- Other project beneficiaries
- Other key players involved in the funding/operation/utilisation of the project.

Ing. Miguel Eid, CIAT, Casilla 247, Santa Cruz, Bolivia.

**PLEASE REMEMBER TO ATTACH COPIES OF ALL DOCUMENTATION
PRODUCED BY THE PROJECT I.E. REPORTS, PAPERS,
MANUALS GUIDES, CONFERENCE/WORKSHOP PROCEEDINGS TRAINING
MATERIALS ETC**

Ref: 9120/FORMS/9120-FRS

Enclosed:

Final copy of manual.

Circulation:

Peter Milway, DTZ

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Pierre Ibisch, Director, Science Programme, FAN Bolivia

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