

Darwin Initiative: Half Year Report

(due 31 October 2007)

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| Project Ref. No. | 15-016 |
| Project Title - | HABITAT RESTORATION AND SUSTAINABLE USE OF SOUTHERN PERUVIAN DRY FOREST |
| Country(ies) | Peru |
| UK Organisation | Royal Botanic Gardens Kew |
| Collaborator(s) | UNALM, UNICA, ANIA, GAP, INRENA |
| Project Leader | <i>William Milliken</i> |
| Report date | <i>October 2007</i> |
| Report No. (HYR 1/2/3/4) | <i>HYR 2</i> |
| Project website | www.huarango.org |

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

The last six months have been very busy and challenging for the Darwin team. Activities have included: a capacity building/training visit to northern Peru; a four-week training visit from a Kew horticulture student (including establishment of a community cactus greenhouse); a ten-week visit by five volunteers from Newcastle University (including collating ethnobotanical information with local university students); finalisation of the legal status of a forest reserve (concession for conservation); development of closer cooperation with regional government; development of a MOU with a large agroexporter for a 9ha restoration trial (and first phase of planting); planning (and MOU) for setting up of a small herbarium at UNICA; and progress towards establishing small carbon capture agreements between Trees for Cities and one of the project's Peruvian partner organisations.

The more routine project activities have continued unabated: monthly monitoring of restoration sites; workshops; educational tree planting; lectures and public dissemination; publications; germination and propagation trials; plant collection (awaiting export permits) and biodiversity monitoring. These have been especially challenging for the student team and education programme, since extended strikes forced closure of schools and universities. In addition, the region was hit by an exceptionally large earthquake in August (see below).

Sustainable management and capacity building

Following meetings and the festival workshops it was decided that funding for the planned *Tamarugo* site visit in Chile would be more productively used in-country to extend an important capacity-building visit to northern dry forest, under the guidance of Gaston Cruz at University of Piura and its affiliated CITE Agroindustrial. The team numbers were constrained by costing, but we were able to take four members of our Miskihuaranga group (Katia, Ana, Enma led by Consuelo Borda), also Reno Cortez from Samaca products and Claudia Luthi to film the training video. We were joined for three days by Alberto Benevides, the owner of Samaca products. The group visited 8 small sustainable dry forest businesses, making a range of *Prosopis* (Algarrobo)-derived products including syrup, sweet meal, cakes, honey, toffees and a coffee-like beverage. We also visited: a UNEP-funded community *Prosopis* carbon sequestration project; a *Prosopis* salinity resistance experiment and pod processing facility; an organic composting factory at Tambogrande using *Prosopis* forest leaf-litter and coral guano, and a ceramic making, community firewood and *Capparis* carpentry project (a full illustrated report will be submitted with annual report). The learning outcome was reinforced with talks from Gaston and Nora Grados, who have unique experience in developing *Prosopis* products with local communities.

We took the opportunity to take our *Prosopis* (huarango) sweet meal from Ica to CITE for nutritional analysis and the required phytosanitary permits for the Miskihuaranga product sale and labelling. The trip was highly valuable and will help to develop a legacy of sustainable forest production in the south (details in annual report 2006).

The Miskihuaranga group (five economics students) completed a census of 200 rural households around Ica in July, using a 30 options questionnaire to conclude its Ica research (results available). This has recently been extended to the Rio Grande and Nazca watershed, thus encompassing the distribution of *Prosopis* forest, to have a comprehensive and comparative dataset for publication for the final phase of market research.

The *Prosopis* flour (sweet meal) product, prepared for sale at the festival, is due to be sold by Miskihuaranga under trademark labelled jars. However it is not clear following the earthquake whether the condition of the meal is still suitable for sale this October, and we await analysis by CITE. The last hurdle for starting flour (and *Prosopis* coffee) production in March 2008, with pod harvest and sale in identified outlets (see annual report '06), is the signing of an MOU between Miskihuaranga and the *Instituto Superior Tecnológico Público 'Fernando Leon de Vivero'* in La Tinguíña, Ica, where the pod processing facility is planned. OQW made contact with Traidcraft during the recent Darwin Livelihoods workshop and will arrange a consultation meeting to discuss these issues. Honey production experiments have been able to resume with this year's nectar flow, with the placement of hives at the San Pedro habitat restoration site. In July the project paid for Andre Olechea to visit DarwinNet to participate in a conference on Meliponidae native stingless bees, the product of which has a high market price and it is hoped might be trialled in the conservation concession.

Government relations

In June the Darwin team took part in a government initiative, mediated by the project, planting 1,000 Huarangos propagated in the project nursery. Many of these the government subsequently failed to irrigate properly, but this nevertheless demonstrated an important first step by the regional government towards reforestation with native species. The regional president Romulo Triveño took part, as did local scout groups and team members.

The project manager Oliver Whaley (OQW) was asked to guide and advise INRENA and the local government's natural resource team on a number of excursions to assess *Prosopis* forest condition. During these visits illegal deforestation activities were encountered. INRENA confiscated chainsaws on two occasions, with fines and verbal warnings, and in one area of the lower Rio Ica a large quantity of charcoal was confiscated from a wealthy landowner. Whilst helping to protect endangered relic forest fragments, this has had some negative repercussions for OQW by associating him with threats to illegal charcoal businesses.

The project can reasonably claim, through its publicity, to have helped the local government address loss of forest and biodiversity. This has meant that both the local government, INRENA and Comisión Ambiental Región – Ica (CAR), through their emerging initiatives for reforestation, can draw on the project experience of native species restoration. This should ensure that the project's habitat restoration and sustainable management guides will become increasingly welcome tools. Other benefits of a close relationship with the government have allowed us the free use of their seminar rooms for workshops, and use of their truck when the project truck has been in repair.

Publicity and Publication, dissemination

Various publications authored or co-authored by Darwin team members have recently been completed and submitted, including: 'The Role of *Prosopis* in Ecological and Landscape Change', submitted for peer review to *The American Archaeologist* (10,000 words); 'First Case Study of Nesting Peruvian Endemic *Colaptes atricollis*, (Black-necked woodpecker) – Ica Region' – submitted to *Cotinga*; 'Cactus Inscriptions - *Neoraimondia arequipensis* informs historical ecology' for *Kew Magazine*. As well as these forthcoming publications Katie Huber, a journalist based in Lima, has prepared a lengthy Huarango article accepted for publication in the Lima magazine *Somos*, highlighting the Darwin project through interviews with OQW. Darwin team student Octavio Pecho has completed a thesis on the Poaceae (Gramineae) of the Ica region, identifying a record number of species including five rare endemics and greatly contributing to the knowledge of a key family. Publications including the Ica Flora are delayed due to difficulties with specimen export permits, but are expected in November at Kew. Five further papers are in preparation with the completion of three theses supervised by Carlos Reynel in Peru expected by February 2007.

OQW was invited in July, as part of the government plan for sustainable development for the Region of Ica under the Regional Management of Natural resources and the Environment, to form part of the steering committee advisory group for Gran Parque Ecologico de Ica (documentation available). OQW was asked by the regional government to participate in a series of conferences around "El Dia Mundial del Medio Ambiente 5 Junio" giving lectures around the theme of Ecology and Biodiversity in Ica – understanding for conservation and restoration.

Following the Huarango festival in April a documentary film is being made by a Lima team directed by the well-known film maker Diana Ackerman under guidance of OQW to bring further publicity to objectives of the project.

The Project has now produced a series of three posters in the same format - native Plants, Reptiles and Birds of Ica, highlighting the key species and ecosystem services they provide. These have been widely distributed to public spaces, agroindustries and municipalities. They are used during the ongoing programme of environmental education focused around tree planting activities. The key objective has been to instil the message, though a range of activities, that understanding biodiversity can be seen simply as the components of ecosystems that provide essential services.

2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

The project suffered a few minor setbacks including mechanical problems (vehicle, pumps) and rising office costs, but these are all resolvable without major impact on timetable or budget. The most devastating development was the earthquake that hit the region on 15th August at 6.30pm, which was the strongest worldwide since 1990 (Richter 7.9) and was felt all over Peru. This left over 500 dead, 91,000 with destroyed or uninhabitable houses, and affected 1,278 classrooms. The town of Pisco, 70 km from Ica, was 90% destroyed. This has thrown much of the Ica region into disorder and affected the Huancavelica - the watershed for Ica. Several members of the project team either lost their houses or had them damaged. Funds have been donated from the UK to help recovery. Some damage was sustained to wells and irrigation canals used by the project, but these have since been repaired. WM was in Brazil at the time, and was able to make a brief visit a few days after the earthquake in order to check on the wellbeing of project staff, resolve pressing issues and assist with forward planning.

On 16th October OQW was invited to attend an all-party parliamentary Group with the Peru Earthquake Aid Committee (PEAC), chaired by Michael Connarty MP and Kim Howell MP (Minister of State, Foreign & Commonwealth office) with Ricardo Luna - Peruvian Ambassador to UK. Following discussion with PEAC and the Ambassador, it was agreed that given the unique experience of the project in the region, we would be well placed to advise on planting. Thus as Government and NGO resources flow into the area, an opportunity has arisen to focus attention on native planting as an important element of reconstruction.

Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?

No

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| Discussed with the DI Secretariat: | no/yes, in..... (month/yr) |
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| Changes to the project schedule/workplan: | no/yes, in.....(month/yr) |
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3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

None

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with the Darwin Secretariat directly.

Please send your **completed form email** to Eilidh Young, Darwin Initiative M&E Programme at Darwin-Projects@ectf-ed.org.uk . The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message eg Subject: 14-075 Darwin Half Year Report**

Response to review

Sustainability and legacy

As observed in the 2006-7 end-of-year review, sustainability and legacy are, for a number of reasons, particularly challenging for this project. Our approach to this is as follows:

The project aims to develop and promote methodology rather than to restore habitat *per se*. It is recognised that the timescale is short, and that within the lifetime of the project it will only be possible to develop meaningful information about the early stages of the restoration process. However, in this arid environment this is one of the most critical phases.

Habitat restoration trials in community areas are particularly challenging, as the reviewer observed. Our decision to implement small trials alongside poor communities was intended to further the overall methodological learning process, i.e. understanding appropriate approaches and potential problems associated with working in this context. It is, however, not realistic to expect that the development of sustainable forest products will provide sufficient incentive, at least in the short term, for widespread uptake of community-owned habitat restoration initiatives, since the time lag between planting and productivity is great and the existing forest resource small. Nevertheless, the establishment of small-scale pilot forest product operations should prove a valuable learning process and, it is hoped, promote custodianship of forest fragments whilst helping to explore and define future options.

Long-term take-up and success will have as much to do with will and incentive as with methodology – probably more. To this end the project has laid a heavy emphasis on engaging constructively with a range of partners including local government, NGOs and the private sector (as well as the communities), raising awareness of the importance of native flora through public education and events etc., and attempting to identify strategies for ensuring continued momentum and access to funds after the end of the project. These activities are all referred to in the sections above and will be further analysed in the end of year report.