DarwinNet

The Peru-Ecuador Dry Forest Clearing-house Mechanism

Ref. 13/006

FINAL REPORT

Contents

Cover: Red-masked Parakeet (*Aratinga erythrogenys*), threatened endemic of the Tumbesian Region.
By Alex More – DarwinNet webmaster, Sullana, Peru.

Darwin Initiative

Final Report

1. Darwin Project Information

Project Reference No.	13/006
Project title	DarwinNet – the Peru-Ecuador Dry Forest Clearing-house Mechanism
Country	Peru and Ecuador
UK Contractor	BirdLife International
Partner Organisation (s)	Naturaleza y Cultura Internacional – Peru Naturaleza y Cultura Internacional – Ecuador Fundación ProBosque - Ecuador
Darwin Grant Value	£195,951
Start/End date	July 2004 to July 2006
Project website	www.darwinnet.org
Author(s), date	Jeremy Flanagan & David Thomas, September, 2006

2. Project Background/Rationale

- Describe the location and circumstances of the project

The project was centred on the Equatorial Dry Forests of NW Peru and SW Ecuador, which are recognised as one of the most threatened biota on earth and a global conservation priority. The region, known also as the Tumbesian Endemic Bird Area, has exceptional levels of endemic species, but widespread habitat destruction has resulted in many globally threatened species. Recognizing the importance of this region BirdLife is implementing various projects, including DarwinNet, to improve the conservation and sustainable development of the remaining forests. While other BirdLife projects in the region are based on direct activities at site / community level, DarwinNet evolved as a concept to improve our overall knowledge of the region, providing free access and interchange of information to all stakeholders.

- What was the problem that the project aimed to address?

The main problem addressed by the project was the lack of access and interchange of information and experiences amongst stakeholders as to the importance of the region. By addressing this problem through the implementation of an ecoregion based clearing-house mechanism the project enhanced the interchange of information and experiences thereby improving decision making, raising awareness, helping to set conservation priorities and build capacities amongst stakeholders, civil society and other interested parties in the region.

- Who identified the need for this project and what evidence is there for a demand for this work and a commitment from the local partner?

The project was identified by in-country partner Naturaleza y Cultura Internacional and developed with BirdLife. Demand for the work can be measured in terms of the number of requests DarwinNet receives for information, the number of invitations to give presentations, the number of members now in the maillist and number of news articles received and disseminated, for example. Also the CBD identifies regional/sub-regional and thematic CHMs as important towards the implementation of the convention, with DarwinNet at present listed as the only such

CHM globally on the CBD website.

There is strong commitment from local partners to continue and strengthen DarwinNet into the future.

3. Project Summary

- What were the purpose and objectives (or outputs) of the project? Please include the project logical framework as an appendix if this formed part of the original project proposal/schedule and report against it. If the logframe has been changed in the meantime, please indicate against which version you are reporting and include it with your report.

Purpose
Policies for land use and development in the dry forests of NW Peru and SW Ecuador that are consistent with the conservation and sustainable use of biodiversity and the sustenance of local livelihoods.

Outputs
1. Increased transfer of and access to biodiversity & other information.
2. Enhanced awareness and capacities.
3. Systematised information on experts and grey material.
4. Systematised GIS/spatial information.
5. Enhanced communications between stakeholders.
6. Enhanced dissemination and publicity.
7. Strengthened institutional capacities for Peruvian & Ecuadorian partner organisations.
8. Strengthened institutional capacities for public and private institutions in region.
9. Priority conservation areas for forests and species in Peru-Ecuador identified.

Original project logical framework is given in Appendix V. The original framework did not change throughout the project and is being reported against here.

- Were the original objectives or operational plan modified during the project period? If significant changes were made, for what reason, and when were they approved by the Darwin Secretariat?

No significant changes were made during the project.

- Which of the Articles under the Convention on Biological Diversity (CBD) best describe the project? Summaries of the most relevant Articles to Darwin Projects are presented in Appendix I.

The main articles are 13, 17 and 18 referring to public education, information exchange and cooperation, also of relevance are articles 7, 12, & 16, and cross-cutting themes: Access & Benefit Sharing, Ecosystems Approach, Forest Biodiversity, Indicators, Public Education & Awareness, and Sustainable Use & Biodiversity. The project is also relevant to other articles, such as Arts. 5, 6, 8, & 10 and themes; Biodiversity & Tourism, Ecosystems Approach and Protected Areas.

- Briefly discuss how successful the project was in terms of meeting its objectives. What objectives were not or only partly achieved, and have there been significant additional accomplishments?

The project has been successful in meeting all of its objectives. Although some discrete outputs were not achieved (e.g. peer-reviewed paper) the project feels this is more than balanced by a substantial array of additional accomplishments / outputs during the project.

4. Scientific, Training, and Technical Assessment

- Please provide a full account of the project's research, training, and/or technical work.
- **Research** - this should include details of staff, methodology, findings and the extent to

which research findings have been subject to peer review.

As mentioned in previous reports the project does not involve research as such, but activities are orientated towards office-based research, in the collation of information related to the conservation and sustainable development of the region and on ´on-going DarwinNet development, collation and dissemination of new / existing data´.

- **Training and capacity building activities** – this should include information on selection criteria, content, assessment and accreditation.

Selection criteria were based on consultation with in-country partner institutions who recommended the most appropriate candidate from within their organisation to participate in the project. Overall this involved young biology graduates throughout the project, but the project has also involved students and volunteers from Communication Science degrees. Additionally for training workshops representatives from the NFPs of both countries were invited to participate thereby consolidating the project's relationship with both states.

Project staff received training in GIS (programmes: CartaLinx, MapInfo, ArcView) and in database management (Microsoft Access). This involved instructors / experts from the BirdLife secretariat in Cambridge travelling to Peru to conduct workshops. Project staff also received training in webpage design (DreamWeaver, HTML) and management (image management, FTP uploading, etc.).

Content of training workshops was designed to enable project staff to implement the webpage and better manage geographical and database information to be used within the webpage. Although no formal assessment (such as an exam) has been implemented of the capacities learnt, it is felt that the best indication of the training received is reflected in the quantity and quality of the information available on the webpage, all of which is produced by partner members.

5. Project Impacts

- What evidence is there that project achievements have led to the accomplishment of the project purpose? Has achievement of objectives/outputs resulted in other, unexpected impacts?

As has been acknowledged by the project members, BirdLife and external reviewers it will be some time before the project purpose is fully accomplished. It will also prove difficult to assess to what extent DarwinNet influenced changes in policy making as tracking how and when information is used is near impossible. DarwinNet as a CHM continues to grow, gather more support and have more impact both within and outside the region. Evidence to date of this comes from training workshops for community members, participation on regional and national resource management boards, participation in regional, national and international events, facilitation of binational events between communities, state agencies, scientists, etc. Such activities all combine to raise awareness and insert conservation issue into various levels of society and decision making.

Achievement of objectives has lead to several interesting and unexpected impacts:
- Invitations from the CBD to attend their events to explain about DarwinNet as a role model.
- Possible replication of DarwinNet for a new GEF project covering the paramos of Colombia, Ecuador, Peru and Bolivia.
- Interest by BirdLife to adapt DarwinNet in a new proposal for the wetlands of the Caribbean.
- Recent interest by the Ministry of Environment of the Dominican Republic to collaborate.

- To what extent has the project achieved its purpose, i.e. how has it helped the host country to meet its obligations under the Biodiversity Convention (CBD), or what indication is there that it is likely to do so in the future? Information should be provided on plans, actions or policies by the host institution and government resulting directly from the project

that building on new skills and research findings.

The project has helped both Peru and Ecuador with its obligations under the CBD. The main obligations being those of Articles 13, 17 and 18, but also several others. For both countries the project has greatly assisted national CHMs. In Peru DarwinNet also serves as a regional node of the national CHM of CONAM, the CBD NFP, and has assisted with training of CONAM personnel as well as the co-organization of events related to national strategies. In Ecuador the project has assisted the Ministry of Environment (MAE) with training, technical assistance and dissemination / publicity materials. The project has also produced 21 species action plans on threatened fauna, which are for use by natural resource managers and general awareness raising. With Article 13 the project has produced a wide variety of materials to encourage a better understanding of the region. Materials have included posters, CDs, factsheets on-line, bulletins on-line and other documents for downloading. Public presentations throughout the region have also served to promote awareness.

- Please complete the table in Appendix I to show the contribution made by different components of the project to the measures for biodiversity conservation defined in the CBD Articles.
- If there were training or capacity building elements to the project, to what extent has this improved local capacity to further biodiversity work in the host country and what is the evidence for this? Where possible, please provide information on what each student / trainee is now doing (or what they expect to be doing in the longer term).

In addition to the training and capacity building provided to the project team and partners described under section 4, the project has also given training workshops to community members and health workers on tree nurseries (in Guayaquil) and venomous animals (in Macara). There has been no formal training of students.

- Discuss the impact of the project in terms of collaboration to date between UK and local partner. What impact has the project made on local collaboration such as improved links between Governmental and civil society groups?

The project has had a great impact on collaboration between BirdLife and local partners, and has given BirdLife more understanding of the realities and necessities of the Tumbesian Region. Moreover the relationship with NCI-Peru has greatly facilitated the initiation of BirdLife´s activities at a national level in Peru. These have included the development of a small grant programme for conservation and development actions at IBAs, a series of national workshops to develop a national bird conservation strategy, and development of a number of projects and proposals that have been submitted to donors (including Darwin Initiative, DFID and EcoFondo). There is a also a collaborative proposal for bird-watching tourism in preparation.

At the local level partners already had good relations with government and other groups through various activities and projects. However, the project has allowed a more open forum where participation is equal amongst those involved and has strengthened relationships with both existing and new local entities. With national Government the impact has been by providing the countries with a strong ally; supporting national strategies, supporting national CHMs, shared resources, training – all in a region in which national governments previously overlooked the role of NGOs in policy development and programme implementation.

- In terms of social impact, who has benefited from the project? Has the project had (or is likely to result in) an unexpected positive or negative impact on individuals or local communities? What are the indicators for this and how were they measured?

The spectrum of people who have benefited is very broad – from primary-school children to State agencies. Moreover, DarwinNet has served to put the region ´on the map´ globally, which is of benefit to all those concerned with its conservation.

It is expected that all impacts will be positive both for individuals and communities. DarwinNet exists as a ´service´ which relies on collaboration with actors and as such it is difficult to see any negative aspects about the project. As DarwinNet continues to grow it is foreseen that its

impact will continue to be positive.

As mentioned under Project Impact there are various indicators as to the positive nature of DarwinNet.

6. Project Outputs

- Quantify all project outputs in the table in Appendix II using the coding and format of the Darwin Initiative Standard Output Measures.
- Explain differences in actual outputs against those in the agreed schedule, i.e. what outputs were not achieved or only partly achieved? Were additional outputs achieved? Give details in the table in Appendix II.

Those outputs not/partly achieved were:

1. 11a (peer-reviewed publications): one of the 2 intended articles was published (Flanagan, J.N.M., Franke, I., & Salinas, L. 2005.). The article was first given as a paper at the X National Botanical Conference in Peru in 2004 and published in 2005. Paper mentions BirdLife, Darwin Initiative and DarwinNet and the need to form networks of actors to save relict forest. A second paper has been drafted and is currently being circulated for comment prior to being revised and submitted to a journal.

2. 11b (papers published elsewhere): one of the 2 intended articles was published (Flanagan, J.N.M., Solís, R, & Sneary, M. 2005.), which was based on a poster presented during a CBD-SBSTTS meeting in Bangkok in February 2005.

3. 15c: (article in UK): project has yet to publish an article in the UK, although coverage has been given on the BirdLife webpage on four occasions and coverage included in the Darwin Initiative newsletter. BirdLife webpage coverage includes the following news stories and information:

- Posters highlight dry forest threats: http://www.birdlife.org/news/news/2006/06/darwin_peru.html

- DarwinNet factsheet: http://www.birdlife.org/downloads/america/files/Flder_Tumbes_Darwin_En.pdf

- Training workshop helps conserve dry forests: http://www.birdlife.org/news/news/2004/12/darwin_peru.html

- Conservation effort launched to protect the threatened biodiversity of northern Peru's "forgotten" forests: http://www.birdlife.org/news/pr/2006/03/peru.html

4. 18a & 19a: (national host country TV & radio): although efforts were made it proved difficult to attract coverage from the capital cities. In Ecuador TV coverage would have meant paying $3000, so was not deemed appropriate. One problem is that DarwinNet is not an ´event´, like an expedition or finding a new species, so it proved hard to sell.

Additional outputs are given in Appendix II.

- Provide full details in Appendix III of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website database.
- How has information relating to project outputs and outcomes been disseminated, and who was/is the target audience? Will this continue or develop after project completion and, if so, who will be responsible and bear the cost of further information dissemination?

Project outputs have been disseminated in various ways:

The webpage itself contains various formats of information, from Action Plans for conservationists / planners, to factsheets for the general public, to bulletins aimed more at communities and schools. There is also information on protected areas, ´species of the month´, general information on the region and more, which is of interest to a broad range of people.

Dissemination about the project itself has been through newspaper / magazine articles (general public), leaflets (distributed widely in region), presentations (local authorities, resource

managers, universities, students and more), through other internet pages, local radio-spots / TV interviews, conferences, workshops and formal presentations/posters at CBD events.

These activities will continue during the post-project phase, with the partner institutions responsible.

7. Project Expenditure

- Tabulate grant expenditure using the categories in the original application/schedule.
- Highlight agreed changes to the budget.
- Explain any variation in expenditure where this is +/- 10% of the budget.

Explanation for variances exceeding +/- 10 percent

Martin Sneary and Mark Balman: These two staff are experts in database design and management (Martin Sneary) and GIS (Mark Balman). During the first year of the project they visited Peru where they ran a very successful training course. It had been envisaged that their further expert input (via e-mail, phone) would be needed, to support the project in these technical areas. However, this turned out not to be the case, and the project staff (Peruvian and Ecuadorian nationals) were able to achieve project objectives based on the training provided in year 1.

Robert Williams: Robert Williams is an expert on the biodiversity of the Tumbesian region. As already explained in correspondence with the Darwin Initiative, Dr. Williams left the project early in 2006. Some of the outputs he was due to deliver were transferred to other staff persons. Darwin Initiative subsequently approved reallocation of some of the budget for Dr. Williams to other budget lines (conferences).

Ian Davidson: Ian Davidson is Head of Americas Division for BirdLife, based in Quito, Ecuador. The frequent change of government in Ecuador (three Environment Ministers during the course of the project) involved slightly more high-level advocacy than had originally been planned.

8. Project Operation and Partnerships

- How many local partners worked on project activities and how does this differ from initial plans for partnerships? Who were the main partners and the most active partners, and what is their role in biodiversity issues? How were partners involved in project planning and implementation? Were plans modified significantly in response to local consultation?

The project worked with three local partners; Naturaleza y Cultura Internacional Ecuador in Loja, Fundación ProBosque in Guayaquil, Ecuador, and Naturaleza y Cultura Internacional Peru in Sullana. This was the original partnership as detailed in the proposal, the idea being that DarwinNet function through regional offices covering different areas of the Tumbesian region to facilitate information exchange. In terms of administration of the project Naturaleza y Cultura Internacional were the main partners, but all three partners played active and important roles in the success of the project.

These three institutions work closely with biodiversity issues in the dry forests. ProBosque manages the 8,000ha Cerro Blanco reserve outside Guayaquil, which receives some 10,000 visitors per year, as well as being involved in other projects and elaboration of local strategies.

NCI-Ecuador own some 12,000ha of dry forest in the border region of Peru and together with NCI-Peru are currently implementing a Community Fund (British Lottery) financed project with BirdLife. NCI-Ecuador also works in several other dry forest areas, as well as Andean and Amazonian projects. NCI-Peru is involved at several Important Bird Areas funded by the British Bird Fair through BirdLife International, as well as other projects in the Andes and Amazonia of Peru.

Partners were involved in the project planning and were largely responsible for its implementation. From conception through to implementation the project has been from the bottom-up with partners taking the lead and BirdLife assisting with input of technical expertise and administrative and management issues. This meant that there were no significant modifications with plans.

- During the project lifetime, what collaboration existed with similar projects (Darwin or other) elsewhere in the host country? Was there consultation with the host country Biodiversity Strategy (BS) Office?

The only similar work conducted was with the Instituto de Investigación de la Amazonia Peruana (IIAP), in Iquitos. IIAP manage the SIAMAZONIA information portal for conservation and development issues in that region. During the project close ties were made with IIAP, with joint meetings with CONAM on regional nodes and during March 2006 Peruvian team member Alex More spent two weeks with IIAP learning various aspects of data and webpage management.

Project did collaborate with Reynaldo Linares-Palomino, a Darwin Initiative Scholarship student who conducted botanical work in the dry forests of the Marañon Valley, north Peru. During the post-project funding phase project will also collaborate with the successful Kew Garden Darwin Initiative project in the dry forests of southern Peru.

The BS offices for Peru and Ecuador are CONAM and MAE respectively, with whom the project worked closely throughout with regular consultations (a three party agreement with BirdLife exists for the project).

- How many international partners participated in project activities? Provide names of main international partners.

BirdLife was the only international partner. However, during the course of the project many important international relationships were forged, especially with the CBD itself. Other international institutions that have assisted in one way or another have been the United Nations Convention to Combat Desertification (UNCCD), The Nature Conservancy, Global Biodiversity Information Facility, Conservation International, UNEP, Comunidad Andina de Naciones, PromPeru – The Peruvian Ministry of External Commerce & Tourism, World Resources Institute, British Embassies (Quito, Lima, and Brasilia) and Kew Gardens. These institutions have helped with letters of recommendation, exchange of information, organisation of project presentations, and funds for printing posters.

- To your knowledge, have the local partnerships been active after the end of the Darwin Project and what is the level of their participation with the local biodiversity strategy process and other local Government activities? Is more community participation needed and is there a role for the private sector?

The partners continue to develop DarwinNet through post-project funding, so are very much active. All partners participate with local biodiversity strategies, as well as national strategies, which also serves to further strengthen and promote DarwinNet.

More community participation is needed and this forms the main focus of the post-project funding proposal by working with 10 Important Bird Areas and their communities, as well as working with local and regional governments.

At the local level there is a role for the private sector and DarwinNet did advance with this with private companies co-funding printing costs. However it is one aspect which needs to be examined more as the private sector is an important stakeholder in the region and could assist with the future sustainability of the project. Recently the post-project has begun to collaborate

with farmers who export certified products (mangos) to Tesco in the UK. The issue of farmland diversity is one which has been largely overlooked in the region and could form the basis for an interesting proposal in the future involving more stakeholders from the private sector. There are also plans for collaboration with the bird-watching tourism private sector both at the national and international level, and discussions have been initiated with private tour companies and PromPeru (the national tourism promotion agency).

9. Monitoring and Evaluation, Lesson learning

- Please explain your strategy for monitoring and evaluation (M&E) and give an outline of results. How does this **demonstrate** the value of the project? E.g. what baseline information was collected (e.g. scientific, social, economic), milestones in the project design, and indicators to identify your achievements (at purpose and goal level).

M&E was measured against the project timetable of activities and outputs, which provided the simplest measure of progress and is in-line with reporting procedures for the Initiative. In-country evaluation was through regular team meetings and constant communications between BirdLife and partner organisations. Results have been positive, with only a few of the intended outputs not met, but as mentioned balanced by various other additional outputs.

A very large amount of baseline information has been generated, collated and disseminated, the majority of which is available free on-line.

The project developed a set of relatively simple indicators, upon which information was to be collated. However with some of these indicators it has proved difficult to collect quantitative data on various issues. The other question is if such changes are a result of DarwinNet and to what degree. These are as follows:

Webpage	**July 2004**	**July 2005**	**July 2006**
Number of visits.	0	7640	19935
Number of members in maillist.	0	650	1500
Number of people in database of experts / institutions.	0	89	144
Number of messages received asking for information.	0	57	138
Number of species action plans.	0	15	21
Number of factsheets.	0	10	41
Number of bulletins.	0	2	9
Number of projects listed in project database.	0	10	17
Number of hyperlinks (to local govt. state agencies, etc.).	0	60	95
Dissemination			
Number of press notes / articles published.	0	30	46
Other dissemination materials (posters, manuals, etc.).	0	6	26
Radio / TV coverage.	0	4	7
Social	0		
Number of communities receiving information via bulletins.	0	5	12
Number of communities sending information to include in future bulletins or factsheets.	0	4	8
Political / management			
Number of regional or local governments involved in the mechanism (network of associates).	0	4	7
Evidence that information is being used by authorities.	Via direct consultations / emails		
Number of NGOs linked to mechanism.	0	13	29
New and changed legislation – favourable or not	-	-	-
Number of projects in the region (investment, time span, etc.).	Complete data is not available		
Conferences			
Number of participants in workshop during VICNO.	n/a	70	n/a
Results / agreements from workshop during VICNO.	n/a	1	n/a
Number of participants in workshop during IICIBS.	n/a	400	n/a
Results / agreements from workshop during IICIBS.	n/a	1	n/a

Conservation			
Hectares under protection (number / type of reserve, with or without management plans, finances, personnel, etc.)	Information held as part of the database on projected areas.		
Threatened species (categories, changes in categories, number of reserves that hold a certain species, etc.)	There have been no changes in threat categories.		
Proposals for new reserves (and IBAs)	No proposals for new reserves		
Proposals for changes or new threatened species.	No proposals for threat changes		
CBD			
Number of references to the DarwinNet mechanism in CBD publications.	1	0	0
Number of articles by the DarwinNet mechanism published by CBD.	0	1	0
Participation of DarwinNet staff or associated in CBD events (directly or indirectly).	1	1	1

- What were the main problems and what steps were taken to overcome them?

During the project no main problems were encountered. Some political unrest in Ecuador over the project period saw 4 Ministers for Environment in 3 years, which weakened links at the highest political levels. However, the project was able to operate well through regional offices of the Ministry.

- During the project period, has there been an internal or external evaluation of the work or are there any plans for this?

There was no official independent evaluation of the work, although continued support for the project from CONAM, Ministerio del Ambiente and the CBD can be taken as an indirect evaluation of the value of the project. Also the three party agreement between BirdLife, CONAM and the Ministerio del Ambiente has to be reviewed to see if the objectives laid out in this document have been fulfilled. This process will provide a useful indication of the success of the project.

Internally, regular team meetings and evaluations within Naturaleza y Cultura in collaboration with BirdLife have served to keep the project on track, making adjustments as necessary. Meetings also served to evaluate the direction of the project and the needs for financing into the future. Interviews with key-stakeholders have been held to assess how they use DarwinNet and what other sort of information they would like to see available, or what other assistance they need. This process has helped to better define the post-project stage.

- What are the key lessons to be drawn from the experience of this project? We would welcome your comments on any broader lessons for Darwin Initiative as a programme or practical lessons that could be valuable to other projects, as we would like to present this information on a website page.

One of the key lessons learnt was how should a CHM function to be effective. Globally many existing CHMs of NFPs are poorly maintained with limited information. Also the concept of a CHM appears to be based on the implementation of a webpage and little else. It has always been DarwinNet´s policy that an effective CHM should consist of other activities, such as presentations, development of materials for different stakeholders, direct consultations, field visits, etc. in order to gain the confidence of the various actors. This has been a slow process but it is evident the mechanism continues to grow and receive more acceptance within the region. The experience of DarwinNet will prove a very valuable lesson for those wishing to implement similar projects in other ecoregions.

Another lesson is that there is a definite need to bring scientific information to the people, communities and local decision makers, be it through presentations, leaflets, posters, etc.

10. Actions taken in response to annual report reviews (if applicable)

- Have you responded to issues raised in the reviews of your annual reports? Have you discussed the reviews with your collaborators? Briefly summarise what actions have been

taken over the lifetime of the project as a result of recommendations from previous reviews (if applicable).

Issues raised from the First year report review are dealt with in Appendix VII. From the Second year review no specific issues were raised although some topics were referred to which are dealt with below. Reviews were always discussed with collaborators to insure necessary adjustments and receive input. Main issues from the second year Annual Report review are:

- "The project has identified 10 communities in key areas for visits and started to involve relevant local institutions and authorities. This indicates that the project is moving to reach the primary stakeholders who depend on the land and natural resources."

The project will be consolidating this approach through the post-project funding proposal, focusing on communities at relevant sites (mainly **Important Bird Areas** IBAs, as identified by BirdLife). At most of these sites project partners are already involved with community level conservation projects, thereby facilitating the relation with DarwinNet. The project continues to work closely with national resource institutions (CBD-NFPs) (INRENA and CONAM in Peru and Ministerio de Ambiente in Ecuador) and environmental departments of regional governments.

- "In the longer term, maintenance of the services that DarwinNet provides will depend on the value that local organisations gain from these services and the ability of such organisations to sustain them."

This issue is recognised and reflects the question of sustainability in the long term for DarwinNet. It is becoming obvious that as DarwinNet grows it is becoming the main or only focal point for conservation issues in the region. As such the possibility of regional organisations assisting with DarwinNet activities is being discussed with these stakeholders, so that at least costs of some activities are shared in the future.

- "The annual report gives a full and clear description of the outputs achieved so far. As indicated in Section 2, one small output (two peer reviewed journal articles) has not yet been produced. Given that all other planned and many additional outputs were produced, the explanation that this was given a lower priority within the heavy workloads is reasonable."

It is still planned to publish one or two journal articles in the future as this is important for summarizing results to date and bringing this to a more academic and international audience.

- "While making knowledge and information available to stakeholders is essential to making progress it is difficult to separate the effects of that input from other factors. Full project impact will probably only be apparent long after the DI project closes."

While this is accepted, it should also be recognised that much of the information on DarwinNet did not exist in Spanish or in a readily available format before. From there it is difficult no know how such information influences regional processes, but partners also participate directly in regional meetings, etc. where such issues are inserted directly into discussions.

- "Although local staff have received training it is not clear from the report whether they have acquired the ability to maintain the website without external support."

It should have been made clearer before that local staff have completely managed the website, without external support, since March 2005. All design and maintenance of the site and information (factsheets, maps, directory of experts etc.) is managed between in-country partners. They have also been responsible for the design of the wide range of other materials produced (posters, leaflets, manuals).

- "It would be worthwhile attempting to define which of these products is the most effective and produces the most benefit in relation to cost. Is a record kept of how many people access the website and what they look at? It may also be helpful if the site contained a feature that allowed visitors to give feedback."

This is one question that needs attending. With physical materials (posters delivered to schools, communities etc.) it is difficult to measure effectiveness, although it is known that this was the first time such materials were produced in the region and proved extremely popular

(additional funding for reprinting these materials is currently being sought by partners).

The website at present contains a simple counter of visits which allows an approximate evaluation of visitors, where they are from and what they are looking at. However the need for a more detailed analysis of the services and information being used on the site has been recognised and is planned to be implemented during the post-project phase along with a restructuring of the page to better handle the increased amount of information it is holding.

Some level of feedback is given by direct emails to the project or verbal comments from stakeholders (schools, INRENA, MAE, communities, universities), see Appendix VII for examples.

A visitor's feedback section could be implemented, or as has been considered some simple questionnaire or poll.

Overall, there are several components that need implementing or adjusting to improve the webpage and in-country partners are currently working to address these issues.

11. Darwin Identity

- What effort has the project made to publicise the Darwin Initiative, e.g. where did the project use the Darwin Initiative logo; promote Darwin funding opportunities or projects? Was there evidence that Darwin Fellows or Darwin Scholars/Students used these titles?

The Darwin Initiative has been publicised at every opportunity: the use of the name DarwinNet refers in/directly to the Initiative; the project adapted the Darwin Initiative logo as the project's logo; the Darwin Initiative logo was included on every output of the project (c.24,000 items between posters, leaflets, factsheet, manuals); during public presentations to actors an explanation was always given on the Darwin Initiative (to c. 2,000 people through presentations and conferences); and the webpage contains a factsheet in Spanish on the Darwin Initiative.

- What is the understanding of Darwin Identity in the host country? Who, within the host country, is likely to be familiar with the Darwin Initiative and what evidence is there to show that people are aware of this project and the aims of the Darwin Initiative?

Through project presentations the understanding of Darwin is good. Also several other institutions in Peru and Ecuador have received funding before, so there is a growing awareness about the Initiative.

- Considering the project in the context of biodiversity conservation in the host country, did it form part of a larger programme or was it recognised as a distinct project with a clear identity?

DarwinNet is a distinct project with a very clear identity. However, in terms of larger programmes it is directly related to the CHMs and national biodiversity strategies of Peru and Ecuador.

12. Leverage

- During the lifetime of the project, what additional funds were attracted to biodiversity work associated with the project, including additional investment by partners?

Associated with the project and partner NCI-Peru, the relationship lead to related funding for NCI-Peru for site-specific work at IBAs in northern Peru. Additionally BirdLife is applying to the Darwin Initiative to continue work in Peru, involving NCI-Peru, in the implementation of the national bird conservation program. An application has also been submitted by BirdLife and NCI to the DFID Civil Society Challenge Fund for a programme of work focused on integrating environment and development through a rights-based approach at IBAs in the region. Also, both BirdLife and NCI have inserted guidelines into their fundraising efforts and all new project in the region with dissemination activities will contribute to the DarwinNet self-sustaining effort.

- What efforts were made by UK project staff to strengthen the capacity of partners to

secure further funds for similar work in the host country and were attempts made to capture funds from international donors?

BirdLife has been working closely with partners on securing funds for some time now. This has resulted in funding from the Community Fund and the British Bird Watching Fair to date. Another application to the EU for work in northern Peru would include funds for DarwinNet if successful. NCI-Ecuador has also applied for funds from Ecofondo to continue work at La Ceiba IBA.

13. Sustainability and Legacy

- What project achievements are most likely to endure? What will happen to project staff and resources after the project ends? Are partners likely to keep in touch?

DarwinNet itself will endure, even after post-project funding resources are used, due to the nature of the project and commitment of local partners. All resources will still be used for the continuation of the project; the staff remain the same at present, but may well change in the future. Partners are in regular contact with BirdLife and between each other, not just as part of DarwinNet, but also through the Important Bird Areas program in Ecuador and Peru, two further projects with NCI-Peru, and NCI-Peru participation with BirdLife in the elaboration of the first National Bird Conservation Strategy of Peru in coordination with CONAM. There is also an on-going discussion with PromPeru of the Ministry of External Commerce and Tourism to develop Peru's Birdwatching Tourism strategy. It is expected that DarwinNet will prove itself as a useful tool in this process.

- Have the project's conclusions and outputs been widely applied? How could legacy have been improved?

DarwinNet as a project does not have determined conclusions or recommendations, such as other projects would have at the end of a project period and which one would hope to see implemented. The project is on-going and continues to deliver discrete outputs which are widely disseminated. Similarly it is difficult to talk of legacy. What is planned is to systematize the experience of DarwinNet into an article or manual, which can then be used by others to replicate the model of DarwinNet in similar situations.

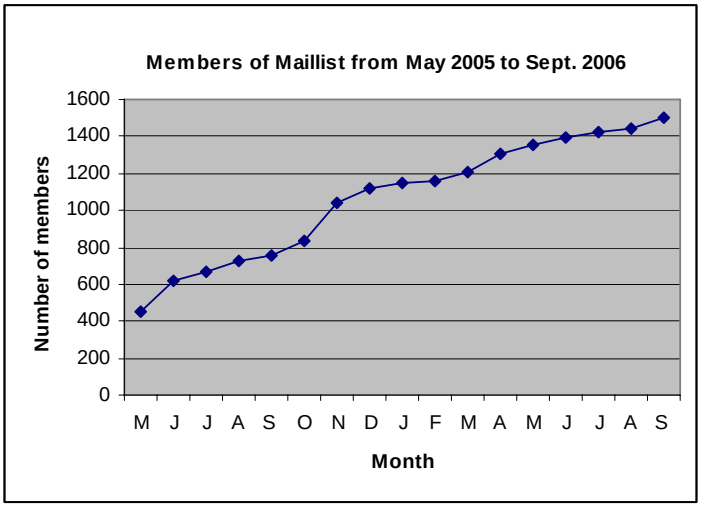
- Are additional funds being sought to continue aspects of the project (funds from where and for which aspects)?

The project has secured post-project funding from the Darwin Initiative. Additionally partners are seeking further funding for the project. Several proposals have included financing for DarwinNet, and plan to use the facilities and services that DarwinNet offers as part of their programme for dissemination, awareness raising and networking. In the future, this kind of funding is regarded as one of the best prospects for the sustainability of DarwinNet and will also help to ensure that DarwinNet responds to the needs of the organisations and agencies it serves.

14. Value for money

- Considering the costs and benefits of the project, how do you rate the project in terms of value for money and what evidence do you have to support these conclusions?

The total budget for the project was some £196,000, but this should not be seen as a cost, more as an investment given the benefits and outputs of the project and the high profile the project continues to attain.



It is considered that the project has given excellent value for money by:

1. Providing the only CBD recognised ecoregional CHM (project endorsed by the CBD-CHM).
2. Fostering closer ties between Peru and Ecuador (two mega-diverse countries).
3. Backing and involvement of Peru and Ecuador NFPs throughout project.
4. Supporting the work at three offices in a critical ecosystem.
5. Produced c.24,000 units of dissemination materials (posters, etc.).
6. Project presented at three CBD meetings (Bangkok, Brasilia, COP8).
7. Trained local partners in needed skills for the future.
8. Implemented a maillist with more than 1,500 members (and growing).
9. Received various enquiries from the CBD for ideas / involvement.
10. Produced 21 Action Plans for threatened species.
11. Visits from some 30 different countries to the webpage.

15. Appendix I: Project Contribution to Articles under the Convention on Biological Diversity (CBD)

Please complete the table below to show the extent of project contribution to the different measures for biodiversity conservation defined in the CBD Articles. We have focused on CBD Articles that are most relevant to biodiversity conservation initiatives by small projects in developing countries.

Note: Those articles not relevant to DarwinNet have been deleted from table.

Project Contribution to Articles under the Convention on Biological Diversity		
Article No./Title	**Project %**	**Article Description**
6. General Measures for Conservation & Sustainable Use	5	Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	15	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation	10	Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
10. Sustainable Use of Components of Biological Diversity	10	Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
12. Research and Training	10	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness	20	Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
16. Access to and Transfer of Technology	10	Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information	20	Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
Total %	**100%**	**Check % = total 100**

16. Appendix II Outputs

Please quantify and briefly describe all project outputs using the coding and format of the Darwin Initiative Standard Output Measures.

Note: Those Output Measures not relevant to DarwinNet have been deleted from table.

Code	Total to date (reduce box)	Detail (←expand box)
Training Outputs		
6a	8 people within project, 866 people within region.	3 separate workshops covering GIS, Databases and web design. Plus 100 training presentations in region
7	7	Factsheets (41), Bulletins (9), posters (13), training manuals from 3 different workshops
Research Outputs		
8	130 weeks	
9	21 Species Action Plans	All available on-line
11a	1 (Flanagan, J.N.M., Franke, I., & Salinas, L. 2005.)	Achieved 1 out of 2 articles proposed
11b	1 (Flanagan, J.N.M., Solís, R, & Sneary, M. 2005.)	Achieved 1 out of 2 articles proposed
12a	3	GIS database, experts database and reference library.
Dissemination Outputs		
14a	5	Planning workshop for project partners. 2 National Project launches in Lima and Quito. Tumbesian meeting during VI National Ornithology Conference in Peru. DarwinNet forum during II Int. Congress on Dry Forests.
14b	4	Regional meeting on CBD-CHMs in Latin America in Brasilia. Presentation of project during VI National Ornithology Conference in Peru and during II Int. Congress on Dry Forests. COP8.
15a	6	Copies have been included in previous annual reports.
15b	40	Copies have been included in previous annual reports.
15c	0	To date the project has not published an article in the UK as mentioned in proposal, although a number of news articles have been published on the BirdLife website (publicly accessible and also sent directly to the 3,500 subscribers of BirdLife 'News Alerts').
16a	9	9 newsletters produced
16b	200	200 printed, plus available via webpage for downloading.
16c	No direct circulation of printed copies in UK	Available via webpage for downloading in UK.
17a	2	DarwinNet webpage and Maillist.
18a	Number of national TV programmes/features in host country(s)	Output not achieved (see explanation, section 6)

Code	Total to date (reduce box)	Detail (←expand box)
18c	3	2 in Loja Ecuador, 1 in Talara Peru
19a	Number of national radio programmes/features in host country(s)	Output not achieved (see explanation, section 6)
19c	4	2 in Loja, 1 in Guayaquil, 1 in Talara.
Physical Outputs		
20	£8,000	In computers, projectors and cameras.
23	£79,500	Post-project funding
Additional Outputs		
Note: DarwinNet has produced a great deal of outputs in terms of bulletins, posters, manuals, CDs, etc. although such activities are grouped under what was referred to in the original proposal as ´On-going DarwinNet development (collation & dissemination of data)´, and not specified in the proposal. Copies of these materials have been included in this and previous reports.		
Use throughout project of the logos of the CBD, Consejo Nacional del Ambiente (Peru) and Ministerio del Ambiente (Ecuador).		
Permission from the CBD to adapt their official poster for 2005 International Day for Biological Diversity, to include details of DarwinNet and a different photo in main design.		
Permission from CBD to adapt logo for 2006 IDB to one including landscape of dry forest from the region.		
Participation in three CBD events and publications/references in CBD documentation.		

17. Appendix III: Publications

Provide full details of all publications and material that can be publicly accessed. Mark (*) all publications and other material that you have included with this report.

Type * (e.g. journals, manual, CDs)	**Detail** (title, author, year)	**Publishers** (name, city)	**Available from** (e.g. contact address, website)	**Cost £**
CBD Technical Series No. 17	Flanagan, J.N.M., Solís, R, & Sneary, M. 2005. DarwinNet – A binational, ecoregion-based CHM for the dry forests of Peru and Ecuador.	Secretariat of the Convention on Biological Diversity, Montreal	http://www.biodiv.org/doc/publications/cbd-ts-17.pdf	Free
Checklist*	Sheets, D.R. 2005. Catálogo diagnóstico de las aves del Bosque Protector Cerro Blanco.	Fundación ProBosque, Guayaquil	Fundación ProBosque, Km 16 Via a la Costa, Guayaquil. http://www.bosquecerroblanco.com/	$10
Manual	´Venomous Animals´	DarwinNet	http://www.darwinnet.org/docs/animales_venenosos.pdf	Free
Manual	´Field note-book´	DarwinNet	http://www.darwinnet.org/docs/guardaparques.pdf	Free
Manual	Manual para viveristas del bosque seco	DarwinNet	En prep. Available soon on webpage.	Free
CD*	´Peruvian Plantcutter`	DarwinNet	NCI, Av. Santa Rosa 601, Sullana, Peru	Free
CD*	´ProAvesPerú 99-04´	DarwinNet	NCI, Av. Santa Rosa 601, Sullana, Peru	Free
CD*	Forum El Angolo Hunting Ground	DarwinNet	NCI, Av. Santa Rosa 601, Sullana, Peru	Free
CD*	Presentations for 22 May, International Biodiversity Day, Piura and Tumbes	DarwinNet	NCI, Av. Santa Rosa 601, Sullana, Peru	Free
Journal	Flanagan, J.N.M., Franke, I., & Salinas, L. 2005. Aves y endemismo en los bosques relictos de las vertientes occidentales andinas del norte del Peru y sur del Ecuador.	Revista Peruana de Biología. *Rev.peru.biol.* **12(2):** 239-248 (2005)	http://sisbib.unmsm.edu.pe/BVrevistas/biologia/v12_n2/Pdf/v12n2a08.pdf	Free
Book*	Abstracts VI Congreso Nacional de Ornitología, 2005	Naturaleza y Cultura Int. y Asoc. Cracidae	http://www.darwinnet.org/VICNO/docs/VICNO_resumenes.pdf	Free
Book	Abstracts II Congreso Internacional de Bosque Secos, 2006	Universidad Técnica Particular de Loja	http://www.darwinnet.org/docs/memorias_IICBS.pdf	Free
Other references				
CBD report	Report of the Latin American and the Caribbean Regional Meeting on the Clearing-house Mechanism	CBD UNEP/CBD/CHM/LAC.Reg/2/2 11 March 2005	Report includes reference to the presentation on DarwinNet made by J. Flanagan at this meeting, paragraphs 47-49. (free from the CBD website)	
Journal	Silva, M. 2004. Bioinformatics, the Clearing-house Mechanism, and the Convention on Biological Diversity	Biodiversity Informatics, 1, 2004, pp. 23-29	Article includes reference to the CBD Secretariat support for BirdLife in setting up of the binational CHM for the Tumbesian Region.	

* Copies have been sent by post from Peru to the ECTF.

18. Appendix IV: Darwin Contacts

To assist us with future evaluation work and feedback on your report, please provide contact details below.

Project Title	DarwinNet – the Peru-Ecuador Dry Forest Clearing-house Mechanism
Ref. No.	13/006
UK Leader Details	
Name	David Thomas
Role in Darwin Project	Technical support, overall management and coordination
Address	Wellbrook Court, Girton Road, Cambridge, CB3 0NA
Phone	
Fax	
Email	
Partner 1	
Name	Jeremy Flanagan
Organisation	Naturaleza y Cultura Internacional - Peru
Role in Darwin Project	In-country project coordinator
Address	Av. Santa Rosa 601, Sullana, Peru
Fax	(51) 73 506780
Email	

19. Appendix V. Original Logical Framework from project proposal

Project summary	Measurable indicators	Means of verification	Important assumptions
Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.			
Purpose			
Policies for land use and development in the dry forests of NW Peru & SW Ecuador that are consistent with the conservation & sustainable use of biodiversity & the sustenance of local livelihoods.	**DarwinNet** being used by full range of stakeholders. Evidence of development policies & practice that take account of biodiversity & the environment & sustain local livelihoods.	Hit-counter, on-line user registration form & feedback form. Application of information & recommendations in decisions on development, management & land use.	Stakeholders understand & incorporate information into their work areas. Government, local NGOs & other institutions (e.g. university) attract additional support to maintain project activities.
Outputs			
1. Increased transfer of & access to biodiversity & other information. 2. Enhanced awareness & capacities. 3. Systematised information on experts & grey material. 4. Systematised GIS/spatial information.	**DarwinNet** functioning online; site being visited by a range of stakeholders in Peru, Ecuador & internationally. Resource materials (fact sheets) Directories / library. GIS – databases.	Feedback from authorities (e.g. Min. Env. in Ecuador, CONAM in Peru) provides assessment on quality & contents. Number of 'hits', types of users.	Project staff sufficiently trained to design & implement high quality CHM & resource materials.
5. Enhanced communications between stakeholders.	Listserver established. No. of members subscribed, traffic registered.	NFPs &/or other authority (Darwin) included as members.	Stakeholders willing to collaborate in open forum.
6. Enhanced dissemination & publicity.	Newsletter. Publication dates adhered to. Number of recipients.	NFPs &/or other authority (Darwin) included as recipients.	Stakeholders willing to contribute information to newsletter.
7. Strengthened institutional capacities for Peruvian & Ecuadorian partner organisations.	Min. 8 staff from 3 partner institutions trained (as trainers) in topics relevant to CHM management.	Participants' attendance and assessment records (GIS systems, databases, website).	Staff continue in present employment after training. Effective skills transfer takes place (trained people act as trainers).
8. Strengthened institutional capacities for public & private institutions in region.	2 x 20 training presentations throughout region (min. **800** people/institutions).	Participants' attendance and assessment records.	Stakeholders willing to participate in presentations.
9. Priority conservation areas for forests & species in Peru-Ecuador identified.	Priority map produced & distributed. 20 Species Action Plans.	Feedback from stakeholders on value, quality & utility of outputs.	Sufficient baseline material available. Effective inter-institutional collaboration.
Activities	**Activity Milestones. NOTE: all dates have shifted forward from Stage 1 Logframe.**		
Project Team Training (for recipient countries) & project management meetings.	• Project planning workshop (Jul 04) • GIS / Satellite image and databases (Oct 04) • Webpage design, Adobe Acrobat and Macromedia Flash (Sept 04) • Trimonthly project development meetings with team (Oct 04, Jan, Apr, Jul, Oct 05, Jan, Apr, Jul 06)		
CHM development.	• On-going **DarwinNet** development (collation & dissemination of data) (Jul 04-Jul 06) • **DarwinNet** manual published (Oct 04) • **DarwinNet** webpage on-line (Dec 04) • 1st versions of priority map, GIS, Directory & library online (Apr 05)		
Publicity & advocacy	• National project launches (Jan 05) • 1st of 8 bimonthly newsletters (Jan 05) • 20 training seminars throughout region (Mar 05) • 20 Species Action Plans (by Dec 05) • 40 factsheets on conservation & management (by May 06) • Continuous press (incl. TV & radio) coverage (Jul 04-Jul 05) • 20 feedback seminars throughout region (Mar 06)		
Project M&E.	• Evaluation of training courses (Feb 05) • Reports to Darwin (Oct 04, Apr 05, Oct 05, Apr 06, Sept 06) • Project & staff evaluation (Jul 06)		

20. Appendix VI: Additional materials produced (April-June 2006)

Nuestras aves en peligro

Día Internacional de las Aves

ESPECIAL

Correo

Aves amenazadas de Piura y Tumbes

Article published for International Bird Day, 9 of May, in regional newspaper El Correo, Peru.

Ecología Semana

Ted Flanagan

Coloreando el medio ambiente

En el Día Mundial del Medio Ambiente, el 5 de junio, decidimos visitar colegios ya no de Piura sino de Sullana y encontramos que en el Centro Educativo del Norte los niños de primaria lo celebraban coloreando el mundo con los ecojuegos elaborados por Darwinnest, Naturaleza y Cultura Internacional.

EL COLEGIO

Article published for Environment Day, 5 of June, covering children using the DarwinNet activity sheets (see below). In regional newspaper El Tiempo, Peru.

Article published for International Bird Day, 9 of May, in Sunday supplement SEMANA of El Tiempo newspaper, Peru.

Semana

Fecha que no se nos puede escapar

DÍA INTERNACIONAL DE LAS AVES

El 9 de mayo es el Día Internacional de las Aves, motivo suficiente para celebrar la increíble diversidad de la avifauna en el Perú y también promocionar su conservación con el fin de asegurar el desarrollo sostenible del país a través de la 'observación de aves'.

El Perú es líder mundial considerando su diversidad de aves, con alrededor de 1.830 especies. Sólo Colombia nos supera con algunas especies más. Si consideramos que existen unas 10.000 especies de aves en todo el mundo, en el Perú contamos con casi el 20% de la avifauna mundial. Así también, más de 500 especies presentan subespecies que poseen rasgos peculiares que las distinguen de las otras, permitiendo la existencia de al menos 2.411 unidades taxonómicas diferenciables.

La razón del gran número de especies, es la enorme variedad de hábitats y climas que posee el Perú, y es que, en cada rincón del país encontramos maravillas de la naturaleza que lo confirman. Esta gran riqueza natural origina además que cada año los ornitólogos descubran nuevas especies para la ciencia, aumentando la cifra de aves registradas en el Perú.

La gran diversidad de aves ha convertido al Perú en un paraíso para los observadores de aves (o birdwatchers).

Anualmente, el número de extranjeros que llegan al Perú para observar aves aumenta, lo que genera importantes ingresos para el país.

Esta actividad crea nuevos negocios y puestos de trabajo, convirtiéndose en un claro ejemplo de desarrollo sostenible. Cada turista que llega al Perú a observar aves gasta en promedio $ 2.000 anuales.

El beneficio a costa de la naturaleza debe estar destinado en especial a las comunidades directamente involucradas. Pese a este beneficio y otros que brinda la avifauna, no la protegemos adecuadamente.

Es necesario por eso tomar medidas más estrictas de conservación de nuestros recursos, como las aves, para asegurar un desarrollo sostenible.

CONTINUA

Semana

Semana

Aves que pueden dejar de volar

Muchas de nuestras aves son endémicas, es decir, su zona de distribución se encuentra solamente en el Perú o en alguna zona compartida con países vecinos. Estas aves de distribución restringida son las más amenazadas, pero a la vez, las más buscadas por los birdwatchers. Para ellos, el Perú es un punto magnético para la observación de aves tanto por su alto número de especies endémicas, como por su alta diversidad.

Sin embargo, más de 70 especies de aves se encuentran en peligro de extinción en el país. La mayoría de estas aves habitan en los Andes, así como en los bosques secos del norte. Si estas especies desaparecen, perderemos no solamente la herencia natural del país, sino la oportunidad para que se implemente la observación de aves como estrategia de desarrollo.

PROBLEMAS QUE ALZAN VUELO

Lamentablemente el autor, junto con otros ornitólogos sobre el tema, es testigo de la destrucción de los bosques secos. La solución -si es que aún no es demasiado tarde- depende de un cambio en la visión de la sociedad hacia la conservación de nuestros recursos naturales. Las aves son excelentes indicadores de la salud y de la calidad de diversos ecosistemas. Su presencia o ausencia nos permite descifrar el estado de conservación de los bosques. Ningún otro grupo de seres vivos es tan conocido y tiene el potencial de generar ingresos importantes para el país, como las aves.

Urge un cambio en la visión de la sociedad, así como un cambio en el Estado, así como en los Gobiernos Regionales y Locales, con el fin de fomentar políticas de desarrollo sostenible. Es necesario enfrentar una de las posturas conservacionistas que plantea que, debido a la pobreza de los campesinos o de las comunidades, se debe seguir talando los bosques para ampliar las tierras agrícolas. El Perú no puede ser catalogado como un país pobre. El problema radica en la falta de oportunidades ocasionada por la ausencia de liderazgo y visión durante muchas décadas por parte del Estado en los lugares más alejados y olvidados del país.

LAS CRÍTICAS DEBEN SER CONSTRUCTIVAS

Pese a este cuestionamiento, existen buenas iniciativas del Estado que buscan dialogar esta situación. El Instituto Nacional de Recursos Naturales (INRENA) y el Consejo Nacional del Ambiente (CONAM) lideran procesos importantes de conservación. Por ejemplo, en pocos meses se empieza el proceso de elaborar la estrategia nacional para la conservación de las aves; muchos países ya tienen sus estrategias nacionales, entonces ya es hora de que Perú se ponga al día.

¿Y dónde quedan las aves? Las aves deberán seguir volando. Las aves y el turismo tienen mucho que ofrecer al Perú. El Día Internacional de las Aves es una perfecta oportunidad para celebrar lo que poseemos, pero también para reflexionar sobre las riquezas del país y en especial, planteamos hacia donde nos dirigimos.

FOTO PORTADA:
Eduardo Flanagan, estudia en el Colegio del Norte, en Tullins, está en tercer grado y espera una pensión con dibujo del Orbis, la Catarsis peruana y una Sella, con un mensaje dulce y no matar las aves.

* Naturaleza y Cultura Internacional.

Entérese en línea,
www.darwinnet.org
para información sobre los bosques secos del norte de Perú y su conservación.

www.birdlife.org
para información completa sobre las aves del mundo, especies endémicas, etc.

Naturaleza & Cultura Internacional

NATURALEZA & CULTURA INTERNACIONAL
www.natureandculture.org
Telfs: 2573691- 2573623

ESPECIE DEL MES

Alouatta palliata
Mono Coto de Tumbes, Mono Aullador

DarwinNet
Información para la conservación de los bosques secos de Perú y Ecuador
www.darwinnet.org

Nombre científico: Alouatta palliata
Nombre común: Mono Coto de Tumbes, Mono Aullador
Familia: Cebidae

Descripción de la Especie:
A. palliata es un cébido de cuerpo macizo, tiene un pelaje densa de color negro y dorado en los flancos, cola larga y prensil del mismo tamaño que el cuerpo. Ocupan el segundo lugar en peso dentro de los primates del nuevo mundo con un promedio de 8,5 Kg para los machos adultos y de 6,5 Kg para hembras adultas. Son diurnos, arboricolas, herbivoras y de hábitos muy sociables. Forman grupos permanentes llamados tropas que van de 10 a 30 individuos, compuestas por machos, hembras e individuos jóvenes. Cada una de estas tropas se mueve diariamente dentro de un área restringida de territorio, denominada 'ámbito hogareño' o 'área de actividad'.

La pérdida de habitat ha limitado las poblaciones de la especie, que en algunos casos también ha sufrido una fuerte presión por parte de pobladores locales quienes la cazaban como alimento, mascota y además como medicina, ya que debido a su prominente aullido le atribuian al "caldo de mono" propiedades curativas para las afecciones bronquiales.

Agradecemos la contribución de información y fotos a:
Blgo. Monica Alzamora Torres (NCI - Perú)
monica_alzamora@yahoo.com

Visita: www.darwinnet.org
Escribenos a: contactos@darwinnet.org

Presentan **dimorfismo sexual**, los machos se reconocen por tener una barba tupida en la parte de la cabeza en forma de una línea que termina en la frente, dándoles una apariencia más robusta que las hembras. Además, presentan una laringe muy especializada, con el hueso hioides agrandado que actúa a manera de caja de resonancia, la cual le permite emitir sonidos fuertes propios de la especie. Este comportamiento vocal funciona como un mecanismo de espaciamiento entre las tropas evitando así enfrentamientos directos, para mantener el monopolio sobre los recursos dentro de su ámbito hogareño.

Los hembras alcanzan la madurez sexual cerca de los 36 meses de edad y tienen una primera cría entre los 40 y 46 meses. Presentan un estro regular cuyo ciclo es de 16 días; donde muestran cambios en el clítoris y participan en acoplamientos múltiples.

El periodo de gestación es de 6 meses y las crías al nacer pesan 400 gramos, son de color plateado o pardo dorado y van adquiriendo el pelaje adulto a las doce semanas. El tiempo promedio entre un parto y otro es de 23 meses y la lactancia de sus crías puede durar hasta 18 meses.

Distribución Geográfica:
Esta especie se la encuentra desde Centroamérica hasta la costa norte del Perú en el departamento de Tumbes.

Hábitat:
Habita en la zona ecológica del Bosque Lluvioso Macrotermo del Pacífico, que se extiende a lo largo de la costa occidental, desde América Central hasta el norte del Perú (zona denominada El Caucho, en el departamento de Tumbes).

Ecología:
En su hábitat esta especie se encuentra normalmente interactuando con otro primate: Cebus albifrons, además de momíferos como Eira barbara, Bradypus variegatus, Nasua nasua, entre otros. Los monos aulladores se alimentan de las hojas, los frutos y las flores de árboles de diferentes especies, algunas de estos pertenecen a las familias botánicas Moraceae (Ficus spp, Brosium spp), Sapotaceae (Pouteria spp), Anacardiaceae (Spondias mombin), Lauraceae (Nectandra spp, Ocotea spp), Bombacaceae (Cavanillesia platanifolia) entre otras. El consumo de hojas y frutos es el más importante en su dieta y casi el 40% de su tiempo alimenticio la pasan consumiendo hojas y otro 40% consumiendo frutos. Para estos primates arboricolas las hojas jóvenes y los frutos maduros son sus partes preferidas.

Amenazas:

Naturaleza & Cultura Internacional

NATURALEZA & CULTURA INTERNACIONAL
www.natureandculture.org
Telfs: 2573691- 2573623

Con éxito se desarrolló en Machala

V FERIA ESCOLAR BINACIONAL DE CIENCIA Y TECNOLOGÍA

La V Feria Escolar Binacional de Ciencia y tecnología, que se desarrolló en la ciudad de Machala del 24 al 27 de mayo del presente año, y que fuera organizada por la dirección Provincial de Educación de el Oro, generó la presencia de 5 departamentos del Norte Peruano: Amazonas, Chachapoyas, Lambayeque, Piura y Tumbez; así como también la presencia de 4 provincias del sur del Ecuador: Azuay, Zamora Chinchipe, El Oro y Loja.
Se presentaron 70 proyectos ubicados en las siguientes áreas: Ecología y Conservación del Ambiente, Sociales, Ciencias Básicas, tecnología e informática.

Aproximadamente unos 6000 personas visitaron la feria, llegaron delegaciones de Instituciones educativas y ciudadanía en general, quienes valoraron el aporte, creatividad y esfuerzo intelectual de los educandos.

Debemos destacar el triunfo del Instituto Beatriz Cueva de Ayora, con su proyecto relacionado al área de Ecología y Conservación del medio Ambiente; no obstante todos los demás proyectos merecieron el reconocimiento tanto de los organizadores como de la ciudadanía.

Cumpliendo con el Reglamento de éste evento y bajo la premisa de Integración Binacional, este evento que se lo viene realizando en forma alternado y que en ésta ocasión la sede fue la ciudad de Machala para el próximo año el turno le corresponde a cuenca "La Atenas del Ecuador"

En Feria Binacional

Estudiantes exponen conocimiento científico

Así destacó la prensa Orense a la V Feria Escolar de Ciencia y Tecnología.

ESPECIE DEL MES

Ceiba trichistandra (A. Gray) Bakh.
Ceibo

DarwinNet
Información para la conservación de los bosques secos de Perú y Ecuador
www.darwinnet.org

Nombre científico: Ceiba trichistandra
Nombre común: Ceibo
Familia: Bombacoceae

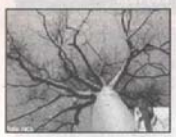
Descripción Botánica:
Árbol caducifolio de 20 a 40 m de alto y 1 a 2 m de DAP. Presenta ramificación simpodial, un fuste abombado y raíces tablares, la corteza externa es color verde claro el cual fotosintetiza durante la estación seca y se pueden observar abundantes aguijones cónicos en el tronco principalmente cuando es juvenil. Hojas compuestas, alternas, palmadas de 25 a 40 cm . de largo, estipulas caducas, con folíolos oblongo-lanceolados de 10 a 15 cm . de largo y 6 a 10 cm . de ancho y nervadura principal blanquecina. Flores grandes de 8 a 12 cm ., nacen en racimos laterales hasta 12, raramente solitarios, con cáliz de color rojo púrpura de aspecto aterciopelado y pétalos generalmente blancos que pueden variar a rosado. Fruto es una cápsula pentacarpelar de forma elipsoidal a elíptica-oblongo, de color café, caído, de 10 a 16 cm . de largo por 5 a 8 cm . de ancho, las semillas presentan filamentos de color blanco que les permite ser dispersados principalmente por el viento.

© Mark Whitfin

Hábitat:
Prefiere temperaturas que están alrededor de los 24 °C, precipitaciones medias anuales de 250 a 800 mm, y altitudes de 300 a 1500 m.s.n.m. Según la clasificación de Holdridge se desarrollan en los zonas de vida: Montano Espinoso, Bosque Muy Seco y Bosque Seco Premontano. Crecen en suelos de textura moderadamente fino a fina con presencia de gravas (piedras chancadas) superficiales, en algunos casos; y en otros, son suelos desarrollados, profundos de color pardo rojizo amarillento con bajos niveles de materia orgánica y nitrógeno total.

Ecología
En la naturaleza se encuentra asociado con especies arbóreas de la misma familia como Pasalla o chirigua Eriotheca ruizii , beldaco Pseudobombax guayasense, prefino o pigio Cavanillesia platanifolia y otros árboles comunes como guayacán (Tabebuia chrysantha), huaitaco (Loxopteriginum huasango), palo santo (Bursera graveolens), guarapo o castaño (Terminalia valverdae), parotillo o pepito colorado (Erytrina velutina), sapote de campo Capparis scabrida , sata (Madura tintoria) y arbustos como popelillo (Bougainvillea peruviana), guapala (Simira ecuadorensis), Capparis crotonoides etc. Es típico en esta asociación la presencia de epifitas como la salvalinea, salvaje o barba de viejo (Tillandsia sp.) que se cuelgan de las ramas de los árboles y la achupalla (Vriesea espinosae) que forma agrupaciones. La vegetación característica es caducifolia principalmente para resistir el periodo de sequía que generalmente se presenta entre mayo a diciembre.

Usos:
Su madera por su baja densidad sirve para la elaboración de artesanías, de la corteza de los árboles jóvenes se extrae la pasalla (fibra que se extrae de los árboles jóvenes) que sirve para confeccionar sogas o cuerdas. Las hojas, flores y frutos son forrajeras, además las flores son excelentes para la actividad melífera. La fibra de los frutos (lana) se aprovecha para confeccionar almohadas y colchones. Debido a las formas caprichosos que adoptan los árboles se utilizan como especie ornamental principalmente en los parques.



Amenazas:
Esta especie se encuentra amenazada principalmente por la expansión de la frontera agrícola y por la destrucción de los árboles en temporada de captura de loros que anidan en esta especie y en temporada de cosecha de miel de abeja que en muchos casos sacrifican los árboles.

Agradecemos la contribución de información a:
Ing. Eduardo Cueva O. Blgo. Luis Albán Ing. Oswaldo Jadán
Fotos: NCI - Perú
Visita: www.darwinnet.org
Escribenos a: contactos@darwinnet.org

3 articles in regional newspaper La Hora, southern Ecuador, 04.06.06, 18.06.06 & 02.07.06

Naturaleza & Cultura Internacional

Hay muestras de preocupación por el tema ambiental

AUTORIDADES DE MACARA VISITARON LA "RESERVA NATURAL LAIPUNA"

En el cantón Macará se encuentra uno de los mejores bosques del mundo. Cientos de especies únicas en el planeta pueden ser apreciadas sólo en este ecosistema conocido como Bosque Seco Tumbesino o del Pacífico Ecuatorial. Este hábitat caracterizado por ceibos, palo santos y guayacanes, originalmente se extendía desde la provincia de Manabí, hasta el departamento de La Libertad en Perú, mas en la actualidad ya se ha deforestado el 95% de esta gran superficie. En Macará y Zapotillo, así como en el sector de La Tina en Perú, aún se conserva una buena cobertura vegetal nativa, por lo que su protección es una prioridad nacional y mundial, según lo demuestran varios estudios científicos.

Con estos antecedentes, y con la finalidad de conocer mejor la riqueza natural de su cantón, varias autoridades visitaron la Reserva Natural Laipuna el día sábado 25 de Junio. Entre los casi 30 asistentes, se contó con la presencia de un representante del M. I. Municipio de Macará, del BI-21 Macará, Cuerpo de Bomberos, Jefatura Política, Ministerio del Ambiente, Aduanas, Colegio Técnico, Hoteleros, prensa, estudiantes y ciudadanía en general.

En esta Reserva, que está ubicada en la parroquia Larama del cantón Macará, los visitantes recibieron charlas sobre la riqueza biológica, las aves y los árboles endémicos de este sector, remarcándose el gran potencial turístico que aún no está siendo aprovechado. Además pudieron conocer algunas experiencias de los barrios Naranjito y Canguraca, donde Naturaleza y Cultura Internacional, gracias al apoyo del Fondo Flamenco para el Bosque Tropical del Gobierno de Bélgica, ejecuta proyectos de capacitación y desarrollo comunitario. Conocieron un cultivo de yuca orgánica, en el cual no se han empleado productos químicos, y pudieron comprobar la calidad de este tubérculo en un almuerzo campestre preparado por personas de la localidad. Finalmente, y para consolidar su compromiso con la naturaleza, recibieron varias plántulas de árboles nativos del bosque seco como charán, ceibo, porotillo, almendro, cedro, entre otras especies que están siendo criadas en viveros por los pobladores locales para reforestar sus territorios y proteger su agua.

Varios temas muy relevantes fueron discutidos entre las autoridades y técnicos, remarcando la importancia de administrar mejor los recursos naturales e impedir la depredación y deterioro ambiental en favor de unos pocos. En este sentido, es muy importante la explotación aurífera que se desarrolla en las orillas y cauce del río Catamayo, entre El Empalme y Tangula, contaminando con sedimentos y otras sustancias, las aguas que más abajo son usadas para riego y consumo humano. Ante este problema, se manifestó la importancia de alertar a la población local e investigar los permisos y las condiciones de operación en las que se está desarrollando esta empresa, actividad que estará a cargo del Ministerio del Ambiente y la Jefatura Política. Otro tema que despertó mucha preocupación es la desaparición de especies como el Perico Macareño y el Perico cabeza roja, ya que su comercialización como mascotas ha diezmado las poblaciones silvestres. Ante este problema se esta desarrollando una campaña de prevención y control de tráfico ilegal de vida silvestre, coordinada por DarwinNet y con la participación de la Policía Nacional, Fuerzas Armadas, Aduanas, Municipios de Macará y Zapotillo, NCI y Ministerio del Ambiente.

Nuestro agradecimiento a los organizadores de esta caminata: Ing. Olga Milena Vélez, Jefa Política; Coronel Marcelo Montalvo, Comandante del BI-21 Macará.

A4 activity-sheets for children featuring the threatened & endemic Peruvian Plantcutter (top) and White-winged Guan.

DÍA INTERNACIONAL DEL MEDIO AMBIENTE

5 DE JUNIO

PROTEGEA A LOS ANIMALES Y PLANTAS DE LOS BOSQUES SECOS

¡hola amigos! soy Paco-Paloma, sacan tus colores y lápices para jugar conmigo

Mi nombre :_____

Colegio :_____

Mi edad :_____

Los bosques secos son el hogar de muchos animales y plantas

Soy el Gavilán Dorsigris, vivo en los bosques de Tumbes. busca las 5 preguntas escondidas en esta hoja.

cuidemos nuestro mundo ¡Pinta las Aves!

(3) ¿la Cortarrama Peruana es un...?

Busca las palabras en el pupiletras....

a	e	p	e	r	i	c	o	c	n	m	a
f	c	o	r	t	a	r	a	m	a	a	m
a	g	e	s	e	m	c	o	c	l	n	b
i	t	u	r	w	t	r	e	e	g	o	i
q	c	q	a	u	p	i	s	i	a	c	e
u	e	s	s	y	a	f	n	b	r	h	n
e	i	o	d	p	a	v	a	o	r	i	t
s	b	b	o	a	u	c	e	t	o	l	e
i	n	g	a	v	i	l	a	n	b	a	s
e	s	a	p	o	t	e	s	n	o	l	e
r	c	h	d	e	s	i	e	r	t	o	c
t	o	i	c	o	c	o	d	r	i	l	o

algarrobo, ambiente, ave, boa, bosque, cactus, ceibo, chilalo, cocodrilo, conam, desierto, faique, gavilan, guayacan, pava, perico, pretino, sapote, seco, tree

(1) ¿cuántas especies de aves hay en el Perú?

(4) ¿que animales estudia un ornitólogo?

biología + **diversidad** = biodiversidad

Colorea los dibujos usando los colores

(5) ¿que significa CONAM?

La Pava Aliblanca esta en peligro de extinción

1. Amarillo
2. Verde obscuro
3. Verde claro
4. Azul celeste
5. Azul
6. Morado
7. Marrón
8. Naranja
9. Negro
10. Rosada
11. Rojo

SOY AMIGO DEL BOSQUE SECO

(2) ¿un Ceibo es un tipo de ....?

biodiversidad significa todo los diferentes tipos de seres vivos

cocodrilo de Tumbes

Respuestas: aqui
(1) 1,800
(2) Arbol
(3) Pajaro
(4) Las aves
(5) Consejo Nacional del Ambiente

NATURALEZA & CULTURA INTERNACIONAL · BirdLife INTERNATIONAL · CONAM · DARWIN INITIATIVE

DÍA INTERNACIONAL DEL MEDIO AMBIENTE

5 DE JUNIO

coloreamos el mundo

Mi edad:_____

Colegio:_____

Mi nombre:_____

PROTEJAMOS A LOS ANIMALES Y PLANTAS DE LOS BOSQUES SECOS

¡ hola amigos ! Soy **Coco**, el **Cortarrama Peruana**, ayudame con estos juegos y protejamos el ambiente

Busca las palabras en el pupiletras (que te ayude tu profesor o padres)

b	s	a	p	r	e	t	i	n	o	d	a
m	a	r	t	e	s	i	a	v	e	s	m
e	s	u	e	l	o	e	f	l	h	e	b
c	o	r	t	a	r	r	a	m	a	c	i
i	l	a	l	g	a	r	r	o	b	o	e
e	b	a	s	u	r	a	c	o	o	l	n
l	l	a	m	a	i	r	e	n	s	v	t
o	j	a	n	e	p	f	a	i	q	u	e
o	c	a	c	t	o	o	z	p	u	t	m
a	d	e	s	i	e	r	t	o	e	g	h
r	k	w	a	n	d	e	s	e	n	c	i
i	g	u	a	n	a	s	e	l	v	a	e
s	c	e	i	b	o	t	l	f	b	e	w

agua, aire, algarrobo, ambiente, andes, basura, bosque, cacto, ceibo, cielo, cortarrama, desierto, faique, forest, iguana

llama, maca, mar, moon, oca, oceano, pretino, rana, sapote, seco, selva, sol, suelo, tala, tierra

Coco a color:
1. plomo 2. rojo
3. negro 4. verde

Deja en blanco si no hay un numero, como las manchas en mi ala, y las puntas de mi cola, mi ojo es amarillo

El agua es importante para nuestras vidas, ¿en que usamos agua cada día?

_____

_____

_____

¿Donde vive el Cortarrama Peruana? _____

¿Que come el Cortarrama Peruana? _____

¿Que tenemos hacer para proteger el Cortarrama Peruana?

_____

_____

_____

Colorea el camino del agua hasta nuestras casas

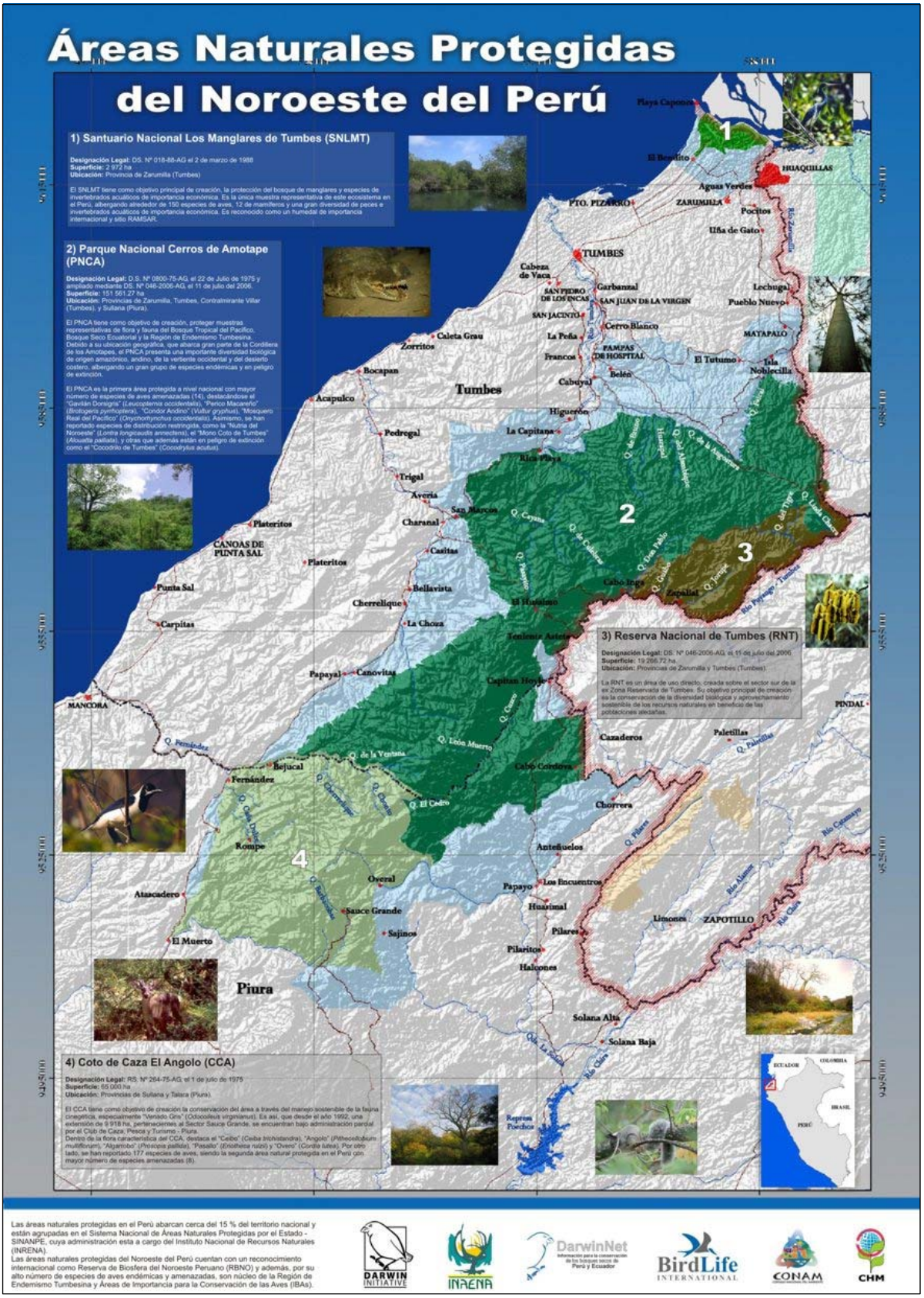
¿de donde viene nuestro agua?_____

NATURALEZA & CULTURA INTERNACIONAL · BirdLife INTERNATIONAL · CONAM · DARWIN INITIATIVE

Colouring-sheet, with typical north Peru farmland scene, drawing by 14 year student Eder Floriano from Sullana.

These 3 activity sheets were distributed to schools in the region, and proved very popular.

Poster (60 x 40 cm) produced for IDB, 2006, with photos from the region and adapted logo for IDB. The British Embassy – Lima sponsored the cost of printing (2,000 copies).



Poster on the protected areas of the North-west Peru Biosphere Reserve (40 x 60cm, 1000 printed), produced in collaboration with the Instituto Nacional de Recursos Naturales (INRENA).

21. Appendix VII: Comments & feedback from stakeholders

Below are some of the emails the project has recently received congratulating DarwinNet:

La Jefatura del Santuario Histórico Bosque de Pómac y Refugio de Vida Silvestre Laquipampa – INRENA, saluda a Darwinnet, por esta interesante iniciativa de acopiar y distribuir información relacionada a nuestros Bosques Secos y Zona de Endemismo Tumbesina, contribuyendo de esta manera a la conservación de la diversidad biológica y cultural, y por ende a la valoración y rescate de nuestra identidad.
Dante B. Alemán De Lama
Jefatura
Santuario Histórico Bosque de Pómac
Refugio de Vida Silvestre Laquipampa
INRENA

Desde Pucallpa, Perú agradezco a cada de Ustedes en representación de la Asociación Centro Indígena para el Desarrollo Sostenible (CINDES) por la información enviada, espero mantenerme en contacto con Uds. en beneficio del desarrollo de las ciencias y proyectos de avifauna, fauna, flora entre otros.
Atentamente
Samuel Cauper Pinedo
proyectos_cindes@yahoo.es

Estimados amigos de DarwinNet
Blgo.
Rafael Angel,
Reciba usted un cordial y fraterno saludo, a la vez que le agradezco mucho por tan valiosa información. Esperamos la participación de vuestra prestigiosa organización en el evento que se realizará en Bahía de Caráquez. Desde ya agradeceremos mucho su colaboración y participación que ayuda a fortalecer los caminos de la educación y conservación ambiental en nuestro país y región.
Desde ya me suscribo muy agradecido.
Atentamente,
Marcelo Luque

Sres.
DarwinNet
Agradecemos la respuesta para nosotros y nos alegramos que hayan recuperado la tarea de estar en contacto con Organizaciones como la nuestra que pretendemos mantener los bosques secos en nuestro país.
Gracias
Julio Mancero
Director Ejecutivo
Fundación Algarrobo
falgarrobo@yahoo.com

Hola, les saludo desde Nazca, el sentido común y la racionalidad hace que todos apoyemos la cruzada que va a tener lugar en Chiclayo, cualquier esfuerzo en favor de preservar nuestros escasos bosques y reservas biodiversas costeras son acciones positivas; extrañando solamente que sean necesarias estas actitudes para llamar la atención y sensibilizar a las autoridades llamadas a preservar el patrimonio de las generaciones futuras.
En Nazca tenemos también problemas bastante similares a los que originan las jornadas Chiclayanas.
Un saludo fraterno, y gracias a ustedes de Darwinnet por informar y actuar en favor de la naturaleza.
Gustavo Miranda C.

Señores DarwinNet:
Quiero agradecerles por toda la información que ustedes me envían a través de mi correo. Ha sido de gran importancia para mí ya que estoy involucrada en el área de turismo y gestión ambiental, como funcionaria y consultora privada.
Espero que me puedan enviar información sobre instituciones u organizaciones no gubernamentales que tengan como financiar proyectos en estas áreas ya que necesitamos poder armar proyectos que apoyen la implementación de acciones que permitan que los recursos naturales sean sostenibles y tengan un manejo sustentable para sus usuarios.
Les comunico que soy Ecuatoriana de la provincia de Manabí y vivo en Bahía de Caráquez, pero mi actividad la desarrollo en todo el Ecuador.
Agradeciendo me puedan seguir enviando información, me suscribo de ustedes deseándoles muchos éxitos en sus funciones.
Saludos
Eura

Agradezco su amable correo del 09 de mayo muy interesantes, espero prosigan enviándonos esta información. Somos de la Gerencia Regional de Recursos Naturales y Gestión del Medio Ambiente.
Saludos
Mercedes García López

CIDAR, les felicita por el esfuerzo y convicción de promover la preservación conservación y el desarrollo sostenible de nuestro bosque seco, hermanando a nuestros países, como fue antes por un problema común "el peligro de desaparición de nuestro bosque seco ecuatorial". Nosotros a partir de una pequeña captación de agua en pie de ande, con fines de abastecimiento de agua a una población muy pobre de Motupe llamado Cerro la Vieja, estamos creando conciencia que es el bosque que queda en el entorno del manantial el que sostiene su presencia. Si ustedes tuvieran alguna experiencia, les rogamos nos haga conocer.
Atentamente,
Pepe Segura

Señores:
DarwinNet.
Les agradecemos por la información tan importante que vienen difundiendo referente a los bosques secos del Ecuador y el Perú, estamos formulando documentos referente a las experiencias institucionales en el manejo de Bosques secos en la Comunidad Campesina de Olmos, Lambayeque y otras propuestas que creemos deben ser conocidas y difundidas a través de su institución.
Atentamente,
Ing. Carlos Paredes Cerna
Presidente FUNDENOR
fundenor@hotmail.com