Cloudy with a chance of sustainability

ITTO Fellowship develops training program on utilization and management of cloud forests in Peru

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Mr Constantino Aucca Chutas (Peru) received his fellowship in 2007 to carry out a lecture/ demonstration tour to raise conservation awareness and train community people on the use and management of cloud forests in the Abra Patricia - Alto Nieva Private Conservation Area in Peru.

Cloud forest: Abra Patricia forest area and surroundings. *Photo: W. Palomino*

The Abra Patricia forest region of Peru and its surrounding areas have remained almost intact for a very long time. There is, however, a void of scientific information about this region, which is also a very important watershed of the Mayo and Nieva river valleys. The Marginal Forest Highway (*Carretera Marginal de la Selva*) was designed and built during the 1960s. This access road was built with the aim of increasing the migration of settlers into the pristine forests of the Amazon Region (as part of the Social and Economic Development Plan promoted by the then President of the Republic, Mr Fernando Belaúnde Terry, in 19681, ZEE, 2008). To alleviate their extreme poverty, these new settlers became involved in logging and shifting agricultural and cattle-raising activities, causing a huge impact in many of these pristine forests (INRENA, 2008). The Alto Mayo Protection Forest (Bosque de Protección de Alto Mayo – BPAM) was established in 1987 over an area of 182 000 ha. Today, there are more than 5400 people illegally settled within the BPAM, endangering the stability of the management and conservation of this area (INRENA, 2008). The Abra Patricia and Alto Nieva areas are located in the buffer zone of the BPAM (INRENA, 2008).

Study objective

Against this background, the aim of the study funded through an ITTO fellowship was to analyze the problem of illegal forest utilization in the area through the exchange of information and opinions in "multi-participatory workshops" that would help provide a real picture of the different implications of proposed management changes on stakeholders. These multi-participatory workshops represent a tool that can not only provide the quantitative values required to implement the necessary measures, but can also provide access to the communities and provide them with the technical information required to gain awareness and work jointly in the efforts to avoid the deforestation of the area and its consequences. This tool can also provide information on the needs and expectations of these communities.

Throughout the Andes, watershed areas as well as forests and vegetation cover have been degraded, thus affecting their stability. Deforestation and unsound human activities have disturbed the natural balance leading to impacts on water sources such as glaciers, landslides, floods, droughts, etc. The vegetation cover that drains water to various tributaries flowing into the Pacific and Atlantic basins is being increasingly altered, which jeopardizes the existence of the great Amazon valleys and endangers all the life forms found in this area.

Climate change, El Niño and other phenomena can lead to major natural disasters that represent a large economic loss for families and governments. Only through extensive reforestation programs, preferably with native species, and environmental education campaigns will it be possible to prevent and mitigate these problems and stop them from increasingly affecting our daily lives. Afforestation and reforestation activities can greatly contribute to generate resources for local communities, who will benefit from the implementation of strategies to alleviate poverty, an ever-present problem in these areas.

Forest conservation and rehabilitation through the implementation of conservation strategies with local

1 *www.congreso.gob.pe/museo/mensajes/Mensaje-1968-1.pdf*

Sliding away: In the Amazon and Upper Andean regions, landslides and flash floods are now more frequent because the natural vegetation cover has been severely disturbed by human interventions. *Photos: C. Aucca*

community involvement is the key to finding a strategic partner to ensure the future protection of the environment based on the benefits derived from these actions by the local population.

The general objective of the study was to facilitate a change in attitude with a view to decreasing the indiscriminate logging of forest resources through the implementation of sound and sustainable practices by the local communities.

Study area

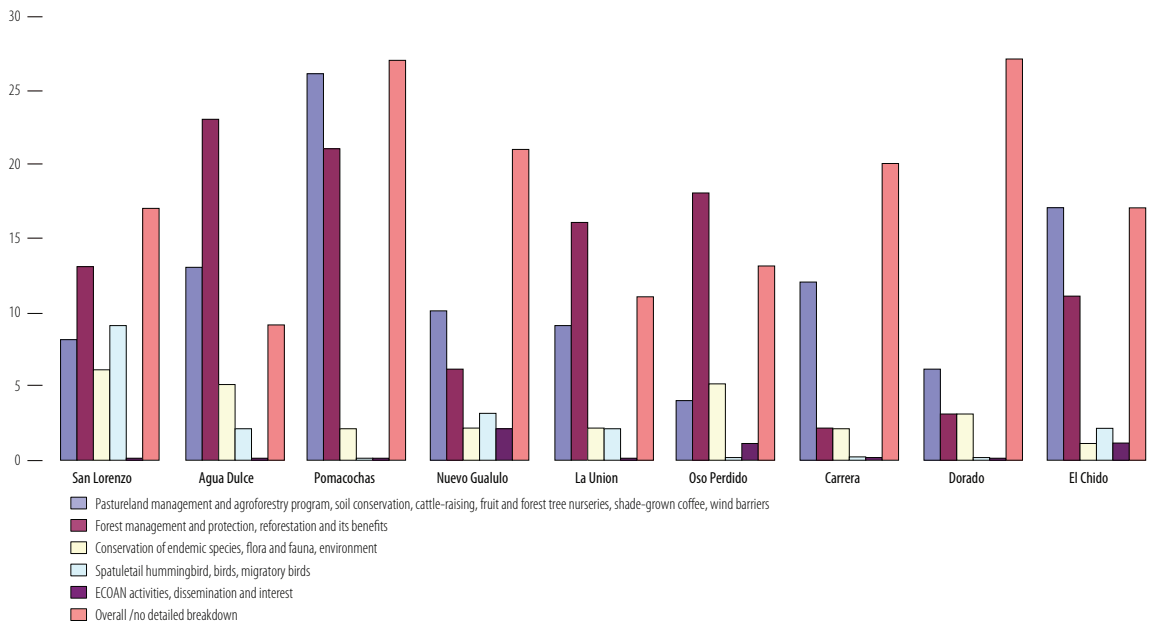
The study area was located in the districts of: Florida Pomacochas, Yambrasbamba, Shipasbamba, Jazan, San Carlos and Chisquilla, in the Province of Bongará, Amazon Region. According to the 2008 NatureServe classification, the study sites are part of the Andean Moist Forests and, more specifically, belong to the following ecological systems: CES409.050 Montane rainforest of the Yungas region and CES409-110 Montane rainforest of the Northern Andes region.

Methodology

The proposed approach was based on participatory methodologies, so it was decided to implement workshops where the participants actively contributed to the process of developing a diagnosis and description of existing problems through a questionnaire approach. The questionnaire on preferred forest management objective(s) was distributed to nine communities (adults and primary/secondary school students) in the study area. A manual for community forest management and reforestation was developed and distributed at the workshops to help in analyzing/refining questionnaire responses. In some cases, in order to complement this process, experience-sharing field trips

Integrated management preferred

Figure 1 Community responses to questionnaire on preferred forest management objective(s).



Planting out: Community reforestation programs in the Pomacochas area, Amazonas. *Photo: W. Palomino*

were organized for both community leaders and students, which resulted in a motivational experience for survey participants. These different processes were based on similar experiences such as those implemented in Maule, Chile (2008). The results of the questionnaire on preferred management objective are shown in Figure 1 on the previous page.

Conclusions

Based on the large number of manuals that were handed out, the total number of participants at the workshops (more than 2000) was higher than the number of survey responses that were received for analysis (1208). This could be due to the fact that there is still a certain level of mistrust among adults and a greater level of information and cooperation among children (who were more likely to attend the workshops).

Adults showed a great interest in the rehabilitation of habitats through the implementation of agro-sylvo-pastoral or agroforestry programs, as these will directly benefit the communities, together with the technological upgrading of agricultural activities and reforestation programs. Clearly, the adult population is more concerned with solving their economic problems than environmental problems. There is a general awareness about the negative processes affecting forests and the environment and the need to curb those processes, but more information is required through ongoing multi-participatory workshops and watershed management and conservation campaigns, as soil and water resources are vital elements for these communities.

Forest and biodiversity management and conservation are issues of great importance and impact and should be complemented with actions such as the establishment of community forest and fruit tree nurseries. It is necessary to provide information to the communities so as to make them aware of the need to care for their forests, which should be supported through long-term programs to help strengthen their weak economies.

Primary school children are more motivated by emblematic topics and beautiful sights; for example, the spatuletail hummingbird tends to attract a great deal of interest since it is emblematic of this region, while more general deforestation and reforestation issues usually draw a lower level of attention. It is clear that socioeconomic issues are not a priority for children, although cultural aspects attract a great deal of interest. Thus, it was concluded that environmental education should be more extensive at the primary school level. The conservation issue can be addressed by avoiding slash-and-burn practices in mountain and forest areas and preventing their pollution based on the slogan: "Let's keep our forests clean", and all of this should be complemented with reforestation activities. In this respect, there is great optimism among children of their ability to safeguard the environment implementing solutions where required.

Secondary school students are more interested in a higher level of training and motivation. The spatuletail hummingbird is also their emblematic bird and needs to be protected through reforestation programs to safeguard its

habitat and avoid practices that can cause damage to the environment and forests. Their slogan is "Let´s stop slashing and burning our forests" to promote the protection of forest areas and prevent their pollution, and this process should be helped through the implementation of reforestation programs.

Recommendations

Regular workshops should be implemented in the future to breach the information gap and at the same time continue the analysis and training of these communities. The reality of the students and their responses indicate that they are very receptive to new information and cultural awareness.

The three groups surveyed have shown great motivation in the area of reforestation, particularly among the heads of community families ("*Comuneros*"). The implementation of these strategies is of utmost urgency. This is why the issue of habitat rehabilitation has been met with great acceptance and hope and should be incorporated into the different conservation projects implemented in the Peruvian cloud forests.

References

Beck, S. G., P. A. Hernandez, P. M. Jørgensen, L. Paniagua, M. E. Timana and B. E. Young. 2007. *Plantas Vasculares*. pp. 18-34. In: B. E. Young (editor), *Distribución de las especies endémicas en la vertiente oriental de los Andes en Perú y Bolivia*. NatureServe. Arlington, Virginia, USA.

INEI. 2005. *Resultados del censo de población y vivienda 2005*.

INRENA. 2008. *Plan Maestro del Bosque de Protección Alto Mayo 2008 – 2013*. Lima. 272 pp.

INRENA (National Institute for Natural Resources). 2000. *Guía explicativa del mapa forestal*. Lima, Peru.

INRENA (National Institute for Natural Resources). 1995. *Guía explicativa del mapa forestal*. Lima, Peru.

Informe Talleres Comunales. Proceso de Actualización ERD Maule 2008 – 2020. *Así quiero al Maule, puro ñeque, puro corazón*. 41 pp.

Josse, C., G. Navarro, P. Comer, R. Evans, D. Faber-Langendoen, M. Fellows, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. *Ecological Systems of Latin America and the Caribbean: A Working Classification of Terrestrial Systems*. NatureServe, Arlington, VA. Available on line in: http://www.natureserve.org/getData/LACecologyData.jsp.

Josse,C., G. Navarro, F. Encarnación, A. Tovar, P. Comer, W. Ferreira, F. Rodríguez, J. Saito, J. Sanjurjo, J. Dyson, E. Rubin de Celis, R. Zarate, J. Chang, M. Ahuite, C. Vargas, F. Paredes, W. Castro, J. Maco and F. Arreátegui. 2007. *Mapa de Sistemas Ecológicos de la Cuenca Amazónica del Perú y Bolivia. Memoria Técnica*. NatureServe, Arlington, Virginia, USA.

Mittermeier, R.A., N. Myers and C. G. Mittermeier. 2000. *Hotspots: Earth`s Biologically Richest and most Endangered Terrestrial Ecoregions*. Conservation International, Washington, DC, USA.

ONERN. 1976. *Mapa Ecológico del Perú*. Oficina Nacional de Evaluación de Recursos Naturales (ONERN), Lima, Peru.

Fellowships awarded

Twenty fellowships were awarded in Autumn 2010. Awardees were:

Ms. Bernal Toro, Francia Helena (Colombia); **Mr. Borokini, Temitope Israel** (Nigeria); **Ms. Espiritu Tellow, Estela Marjorie** (Peru); **Ms. Forbu, Ntogang Innocentia** (Cameroon); **Mr. George, Ratu Vuki** (Fiji); **Mr. Jiofack Tafokou, René Bernadin** (Cameroon); **Ms. Lamichhane, Sabina** (Nepal); **Ms. Low, Shook Ling** (Malaysia); **Mr. Martana, Kadim** (Indonesia); **Mr. Migolet, Pierre** (Gabon); **Dr. Mounguengui, Wenceslas Steeve** (Gabon); **Ms. Nyarko-Duah, Nana Yaa** (Ghana); **Ms. Padakale, Essotebemime** (Togo); **Dr. Quattara, Adama** (Côte d'Ivoire); **Mr. Roopsind , Anand Ramotar** (Guyana); **Ms. Ruiz Osorio, Eugenia Catalina** (Colombia); **Mr. Shrestha, Pratap Sundar** (Nepal); **Dr. Singh, Sanjay** (India); **Mr. Tekpetey, Stephen Lartey** (Ghana); **Mr. Vargas Oro, Carlos Juan** (Panama);

Twenty-five fellowships were awarded in Spring 2011. Awardees were:

Mr. Adefolu, Solomon Olatunji Adefolu (Nigeria); **Mr. Ali, Salissou** (Togo); **Ms. Andeme Ondo, Hortense** (Gabon); **Ms. Barbosa Herrera, Adriana Paola** (Colombia); **Mr. Bhatt, Bharat Prashad** (Nepal); **Mr. Chaudhary, Dinesh Prasad** (Nepal); **Mr. Chhem, Leang Song** (Cambodia); **Ms. Ferreira, Mônica Sousa** (Brazil); **Ms. Gyabaah, Grace** (Ghana); **Dr. Kouadio, Kouassi** (Côte d'Ivoire); **Ms. Loayza Cabezas, Sophia Cristina** (Ecuador); **Dr. López Castañeda, Arelia Jacive** (Mexico); **Mr. Mavah, Germain Aimé** (Congo, Rep.); **Ms. Mbosso Mafomekiet Fouedjo, Philomène Charlie** (Cameroon); **Dr. Mohamed, Azmy** (Malaysia); **Ms. Mokake, Seraphine Ebenye** (Cameroon); **Mr. Nalvarte Armas, Jaime Guillermo** (Peru); **Mr. Paul, Geo Basil** (India); **Mr. Pereki, Hodabalo** (Togo); **Mr. Piñon, Albert Arvisu** (Philippines); **Mr. Rivera Martin, Luis Eduardo** (Colombia); **Ms. Sari, Ritta Kartika** (Indonesia); **Ms. Thwe, Thwe Win** (Myanmar); **Mr. Tupac Espiritu, Henry Aldo** (Peru); **Mr. Wallace, Robert Flomo** (Liberia)

Fellowship applications

The next deadline for applications: 9 March 2012. Proposed activities should begin no sooner than 15 July 2012.

Further details and application forms (in English, French or Spanish) are available at www.itto.int or from Dr. Chisato Aoki, Fellowship Program, ITTO; Fax 81 45 223 1111; fellowship@itto.int (see page 2 for ITTO's postal address).