



## Biodiversity Conservation at the Landscape Scale

A Program of the Wildlife Conservation Society  
Supported by the USAID/Global Conservation Program

Yasuní-Napo Moist Forest Landscape Conservation  
Area, Ecuador  
Semi-Annual Report  
October 2000 - March 2001

### I. Summary of Activity Status and Progress

#### a. Introduction/Summary

The long-term objective of the Wildlife Conservation Society/Biological Conservation at the Landscape Scale (BCLS) Program in the Greater Yasuní-Napo area is to conserve the biodiversity of the Greater Yasuní-Napo Moist Forest Landscape Conservation Area. To accomplish this purpose, the BCLS Program is working with local ethnic groups, public and private sector stakeholders, and private voluntary organization (PVO) partners to develop a landscape strategy and to improve management of the protected areas and adjacent and surrounding biological resources. These partners include CARE, EcoCiencia, Organización de la Nacionalidad Huaorani de la Amazonía Ecuatoriana (ONAHAE) and Fondo Ecuatoriano Populorum Progressio (FEPP). BCLS Program researchers are working with local partners to establish baseline ecological information, provide support for monitoring and design of local-level initiatives, promote change in patterns of resource use, and craft policy initiatives to encourage conservation-compatible land uses in the region. This landscape approach is designed to determine the needs of key wildlife species, assess human activities across the same landscape, and use the intersection of these to focus efforts on those areas and actions which emerge as key conservation conflicts or opportunities. The project is focusing its local, community-based efforts on the Huaorani Indians, the key local ethnic group, but will expand interventions to include the Shuar and Quichua ethnic groups, as well as to *mestizo* colonists, as appropriate. Efforts focusing on the Huaorani will occur in parallel with the strengthening of on-site park management and national institutional structures. This capacity building is intended to increase the ability of park staff to respond to conservation and management needs of the landscape and to build partnerships with local populations.

All BCLS Program work in Yasuní is designed to contribute to a coherent, consensus-based landscape conservation plan. The plan will take into account all major stakeholders, from local resource users to large-scale industrial entities. We expect results to include a reduction in habitat loss, a decline in hunting pressure on landscape species, and the development of capable co-management programs by public and local institutions.

The BCLS Program has established itself within the institutional framework in the region by conducting a Threats Analysis Workshop of the Yasuní National Park and Biosphere Reserve (January 16 - 19, 2001). About 65 participants from 25 government, nongovernmental, and grassroots organizations met for the first time to view the Yasuní landscape as a whole, and to identify major threats to the region's biodiversity and ways to improve management of the area. The major threats to the region were mapped and the results of the workshop are being compiled into proceedings. Throughout our participation in the

workshop and in subsequent publication of the proceedings, the BCLS Project will facilitate identification of information needs and conservation issues to be addressed. A follow up workshop will probably take place during the second half of FY 2001.

In addition, three aquatic monitoring trips were made during this reporting period along the Yasuní and Tiputini rivers in order to characterize distribution and abundance of reptiles and aquatic mammals. The Program also initiated research activities to assess current land use patterns and wildlife uses by local communities.

Finally, our relationships with other institutions have improved dramatically during this period and new ones are being established. BCLS Program staff proposed partnerships with several local natural resource organizations, including FEPP, CARE-Ecuador, EcoCiencia, as well as the Ministry of Environment, Pontificia Universidad Católica del Ecuador, and ONAHE. Coordination is underway to carry out project activities and identify priorities for strategic work.

## **b. Highlights**

- Restructured project staffing and revised the FY 2001 Implementation Plan.
- Conducted the highly successful, well attended Yasuní Workshop during January 2001. This constituted the first on-site collaborative meeting of a diverse set of local and national stakeholders.
- Formed the Yasuní Management Committee at the Yasuní Workshop. The committee includes 15 conservation and development NGOs and is coordinated by the Ministry of the Environment.
- Updated vegetation and land uses map, highlighting spatially explicit conservation threats.
- Conducted three aquatic surveys during the time period of October 2000 - March 2001. A total of 319 km of river were sampled for aquatic mammals and 295 km for reptiles. In addition, historic information on commercial trade of giant otters was also compiled. Surveys located and identified 259 river turtles (*Podocnemis unifilis*), 238 caimans (65 *Melanosuchus niger*, 124 *Caiman crocodilus*, 44 *Paleosuchus palpebrosus*, 5 *P. trigonatus*), 48 river dolphins (*Inia geoffrensis*), 32 giant river otters (*Pteronura brasiliensis*), 2 Neotropical river otters (*Lontra longicaudis*), 4 gray river dolphins *Sotalia fluvialis*, and 1 manatee (*Trichechus inunguis*).
- Formalized an agreement with EcoCiencia to facilitate community mapping at 14 Indian and colonist villages to determine the spatial distribution of the main hunting, fishing, and gardening sites, as well as the approximate sizes of the areas used by villagers.
- Under the same agreement mentioned above, EcoCiencia is also facilitating wildlife use and knowledge surveys at 14 villages to determine the general distribution of 10 candidate landscape species of birds and mammals, as well as information about their ecology and behavior.
- Further developed contacts with Ecuadorian government and non-government organizations to promote conservation and research of natural resources in the Yasuní area. These new partnerships will assist in consolidating conservation work in Yasuní.

**c. Table of Activity Status**

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## II. Detailed Description of Progress

### a. Key program objectives for this reporting period (October 2000 - March 2001)

The principal objectives of the BCLS Program in the Greater Yasuní-Napo area for this reporting period were to understand the institutional context associated with Yasuní, identify the immediate threats to the area, obtain baseline information about the biology and ecology of focal landscape species, and begin the assessment of current land-use patterns and wildlife uses by local communities. In addition, the BCLS Program intended to draw together all major interested parties together for the first collaborative meeting regarding conservation in the Greater Yasuní-Napo area.

### b. Activity Description

**OBJECTIVE 1: Establish baselines and monitor landscape species and the landscape context in which they are found.**

**Activity 1.1. Landscape Species Baseline: Identify landscape species, compile a research bibliography, and initiate landscape species research**

On-track

During October 2000, BCLS Program staff conducted a preliminary analysis of 28 candidate landscape species. The white-lipped peccary (*Tayassu pecari*) and lowland tapir (*Tapirus terrestris*) were ranked as the top two species. Assessment of species complementarity has not yet been completed. The suite of landscape species will be determined by the end of FY 2001, taking into account selection criteria, and discussions on complementarity are to be held at the Annual Meeting in July 2001. At present we are compiling a research bibliography.

**Activity 1.2. Land Cover/Resource Use Assessments: Produce a Yasuní vegetation and human uses map**

On-track

Plans are being finalized with representatives of EcoCiencia, the National Herbarium of Ecuador, and a private consultant to assess current vegetation cover and land uses. This assessment will be carried out during a 6 to 8 hour over-flight of Yasuní National Park. Available satellite imagery will be classified onto a draft map to reflect threats categories that were identified during the Yasuní Workshop (January 2001) (see Appendix A). This information will also support WCS Ecuador Program activities in SUBIR III (in cooperation with EcoCiencia and CARE-Ecuador).

**Activity 1.3. Landscape Species Surveys/Monitoring: Aquatic and terrestrial landscape species**

On-track

During the period October 2000 - March 2001, BCLS Program staff conducted aquatic monitoring during 3 outings that characterized the distribution and abundance of nine species of reptiles and aquatic mammals in Yasuní National Park, including five high-ranking landscape species (ranks # 4, 12, 13, 22, unofficial data on # 7).

A total of five student volunteers and two park guards were trained in monitoring techniques and participated on the surveys (some individuals participated in more than one survey). The surveys located and identified 259 river turtles (*Podocnemis unifilis*), 238 caimans (65 *Melanosuchus niger*, 124 *Caiman crocodilus*, 44 *Paleosuchus palpebrosus*, 5 *P. trigonatus*), 48 river dolphins (*Inia geoffrensis*), 32 giant river otters (*Pteronura brasiliensis*), 2 Neotropical river otters (*Lontra longicaudis*), 4 gray river dolphins (*Sotalia fluvialis*), and 1 manatee (*Trichechus inunguis*). Preliminary results of the aquatic monitoring are now being analyzed and will be presented at an international wildlife management congress during September 2001 in Cartagena, Colombia (see Appendix B).

Due to the low densities and wide-ranging behavior of landscape species, a rigorous sampling design is a necessity for an effective monitoring and response framework in Yasuní. This framework and design will be determined in conjunction with BCLS Program staff within the Coordination Unit.

**Activity 1.4. Baseline and Monitoring of Impacts: Monitor human activities along roads and rivers**

On-track

During the first half of FY 2001, BCLS Program staff and the FEPP Program Coordinator have discussed future collaboration in monitoring human activities along the major roads and river systems in the northern, highly degraded, portion of the Yasuní area. The purpose of this activity is to develop spatial and temporal baselines for several human activities (e.g., hunting, logging, tourism) currently considered as threats. These data will be compared to undisturbed baselines to characterize the ecological effects of resource use and ecological and economic feasibility of multiple uses within the area. A joint study will be approved and undertaken during the second half of FY 2001 and continued during FY 2002.

**Activity 1.5. Baseline and Monitoring of Impacts: Hunting and wildlife impacts**

On-track

During the first half of FY 2001, BCLS Program staff came to a preliminary agreement with EcoCiencia researchers to conduct a study of subsistence hunting by Shuar and colonists in the western portion of the Yasuní region, along the via Auca. The research will be initiated during the second half of the fiscal year. The proposed support of Dr. Margaret Franzen, a separate part of this activity, has been delayed. Due to university teaching responsibilities and the security risk in Yasuní due to the kidnapping of the 10 oil engineers, she returned to the US. Her anticipated return is mid-2001, but that, and BCLS support for her study, will require reformulation.

**OBJECTIVE 2: Strengthen local, on-site protection and management of biological resources across the landscape.**

**Activity 2.1. National Park Authority Support: Needs assessment and park guard training**  
Delayed

During October 2000-March 2001, BCLS Program staff began to identify first-hand some training and equipment needs of park guards at Yasuní National Park. BCLS staff had hoped to work through the Yasuní Management Committee and the Ministry of the Environment to conduct the needs assessment, including the development of a list of topics for the park guard training course. However, the Ministry is still involved in a series of planning meetings and given that the committee has yet to formalize its work

agenda, the nature and extent of any assistance, including training, has yet to be formally determined. We expect to complete this activity during the second half of FY 2001.

It is worth noting that during the aquatic surveys conducted in this period, three park guards permanently stationed at Tambococha and Nuevo Roca Fuerte received technical assistance on environmental education activities oriented to local community members and oil company technicians. Informal environmental education talks were given to Nuevo Roca Fuerte residents.

**Activity 2.2. Yasuní Management Committee: Facilitate management process and analyze effectiveness and efficiency of management committees**

Delayed

During the Yasuní Workshop (January 2001), a Yasuní Acting Management Committee was formed. The committee will be coordinated by the Ministry of the Environment and will have about 15 members, essentially all of the major conservation NGOs that are active in the Yasuní region. Due to a series of larger-scale internal planning sessions in the ministry, the committee has yet to formalize its work plan. Upon completion of the planning sessions we expect that the committee will have an active role in the management of Yasuní National Park. As a part of this activity, during the second half of FY 2001 we will conduct a review of the characteristics of successful management in other areas in order to adapt those features to the Yasuní Management Committee.

**Activity 2.3. Participatory Evaluation of the Yasuní National Park/Biosphere Reserve Annual Work Plan**

On-track

This activity is scheduled to take place during the second half of FY 2001. In the meantime, BCLS Program staff is compiling relevant maps (national park boundaries, biosphere reserve boundaries, oil concession areas, etc.), reports (internal evaluations, implementation strategies, etc.), and work plans as vital background information.

**Activity 2.4. Local Community Management Capacity: Community mapping of natural resource use**

On-track

During the first half of FY 2001, the BCLS Program formalized an agreement with EcoCiencia to conduct mapping of approximately 14 indigenous communities (primarily Huaorani [6], but also Shuar and Quichua, as well as some colonist communities) to determine natural resource use patterns in time and space (including, fish, wildlife, and timber resources). The selected communities occur adjacent to the western portion of Yasuní National Park, in an area of great conservation threat due to colonization. This activity also supports our efforts in SUBIR III. It should be noted that this EcoCiencia team will also conduct Activity 2.5.

**Activity 2.5. Local Community Management Capacity: Surveys of wildlife use and knowledge**

On-track

During the first half of FY 2001, the BCLS Program formalized an agreement with EcoCiencia to conduct wildlife use and knowledge surveys at the same 14 indigenous and colonist communities mentioned in Activity 2.4. The survey will focus on the top 10 candidate landscape species determined earlier in the

year. The selected communities occur adjacent to the western portion of Yasuní National Park, in an area of great conservation threats due to colonization. This activity also supports our efforts in SUBIR III. It should be noted that this EcoCiencia team will also conduct Activity 2.4.

**Activity 2.6. Oil Company Wildlife Management: Protocols for local community relations and compliance with environmental laws**

Delayed

Throughout the year, BCLS Program staff had hoped to engage in a dialogue with representatives of petroleum companies and to begin to develop a strategy to reduce the impacts of exploration and extraction of petroleum. Three representatives attended the Yasuní Workshop and gave presentations (companies: DAIMI-YPF, OXY, and VINTAGE) and will continue to be contacted. Program staff has begun to work with Ministry of Environment managers to identify ways in which petroleum operations could contribute to wildlife conservation and enhanced protection of the Yasuní region. This activity will form part of the work plan for the Yasuní Management Committee. We expect this activity to increase during FY 2002.

**Activity 2.7. Review of Yasuní Management Plan: In-house plan review by WCS Ecuador**

On-track

Planned for the second half of FY 2001, and independent of our participation on the Yasuní Acting Management Committee, BCLS will conduct an internal review of the Yasuní Management Plan. To date, our main accomplishment has been to obtain copies of maps and the Yasuní Management Plan (this took 1.5 years of requests to government departments).

**Activity 2.8. Yasuní Workshop: Workshop 1 (January 2001), compilation of proceedings, and threats analysis (determine threats on landscape species)**

On-track

From January 16 – 19, 2001, BCLS co-hosted a workshop on the Yasuní region in cooperation with the Ministry of the Environment and UNESCO. The workshop was a huge success for several reasons. First of all, stakeholder participation was good; there were about 65 people representing 25 organizations. Second, a consensus was reached about the major threats to the area and the need to work in an integrated manner. Third, major threats were characterized and mapped. Finally, as mentioned before, the Yasuní Acting Management Committee was established (See III. Success Stories and Other Appendices).

Following the Yasuní Workshop, BCLS, in cooperation with the Ministry of the Environment, UNESCO, and Simbioe (Ecuadorian conservation NGO with experience in publishing books and proceedings), is coordinating the publication of the proceedings. Essentially all of the manuscripts have been received (about 25) and are in the process of review and editing. By the end of FY 2001, BCLS Program staff will develop specific, more detailed assessments for the most pressing threats identified in the preliminary analyses (workshops conducted November 1999 and January 2001).

**Activity 2.9. Yasuní Follow-up and Workshop 2 (June 2001)**

On-track

As a result of the initial Yasuní Workshop in January 2001, a series of actions will be proposed to enhance the conservation status of the park and biosphere reserve. These actions will be coordinated with the Yasuní Management Committee. As has been mentioned earlier, the committee is in the process of

formalizing its work plan. Once this plan has been adopted, follow-up activities will commence. Workshop 2 will likely be held during the second half of FY 2001.

**OBJECTIVE 3: Promote the development of national policies that support the landscape conservation approach.**

**Activity 3.1. Land Access and Use Zoning: Determine appropriate use and protection levels**

On-track

During the second half of FY 2001, BCLS project staff, in collaboration with the Ministry of the Environment and other Ecuadorian counterparts, will initiate an evaluation to determine appropriate land uses and protection levels for the Yasuní region. Thus far we have met with officials of FEPP, and have agreed that the two organizations will work together in this regard. A working agreement with FEPP will be developed soon. Through SUBIR III, we will participate with CARE-Ecuador and EcoCiencia in a land access and use zoning exercise for the Huaorani Territory in mid-2001.

**Activity 3.2. Analysis of Environmental Laws: Produce terms of reference**

On-track

During the second half of FY 2001, BCLS Program staff, in cooperation with Ecuadorian counterparts (Fondo Ambiental Nacional and Ambiente y Sociedad), will initiate an effort to compile national, regional and local environmental laws into a single, widely available document. To date, we have discussed this activity locally with FEPP and with BCLS Coordination Unit staff. The WCS Latin America Program has experience in this regard elsewhere in the hemisphere. This activity will be coordinated with Activity 3.3, below.

**Activity 3.3. Conservation Financing and Implementation (Determine funding sources and develop implementation strategies): Produce terms of reference**

On-track

As with Activity 3.2, above, during the second half of FY 2001, BCLS Program staff, in cooperation with the same Ecuadorian counterparts mentioned in 3.2, will compile and analyze this conservation financing information. To date, we have discussed this activity locally with FEPP, Fondo Ambiental Nacional, and with BCLS Coordination Unit staff. The idea is to also benefit from the experience acquired by WCS Latin America Program in other Latin American countries. This activity will be coordinated with Activity 3.2, above.

**OBJECTIVE 4: Elaborate a participative, integrated landscape conservation action plan.**

**Activity 4.1. Assess Causes and Important Impacts: Conduct preliminary review of causes and effects**

On-track

To date, we have discussed an assessment of the causes and effects of important conservation threats with FEPP and have learned that they have the institutional capacity and interest to conduct this review in cooperation with WCS Ecuador Program. During the second half of FY 2001, BCLS Program staff, in

collaboration with Ecuadorian counterparts, including other conservation (e.g., EcoCiencia and Fundación Jatun Sacha) and community development NGOs (e.g., FEPP and CARE), will formalize the review and seek to have the results shared with the Yasuní Management Committee.

### **c. Key Management Issues**

Core BCLS staffing has been restructured and expanded. One of the first tasks has been to revise the Yasuní Implementation Plan for FY 2001. The objectives were rewritten to give significant emphasis to establishing partnerships and obtaining the necessary information to orient future research and conservation work. The revised plan will emphasize strengthening of park management and addressing threats to conservation. The political instability and lack of security in the Yasuní region continue, due in large measure to drug-related problems in Colombia. Finally, the Ministry of the Environment has been slow to develop a long-term management plan for the park.

## **III. Success Stories and Appendices**

The most important success story is that the threats analysis conducted during the Yasuní Workshop (January 16 – 19, 2001). This workshop was highly effective in drawing together major local stakeholders to view the area using a holistic approach and set the stage for discussion of conservation problems and issues of common concern. Workshop participants included scientists, government officials, representatives of oil companies, and Huaroani and Quichua Indians. The workshop was hosted by the Ministry of Environment, in conjunction with technical and financial support from WCS and UNESCO. Major conservation threats to the area were characterized and quantified. The Threats Analysis, as well as formal technical papers will be compiled into a Workshop Proceedings by the BCLS Program (see Activity 2.8.).

Seven conservation threats were analyzed: (1) agriculture and livestock, (2) oil exploration and exploitation, (3) timber harvest, (4) subsistence hunting, fishing, and gathering, (5) ecotourism, (6) colonization, and (7) institutional weakness. Each threat was characterized and specific actions were proposed to respond to each threat. The physical locations of each threat were indicated on base maps of the Yasuní region. This information will be analyzed using GIS technology to determine the surface area affected by each threat. The Ministry of the Environment will propose areas subjected to multiple threats as priority areas for conservation actions. Preliminary analysis has determined that the northern and northwestern portions of the Yasuní landscape suffer from the greatest human impacts. The Yasuní BCLS project will emphasize addressing concerns in those areas determined to be important biological zones, in particular those essential to landscape species.

The formal proceedings of the Yasuní Workshop will also include a section that summarizes research and community development activities by the several NGOs working in the area. One objective of this summary is to publicize these activities in an attempt to avoid duplication of efforts. A second objective is to promote cooperation between organizations that will lead to the development of a participative management plan for the park and reserve. We are encouraged by the spirit of collaboration demonstrated at the workshop, and feel it provides a sound base for our newly restructured project.

### **Appendices**

- A. Threats Analysis Workshop Program
- B. Cartagena Wildlife Congress Abstract