



Biodiversity Conservation at the Landscape Scale

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

Coordination Unit, New York, USA
Semi-Annual Report
April 2001 – September 2001

I. Summary of Activity Status and Progress

a. Introduction/Summary

The Biodiversity Conservation at the Landscape Scale (BCLS) Program is designed to develop and test an integrative, landscape-level approach to biological conservation across multiple sites. Accordingly, the program encompasses a diverse array of land-use categories and resource-use issues, in addition to a variety of approaches to site-based management. In order to facilitate and harmonize work among these sites and capture the synergistic benefits from diverse experiences, a New York-based Coordination Unit is charged with managing the BCLS Program. This unit guides the three field sites as the Landscape Approach to Conservation is developed and tested, assists in the design and development of sound monitoring programs at these sites, promotes cross-site learning, and ensures communication among the sites, WCS staff (central and field), USAID (Global Bureau and country missions), and the larger conservation community. In addition, the Coordination Unit assesses and promotes opportunities for application of our Landscape Approach to new sites, with complementary funding from USAID and/or other sources.

In the second half of FY 2001, the Coordination Unit accomplished most of its planned programmatic, technical, and administrative goals. During this reporting period, we further developed our Landscape Approach to conservation (including the Landscape Species Approach and associated tools), refined and began to implement a monitoring strategy and incorporated threats analyses into conceptual models. We fulfilled USAID reporting requirements and produced communications materials for use within WCS, for distribution in the field, and for external audiences.

b. Highlights

- Second Annual Meeting of the Living Landscapes Program convened July 16 – 26, 2001 in Congo
- Refined the Landscape Species Approach to conservation, including finalization of Landscape Species Selection Criteria
- Established and carried out methodological framework for building “biological landscapes”
- Developed a framework for monitoring the implementation and effectiveness of interventions
- Developed conceptual models which capture the interdependent factors that threaten wildlife and its habitat for each core site
- Printed and distributed issues 1 and 2 of the Living Landscapes Bulletin Series
- Developed and launched a Living Landscapes website (www.wcslivinglandscapes.org)

c. Table of Activity Status

Activity Number	Activity Title	Status	Page Number
Obj. 1	Guide development and testing of the landscape approach		
1.1	Landscape Species Strategy Design	On-track	2
1.2	Threat Analyses	Completed	3
1.3	Cross-site Analyses	Delayed	3
1.4	Application of Landscape Approach to new sites	On-track	3
Obj. 2	Provide technical and monitoring assistance to field projects		
2.1	Project Design and Monitoring	On-track	4
2.2	Spatial Analyses	On-track	4
2.3	Wildlife Health Research	Delayed	5
Obj. 3	Ensure coordination and communication services for the Program		
3.1	Coordination Unit Staffing	Completed	5
3.2	Project Consultation/Site Visits	On-track	5
3.3	Annual Meeting	Completed	5
3.4	Program Reporting	On-track	6
3.5	Informational Materials and Communications Packets	On-track	6

II. Detailed Description of Progress

a. Key program objectives for this reporting period (April 2001 - September 2001)

Our objectives for the second half of FY 2001 included: ensuring effective functioning of the Program; elaborating the Landscape Species Strategy (for the core sites this included completion of the selection of landscape species, development of conceptual models to map causal linkages amongst direct and indirect threats and developing a coherent and prioritized program of monitoring); providing technical expertise to field projects; producing printed materials for communications (within WCS, for distribution in the field, and for external audiences); and critical assessment of additional sites for Program expansion.

b. Activity Description

OBJECTIVE 1: Guide development and testing of the Landscape Approach.

Activity 1.1. Landscape Species Strategy Design

On track

Coordination Unit staff, in consultation with BCLS field staff, continued to elaborate the Landscape Species Strategy. We have further developed the conceptual framework and are implementing the strategy at the core field sites. WCS staff from outside the BCLS program have participated in the development of the strategy, and are further exploring its use in areas in Latin America, Africa, Asia, North America, and the marine realm.

The selection criteria for landscape species were finalized and documented in the draft version LLP Bulletin 3 (See Appendix 1). Coordination unit and field staff also began preparation of a manuscript documenting the selection criteria for wider publication. This will allow replication of the process beyond WCS.

A methodological framework for building “biological landscapes” was also established and carried out for spectacled bear and white-lipped peccary (Bolivia), tapir (Ecuador) and bongo (Congo). Biological landscapes are a critical component of the landscape species approach as they constitute a formal articulation of the spatial and resource requirements for each landscape species. Results from these analyses are currently being incorporated in each site’s management planning and were presented at the Society for Conservation Biology and Amazonian Wildlife Management conferences.

Coordination Unit staff also organized a workshop on “Ecologically functional populations as conservation targets.” The workshop is scheduled for November 2001, so only the preparations are reported here (results from the workshop itself will be presented in next report). The workshop seeks to formalize our approach to setting target levels for the conservation of landscape species populations and habitats. Thirty-one people from WCS, Federal Agencies, Universities and other NGOs are scheduled to attend the workshop, and a background paper has been prepared.

Activity 1.2. Threats Analyses
Completed

Each of the three core sites completed Threats Analyses in the last reporting period, and continue to use the results of their analyses within their overall conceptual and monitoring frameworks. A table explaining the ranking system used for landscape species and the threats they address is included in this report (See Appendix 5), and should be used in conjunction with each of the core sites reports to understand the link between landscape species and overall vulnerability (as a function of the number and severity of threats).

Activity 1.3. Cross-site Analyses
On-track/delayed

During this reporting period, Coordination Unit staff further engaged in the establishment of a new thematic program at WCS to address wildmeat and hunting issues, which is a major issue in each of the core sites. Program staff attended the Bushmeat Crisis Task Force meeting in May, 2001, took the lead in developing a workplan for the ‘Income and Protein Alternatives Working Group’ of BCTF, and provided technical assistance to Dr. Elizabeth Bennett, the newly hired Director of the WCS program on Conservation of Harvested Wildlife. Coordination Unit staff participated in an NSF sponsored workshop designed to identify approaches to multidisciplinary problem solving and cross-site analysis.

Although field and coordination staff further discussed cross-site issues identified in the last reporting period (hunting, private sector partnerships, community-based conservation), the design of the analytical processes necessary for comparative and synthetic analyses was not completed. However, draft bulletin issues were written on the three cross-site issues listed above, and will be printed in the near future. Additional potential cross-site themes brought up at the annual meeting in July include land tenure and oil issues.

Activity 1.4. Application of Landscape Species Approach to new sites.
On track

The Landscape Species Approach is being extended to additional WCS long-term project sites via several mechanisms. Coordination Unit staff continued to work closely with WCS Regional programs to identify WCS sites for the potential application of the Landscape Approach. Meetings with Colin Poole of the Asia program, and Matthew Hatchwell of the Africa program were held to discuss application of the Landscape Approach in the Northern Plains of Cambodia and in the Masaola-Makira Plateau region of

Madagascar, respectively. The Cambodia program has applied the landscape species framework to its Northern Plains Project (funded by the GEF). Further progress was made with the North America Program to begin to apply the approach and add as core sites the Greater Yellowstone area (MT, WY, ID) and the Adirondack State Park (NY). John Beecham of the Northern Rockies Program attended the annual Living Landscapes meeting, and strategic meetings were held with Jodi Hilty (Assistant Director of the North America program) who is based in MT. In addition, inclusion within the BCLS program of the Asia Program's work under the East Asia and Pacific Environment Initiative has been designed and approved as part of the Leader with Associates Cooperative Agreement Award (LAG-A-00-99-00047-00). At this time however, funding for EAPEI remains pending due to personnel changes within USAID.

OBJECTIVE 2: Provide technical and monitoring assistance to field projects.

Activity 2.1. Project Design and Monitoring

On track

The rationale and process for development of conceptual models for each project site were drafted by Coordination Unit staff and refined with input from BCLS field staff during the annual meeting in July. Coordination Unit staff provided technical assistance to BCLS field staff to draft a conceptual model that effectively captured their vision of the interdependent factors that threaten wildlife and its habitat.

Coordination Unit staff and BCLS field staff also developed a framework for monitoring the implementation and effectiveness of interventions at each program site during this reporting period. The framework provides a standardized but flexible lens through which to view biological threats reduction, and performance monitoring across Living Landscapes Program sites. The monitoring framework was drafted by Coordination Unit staff and was refined and finalized with input by BCLS field staff during the annual meeting. Coordination Unit monitoring specialists wrote a draft version of a bulletin dealing with the topic of monitoring for future publication as part of the Living Landscapes Program bulletin series.

The Quantitative Monitoring Specialist has been closely working with field staff to produce sound sampling designs for landscape species research. Designs have been generated for a) a line transect survey of chimpanzee nests in the Goualogo triangle within the Ndoki-Likouala landscape conservation area as part of a pre- and post- logging study in the area to estimate the impact of logging on chimpanzee abundance and distribution, and b) a line transect survey for large mammal sign covering a number of different habitat types in the Lac Télé Community Reserve, falling within the same conservation area.

Activity 2.2. Spatial Analyses

On track

Spatial analysis of landscape species' requirements and distribution was further developed in this reporting period. WCS Dr. Eric Sanderson's "GIS in Wildlife Conservation" courses were attended by field staff from Yasuni and Madidi. Field and NY staff continued to develop the human and biological landscapes for the core sites. Preliminary results of these analyses have been presented by the Landscape Ecologist at the annual meeting in Congo, by Dr. Sanderson at the Society for Conservation Biology meeting in July, 2001 and by the Landscape Ecologist at an internal WCS talk held in September, 2001. The monitoring specialists outlined the logic and components for a spatial model designed to simulate multi-species hunting of terrestrial wildlife. Model development and testing will help identify cost effective indicators that will forewarn overexploitation of harvested wildlife.

Activity 2.3. Wildlife Health Guidelines for Biodiversity/Environmental Programs
Delayed

As discussed in the previous interim report, The Field Veterinary Program engaged the services of Dr. Felicia Nutter for assistance in researching and compiling information for the USAID wildlife health guidelines. Dr. Nutter provided a first draft in July 2001 that was promptly distributed to several wildlife health experts for review. In September, the FVP hosted a two-day meeting at Central Park Zoo with select veterinarians and wildlife health professionals that served as a brainstorm session to revise content and determine the structure of the document. Because the scope of the guidelines has substantially expanded, we now anticipate the completion of the guidelines by December 2002.

OBJECTIVE 3: Ensure coordination and communication services for the Program.

Activity 3.1 Coordination Unit Staffing
Completed

During this reporting period, the Quantitative Monitoring Specialist, new Program Officer and new Administrative Assistant joined the Living Landscapes Program. The coordination unit is currently operating under full staffing.

Activity 3.2. Project Consultation/Site Visits
On track

In addition to regular email and telephone consultation amongst Coordination Unit and field staff, NY-based WCS staff consulted extensively with field staff at the annual meeting in Congo.

Activity 3.3. Annual Meetings
On track

The Second Annual Meeting of the Living Landscapes Program took place from July 16 – 26, 2001 in Northern Congo, within the Ndoki-Likouala landscape conservation area – one of the three core sites of the Program. The meeting itself took place at Nouabalé-Ndoki National Park headquarters in Bomassa, just outside of the park on the Sangha River. Living Landscapes Program staff from each of the core sites attended the meeting, including representatives from the Yasuni-Napo site in Ecuador, the Northwestern Bolivian Andes site, and the Ndoki-Likouala site. In total, there were 27 participants including staff from other WCS regional programs (North America, Asia and Africa) as well as the USAID/G CTO. The meeting provided an excellent forum for WCS cross-regional and cross-site learning – a valuable way for field staff to compare site-specific challenges and opportunities in implementing the landscape conservation approach. This was especially useful the core sites are also at various stages of implementing the approach.

The primary purpose of the meeting was to collaboratively develop monitoring strategies for each of the core sites that were sufficiently comparable to allow cross-site learning and analysis. To facilitate the process each core site used conceptual modeling to make explicit their conservation objectives and to map out the causal linkages amongst the direct and indirect factors that militate against wildlife conservation at their site. In doing so each core site was better able to articulate to others their conservation vision and the challenges they face. Moreover, by developing a conceptual model the rationale underlying each core site's conservation interventions was made clear, as were priorities for monitoring.

By the close of the meeting, frameworks for both the conceptual model and the monitoring strategy had been laid out coherently. The criteria for landscape species selection criteria were also finalized, including a means for tracking uncertainty and allowing for transparency in the process. Field excursions included 1) two days within the park to visit Mbeli Bai, a 13 hectare clearing where gorillas, elephants and other wildlife feed, bathe and gather and 2) site visits to the Kabo and Pokola forestry concession areas south of the park, where WCS is working with the CIB (Congolaise Industrielle du Bois) logging company and the Congolese government to conserve and manage wildlife.

Activity 3.4. Program Reporting

On Track

The Coordination Unit assisted each of the three field sites in meeting USAID reporting requirements, including FY 2001 Semi-Annual Reports in June, and the Implementation Plans for FY 2002. Coordination Unit staff coordinated and advised field staff so that appropriate deadlines and guidelines were followed, and assisted with design, editing and formatting. We have been notified that USAID/G staff have used an example of these documents as a model for reporting with another GCP partner.

Activity 3.5. Informational Materials and Communications Packets

On Track

The Coordination Unit further developed a portfolio of informational materials about the Program for distribution to field sites, USAID Missions/Bureaus and the greater conservation and donor arena. Living Landscapes Program Bulletin 1 (*The Living Landscapes Program*) and Bulletin 2 (*The Landscape Species Approach*) were developed and printed in June and September respectively (See Appendix 2 and 3). These Bulletins are designed to be engaging, informative and portable and have been very useful since their release. Approximately one fourth of the total number of each Bulletin printed has been distributed to date.

A Living Landscapes Program website was launched in July (www.wcslivinglandscapes.org). It includes a programmatic overview, core site descriptions, and electronic versions of Bulletins. In addition, a Living Landscapes email address LLP@wcs.org was established to facilitate communication from interested parties. Periodic email updates will be sent quarterly to the growing email distribution list.

Two PowerPoint Presentations were further developed that focus on: (a) a comprehensive description of the Landscape Approach and Landscape Species Strategy; and (b) Landscape Species Selection. The third and final "advertorial" was produced for the New York Times Op-Ed page and describes the WCS Landscape Approach to site-based conservation. The Living Landscapes approach was highlighted in WCS communications throughout the reporting period, including WCS newsletters and the Wildlife Conservation magazine, which has a broad readership made up of WCS members, donors and the general public.

Other communication activities include the publication of a 'letter to the editor' of "Conservation Biology In Practice" in response to an article critical of the concept of umbrella species. Currently 'in press' in "Conservation Biology" is *Mapping the Conservation Landscape* in which a broad conceptual map of biodiversity conservation approaches is made (See Appendix 4). An article for "Conservation Biology" on the landscape species selection criteria is being written by coordination unit and field staff, and is close to completion. Finally, an essay to be submitted to "Conservation Biology In Practice" on the practical and theoretical underpinnings of the Landscape Species Approach is also in progress.

III. Success Stories and Appendices

1. The Living Landscapes Program and the Africa Program co-hosted the Forestry Minister of Congo and the CEO of the forestry company CIB (Congolaise Industrielle du Bois), when a press conference was held at the Bronx Zoo in July 2001 to announce the turnover by CIB of the pristine Goualogo Triangle to Nouabalé-Ndoki National Park, one of the BCLS core sites (See Appendix 6).
2. The annual Living Landscapes Program meeting in July 2001 was a success in laying out frameworks for both the conceptual model and the monitoring strategy. Landscape species selection criteria were also finalized, including a means for tracking uncertainty and allowing for transparency in the selection process.
3. A presentation on the Landscape Species Approach was well received at the Society for Conservation Biology meeting held in July 2001. The SCB talk was extremely well attended, having a prime spot on the opening day of the meeting and positioned within a broader section on landscape ecology. Following the talk were several requests for additional information and documentation. This indicates that the WCS BCLS Landscape Species Approach is gathering major interest from conservation practitioners and academics, and is gaining a key role in the development of landscape approaches to conservation.
4. Development of core site conceptual models by field and coordination staff has been an important part of the BCLS program during this reporting period. Conceptual models are extremely useful planning tools for conservation threats abatement because they force us to: a) explicitly define what we want to influence or change as a result of project interventions (i.e., the conservation objective), b) characterize and prioritize the direct and indirect factors that threaten wildlife conservation, and c) graphically represent how these threats individually or in combination cause the undesired changes in the species or landscapes that we want to conserve. Identifying key threats and then deciding which ones are the most significant is an important exercise when building a conceptual model. However, equally important is to decide how the indirect and direct threats link together to form a causal network or chain. Understanding not only the range of threats, but also how they interact and influence one another is critical. This enables us to clearly articulate our vision of why we need to take action to conserve a particular species or landscape, and to pinpoint where and why our interventions are likely to have the most success and the greatest conservation payoffs. Most notably, conceptual models direct conservation actions and allow us to measure outcomes.

Appendices

1. Living Landscapes Program Bulletin 3. DRAFT. *Selecting Landscape Species*.
2. Living Landscapes Program Bulletin 1. July 2001. *The Living Landscapes Program*.
3. Living Landscapes Program Bulletin 2. September 2001. *The Landscape Species Approach*.
4. Redford et al. In Press. *Mapping the Conservation Landscape*. Conservation Biology.
5. Landscape species and overall vulnerability (as a function of the number and severity of threats).
6. The New York Times. *German Loggers to Leave 'African Eden' Untouched*. July 7, 2001.