

Landscape Species Approach: FAQs



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- ◆ *Conservation that is focused solely within the boundaries of national parks, community forests or trophy-hunting conservancies often does not succeed because wildlife, ecological processes and human resource use often spill across these political borders.*
- ◆ *As people around the world continue to expand into wilderness areas, and as we successfully conserve healthy wildlife populations, the needs of people and the needs of wildlife will increasingly clash. Consequently, we must find new and better land use management practices and policies to help people and wildlife share the same landscapes.*
- ◆ *To set priorities for conservation, it is better to use the ecological needs of wildlife, rather than political boundaries, to define the conservation landscape.*
- ◆ *Understanding how to prevent or minimize human-wildlife conflicts within and across land-use zones is essential to ensure the long-term survival of wildlife and wildlands.*
- ◆ *Funding for biodiversity conservation does not grow as fast as human demand for resources or the pace of wildlife and wildlands loss. Consequently, we must develop cost-effective conservation tools and set strategic priorities for conservation spending.*
- ◆ *The WCS Living Landscapes Program designed a method to define landscapes based on the needs of wildlife, developed cost-effective conservation tools to prevent or minimize human-wildlife conflict within these landscapes, and promoted the international exchange of practical conservation knowledge.*

Frequently Asked Questions

Why was the Living Landscapes Program started?

In this complex world, where growing populations and global economies are altering natural resources at a scale and pace never before seen, we need tools to help us to reconcile people's use of the land with the needs of wildlife. By starting the Living Landscapes Program (now **Conservation Support**), the Wildlife Conservation Society (WCS) continued a long tradition of seeking innovative ways to minimize human-wildlife conflicts and ensure the long-term survival of wildlife and wildlands.

What was the mission of the Living Landscapes Program?

From its inception, the Living Landscapes Program (LLP) was dedicated to the conservation of large, wild ecosystems. The approach that LLP developed places wildlife at the center of conservation strategies but recognizes that few places on earth remain free from human influence. The Living Landscapes Program developed and tested wildlife-based strategies for conserving ecosystems that take into account human impact. Furthermore, LLP linked wildlife monitoring directly to assessments of conservation progress. By pursuing a common set of strategies and approaches across a globally distributed set of sites, the program promoted inter-site research and learning, and developed models of conservation management that are broadly applicable. The WCS Conservation Support Program continues this work to this day.

Why are wildlands important?

Today, over 95% of the earth's land-surface is zoned for human uses such as building and road construction, farming, fishing, ranching and logging. Even the few remaining wild areas where human impact has historically been minimal are being encroached upon, converted to other uses, and their plant and animal communities degraded or depleted.

At WCS, we believe that conservation of wildlands is important because they are the last strongholds where ecological and evolutionary processes remain largely unfettered by the influence of humans. Wildlands are extraordinary places that still support richly diverse and abundant assemblages of plants and animals, including those that are particularly susceptible to and intolerant of human behavior. Moreover, wildlands are natural laboratories that can continue to teach us much about how the natural world works.

Why are parks and reserves not enough?

At WCS we believe that protected areas must remain at the core of all nations' biodiversity conservation plans. Protected areas typically contain a higher diversity and abundance of plants and animals than landscapes managed primarily for economic reasons where biodiversity conservation tends to be of secondary importance. Yet, we also recognize that parks and reserves are always embedded in larger, human-dominated landscapes and are seldom sacrosanct. Thus, regardless of how large or small a protected area may be, the plants and animals it contains are often threatened, whether directly or indirectly, by human resource use behaviors.

Management of parks and reserves cannot, therefore, occur in isolation from the surrounding human-dominated landscape, but must take into account where and how human behavior conflicts with biodiversity conservation and also where conservation activities adversely impact human welfare. As human populations continue to expand, the incentive for exploiting natural resources within protected areas will certainly increase and the need for biodiversity conservation tools that reflect this nexus of human-wildlife conflict will become even more important. The WCS Living Landscapes Program developed and tested tools to ensure the long-term persistence of wildlands; tools that can be used to help avoid or mitigate environmental impacts in the areas of the world that are zoned for human economic use. The Conservation Support Program continues to refine these tools and make them available for conservation practitioners around the globe.

Why focus on wildlife?

Focusing on wildlife requires us to be specific about their population habitat requirements, which helps us to explicitly define the size and shape of the landscape needed to ensure the long-term persistence of these populations and the underlying ecological processes upon which they depend.

Using the status of wildlife populations as a proxy for landscape health, quality or integrity allows us to be specific about where and why conservation investments are needed, what such investments are designed to achieve, and how the success or failure of these interventions will be measured. Focusing on wildlife makes the landscape to be managed geographically tangible and ecologically meaningful, and makes the targets for, and outcomes of, conservation investments explicit and measurable.

What is a *Landscape Species Approach*?

The **Landscape Species Approach** is conservation designed from the perspective of the needs of wildlife, rather than from the viewpoint of economic development. The approach is focused on ensuring that conservation investments are made to address the environmental needs of, and human threats to, ecologically functioning populations of one or more *landscape species*. By doing so, not only will landscape species and the habitats they require survive over the long-term, but so too will the assemblage of other species that shelter under the ecological umbrellas that they provide.

What is a *Landscape Species*?

Landscape species are wildlife that typically require large, ecologically diverse areas to survive and often have significant impacts on the structure and function of natural ecosystems. Because of their habitat requirements and ranging behavior, landscape species may be particularly threatened by human alteration and use of natural landscapes. Landscape species are often cultural icons that can help generate a constituency for biodiversity conservation.

What are some examples of *Landscape Species*?

African forest elephants in Ndoki-Likouala, Congo; white-lipped peccaries in Yasuní, Ecuador; spectacled bears in Madidi, Bolivia; black-backed woodpeckers in northern California; tigers in the Russian Far East; and elephant seals in coastal Patagonia.

The Landscape Species Approach

The Landscape Species Approach is a wildlife-based strategy to define ecologically meaningful conservation areas that recognize the complexity of the biological and social landscape in which conservation occurs. The Landscape Species Approach depends on selecting a set of species with complementary ecological needs (a suite of Landscape Species which collectively represents the biodiversity of the landscape as a whole). The goal of the approach is for the conservation of a suite of Landscape Species to lead to the conservation, not only of those species, but of all biodiversity in the landscape.

What must we do to implement the Landscape Species Approach?

The key objective of the Landscape Species Approach is targeting conservation actions to avoid or mitigate conflicts between people and wildlife. To do this, we need to identify where human and biological landscapes intersect in time and space. This requires that we gather sufficient information to accurately map human land use and resource management practices and to characterize the habitat use requirements of landscape species. To take action to minimize conflicts between wildlife and people, we need to develop the constituency and capacity for wildlife conservation; we do this by working closely with resource users, civil society organizations, private sector companies and public sector agencies.

Who participates in the Landscape Species Approach?

One of the primary goals of the Living Landscapes Program has been to identify and engage key stakeholders in the conservation process. One way that this was achieved was through the adoption of a participatory and iterative threats analysis process. Stakeholders are invited to contribute data, evaluate the quality and gaps in the data, and identify the set of threats to be addressed. Participants then suggest institutions and actions to address each threat. Through this process, stakeholders themselves are encouraged to identify problems and the actors best suited to address them, and to identify areas for institutional strengthening or coordination. This process strengthens the involvement of stakeholders and, therefore, their faith in the conservation process.

Why will this approach work?

Focusing on the ecological needs of a suite of landscape species ensures that the minimum conditions for their conservation are understood. By meeting their habitat needs (and removing threats to the suite of landscape species), a project will be on course to conserve the full range of habitats, plants and animals within the wildlands in which the landscape species reside.

Why does a Landscape Species Approach help me do better conservation?

Focusing only on mitigating direct threats to wildlife fails to ensure that the size, structure and quality of the landscape is sufficient to meet the ecological needs of the species. Spending scarce conservation dollars to minimize human threats to a population of wildlife within a landscape that does not provide the requisite habitat is effectively a wasted investment, as the population is unlikely to persist even if the direct and immediate threats are removed. The Landscape Species Approach forces us to be explicit about what we want to conserve and to define the minimum conditions that must be retained (or attained) to declare conservation success. This means that conservation progress can be monitored and the success of investments measured.

How is this approach different from WWF “Ecoregions” or CI “Hotspots”?

In contrast to traditional efforts, the WCS Living Landscapes Program set priorities for conservation by looking through the eyes of wildlife. The Living Landscapes Program was established to develop and test practical, site-based approaches to conserving wildlife and wildlands. Existing regional or global priority-setting strategies such as Global 200, Hotspots or Gap Analysis remain vital to ensure that a representative sample of the world's plants, animals and landscapes receive conservation attention. But while these strategies help us target scarce resources at the most globally important biological areas, they tell us little about how to manage each priority site, nor do they define how large or small a site should be to ensure that ecologically viable populations of plants and animals persist within the site. That's where the Landscape Species Approach comes in.

Is this just a rationalization to keep studying large, charismatic wildlife species?

No. Although large-bodied animals often intersect and conflict with human interests and do tend to have a disproportionate effect (relative to their abundance) on ecosystem structure, species composition and nutrient

flows, not all landscape species are big. Marmots are certainly not the largest animals in their Mongolian steppe ecosystem, yet their burrows provide shelter to numerous ground-dwelling species in the landscape, they are highly susceptible to hunting pressures in the region, and they are therefore appropriately described as landscape species.

Is this just a rationalization to extend conservation efforts outside of parks?

No. The Landscape Species Approach is a tool for using the environmental needs of wildlife to: (1) define a conservation landscape; (2) identify human-conservation conflicts; and (3) prioritize conservation investments. Although WCS is most concerned with the conservation of wildlands, the Landscape Species Approach could also be adapted for targeting conservation efforts within agro-ecosystems or suburban greenbelts.



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The Landscapes Species Approach and Conservation Support

WCS Global Conservation Programs work to save wildlife and wildlands by understanding and resolving critical problems that threaten key species and large, wild ecosystems around the world. Simply put, our field staff make decisions about what causes the needs of wildlife and of people to clash and take action, with their partners, to avoid or mitigate the conflicts that threaten wildlife and their habitat. Helping our field staff to make the best decisions is a core objective of the Conservation Support Program.

We believe that if conservation projects are to be truly effective, we must: (1) be explicit about what we want to conserve; (2) identify the most important threats and where they occur within the landscape; (3) strategically plan our interventions so we are confident that they will help abate the most critical threats; and (4) put in place a process for measuring the effectiveness of our conservation actions, using this information to guide our future decisions. WCS Conservation Support develops and tests, with our field programs, a set of decision support tools designed to help field staff select targets, map key threats, prepare conservation strategies and develop monitoring frameworks. The Landscape Species Approach is one tool which we have developed.

We describe the application of these tools in a series of brief bulletins and technical manuals which are available, by email, from conservationsupport@wcs.org.

Contact:

Conservation Support
Global Conservation Programs
WILDLIFE CONSERVATION SOCIETY
2300 Southern Blvd.
Bronx, NY 10460 USA



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