

parks in peril site consolidation:

a framework for strengthening protected areas

Parks in Peril, Innovations in Conservation Series, 2007

Lilo Metfessel



Marcio Sztutman

in this issue...

- Programme of work on Protected Areas
- Site Consolidation Framework
- Strategic Planning
- Basic Protection Activities
- Long-term Financing
- Site Constituency

Protected areas are recognized as an integral strategy for protecting earth's biodiversity. Protected areas now account for more than 12% of the earth's surface (of this, less than 1% are marine protected areas) (Chape 2003). Yet, it has been suggested that the design, comprehensiveness and, especially the management of many protected areas are insufficient to protect fully the biodiversity found within them for the long term (CBD 2004, Dudley et al. 2005, Ervin 2006).

To address the weaknesses of protected areas, the primary goal of the Parks in Peril program has been to strengthen local capacity to manage protected areas through out Latin America and the Caribbean through a broad-scale partnership with The Nature Conservancy (TNC), the United States Agency for International Development (USAID), foreign governmental organizations, local non-governmental organizations (NGOs), and local communities. Since 1990, the Parks in Peril program has supported 45 protected areas across 17 countries in the Americas.

The Parks in Peril Program strengthens protected areas through the process of site consolidation, or the process of bringing together all the resources necessary to support long-term biodiversity conservation in specific protected areas. Therefore, a consolidated site is a protected area which has the tools, infrastructure, local constituency, financing and personnel to deal with current threats and management challenges, as well as the capacity to respond to threats that arise in the future (Martin and Rieger 2003). The Site Consolidation Scorecard was developed as a tool to help protected area practitioners manage the process of site consolidation. It should be noted that the site consolidation scorecard measures the progress of a site as it acquires the resources it needs to support conservation, but it does not actually measure the status of threat reduction at a site.

This document provides an overview of the Convention on Biological Diversity's Programme of Work on Protected Areas, outlines the site consolidation framework, and draws on examples and lessons learned from protected areas supported by the Parks in Peril program to illustrate this approach.

1. Programme of work on protected areas

The Convention on Biological Diversity (CBD) notes that "protected areas are a vital contribution to the conservation of the world's natural and cultural resources" (CBD 2007). As such, at the seventh meeting of the Conference of the Parties (CoP7) to the Convention on Biological Diversity in 2004, CBD developed the Programme of Work on Protected Areas. The overall purpose of this ambitious Programme is to support by 2010 for terrestrial and 2012 for marine areas, the "establishment and maintenance of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas" (CBD 2004).

Protected Area: An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (IUCN 1994).



Mark Godfrey

In order to achieve this, CBD has outlined goals, targets and suggested activities, which fall into four main categories (Dudley et al. 2005):

1. Direct actions for planning, selecting, establishing, strengthening and managing protected area systems and sites.
2. Governance, participation, equity and benefit sharing.
3. Enabling activities.
4. Standards, assessment and monitoring.

The site consolidation framework reflects these categories and the global consensus on the critical elements that make protected areas effective and sustainable. Protected area managers can use the site consolidation framework as a step-by-step approach for advancing the goals of the CBD's Programme of Work on Protected Areas.

The goals of the Programme of Work on protected areas which correspond to the steps of the Parks in Peril site consolidation approach can be found throughout this document, and are designated with this symbol



2. Site consolidation framework

Through its history, the Parks in Peril program (PiP) has determined that there are four key categories or components that must be addressed in order to effectively manage and conserve protected areas. While the specific actions will differ according to the context of the protected area, the underlying premise of the four components will remain the same across a variety of protected areas. These components are strategic planning, basic on-site protection, long-term financing, and a supportive local constituency (Martin and Rieger 2003). Within each of these, there are several important sub-components, or indicators, which include protected area zoning, land tenure analysis, long-term financial planning and policy development, among others (see page 3). These categories and indicators will be explained in more detail throughout this document.

Recognizing that most established protected areas are already implementing management actions, there is no specific order of carrying out these four components. However, in general, strategic planning should be carried out at the initiation of a newly established protected area, the start of a specific project, or the beginning of a broad-

scale conservation intervention. This will better define the scope and goals of the management actions and ensure that subsequent actions, such as environmental communication or specific policy initiatives are in accordance with the goals of the project. With this in mind, within this document, strategic planning is presented first. The other components follow in no specific order, but should be implemented in coordination with each other.

3. Strategic planning

The first integral component of site consolidation is strategic planning. Long-term management consists of building the analytic and strategic capacity necessary for sustainable management of protected areas. The site consolidation approach to strengthening protected areas management through strategic planning includes:

- conducting a threats analysis
- developing zoning plans
- developing site-based long term management plans
- conducting scientific-information needs assessments, and
- developing monitoring plans (Martin and Rieger 2003).

Site Consolidation Scorecard

To help protected area managers better organize and manage the site consolidation process, PiP developed an evaluation tool called the Site Consolidation Scorecard.

This tool helps managers monitor the progress protected areas are making towards consolidation over time and adjust management actions accordingly. The scorecard is most effective when used on an annual basis as a self-assessment tool by protected area managers (Martin and Rieger 2003).

This assessment is carried out at the start of the project, or intervention, in order to establish a baseline score. It is then applied on an annual basis to compare scores and to measure a protected area's progress in bringing together the necessary resources for long term conservation.

To apply the site consolidation scorecard, protected area managers or teams evaluate each indicator and assign a score of 1, 2, 3, 4, or 5, with 5 being the best. While achieving "5s" in every category is ideal, as a general rule, a protected area that has achieved at least "4's" in all 17 indicators is considered consolidated. In some cases, the expected score may change based on changes to the context of the protected area.

For example, in the Amboro National Park in Bolivia, recent changes at the national government level have affected the activities related to land acquisition in the park's buffer zone. As a result, the PiP project team has adjusted the expected scores and objectives for this specific indicator (TNC 2007).

The generic score levels are summarized below. For a site to be considered consolidated, it must reach a level 4 or 5 in all indicators.

5	Excellent (proper management of the protected area ensured)
4	Adequate (protected area is adequately managed for the most critical threats and highest priority conservation targets)
3	Progress made (protected area becoming adequately managed, but isn't yet)
2	Work begun (little actual progress towards adequate management of the protected area)
1	No work has been done (protected area not being managed)

Site Consolidation Categories & Indicators

The Parks in Peril Program (PiP) has identified four essential components, or categories that are critical for effectively conserving protected areas: **strategic planning; basic on-site protection; long-term financing; and a supportive local constituency.** Within the four basic categories, there are 17 indicators with which to measure site consolidation.

Categories	Indicators
Strategic Planning	<ol style="list-style-type: none"> 1. Threats analysis for the protected area 2. Project area zoning 3. Site-based long-term management plan 4. Science and information needs assessment 5. Monitoring plan development and implementation
Basic Protection Activities	<ol style="list-style-type: none"> 1. Physical infrastructure for the protected area 2. On-site personnel 3. Training plan for on-site personnel 4. Land tenure issues within the protected area 5. Official declaration of protected area status
Financing	<ol style="list-style-type: none"> 1. Long-term financial plan for the protected area
Site Constituency	<ol style="list-style-type: none"> 1. Broad-based management committee/ technical advisory committee for protected area 2. Community involvement in sustainable resource use in the protected area 3. Stakeholder and constituency support for protected area 4. Policy agenda development at national/ regional/local levels for protected area 5. Environmental communication and education plans for the protected area 6. Institutional leadership for protected area

For a complete guide on using the site consolidation scorecard, please refer to *Measuring Success: The Parks in Peril Site Consolidation Scorecard Manual* on parksinperil.org.

Strategic planning – innovative examples

In the Lake Atitlán Watershed Multiple Use Protected Area (PiP 2001 – 2007) in Guatemala, the project team adapted the CAP methodology to include cultural conservation targets, in addition to ecological targets. For example, indigenous sacred sites were incorporated as a conservation target for the Conservation Action Plan and subsequent long-term management plan. Incorporating cultural targets as well as ecological targets allowed for a more holistic approach to protected areas planning and management and increased the participation and buy-in of local stakeholders. See CAP publications on www.parksinperil.org for more information.

In the Grenadines island chain, which consists of the countries of Grenada and St. Vincent and the Grenadines (PiP 2001 – 2007), strategic planning was done at the site, national and regional levels. Planning at multiple scales produced a hierarchical, or nested structure of conservation targets and goals. This allowed the protected areas project team to ensure that conservation actions at all levels were synchronized and compatible. In addition, the Grenadines PiP site has been able to influence policy and leverage actions beyond the limits of this island chain. The success of this planning process facilitated the expansion of the scope of the conservation action throughout the Organisation of Eastern Caribbean States (OECS).

Conservation Targets: A limited suite of species, communities and ecological systems that are chosen to represent and encompass the full array of biodiversity found in a project area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. May also be called Focal Conservation Targets (TNC 2007).



3.1 Threats analysis



Programme of Work on Protected Areas Goal 1.5:

To prevent and mitigate the negative impacts of key threats to protected areas (CBD 2004).

For a site to be considered consolidated, the threats to its conservation must have been identified and prioritized, and management strategies developed to address specific, priority conservation threats.

A systematic threat analysis is one that identifies threats to a site's conservation, pinpoints their origins, and proposes strategies for overcoming them. It is an essential management tool for conservation of a protected area. A threats analysis establishes priorities for management activity and helps direct limited resources to actions of greater conservation impact.

TNC's Conservation Action Planning (CAP) methodology is a comprehensive tool for identifying conservation targets and threats and developing abatement strategies and monitoring indicators (Dudley et al. 2005). The CAP methodology can be found on www.conserveonline.org/workspaces/cap.

Protected area managers and local stakeholders in Cockpit Country, Jamaica (PiP 2001 – 2007) used the collaborative CAP methodology over the course of three years to identify bauxite mining, forest conversion, invasive species, solid-waste disposal, incompatible agricultural practices, and hunting and collecting as the top threats affecting the conservation targets in the area (John and Newman 2006). This analysis allowed the project team to develop targeted conservation objectives such as "Within five years, measurably reduce the threat of invasive species on the health of the Cockpit Country." Conservation strategies were then developed in order to achieve this goal, including, "Develop detailed data on the distribution and impacts of major invasive species (e.g., bamboo, Asian fern, American cockroach, shiny cowbird, etc.) on Cockpit Country biodiversity and develop priorities for control and/or eradication" (John and Newman 2006).

It is important to note that many protected areas are currently vulnerable to large-scale threats that have their origins in national policies. As Brandon et al. (1998:404) notes, "the policy context can take many forms, such as weak government institutions, conflicting government policies, and changes in laws regarding tenure; and it is the area where park management agencies feel they have the least control." In many cases, lack of a commitment to enforce existing environmental regulations is a de facto policy that must be addressed in the threats analysis (Brandon et al. 1998, Martin and Rieger 2003).

3.2 Protected area zoning

A consolidated protected area will have clearly defined zones that have emerged from a participatory process. In addition, actual land uses in the consolidated site will conform to the described uses in critical zones of the area.

While the management category of a protected area largely determines the different types and intensities of resource use allowed, many protected areas are also further subdivided into zones according to their specific use. Zoning is a key protected areas management tool as it allows for different kinds of uses in different areas. For example, protected areas based on the United Nations Educational, Scientific and Cultural Organization (UNESCO) biosphere reserve concept are customarily divided into off-limits core zones and multiple-use buffer zones. Since the livelihoods of people living in buffer zones are affected by the boundaries and restrictions of these different zones, a participatory process is critical to facilitate the development of resource use standards governing each zone and generally conforming to land use (Martin and Rieger 2003).

It is important to note that participatory processes for designing zoning and management plans can greatly facilitate future management of the site by creating stakeholder buy-in from the outset. However, these processes need to be skillfully managed; a participatory process gone awry, where stakeholder expectations are not met, can cause rifts between protected area managers and local stakeholder groups, which undermines long-term management (Martin and Rieger 2003).

In the Rio Platano Biosphere Reserve in Honduras (PiP 1998 – 2001), the Biosphere Reserve was divided into three major zones, which correspond to the IUCN norms as well as the ecological and cultural characteristics of the region (AFE 2000). The nuclear zone corresponds to

an area that is practically uninhabited and functions to protect the biodiversity of the area in its natural state. The buffer zone is populated by relatively recently established mestizo farmers, and the cultural zone is populated by mainly indigenous peoples, including Miskita, Garifuna, Pech and Tawaka. Utilizing a participatory process, these three zones were further divided by those living in the region into sub-zones, including a multiple use zone, riparian buffer zone, and an extensive use zone. These sub-zones corresponded largely to existing land use norms (AFE 2000). The local populations also created “special use zones” within the sub-zones to designate important areas in need of special management, such as sacred sites, fishing areas, community forest areas, wildlife refuges and archeological sites (AFE 2000).

3.3 Site-based long-term management plan



Programme of Work on Protected Areas Goal 1.4:

To substantially improve site-based protected area planning and management (CBD 2004).

To be considered consolidated, a protected area should have a management plan that describes and justifies a protection strategy extending at least five years into the future.

A management plan is an explicit strategy for conserving a particular protected area into the future. Many types of management plans exist, and oftentimes resource management agencies have an official management plan format. The challenge of management planning is to ensure that the developed plan serves as an effective management tool to guide the actions of not only the park management authority, but also other stakeholder groups, and for an extended period of time, such as five years.

Official approval of a management plan might take months or years after the plan’s final draft. In many cases, the process of developing the management plan, and the collaborative relationships that result, are more important than the document itself. A commitment to continue those processes, implement the plan’s strategies, and revisit the plan frequently is what supports effective conservation (Martin and Rieger 2003).

The CAP methodology is also useful tool for defining and prioritizing key strategies and components of a long-term management plan. The CAP methodology is a “collaborative and structured approach to conservation planning, which uses the principle of adaptive management to develop successful conservation strategies” (John and Newman 2006). This planning methodology may be adapted to different scales and management categories and also to incorporate key cultural factors such as archeological sites, or recommended methods of production such as shade-grown coffee in private reserves. For more information about CAP, visit www.conserveonline.org/workspaces/cap.

In the Lake Atitlán Watershed Multiple Use Protected Area (PiP 2001 – 2007), the PiP project team carried out a participatory CAP process at the start of the project. This process not only determined the key conservation targets and their threats, but it also served to unite diverse stakeholders around a common conservation vision. According to Alex Salazar, Ministry of Agriculture Coordinator for the Department of Sololá, Guatemala, over the course of a year of stakeholder workshops, the strategic planning process united all of the fragmented development plans of the area into a single sustainable development plan. Because of the participation of key stakeholders, including municipal representatives, community members, national government representatives, and NGOs, the resulting plan took into account the interests of each representative entity. This created a sense of ownership and accountability for the

plan, which enabled it to become the guiding management plan for sustainable development in the region and to live on beyond the five years of the PiP project (A. Salazar 2006, personal communication).

3.4 Science and information needs assessment



Programme of Work on Protected Areas Goal 4.4:

To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected areas systems (CBD 2004)

At a consolidated site, both conservation targets and the science and information needs required for effective management have been systematically identified, and contacts and actions have been initiated with appropriate organizations capable of addressing those needs.

Management of protected areas should be based on the best scientific information available. However at times, sufficient information is not available. Since the possibilities for conducting scientific research in the biologically diverse protected areas of Latin America and the Caribbean are virtually limitless, science and research needs must be prioritized so that research focuses on what protected area managers genuinely need to know. A first need at all sites is the identification of a site's conservation targets, or vulnerable species and natural communities (Martin and Rieger 2003).

There may be opportunities for partnering with universities and scientific institutions to shore up science advancements at sites. Cultivating long-term relationships with these partners can also contribute to long-term biophysical monitoring at the

site and this data can be used to inform adaptive management in future years (Martin and Rieger 2003).

For example, in the Motagua-Polochic region (PiP 2001 - 2007) of Guatemala, the project sponsored a local NGO, Zootropic, to conduct research on the population status, reproductive behavior and home range of the *Heloderma horridum charlesbogerti*, a beaded lizard which is a close relative of the Gila Monster of the Southwestern United States. These studies determined that this species is entirely restricted to the Motagua River thorn scrub and is in critical condition, with less than 175 individuals remaining in the population. As a result of this study, the beaded lizard was considered a conservation target and conservation strategies have been developed and implemented to mitigate the threat of extinction for this species (TNC 2006a).

3.5 Monitoring plan development and implementation



Programme of Work on Protected Areas Goal 4.2:

To evaluate and improve the effectiveness of protected areas management (CBD 2004).

To be considered consolidated, a protected area should have a completed monitoring plan that is being implemented so that priority biodiversity targets and critical threats are being monitored.

Effective monitoring tracks the impact that threats have on conservation targets and, thus, enables site managers to measure the effectiveness of management actions. Different types of monitoring can be carried out at a protected area. Monitoring can focus on conservation

targets such as populations of vulnerable species and natural communities or threats to those targets such as land conversion. For the purposes of achieving consolidation, monitoring should focus on those priority conservation targets or threats to priority conservation targets that have been identified and ranked in the threats analysis process.

Monitoring should track major threats as directly as possible, choosing variables and monitoring techniques that are within the means of protected area managers or support groups to track continually and at a relatively low cost. It is important set aside sufficient funding for carrying out monitoring activities. Once variables are identified, initial data-collection is required to establish a baseline against which future data can be compared (Martin and Rieger 2003).

To be considered consolidated, a site should be monitoring the principal threats to its conservation targets. For example, in the Condor Biosphere Reserve site in Ecuador (PiP 2001 - 2007), the PiP project team is monitoring the impact of threats and conservation actions on one of the site's conservation targets, the Andean Spectacled Bear, *Tremarctos ornatus*. To this end, one of the PiP project team's conservation objectives is that by September 30, 2007, the deaths or removal of Andean bears are reduced by 50% due to conflict with cattle-grazing in their natural habitat, especially in Oyacachi, Cuyuja and Cosanga. As one of the activities of this objective, a Bear Compensation Fund was established in Oyacachi to compensate cattle-owners for cattle killed by bears as a way to decrease conflicts with the local community. Protected area managers are monitoring the number of deaths and relocations of problem bears, and using this information to evaluate whether their management actions are minimizing these types of negative interactions, and therefore are contributing to the conservation of the Andean bear (TNC 2006b).

4. Basic protection activities

Basic on-site protection activities consist of those which build and strengthen the logistic capacity to manage protected areas including:

- Physical infrastructure
- On-site personnel
- Training of personnel
- Resolution of land tenure issues
- Official declaration of protected area status

4.1 Physical infrastructure

At least the basic necessary infrastructure to address the most critical threats must be in place for a site to be considered consolidated.

Physical infrastructure refers to onsite improvements (i.e. ranger stations, radio systems, vehicles, boundary demarcation and management-related signs, road and trail systems) necessary for effective management of a protected area. It is important for site managers to determine the specific infrastructure needs of sites in light of the overall requirements for basic management

Before the Parks in Peril (PIP) program began activities in 1992, the area that is now protected as Mbaracayú Reserve (PiP 1992 – 1997) was at the center of the largest continuous tract of interior atlantic forest remaining in Paraguay. However it was under private ownership and threatened by uncontrolled logging and conversion to pasture. Poaching and illegal timber cutting were common, and the area was in danger of expropriation by the government and distribution as farmland. PIP worked with Fundación Moisés Bertoni (FMB) to raise funding for its purchase. At the time of purchase the boundary lines of the reserve had not been adequately demarcated and the staff accommodations were deteriorating. To remedy this, FMB immediately recruited, equipped, and trained 13 park guards from the local communities and constructed guard stations and visitor facilities. In addition, FMB demarcated all the boundaries of the reserve. In 2000, The Mbaracayú Reserve was declared a United Nations Biosphere Reserve and has been recognized nationally and internationally as an important and well-managed protected area (FMB 2007).



case 1

Comprehensive protection program in Amboro-Carrasco National Parks, Bolivia

Rising from 951 to 14,899 feet, the neighboring Amboró and Carrasco National Parks lie at the crook of the “Andes Elbow” where the Andes mountains meet the Amazon and form deep canyons. Amboró-Carrasco is a “natural island” in the midst of human activity: the parks lie between Andean settlements in the south, expanding agricultural lands to the north, and close to two million people between the cities of Cochabamba in the east and Santa Cruz in the west.

Through the protection program supported by Parks in Peril, the Amboro-Carrasco Conservation Unit achieved a number of accomplishments: illegal incursions into the park were reduced, park boundaries were consolidated, strengthened administrative and legal disincentives for incursions were strengthened, and a larger protection force was hired to guarantee long-term biodiversity conservation at the site.

To launch the protection program, the park administration, park guards, municipal governments, Fundación Amigos de la Naturaleza (FAN) and established communities adjacent to the park defined the nature and scope of relevant protection issues. Once a thorough understanding of protection issues was in place, the protection program underwent a slow metamorphosis in order to change public perception of the park guards from one of “police guards” to one of “extension officers.” Crucial in this process was linking park guard activities with technical follow through in terms of monitoring, small-scale productive ventures, environmental education and communication activities that provided a venue for park guards to reach out to the communities in a non-threatening manner and begin to establish long-term working relations.

The protection program also succeeded in rapidly responding to infractions. Rapid response was made possible through funding by PIP for emergency fuel to mobilize park guards. PIP also provided uniforms and equipment (e.g., backpacks, GPS units, cameras, binoculars, motorbikes, bicycles, radios and other communication equipment, etc.) which allowed park guards to operate as a unit and obtain hard evidence required for prosecuting illegal activity. In addition, park guard reports were taken seriously and systematically by competent legal counsel to ensure follow through on illegal incursions, thus closing a legal loophole which had remained open in the past.

According to Gil Moyo, Technical Coordinator of FAN, “PIP contributed to strengthening local participation, achieving effective municipal participation, and it helped improve the park guards’ technical capacity and working conditions.”

Source: Amboro and Carrasco National Parks, Bolivia: Parks in Peril End-of-Project Report, TNC, 2007, available on www.parksinperil.org.

case 2

Volunteer youth corps in Jaragua, Dominican Republic

Located in the southwestern end of the Dominican Republic, Jaragua National Park is the largest protected area in the country. From 1990 to 1994, PiP supported the consolidation of this park, as a critical natural area in urgent need of protection.

A group of 30 volunteer park guards was established for this purpose through partner Sociedad Ecológica Oviedo. Some are students, and the average age is 25. PiP helped provide training so they could effectively manage and conserve the park. In addition to lowering the costs of patrolling this extensive area, the volunteers have also served as a link with the local community and a means of engaging fishermen, teachers, housewives, bird watchers and community leaders from the Oviedo municipality and El Cajuil community in protection efforts. In addition, the volunteers have carried out educational campaigns at the schools, offer guided tours on land and by boat in the Oviedo Lagoon, and assist with scientific research in the zone.

Source: *Park Guards in the Conservation of Protected Areas*, Gonzalez and Martin, 2007, available on www.parksinperil.org.



4.2 On-site personnel

To be considered consolidated, a protected area should have the physical presence of sufficient on-site personnel in the right positions to carry out basic management activities, abate the most pressing threats, and carry out appropriate conservation activities.

The on-site presence of protected area staff is generally essential to the effective management of a protected area. Personnel should be adequate for management both in terms of number, but also in terms of the positions they occupy, and with the training and experience to achieve the performance objectives. Staffing needs should be developed according to a management plan, a Conservation Action Plan, or another threats-based analysis of personnel needs. The financial plan for the area should identify sustainable funding sources to pay for personnel costs and other basic management costs after consolidation (TNC 2007).

The Condor Biosphere Reserve in Ecuador (PiP 2001-2007) has a system of volunteer park guards elected from local communities as well as regular paid park guards. The voluntary park guards receive training, equipment and identification like the paid park guards and are assigned to work in locations close to their communities. As a result of the presence of the community park guards, which includes both salaried and voluntary park guards, forest fires, overgrazing and uncontrolled tourism have all been substantially reduced (González, A.M. and A. S. Martin 2007c). For additional information on park guards, see *Park Guards in the Conservation of Protected Areas* on www.parksinperil.org.

4.3 Training



Programme of Work on Protected Areas Goal 3.2:

To build capacity for the planning, establishment and management of protected areas (CBD 2004).

At a consolidated site, the specific training needs of on-site personnel have been identified and described in a training plan, and some training to fulfill these needs is being provided.

The presence of on-site personnel at a protected area is not sufficient in and of itself. Protected area staff should also have the skills necessary for carrying out their on-site management responsibilities. While most sites provide some training for their staff, the premise of this indicator is that training must be systematically provided to personnel based on an analysis of the skills needed for each one to function effectively. A systematic training plan should respond, besides to the evolving needs of existing staff, to new staff's needs. The training plan should be developed in conjunction with Conservation Action Planning or another management plan.

The experience of PiP has shown that there is a tendency on the part of protected area managers to neglect to strategically consider training needs. For example, managers may send staff to training events just because the training events have become available, or they may decide which staff to send for training events as a reward for an unrelated reason, instead of linking individual and organizational training needs with appropriate opportunities. Staff training should respond to the suite of skills necessary for management of the protected area.

In the case of volunteer park guards, training may serve both as an incentive for recruiting volunteer guards, as well as serving to meet the strategic and essential needs of the protected area (González, and Martin 2007c).



4.4 Land tenure issues

At a consolidated site, managers will have and use the land tenure information that facilitates taking management actions in critical areas of the site as identified in a Conservation Action Plan or management plan.

Good land tenure information is critical to effective protected area management. Brandon et al. (1998) in *Parks in Peril: People, Politics, and Protected Areas* describes the concept of land tenure: “Tenure is the form of rights or title under which property is held and that determines how an individual or group may use, share, sell, lease, inherit, or otherwise control property and resources.” Tenure is most commonly used to describe land, but the systems of rights and rules that make up tenure also apply to natural resources, such as water, trees, and wildlife. Tenure regimes and customary practices vary dramatically among countries and different groups of users. Understanding what is traditional, what is legal, and what are actual uses of land and resources is necessary; all have an impact on biodiversity conservation (Brandon et al. 1998: 381). In Nicaragua, indigenous communities in the Bosawas Biosphere Reserve received communal land titles after years of negotiation. See case 3 for an explanation of the process.

Reliable land tenure information is often difficult to obtain and in those situations, site managers need to determine

which tenure information is critical to management efforts. At a minimum, a map should be developed to distinguish between different types of private, public and communal landholdings both within and adjacent to the protected area. It is also helpful to maintain records of other tenure-related data, such as resource-use concessions, title histories, and contact names for large privately or communally held lands. Gender issues are often critical in understanding tenure within both traditional and legal systems (e.g., the legal rights afforded or denied to female-headed households in different countries). Ideally, land tenure information should be based on the most recent official sources, verified on the ground, and presented in an accessible way (i.e., a map).

Unresolved tenure issues add to the social and political complexity of protected area management, affecting advances in other site consolidation indicators, such as reserve zoning and the development of a site-based long-term management plan (Brandon 1998, Martin and Rieger 2003). However, in the case of Chagres National Park in Panama (PiP 2001-2007), because of historical land tenure conflicts surrounding the declaration of the protected area, the project team waited until the management plan was completed before carrying out a land tenure analysis. This allowed the team to compile technical data which was used to mount a strategic process for acquiring the land tenure information (González and Martin 2007f). For additional information on land tenure issues in protected areas, see *Land Tenure in Protected Areas*, found on www.parksinperil.org.

4.5 Official declaration of protected area status

At consolidated sites, managers and support groups will have done everything in their power to obtain a strong, accurate, legally binding decree.

An official decree is generally a fundamental part of long-term security at an official protected area. Some decrees suffer from inaccuracies and lack of precision that undermine their use as a policy tool to protect an area. What constitutes the correct boundaries of a protected area is often a matter of interpretation. Some decrees demarcate polygons that do not close or that do not accurately reflect the geographic area needing protection. At consolidated sites, protected area managers will have done everything in their power to obtain a legally binding decree.

Official declaration of a protected area may not be appropriate in all sites, nor will the declaration always be for a public protected area. For example, in Guatemala, the PiP program has worked with private landowners to create private nature reserves and municipal governments to create municipal-owned and managed protected areas. While not public protected areas, these other categories of protected areas are officially recognized by the government. Each municipal or private protected area can elect to be officially recognized by the government and inscribed into the national system of protected areas





case 3

Land tenure in Bosawas Biosphere Reserve, Nicaragua

Covering almost 7% of Nicaraguan territory, the Bosawás Biosphere Reserve (PIP 2001 – 2007) is one of the most extensive and intact tropical rainforest ecosystems in Central America. Its name comes from combining the first letters of the geographical sites that serve as reference for its limits: BOcay River, SAslaya Mountain and WASpuk River. Originally, the reserve was to be managed by the Ministry of the Environment and Natural Resources. This protected area was created in 1991 in response to an emergency (the land was about to be handed over as mining and forestry concessions), and there was essentially no local consultation due to the crisis. Indigenous populations viewed this as an act of hostility, considering that their historical rights over the land had been ignored. The regional government also felt its rights were being violated by the federal government's decision (Stocks 1996).

The Miskito and Mayangna communities have lived in these territories for centuries, maintaining practices of sustainable natural resource use. Many of them left to escape the violence of the Sandinista Revolution, but have returned since 1991 (Stocks 1996). They share the territory with campesinos migrating in search of productive lands. Expansion of the agricultural frontier constitutes the main threat to the reserve's conservation, facilitated in part by unclear land tenure. For example, on the average indigenous people clear less than 5% of the land for productive livelihood activities, versus 50% by campesinos, who then claim property rights on the basis of these "improvements" to the land (Luz 1997).

Funded by USAID, TNC began tackling this situation in 1993 by supporting the formation and demarcation of the indigenous territories, representing around two-thirds of the reserve's total area. The restoration of indigenous territorial rights became a point of common interest for those involved, the ultimate end for indigenous peoples, and a means of conservation for TNC (Stocks 1996). In a participatory process lasting several months, community maps were made to document existing land use patterns and zones in the territory, and agreement was reached on management regulations. Groups of indigenous researchers were trained to conduct a socio-economic census in their communities, and meetings were held between the Miskito and Mayangna communities and the campesino settlers to discuss the most serious territorial disputes and agree on a dividing line between their territories. Parallel to these activities, a lawyer was contracted to build a legal case for presentation to the Nicaraguan government, requesting that titles be granted to the indigenous peoples whose natural resource practices have conserved forests.

Through Parks in Peril, TNC and USAID returned to this theme once again in 2002, supporting titling processes for indigenous communities, legal advising, boundary demarcation, registration of property titles with the appropriate institutions, strengthening of indigenous organizations in the administration and defense of their land rights, and other activities. PiP focused on titling for two of the indigenous territories in Bosawás, encouraging other cooperation agencies to support the others.

In addition to strengthening and empowering the indigenous communities, in this case land titling was a key step toward controlling expansion of the agricultural frontier. Access to the reserve was wide open due to the weakness of the area's institutions and limitations in enforcing regulations, with negative effects for its ecosystems. Clearly defined rights of ownership, use and access to natural resources were therefore vital. Granting these lands to the indigenous was a formal recognition of the compatibility between their way of life and the reserve's environmental objectives. In addition, the process generated coordination among institutions of the national government, international agencies, regional authorities, reserve administrators and the indigenous communities.

Fostered in part by the positive results of this process, in 2003 the Nicaraguan congress approved legislation on a system of communal ownership by indigenous territories and ethnic communities. In May 2005, the central government granted five titles to the 41 indigenous communities living in the reserve, covering a total of 2,531 km². Thanks to this historic decision, 21,000 people were awarded and guaranteed non-transferable communal property rights. This has made it possible for the indigenous to combine traditional laws and practices with new ideas about better resource use. Backed with titles, inhabitants can now file complaints with MARENA authorities when groups of colonizers invade the indigenous territories, with negative impacts on the forests.

(González and Martin 2007f).

5. Long-term financing



Programme of Work on Protected Areas Goal 3.4:

To ensure financial sustainability of protected areas and national and regional systems of protected areas (CBD 2004).

To be considered consolidated, a site should have completed a financial plan and begun to implement its recommended measures to achieve recurrent and/or sustainable sources of financing, with funding sufficient for the next fiscal year.

A long-term financial plan is an indispensable component of a successful long-term conservation strategy. To develop an effective site financial plan, the protected area first needs a management plan, which outlines the goals, objectives,

activities and resource needs of the site. While the management plan is crucial, it is equally important that the information outlined therein be feasible and not just a wish list

The financial plan should identify a diverse funding base to pay for basic protected area management activities. Each site's access to sustainable and/or recurrent sources will be different. The planning process should identify the site's best available financing options and should outline a strategy for pursuing them. Sources could include national government budget allocations, payment for protected area service, such as visitor entrance fees, concessions, capitalized endowments, multiple and multi-year sources of foreign funding, and many more. For example, at Morne Trois Piton National Park in Dominica (PiP 1992 - 1996), the Ministry of Agriculture, Forestry, and Wildlife established a user-fee collection system to charge visitors for park services in order to help fund park management

Generally, bringing these sources on-line will require months or even years of preparatory work by site managers and support groups.

In addition, while many advances have been made, there is still significant room for improvement in creating sustainable financial mechanisms for protected areas. For additional information on advances in sustainable finance for protected areas, please refer to the Conservation Finance Alliance at www.conservationfinance.org.

The Programme of Work on Protected Areas has emphasized the need to look beyond the site level to sustainable financing for national systems of protected areas. Please see below for examples of national and site-level financial mechanisms that support sustainable protected areas financing. In the PiP Central Selva project site in Peru (PiP 2001 - 2007), the project team has developed a detailed financial, or business plan, which details funding strategies at the site level. This plan then folds up into a larger financial plan for the national system of protected areas.

Finance mechanisms – innovative examples

- Fondo para la protección del agua (FONAG) is a water protection fund for the metropolitan area of Quito, Ecuador. Founded in 2000, the water fund was set up with the support of the Quito potable water and sewage company, Empresa Metropolitana de Alcantarillado y Agua Potable de Quito, TNC, the electric company – Empresa Electrica Quito S.A., beer company, Cerveceria Andina S.A. and the Cooperacion Suiza para Desarrollo (COSUDE). The premise of the fund is to attach value to environmental services and provide funding for activities that contribute to conserving the watershed, including reforestation of riparian areas, support for protected areas guards and environmental communication and education with school children and communities living within the watershed areas. The fund began with US\$21,000 and in 2006, reached \$US3.7 million, with \$US1.7 million invested in programs and projects (FONAG 2006). For additional information see www.fonag.org.ec.
- El Programa de Incentivos Forestales (PINFOR), in Guatemala is a unique program designed to provide incentives for conservation and reforestation. Developed by the Instituto Nacional de Bosques (National Forest Institute, INAB) in 1997, the program is funded by the National General Budget and will run through 2017. PINFOR offers incentives for three activities: forest conservation on municipal lands; sustainable management of forests on private lands, and reforestation on private lands. Since its initiation in 1999, PINFOR has recovered a total of 80,000 hectares of forest in Guatemala. The program consists of paying local landowners an annual payment for five years for each hectare of forest on their land. The beneficiaries are expected to assure the conservation of the hectares inscribed by protecting them from forest fires, timber harvesting, resource extraction and any other negative activities. Over the next five years, a total of USD \$250,000 will be provided by PINFOR to the San Pedro, San Juan, Santa Clara and San Marcos Municipal Parks for a total of 1,159 hectares registered in the program (TNC 2006a). For additional information see www.inab.gov.gt.

6. Site constituency

Building a supportive local constituency integrates protected areas into the lives of local society as well as that of people living far beyond a site. This includes:

- Empowering Broad-based management committees
- Promoting Community Involvement in Sustainable Resource Use
- Building Stakeholder and Constituency Support
- Developing a Policy Agenda
- Strengthening Environmental Communication
- Bolstering Institutional Leadership

6.1 Broad-based management committee/technical advisory committee

To be considered consolidated, a site should have formed a management or advisory committee, that participates in conservation and management decisions. The Committee must be made up of key stakeholders identified in a credible stakeholder analysis.

A management or technical advisory committee allows stakeholders, including but not necessarily limited to local communities, to participate in the protected area management process. The presence of such a committee indicates good will and transparency on the part of protected area managers to incorporate and address the concerns of these stakeholders.

Many types of management and advisory committees exist, ranging from support committees (i.e. Friends of the Park) to formal representative councils designed to ensure broad participation. The authority invested in these committees varies widely as well. Some are strictly

advisory, whereas others have decision-making authority on many issues affecting protected area security and management.

The PiP experience has shown that technical advisory committees are more effective if they are legally mandated. National decentralization policies are one mechanism that supports local participation in protected area management. In countries such as Bolivia, national decentralization policies have facilitated the participation of local civil society groups and municipalities in protected area management.

In Peru, management committees were supported by the development of norms and regulations in 2001 under the Natural Protected Areas Law of 1997. The norms and regulations have defined and systematized the role and function of management committees, although each group will further adapt its structure to the context of the protected area. By 2006, the National Resource Institute (Instituto Nacional de Recursos Naturales, INRENA) had formally recognized 31 management committees throughout the country. Most committees have an executive committee, which is composed of no less than three people and the director of the protected area, who acts as a non-voting secretary.

One of the most important advancements for the management committees in Peru, was the establishment in 2005 of a national management committee coordinating body “Consejo Nacional de Coordinación de los Comités de Gestión.” This body is charged with coordinating a learning exchange with the various committees in the country (González and Martin 2007b). In addition, the management committees elect a representative to communicate their proposals and opinions to the Protected Areas Coordinating Body, el Consejo de Coordinación del Sistema Nacional de Areas Protegidas por el Estado (SINANPE). For additional information see *Management Committees in Protected Areas* on www.parksinperil.org.

6.2 Community involvement in compatible resource use



Programme of Work on Protected Areas Goal 2.1:

To promote equity and benefit sharing (CBD 2004).

At consolidated sites, the protected area's principal community groups (or other key stakeholders) in critical zones of the protected area are involved in pilot initiatives for the sustainable use of local resources. These pilot initiatives are being documented in such a way that they can be adapted elsewhere.

In protected areas where communities are located either within the site boundaries or immediately adjacent to the site, biodiversity conservation depends on these communities' using the site's biological resources in a manner that is compatible with the biodiversity conservation goals of the protected area. A local constituency for a site can be built when community organizations are encouraged to develop programs that promote the compatible use of resources the site has to offer, and upon which these communities depend for their livelihoods.

By comparing diverse experiences in compatible resource use, conservation practitioners have been able to suggest key elements that lead to success. Some of these elements include: conducting a diagnostic of community needs and desires; paying attention to gender issues and other social dynamics; training extension staff for work in communities; carrying out feasibility studies for income-generating projects; and implementing participatory monitoring of the results of compatible-use projects (Martin and Rieger 2003).

In the Pacaya Samiria National Reserve (PSNR) in Peru (PiP 2001-2007), artisanal fishing organizations have gained the authority to manage and commercially harvest *Arapaima gigas*, an enormous freshwater catfish known locally as *paiche* (Rojas et al. 2006). This fish is consumed locally and is also dried and sold outside of the Reserve. Beginning in the mid 20th century, Peru passed laws to protect the *paiche*, whose population was sharply declining due to uncontrolled harvesting. These measures included creating the PSNR and mandating a management plan for commercial *paiche* harvesting.

These efforts supported the *paiche*'s recovery and beginning in the mid 1990s, TNC, the NGO, ProNaturaleza, and communities living within PSNR began to work with governmental authorities to consider approving a management plan for *paiche* that would give community organizations the right to manage this resource for commercial purposes. The principle behind this was that the communities within the Reserve would benefit economically by commercializing *paiche* harvest and would contribute to conserving this resource by being involved in its sustainable management.

In coordination with ProNaturaleza, the local fishing and processing organization, Organización Social de Pescadores y Procesadores Artesanales (OSPPA) – Unidad de Pesca Comunitaria (UPC) Yacu Tayta, developed a management plan for *paiche* for 2004 – 2008. This plan stipulates the time period, methods, size and quantity of *paiche* that can be harvested and fishermen must keep data on the number, gender, age and size of fish caught (Rojas et al. 2006). Sustainable harvesting of *paiche* is now contributing to the economic well-being of local communities within PSNR, and is supporting long-term conservation of this species.

For additional information, see Community Incentives for Sustainable Use of Natural Resources in Protected Areas on www.parksinperil.org.



Hernando Cabra

case 5

Mesquite artisans in Cuatrociénegas, Mexico

In the Cuatrociénegas Valley in northern Mexico, four ejidos (El Venado, San Vicente, Eliseo Mendoza Ber ruelo and La Vega) in the region have used and traded mesquite (*Prosopis* sp) for years, leading to a significant reduction in reserves of this wood. The purpose of the project receiving PiP support was to use the wood to make handicrafts, a finished product that would provide higher profit margins.

The project initiated with a situation appraisal of mesquite in the Cuatrociénegas Valley, followed by training for participants in crafting products. Another emphasis at this stage was organizational strengthening, which led to formalization of the groups in legally recognized structures. These, in turn, banded together as a rural cooperative known as “Artesanos La Esperanza” and “Artesanos La Vega”. The creation of these two artisans groups facilitated equitable distribution of earnings among the beneficiaries. A catalogue with products and prices was prepared as a marketing document, and points of sale were arranged in nearby cities. One factor that enhanced the business was the adaptation of the models and types of handicrafts based on an analysis of existing supply and demand, thus boosting sales.

TNC and its partner, ProNatura, supported training of the artisans, organizational strengthening, equipping and promotion of the handicrafts. Other organizations collaborated in the project's development. The Technological Institute of Monterrey provided technical assistance for the artisans' formal organization, as well as creating capacities in financial and marketing areas. In addition, the government Secretariat of Agriculture, Livestock and Fishing (SAGARPA) offered funding to acquire the necessary equipment to produce the handicrafts, while the National Commission on Protected Areas supported training and sale of the products at the Visitors Center of the Cuatrociénegas Flora and Fauna Protection Area.

Source: Community-based Sustainable Natural Resource Use in Protected Areas: Experiences from the Parks in Peril Program in Latin America and the Caribbean, Gonzalez and Martin, 2007, available on www.parksinperil.org.

6.3 Stakeholder and constituency support

In a consolidated site, protected area managers will have identified priority stakeholders and areas of critical threat where stakeholders are important. Support from these stakeholders will be sufficient to allow implementation of high priority strategies that have been collectively decided.

There can be no enduring results in protected areas without the engagement and support of critical constituencies, including stakeholders in local communities. Critical constituencies and their relationship to priority conservation targets and threats should be identified in a stakeholder analysis, normally as part of a CAP process or similar threats-based planning exercise. Protected area managers need to develop explicit strategies for gaining the support of the most critical constituencies, including relevant stakeholders, especially local communities.

There are a wide variety of constituencies for the project area – from local communities and resource users, to state and federal governments and global industries. Constituencies do not necessarily have to live in or around the area to have an important role and impact on its conservation. One or more of the following characteristics can describe an area's constituencies:

- They are causing source(s) of stress on the conservation targets.
- They are, or could be, mitigating source(s) of stress on the conservation targets.
- They could benefit if the protected area conservation goals were achieved
- They could be affected adversely if the protected area goals were achieved

- They could shape public opinion about conservation goals & strategies
- They have the authority (formal or informal) to make decisions, which would affect the protected area manager's ability to implement conservation strategies and achieve conservation goals

Protected area managers may employ a number of different strategies to appeal to the support of stakeholders. Community development and sustainable use projects are an example, but involving stakeholders in management decisions may also contribute to building constituency support, as may other strategies.

In 2001 in the PiP Amistad project site (PiP 2001 – 2007), the PiP project team began working with Panamanian organization FUNDICEP, originally Fundación para el Desarrollo Integral del Corregimiento de Cerro Punta. FUNDICEP was founded in the mid-1990s with the mission of supporting sustainable development in communities located in the buffer zone of La Amistad Biosphere Reserve in Panama. Through dialogue and a self-evaluation of the administrative capacity of the organization, the PiP project team and FUNDICEP realized that it was weak in its administrative and particularly accounting capacity. The PiP team recognized the potential of FUNDICEP for long-term conservation of the site and as part of the project, helped strengthen the organization's weaker areas, including financial management and building a diverse network of partner and funding organizations beyond TNC. FUNDICEP has now taken the initiative to leverage its stronger technical and administrative capacity to support and strengthen other organizations within the Red Alianza para el Desarrollo Ambiental de Tierras Altas (ADATA), a network of organizations working in sustainable development in the Pacific highlands of Panama (González and Martin 2007e). For additional information, see *Partners for Protected Areas Conservation* on www.parksinperil.org.

6.4 Policy agenda development at regional/national/local levels



Programme of Work on Protected Areas Goal 3.1:

To provide an enabling policy, institutional and socio-economic environment for protected areas (CBD 2004)

At consolidated sites, the policies needed to support the site's long-term security have been identified and prioritized in a brief policy agenda. Also, a plan to promote policies related to the highest priority threats and conservation targets is being implemented.

Protected areas can support the conservation of biological diversity insofar as local, regional, national, and international policies that promote biodiversity conservation allow these sites to function effectively and to thrive. For that reason, protected area managers should work with NGO and government partners to ensure that appropriate policies supporting the conservation of protected areas are in place at the appropriate levels.

Within protected areas, it is important to recognize that there are several types of policies that may impact the effectiveness of a protected area. For example, policies might be in place, which positively impact the conservation and sustainable use of a protected area. Other policies may support economic development and may have a positive or negative effect on a protected area. Still other protected areas may be affected by a lack of policies that support effective management of protected areas (González and Martin 2007a). For example, policies that recognize and support private-lands conservation, vary widely from country to country in Latin America and the Caribbean. To address this, a consortium of conservation

practitioners and organizations in Central America is working to develop a region-wide policy for private-lands conservation. This policy will delineate a regional framework for regulations, incentives and actions that would promote private-lands conservation. Currently, in Central America, only Guatemala and Costa Rica have strong private-lands incentives in place. The importance of strong private-lands policies can be seen at the PiP sites in Costa Rica and Guatemala, where private lands conservation is a key conservation strategy in those sites (González and Martin 2007a).

For additional information, see *Policy Agenda for Protected Area Management* on parksinperil.org.

6.5 Environmental communication



Programme of Work on Protected Areas Goal 3.5:

To strengthen communication, education and public awareness (CBD 2004)

To be considered consolidated, a site should have an environmental communication and/or education plan – which identifies target goals, audiences, messages, activities and people responsible – in place.

People who impact the conservation of protected areas make decisions and take action that favor the protection or degradation of the environment based on information, perceptions, and/or the existence of alternatives (CCC 2003). Through communication, awareness-raising and education, those in charge of protected areas management can help people to modify their individual and group behaviors around conservation and sustainable natural resources use (González and Martin 2007e).

Environmental education and communication covers a broad range of activities and approaches. One of the environmental communication approaches that has succeeded in motivating local communities to conserve and protect natural resources and biodiversity in protected areas has been the development of social marketing tools. Social marketing uses multi-media strategies to achieve benefits for the society as a whole and it aims to change the behavior of people by increasing their awareness and knowledge (CCC 2003).

Rare, a U.S.-based conservation NGO has worked for more than 15 years in the design and implementation and monitoring of social marketing tools through Pride Campaigns. By generating public advocacy and peer pressure, the Campaigns have helped to change knowledge, attitudes and behavior in diverse segments of the communities with respect to environmental conservation (TNC 2007).

In partnership with TNC, Rare has carried out several pride campaigns in PiP project sites. Rare, TNC and the Cuencas de Limon Foundation implemented a Pride Campaign in the Limon Watershed area of Costa Rica which includes the Parque Internacional La Amistad (PILA) a bi-national protected area between Panama and

Examples of policies supporting conservation

- Defensores de la Naturaleza, an NGO in Guatemala, succeeded in establishing a fishing season that protects fisheries with a total ban on fishing during July and August at Bocas del Polochic Wildlife Refuge (PiP 2001- 2007).
- At El Triunfo Biosphere Reserve in Mexico (PiP 1991-1997), reserve staff worked with other protected area managers to support the creation of the National Commission on Natural Protected Areas. Under the direction of the Secretaría de Medio Ambiente, Recursos Naturales (SEMARNAT), or Secretariat of the Environment, Natural Resources in English, this commission created greater solidarity among those working in protected area management and guaranteed continuity in long-term management, financing, and protection activities in natural protected areas within Mexico.
- In 1996, President Ernesto Pérez Balladares of Panama decreed a ban on mining activities within Darien National Park (PiP 1991-1997), in part as a result of the efforts of the NGO, Asociación Nacional para la Conservacion de la Naturaleza (ANCON).



Connie Gelb

Costa Rica, and other protected areas and indigenous reserves. This campaign, called Rios par la Vida, or Rivers for Life in English was implemented from 2004-2006 as part of the conservation goals of the Amistad PiP project site (PiP 2001-2007).

The goal of the campaign was to promote sustainable use of the Banano and Bananito river watersheds through the following objectives: raising awareness in the target population of the importance of the Banano and Bananito rivers for potable water, natural richness and recreation; educating the population on the avenues available for reporting illegal logging; and acquiring the commitment of local communities to participate in sustainable water resources management (TNC 2007).

At the end of the campaign, awareness of the importance of the Banano and Bananito river watersheds for potable water had increased on average by 20%. There was also an increase in those aware of the importance of the rivers for recreation. In the target communities, more than 1000 people signed a commitment to participate in sustainable water resources management. This translated to lobbying the municipal government for a water fee to help protect the watershed (Rare 2007).

It is unclear if the campaign increased the reporting of illegal logging and it appears that the importance of natural richness in the Banano and Bananito river watersheds will need to be addressed in a followup campaign. However, one of the benefits of implementing an environmental communication project such as a Rare campaign, is that the results of the campaign can be measured and strategies and activities that don't generate the desired impact can be modified in order to achieve the objectives.

For protected area managers, these types of communication campaigns may be advantageous over traditional general environmental education, because they aim to change specific behavior towards conservation targets and threats within a specific timeframe. With traditional environmental education, it may be difficult to measure the results of the intervention against a specific conservation target or threat, especially within a relatively short time frame. For more information on Rare Pride campaigns, see *Pride Campaigns for Engaging Communities in Protected Areas Management* on parksinperil.org and www.rareconservation.org.



case 6

Education and Forest Conservation Campaign in Oxapampa, Central Selva, Peru

The Yanachaga Chemillén National Park (YChNP) is located in the Oxapampa Province, in the eastern side of the Peruvian Andes, in the tropical region. With Parks in Peril (PiP) support, the Education and Forest Conservation Campaign in Central Selva, Peru (CECOBO, due to its name in Spanish) started in 2005 to generate pride for the natural environment in the region. The campaign was developed by ProNaturaleza together with other institutions and organizations interested in the region and targeted 29,429 people distributed in four districts. The spectacled bear (*Tremarctos ornatus*) was selected as the flagship species selected for the campaign through a participatory process during the first stakeholders meeting.

A survey was conducted with 1,028 people older than 12 years from the four districts to create a baseline regarding the level of understanding about the environment and the spectacled bear. Based on the findings, the Central Selva Pride Campaign designed and implemented the following activities: 1) production and distribution of communication materials (i.e., songs, t.v. and radio public service announcements, photo exhibits, bulletins, puppet shows, coloring books, posters, badges, t-shirts, caps, etc.); 2) informative talks and environmental festivals for students, natural resource professionals and local businesses; and 3) design of a costume for a spectacled bear mascot. In terms of financial support, ProNaturaleza obtained support from the German Cooperation Service for Development (GTZ), Oxapampa Provincial Municipality and other local NGOs for some of the campaign's activities.

The campaign in Central Selva was not an initiative isolated from other conservation activities developed in the region. The campaign was integrated to the National Park Public Use Program and particularly within the Communication and Environmental Education sub-program.

The campaign became a strategy to improve the image of the National Park in the region, whereby the communities and local governments learned about the benefits that the protected area provides. The Oxapampa municipality and the Regional Tourism Directorate adopted the spectacled bear as an emblematic symbol used in their tourism promotional materials. Plans are also underway to formalize the bear festival and make it an annual event as well as to make the bear the official symbol for environmentally-friendly products and services produced in the region.

Source: Strengthening Communication, Education and Public Awareness in Protected Areas, Gonzalez and Martin, 2007, available on www.parksinperil.org.

6.6 Institutional leadership

In a consolidated site, clear leadership is provided in critical zones of the area by one or more institutions that a) create and demonstrate a vision of long-term success, b) ensure implementation and monitoring of priority strategies by focusing efforts and using an adaptive management approach, and c) motivate stakeholders to work willingly towards the implementation of the priority strategies

Institutional Leadership is essential for achieving conservation success within the site consolidation model. Leadership capacity needs to be built within the core institutions at a project area, whether there is one lead institution or a combination of institutions and across three key leadership components: vision, focus, and motivation.

Creating and demonstrating a vision of long-term success involves clearly defining and expressing a future for the protected area based on both contextual (external) and institutional (internal) factors.

Focusing efforts to implement and monitor strategies involves providing resources and support for strategy achievement, monitoring performance, improving effectiveness, holding individuals and institutions accountable for achieving their goals, tackling problems before they become crises, and resolving problems efficiently and effectively.

Motivating stakeholders to work willingly towards the implementation of priority strategies involves building a broad base of support, negotiating win/win solutions by understanding the needs and perspectives of a variety of stakeholders, and creating a climate that fosters individual and institutional investment, development, excellence, and learning.

Asociación Vivamos Mejor, a Guatemalan NGO has been working for nearly 20 years with communities in the Atitlán watershed (PiP 2001 – 2007) in Guatemala. In the past Vivamos Mejor focused primarily on social issues such as communal health, education and poverty alleviation. However, its director, Dr. Eduardo Secaira, began to realize that biodiversity conservation, and especially the protection of the watershed, was fundamental for the long-term sustainability of communities in the area. To this end, Vivamos Mejor began to also work in sustainable development and natural resource management, including organic agriculture, forestry and conservation.

Through the decades of experience working on social issues with the primarily indigenous communities in the area, Vivamos Mejor had gained the trust of the local communities and was a major institutional leader in the area. Vivamos Mejor already possessed vision, focus and motivation and TNC recognized the importance of partnering with Vivamos Mejor for the success of the PiP project and long-term conservation in the area.

According to Dr. Secaira, Vivamos Mejor and TNC complemented each other as institutions. Vivamos Mejor wanted to work more in natural resources management and TNC helped strengthen this aspect of the organization. On the other hand, as a result of this project, TNC learned from Vivamos Mejor the benefits of approaching conservation with a better understanding of the social context of the area and the importance of sustainable development for conservation in the region (Dr. Eduardo Secaira, August 2006, personal communication).

The institutional strength and leadership of Vivamos Mejor has played a critical role in the success of conservation initiatives of the PiP Atitlan site. Without this leadership, built on years of trust with local communities, the project would not have been able to achieve successful site consolidation. With their

continued vision, focus and motivation, Vivamos Mejor will continue to unite the stakeholders in the area under a common sustainable development and conservation vision for years to come.

For additional information, see *Partners for Protected Areas Conservation* on www.parksinperil.org.

The Parks in Peril Site Consolidation Framework has been tried and refined by numerous protected areas practitioners over the course of the last seventeen years. In the spirit of adaptive management, it continues to be modified and improved by protected areas managers, according to lessons learned within the context of the specific protected area and in light of advancements in science, technology, and protected areas policy. Yet after nearly two decades of use as an approach for strengthening protected areas, the fundamental elements of the framework remain in place: strategic planning, basic protection activities, sustainable financing, and supportive site constituency.

The CBD's Programme of Work on Protected Areas reiterates the need to bolster these elements of protected areas management in order to establish and maintain systems of protected areas which effectively and sustainably conserve the world's biodiversity.

The site consolidation framework presented in this bulletin contributes to advancing the goals of the CBD's Programme of Work on Protected Areas and is a time-tested approach to building the capacity and conditions necessary for effectively managing protected areas. Many of the elements and experiences of site consolidation presented in this bulletin can be found in greater detail on www.parksinperil.org.



sources

Administración Forestal del Estado—Corporación Hondureña de Desarrollo Forestal (AFE-COHDEFOR). 2000. Proyecto Manejo y Protección de la Biosfera del Río Plátano. Tegucigalpa, Honduras.

Brandon, K., Redford, K., and S. Sanderson (eds). 1998. *Parks in Peril: People, Politics, and Protected Areas*. The Nature Conservancy. Island Press. 519 pp.

Chape, S., S. Blyth, L. Fish, P. Fox and M. Spalding (eds). 2003. 2003 United Nations List of Protected Areas. IUCN, Gland Switzerland and Cambridge, UK and UNEP-WCMC, Cambridge, UK.

Community Conservation Coalition (CCC). 2003. *Putting Conservation in Context: Social Science Tools for Conservation Practitioners*. CD-Rom.

Convention on Biological Diversity (CBD). 2004. *Protected Areas Programme of Work*. Downloaded on September 26, 2006 from <https://www.cbd.int/programmes/cross-cutting/protected/wopo.asp>.

Convention on Biological Diversity (CBD). 2007. *Protected Areas Introduction*. Downloaded on April 14, 2007 from <https://www.cbd.int/programmes/cross-cutting/protected/default.asp>.

Dudley, N., et al. 2005. *Towards Effective Protected Area Systems: An Action Guide to Implement the Programme of work on Protected Areas*. Secretariat of the Convention on Biological Diversity, Montreal. Technical Series no. 18.

Ervin, J. 2006. *Quick Guide to Protected Area Management Effectiveness*. Arlington, VA: The Nature Conservancy. 18 pages.

Fondo Para la Protección del Agua (FONAG). 2006. *Fondo para la Protección del Agua: Invirtiendo en el Futuro*. Quito, Ecuador.

Fundación Moisés Bertoni (FMB). n.d. *Reserva de Biosfera del Bosque Mbaracayú*. Downloaded on May 4, 2007 from <http://www.mbertoni.org.py/>.

González, A.M. and A. S. Martin. 2007a. *Policy Agenda for Protected Areas Management Innovations in Conservation Series*. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

González, A.M. and A. S. Martin. 2007b. *Management Committees in Protected Areas*. Innovations in Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

González, A.M. and A. S. Martin. 2007c. *Park Guards in the Conservation of Protected Areas*. Innovations in

Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

González, A.M. and A. S. Martin. 2007d. *Pride Campaigns for Engaging Communities in Protected Areas Management Innovations in Conservation Series*. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

González, A.M. and A. S. Martin. 2007f. *Partners for Protected Areas Conservation: Experiences from the Parks in Peril Program in Latin America and the Caribbean*. Innovations in Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

González, A.M. and A. S. Martin. 2007g. *Land Tenure in Protected Areas*. Innovations in Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.

World Conservation Union (IUCN). 1994. *Guidelines for Protected Area Management Categories*. CNPPA with the assistance of WCMC. IUCN, Gland, Switzerland and Cambridge, UK x + 261 PP.

John, K. and M. Newman. 2006. *Cockpit Country Conservation Action Plan: A Summary*. The Nature Conservancy. Kingston, Jamaica.

Luz, Karen. 1997. Community-based Conservation in the Bosawás Reserve. The Nature Conservancy. Arlington, Virginia.

Martin, A. and J. Rieger. 2003. The Parks in Peril Site Consolidation Scorecard: Lessons from Protected Areas in Latin America and the Caribbean. Arlington, VA. The Nature Conservancy. 99 pp.

Rare. 2007. 2005-2006 Global Impacts: Changes in awareness and attitudes in key locations. Downloaded from www.rareconservation.org/impact on May 3, 2007.

Rojas, G, Noriega, J. and La Organización Social de Pescadores y Procesadores Artesanales (OSPPA) – Unidad de Pesca Comunitaria (UPC) Yacu Tayta. 2006. Plan de Manejo de Arapaima gigas “paiche” en La Cocha El Dorado, Cuenca Yanayacu Pucate-RNPS. Reserva Nacional Pacaya Samiria 2004 – 2008. ProNaturaleza. Lima, Peru.

Stocks, Anthony. 1996. The Bosawás Natural Reserve and the Mayangna of Nicaragua. In: Redford and Mansour (Eds). Traditional Peoples and Biodiversity Conservation in Large Tropical Landscapes. The Nature Conservancy. America Verde Publications.

The Nature Conservancy (TNC). n.d. Conservation Action Planning (CAP): Basic Practice 2 – ConserveOnline. Defining Scope and Selecting Focal Conservation Targets. Downloaded on February 20, 2007 from http://conserveonline.org/workspaces/cbdgateway/cbdmain/cap/practices/bp_2.

TNC. 2004. Measuring Success: The Parks in Peril Scorecard Manual. Revised 2004. Arlington, VA, USA: The Nature Conservancy.

TNC. 2006a. Parks in Peril: Motagua-Polochic System. Site Evaluation FY05/Workplan FY06. The Nature Conservancy. Guatemala City, Guatemala.

TNC. 2006b. Parks in Peril: Condor Bioreserve. Site Evaluation FY05/Workplan FY06. The Nature Conservancy. Quito, Ecuador.

TNC. 2007. Measuring Success: The Parks in Peril Site Consolidation Scorecard Manual. Innovations in Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy.



For Additional Information

www.parksinperil.org

Parks in Peril program information, publications and tools.

www.conserveonline.org

Database of multiple conservation publications and tools, including publications and tools produced by The Nature Conservancy such as Conservation Action Planning (CAP) Methodology.

www.protectedareas.info

A guide for government and others for carrying out a gap analysis on national protected areas systems within the framework of CBD's Programme of Work on Protected Areas.

www.conservationfinance.org

The Conservation Finance Alliance is a collaborative effort to promote sufficient and sustainable funding for biodiversity conservation worldwide.

www.biodiv.org

Convention on Biological Diversity (CBD). Programme of Work on Protected Areas can be found here. In addition, the excellent CBD Technical Series No. 18: Towards Effective Protected Areas Systems: An action Guide to Implement the Convention on Biological Diversity Programme of Work on Protected Areas can be found on this site.

www.iucn.org

World Conservation Union

www.iucn/wcpa.org

World Conservation Union's World Commission on Protected Areas

www.fosonline.org/cmp

Conservation Measures Partnership



The Nature Conservancy (TNC) is a leading Conservation organization working around the world to protect ecologically important lands and waters for nature and people. Since 1951, TNC has been working with communities, businesses and people like you to protect more than 117 million acres of land, 5,000 miles of river, and 100 marine sites around the world. TNC's mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

www.nature.org



Since 1990, The Nature Conservancy, the United States Agency for International Development, local government agencies and non-governmental organizations have been working together through the Parks in Peril Program (PiP) to protect and manage more than 18.2 million hectares of endangered habitats in 45 protected areas in 18 countries of Latin America and the Caribbean. PiP works with partner organizations to improve financing, supportive policies, and management of individual sites as well as entire systems of protected areas, including private, indigenous, and municipal reserves, as well as national parks.

www.parksinperil.org



The United States Agency for International Development (USAID) is an independent U.S. government agency that receives foreign-policy guidance from the U.S. Secretary of State. Since 1961, USAID has been the principal U.S. agency extending assistance to countries worldwide recovering from disaster, trying to escape poverty, and engaging in democratic reforms.

www.usaid.gov

publication credits

Series Editor: Angela S. Martin

Authors: Nicole M. Balloffet, Angela S. Martin

Design: Kristen Truitt

Parks in Peril Program Director: James F. Rieger

Contributions to this bulletin:

James Byrne, Jorge Cardona, Ana María González, James Rieger, Alex Salazar, Eduardo Secaira

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID) through the Award No EDG-A-00-01-00023-00 for the Parks in Peril Program. The contents are the responsibility of The Nature Conservancy and do not necessarily reflect the views of USAID or the United States Government.

please cite this publication as:

Balloffet, N.M. and Martin, A.S. 2007. Parks in Peril Site Consolidation: A Framework for Strengthening Protected Areas. Series: Innovations for Conservation. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy

©2007 The Nature Conservancy,
Arlington, Virginia, USA

Parks in Peril Program
The Nature Conservancy
4245 N. Fairfax Drive, Suite 100
Arlington, VA 22203-1606 USA

Tel: +1-703-841-5300
Fax: +1-703-524-0296

www.parksinperil.org
www.parquesenperil.org