Sustainable Nature Reserves:

Guidelines to create privately protected areas

IUCN National Committee of The Netherlands

AMERICAN BIRD CONSERVANCY

IUCN protected area definitions, management, and governance types

International Union for Conservation of Nature (IUCN) defines a protected area as: '**A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values'.**

The definition is expanded by six management categories (one with a sub-division), summarised below.

Ia Strict nature reserve: Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use, and impacts are controlled and limited to ensure protection of the conservation values.
Ib Wilderness area: Usually large unmodified or slightly modified areas, retaining their natural character and influence and without permanent or significant human habitation, protected and managed to preserve their natural condition.
II National park: Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational, and visitor opportunities.
III Natural monument or feature: Areas set aside to protect a specific natural feature, which can be a landform, sea mount, marine cavern, geological formation such as a cave, or a living feature such as an ancient grove.
IV Habitat/species management area: Areas that protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category.
V Protected landscape or seascape: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural, or scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
VI Protected areas with sustainable use of natural resources: Areas that conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level nonindustrial natural resource use compatible with nature conservation is seen as one of the main aims.

The category should be based around the primary management objective(s), which should apply to at least three-quarters of the protected area — the 75 percent rule.

The management categories are applied with a typology of governance types — a description of who holds authority and responsibility for the protected area. IUCN defines four governance types:
Type A. Governance by government: Federal or national ministry/agency in charge; sub-national ministry or agency in charge (e.g. at regional, provincial, municipal level); government-delegated management (e.g., to NGO).
Type B. Shared governance: Trans-boundary governance (formal and informal arrangements between two or more countries); collaborative governance (through various ways in which diverse actors and institutions work together); joint governance (pluralist board or other multiparty governing body).
Type C. Private governance: Conserved areas established and run by individual landowners; nonprofit organisations (e.g. NGOs, universities) and for-profit organisations (e.g., corporate landowners).
Type D. Governance by Indigenous peoples and local communities: Indigenous peoples' conserved areas and territories — established and run by Indigenous peoples; community conserved areas — established and run by local communities.

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Alberto Campos, Lucia Guaita, Bennett Hennessey, and Marc Hoogeslag

IUCN National Committee of The Netherlands

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IUCN NL Land Acquisition Fund

Since its founding in 2001, the IUCN NL Land Acquisition Fund contributes to expanding, connecting and safeguarding habitats for endangered species. For more than 20 years, it has enabled nature organisations all over the world to acquire and protect endangered natural habitats.

Long-term nature conservation

Working with nature organisations is a crucial element of the Land Acquisition Fund. The ownership of and responsibility for the nature reserves purchased is placed in the hands of a local nature organisation. This is important, because these organisations are highly familiar with the local context and are in close contact with the local community. In association with local residents these environmentalists ensure long-term nature conservation.

Local nature organisations make all the difference

Together with local partner organisations, IUCN NL has been able to make a difference for countless endangered animal species, such as the Golden Lion Tamarin in Brazil, the Maleo Bird on the Indonesian island of Sulawesi and the Indian Elephant. So far, the fund has supported more than 135 projects in 39 countries, ensuring the long-term protection of almost 70,000 hectares (173,000 acres) of nature.

With the support of the Dutch Postcode Lottery and a growing number of private donors, the Land Acquisition Fund improves the chances of survival of species that face the threat of extinction.

Businesses and private individuals can also contribute, through a one-time donation or by means of a periodic donation.

www.iucn.nl/en/support-us/

American Bird Conservancy

American Bird Conservancy was founded in 1994 with a clear mission: to conserve wild birds and their habitats throughout the Americas. That mission continues to drive ABC to reverse the staggering declines in populations of many bird species today. With an emphasis on achieving lasting results and working with partners, the organisation addresses the most urgent needs of birds by pursuing four goals: halting extinctions, conserving habitats, eliminating threats, and building capacity.

In Latin America and the Caribbean, ABC works with dozens of partner groups to provide protected habitat for more than 80 Endangered and Critically Endangered bird species. Overall, the organisation has helped to establish bird reserves totaling 404,686 hectares (1 million acres) at 100 sites in 15 countries, providing habitat for 2,900 bird species — 66 percent of all birds found in the Americas, including some of the rarest. ABC has also supported the planting of more than 6 million trees and shrubs to restore bird habitat.

In the U.S., ABC works extensively with the Migratory Bird Joint Ventures and their partners to improve bird habitat. Through these networks, ABC has played a significant role in managing land for bird species in need across more than 3 million hectares (7.6 million acres). The organization identifies priority sites for conservation through its BirdScapes approach and is currently working in 42 of these vital places to conserve breeding, stopover, and wintering habitat for migratory birds.

ABC also works to reduce mortality of birds through targeted solutions that eliminate or prevent threats that pose a major risk to birds, such as collisions with glass, wind turbines, and powerlines; free-roaming cats, and other invasive species; and overuse of pesticides.

www.abcbirds.org

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Foreword

Privately protected areas (PPAs) have existed for just as long as government protected areas, but until recently did not receive the same attention within international conservation circles, and many governments around the world still do not recognise PPAs. That is changing, and work to elevate awareness, recognition and integrity of PPAs is ramping up as we anticipate ambitious new targets for conservation. Whether 30x30 (30 percent of area protected or conserved by 2030) or 50x50, private land and private initiative are clearly going to be necessary to protect our planet to the extent that science tells us is needed. Thus this guidance is very timely, and indeed includes a highly relevant section as we begin the UN Decade on Ecosystem Restoration.

In 2018 we published IUCN Best Practice Guidelines on Privately Protected Areas, the first global guidance on private conservation. One might ask, 'Why is additional guidance needed'? Our Guidelines are just that, broad guidance, on everything related to PPAs—site management, incentives, permanence, coordination with national PA systems, networks and much more. They are principles-based, not a how-to guide for individual sites. This new guidance from IUCN NL, intended for PPA managers, is a bit more practically oriented, is very accessible, and draws on many case studies in the form of testimonials from those with experience on the ground.

At the 2016 World Conservation Congress, in Hawai'i, we passed a resolution for IUCN to support private conservation and to encourage states to do the same. And we formalised the name *privately protected area*. Older terms, such as private reserve, give the impression that PPAs are exclusive, even elitist, only for the wealthy or foreigner. We want to stress that what we see, and what we want, is the use of private means to achieve public benefits. PPAs always have public benefits. Sometimes that includes direct benefits such as access for recreation, but always there are indirect benefits in biodiversity conservation and ecosystem services. This manual offers a good deal of advice on community engagement, which, by the way, does not mean one-way attempts to get local people to agree with you. Rather, the key to successful engagement is to fully understand their needs so you can partner to help meet them and/or adjust management to accommodate them.

Many PPA managers have struggled because they rushed through an acquisition and establishment phase without a plan for what comes after. Responding to requests, this guidance shares a lot of experience grappling with economic sustainability. Too often, protected areas of all kinds, and PPAs in particular, are overly reliant on tourism and grants — both typically from far away — to support management costs. The COVID-19 pandemic vividly pointed up the vulnerability of such dependence. Some of the approaches described herein — high-value farming, payments for ecosystem services, carbon markets, among others — point to promising options. But the role of public funds in partially underwriting PPAs should not be neglected, as nature areas are partners with governments in meeting their biodiversity and climate commitments, no matter if the governance of the area is private. Securing and managing more area for conservation, including privately protected areas, must be a public priority.

Our planet is in trouble. Area-based conservation: protected areas, conserved areas, and 'other effective area-based conservation measures', are part of the solution IF we scale up massively. Government-managed areas, indigenous- and community-conserved areas and privately protected areas are all important pieces of that puzzle. This manual is a welcome tool in helping us meet the grave challenges before us.

Brent A. Mitchell
QLF Atlantic Center for the Environment, and
Specialist Group on Privately Protected Areas and Nature Stewardship
IUCN World Commission on Protected Areas

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This publication is dedicated to all the anonymous heroes of this global community that devote their lives and careers to deliver a better world for future generations, as diverse and productive and beautiful as the one we inherited.

The Editors

Preface

IUCN Netherlands – Land Acquisition Fund

On the eve of a renewed, worldwide agreement to halt biodiversity loss by 2030 and to attain to live in harmony with nature in 2050 (UN Convention for Biological Diversity COP 15) we need to engage society in the conservation of threatened species and ecosystems. In a world where landowners still tend to exploit rather than protect natural ecosystems, land acquisition by local civil society organisations is among the most effective ways of securing biodiversity. Moreover, locally rooted privately protected areas are expected to form an integral part of sustainable development across the world, offering a green and inclusive alternative to often destructive and heavily exploitative models of economic growth.

For more than two decades, IUCN NL supported strategic land acquisition by local conservation NGOs as an answer to fragmentation of habitats and degradation of ecosystems, made possible by the generous and trusted financial support of the Dutch Postcode Lottery. Our 20-year anniversary report from 2020, with an assessment of the results and impact, clearly demonstrated the huge potential of privately managed and locally grounded protected areas to ensure a safe space for threatened species and ecosystems, such as Blue-throated Macaws in the Beni savannah and the Maleo on Sulawesi.

Furthermore, land acquisition has been proven to be a highly cost-effective manner to invest funds for conservation with long-lasting impact. A survey of 52 NGOs showed that an investment of €4,3 million in grants for land acquisition leveraged €5,7 million of additional investments from other donors, multiplying the conservation impact manifold. Over 90 percent of the acquisitions proved to be successful and are sustained to date. New jobs and sustainable business models have been created on the basis of these local initiatives, to the benefit of local communities and their livelihoods. Across countries and continents, thousands of people – old and young – were offered the opportunity to experience and appreciate the wealth and beauty of their local biodiversity, nurturing hope and pride.

Creating such privately protected areas is, however, not easy. In our 20-year anniversary report, we interviewed a large proportion of our local partners and many stated that one of their main challenges was the lack of information on how to create and manage a privately protected reserve. For many it was a plunge in the dark, learning many valuable lessons by trial and error. At that time, the idea sprouted: to develop a very pragmatic manual using our network of global partners, whom we have nurtured for 20 years, Our partners allowed us to tap into the treasure chest of their knowledge and experience. Their knowledge cannot be found in textbooks, and stems from many years of hard work, facing challenge after challenge, inventing and implementing new strategies and instruments for protection and restoration of the numerous habitats where endangered species live.

We have seen that, across cultures and continents, people are committed to their living environment and care to safeguard it. This manual provides guidance for those who want to secure and protect strategic parts of an ecosystem in the form of privately protected areas. The impact of such initiatives constitutes a source of hope, hope for a beautiful world in which biodiversity is valued and conserved as a basis for all life.

Dr. Coenraad Krijger
Director IUCN NL

Preface

American Bird Conservancy

The world today faces three major interrelated crises: the accelerating extinction of biodiversity, the destabilization of Earth's climate, and widespread social inequality. Nature reserves are important solutions to protecting places where biodiversity can thrive and extinctions can be averted. They are important solutions to sequester carbon and build resiliency against extreme climate events. Finally, nature reserves often promote a more equitable society by safeguarding clean water supplies and providing other ecosystem services to communities living nearby and the global community. If we treat nature well, this can help us treat each other better. When societies get this balance wrong, disease, poverty, war, and other disasters all too frequently result.

Nature reserves will increasingly be established and managed as the world addresses these crises. A coalition of 50 countries have committed to protecting 30 percent of their terrestrial and near-shore marine ecosystems by 2030, under the banner of an initiative known as '30x30'. This initiative is part of a wider trend of promoting nature-based solutions to address climate change by protecting carbon-rich forests and other habitats. Nature reserves, especially those within Alliance for Zero Extinction sites and Key Biodiversity Areas, each representing tiny percentages of Earth's surface (0.2 percent for AZE, 8.8 percent land and 2.1 percent marine for KBAs), are particularly important and efficient mechanisms to contribute to this global agenda – and privately protected areas are an important part of this conservation portfolio.

Sustaining such nature reserves is essential for two main reasons. First, it is necessary to maintain the ecological integrity of the reserves and the environmental benefits they provide. We have lost so much already; we can't afford to further lose hard-won gains in conservation assets. Second, sustaining nature reserves is essential to maintain public trust and faith in this model of conservation. We can't risk the cynicism and disappointment of 'paper parks' that are never fully implemented or reserves that cease functioning due to challenges to their security. Sustainable reserves require commitment, planning, and money to maintain presence and management, and provide access to communities to share these benefits with society in a way that enhances the reserves' benefits without degrading their resources. This is challenging work!

As the network of nature reserves and protected areas grows, we hope this manual will be a helpful resource to our partners and conservation colleagues to establish and manage healthy reserves that succeed in their conservation goals and persist for future generations. Those conservationists establishing and managing reserves are stewards, creating an alternative and more positive vision of a healthier, more ecological, diverse, rich, and equitable future that we can all strive toward, and they deserve our support. This manual is for these heroic stewards, often working in small groups, in their own corner of the planet, who are changing the world for the better — one (or several) reserve at a time.

Daniel J. Lebbin, PhD
Vice President of Threatened Species
American Bird Conservancy

Executive summary

This publication is aimed at individuals, nonprofit organizations, and civil-society groups interested in purchasing or leasing land as a long-term conservation strategy, as well as international donors, environmental agencies, and other supporters of privately protected areas. In a stepwise and practical format, these 'Guidelines' cover nine key questions: (1) Why do you want to create a reserve? (2) Are you ready to create a private reserve? (3) How do you create a sustainable reserve? (4) How much does it cost to operate a reserve? (5) How are you going to maintain the reserve? (6) How do you prepare a land acquisition proposal? (7) How do you engage communities and other stakeholders? (8) How do you promote restoration and rewilding? (9) What are the main tools to manage private reserves? It has been idealised, designed, and written by field practitioners to inspire reserve owners and managers to create more *sustainable nature reserves*.

Villa Carmen Biological Station (Amazon Conservation Association, Peru)

Introduction

How can we effectively protect nature? Creating and caring for privately protected areas are some of the most effective ways for civil society to get involved in the alleviation of the present climate and biodiversity crises. Community groups, families, nonprofit organisations, and companies can contribute to the protection and restoration of natural ecosystems that provide us with so many direct benefits (food, water), services (carbon sequestration), and development opportunities (ecotourism, agroforestry).

Land acquisition, if carefully planned and implemented, is one of the most cost-effective conservation strategies to create privately protected areas, protect endangered species and their habitats, and promote large-scale ecosystem restoration. However, although effective, fulfilling, and proactive, the creation of private reserves has many challenges that should be considered in advance. It differs from most other conservation projects in its 'foreverness', requiring a greater concern about economic sustainability in the long term, and the creation of diverse sources of income to reduce dependence on continuous fundraising.

To better understand these challenges and opportunities, we decided to ask the experts. We conducted a survey with more than 58 private reserve managers from 22 countries on four continents. They represent the network of partners of American Bird Conservancy and the IUCN National Committee of the Netherlands (IUCN NL) Land Acquisition Fund, with their valuable experience in purchasing, managing, and fundraising for private reserves.

Besides presenting updated data from hands-on practitioners, the survey also identified key aspects that the participants would like to have covered in a publication to support the creation, management, and sustainability of privately protected areas. The results have shown that out of 58 private reserves surveyed only 4 percent are economically self-sufficient, with 76 percent mostly or totally dependent of continuous fundraising to maintain and protect their reserves.

Privately Protected Areas (PPAs)

The term we use for protected areas under private governance is privately protected area (PPA). However, throughout this publication and in the testimonials of reserve managers and owners here included, we may also use the terms 'private reserve' or 'nature reserve' interchangeably, as a more colloquial form.

Introduction

The purpose of this guidebook is to provide useful information to aspiring reserve owners, based on our experience and the many lessons learned from private reserve managers.

It has been designed in a stepwise format that covers aspects related to reserve **creation** (Steps 1 and 2), **sustainability** and **fundraising** (Steps 3 through 5), **preparing a proposal** (Step 6), promoting **community engagement** (Step 7), **restoration** & **rewilding** (Step 8), and **management tools** (Step 9). Each of the nine steps is presented in four sections:

- **CHECKLIST** – an introduction to the topic with a list of important aspects to consider.
- **SURVEY** – presenting a summary of the survey results related to each step's topic.
- **TESTIMONIALS** – distilling tips and practical experiences from the global community of reserve managers.
- **HOW TO DO** – detailing some of the topics selected by the survey participants.

Privately protected areas are powerful tools to restore natural habitats, protect threatened species, create wildlife corridors, and develop more sustainable practices at local levels. At the onset of the United Nations Decade on Ecosystem Restoration, individuals, communities, and nonprofits can also contribute to increasing nature's contributions to people, the overall health of the planet and her ability to provide for all beings.

We hope this guidebook will inspire future reserve owners to design more sustainable nature reserves, while providing useful tools for those already dealing with the daily challenges of reserve protection and management.

STEP 1 - REVIEW YOUR MOTIVES

Why do you want to create a reserve?

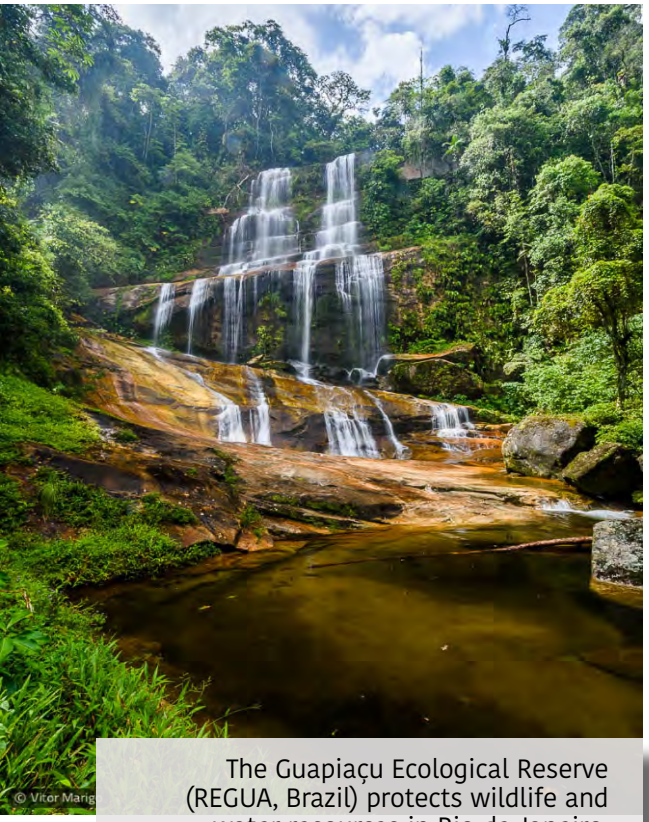
The Critically Endangered Araripe Manakin has a safe home at the Oasis Araripe privately protected area (Aquasis, Brazil).

STEP 1 - REVIEW YOUR MOTIVES CHECKLIST

Why do you want to create a reserve?

The creation of a privately protected area can be the fulfillment of a dream and longtime aspiration for many conservation-minded people and organisations. However, the challenges of maintaining a reserve are enormous and must be accounted for before embarking on this long-term adventure. Firstly, you should review your motives. Are they aligned with your broader conservation goals?

This initial section presents guiding questions that should help you review and evaluate the motives to purchase land and create a private reserve. This evaluation should be conducted collectively by a group interested in the creation of the reserve (such as a family, community group, company, or nonprofit organisation) as an exercise to guide them through the process of creating a sustainable nature reserve from its inception. Why do you want to create a reserve? The answer to this question must be clear and relevant, to yourself, your partners, and potential donors.



The Guapiaçu Ecological Reserve (REGUA, Brazil) protects wildlife and water resources in Rio de Janeiro.

What are your motives to create a private reserve?

There can be many motives associated with the creation of privately protected areas, such as protecting endangered species, habitats, and natural resources. Many others are less tangible, more related to emotional, altruistic, cultural, and community values.

These aspirations seem to come from a visionary group of people who have realised — either because of their research, their personal experiences with nature, their livelihoods connected to the land, or simply empathy for all beings — that there is so much more to learn and benefit from nature. Instead of totally transforming natural environments, they are creating novel models of coexistence and sustainability, inspired by nature, and adapted to conservation priorities and societal needs.

Although invariably altruistic and well-intentioned, these initiatives to create private reserves must also make sure that this is a realistic strategy, given the organisation's means and capacity (see Step 2), and that they are aligned with their conservation targets and goals.

What are your conservation targets and goals?

According to WWF Standards Terminology, a conservation target is 'a specific element that a project has decided to focus on and whose condition the project ultimately seeks to impact'. In other words, your targets are those things that are most important for you to conserve – ideally considering not just your personal aspirations, but also your community's interests, and the planet's needs. Your goals refer to how important you expect these things to be in the next few years, and for following generations. Most organisations seem to have a clear target: a threatened species, a specific type of habitat, an important local resource, a certain amount of carbon to be sequestered, or a key ecosystem service, such as pollination or seed dispersal. Make sure you also have clear goals in a timeline, and that these are realistic and measurable.

STEP 1 - REVIEW YOUR MOTIVES

CHECKLIST

Why do you want to create a reserve?

Are your motives and goals aligned?

The motives to create a private reserve should be aligned with your conservation targets and goals. Will the reserve provide significant benefits for your targets? Will it be part of a broader strategy to achieve your goals? Do you have a clear justification of your motives and how they fit in the bigger picture of your conservation targets and goals? Are your motives aligned with local interests and global priorities? Are you considering a very long-term conservation process? These are some of the important questions that international donors would like to see covered in a funding proposal, and ones that usually show if an organisation is on the right path to create a sustainable private reserve.

Are you considering local interests and global priorities?

Long-term projects such as successful nature reserves must consider, from the very beginning, the values and interests of local communities and other neighbours. Understanding potential conflicts and synergies is essential to being able to foresee and cope with different situations, while taking advantage of the existing opportunities. To responsibly act locally, we must think globally. Each reserve is part of a growing planetary network for the regeneration of ecosystem functions and services, as well as for the development of more sustainable ways of living. We have a shared responsibility with the global community to protect our endemic species, unique local resources, and ancient practices that can only be found in our region, so that future generations can have the opportunity to enjoy the benefits provided by biological diversity and associated ecosystem services.

Are there other, more economical alternatives?

Purchasing land is not the only way to create privately protected areas. Although it is one of the most reliable methods to protect a landscape and its attributes in the long run, it is also significantly expensive and, in some societies, culturally or legally challenging to pursue. Thus, it is wise to reflect if there are other, more economical or socially accepted alternatives, so that a portion of the funds that would be used for land purchase could be invested in other key expenses. Land leasing and municipal reserves are some of the alternatives to land purchase. Leasing is the equivalent of renting, usually for longer periods — so much so that lease agreements are usually paid yearly, instead of the monthly installments prevalent in rental agreements. Interestingly, leasing and reserve creation can also be options for privately managed communal lands and even government lands. The testimonials of reserve practitioners from different countries presented in these guidelines have some practical examples of leasing experiences (see 'Strategies for reserve creation: leasing land for conservation' (p.37) and the importance of considering economic and sociocultural factors when evaluating other alternatives (See 'Incentives to reverse deforestation: a community approach to restoration' (p.76).

Privately Protected Areas Survey

As part of the joint effort between IUCN Netherlands Land Acquisition Fund and American Bird Conservancy to better understand the challenges and opportunities for reserve creation and sustainable management, a survey was conducted to distill and share valuable experiences from private reserve practitioners. The survey was applied to members of their combined networks of reserve owners and managers across the globe, mostly small nonprofit organisations and community groups in developing countries. The respondents represent 58 private reserves in 22 countries, on four different continents (**Figure 1**).

The objective of the survey was to provide guidance and real-life examples for local and national NGOs, communities, Indigenous groups, municipalities, funding agencies, larger conservation organisations, landowners (people, small businesses, corporations), private sponsors, and any other individuals or groups interested in funding sustainable nature reserves or fundraising to create them. The results of this survey are illustrated and discussed in the Survey section of each chapter, according to their specific themes.

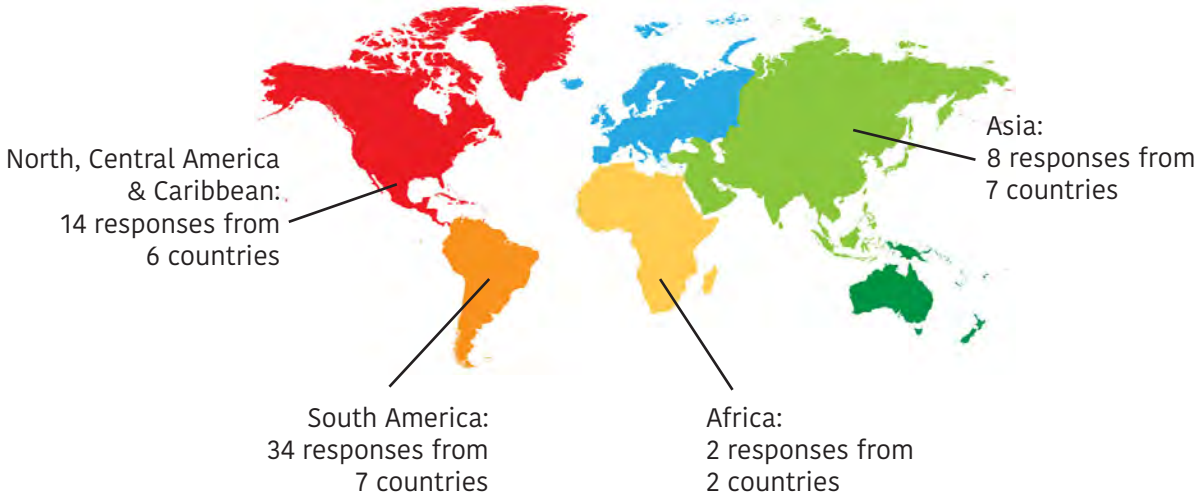


Figure 1. Survey geographic coverage: 58 participants from 22 countries representing 55 different organisations responded the survey.

Survey results have shown that: (1) private reserves were mostly created to protect species (37 percent), habitat (30 percent), and water resources (15 percent); (2) only 52 percent of the organisations have dedicated fundraising staff; (3) 76 percent of the reserves are dependent on continuous fundraising, and only 4 percent are economically sustainable; (4) housing and office facilities were the main costs related to reserve implementation (40 percent), followed by perimeter fences (15 percent), road access (9 percent) and vehicles (9 percent); (5) salaries for reserve staff is the most significant monthly expense for 81 percent of the respondents; and (6) 70 percent of reserves have management plans in place, but only 26 percent have business plans for their income-generating activities.

Survey participants also requested information on several aspects related to private reserve creation, management, and sustainability, such as preparing a proposal for land acquisition, promoting economic self-sufficiency, developing management tools, and engaging communities and other stakeholders, that have been considered during the preparation of these guidelines.

What were your motives to create a private reserve?

The first question presented in the survey was related to the reasons that motivated the creation of the private reserves. More than 80 percent of the respondents declared that their single most important reason for the creation of the reserve was related to the protection of biodiversity and natural resources, such as species (37 percent), habitat (30 percent), or water resources (15 percent). Other primary reasons included opportunities to expand the reserve and/or its connectivity with other protected areas, the protection of cultural values, developing ecotourism (particularly birdwatching), or creating a headquarters for the organisation (Figure 2). The responses can be roughly divided into four main groups of reasons related to: (1) the conservation of natural environments and associated elements, such as endangered species, habitats, and water resources; (2) opportunities to expand existing reserves, or increase connectivity with other protected areas; (3) the development of ecotourism, particularly birdwatching; and (4) the protection of less tangible, cultural values.

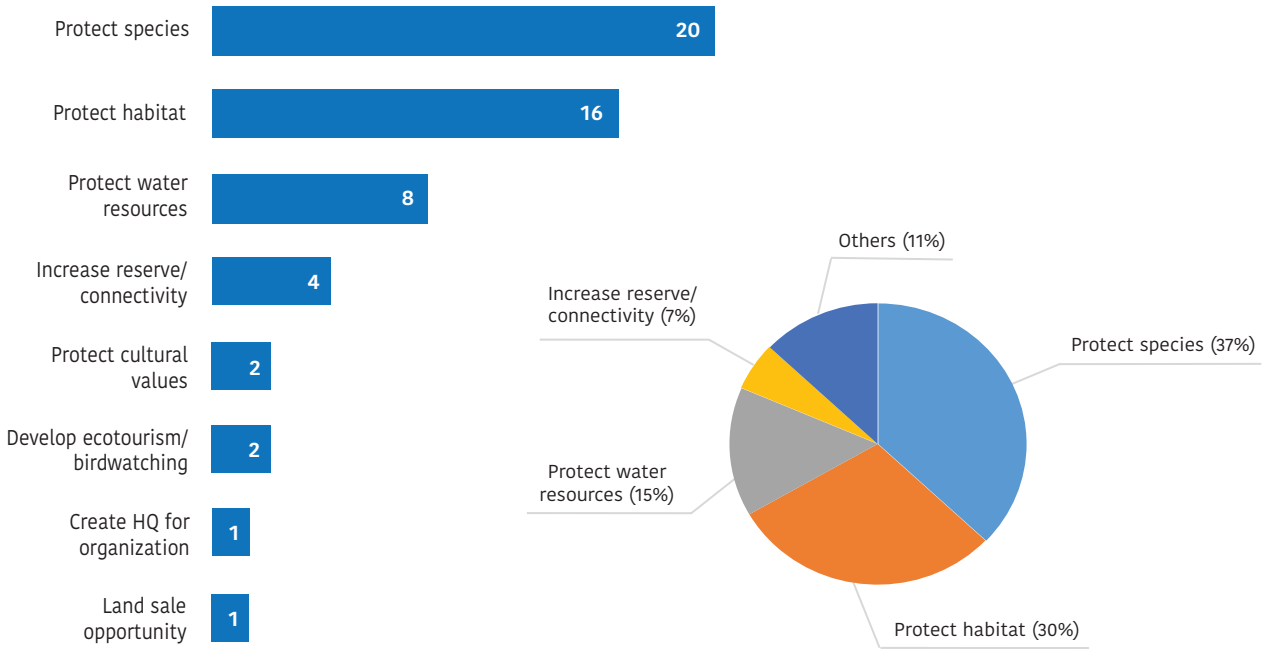


Figure 2. Survey results: motives to create a private reserve. Primary reasons to create a private reserve in number (bars) and percentage of responses (pie). The category 'Others' is expanded on the bar chart.

More than 80 percent of the private reserves surveyed were created primarily to protect habitat, species, or water resources.

'Motives to create a private reserve: protecting water resources'

Renzo Paladines

Nature & Culture International, Ecuador

Renzo is the Latin American Director of NCI and Executive Director for Ecuador since 1996. He holds a Master's in Zootechnics from the People's Friendship University in Moscow, and is a passionate birdwatcher.

In an increasingly perceptible and critical climate change scenario, water conservation has become a growing priority for authorities and inhabitants of cities and towns around the world. For people living in the mountains, the direct relationship between the conservation status of forests and *páramos* in the upper watersheds, and the quality and quantity of water available for use in the lower parts, is evident.

During the past 25 years of conservation work in the tropical Andes, I have experienced that protecting water sources is an easy strategy to understand and to accept among authorities and the general public. In most cases, parties are even willing to contribute financially to the protection of this fundamental environmental service through the payment of an environmental fee. The forests and *páramos* in the Andes, with varying degrees of human intervention, typically belong to communities and private landowners. Landowners carry out subsistence agriculture and cattle farming activities, which are not very profitable due to the difficult climatic, topographic, and poor soil-quality conditions. Most of these landowners live in the cities and towns of the lowlands. However, they use water that comes from the *páramos* and forests in the upper watershed.

These circumstances have made it easier to reach conservation agreements based on compensation mechanisms, which imply that users in the lower watershed pay an environmental fee to compensate landowners for replacing extractive activities with a more environmentally friendly system. Additionally, landowners can carry out conservation and restoration activities of the natural ecosystems on their properties. In some cases this fee is also used to finance the purchase of properties in the upper watershed.

In the last 15 years, this model, initially developed with six municipalities in southern Ecuador, has spread to a large part of the country and has even been replicated in neighbouring nations. Its implementation has made it possible to establish more than 1 million ha (2.4 million ac) of municipal and national reserves, restore nearly 2,000 ha (4,900 ac) of forests, and generate $10 million U.S for conserving water sources in more than 60 municipalities, home to more than 3 million inhabitants.

- ☑ Authorities and users are aware of the importance of the conservation of water resources.
- ☑ Partner with local authorities to develop the political will to promote water conservation.
- ☑ Seek technical assistance from Universities, NGOs, and specialised conservation organisations.
- ☑ Support the creation of protected areas to conserve water resources.
- ☑ Propose the creation of environmental fees deducted from users' water bills, to support conservation.
- ☑ Promote effective conservation, such as education, fire control, patrolling, monitoring, and restoration.

'Motives to create a nature reserve: protect an endangered ecosystem'

Pham Tuan Anh

Viet Nature, Vietnam

Tuan Anh is a co-founder, President and CEO of Viet Nature Conservation Centre. She believes that conservation has to come from people's hearts and minds, and be deeply rooted locally to be sustainable.

Dong Chau – Khe Nuoc Trong was a watershed protection forest of about 20,000 ha (48,000 ac) of moist lowland evergreen forests, home to more than 40 globally threatened species. Before Viet Nature's work, its legal status meant that it was not a protected area; while logging was prohibited, there was no mandate for wildlife conservation. Recognising the growing threats in the region — conversion of forests to agriculture, rubber, and timber plantations, rampant hunting pressures — Viet Nature was determined to upgrade the site's protection. However, local authorities, worried about the responsibility and public scrutiny to create a protected area, preferred to keep it as 'a sleeping beauty', rather than expose it to spotlights!

Therefore, we had to find a way to manage it as a nature reserve while advocating for its official designation. Buying large natural areas in Vietnam is almost impossible. According to our Constitution, 'land belongs to the entire people with the State acting as the owner's representative and uniformly managing land', although users may be granted land-use rights. In addition, land prices in Vietnam have become very high. That is why, we opted for leasing a 'forest environment', instead of forested land: that was our innovation. As we leased the forest environment for scientific research and conservation purposes, the owner is responsible to work with us to conserve the entire Dong Chau Watershed Protection Forest.

In 2013 and 2014, leasing forest environments for nature conservation in Vietnam was so new that international conservation organisations were hesitant about the idea. Today, our approach of a long-term, 30-year lease with up-front payments has proven to be a very good choice. Our methods focused on rapport building, lobbying, and collaboration to win people's hearts and minds.

Over the past 8 years, local authorities and communities have gained confidence in Viet Nature, treating us as long-term local players and allies. They are receptive to our technical support and recommendations, such as resolving land-use conflicts between communities and landowners, sustainable timber with Forest Stewardship Council certification, etc. Official designation of the site has clear advantages: higher legal protection for biodiversity conservation; more investment from the governments; and more public scrutiny over its management. It is also much more difficult to legally convert a nature reserve's land to other land uses.

- ☑ Land acquisition is possible in any land tenure system, including where land belongs to the state.
- ☑ Land stewardship and conservation can take different forms; it all depends on innovation.
- ☑ Build rapport with local stakeholders, aim for their hearts, minds and synergy for conservation.
- ☑ Think out of the box! Building new schemes for conservation is possible with innovation.
- ☑ Build local capacity! Establish long-term commitments through capacity building.
- ☑ In our case, the acquired area became our conservation foothold, and hopefully also stronghold!

'Motives to create a nature reserve: leasing pastures for wildlife'

Khalil Karimov
BOKU, Tajikistan

Khalil is a Veterinarian and Wildlife biologist with the University of Natural Resources and Life Sciences, Vienna (BOKU). He worked for the past 12 years on the conservation of Snow Leopards and their prey in Tajikistan.

In Tajikistan all the land of the country is owned by the government, so the only option to create a privately managed reserve is by leasing land. There are different types of leases, mainly for livestock farmers, foresters, and hunters. We received support to lease pastures exclusively for wildlife. We partnered with livestock owners with an agreement: We asked their support to avoid core zones where Ibex and Markhor (mountain goats) live, and they would be able to use the remaining pasture areas. The community received funds to conduct monitoring and population surveys.

After one year, the survey showed not only that the population was regenerating, but that also animals from nearby areas moved to the privately protected area. Since we were aware that by changing the route of livestock farmers we would be interfering with their livelihoods, we decided to provide them with tools with which they were not equipped. This attention and respect for their work contributed to building a strong relationship with livestock owners, while valuing the conservancy.

Another challenge we faced was corruption within the community. This can build a stressful situation. If you perceive there are corrupt mechanisms affecting your project, communicate it transparently to the donors. It is important to be open minded about how to jointly find solutions. Hiding these things from donors will only decrease trust, and can have wider consequences for the project.

When urgent action is needed to conserve a species, do not panic. We rediscovered a population of Bukhara Markhor that had been declared extinct in the Pamir Mountains. Species are resilient. If they have been around despite being thought extinct, it means that they won't disappear in a few months. It is best to invest time and energy to properly understand the causes for population decline and to draft a well-informed and effective conservation plan. Equally crucial is building trust with communities and other stakeholders to have allies supporting the implementation of the conservation plan and activities.

Do not focus on one single species, this can confuse people and lead them to take actions that are against the purpose of the programme. Initially we focused on the conservation of Ibexes, the prey of Snow Leopards. Since the incentives focused on preserving the highest number of Ibexes, there were cases of people killing Snow Leopards. This was a big lesson that taught us to ensure that we would always frame the programme as a multi-species conservation programme. Depending on the case, giving the spotlight only to one species can be a dangerous strategy.

Finally, find and empower local advocates who care and have the enthusiasm to influence the community, so that they can make an impact. This empowerment can be financial, social, emotional, or just someone to rely on for advice.

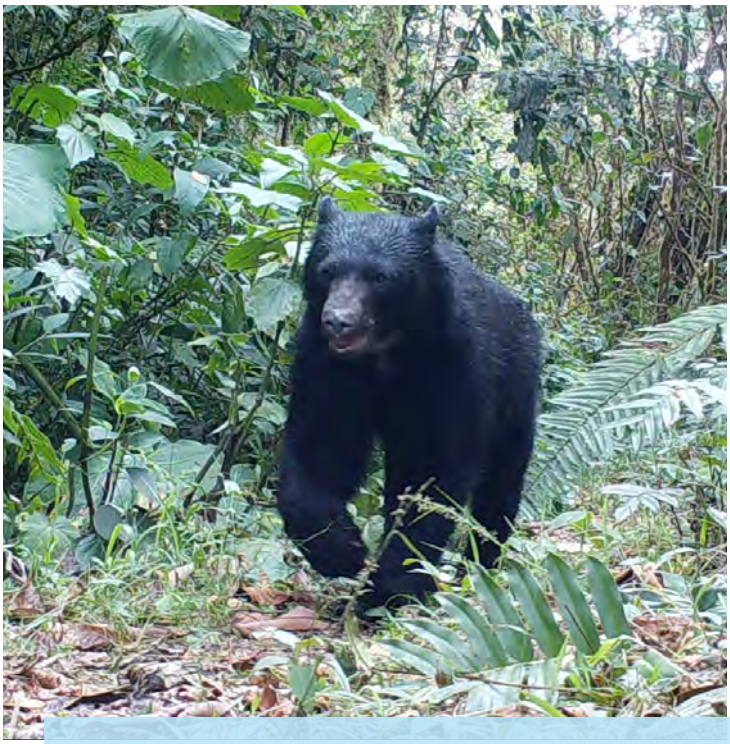
- ☑ Involve all stakeholders from the beginning to create a solid basis for the future.
- ☑ Be realistic about the advantages of conservation and potential impacts to their lives.
- ☑ Always be transparent with the donors.
- ☑ Single species conservation can be a dangerous strategy.
- ☑ Not everyone can actively participate, but their appreciation for what you do is crucial.
- ☑ Always reward the community. Keep your promises, and trust will increasingly build.

How to highlight your conservation targets

When preparing a proposal for land acquisition or reserve management, you must clearly show why a particular property or area is important for conservation. Usually, the most important conservation attributes of a landscape are closely related to your conservation targets, and these must be highlighted in your proposal.

According to our survey, the main attributes that motivated reserve creation were related to protecting species, habitat, water resources, and cultural values. The aim of this section is to guide aspiring reserve owners and practitioners on how to identify their site's conservation relevance, and where to find the right sources of information to demonstrate this importance to donors.

Migratory, endemic, and endangered species, and their respective categories of extinction risk or conservation status, are some of the attributes most commonly highlighted in land purchase and reserve management proposals. Make sure to look beyond just threatened birds and mammals, and include plants, frogs, reptiles, even insects. You can use trusted crowd-sourcing websites, such as iNaturalist (www.inaturalist.org) to obtain data for your area.



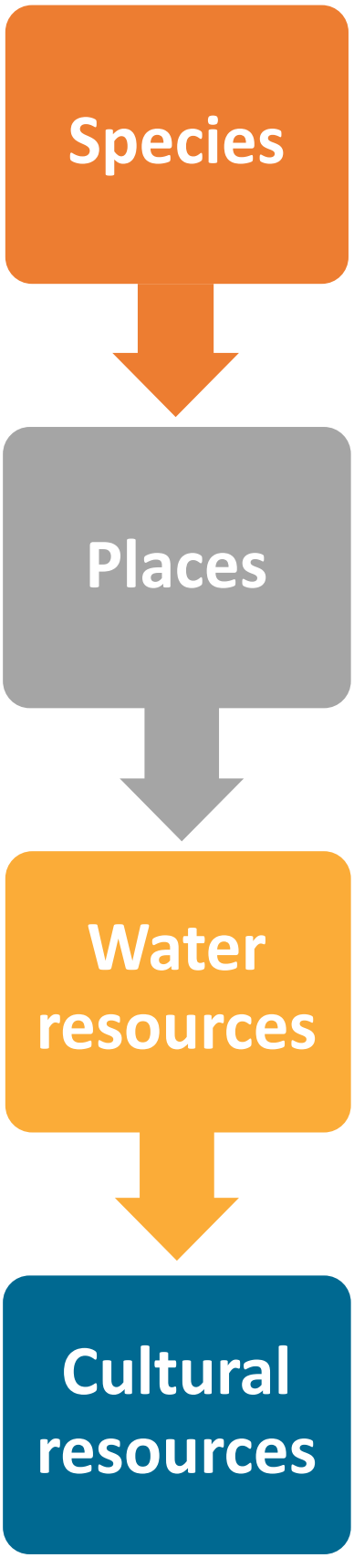
The Andean Spectacled Bear, considered ***Vulnerable*** by the IUCN Red List, is protected in Serraniagua's privately protected area (Colombia).

Threatened species and their conservation status assessments can be found in global (IUCN Red List, www.iucnredlist.org), national, and sub-national assessments (state, provincial, municipal). Most international donors follow the global IUCN guidelines and categories, which should be the primary source for consulting species' conservation status.

In addition, review other priority listing systems — such as Key Biodiversity Areas, Important Bird Areas, Alliance for Zero Extinction, Ramsar sites, and CI Biodiversity Hotspots, as exemplified in the infographic below — to highlight as much as possible the conservation value and urgency of your proposal.

Critical habitat (feeding, breeding) and key natural resources (water, vegetation cover) can also be highlighted as attributes to be conserved, as well as the conservation of ecological functions that translate into ecosystem goods and services for human well-being, such as the enhancement of seed dispersal and pollination. Initiatives motivated by cultural values and communal conservancies can also present their conservation targets and indicators at the local, national, and global levels.

How to highlight your conservation targets



Globally threatened and endemic species: Alliance for Zero Extinction species (zeroextinction.org), IUCN Red List (iucnredlist.org).

Wildlife trade species: CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora (cites.org).

National conservation priorities: country red lists and species action plans (national environmental agency websites).

Locally important species: threatened subspecies, or local species that have not been assessed by global and national lists, with information that demonstrates their conservation status.

Globally threatened ecosystems: IUCN Red List of ecosystems (iucnrle.org); CSN - Critical Site Network (criticalsites.wetlands.org).

Important biodiversity areas: IBA - Important Bird Area (datazone.birdlife.org); Key Biodiversity Areas (keybiodiversityareas.org); Biodiversity hotspots (www.cepf.net/our-work/biodiversity-hotspots); Alliance for Zero Extinction sites (zeroextinction.org).

International recognition: UNESCO Biosphere Reserve (en.unesco.org/biosphere); shorebird reserve networks (whsrn.org).

National & local key habitats: national, municipal protected areas (environmental agency websites); local knowledge.

Wetlands of global importance: RAMSAR sites – Ramsar Convention on Wetlands of international importance (ramsar.org).

Regional watersheds: maps and watershed committee plans (state and municipal water management agency websites).

Key local resources: field assessments (springs, lakes, wetlands) and traditional local knowledge.

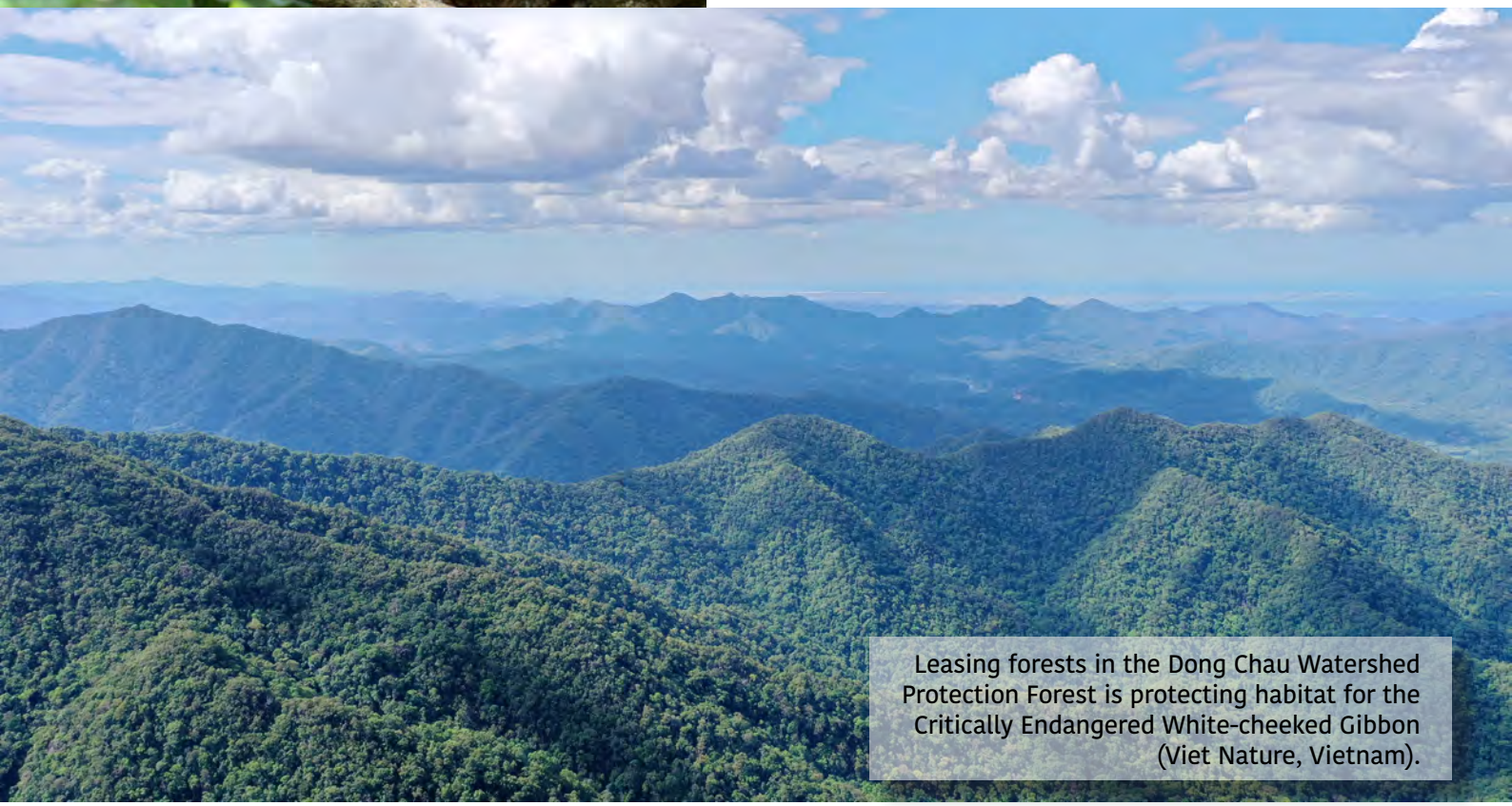
Subsistence & traditional uses: field assessments combined with traditional local knowledge.

Foraging lands & commons: field assessments combined with traditional local knowledge.

Cultural & scenic value: field assessments combined with traditional local knowledge.

STEP 2 - CHECK YOUR ELIGIBILITY

Are you ready to create a private reserve?



Leasing forests in the Dong Chau Watershed Protection Forest is protecting habitat for the Critically Endangered White-cheeked Gibbon (Viet Nature, Vietnam).

Are you ready to create a private reserve?

After reviewing your motives and making sure that they are aligned with your conservation goals and considering local societal needs, the next step is to check if your organisation has the capacity to conduct long-term conservation processes, such as sustainably maintaining a privately protected area. Most of the problems that small organisations or community groups requesting large land acquisition support have with international donors are related to governance, legal registration, and administration capacity.

You should be able to demonstrate that your organisation is capable of performing all proposed project activities and has the minimum administrative and fundraising structure to maintain a reserve. Most donors will prioritise those partners that can show their ability to cope with longer-term projects involving larger amounts of resources. Experience has shown them that organisations with certain planning and administrative tools in place — such as a board of directors, external audits, bylaws, strategic plans — are the ones with a higher chance of succeeding.

Pronatura has been creating private refuges and corridors to protect the biodiversity of the Mariposa Monarca Biosphere Reserve in Mexico.

Are you legally entitled to manage a private reserve?

Your organisation needs to be legally registered in your country. This often includes complicated paperwork, such as formally registering statutes and previously approved bylaws, and fitting into a specific tax category (for example, nonprofit). You also should have a bank account in the name of the organisation and regularly file tax returns each year.

Your mission statement should be aligned with the motives to create a private reserve. Your statutes and bylaws ideally should include specific topics related to the transparency of the decision-making process and the destination of assets of the organisation, as highlighted below.

Do you have the proper decision-making and administrative tools?

A typical scenario, and a noble one, is a group of friends getting together to form a nonprofit organisation because they are passionate about protecting an area, habitat, or species. Their initial efforts have proven successful, and they realise the next important step is to create a protected area through a land purchase. Unfortunately, frequently small organisations, as they start managing larger teams and funds, are more prone to internal conflicts. If there is no higher structure to resolve this kind of problem, then how can you show that your organisation can cope with the long-term challenges of running a private reserve?

It is generally perceived by international donors that the solution to this problem is that a nonprofit should have an overriding, independent volunteer board of directors, a diverse group of professionals that care about conservation and offer their time and advice (and sometimes funds) to help guide the organisation and guarantee its transparency. If your organisation does not have a board or similar arrangement, you can include this in your proposal as part of a 'moving towards' project (see 'How to develop organisational tools', p.19).

Are you ready to create a private reserve?

Do you keep accounting and external audit?

A biologist typing out their receipts on a spreadsheet can be productive for a small project, but not when funds radically increase. You need to consider hiring someone trained in financial systems or contracting out to professionals using accounting software to manage your finances. These items can be included in your proposal budget as long as the new funding enables you to hire accounting staff or solve the problem in a similar way.

Performing yearly external audits is a widely recognised way to ensure that nonprofits comply with legal and fiscal requirements. Since this practice is highly recommended by international donor bodies, it is an extra cost that should be considered as part of the reality of running a growing organisation. It is interesting how a first external audit often shows accounting irregularities, while also providing a road map to solve them. Costs related to hiring an external audit are perfectly acceptable in medium- to large-sized proposals.

Do you have long-term planning and bylaws dealing with asset destination?

For most nonprofits, creating their first private reserve is a huge difference compared to past projects because of the amount of funds involved and its 'foreverness'. The fact that the creation of a reserve should be planned for perpetuity, also means that land acquisition donors ask a lot more from nonprofits than short-term small-grant donors.

There are two organisational tools that you must develop at this point to support your growing administrative needs and improve the credibility of your project: long-term strategic planning and bylaws referring specifically to asset destination (in case the organisation must be dissolved or liquidated for whatever reason). These can be done by hiring professional services or finding volunteer support, such as a graduate student in business administration. Another option for small nonprofits is to ask for assistance from larger, often big city-based organisations, to assist them in developing a governance structure, which could also lead to sharing members of their already established board.

Do you have the fundraising capacity to maintain a reserve?

To manage a reserve for perpetuity you should be capable of maintaining it through fundraising and sustainable sources of income. With a land purchase, a small nonprofit can quickly transform into a large organisation with much higher funding needs. This is something to be considered in the initial land purchase proposal, as part of a broader conservation programme (see 'Land acquisition as part of a Conservation Program', p.56). Although all organisations are expected to create alternative sources of income for their reserves, our survey has shown that nearly half of the respondents rely solely on fundraising, and only 2 out of 55 reserves surveyed are financially self-sufficient (see 'Is your reserve economically sustainable?', p.24). Fortunately, there are numerous creative ways to raise funds and many funding opportunities available for private reserves (see 'How to find funding sources', p.49). To access these sources, however, you must be willing to invest a good portion of your time in fundraising and, as soon as possible, include dedicated fundraising staff to your team.

Organisational capacity

To evaluate the existing organisational and administrative capacity to support the creation and management of sustainable reserves, participants were asked which of the following tools were in place, or near completion, for their organisations (Figures 3 and 4).

The majority of the participants seem to have the basic tools for organisational development and sustainability, such as a strategic plan in place (67 percent), a shared decision-making system (69 percent) and an active board of directors (72 percent). The vast majority of the organisations are legally recognized and formally constituted in their countries (91 percent) and 83 percent have nonprofit status. Almost two thirds of the organisations surveyed have specific bylaws dealing with asset destination, which is highly desirable by international donors for nonprofits presenting land acquisition proposals (Figure 3).

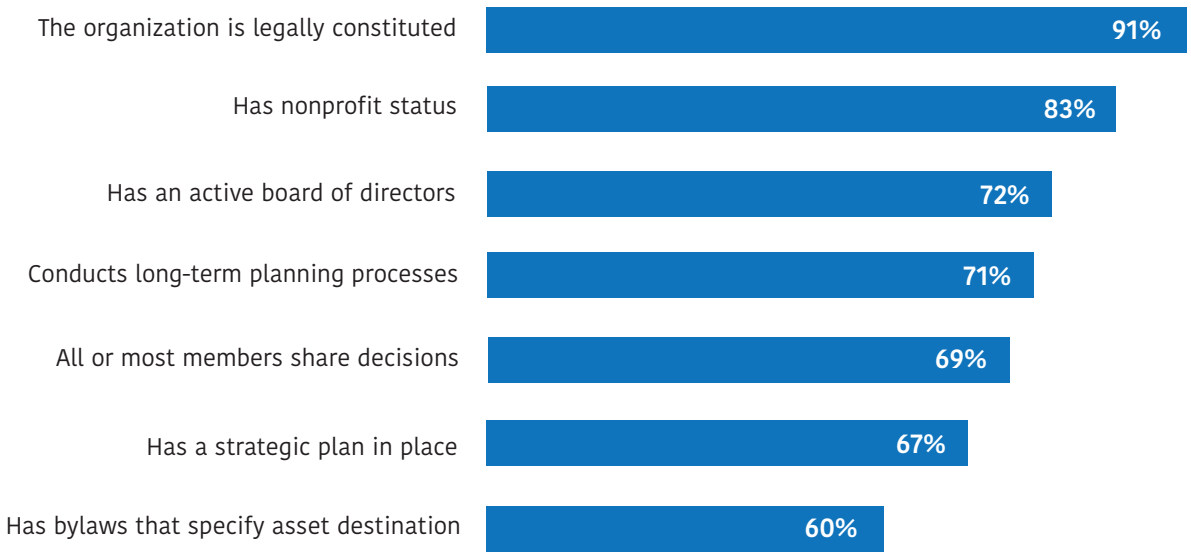


Figure 3. Survey results: organisational capacity. Percentage of respondents that have the above organisational and administrative tools in place.

91 percent of the organisations surveyed are legally constituted in their countries and 83 percent have 'nonprofit' status.

Organisational tools

Additionally, respondents were asked if their organisations have any of the following administrative and fundraising tools in place: (a) mission statement; (b) organisational statutes and internal bylaws; (c) periodic external audits; and (d) staff dedicated (exclusively, or most of their time) to fundraising. Nearly 90 percent of the participating organisations seem to have a clear focus which is expressed in their mission statements. Eighty-three percent of the respondents declared having registered statutes, or some kind of internal bylaws formally established. Almost three-quarters of the respondents conduct periodic external audits (74 percent), but only slightly more than half have dedicated fundraising staff (52 percent). (Figure 4).

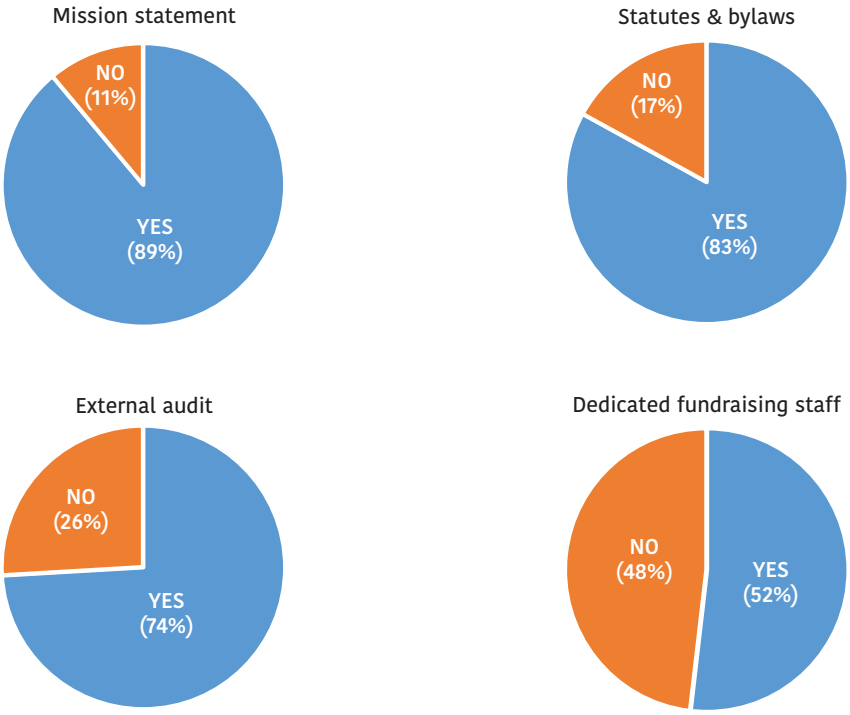


Figure 4. Survey results: organisational tools. Percentage of respondents that have the above organisational and administrative tools in place.

Almost three-quarters of the respondents conduct periodic external audits (74 percent), but only half have dedicated fundraising staff (52 percent).

'NGO governance experiences'

Associação Caatinga

Ceará, Brazil

Associação Caatinga promotes the conservation of the Brazilian Caatinga biome. It owns and manages the 6,285 ha (15,500 ac) Serra das Almas Natural Reserve, between the states of Ceará and Piauí.

The Serra das Almas Natural Reserve was created on September 8, 2000, from the vision of Samuel Johnson, an American citizen and then president of SC Johnson. For many years, this multinational company used wax from a native palm tree of the Caatinga biome called *carnaúba* as the main raw ingredient for its products. To contribute to the biome's preservation, he set up a fund to acquire a relevant area of Caatinga and transform it into a private natural heritage reserve, locally known as Reserva Particular do Patrimonio Natural (RPPN), a type of privately protected area that is registered for perpetuity and recognised as part of the Brazilian national legal framework. The fund also helped to found a local organisation to manage the reserve and promote conservation in the region.

With this purpose, the Associação Caatinga was born. The establishment of the reserve began in 2000, with the aim of fostering the conservation of the Caatinga and contributing to sustainable local development. At first, communities were uninformed about environmental issues and the importance of protected areas, and didn't fully trust in the initiative. After 20 years of managing this area, we have proven that creating a formally recognised protected area is a great opportunity to build a positive relationship between a reserve and its surrounding communities, generating mutual benefits.

The biggest challenge has been to show them the benefits of maintaining a standing forest while offering opportunities for income generation and a harmonious coexistence with the environment. Associação Caatinga and the reserve contribute in a concrete way to improve livelihoods in 40 partner communities. Projects include courses, training, education, forest restoration, and sustainable technologies that reduce the impacts of global warming and facilitate the coexistence of the families living in the semi-arid. The relationship with the communities is based on the principle that while the reserve safeguards environmental services provided by the forest — such as water recharge, microclimate, reduced land degradation — the communities support the preservation of this unique natural heritage and participate in conservation activities.

The Serra das Almas Natural Reserve is currently recognised as an outpost of the Caatinga Biosphere Reserve by UNESCO. Crateús, where the reserve is located, is the municipality with most RPPNs in the state of Ceará (5), as a result of an integrated conservation model and the power that this category of protected area holds for being created from a voluntary act. Long live private nature reserves!

- ☑ Encourage the creation of protected areas, they make the world a better place to live!
- ☑ Private reserves can start as an individual's voluntary decision, but the benefits are collective.
- ☑ The main challenges can be overcome by establishing partnerships, especially with neighbours.
- ☑ Private reserves need economic incentives to fulfill their objectives and purpose.
- ☑ Payments for environmental services are a great option to encourage conservation.

'Multi-stakeholder governance experiences'

Victor Saravia

AESMO, Honduras

Víctor is executive director of Asociación Ecológica San Marcos de Ocotepeque, a Honduran NGO with 31 years of continuous work in the conservation of biodiversity, water, and soil.

In 2006, the Asociación Ecológica San Marcos de Ocotepeque (AESMO) facilitated the purchase of the 380 ha (939 ac) Reserva Biológica Güisayote through a participatory acquisition scheme. By teaming up with local municipalities, community water management boards, community trusts, private companies, and cooperatives, AESMO explained clearly and transparently the convenience of providing financial and in-kind resources, asking them to contribute financially to the purchase of new land. As a result, AESMO built a mechanism of social responsibility in getting people committed to safeguarding the acquired lands. The purchased lands — acquired as exploited agricultural lands and successively reforested — are strategically important to the rehabilitation of surrounding watersheds, which provide water for domestic and agricultural consumption to the communities, in addition to conserving biodiversity and soil.

We learnt that by ensuring participation spaces for the different organisational expressions of civil society, local governments, academia, private companies, churches, and others, we obtain a much stronger governance process. Municipal governments necessarily have to sit down to dialogue with social actors on a level of equality and respect. This generates an interesting democratic process that offers a greater possibility of ensuring the integrity of these protected areas in the future. One of the most important benefits of the model is strengthening local actors' self-esteem, by ensuring spaces in decision-making about the protection of areas providing them with ecosystem services.

The mechanism functions as such: every local actor has the possibility of contributing funds for the collective purchase of lands without an established quota, but depending on their socioeconomical abilities. This gives to every contributing stakeholder the same rights and responsibilities. We have seen that this scheme generates a sense of ownership and a healthy sense of pride. This does not only concern monetary contributions; for example, local actors patrol, prevent or suppress forest fires, and carry out biological monitoring activities, together with forest rangers, technicians from municipal environmental units, local police, and the army.

One of the challenges of this process is resistance to change. For some officials it is still hard to see communities be taken into account in decision-making. Changing that mentality is a tough challenge for AESMO and its local allies. However, our NGO continues to do a careful job, with a visionary, strategic outlook, seeking to be coherent between discourse and practice, knowing that what we do is for Honduras and for our planet.

The Co-managing Council of the Pacayonas-Ventanas Sub-basin (Pacayita Volcano Biological Reserve), including several Lenca Indigenous communities, contributed funds to buy 70.31 ha (173,74 ac) in the Güisayote Biological Reserve. The plot is located 34 km (21 mi) away from the sub-basin, and does not provide the communities with water. However, now local communities have the clarity that conservation and protection work must be done at the landscape level.

- ☑ Ensure the broadest social participation in the different phases of decisionmaking.
- ☑ Participatory purchases increase commitment by creating a sense of ownership and pride.
- ☑ Allow contributions to be provided in cash and in kind.
- ☑ A greater sense of self-esteem and participation can establish the conditions to ensure long-term conservation.
- ☑ Be proud, since you are contributing with the enjoyment of present and future generations!

'Transboundary governance: the Southern Grassland Alliance'

Alberto Yanosky

Guyra, Paraguay

Alberto is a founding member of the Southern Grassland Alliance, co-chair of the KBA Partnership and Chair of the Paraguayan IUCN Committee.

The Southern Grassland Alliance resulted from the need to conserve the biodiversity of a forgotten ecoregion, from the conservation perspective, in South America. The pampas, or grasslands, are originally treeless prairies that allowed the first colonisers from Europe to develop a successful livestock industry in this 'sea of grasslands' that is now recognised worldwide. The disappearance of the native vegetation, the lack of sufficient protected areas, and the need to reduce the impact of cattle raising brought together a group of conservationists from different civil society organisations as well as producers, and associations. Their goal was to design a strategy to advance a more sustainable way of production in the pampas, conserving nature and making livestock production more resilient to climate change while differentiating its production in a more demanding market with higher standards of social and environmental responsibility.

Four countries (Argentina, Brazil, Paraguay, Uruguay) came together to set up a mechanism to conserve nature and use grassland birds as indicators. Participation was not only by conservationists from civil society organisations but also producers associations and academia, three parties working together with a transboundary vision.

Initial specific actions on the ground focused on the ranches and the marketing mechanisms developed to differentiate beef at this initial phase, but expect in the near future to address other sectors that may affect biodiversity (crops, plantations) if not developed sustainably.

These crucial stakeholders meet every year to learn from each other and to discuss regional governance and its representation at the national level to ensure idiosyncrasies, production styles, socio-environmental conditions and national regulations are duly met. The alliance is now more than a decade in existence and has relied on external sources to operate with the challenge to be maintained independently. It has caught the attention of other grassland areas of South America and the rest of the Americas, though prairies with similar conditions are outside the ecological boundaries of the Pampas Ecoregion.

This gave birth to a hemispheric alliance for the conservation of the native grasslands of the Americas. The main challenge is to find a specific niche for this differentiated beef that not only honors the rural producer with all the history and tradition associated (the gaucho cowboy) but also brings with it a certification and traceability of environmental and social safeguards with indicators of healthy environments.

- ☑ Production and conservation require a sincere discussion to set up joint priorities and actions.
- ☑ Wearing the shoes of others (academia, producers, conservationists) is crucial to understanding each other.
- ☑ Agree on common interests, such as beef associated with threatened birds, both linked to the same habitat.
- ☑ Statements need to be validated to set up the baselines and jointly design a shared vision.
- ☑ Decisions for conservation in the properties of others require joint decisions.
- ☑ The ecoregional and transboundary vision brings cohesion and the sense of belonging to a community.

How to develop organisational tools

Your nonprofit organisation needs solid financial, administrative and institutional foundations that will allow it to cope with the challenges of reserve management and to survive potential problems. According to the views of most international donors, there are a few basic organisational and administrative tools that small nonprofit organisations ideally should strive to have, increasing their credibility and competitiveness, such as: a board with external board members, institutional bylaws, internal operations manuals, proper financial management and accounting, and a yearly external audit.

Board members

If your organisation is based in a developing country, we are aware that the board utopian idea is difficult to achieve. However, this is generally what international donors want to see. Although it might take many years, we suggest following these steps to gradually achieve a functional group of dedicated board members:

- Develop your board as a work in progress, along many years, starting with a small board of five people, and working up to at least seven.
- Finding the right people — who will help your organisation and not complicate things — is very important, and worth putting in the effort to search continually in different circles.
- Look for someone who has altruistic reasons to be on your board, who is concerned about the environment, and ideally who is financially secure and able to contribute to the organisation. There are good people out there, but it may take time to find them.
- Make sure you have diversity in a board, not only gender and age but also different backgrounds and networks. For example, someone with a big network in media might help the organisation a lot.
- Keep your board happy by making things easy for them. Make meetings short, keep them informed frequently with short, illustrated posts of activities. And offer them advantages to being on the board, like trips to projects, or local social events.

Social media or webpage?

Many small nonprofits have found that social media is adequate to inform their actions, especially in their local language. But when a group wants to expand to receive international donors, they should create a web page in English, since donors often conduct an internet search for more information on the nonprofit.

A simple page showing the history, staff and projects will be sufficient, with links to local language social media. The web page should be clean, with short texts and lovely photos that quickly show your project and the professionalism of the nonprofit.

Bylaws and operations manual

When you build or review these tools, make sure you clearly understand the difference between bylaws, which are usually nationally registered, and operations manual. Bylaws, or statutes, refer to formal institutional agreements that establish the foundations (mission, nonprofit status, goals) and overall functioning of the organisation (higher hierarchy, decision-making processes, election and voting, etc.), and are usually required to be legally registered. Operations manuals deal with all internal operational procedures and routines, including technical, administrative, human resources, safety, and security procedures. Avoid overly complex bylaws and leave details for operations manuals, since these are far easier to change.

Financial management and external audit

There is no single formula for financial management, but we suggest you pay attention to three key aspects that international donors highly consider: (1) that your organisation conducts a yearly external audit to demonstrate the transparency and accuracy of your accounting and fiscal procedures; (2) that your management is familiar with all applicable taxes; and (3) that you are not sending accounting errors with your financial reports.

How to develop organisational tools

An independent volunteer board of professionals that care about wildlife habitat conservation is what you want to try to achieve. This is what most donor bodies believe is the best management state for an organisation.

National organisations that you admire could provide copies of their bylaws and operations manual. Many elements of bylaws are the same in nonprofit organisations throughout the world. Go through them and try to simplify them, cleaning out ambiguities, and moving excess details in bylaws to your operations manual. You most likely will need to update your operations manual to include recent international diversity and inclusion awareness.

The organisation should demonstrate the capacity to manage financial, accounting, and fiscal routines. Until you have enough funds to hire a financial manager, a strategically selected board member could volunteer for the position.

You must have professional accounting services. To reduce costs, small organisations can look for cooperatives or seek the help of volunteers. Emerging web-based accounting services can significantly reduce costs, allowing you to input the data online into their system, although still limited to a few developing countries (e.g., www.contabilizei.com.br, in Brazil).

Make sure to budget for external audits in your funding proposals or be prepared to spend your administrative fees (when allowed) on a yearly audit.

Develop a management routine to review and double-check financial reports to avoid errors in reports to donors.

STEP 3 - RESERVE SUSTAINABILITY

How do you create a sustainable reserve?

Rio Zuñac Reserve is protecting montane habitat for endemic species of fauna and flora (Ecominga, Ecuador).

How do you create a sustainable reserve?

There are different definitions and levels of sustainability. In our context, and throughout this publication, sustainability has a broad but simple meaning: using resources wisely to be able to use them indefinitely. As such, we should not be concerned only about ecological issues, but embrace the three main pillars of sustainable living — economic, social and environmental — also known as the three 'P's of sustainability; or profits, people, and planet. This means that a sustainable privately protected area should aim to be economically self-sufficient — creating diverse sources of income to reduce dependence on continuous fundraising — while developing models of sustainable living and social-ecological justice. To be successful in developing a private reserve in the long-term, aspiring reserve owners, such as nonprofits, community groups, and landowners should have a Sustainability Plan in place that considers different dimensions of sustainability (see 'How to do a 9-year Sustainability Plan', p.29).

In Ecuador, Nature and Culture International (NCI) has been partnering with Indigenous groups to protect water resources in the *páramos*.

Are you considering different dimensions of sustainability?

In this step we want to make sure you consider the multiple dimensions of sustainability when planning to create or manage privately protected areas. This approach is highly recommended (and sometimes required) by international donors and funding agencies. These are foundations to develop better practices for successful conservation projects, and that will be important for the long-term development of both the organisation and the reserve:

1) Existing or expected income-generating activities that will reduce the reserve's dependency on continuous fundraising (economic sustainability).

2) Measures to reduce the project's ecological footprint, such as building with local materials, adopting water- and energy-saving practices and promoting restoration (environmental responsibility).

3) Activities that inform and engage local communities and other stakeholders in sustainable practices, sharing benefits of ecosystem services, and creating opportunities for working together that consider the heterogeneity of local communities (social solidarity);

4) Programmes that are inclusive, promote gender equality, respect cultural differences, incorporate traditional practices and local knowledge (cultural diversity).

Economic sustainability: generating revenue to maintain the reserve

Being a nonprofit organisation does not mean that it cannot generate revenue to support its operational expenses and staff. Essentially, nonprofits do not distribute any surplus from their income generating activities among their members or executive team, but they can invest income in activities that support the fulfillment of their mission and conservation goals. Although most private reserves rely heavily on fundraising at first, in order to pursue long-term economic sustainability they must develop other sources of income. Learn from the local markets what's already working and seek support from partners or local governments to develop novel methods of monetizing such as payments for ecosystem services. For each activity that you envision, it is recommended to conduct your planning grounded on the three pillars of sustainability. Our survey has identified several sources of income that have been used to support private reserves, listed in the next section (see 'What are the existing sources of income?', p.25).

How do you create a sustainable reserve?

Environmental responsibility: green building, consuming, and restoration

Environmental responsibility requires reducing your ecological footprint as much as possible, which involves optimizing water and energy consumption, rethinking your consumer choices and building techniques, and reducing solid wastes and residues. It also involves acquiring a good knowledge of your reserve's resources, habitats, and biodiversity in order to conduct informed decisions. Good environmental practices also involve active restoration of natural landscapes to recover species and ecosystem services. When conducting environmental assessments and restoration activities, make sure to learn from traditional practices and incorporate local knowledge. Restoration activities can benefit from payment for ecosystem services agreements, such as reforestation projects that capture and store atmospheric carbon, or even monetise with the enhancement of key natural resources, especially the protection of water springs and catchment areas.

Social solidarity: building collective action

Conservation is much more than just environmental protection. In order to engage people in understanding and sharing the purpose of conservation, it is important for the entire community to recognise that conserving an ecosystem is a more inclusive and holistic mission than protecting species. Humans are key players in the health of an ecosystem.

Starting a conservation initiative is also an opportunity to join forces to tackle associated problems: poverty, unemployment, social inequalities, and many more. Although it may take extra effort, time, and resources it is important to involve and empower local actors and marginalised communities in your project and, more broadly, in ecosystem governance. Alongside developing sustainable mechanisms for the use of natural resources, your project can initiate a path of change, and create social safety nets for hundreds if not thousands of people. In community conservation management, everyone should be included in the ownership of land; this brings pride to the community, enhancing commitment toward safeguarding the land.

Cultural diversity: connecting identities and traditions

Connectivity is not only a concept to be found in environmental conservation. When ecological connectivity is integrated with social, cultural and economic connectivity, new models of community-based conservation take shape: models that are locally molded and therefore fit the uniqueness of that territory. Being inclusive of cultural diversity is a great opportunity to engage local and grassroots conservation projects that speak also from the perspective of collective or minority heritage, history and values. Including everyone — women, men, elderly, and youth — will allow you to establish a strong identity to the project, and to 'hatch' dedicated community advocates and supporters (see 'Step 7 – Community Engagement', p.62).

Be aware that numerous factors can unintentionally inhibit inclusion in your project, including language, knowledge, and resources. Understand these barriers in order to find successful ways to pull them down. Caring for human systems is as crucial as caring for nonhuman systems.

Is the reserve economically sustainable?

Participants were asked if their reserves were economically sustainable, and were given five alternatives (Figure 5). Nearly half of the respondents (25 out of 54, or 46 percent) declared that their conservation initiatives are totally dependent on continuous fundraising, and presently they have no other source of income for the operation of the reserve. Combined with those 'mostly' dependent on continuous fundraising (30 percent), it seems that 76 percent of all organisations are totally or mostly depend on continuous fundraising to pay for their reserve expenses. Only two organisations (four percent) declared to be fully economically self-sufficient, generating enough revenue to support the daily needs of reserve maintenance and operation.

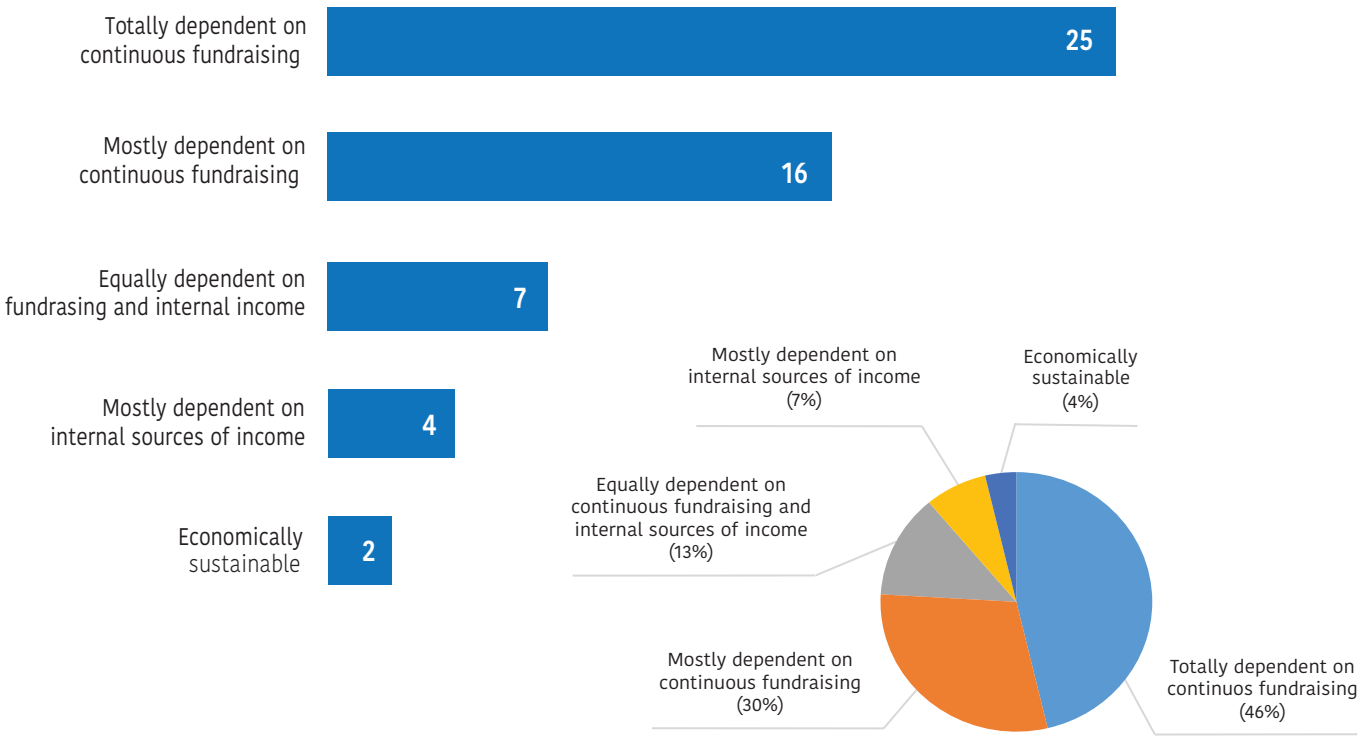


Figure 5. Survey results: economic sustainability of private reserves. Dependency on fundraising and/or other sources of income, presented as total number (bars) and percentage of responses (pie).

76 percent of all private reserves surveyed are mostly or totally dependent on continuous fundraising and only 4 percent are economically sustainable.

What are the existing sources of income?

To better understand what types of income-generating activities that private reserve managers have been adopting to support their daily needs, participants were asked about the existing sources of funds that are presently responsible for the maintenance of the reserve. Corroborating the previous question, fundraising was mentioned by nearly half of the respondents (48 percent) as the principal, if not sole, funding source for reserve maintenance and operation. Apart from fundraising, the surveyed reserves rely on a large variety of activities, ranging from paid volunteer programmes, to farming, agroforestry, and ecotourism (Figure 6). Although not mentioned as the main source of income by any of the respondents, 'lodging and food services' was the most cited secondary income-generating activity, followed by payment for ecosystem services and membership fees.

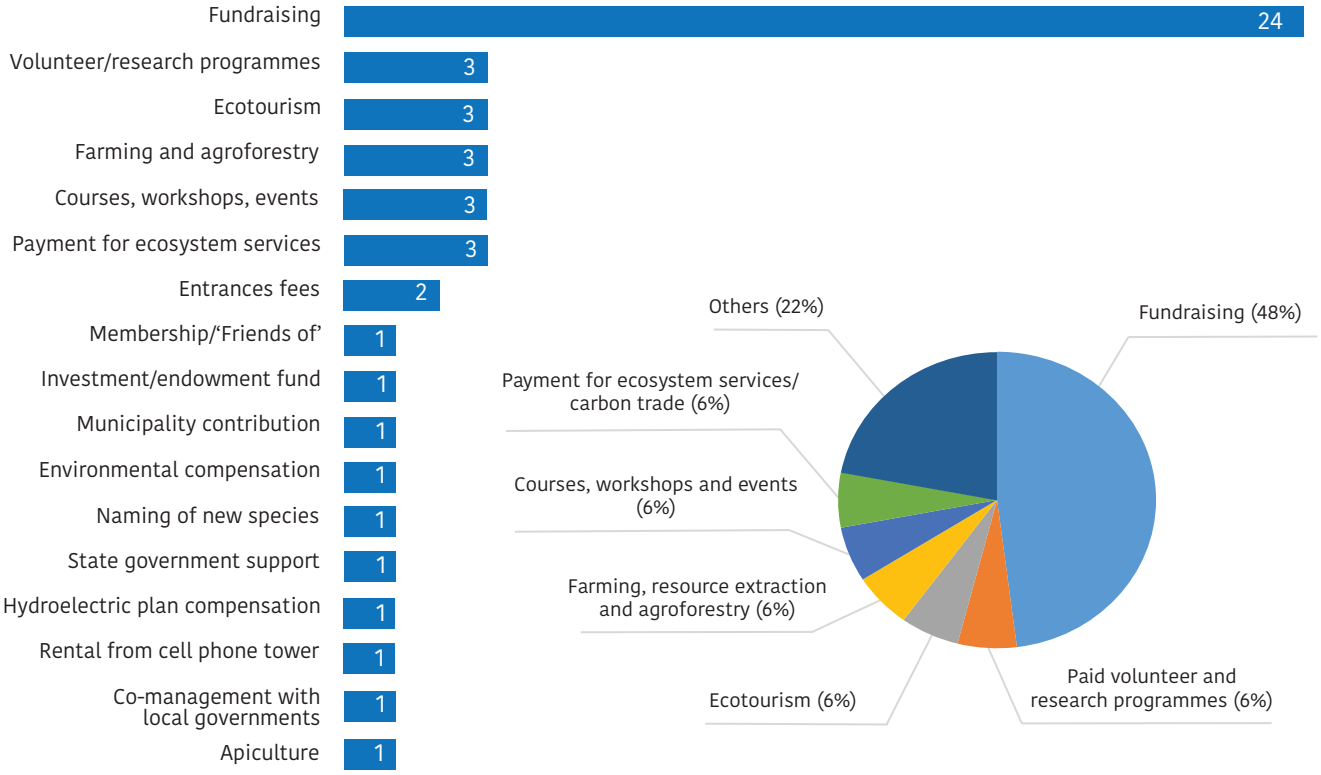


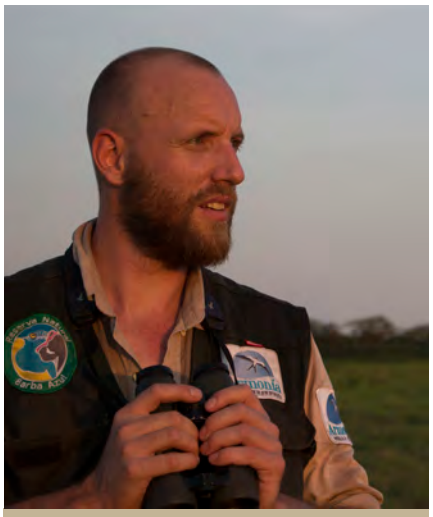
Figure 6. Survey results: existing sources of income. The single most significant activity that presently generates funds for reserve maintenance and daily operation, presented as total number (bars) and percentage of responses (pie). The category 'Others' is expanded on the bar chart.

Apart from fundraising, the reserves rely on a large variety of activities, ranging from paid volunteer programmes, to farming and ecotourism.

'Economic sustainability: a multiple income model'

Tjalle Boorsma

Asociación Armonía, Bolivia



Tjalle is Conservation Programme Director for Asociación Armonía. He started in April 2015 as the Barba Azul Nature Reserve Coordinator in charge of reserve development and sustainability.

Asociación Armonía is a bird conservation nonprofit, whose mission is to conserve Bolivia's birds and their habitats. One of Bolivia's most threatened birds is the endemic and Critically Endangered Blue-throated Macaw for which Armonía created the Barba Azul Nature Reserve (11,000 ha, 27,000 ac) and the Laney Rickman Blue-throated Macaw Reserve (1,422 ha, 3,500 ac). Creating private reserves for the world's most threatened species is fairly easy. But long-term managing in developing countries with often challenging socio-political situations is the real task. Therefore, always evaluate first whether creating a private reserve is the best conservation strategy for your focal species. Once created, expenses will have to be fundraised annually.

Isolated and remote reserves like ours, which can only be reached by air eight months of the year, have higher protection costs than reserves with easy access. To pay for these expenses, it is important to evaluate what type of business models can generate income and are compatible with your conservation goals. Armonía developed multiple income models that pay for our reserve: eco-friendly ranching, ecotourism, faithful private supporters called the 'Friends of Barba Azul', international support based on specific interest (birds, mammals, savanna, etc.), and an investment fund that generates annual income through interest. Oftentimes ecotourism is the first business model that comes to mind. But always assess first why your reserve is special and what could attract people from around the world to visit your site.

More importantly, never put all your eggs in one single 'income' basket. The COVID-19 pandemic that started in 2020 was a wakeup call demonstrating that mere investing in tourism for reserve sustainability is not sustainable. In Barba Azul Nature Reserve, we manage livestock and during the pandemic this continued to generate income; this is also a compatible business model for conserving natural grasslands. One of the challenges we faced was finding financial support to develop this model — as cows are directly associated with deforestation and climate change. That is true, but not in a natural savanna ecosystem.

Therefore, more time and effort were required to convince donors to invest in Barba Azul cattle ranching. As for any business model you plan to develop, it will require serious investments. These investment needs should be on the top of your priority fundraising list. So, make sure that your tourism infrastructure, reserve vehicle, livestock, and any other business needs are within your land acquisition proposal. Do not be shy, because a sustainable reserve requires serious investments. It is the shared responsibility of the land purchase donor and is your financial machine that will secure species and habitat protection indefinitely.

- ☑ Diversify your income sources, including project donors, sustainable businesses and others.
- ☑ Every visitor is a potential donor; develop a "Friends Program" with faithful supporters.
- ☑ Include the needs for your sustainability model in the land purchase proposals, such as business infrastructure.
- ☑ Include hard-to-fundraise tools in the land purchase proposals, such as tractors and reserve vehicles.
- ☑ Secure a financial buffer, contingency fund, for difficult years: reserves are long-term projects.

'Ecological sustainability: building with local resources'

Lou Jost

Ecominga, Ecuador

Lou Jost is a physicist turned biologist, specializing in orchids, the mathematics of biodiversity, and speciation. He's lived in Ecuador for 25 years and co-founded the EcoMinga Foundation.

The Rio Zuñac Reserve protects a cloud forest from 1,400–2,600 m (4,600–7,200 feet) elevation on the east slope of the Andes in Ecuador. These are the first mountains that catch the humid westerly winds off the Amazon basin, so the amount of rainfall here is incredible. The high rainfall and high humidity pose big challenges for construction of a scientific station. Our guiding principle in the construction was to minimise damage to the reserve. Our reserve guards had noticed that trunks of some species of trees with dense wood did not decay on the forest floor. We selected these trunks and hired a local expert to saw them into planks where they had fallen. This is how loggers remove wood from forests here, so the skill was well-developed, and it was worth hiring an expert rather than doing it ourselves. As construction progressed we had to supplement this wood by using trunks that had been washed down the nearest river after landslides. This wood was generally inferior to the selected trunks on the forest floor, so we used it for nonstructural components.

Site location in mountainous areas is very tricky because of constant landslides, and it is really important to be aware of what's above you! The site we chose was a small clearing that had been made by a local farmer before we had established a presence there. We did not need to cut any trees. We felt it was necessary to build a concrete base and columns, due to the wetness of the site. We brought in cement by mules, and used local sand and gravel from a nearby river. I believe this was absolutely essential. We also built a septic tank so that no human waste entered the river. After these constructions we did not allow further use of mules, to avoid trail erosion.

One of the most important design features of the station is its translucent roof, though this requires frequent cleaning. In humid places, a dark closed space quickly develops mold. Our translucent acrylic roof panels (which can be rolled up for easy transport) keep the inside of the station warm and dry. We also used no windows, just screens, to aid airflow. Recently a newly described species of mouse has gnawed many holes in the screen to get to our sleeping bags, an unsolved problem so far.

Our Spectacled Bears have caused even worse problems, destroying our kitchen and going up to the second story to sleep in our bedroom when we are not there! We have solved this by storing our food in a metal vat kept in a deep pit we dug, and covering it with heavy trunks. The local people wanted us to cut the trees nearest the cabin so they wouldn't fall on the station. Of course we did not cut them, but sure enough, one of them fell on the station last year. No serious damage was done though. I do not regret leaving those trees standing.

- ☑ Fallen trunks can serve as raw material even in very wet forests.
- ☑ Watch out for potential landslide tracks.
- ☑ A concrete base may be necessary.
- ☑ Don't let mules on your trails except for short periods.
- ☑ Make sure you take your local wildlife into account.
- ☑ Use a translucent roof and screens.
- ☑ Combine local knowledge with innovation and international expertise.

'Social-ecological sustainability in privately protected areas'

Rocío Lopez de la Lama
UBC, Canada & UPCH, Peru

Rocío is a Research Associate at the EcoHealth and Urban Ecology Laboratory, Universidad Peruana Cayetano Heredia (UPCH) and PhD candidate at the University of British Columbia (UBC), Canada.

John Donne eloquently said back in 1624 that 'no man is an island', something we might forget sometimes nowadays. Thus, even though you are setting up your own privately protected area, most likely you will have human neighbours who might be in favour of nature conservation -- or not. Hence, to achieve social sustainability in your private reserve, it is imperative to foster positive and trustful relationships with your neighbours from the get-go. For that, I will give you some tips based on the shared experiences of reserve owners from Peru. To start with, it is important to properly identify who your neighbours are. Are they local communities, individual landowners, Indigenous peoples, or businesses operating close by? Then, identify what their livelihoods are. For example, are they farmers, coffee producers, tourist operators, or loggers? By knowing what type of activities your neighbours conduct, it is going to be easier for you to identify key similarities, opportunities and even challenges for creating a collaborative relationship with them. However, what are the benefits of investing so much time and energy in your relationships with your neighbours? There are many advantages, but here I will highlight four critical ones:

1) Reduce potential property trespass from people who might be unsure about your property boundaries as well as increasing their willingness to comply with them. (Some people may know where your reserve starts but may still trespass to take advantage of some natural resource when in need.) *Your neighbours should not be seen as a threat!*

2) In case someone strange shows up, your neighbours can let you know right away if that person is going into your reserve. This is particularly helpful if you have a big area that you cannot constantly monitor. Also, if there's a sudden fire or an unusual sound (e.g., chainsaw or shotgun), your neighbours can also inform you right away about that. *Your neighbours become your allies!*

3) You can start working on a landscape level! If your neighbours see your work and its benefits as well as appreciate what you are doing for nature conservation, they can also get motivated to join the conservation movement. In that sense, you can start working on biological corridors for wildlife or even on payment for ecosystems services schemes with downstream communities (if you are located nearby a watershed) or join multiple properties for carbon emission offset schemes. *Your neighbours become your partners!*

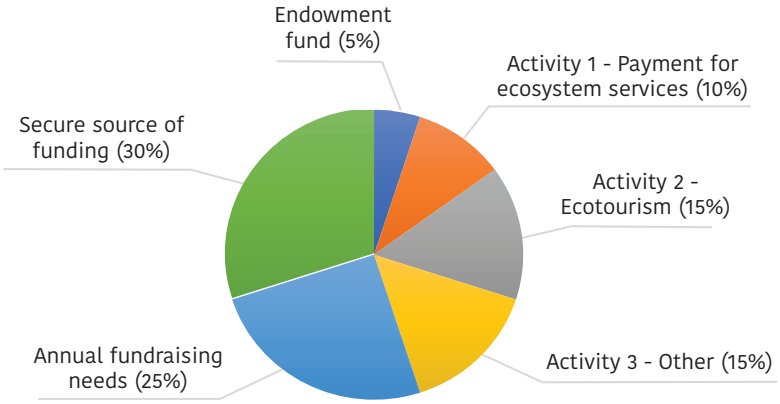
4) Finally, by having more partners and privately protected areas close to yours, you can start thinking about setting up a network of voluntary land conservation initiatives. This would ensure a stronger voice at different local, regional and national spaces and in decision-making processes. It also would allow you to defend yourself against big potential threats such as infrastructure development projects or threats by mafias that want to conduct illegal activities within or close to your property. *You and your neighbours become a movement!*

- ☑ Go and introduce yourself! Say who you are and what you are planning to do.
- ☑ Learn from local traditional ecological knowledge if you are new to the site.
- ☑ Engage your neighbours through citizen science, building a database to make evidence-based decisions.
- ☑ Organise environmental education talks for kids, so that future generations develop a stronger sense of place.
- ☑ Envision your private reserve as a role model of sustainability and development, fostering two-way learning relationships.

How to do a nine-year sustainability plan

The difference in starting a private reserve from most other projects is its foreverness. Every year you will have to raise funds to pay for its protection, maintenance and management, requiring thoughtful long-term planning. We suggest approaching this in a nine-year plan, which is thoroughly reviewed by the team every three years.

In a daylong exercise or workshop, your organisation's team should collectively identify the main income-generating and fundraising activities that are expected to cover the expenses of the reserve for the next decade. The plan is divided into three-year evaluation sections, so that the first year can be spent trying to raise the funds for the proposed activities. It is simpler to envision income-generating activities as a pie chart, where each thin slice is more doable and practical to raise than the full amount at once. Added together they can cover your reserve's maintenance and management budget in a sustainable way, as exemplified in the pie chart below.



To diversify and progressively increase your funding sources, the plan should include two goals: a pie chart illustrating where you would like to be in nine years (example above), and a 'moving towards' pie chart of where you hope to be in three years. That should give you enough time to see if an activity is working or whether you should change your approach. Try to diversify your funding sources to have at least six slices remaining constant, but more slices are fine and better. Ideally no single slice of your income pie should be more than 25 percent of your total budget (unless it is very secure), and fundraising needs should not exceed 25 percent of your budget each year. On top of all this thoughtful planning, we strongly suggest you save some money as a contingency fund because you really can't predict the future.

The sooner you start your nine-year sustainability plan the better the idea you will have for a future budget. Ideally, your broader conservation programme (that included land purchase) should have previously considered budget items to start developing income-generating activities, so that part of the costs of a sustainability plan are already covered in the proposal.

How to do a nine-year sustainability plan

The nine-year sustainability plan can be built during a daylong workshop or team meeting. As the plan is for many years, it should be well communicated within the whole organisation, clearly understood, and agreed upon. The people starting the plan might not be the same people who finish it.

For the planning meeting, a full list of funding possibilities should previously have been discussed, and reviewed one by one to build a checklist of income-generating activities to be pursued. For each activity (e.g., ecotourism, cattle ranching, fundraising), the group should define goals to be achieved in the next three, six, and nine years, and the person(s) responsible to conduct them.

It is simpler to envision income-generating activities as a pie chart, where your chart has many small pieces. Each of those thin slices is a more doable amount to raise individually. Added together they can cover your reserve's budget. Diverse funding is critical as insurance, to cover basic costs in between larger projects.

At least every three years, the team should evaluate the progress of proposed activities, and adaptively review timelines and goals. The plan is divided into three-year sections, so that the first year can be spent raising the funds for the proposed activities.

Create a contingency fund of at least 50 percent of your reserve's yearly budget. If things go bad, you will have at least six months to raise funds to cover this gap. It's a long-term goal to build a contingency fund by saving a little bit each year. Consider opening a separate account for this funding, with the clear rule that it is not to be spent filling budget holes of other projects.

Reserve sustainability is possible, but it requires creative thinking, long-term planning, and entrepreneurship. Endowment funds can be slowly built to cover key partial costs, for example to set an initial fundraising goal to create an endowment to cover the reserve guard's salary.

Envision your reserve creation proposal as part of a broader, long-term conservation programme, one that includes land purchase as an initial step, and opens possibilities to fund other activities envisioned in the sustainability plan.

STEP 4 - RESERVE BUDGET

How much does it cost to create a private reserve?

The Alliance for Tompotika Conservation is providing safe breeding coastal habitat for the Critically Endangered Maleo in Sulawesi (Indonesia).

How much does it cost to create a private reserve?

It is really important that you understand clearly, before you start advancing on a land purchase, the real cost and commitment of running a privately protected area. This is vital because creating a private reserve can be a radical change for a small nonprofit organisation or community group, since it will require continuous financial support for a long time. You cannot just close the project down for a couple of years.

We suggest you design two budgets: an ideal budget considering everything you would like to do; and a minimal budget, which is the least amount of funds needed to keep the reserve protected. In most cases, your minimal budget will become your yearly budget, and occasionally through additional projects you will be able to cover costs for extra items. Besides the traditional costs discussed below (implementation, operation, reserve staff, restoration), you also must consider the possible threats to the reserve, such as fires, hunting pressure, logging, land-clearing, etc.

A vehicle can help draw attention to your project and the donors involved. Grey-breasted Parakeet Project (Aquasis, Brazil).

Costs related to reserve implementation

Starting a reserve usually requires new infrastructure, equipment, and materials. If you try to do everything in the first year of the purchase, your budget may be too large and unattractive to donors. As suggested in the introduction, you can divide your implementation costs into (1) priority needs, and (2) ideal improvements — things that could wait a few years.

Often nonprofits underestimate the need for housing and transportation. We suggest initially to create a simple structure where many people (eight or more) can sleep comfortably, and which you can add on to, over time.

Given vehicles are unattractive to donors, you can add a line in your proposal stating that the vehicle will be restricted to reserve-use only. This hole is often patched with less expensive ATVs and motorcycles — which can be excellent for field work — but if more than two people might use the vehicle for transportation, then you really should responsibly search for a 4x4 pick-up type vehicle.

Costs related to reserve operation

Monthly operational costs, such as food, fuel, materials, vehicle maintenance, consumables, etc., are not very attractive to donors, and have to be calculated in a realistic way. Do the math, and you will be astounded by the yearly costs. Try to estimate how much food and fuel will be required and their costs, plus the costs of transportation and all repairs, and then add 10 percent. Also consider your climatic conditions and remoteness where you might need to buy large quantities of some materials to last for months with poor accessibility.

Also, make the initial investment in high-quality materials like rechargeable batteries and solar panels, which in the long run will be cheaper and more sustainable than throw-away batteries. Initial costs can be high, but the creation of a wildlife reserve is forever; it is wise to purchase equipment and materials of better quality. Over the long run, they will be far less expensive.

How much does it cost to create a private reserve?

Budgeting for reserve staff

There is no textbook solution to ideal staffing of a reserve, and it often depends heavily on its size, location, and the threats the area is facing. Remote reserves often have a hard time keeping staff because they are far away from their families, communities, and amenities. Hiring as locally as possible can help alleviate some of these issues while creating local and conservation-friendly incomes.

You also must responsibly consider reserve guards for patrolling and safety, and might have to plan staffing so that the reserve's main entrance or main base is never left unattended. This might require creative rotational staffing. Such systems often depend on the staff. Some people need to visit population centres frequently, whereas others are content to stay on the reserve. Consider what duties the reserve staff will be required to do, and the seasonality of the work. You might need more staff in some periods of the year, or less staff during inaccessible periods.

Restoration programmes

Since it's often easier to raise funds for restoration programmes than for some necessities for the creation of a nature reserve, we suggest combining restoration in a land purchase proposal with other items that are more difficult to fund, such as vehicles, facilities, etc.

The initial cost of a quality nursery and equipment can be high to start. A new nursery will likely have unforeseen problems just as part of the complexity of nature in a new area. We have witnessed expensive irrigation tubes destroyed by all forms of animals across South America.

We highly recommend making the initial investment of paying an experienced professional to design a restoration programme. It may seem simple to plant trees, but it often is more complex than assumed, and errors can waste years of efforts.

Habitat and wildlife monitoring

To design monitoring programmes, try to think of the future and how the reserve might change as you remove external impacts, protect, and restore areas. To be able to record these environmental changes, you should start collecting data as soon as possible. The most frequent changes are natural regeneration, increased populations (mammals and birds), and vegetational community changes. Think of monitoring methods that might be able to show these changes over time and consider the actual change you want to monitor.

Try also to show these changes visually over time. Well-placed camera traps can be a wonderful way to quantify wildlife and landscape changes, as well as offering great images for promotion. One method is to take a series of specific spot photos over a scheduled time period — like every month or every year — to be shown as a time-lapsed video illustrating the recuperation of the reserve in ten years. Donors would appreciate having such materials to communicate to the world, and it will bring more attention to your reserve.

What are the main costs involved in the land acquisition process?

To evaluate the costs involved in land acquisition, participants were asked to rank their main expenses during the reserve purchase process. As expected, land acquisition was the main cost for reserve creation for 83 percent of the respondents (48 out of 58 responses), the remaining having created their reserves without incurring high land-purchase costs for various reasons, such as donations, leases, inheritances and other types of agreements. For all participants, the main cost involved in the land-acquisition process — when excluding land purchase — refers to land-title transfer expenses (32 percent of respondents), followed by legal services, notary office fees (20 percent), property mapping (14 percent) and land-prospection field trips (13 percent) (Figure 7).

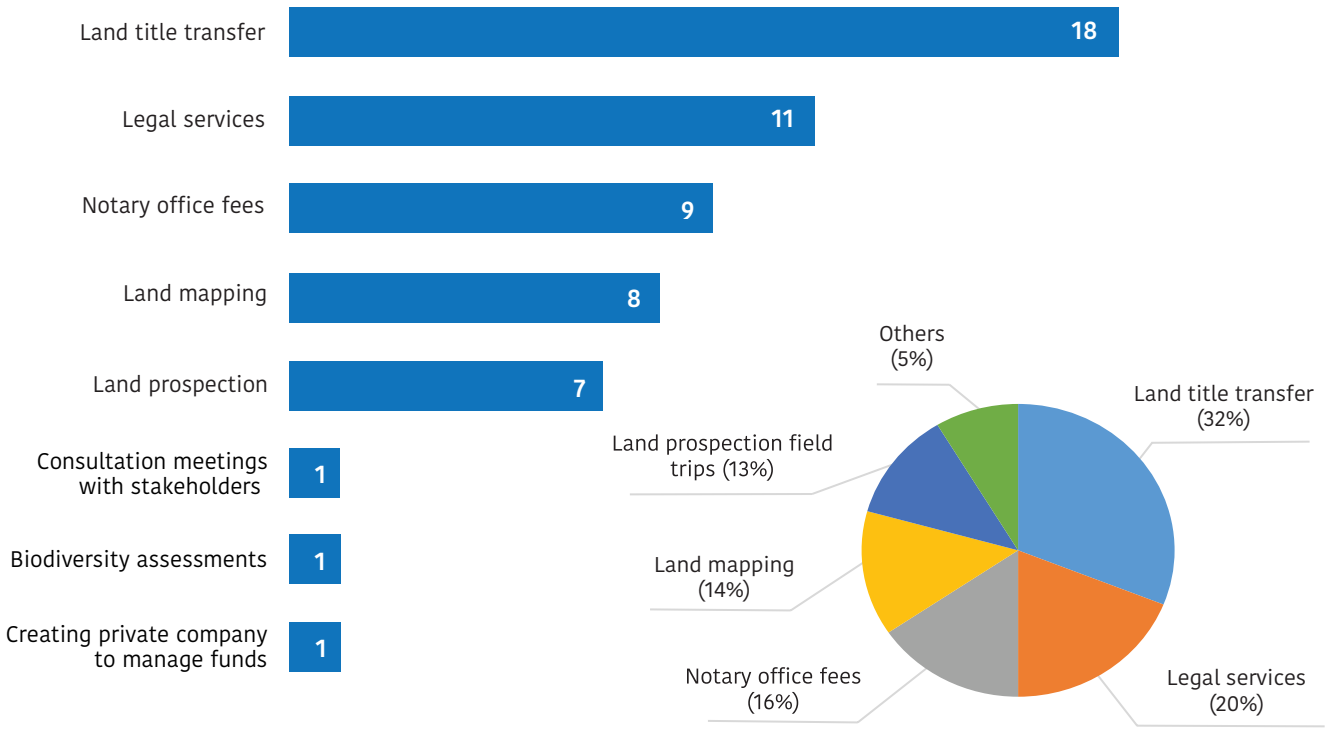


Figure 7. Survey results: main costs during the land-acquisition process. Excluding land acquisition, the most significant costs listed during the survey are presented as total number (bars) and percentage of responses (pie). The category 'Others' is expanded on the bar chart.

Besides land cost, the main expenses during land acquisition were related to legal services, land title transfer, and notary office fees.

What are the initial costs related to reserve implementation?

Besides the costs involved in land acquisition and land-title transfer, respondents were asked what were the main expenses related to the implementation of the reserve, or the initial costs that were made to adjust the reserve's facilities and infrastructure to their needs and goals. The most significant single expense for 40 percent of the respondents was related to building and adapting housing, office, and research facilities. The second most-cited expense for reserve implementation was perimeter demarcation and fence erecting or fixing, followed by road-access improvement and vehicle acquisition (Figure 8).

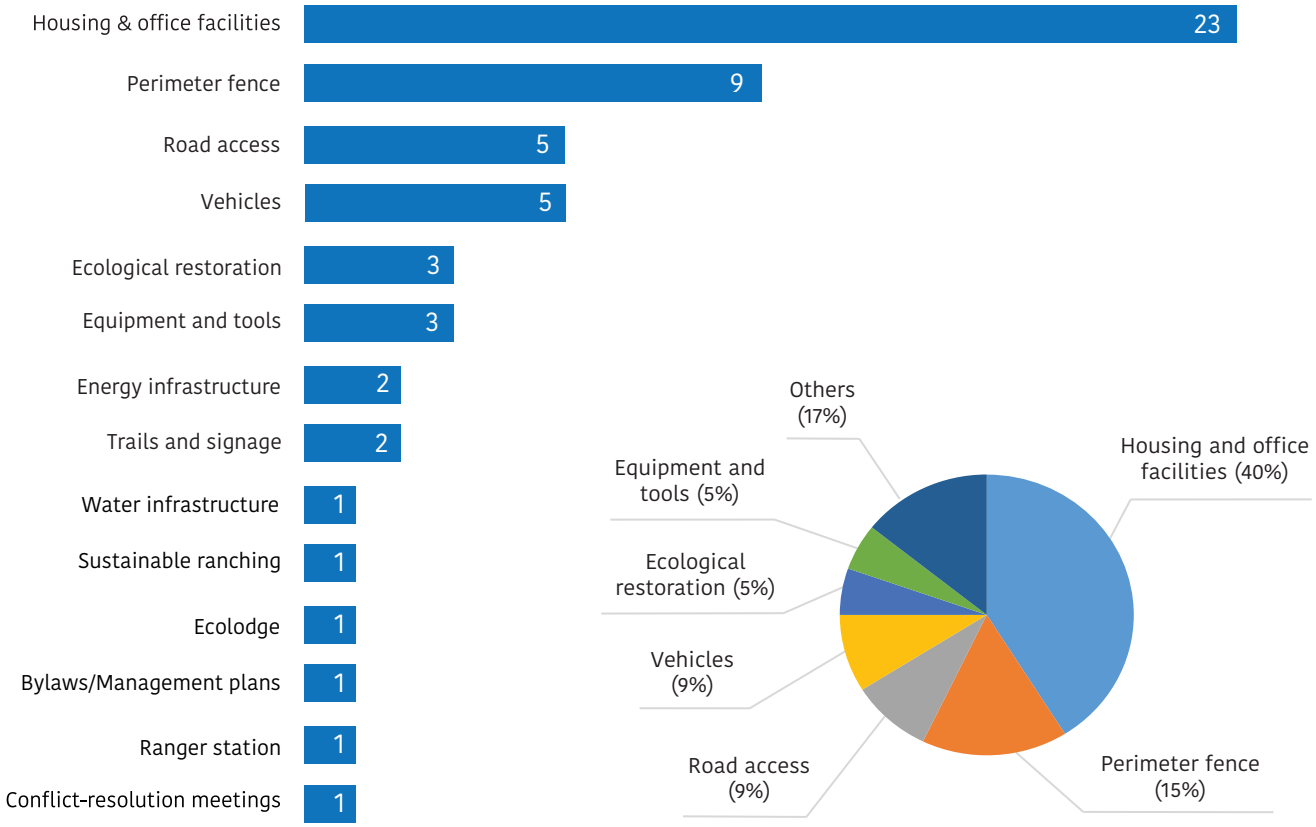


Figure 8. Survey results: reserve implementation costs. The most significant cost related to reserve implementation, presented as total number (bars) and percentage of responses (pie). The category 'Others' is expanded on the bar chart.

Housing and office facilities were the main costs related to the implementation of the reserve, followed by perimeter fences and road access.

'Strategies for reserve creation: building relationships of trust'

Marcy Summers

Alliance for Tompotika Conservation, Indonesia

Marcy is a conservation biologist from the United States. In the early 2000s, local people asked her help to prevent the extinction of their iconic Maleo bird, leading to the creation of the Alliance for Tompotika Conservation.

Since 2006, the Alliance for Tompotika Conservation (Aliansi Konservasi Tompotika, or ALTO) has worked with local communities to save Sulawesi's endangered mascot, the iconic Maleo bird, threatened by habitat loss and poaching of their large eggs. From starting with one site and just a few beleaguered nesting pairs, the ALTO-villager partnerships have ended poaching and facilitated an unprecedented Maleo recovery; Maleo numbers have more than quadrupled and we now protect three sites together with local communities. The key to building successful community-based conservation partnerships for ALTO has been a long-term commitment to the well-being of Maleos and their human neighbours.

In order to work effectively in the Tompotika region, it has been essential to build relationships of friendship and trust with local people. We are clear about our mission as a conservation organisation, and work hard to educate folks about the conservation issues. But we also make sure people know we care about them as people; we stop in sometimes just to say hello, with no agenda, we attend the soccer matches, the weddings and the funerals. While full ownership of the land is often the surest way to assure long-term conservation, it may not always be possible at first, so approaching the project step by step can be helpful.

Often, shorter-term (6 mos.–2 yrs.) conservation agreements to collaborate on a project are a simple, relatively easy way to build trust, especially when the shape of the partnership is still developing -- and starting with a 'low-risk' conservation agreement can often pave the way for a more permanent solution (long-term lease or purchase) once mutual trust and credibility have been established. Be aware, however, that the offering price to purchase a piece of land may need to be higher if the landowner has previously been receiving a good annual price for its lease.

It is essential to involve local people and government at every stage in the project, from conception to long-term management of the new reserve. In fact, the best way to achieve agreement on a land purchase or lease is often to negotiate through a trusted local advocate. Locals are likely to perceive the NGO at least somewhat as wealthy outsiders, but if a strong lifelong member of the community is willing to advocate for the project, an agreement that is fair and sustainable for everyone is much more likely to be achieved. Once the new reserve is established, then, involving locals in the conservation goals and day-to-day management will help strengthen the project for long-term roots and longevity in the community.

- ☑ Build relationships: It cultivates trust, credibility, and awareness of the conservation issues.
- ☑ Be patient: Roadblocks often are transformed, or new options arise, after time has gone by.
- ☑ Work in steps: Conservation agreements can be a simpler way to pave the way for a purchase or lease.
- ☑ Use advocates: Negotiating through a trusted member of the community can yield superior results.
- ☑ Involve local people at every stage, including management of the site after purchase.

'Strategies for reserve creation: leasing land for conservation'

Bou Vorsak

Nature Life, Cambodia

Bou has a Master's in Business Management, and 15 years of experience working for international organisations. He is the founder of NatureLife Cambodia, a BirdLife partner, and passionate about conservation.

Anlung Pring is a small protected area in Cambodia with only 217 ha (670 ac) but plays a significant role in supporting the vulnerable Sarus Crane. More than 30 percent of Indochina's Sarus Crane population winters in this wetland every year. This protected area needs to be enlarged to maintain its core integrity. With funding support from IUCN NL, NatureLife Cambodia has been working to lease the rice fields of local farmers around this reserve, to increase safe foraging habitat for the Sarus Crane. We can divide our leasing strategy into five steps:

Step 1: Investigate landowners to understand how their rice is cultivated. At this stage, we should not let the landowner know about our plan to lease their land, to avoid price speculation and misinformation. Landowners have provided us with information because they know us, but it would have been challenging for newcomers to collect this data.

Step 2: Organise a consultation meeting with all landowners to understand their perception of rice cultivation, conservation activities, rice market, and future land use plan.

Step 3: Illustrate pros and cons of rice cultivation. Landowners were invited to attend a local meeting to economically analyze their rice cultivations. Our team shared the result of annual net income received from their rice fields, a calculation based on information provided by each landowner in Steps 1 & 2. Landowners understood the economics behind the current land use and started to think about the alternative.

Step 4: Introduce our land leasing for conservation and negotiate to lease their land. We use the annual net income that each landowner received from rice cultivation as the start price for leasing negotiation. We conducted individual meetings with each landowner, also the ones not willing to lease their land. Our biggest challenge was landowners who did not agree to lease their land even though we tried hard to convince them. To avoid delays, we decided to move ahead to Step 5 with only nine landowners. The leasing price was agreed in principle before we organized the landowners' meeting to discuss and make the consensus on general leasing conditions. The final price was 25 percent higher than their annual income generated from rice cultivation; however, this price was 60 percent cheaper than the original leasing budget.

Step 5: Final consultations, land measurement, and signing agreements. The local authorities (protected area director and commune chief) were invited as witnesses of the agreement. The team also invited landowners who did not agree to lease their land. After they understood the conditions and final leasing price, and seeing the trust of their neighbours, the remaining landowners changed their mind and leased their land, too.

- ☑ Investigate the behaviour of landowners.
- ☑ Understand landowners' perceptions of rice cultivation and the conservation project.
- ☑ Illustrate the economical analysis of rice currently cultivated by landowners.
- ☑ Build trust on the project, and then negotiate land lease prices.
- ☑ Invite local authorities as witnesses to the leasing agreement.

'Strategies for reserve creation: ecological and financial viability'

Martin Schaeffer
Fundación Jocotoco, Ecuador

Martin had a dual career as an evolutionary ecologist and conservationist for 17 years. Now his focus is in protecting land and strengthening Jocotoco's conservation programmes.

Private reserves are an effective tool to achieve conservation objectives rapidly if they are set up and managed according to a long-term strategy. Minimally, this strategy lays out the ecological and financial viability of land protection beyond a single (human) generation. If it does, it greatly facilitates fundraising. Ecological viability rests upon protecting viable populations of species or healthy ecosystems under climate change scenarios. It thereby requires at least a basic understanding of the target size of a reserve, its possible connectivity to other protected areas, and how to monitor that the conservation objectives are met over time. Data on climate change and its impact on species and ecosystems should feed into the strategy wherever available. In the absence of such data, it is recommended to increase the elevational span of a reserve in order to mitigate the adverse impacts of climate change on small reserves.

Financial viability rests upon defining and securing the income streams that allow for effective long-term protection of a private reserve. A continued presence on the ground is typically required to avoid illegal logging, hunting, and invasions. Costs thus include salaries, reserve maintenance, some equipment, and minimal administration. While revenues from ecotourism contribute to the maintenance of most private reserves, such revenues are rarely the silver bullet to cover all costs.

Relying on additional income is prudent, particularly if it combines active and passive income streams. The two types of income vary in the degree of managing and fundraising required from being 'high in' (active) project-specific funding to 'low in' income generated from endowments (passive). All organisations, independent of their size, should include various people in developing and implementing their reserve strategies. It enables critical feedback but also safeguards the organisation against the loss of talent. Ideally, two people conduct land purchases. It allows for healthy competition and retaining knowledge even if a person moves on.

Succession plans are really important but often missing in small and even mid-sized organisations. Jointly with long-term financial viability, succession plans are key to ensure the effective protection of reserves over decades. The larger the organisation, the more flexibility it retains in its land-purchase programme. For example, allocating funding to distinct regions allows withstanding increases in local prices to some extent. Likewise, leapfrogging properties enables more flexibility in protecting further areas within the long-term reserve strategy compared to buying only contiguous areas.

- ☑ Clearly define a reserve's conservation objectives and why they are important.
- ☑ Plan for funding management costs over decades.
- ☑ Rely on several income sources.
- ☑ Retain flexibility in reserve expansion to mitigate escalating prices.
- ☑ Rely on long-term thinking and succession plans.

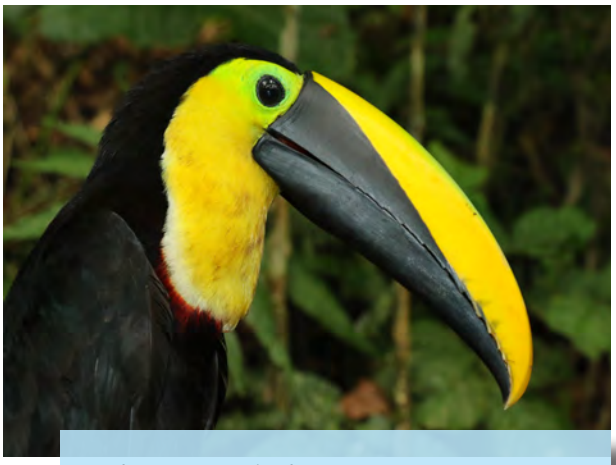
How to do a budget for land acquisition

Gathering basic information

Investing time into researching what information is requested by a donor is a key step toward a successful budget proposal. Carefully read the application criteria and guidelines to have clarity about all basic information. What is the maximum grant size? In what currency do you need to present your budget? Do you need to present the full budget, including confirmed co-funding? Overlooking this basic information is a negative sign, which in some cases can be penalised by the dismissal of a proposal. It is always a good idea to investigate what the average grant size has been over the years. If you cannot find answers on the prospective donor's website, the best solution is to ask. Organisations who ask questions are valued; it shows taking a proposal submission seriously.

Budget template

Most donors have a standardise budget template. When a format is not provided, ask for it or for guidance on what items to include in a budget proposal. Overall, open communication about the budget, both in the design and implementation phases, is highly appreciated and key to a transparent and long-lasting relationship with a potential donor. Bear in mind that it is in your favour to make the budget as general as possible, and thus clearly understanding what the donor requires can help you follow their guidelines while not over complicating the budget.



Choco Toucan in the Jama-Coaque Reserve (Third Millennium Alliance, Ecuador).

Listing items

Donors know that it is not always possible to come up with a land price beforehand. In this case, be transparent about that. If a land price is an estimate, explain how the number was calculated and what the actual price range is. Don't forget to include all associated costs related to land purchase, for instance, land tax, notary fees, and legal advice. Do not include lump sums that group a variety of undefined activities, such as 'Urgent management activities – euro 10,000'. If this amount is used for a ranger station, fencing, signage, and ranger equipment, provide a breakdown of items and specify the budget for each of them.

Include and specify salaries. Donors know that salaries need to be included to make sure that the work is done. If requested, you should be able to specify for whom the salary is, what percentage of his/her time is covered by this, and what the salary per unit is (i.e., per day/month/year). Consider including insurance, annual leave, social security contributions, and other taxes, if they are eligible by donor requirements.

Other items

Although you should include overhead costs — the indirect costs of a project — these should be generally lower than the usual 10 – 15 percent overhead used for smaller projects. These are, for instance, office rents, electricity and internet bills, bank fees, or salaries for accounting staff. The definition of overhead costs may differ by donor; therefore, if not clearly outlined in the call for application, ask the donor. Bank costs on any incoming transfer for the project can usually be included as direct project costs.

Do not forget to include 'unforeseen costs' (usually not more than 5 percent of the project budget), which will allow some flexibility to cover unexpected expenses. There are not many projects where everything goes as planned. However, note that spending this budget does often require the approval from the donor. Lastly, it is good practice to include a column with the budget in the local currency, as well as the currency from the donor country, and show the exchange rate used (plus source and date retrieved).

How to do a budget for land acquisition

Check your donor requirements

Allocate time to research what a donor does or does not fund. Every donor has different requirements and preferences; ensure you are aware of these before budgeting your proposal. Most importantly, check which costs are eligible, how to calculate salary rates, any co-funding requirements, and how to apply overhead in your budget.

Not sure? Ask!

If you cannot find answers on the website or in the call for proposal, the best solution is to ask the donor directly.

Clear listing of items

Write a budget with a clear list of items. For every item, break down the costs into more detailed expenditures or activities. Do not forget to include salaries and overhead.

Be transparent

Budget for acquisition or lease of land is sometimes an estimation. Be transparent about this and other budget approximations with your donor by providing a summary of the assumptions involved in drawing up the budget.

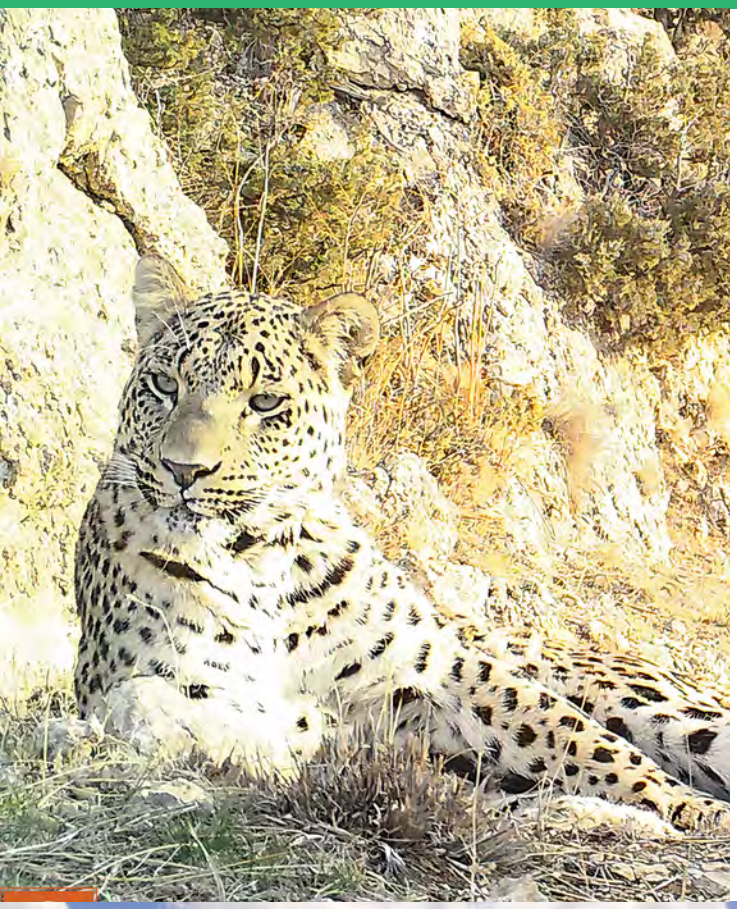
Aligning budget and proposal

Ensure that costs and activities outlined in the budget match the information you included in the project proposal. If something is unclear in the budget, a donor should always be able to answer such questions through the project proposal.

Other items

Don't forget to include costs that are not directly related to tasks' or activities' expenditures, yet crucial to support the expenses of your project. These can be, for instance, overhead (indirect) or 'unforeseen' costs.

STEP 5 - ECONOMIC SUSTAINABILITY PLAN



How are you going to maintain the reserve?

The Caucasus Wildlife Refuge, the first privately protected area established in Armenia, provides safe habitat for Caucasian Leopards and their prey.

How are you going to maintain the reserve?

Reserve economic sustainability is possible, but it requires creative thinking, a long-term vision, and wise planning. How can you guarantee the reserve will have financial support to continue functioning forever? It really is quite the challenge. It is best to start considering how you will cover the management costs as soon as possible and to make sure part of these costs are included in the land-purchase proposal. This section is about preparing a thoughtful economic sustainability plan.

Although there are different viewpoints and measures as to what constitutes a sustainable project or private reserve, it is widely recognised that being continuously dependent on international donations, even to a small degree, is not a sustainable approach. John Fitzpatrick, when at Cornell Lab of Ornithology, stated for their programmes 'nothing is sustainable until there is a 25x project cost endowment'. We think sustainable is a guaranteed level of revenue adequate to support the preserve for the long-term future. For smaller organisations, other approaches such as building a strong fundraising team, might be a better strategy than an endowment.

Revenue sources for private reserves

1) Ecotourism
2) Lodging and food
3) Entrance fees
4) Sales
5) Sustainable resource extraction (timber, forest products)
6) Sustainable agriculture (ranching, agroforestry, apiculture)
7) Forest exchange programmes
8) Long-term programmes (nest boxes, habitat restoration)
9) Short-term activities (tree planting, training)
10) Educational programmes with schools
11) Research programmes
12) Volunteer programmes
13) Courses, workshops, events
14) Committed long-term individuals (membership, 'Friends of...')
15) Committed long-term organisations (NGOs, sponsorship)
16) Government support (national, municipal)
17) Environmental compensation (from infrastructure projects)
18) Endowment fund
19) Payment for ecosystem services (carbon agreements, water resources).

Diversify your income sources

It is extremely difficult to predict and prepare for the future, especially after the COVID-19 pandemic has taught us that unthinkable things can happen. How do you prepare for absolutely everything?

The trick would appear to be to diversify your resources. This is hardly new to the investment or business world. By spreading your income into different areas, you reduce the risk of losing it all. By splitting your income-generating activities, if it is a small percentage of the total, it is far easier to raise those funds or cover the losses with a contingency fund. However, although it's common sense that you shouldn't put all your eggs in one basket, developing activities that generate income is not a simple task.

The following steps can help you identify potential funding sources to compose an economic sustainability plan.

Map potential funding and income sources

An evaluation of potential sources of income depends very much on your reserve's location and natural characteristics. Does it have enough natural beauty and attributes to attract the general public (large vistas, waterfalls, clear flowing rivers) and ecotourists (charismatic and rare wildlife, hiking and trail infrastructure)? What is the type of access? Is it close to a city or international airport? Are there endangered or endemic birds, or charismatic megafauna such as large cats? Does it have previously disturbed areas where low-impact cattle or agroforestry could be possible?

Based on the results of our global survey and coupled with the collective experiences of our network of reserve practitioners, we have selected 19 income-generating activities that have been profitable for private reserves, and thus may inspire more diverse forms of promoting your economic sustainability.

How are you going to maintain the reserve?

Prepare an economic sustainability plan

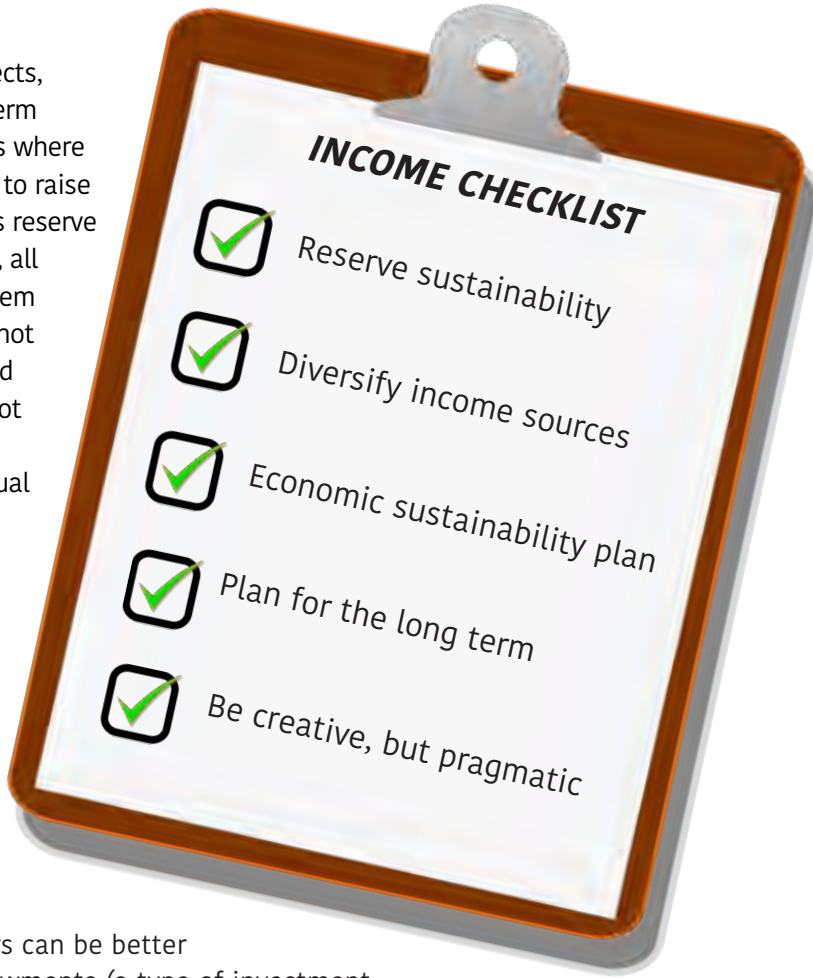
The viable sources of income that you envision as promising, according to your capabilities and the reserve's characteristics, should be organised as a fundraising plan, as part of a broader nine-year economic sustainability plan (see 'How to do a nine-year sustainability plan', p.29), which is reviewed by the team every three years. This should give you enough time to see if an element is working, or whether you should change plans. Review where you are now, and then design a combination of income-generating activities of what you think would be a plausible sustainable model for your reserve.

We suggest you always have at least six slices of your 'revenue pie' with items that should be fairly reliable and constant, but more slices are fine and desirable. Ideally no slice should be more than 25 percent of the overall revenue, unless it is very secure.

Plan for the long term

Although it's OK to have a few short-term projects, we suggest you focus on developing support for long-term programmes, at least for a larger slice of the pie. This is where you need to think about donor fatigue and avoid trying to raise funds for items each year that will bore donors, such as reserve guard salaries and reserve maintenance (unfortunately, all items that are essential to protect a reserve). The problem with these activities is that, even if done well, they do not show clear conservation products or outcomes. It is hard to show how many trees were not logged, or animals not hunted because of a reserve guard.

Long-term planning and actions show a continual increase over the years, where each year builds to a final long-term goal that can cover the salary of a park guard or other reserve staff. Activities like assisting reproduction, such as nest boxes for birds, where the population can be seen to be increasing, are most attractive. Other attractive long-term projects are related to rewilding (reintroducing locally extirpated species to restore ecosystem functions and services), endangered species protection, and habitat restoration.



Be creative, but also pragmatic

Some items that are less attractive to donors can be better approached with a long-term vision. Items like endowments (a type of investment fund that generates yearly revenues) or contingency funds (readily available reserve funds saved for unforeseen or emergency circumstances) are highly desirable for reserve long-term management and can be slowly built over the years.

You might want to consider opening separate accounts for endowment, contingency, and project funds, with the clear rule that these are not to be spent filling budget holes of other projects. Best practices include starting a small, cumulative endowment while keeping a contingency fund of at least 50 percent of your reserve's yearly budget. If things go badly, you will have at least six months to try and raise funds to cover this gap. Instead of trying to raise a huge amount of funds to start an 'ideal' endowment fund, it's a more doable long-term goal to raise this funding by saving a little bit each year.

What are the main monthly expenses to maintain a reserve?

To help donors and aspiring reserve owners better understand the costs involved in the day-to-day maintenance of private reserves, participants were asked to list and rank the five most significant expenses for the monthly operation of their reserves. When considering only the top ranked monthly expense, 'salaries for reserve staff' was elected by 81 percent of the respondents. The weighted average of the top five expenses ranked by participants demonstrates that this is the highest-ranked expense for reserve operation, followed by overall maintenance (fences, trails, buildings), third-party services, insurance policies, and internet provision (Figure 9).

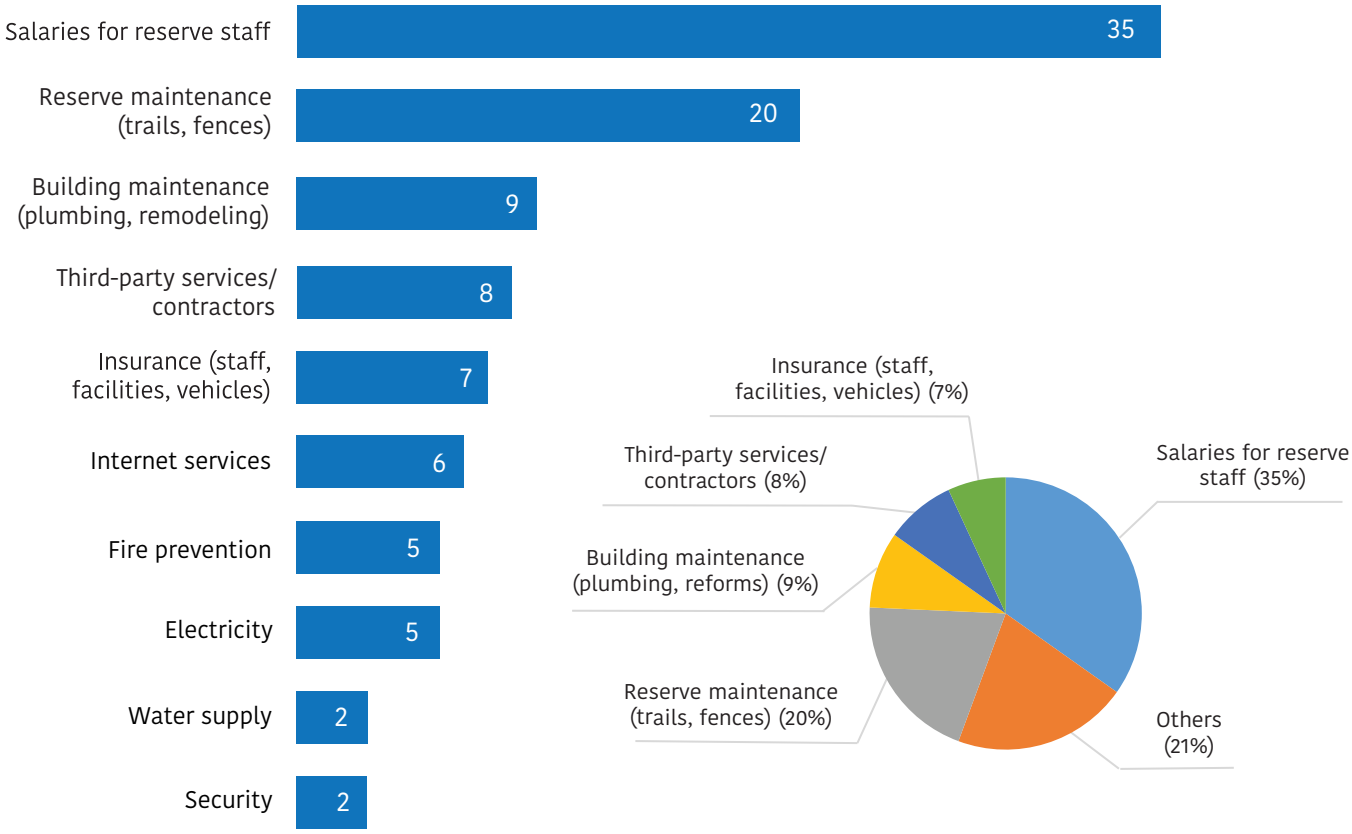


Figure 9. Survey results: most significant operational expenses. Weighted average of the five main expenses listed by the respondents for the monthly operation of the reserve, in percentage. The category 'Others' is expanded on the bar chart.

Salaries for reserve staff is the most significant monthly expense for 81 percent of the respondents.

What sources of income are expected to be developed?

In order to be able to support their monthly operational requirements and to reduce their dependency on continuous fundraising, private reserves are expected to develop alternative sources of income. To evaluate how reserve owners and managers were planning to make their private reserves more economically self-sufficient, participants were asked to list up to five income-generating activities that they would expect to develop in the next five years. Responses were grouped into 15 categories of activities, and ranked according to the number of times they were mentioned (Figure 10). Ecotourism and associated activities, mentioned by 27 respondents, were the most cited expected sources of income, followed by payment for ecosystem services (mostly referring to carbon-trade agreements), and endowment funds.

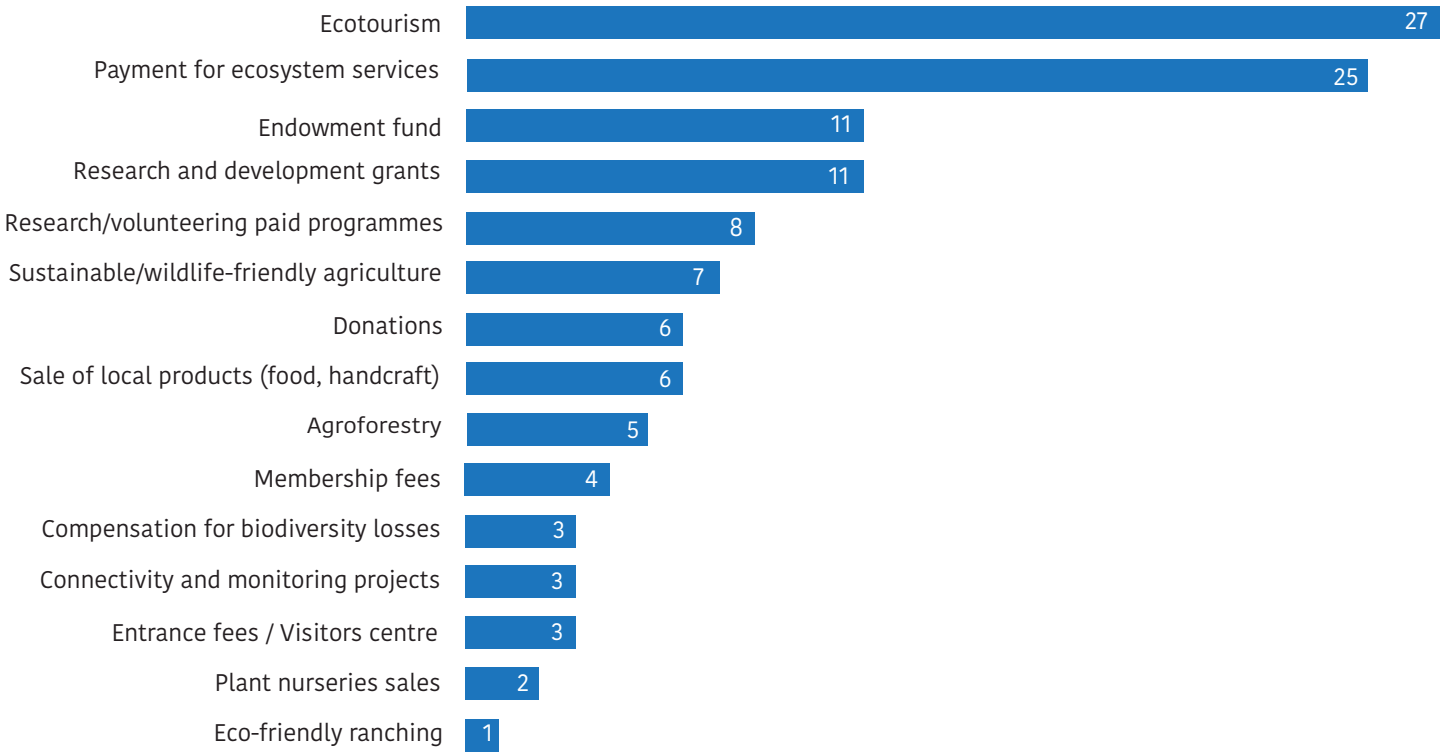


Figure 10. Survey results: expected sources of income. Income-generating activities expected to be developed by managers to help maintain their reserves. Bars refer to the number of mentions for each activity. Respondents could indicate up to five activities.

Ecotourism and associated activities were the most cited expected sources of income, followed by payment for ecosystem services.

'Fundraising ideas: nature tourism'

Tsovinar Hovanissian

FPWC, Armenia

Tsovinar is an ornithologist with 10 years of working experience in the NGO sector, as well as a researcher and PhD applicant of the Zoology Institute, National Academy of Sciences, Armenia.

Privately protected areas are a new nature-protection system in Armenia and remain little known and less promoted among the wider public and under-represented in the national protected area system. Without official protection status, PPAs target to conserve and protect the viable ecosystems and threatened wildlife and are important nature corridors between the national protected areas. The Caucasus Wildlife Refuge (CWR) is the first privately protected area, established in 2010 aiming to conserve the vulnerable ecosystems and threatened biodiversity in Central and Southern Armenia. The area hosts various endangered species, including the iconic Persian Leopard, Brown Bear, Eurasian Lynx, Armenian Mouflon, and Bezoar Goat. Moreover, CWR is a perfect site for observing rare and endemic butterfly and bird species. CWR offers diversified and personalised tours and packages of horseback riding, wildlife/bird watching, hiking, mountaineering, camping, and caving.

Ecotourism is the fastest growing sector in Armenia's tourism market. The interest in nature is growing among the wider public favouring outdoor activities to city life. While Armenia is well known and famous for its cultural heritage — ancient megaliths and old churches and monasteries, it remains less appreciated for its unique and rich biodiversity and wilderness places.

Hiking is the most popular outdoor activity among local and international visitors, attracting different social classes and ages. Additionally, this activity is one of the cheapest ones and does not require special knowledge and experience. CWR offers fully equipped hiking trails with different difficulty ratings and professional guides to conquer the most difficult and the highest peaks. Moreover, we actively work with leading hiking agencies and tour leaders. Along with hiking, outdoor activities such as caving and rock climbing are getting popular.

The culture of bird and wildlife watching is little known and a new activity in Armenia. Birdwatching requires time, knowledge of birds, some experience, good accompaniment or guidance, and equipment. All these factors make it less attractive and unpopular among the local visitors. Most of the birdwatchers arriving in Armenia are from European countries aiming to observe the regional endemics and rare bird species. Wildlife and birdwatching challenges are the lack of local professional guides and infrastructure, such as hides and towers. With the growing bloom of ecological tours in Armenia, CWR has potential to meet the needs of ecotourists and provide high-standard services. Thus, our experience has been showing that ecotourism can be a significant strategy to help maintain, advertise and develop our privately protected area.

- ☑ Ecotourism can contribute to the promotion and maintenance of your privately protected area.
- ☑ Remote and on-site patrolling can provide information about species distribution, besides helping to reduce poaching.
- ☑ Create local capacity to support ecotourism activities, such as guides, rangers, educators.
- ☑ Develop supporting infrastructure for visitors, such as bird hides, towers, and visitors centres.
- ☑ Promote habitat restoration that attracts and sustains wildlife.

'Fundraising ideas: payment for ecosystem services'

Roberto Pedraza

Grupo Ecológico Sierra Gorda, Mexico

Roberto is a full-time conservationist and wildlife photographer. As a photographer, he has discovered several new species to science and uses his images as tools for conservation.

The Sierra Gorda Biosphere Reserve (Querétaro, Mexico) is mostly private land (70 percent), while the remaining 30 percent is owned by local communities. The Grupo Ecológico Sierra Gorda has created a 7,500 ha (18,500 ac) private reserve network, supported by the Land Acquisition Fund (IUCN NL), the World Land Trust (UK), and other partners, to protect temperate and cloud forests. Being part of the local society since 1987, we have been able to focus on conservation instead of conversation. It is important to have clear goals, knowledge, and data to aim your actions to specific habitats and species. Just because we design corridors and map conservation areas, protection does not happen automatically in the field. And wildlife knows it.

To ensure not just 'conservation islands' you have to work on a larger landscape, and it is imperative to incorporate surrounding landowners and their properties. As long as forests do not provide an economic return to their owners, they will keep being destroyed. Payments for environmental services have been extremely effective in reducing and preventing forest fires and land use changes. They promote forest regeneration in areas that were cleared for agricultural purposes and in over-grazed forests, ensuring an important removal of CO2 from the atmosphere, in addition to other environmental services such as water catchment, temperature regulation, and biodiversity.

Forests provide vital services to life on Earth and to our species, so it is necessary and fair to pay forest owners for these services in exchange for conservation. We have managed to designate CO2 capture as a service, with an economic return for forest owners, setting aside the complicated rules and out-of-place international protocols such as Kyoto or REDD projects.

With solid data from local forests, we managed to develop subnational public policies, such as the state environmental protection programme 'Sustainable Development and Environmental Program for the State of Querétaro' that collects funds annually through a small CO2 tax to car owners in the state, and directs it to local landowners for protecting their forest through natural regeneration. Our own programme, Carbono Biodiverso, offers to the public and companies a simple way to offset their emissions while they protect local biodiversity. As well with the World Land Trust and its Carbon Balanced Program, where now 5,520 ha (13,600 ac) of additional forest ensures the connectivity of the private reserves, and so the Jaguars and Black Bears. It has clearly added an extra protection layer to the reserves, as it increases the protected area.

- ☑ Begin with a small area as a private reserve, and grow as you gain experience and means.
- ☑ Add protection layers working with neighbours, increasing your impact and effectiveness.
- ☑ Good pictures can 'sell' your project. Find a volunteer that can take photos and videos.
- ☑ Without value, forests will keep being destroyed. Find out about potential payment for ecosystem services (PES) schemes.
- ☑ Prepare for a long-term commitment.
- ☑ Find out potential associates and partners.

'Funding ideas: carbon projects in communal lands'

Fábio Olmos

Permian Global, Brazil

Fábio is a biologist and conservationist, director of Permian Brasil and co-leader of the South American Team at Permian Global.

Voluntary markets buying carbon credits produced by projects promoting the conservation of carbon-rich ecosystems are on the rise as more companies embrace sustainable policies, while smart carbon taxes (as in Colombia) and regulated carbon markets created by governments gradually create demand for more projects. Forest carbon projects are still too sensitive to economies of scale due to certification and auditing costs and, currently, viable only in fairly large areas. One approach is to pool several areas together, as in carbon projects focusing on conservancies — communal and state lands that communities have the rights to use — as seen in Tanzania, Mozambique, and Colombia.

In Brazil a large percentage of carbon-rich forests are inhabited by communities who own the rights on their ecosystem services. These areas include not only Indigenous lands, but also public lands given in concession to local communities as in extractive or sustainable-development reserves. Previous experiences have shown that partnerships between local communities and companies do work and paved the way to the project developed by Permian Brasil (the local branch of Permian Global) at the Rio Cautario State Extractive Reserve in Rondônia. The reserve is in a high-deforestation part of Amazonian Brazil where other protected areas have lost that status after being invaded and cleared by 'land sharks' and cattle ranchers, demonstrating the need to go beyond just issuing a law and making conservation an attractive business.

At Cautario, the community has been instrumental in avoiding deforestation and, after a transparent selection and community consultation process organised by the state environment agency (SEDAM), they chose Permian to develop a forest carbon project at the reserve aiming at zero illegal deforestation and zero commercial logging. The 86 families currently enrolled in the project have the rights to exploit the natural resources of the reserve based on a management plan produced by SEDAM in a participatory way.

Our forest carbon project rewards the families for complying with this plan and curbing illegal deforestation by receiving monthly payments (c.US$200/family) and by direct investment into an economic development programme the community decides where the money is spent. Those payments, starting in September 2020, have been a big help during the pandemic. Next steps are the hiring of community rangers and firefighters and putting the first infrastructure on the ground. And once the actual carbon credits start to be generated and sold, the profits will be shared with the community.

- ☑ The bigger, the better. Pooling resources and areas are more attractive to carbon projects.
- ☑ Proactive government agencies bridging communities and private sector are key.
- ☑ Communities must have the rights on resources and ecosystem services, and the final word on their use.
- ☑ Management plans and other tools setting rules for land use are a great starting point.
- ☑ Benefits must be clear and start flowing from the start.
- ☑ Carbon projects are not that easy to understand; communication is key.

How to find funding sources

The best place to start with fundraising for your conservation programme, which will include land purchase, is to speak with experienced people (normally in nonprofit organisations) who have already gone through the experience and ask for their advice. We are a conservation community who is willing to put in our time to assist other conservationists. The people and organisations quoted in this manual would be a good place to start. Search for individuals and groups that have created a reserve in similar circumstances to yours. Research the websites of larger organisations that promote or have already purchased land for nature conservation purposes. Very often these organisations publish the names of their donors on the 'partners' or 'funders' pages.

Existing online grant databases can save you a lot of time and effort when looking for specific types of funding sources, although most of them require a paid subscription. There are some online services that offer free comprehensive databases (for example, grantmakers.io for North American donors), while others cover a wide range of grants for developing countries for a small annual fee, such as terravivagrants.org.

The Sarus Crane is a flagship species that helps NatureLife Cambodia raise funds for reserve protection.

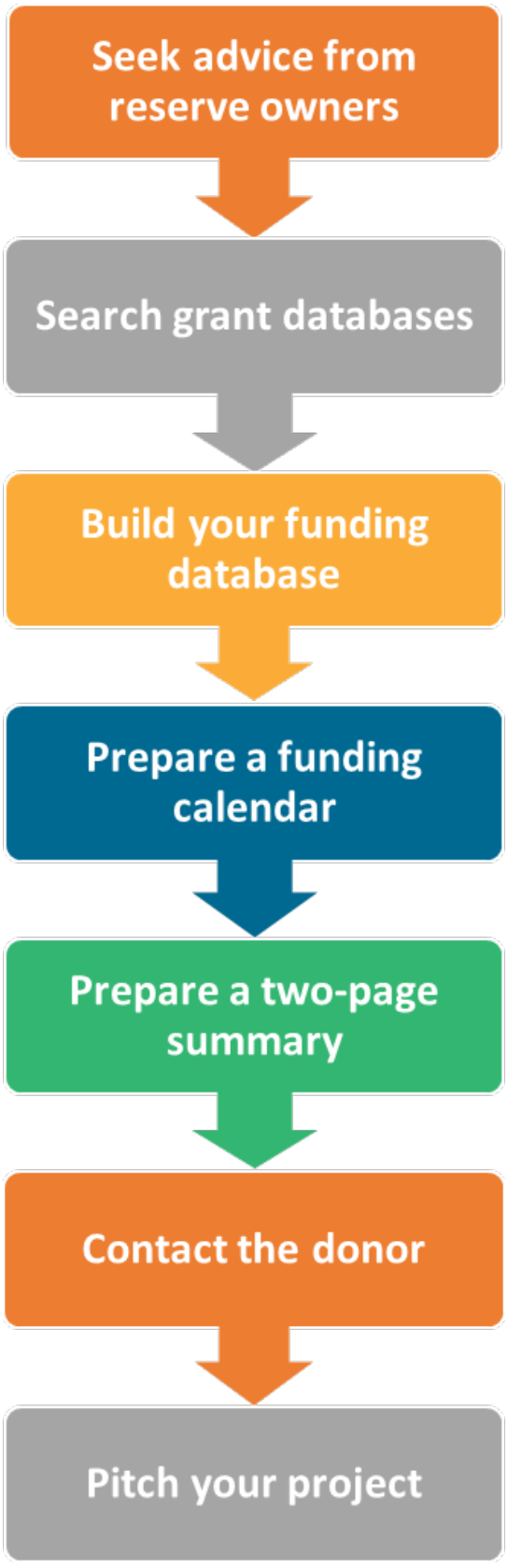
After doing thorough online research, you should be able to build a simple funding database listing all the opportunities that are eligible according to your project's goals and your organisation's characteristics. The database can be a table or spreadsheet that is continuously updated with information on funding sources, values, requirements, and deadlines. Based on this list of potential funders, a calendar of funding proposals can be built according to priorities and team capacity.

Via social media you can 'follow' interesting organisations that fund land purchase to check when new calls for proposals are announced. In addition, you will get a good impression of the funder's interests and objectives. Be ready to respond quickly when you spot an opportunity. Sometimes deadlines are tight and you need to fill out application forms and budget sheets. If you have questions, always contact the donor for clarification. Some funding opportunities are on a rolling basis and don't have specific deadlines. If an organisation or individual donor is interested in your land purchase project, try to reach out to them by requesting a meeting or sending a summary of your project. Be prepared to answer questions and provide additional information upon request. Funders have their own criteria and priorities and screen proposals well before they step into a funding relationship.

Make sure the world knows about your intentions and your project. A two-page summary of your project can be used for communication purposes (see 'Cultivating donor interest: preparing a two-page proposal summary', p.57). Keep the pitch short and concise. This will help grasp readers' attention rather than confusing them with lots of information. Ensure that your pitch contains an appeal for support. You can also publish it on your website, or place the pitch on crowd-funding platforms.

Conservation programmes that include land purchase are in growing demand by donor bodies that support land acquisition. However, be aware that some donors only cover land purchase costs and are reticent to support protection costs. Thus, while considering every funding opportunity, review if they will cover overhead, vehicles, restoration, maintenance, and sustainability development activities.

How to find funding sources



Speak with experienced people (normally in nonprofit organisations) who already have gone through the experience and ask for their advice. Search for individuals and groups that have created a reserve in similar circumstances to yours.

Search online grant databases to find available funding for land acquisition and reserve management, such as grantmakers.io or terravivagrants.org.

Select the funding opportunities that are aligned with your projects and list them in a database with funding sources, deadlines, and values.

Based on the funding opportunities identified in your database, prepare a calendar with funding deadlines, the time and team needed to build the proposals and acquire all the supporting information for the donors.

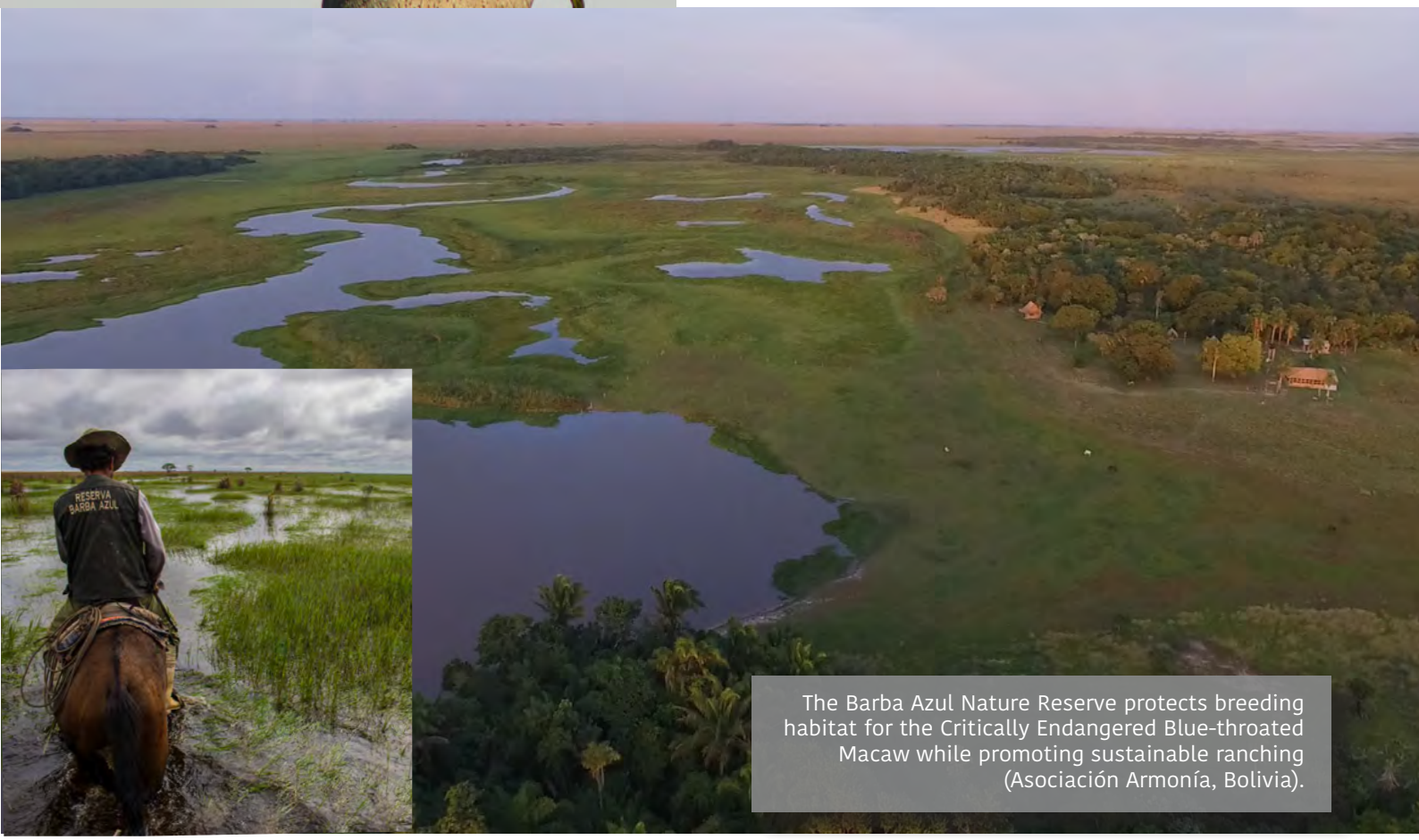
Prepare a two-page summary of your project for communication purposes, including your appeal for support.

Contact the donor organisation for clarification if you have questions. Do not hesitate to reach out to funders. Request a meeting to explain and pitch your project.

Pitch your project on as many occasions as possible, using various media and networks.

STEP 6 - LAND ACQUISITION PROPOSAL

How do you prepare a land acquisition proposal?



The Barba Azul Nature Reserve protects breeding habitat for the Critically Endangered Blue-throated Macaw while promoting sustainable ranching (Asociación Armonía, Bolivia).

How do you prepare a land acquisition proposal?

The fundamental difference in creating a proposal for land acquisition, as opposed to other conservation projects, is that you usually do not have all the exact information beforehand, because you can only advance negotiating with a landowner so far without actually having the money to pay them. And you don't want to be in a situation where you have no negotiation power because they know all the details of your support.

Donors who support land acquisition are experienced in the incomplete information and potential problems that can occur in a land negotiation. Our advice is to try to be as honest and transparent as possible about the situation to the donor organisation. You are both taking a calculated risk, so you need to make sure to gather as much information as possible for the donor. This can include the financial situation of the landowner, reputation, reason for selling, and even criminal records.

On the island of Borneo (Sabah, Malaysia), Hutan is creating private reserves to safeguard vanishing Orangutan habitat.

Preparing a land-acquisition budget

Different donors have different budget formats, but if they are open to your format, we suggest you break up your budget into activity parts. Remember, you are going to present to a donor interested in land purchase your conservation programme proposal that includes land purchase. It is good to have some costs shared throughout the proposal, like salaries, travel, materials and office costs, that can be separated into different sections of a long-term programme. This way, donors more easily could decide how they might want to partition support for your conservation program.

A land-acquisition budget usually follows the same format of a conservation programme budget. We recommend you try to be concise and not too specific, to give yourself flexibility. If the donor does not want to know how many hours each staff person will be paid, then no need to complicate those budget lines with extra information. Do make sure, however, that you can specify them if requested (see 'How to do a budget for land acquisition', p.39).

Checking for land title and former taxes

This can be extremely important, yet complicated in some developing nations. Our experience has shown that the more reluctant a landowner is to present you all the paperwork on the property, the more likely there will be a land-title problem. You don't want to discover this when the land-purchase negotiation is advanced. This can be highly variable. While some landowners will openly give you copies of everything, in other cases we have found land-title problems more than 100 years old, and requiring years of legal review.

However, don't let these problems stop you from protecting an area. A few years fixing paperwork problems is nothing compared to the value of protecting an area forever. If you suspect the paperwork might not be in order, it's advisable to request a small grant to evaluate the legal situation of the land before advancing on a full proposal.

How do you prepare a land acquisition proposal?

Highlighting your conservation targets

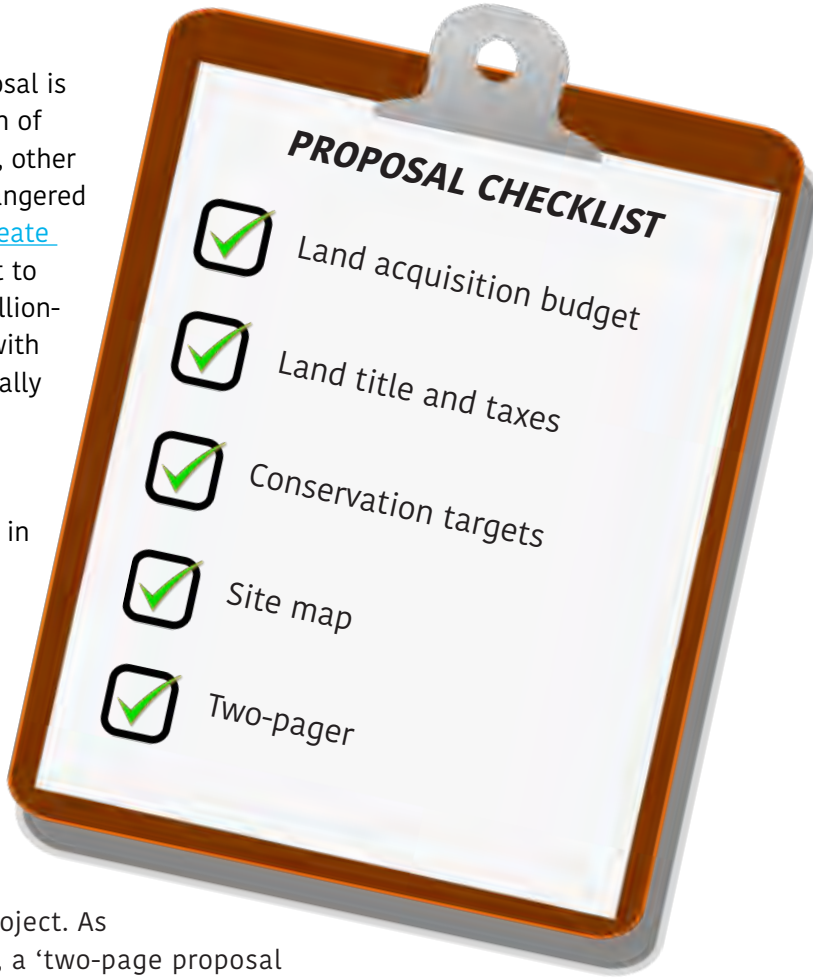
Don't undersell the protection value of your reserve. In many biodiverse-rich tropical countries, remaining habitats hold many species potentially threatened with extinction, not just mammals and birds. Make sure to note threatened species and habitats using evaluation systems like the IUCN Red List, National red lists, IBAs, KBA, AZEs, Ramsar sites (see 'How to highlight your conservation targets', p.9).

Also, consider including in your proposal wildlife recovery and ecological restoration programmes, and what kind of population increase you expect to see in a steady-state habitat. Don't forget about rewilding, the potential for extirpated species to naturally recolonise or be reintroduced to the areas that are being recovered. It is amazing how many species of high conservation interest potentially could be in present reserves once fully restored, especially large mammals.

Creating a site map

One key component of a land-purchase proposal is a site map that clearly shows the geographic location of the reserve and highlights its boundaries. If required, other useful information such as water resources and endangered habitats and species can be included (see 'How to create maps for funding proposals', p.59). You do not need it to be fancy, but you want it to be easily understood. Million-dollar land-purchase proposals have been accepted with simple, clear Google Earth maps available online. Ideally the map you present on your proposal would also be accessible as a Google Earth file (.kmz) that opens a map with simple labels, noted features, and the property outline polygon. Make sure all the titles are in English and cleaned of excessive information.

Don't worry if you do not have geoprocessing capacity to make elaborate maps with scales and coordinates; we have seen proposals with fancy GIS-produced maps where the donor ended up just asking for the Google Earth (.kmz) file



Preparing a two-page summary

A two-pager is a concise summary of your proposal with key aspects of your conservation project. As highlighted by Holly Robertson in her testimonial, a 'two-page proposal summary is an effective way to initiate contact with a prospective donor, introduce a project and request the opportunity to share more information, or submit a full proposal.' She provides tips on how to prepare a successful two-page summary and discusses the key elements that are generally of most interest to donors: an attention-grabbing title, a statement of need, a description of goals and activities, a general time frame, a brief budget, a brief description of your organisation, whom to contact for more information, and visuals (see 'Cultivating donor interest: preparing a two-page proposal summary', p.57).

What are the taxes and fees related to land acquisition?

At this stage of the survey, participants were asked to enumerate what government taxes and fees have to be considered during the land acquisition process in their countries. The responses were as varied as the types of taxes found in all spheres of government. The majority of respondents highlighted the importance of considering municipal taxes, especially land-title transfer taxes, and the associated notary office and legal fees. The proportional number of mentions for the most cited taxes and fees are illustrated in Figure 11. The survey has shown that taxes and fees can vary significantly — from one-time payments (for example, land-title transfer) to recurring expenses, such as annual property ownership taxes — and have to be considered for each specific country and municipality.

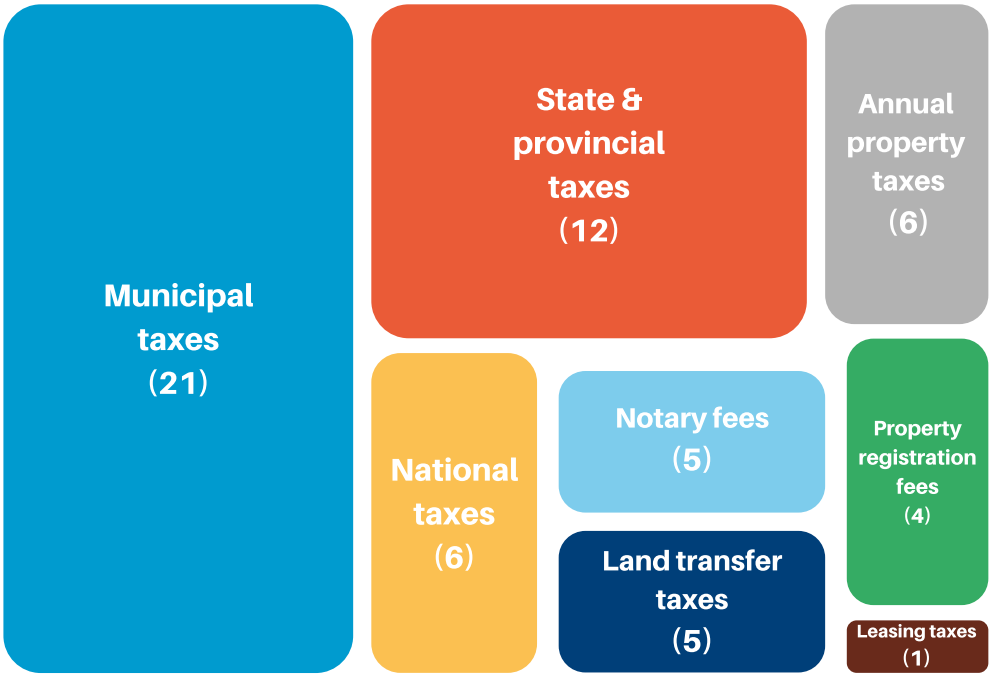


Figure 11. Survey results: taxes and fees related to land acquisition. Respondents were asked to list the existing taxes and fess that have to be taken into account in their countries when purchasing land. The 'tree map' chart refers to the proportional number of mentions for each tax and/or fee listed.

Make sure you know all the taxes that have to be added to a land-purchase proposal, including land-title transfers and registrations.

Taxes and fees related to land acquisition

Because land taxes can represent a significant amount of funds during land acquisition and reserve implementation, they have to be taken into consideration as part of reserve creation and management proposals. In some countries, nonprofit organisations and community groups can be granted tax exemption by municipal or national authorities. Based on the survey responses, we've selected short testimonials from reserve owners and managers to illustrate some of the key aspects to be taken into consideration in different countries when researching for land taxes and fees to be included in land acquisition proposals or management plans.

Oasis Araripe Reserve team, Aquasis (Brazil)

'In Brazil, the most significant tax to consider during land acquisition is the land title transfer tax. It represents 2 to 3 percent of the land value, but can be tricky to estimate, since each municipality is entitled to determine not just percentages, but also how the land price is evaluated. To reduce fraud, some municipalities avoid calculating tax values based on land sales receipts, and have their own systems to estimate land value. After we purchased our reserve, we were surprised to find land title transfer taxes much higher than expected, since the municipality had estimated a land value greater than what we had paid. Thanks to our team's persistence, the "public utility" nature of our conservation work, and local authorities' support, we managed to get formally exempted from these taxes, for this and future purchases.'

Rosamira Guillen, Fundación Proyecto Tití (Colombia)

'As for taxes, for the land purchase negotiation you need to keep in mind 1) Notary Fees (paid 50 percent and 50 percent seller and buyer), 2) Tax retention (paid by whoever sells), 3) State taxes (paid by buyer), and 4) Title registration (paid by buyer). They usually go by percentages of the sales price, and it may vary from state to state within Colombia. The main recommendation would be to find legal advice or consult with local authorities before signing the land purchase agreement, to make sure you have the resources that are needed to complete the negotiation. In our experience, legal advice fees and taxes represent between 5 percent to 7 percent of the total price of the property, but this can vary depending on local context and property situation. After transferring the land title, keep in mind that property taxes are paid once a year, based on the extension of the land, and the property's appraisal stated by the national authority (IGAC in Colombia). However, there may be additional charges by the state or by the municipality. In summary, there are some basic taxes and fees nationwide to be considered, but there may be some additional ones depending on where you are located.'

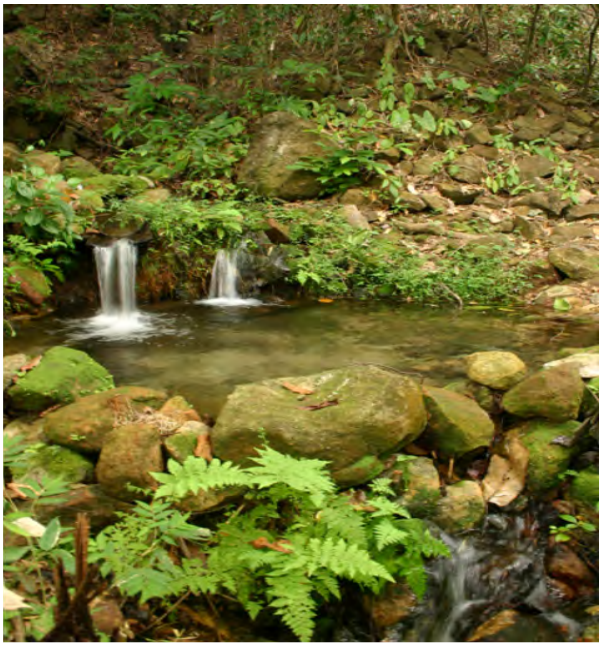


Figure 12. Protecting ecosystem services can facilitate tax exemption. The Oasis Araripe reserve received (land-transfer title) tax exemption from the municipality for protecting water resources.

Lou Jost, Ecominga (Ecuador)

'Land taxes could be a tremendous financial drain, but at least in Ecuador, land destined for conservation and owned by a nonprofit are exempt from property taxes. This exoneration doesn't happen accidentally though; it takes a lot of staff time to get the taxes forgiven. Additionally, there are sizeable and highly variable costs involved with obtaining the titles to land. Notary costs, tariffs, and legal fees can be between about 10–20 percent of the land costs, but the amount varies from one place to another; even neighbouring towns can have wildly different fee structures.'

'Land acquisition as part of a conservation programme'

Bennett Hennessey

Asociación Armonía, Bolivia

Part of Bennett's American Bird Conservancy Brazil programme work is helping partners make their reserves more sustainable, while also trying to create two sustainable reserves for Asociación Armonía in Bolivia.

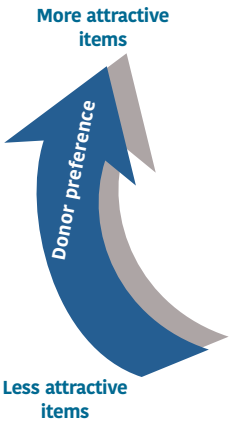
Making a land acquisition is an infrequent occurrence, often one of the largest grants a small NGO will receive. This large grant is an important opportunity not to be missed. Try to envision your reserve in the future and how you will cover those costs. You will not be just buying land, so don't present your programme as such. Present your proposal as a conservation programme, which includes land acquisition as one of its parts. Think of this as a business negotiation. What do you need to do for your conservation programme, and what parts of the proposal will the donor support? I strongly advise to keep the conversation on the proposal total budget focused on the needs of your conservation programme; try not to allow the negotiation to move just to numbers of hectares/acres and price.

One important opportunity here for your conservation programme is to gain financial support for less attractive items by coupling them with the extremely attractive action of land acquisition. In your proposal design, consider fundraising realities. It is far easier to add into a large budget proposal less attractive items as they are only a small part of the entire programme. A clear example is a vehicle, as illustrated by the figure below which shows donor preference trends for 2022. You do not want to be three years in development and discover that you really need a tractor to create fire breaks. Such items are often very necessary, but completely unattractive to donors as a single item on a proposal.

Be aware of the present funding attractiveness trends. I recommend in your conservation programme mixing the larger, more attractive land purchase item with smaller (~25 percent of your budget), less attractive items. Take advantage of this large proposal request to bring in multiple donors to support your conservation programme. Having multiple donors/foundations involved in a conservation programme is beneficial in the long term. More supporters involved in the creation of a programme will open the possibility for wider support, promotion and contacts. Also, large grants with multiple donors show faith in your programme and your organisation's administrative capacity and will help you raise more funds in the future.

Donor preference trends

- Land acquisition
- Reforestation
- Threatened species actions
- Threatened species research
- Environmental education
- Meetings/workshops
- Tourism development
- Reserve infrastructure
- Endowments
- Reserve management
- Contingency fund
- Vehicles



- ☑ Present your proposal as a conservation programme, which includes land acquisition as one of its parts.
- ☑ A large land acquisition is the perfect opportunity to raise funds for less attractive reserve needs included in your conservation programme.
- ☑ Negotiate proposal support; don't be tempted into accepting only easily fundable elements of your proposal.
- ☑ Take advantage of a large land acquisition to engage multiple donors to support your broader conservation programme.

'Cultivating donor interest: preparing a two-page summary'

Holly Robertson
American Bird Conservancy, USA

Holly is the Deputy Director of Development at ABC. She has fundraised extensively for international programmes and supported ABC's partners in strengthening their fundraising capacity.

A two-page proposal summary is an effective way to initiate contact with a prospective donor, introduce a project, and request the opportunity to share more information, or submit a full proposal. The first and most critical step in preparing this document is to consider the audience. Conduct as much research as possible on the donor(s) who will receive the summary: what sort of projects have they supported in the past? What motivates their giving? Some might be most concerned about protecting critically endangered species while others might prioritise climate-change actions.

If you cannot determine what is of most interest to the donor, be broad in your description and highlight (if applicable) what are typically key selling points: endemics and globally threatened species that will benefit from the project; benefits to human health and economic well-being (e.g., improving water resources and creation of sustainable livelihoods); connection to climate-change mitigation or adaptation; any focus on diversity and inclusion (such as inclusion of women in the project); the overall importance of the ecosystem or region in which you are working; and any designations your project site might have, such as World Heritage site, Alliance for Zero Extinction site, Key Biodiversity Area, etc.

A successful two-page proposal summary will contain the following pieces: an attention-grabbing title; a statement of need; a description of goals and activities; a general timeframe; a brief budget; a brief description of your organisation; whom to contact for more information; and visuals that will help sell your proposal (high-quality photos and maps).

The statement of need should come first in the summary, and is your opportunity to provide background information and define the context of your proposal. In your statement you should address:

- *What is the issue/threat and why is it important?*
- *Why now?*
- *What conservation outcome are you working toward?*

After the statement of need is a description of your goals and activities, or in other words, your plan to address the issue just described. Focus on SMART goals as much as possible: specific, measurable, action-based, realistic, and time-defined. Provide a general timeframe for when the activities will take place. For example, 'Over the next two years we plan to purchase 125 hectares and plant 50,000 trees.'

The budget in a two-page proposal summary should not be overly detailed. Focus on outputs (land acquisition, reforestation) rather than inputs (salaries, travel, supplies).

- ☑ Be brief and concise, and avoid technical language: this document is meant to grab a donor's attention.
- ☑ Highlight your most compelling aspects: add a 'quick facts' section to summarise them.
- ☑ Create urgency: why should this donor give right now?
- ☑ A picture is worth a thousand words: pictures of the site and species will help you sell the project.
- ☑ Geography matters: donors will want to see on a map where your project will occur.
- ☑ Be sure to follow up: after sending the two-pager, wait two weeks and follow up to see if they have questions.

'Preparing a proposal for land acquisition'

Marc Hoogeslag

IUCN NL, Netherlands

Marc joined IUCN NL as a volunteer in 1999. He co-founded the Land Acquisition Fund in 2001 and has been in charge of this programme ever since, supporting creation of private reserves all over the globe.

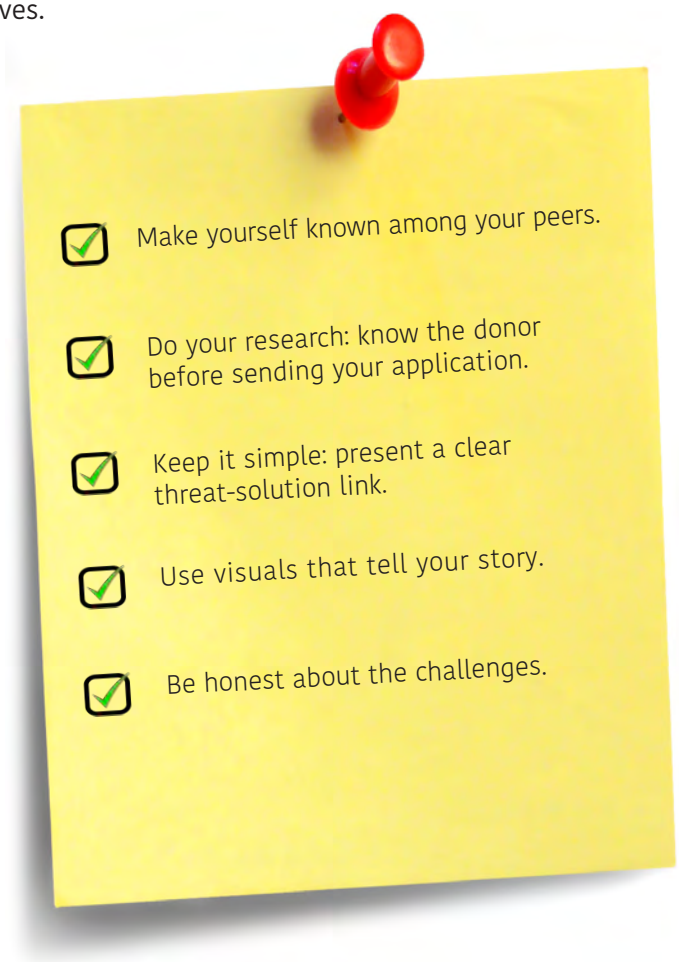
IUCN NL has been running a grant programme for more than two decades and, over the years, we learned that the key to success are the people implementing the project, who have a strong (emotional) link with the land or species they are protecting. Sir David Attenborough calls them 'the people with the fire in the belly'. Our goal is to find these people among the flood of proposals we receive every year. We know that our diverse audiences have different abilities and approaches to write a proposal, so we try to look 'through' the proposal. If a proposal shows potential, our next step is to reach out to our global network of experts in the country or region in question. They are our most important resource for the feedback and references we base our decisions on. Therefore, it is key that you share your work and achievements with the outside world and your peers. Make yourself known! Once we received a proposal that was not well written but a local contact convinced us of the capacities, commitment, and determination of the NGO, which resulted in several grants.

In order to prepare a proposal able to trigger the reader, you should study the donor thoroughly: explore the criteria, website, and previously funded projects. This may sound obvious but we continuously receive numerous proposals that are not aligned with our funding objectives.

When writing your proposal, make sure there is a clear link between the threat and the solution you are presenting, keeping in mind that the reader might not be a biologist or botanist. Test this with a person from outside your 'scene': your partner, neighbour or even mother-in-law. Do they understand what you want to achieve and how? Acquiring land and creating a privately protected area should never be a standalone activity, but part of a holistic programme to tackle a problem, jointly with other actors in the landscape. This should be made perfectly clear.

In land acquisition, visuals are key. One look at a picture or a map should tell your story. If you work on connectivity, make it visible. If you aim to create or secure a corridor between A and B, show A and B on a map with the location of the corridor in question.

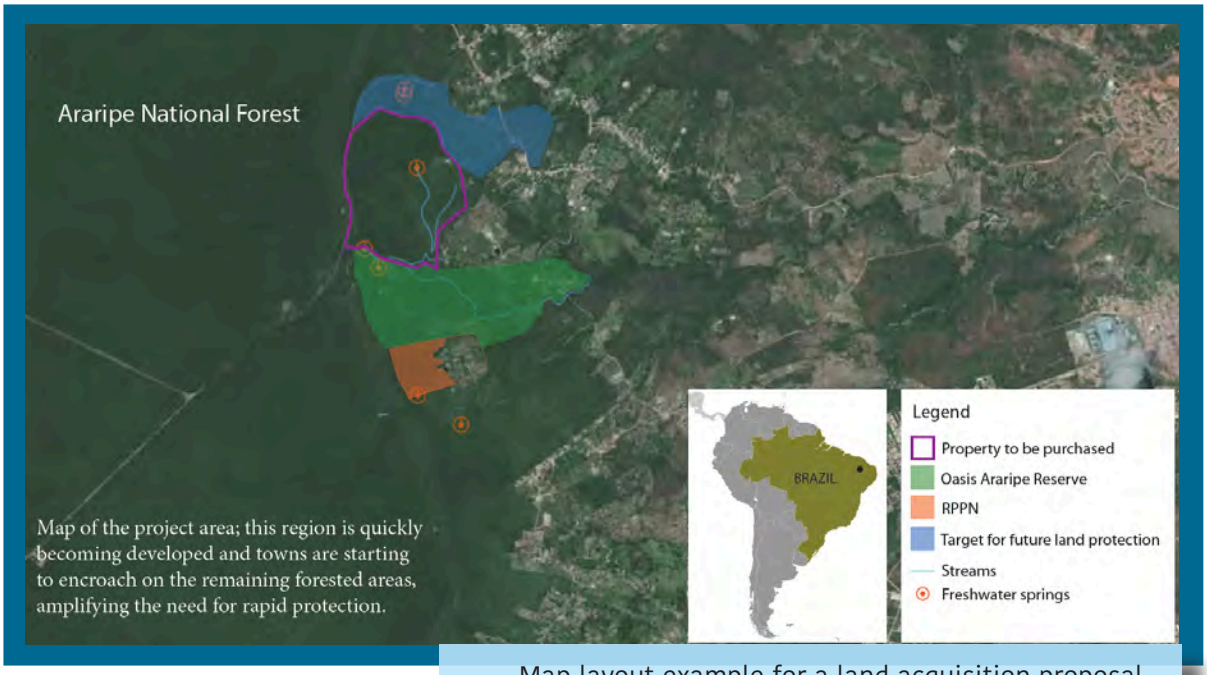
Donors appreciate it if you are honest about the challenges your NGO is facing and the uncertainties that may emerge in the proposal development stage. For example, negotiations about land prices can start only with the funds in hand, so it is perfectly understandable if NGOs cannot give a factual land price before the start of the problem. Do share this with the potential donor!



How to create maps for funding proposals

Geography matters! When you submit a land-purchase proposal, your project is sent to experts for review. They have dozens of proposals to read and cannot spend a lot of time trying to understand complicated maps and legends. Ideally, you should prepare a simple map layout as part of your proposal, but also send one associated KMZ (.kmz) file that can be easily opened by anyone with Google Earth.

The map is very important, since it gives an idea of how much habitat the reserve is trying to protect and shows potential corridors and connections with other protected areas. Even if you do have GIS specialists to create more elaborate maps and layouts, you should always convert them to a single Google Earth KMZ file that the donors can open with a click.



Map layout example for a land acquisition proposal, prepared by the Amerian Bird Conservancy.

Map data ©2017 Google.

Reviewers do not want to receive overly complicated maps, with too many details. We suggest highlighting the following aspects, as exemplified in the figure above:

1) habitats and land use visible in background (Google Earth satellite image).

2) limits (i.e., polygon) of the proposed reserve(s).

3) other protected areas, corridors, or neighbouring reserves.

4) natural attributes that are relevant to your conservation target (water resources, springs, breeding sites, others).

5) other features that are important to understand your proposal (for example, planned facilities and infrastructure, target for future purchases).

Although Google Earth images can be freely used for noncommercial purposes, such as research, education, film, and nonprofit conservation projects — without needing permission, they must provide an attribution to Google (and its data providers, if applicable). The attribution is usually in the line shown on the bottom of the image or mapping product (see https://about.google/brand-resource-center/products-and-services/geo-guidelines/#required-attribution).

How to create maps for funding proposals

Small details can make a difference. North American donors prefer using imperial measurements for areas and distances (acres and miles), while European donors are used to hectares and kilometers/meters.

Creating and saving a KMZ file online is free and relatively easy, but requires basic Google Earth skills. When drawing reserve limits, make sure you use the polygon function (not a trail) where it clearly shows the area of the polygon.

1) Habitats and land use background (satellite image).
2) Limits (i.e., polygon) of the proposed reserve(s).
3) Protected areas, corridors, or neighbouring reserves.
4) Natural attributes (water resources, springs, breeding).
5) other features (planned facilities, infrastructure).

Include only the necessary labels. Make sure all the labels in your KMZ file are succinct, clear, and in English.

Try to prepare only one KMZ file including all the key features defined above. If you have numerous files, organise them into folders to make it easier for donors to find what is needed.

Keep your map layout clean, and as similar as possible to the satellite image background. Having the same fonts and colours for geographic names, and similar sizes for labels and border thickness may avoid visual confusion.

Open and test your KMZ files in different computers to make sure they are opening and displaying the correct information. Google Earth Outreach has an online tutorial on how to create and package content in a KMZ file.

STEP 7 - COMMUNITY ENGAGEMENT

How do you engage communities and other stakeholders?

Privately protected areas and communal pastures in Tajikistan are co-managed to provide grazing habitat for cattle and wildlife.

How do you engage communities and other stakeholders?

Stakeholders are people who affect or can be affected by your conservation initiative. They can also be people who are indirectly affected or who have the position to influence others' opinions about your project. Good relations with stakeholders can benefit your project in many ways, from raising credibility to enhancing decision-making processes. Positive relationships can reduce conflicts and obstacles, avoiding delays in the implementation of projects. Each stakeholder group requires a personalised engagement method: from one-way communication, to two-way communication, to participatory approaches.

Overall, one of the best ways to engage and mobilise local communities is creating opportunities to generate direct or potential revenues through activities such as patrolling, ecotourism, and agroforestry. While engaging stakeholders, remember that respect, patience, and fairness are essential ingredients to construct long-lasting relations.

Listening to the needs of local communities in Tajikistan through participatory planning has allowed the co-management of pastures for cattle and for wildlife.

Mapping your neighbours and other stakeholders

Though we often refer to 'community' as a homogeneous group of people, community can be in fact a large pool of diverse people, with different interests, roles, and influences. Once stakeholders are all listed, a second step is identifying their role and assessing what is their degree of influence in your project. Are these individuals or agencies that provide financial support or permits? Or are they people directly impacted by your conservation plan? Or are they disconnected from your project, but still community influencers?

After these roles have been clearly outlined, sketch a social network analysis that will provide you with a general overview of those who are your current allies, and with whom you will invest more time in engaging. Analyzing the frequency of interactions and intensity of bonds provides you with a good idea of how to structure your relationship with each different stakeholder.

Identifying key players and community advocates

Not everyone understands and shares the goals and values of your conservation project — which is normal. Within the community, there are usually a few individuals who are enthusiastic and eager to contribute to the growth of your initiative. Make sure you pick up their interest and empower them with the tools and support needed to turn them into local 'heroes'! Sometimes the most unexpected people will come up with the most impactful and creative ways to engage stakeholders. Be open to listen and discuss what is proposed, and to give the space needed to experiment with these ideas.

A winning strategy to nurture future local leaders and trusted allies is including educational activities and youth leadership programmes within your conservation objectives and activities. Today's child is tomorrow's adult, parent, or community influencer. We have seen examples of a young adult who participated in an NGO's youth programme later became mayor of the town, and an invaluable supporter of conservation work.

How do you engage communities and other stakeholders?

Building long-lasting relationships

Becoming a locally rooted stakeholder and raising environmental awareness enables you to progressively become a partner among local landowners. Cultivate a trusting relationship with neighbouring landowners; this will increase their willingness to collaborate and be more flexible with your requests. A neighbour may transform into a potential land seller a few years later.

To achieve long-term social, environmental, and economic objectives it is of utmost importance to involve and respect the whole community: women, men, the elderly, and youth. Occasional rewarding of the community is another good practice that creates bonding and makes people feel appreciated and recognised. When you promise a reward, it is essential to keep the promise at whatever cost. In any case, our experience has shown that the most successful long-term conservation projects are the ones that involved local stakeholders.

Sharing benefits of ecosystem and cultural services

The protection of an ecosystem depends on the shared responsibility of the network. Only by effectively connecting people to the 'why' and 'how' one should care for an ecosystem will they comprehend its value for their livelihoods. To identify trade-off mechanisms that can benefit all involved stakeholders, the first step is having a clear picture of the socio-environmental landscape of a community. For example, by understanding the pressing need for water at the community level and communicating how the conservation project would help restoring a watershed both in the short and long-term, you can succeed in achieving community support. In the same way, if you are considering establishing ecotourism as a source of income, to enhance the environmental and cultural knowledge of the area, make sure that all members of the community are equally empowered to join and are able to provide a service where they have a genuine interest.

Integrating science with traditional knowledge

Traditional and Indigenous societies have inherited a rich environmental knowledge that may serve as a basis for sustainable development. In some areas, orally transmitted stories, observations, and practices constitute a crucial body of knowledge that science has not been able to record or to discover yet. A good practice is recording the knowledge of elders, those who have actually lived the environmental and social changes of the past decades. Elders have a visual memory of historical changes in the landscape which is a great benchmark also for your conservation work.

To get the most out of all perspectives, traditional knowledge — which has accumulated through generations and can generally provide time-tested methods and techniques to deal with daily reserve operation needs and challenges — should always comply with the three pillars of sustainability (see 'Step 3 - Reserve Sustainability', p.22) and be supported by sound scientific knowledge. Most probably, the intersection between modern science and traditional knowledge will provide us with the most complete and holistic approaches to sustainability.

Have local communities been engaged in the creation of the reserve?

To evaluate the level of participation that local communities and other neighbouring stakeholders had during the creation process of private reserves, participants were required to answer the question above, initially as a 'Yes/No' question. Positive responses were further asked to specify what strategies were used, according to their understanding, to promote community engagement during reserve design and creation. Community consultation was the most cited type of local stakeholder engagement utilised, corresponding to 44 percent of the positive responses (16 out of 36), followed by some sort of community participation during land prospection or the reserve delimitation process (Figure 13). The presence of members of local communities hired as local staff for private reserves was identified as a form of community engagement in the design and creation of the reserves.

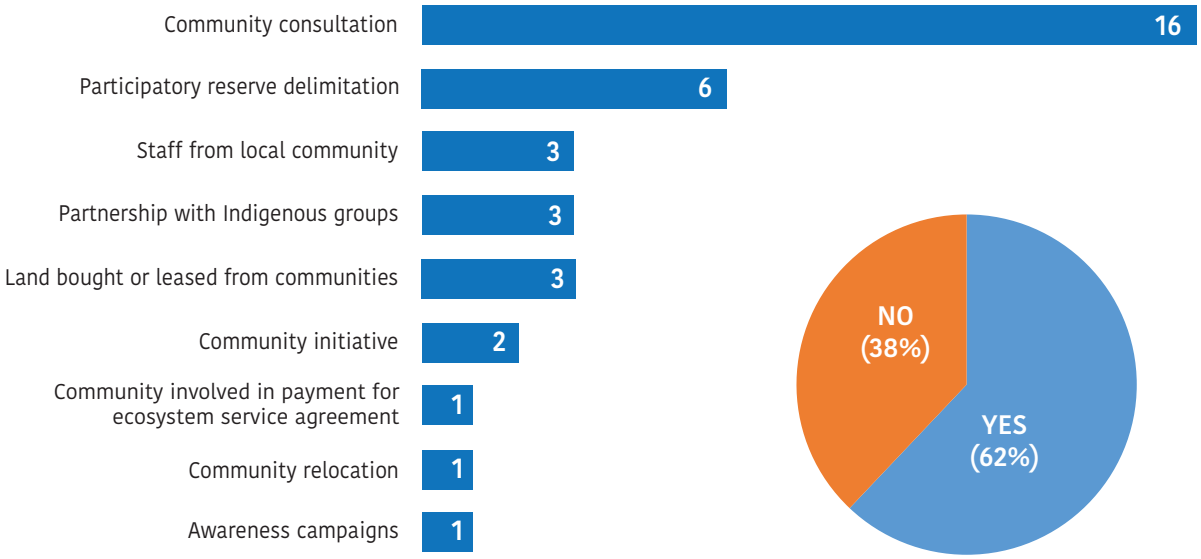


Figure 13. Survey results: community engagement during reserve creation. Percentage of organisations that engaged local communities in reserve design and creation (pie). For the positive responses, the types of inclusive practices and approaches are listed (bars) with the respective number of mentions.

Community consultation was the most cited type of local stakeholder engagement (44 percent), followed by community participation in the reserve delimitation process.

Are you presently interacting with local communities?

Participants were asked about their present interactions with communities and other local stakeholders to evaluate trends in community engagement since reserve creation. From a 62 percent involvement with local communities in the design and creation of the reserves, engagement with local stakeholders greatly increased to 91 percent during the implementation and operational stages of reserve management. The most cited types of involvement were related to educational, training, and cultural activities, followed by sustainable economic activities, such as ecotourism, agriculture, agroforestry, cattle ranching, and apiculture (Figure 14). Most of the present interactions are related to either establishing partnerships with local communities for co-management of territories or resources, or by hiring local labor to perform several reserve functions (manager, ranger, gardener), and temporary activities, such as restoration and fire management.

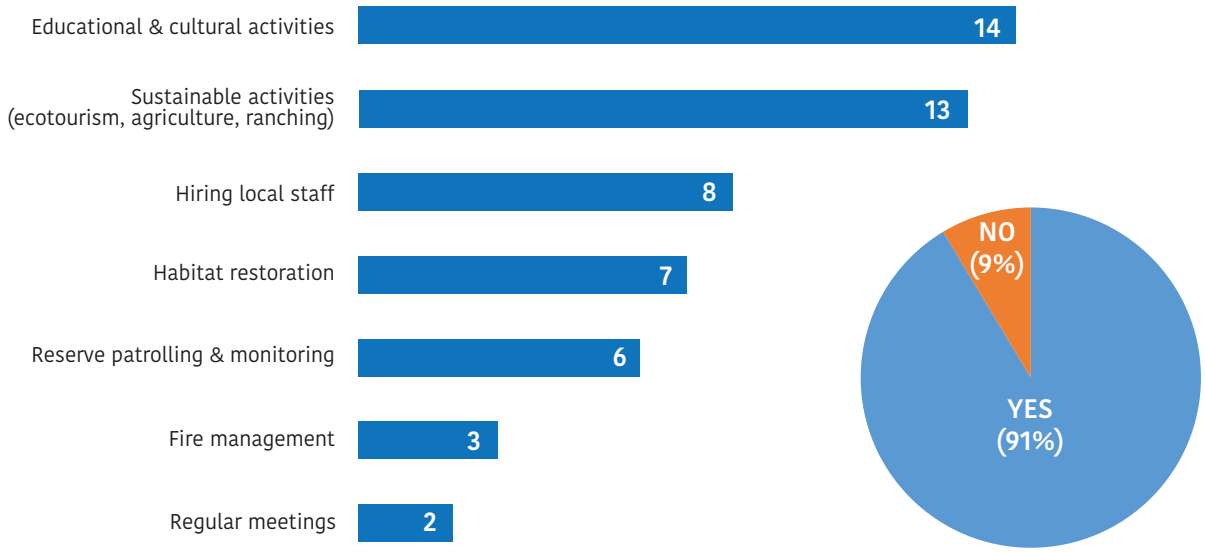


Figure 14. Survey results: present engagement with local communities. Percentage of organisations that are presently interacting with local communities in their reserves (pie). For the positive responses, the types of interactions are listed (bars) with the respective number of times they were mentioned.

Engagement with local communities has shown to be much greater during the operation of the reserve (91 percent) than during its creation (62 percent).

'Private reserve creation and community engagement'

Rosamira Guillen
Fundación Proyecto Titi, Colombia

Rosamira is an architect with a MSc in Landscape Architecture. Former Director of the Barranquilla Zoo (Colombia); she is the co-founder and Executive Director of Fundación Proyecto Titi since 2004.

Cotton-top Tamarins are small primates found only in the tropical forests of northern Colombia. They are critically endangered due to extensive deforestation, habitat fragmentation, and capture for the illegal pet trade. Proyecto Titi is a nonprofit organisation working to secure a long-term future for Cotton-top Tamarins and their forest home. Our work combines field research and forest conservation, with education and livelihood improvement programmes that help reduce the unsustainable use and exploitation of forest resources. Over the past 10+ years, we have focused our efforts on protecting and restoring forests for Cotton-top Tamarins, given that deforestation is the main threat to their long-term survival. One of our strategies has been purchasing land to create forest reserves designated in perpetuity for Cotton-top Tamarins and wildlife conservation. However, science and forest conservation alone are not enough to save a species. Community engagement is key to successful achievement of your conservation goals. Proyecto Titi has a long history of developing programmes to reduce threats to the species and its habitat, and in the process has documented key points for a better opportunity to succeed in engaging and involving communities in our conservation work, as summarised below.

Be relevant: Community engagement is achieved when projects address local needs and focus on what matters to locals, and not necessarily on our conservation objectives and/or targets.

Seek mutually beneficial agreements: Incentives to community participation in conservation should not be necessarily monetary, and should be based on mutual benefits.

Build connections with women: Working with women helps establish strong and stable connections to families and communities, since they invest in their families to help improve their livelihoods.

Build on local skills: Income projects for local communities should be built on their skills, talents, and preferences, and be fit to local traditions and cultural contexts. Communities should be involved from the inception.

Hire locally: A great way to engage communities is to provide job opportunities, which helps to spread our mission and generate tangible benefits for local families.

Manage expectations: Expectations should be set from the beginning and clearly explained to participants.

Avoid dependence: Mentorship is required for the development of income-generating alternatives and conservation agreements, but should be reduced over time.

Monitor marketing trends: Focus on alternative income projects that already have a market, so that they can be financially viable for the local communities.

Measure and monitor: Monitor indicators that can evaluate the long-term success of the initiatives.

- ☑ Be relevant and focus on mutually beneficial agreements.
- ☑ Build connections with women, based on local knowledge.
- ☑ Hire locally.
- ☑ Manage expectations and avoid dependence in the long term.
- ☑ Monitor and evaluate project success.

'Traditional and local knowledge for reserve management'

Vivek Menon
Wildlife Trust, India

Vivek is a wildlife conservationist, author and photographer, with a passion for elephants and birds. Founder of five conservation organisations, he is Executive Director of the Wildlife Trust of India.

Protecting land as habitat or corridors for wildlife is perhaps the single most important way to conserve species and ecosystems. There are several methods of protecting land, and one of them is to manage community-owned lands through the community with external technical support. Having managed land such as this in the Garo Hills, Meghalaya, in northeastern India, there are some lessons that are important to share.

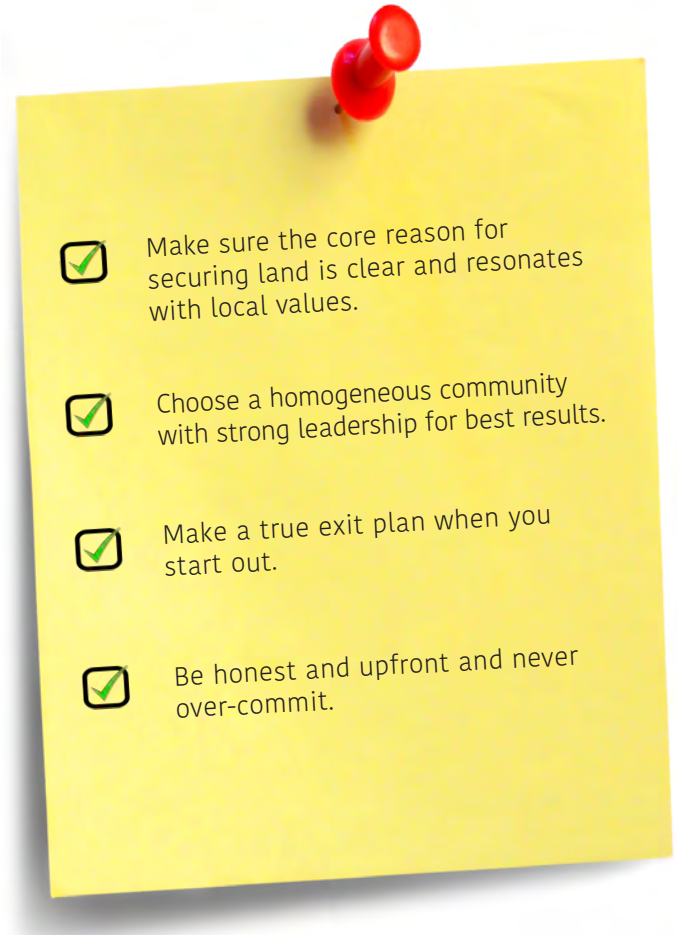
First, a community project does not necessarily mean that the community came up with the idea in the first place. However, the idea should resonate with the ethics, values, or societal objectives of the community. And sooner than later, they should adopt the idea as their own. If the kernel of the idea was from the community, then the external partner must be careful not to tinker too much with it. If it is an alien thought, it would either not be acceptable or might not deliver long-term desired results. If it fits with their ethics, like in our example, the concept of putting aside land for nature was part of a sacred grove ethic, then there needs to be immediate incentive to get the community excited. This has to be based on needs and not on greed.

However, an incentive should not be greater than the core reason why the land was put aside or else it would not be sustainable. It is easier if the community is homogeneous with good and stable leadership. That could form a basis for choice.

Next, the community should work out ways in which the land can be managed long term. A number of workable alternatives can be presented to them following global best standards but it is up to the community to choose. At all stages an external partner should be honest and upfront with the community and also adjust the plan to their changing needs.

Finally land conservation is a long-haul project, and both sets of partners must be willing to stay in it for the time that it takes for it to be sustainable. At all times safeguards should involve raison d'être, which is nature conservation. If the community veers away from that for immediate gain or other societal objectives, the partner should attempt to bring them back to the centre of the thought. Over-dependence must be prevented at all times and an exit plan should be written even before the first steps are taken.

These form the core of the success of the Garo Hill Green Spine project that the Wildlife Trust of India runs with support from the World Land Trust and HCL Foundation. This is also the core of achieving success in projects with the IUCN NL in Wayanad elephant corridor project.



'Creating a nature reserve: relocating local communities'

Jeannie Raharimampionona
Missouri Botanical Garden, Madagascar

Jeannie is Coordinator of MBG's Conservation Unit, including 12 Priority Areas for Plant Conservation designated as New Protected Areas and based on community-based conservation.

The Ankarabolava-Agnakatrika Forest is one of the 80 Priority Areas for Plant Conservation identified by Missouri Botanical Garden (MBG) and one of the 12 New Protected Areas (NPA) created officially in 2015 by MBG and co-managed with the local community. Located in the southeastern region of Madagascar, the 1553-ha (3,837-ac) forest is the only remaining natural vegetation in the district, and therefore has a cultural importance as the only location where people can remain in contact with their natural heritage. It is home to diverse fauna and flora including several threatened and locally endemic plant and animal species as well as the source of water to irrigate rice fields and timber for traditional houses.

But the forest is threatened by over exploitation of timber and shifting cultivation, the growing needs of humankind for food, fresh water, wood, fiber, and fuel. In this region, the human population is growing at 3 percent annually. Prior to the designation of this forest as a NPA, there were 65 farmers cultivating plots within the forest and it resembled 'Swiss cheese'. Farmers have the traditional occupancy rights to their land but cannot extend their plots after the protected area legal designation. Farmers were unable to practice traditional shifting cultivation, so their land became exhausted and they were forced into illegal expansion, hence conflict.

As managers of the new protected area, we have conducted a series of meetings with forest occupants to identify solutions, and communities requested land exchange. We were able to accommodate this request thanks to the Land Acquisition Fund. First MBG asked help from an independent cabinet to evaluate plots within the forest. Then, we informed the farmer-occupants of the value of their plot. We offered them the opportunity to receive this sum to purchase alternative land outside the forest in exchange for abandoning their plot within the forest. Upon acceptance of this offer, we enabled the farmer to obtain legal documents for the purchased land. The exchanges were entirely voluntary.

As results, 125 ha (308 ac) of agricultural plots outside the forest were acquired by the farmers — all with land ownership documentation. Where the land acquired cost less than the valuation of the plots within the forest, the surplus funds were used to plant cash crops on the newly acquired lands. More than 85 ha (210 ac) of land was gained for the PA and officially returned to the PA system, with huge impact on improving forest integrity. On some of the abandoned lands the forest is regenerating naturally, but on truly exhausted plots ecological restoration is required and is now underway with the support from new donors.

- ☑ At first, occupants are reticent: be patient and build trust over the years.
- ☑ Communicate continuously about the project and be transparent.
- ☑ Protected area managers need independent evaluators to calculate the value of land.
- ☑ Besides staff biologists, seek collaboration from other skills such as sociologists and economists.
- ☑ Encourage former occupants to engage in activities within the reserves.
- ☑ Conduct active ecological restoration in abandoned lands, especially exhausted lands.

How to plan for community engagement

The pillars for building strong community engagement are long-term commitment of your organisation, clear benefits of the programme, and validity (What is the organisation's basis for being here?). The first step is getting to know the whole community, since communities are not homogeneous groups. Try to understand with whom you need to collaborate. Who will be affected by the activities of your project? Who will those benefit? How can conservation and other goals be combined? You can start off by drafting a theory of change.

When approaching the community, take the time to listen. Women, men, youth, and elderly have diverse roles, responsibilities, rights and knowledge regarding natural resources. Each has a unique understanding and connection to the natural world and can make an invaluable contribution to advance and achieve the broader mission of your project. Be present for the local communities and make sure your work is also an opportunity for them, such as job opportunities (rangers, local businesses), which also lead to short-term benefits.

Engaging local communities in private reserves (AMPA/Amazonicos por la Amazonia, Peru).

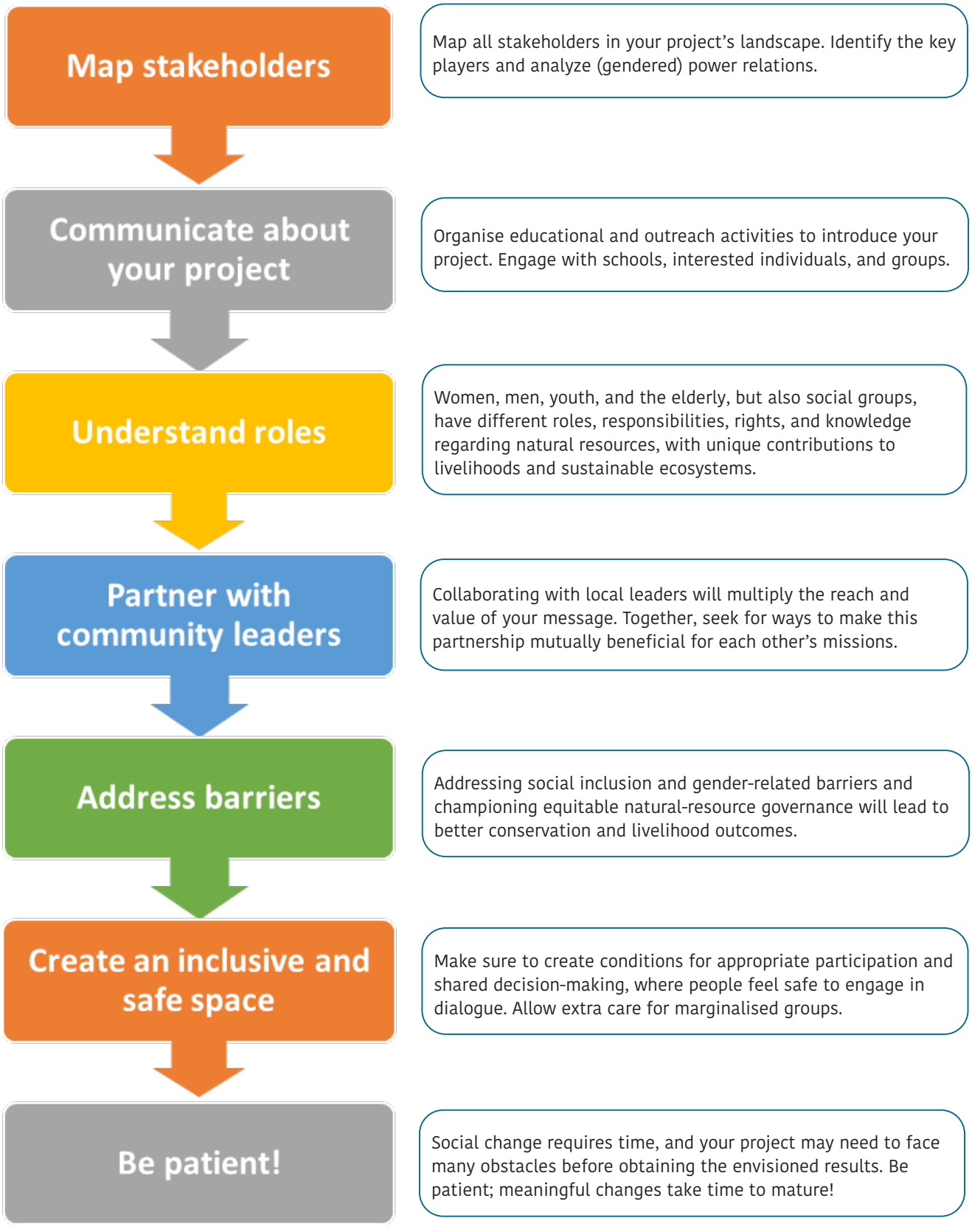
Once locals provide you with sufficient access to understand how the community works, try to work with community leaders. These individuals can be community chiefs, religious leaders, or people who are highly trusted within the community. It is key that both leaders and communities understand why your conservation activities are important. What is in it for them to engage with you? Leaders are strategically selected based on their sphere of influence; the messages they spread will speak louder and potentially boost acceptability within their community. The more tangible the message, the more likely the community will positively respond to it.

From the very beginning of your project, start educational and outreach activities. It is important for people to get to know your organisation and its mission, and for you to permeate into local society. Engage kids at the earliest stages; they are the next generation of conservation ambassadors! Whenever your organisation is ready to involve more people, join forces with volunteers.

Addressing obstacles to social and gender inclusion is crucial. Meaningful engagement of women leads to better conservation and livelihood outcomes, along with respect and empowerment of the community members and groups who use and protect the biodiversity that you aim to conserve. To ensure such inclusivity, create a safe space where people, especially those marginalised, feel comfortable to share opinions and ideas and to raise questions, making their engagement in decision-making possible. Seek to build a good balance between leadership and representativeness.

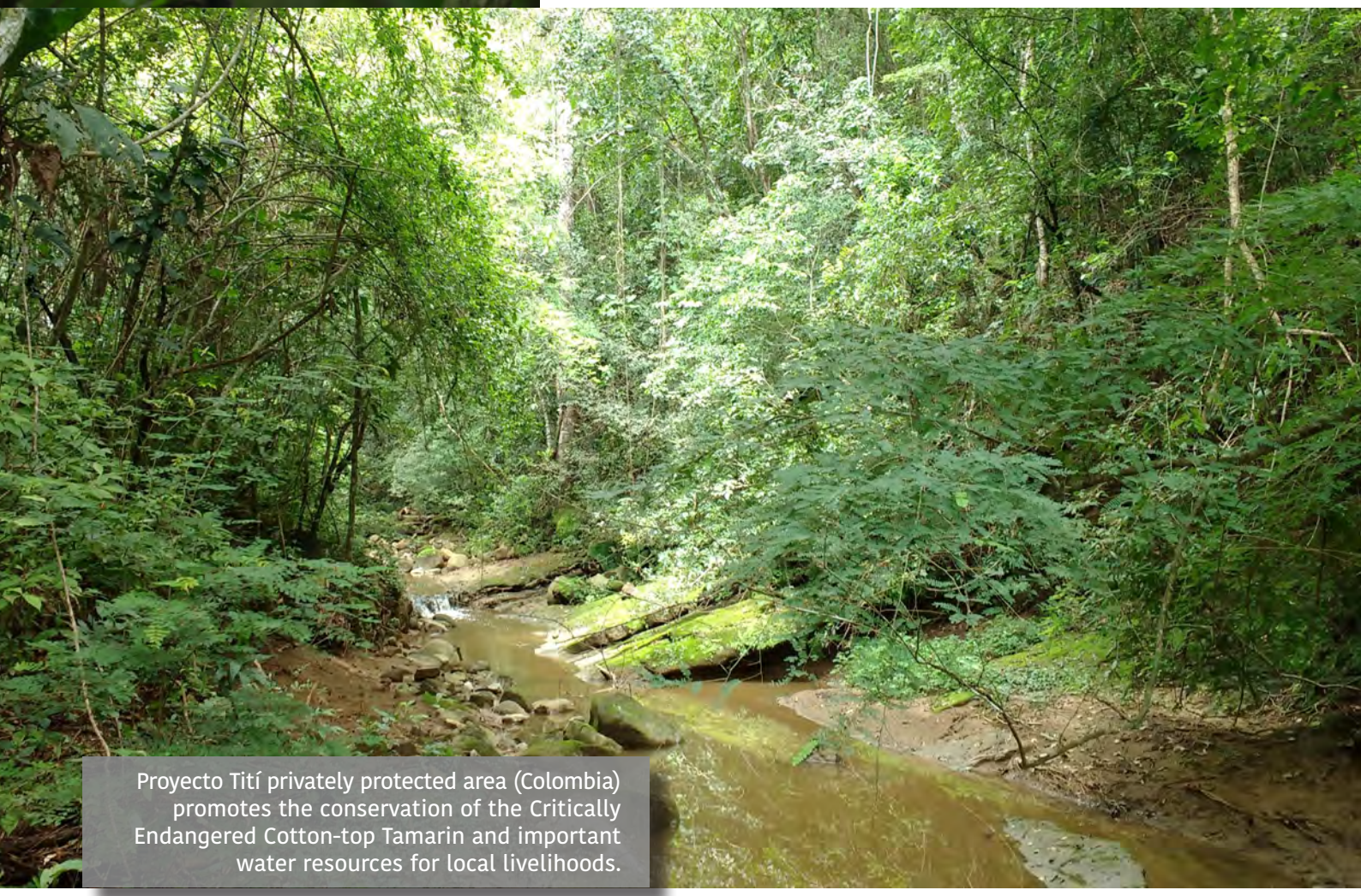
Social change requires years, if not decades. Repeat continuously the message in a crosscutting way through different stakeholders (government, leaders, etc.). It is key to break down your main objective into smaller, tangible goals, which you can measure on a yearly basis. First, this allows you to track the progress of your activities and analyze outcomes of, for instance, income-generating activities, campaigns, and educational and inclusion programmes. Secondly, keeping track of social changes (such as learning), and also potential backlashes (such as an increase in gender-based violence), offers you the possibility to report and seek support from the donors and partners.

How to plan for community engagement



STEP 8 - RESTORATION

How do you promote restoration and rewilding?



Proyecto Tití privately protected area (Colombia) promotes the conservation of the Critically Endangered Cotton-top Tamarin and important water resources for local livelihoods.

How do you promote restoration and rewilding?

Restoring degraded ecosystems and depleted natural resources is one of the most rewarding activities for reserve management. Besides recovering habitats and biodiversity, it can provide opportunities for agroforestry and other sustainable activities such as ecotourism, volunteering, and payment for ecosystem services. Restoration can be complex, time-consuming, and expensive. Still, since it is highly attractive to international donors, it can also help cover more difficult expenses to fundraise, such as facilities, vehicles, and staff.

Bear in mind that restoration is much more than reforestation. Although tree-planting is a significant component of restoration processes, it requires a broader view of the reserve landscape and the status of its resources. Only then will you promote the recovery of flora, fauna, soils, water resources, and all the key elements that interact to increase biological productivity and provide ecosystem services.

Reforestation staff at the Hutan Kinabatangan Orangutan Conservation Programme (Sabah, Malaysia).

Mapping ecological and cultural landscapes

To plan for restoration, you must know the present state of your resources. An essential tool used for mapping restoration targets in protected areas is the creation of a land-use map that can be interpreted from satellite images available online. The satellite image is converted into a vegetation cover map using simple geoprocessing tools, yet requiring specialised software and expertise. This map will show different habitats with contrasting colours, identifying areas with exposed soil, and including water resources and your conservation targets. The habitats identified are later assessed in the field to evaluate their conservation status and the levels of intervention needed.

You can include this type of digital geoprocessing as part of the funding for a restoration programme. However, if you do not have access to GIS services, or do not want to use fancy computing, you can draw by hand a preliminary 'mind map' of habitats and resources on top of a copy of your property map, based on the collective knowledge of your team and local residents.

Restoring and enhancing natural habitats

The level of management and intervention required for restoration processes can vary immensely depending on your budget, expertise, and the conservation status of your targets. Strategies can go from active tree-planting and reintroduction of locally extirpated animals, to a more passive approach where stressors are alleviated and parts of the land are left undisturbed to allow for natural regeneration and recolonisation. In any case, it is wise to ask for professional help when designing a restoration programme, since these activities are expensive and time-consuming, and too risky to be learned by trial-and-error. Unplanned restoration activities can unknowingly introduce invasive species or pathogens, unnecessarily alter functional habitats or change fire regimes, and have detrimental consequences for our conservation targets in the long term. You can always ask your existing or potential donors if they can connect you with other organisations with practical experience.

To facilitate restoration, when prospecting for land look preferably for areas in proximity to sources of biodiversity, or near corridors that can source native wildlife into your reserve after threats are alleviated and habitats restored.

How do you promote restoration and rewilding?

Rewilding: restoring ecological interactions

The science and practice of rewilding promotes reintroductions of locally extirpated species and the enhancement of depleted populations of fauna and flora, to re-establish ecological interactions essential for the functioning of ecosystems. Pollination, seed dispersal, seed dormancy breaking, and predator-prey control are only a few examples of the interactions between animals and plants that allow and optimise the provision of ecosystem services and can significantly increase the overall productivity of an ecosystem.

Although rewilding processes can be highly beneficial to the restoration of species-depleted ecosystems, these are long-term processes that must be done responsibly and respect the ecological requirements of the reintroduced species. Before considering bringing back locally extirpated species, you must restore the basic conditions that will allow them to thrive, as well as reduce or remove the threats and drivers that have depleted that species from your area in the first place.

Protecting and reviving local cultural & historical heritage

Due to the interconnectedness of cultures with their local ecosystems, expanding the conservation work to a bio-cultural landscape approach, which integrates both cultural and ecological scopes, allows broadening the project's horizons. At times, diverse interest groups carry out similar missions or can mutually support each other's goals.

A genuine understanding of the local socio-cultural-historical, ontological, and environmental contexts helps to reposition the communities and the fate of an ecosystem on a holistic perspective, extracting each subject from the distinct boxes and reassembling their relations. Establishing co-management mechanisms for sites with an ecological and cultural significance, both for Indigenous or traditional communities and conservationists, is one of the ways towards which the future of biodiversity conservation is evolving. Actions such as defining and respecting a culturally significant area, or engaging in the active reviving of local cultures enable building trustful relations and long-term synergies with local stakeholders.

Managing human-wildlife conflicts and opportunities

Restoration and rewilding processes will provide unique opportunities for the development of sustainable activities, such as ecotourism, organic agriculture, and agroforestry. However, the increase in natural habitats and the potential overspill of wildlife to neighbouring areas may also exacerbate existing human-wildlife conflicts, such as crop destruction, predation on livestock, vehicle collisions and roadkill, poaching, etc. Dealing with these emerging conflicts in mostly fragmented landscapes will require creative thinking to identify mutually beneficial solutions to biodiversity conservation and the interests of neighbours and local communities. Compensation agreements with small-scale farmers and other types of monetary incentives may be an option in some cases. Still, probably ecotourism — along with the associated benefits that it brings to the broader supply chain of local economies — will be a critical activity to conciliate human-wildlife conflicts and turn them into wildlife viewing and valuing opportunities.

Do you conduct restoration activities in the reserve?

To evaluate the magnitude and the different forms of restoration activities conducted in private reserves, survey participants were asked if they were presently conducting habitat and resource restoration inside or in the surroundings of their reserves. Positive responses were further asked to specify what kind of activities were conducted to promote habitat restoration. Reforestation — from simpler forms of native tree planting to more sophisticated habitat reconstruction experiments — is conducted by more than half of the respondents (30 out of 58), followed by natural regeneration and other forms of passive restoration (Figure 15). The participants are presently restoring more than 5,000 ha (12,300 ac) of natural habitats, and have planted more than 4.3 million trees in and around private reserves.

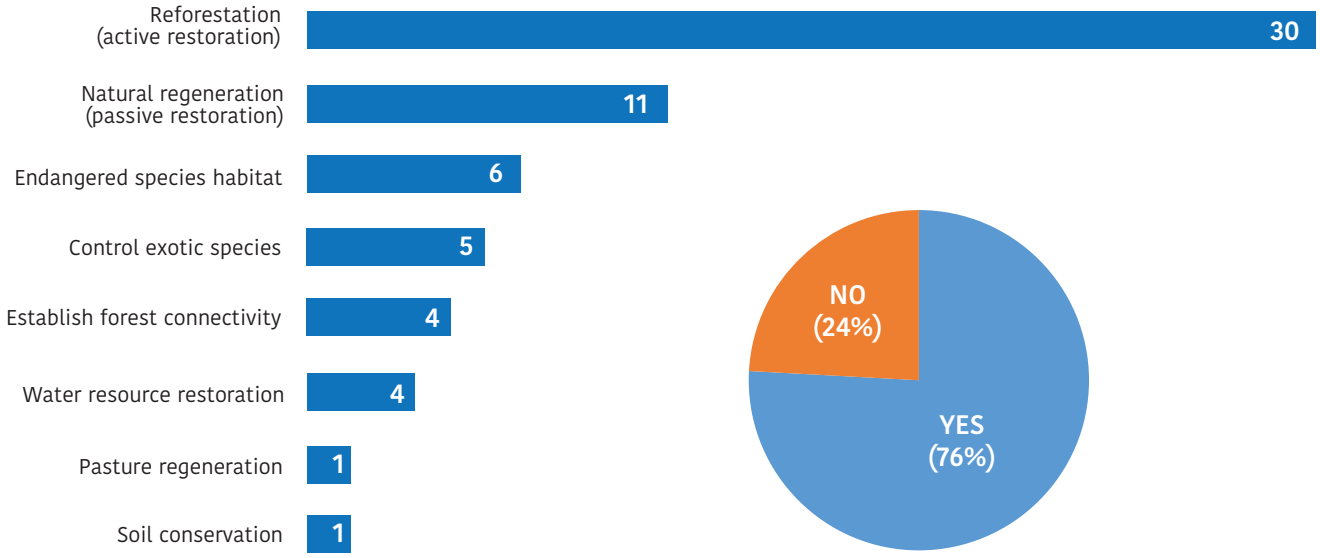


Figure 15. Survey results: restoration activities. Percentage of organisations that conducted restoration activities (pie). For the positive responses, the types of restoration practices cited are listed with the respective number of mentions (bars); participants could mention more than one item.

The participants are presently restoring more than 5,000 ha (12,300 ac) of natural habitats, and planted more than 4.3 million trees in and around private reserves.

Does the reserve have legal protection status?

The level of protection and the types of formal protection for private reserves were evaluated by asking participants if their reserves had any kind of legal protection status, and their respective titles or denominations. More than half of the reserves surveyed (55 percent) already have some kind of protection status, and another 21 percent are in the process of acquiring (Figure 16). Only 19 percent have declared to have no legal status, although the majority of these look forward to being able to acquire formal protection status. There are different levels of protection and forms of recognition, varying from formally registered privately protected areas that are supported and enforced by national laws, such as private natural heritage reserves (RPPNs) in Brazil and Bolivia to broader international categories, such as biosphere reserves, that require specific national regulations to have legal effect in most countries.

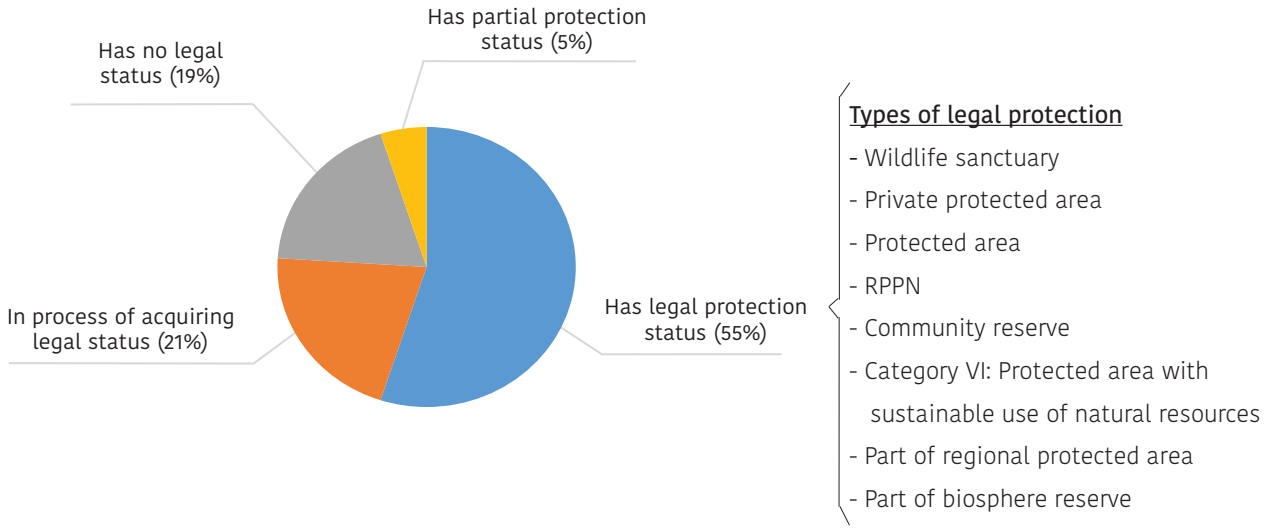


Figure 16. Survey results: reserve legal status. Percentage of organisations that have full legal protection status, partial, no status, or are in the process of acquiring legal status for their reserves. For reserves with legal protection status, different categories of protection mentioned by the respondents are exemplified.

More than half of the reserves surveyed (55 percent) already have some kind of formal protection status, another 21 percent are in the process of acquiring.

'Incentives to reverse deforestation: community approach to restoration'

Jerry Toth

Third Millennium Alliance, Ecuador

Jerry is the cofounder of Third Millennium Alliance and the project lead for its Community Reforestation Program. He has been planting and caring for trees in coastal Ecuador since 2007.

The Third Millennium Alliance is restoring deforested land that surrounds a rainforest preserve that we created in Ecuador, called the Jama-Coaque Reserve. We have been trying to do this for over a decade, and only recently have we found a formula that truly works. It ultimately comes down to the question of money. Farmers use their land in accordance with whatever activity generates the most income. This is how farming works in pretty much every country. It equally applies to Ecuador. People go where the money is.

We've witnessed many failed reforestation initiatives in Ecuador for exactly this reason. The economic rewards of reforestation did not exceed the economic rewards of deforestation. Some of our own initiatives, in the past, also failed for this same reason. TMA's Community Reforestation Program is built to address this simple yet intractable fact of life. We pay farmers US$4,500/ha (US$1,821/ac) over a five-year period to convert their deforested land into a regenerative forest that 1) produces food and income for their family, 2) restores habitat for wildlife, and 3) removes CO2 from the atmosphere. Technically, they are what the industry refers to as payments for ecosystem services (PES).

This payment immediately increases farmers' earnings by 44 percent relative to slash-and-burn corn cultivation and over 300 percent relative to cattle ranching, which are the two dominant agricultural activities in this region. This is enough to convince farmers to shift their activities away from degenerative agriculture and toward regenerative agroforestry. That was the first challenge to overcome. But the payments last only for five years. It is a short-term measure designed to bridge the gap until farmers begin to generate an independent revenue stream through the sale of cacao, banana, and other tree crops produced in their regenerative agroforestry parcels. And that's the second big challenge: creating a long-term income stream for farmers that will outlast the PES payments. The other challenges are ecological: namely, the need for water. We cover 50 percent of the costs to install a year-round irrigation system on each parcel that is being reforested.

Lastly, there is the challenge of monitoring and verification. We combine remote sensing from satellite imagery and drone imagery with on-the-ground site visits to make sure that the trees are 1) being planted and 2) surviving and thriving. As satellite imagery and AI both continue to improve, we hope to be able to monitor and verify reforestation projects entirely through satellite imagery. That will help solve the biggest challenge: scaling up.

- ☑ Make sure that financial rewards for reforestation exceed the opportunity costs. PES payments really do work.
- ☑ Species selection is key. If it's not well-suited to the specific conditions of the site, don't plant it. Period.
- ☑ Combine revenue-producing trees with diverse native trees to optimise local income and CO2/biodiversity benefits.
- ☑ Give farmers and trees what they need to succeed: irrigation, fencing, know-how, and after-care.
- ☑ Leverage technology for monitoring and verification as much as possible. It helps achieve transparency and scale.

‘Restoration and paradigm change through rewilding’

Sebastián di Martino

Rewilding Argentina, Argentina

Sebastián is a biologist and Conservation Director of Rewilding Argentina. He is in charge of species and ecological restoration projects carried out in different parts of Argentina.

I’ve worked for more than six years as Conservation Director for Rewilding Argentina (RA), an organisation dedicated to halting and reverting the present species extinction crisis using a strategy called ‘rewilding’. Rewilding is promoting cultural changes in the conservation mentality of my country, formerly accustomed to the paradigm that the best you can do to conserve habitat and species was to protect them, not to touch them. Nowadays, the level of species and habitat loss has reached such a magnitude that this is not an option anymore. We now have to consider a more active management, interfering to recover what was lost, and that is the conservation agenda of this decade.

Thus, rewilding tries to restore ecosystems through the reintroduction of species that are extinct or locally extirpated and that have outstanding ecological roles. Ecologists call them keystone species and their removal can cause ecosystem degradation or even collapse. Top predators are good examples of keystone species. To reintroduce these large predators is no simple task, requiring large tracts of suitable habitat that are free of threats, and broad social support that can be translated into political support. To create a large nature reserve like Iberá (700,000 ha, 1.73 million ac) and bring back species like the Jaguar, we need to develop prosperous economies that create jobs, and are connected to these reserves and to the species that are coming back. These economies should be based on ecotourism activities such as wildlife-watching, accompanied by a high level of expertise, but conducted by local communities.

Rewilding projects, such as bringing back Jaguars, are fairly new and with little published information to guide us. For that reason, since the initial planning phases, it is imperative to include people with previous experience with the species — and not just any specialist, but those experienced with active wildlife management. We should also choose team members with the disposition to live in the territories where we mostly work, away from many of the comforts of civilization. These people must be good observers and be able to make decisions under adverse and unexpected situations, many times with only partial supporting information. They also must not fear mistakes or failures, and be able to learn from experience. The projects should have key success indicators to be able to measure progress and clearly communicate with authorities and donors.

Communication is extremely important, and rewilding offers the possibility to disseminate good news — which has not been really abundant in conservation. Heroic stories of some animals in particular can be used, using their charisma to broadcast pressing messages. The activities of a specific project should be continued until we have ensured that a self-sustaining population of the target species has been constituted, and no further management is required, apart from minimum interventions. These processes in general do not last less than ten years. At this moment, we can retreat.

- ☑ Change the conservation mentality in your country, from passive protection to more active restoration.
- ☑ Rewilding projects should have clear objectives and indicators that measure progress and communicate results.
- ☑ The project team should not include just researchers, but also people with no formal education.
- ☑ The team should be made of observant people who can take risks and make decisions with little information.
- ☑ External participants should be welcome from the start, but make sure they have something to contribute.
- ☑ Communication is key and should engage society while sharing successes and failures.

'Planting the future: long term restoration in private reserves'

Raquel and Nicholas Locke

REGUA, Brazil

Raquel and Nicholas have dedicated 25 years to dreaming and building the Guapiaçu Ecological Reserve (REGUA) near Rio de Janeiro on the remains of his great-grandfather's property.

Forests protect water sources and we need to find a way to turn degraded land back into forests to protect soils for future generations. With that in mind, REGUA's team has planted 650 thousand trees in 400 ha (990 ac) over 15 years, reconnecting forest fragments, adding resilience to Brazil's third-largest remaining Atlantic rainforest fragment. To plant forests one needs a team familiar with trees and seeds, skilled in cultivating seedlings in nurseries, and experienced to ensure plants turn into healthy forests. We work with 250 species, and we know how to restore forests. The aim is to produce a canopy that diminishes light underneath and slowly brings back humidity to the mulch on the forest floor. The arthropods do their work in freeing nutrients for fungi that work symbiotically with the tree roots, fixing soil, allowing permeability and rainwater to reach the depths of the soil. Hence the more humid the mulch, the healthier the forest.

Aside from growing trees, there are endless ways to invigorate the network that will result in more forests. We established ProMudasRio, an association of Rio de Janeiro's nurseries. We helped develop a government protocol to define the criteria to measure project success. We started the Rio de Janeiro Forest Observatory, a congress that invites speakers to discuss successes and bottlenecks as a means for improvement and to establish a dialogue between funders, planters, and nurseries.

We invited local universities and their professors to develop trial plots to test different cultivation methods and measure tree growth. Long-term plots provide much-needed data that is essential for long term planning. By inviting universities, we attracted the attention of researchers wanting to reintroduce the Tapir, a mammal extirpated from Rio state. Our project site was sufficiently large to permit their release, and after two years, we have nine Tapirs roaming the forests. The birth of a Tapir calf hit international headlines, and the project received much media attention. The education programme benefited from the news and centred its material on the figure of the Tapir as more tourists want to see this animal. Hunting diminished with the use of camera traps to track the Tapirs, and the images of other animals caught on the camera attracted further research and media attention.

At the end of the day, success in conservation ensures funding, and communication is vital. Not everyone is lucky to live in a reserve of lush tropical trees, waterfalls, birds calling, and Tapirs roaming, but they do want to hear that the world is improving!

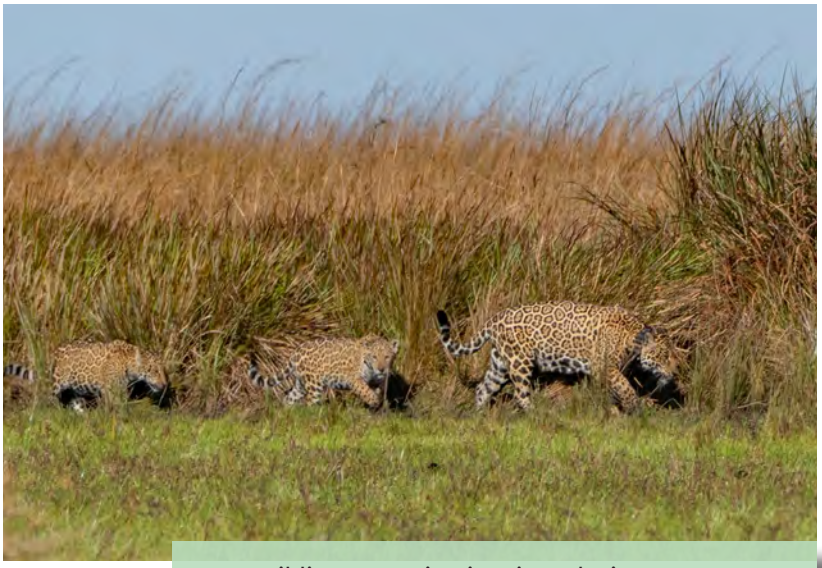
- ☑ Human resources: A good field team that is integrated and responsible is a winner!
- ☑ Filtering funds: The UN Decade of Restoration has brought many grants for tree planting and restoration.
- ☑ Foster partnerships: Build bridges, share results, and foster opportunities as they generate good news and promotion.
- ☑ Communication: Before and after photos are powerful messages to transmit on social media.

How to do restoration and rewilding

Remember: a reserve is forever. Where do you want the reserve to be in 200 years? Do you want to manage the habitat to increase a threatened species' abundance? Do you want more diversity in your reserve — so not a homogeneous, old-growth forest? Do you want emergent, or rare fruiting trees? Marsh habitat? A reserve that can cover the entire life cycle of a certain species?

To conduct responsible restoration activities, you must have a good knowledge of the reserve's remaining habitats, the existing diversity of wildlife, and their conservation status. Ideally, restoration activities should be planned as part of a broader management plan for the privately protected area, since it would greatly benefit from the maps and assessments produced for the consolidation of the plan (see 'How to do a management plan', p.89).

Guided by a vegetation-cover map of the reserve depicting all the different types of habitats and their conservation status, you should be able to select priority areas for restoration projects. In each of these areas, conduct an assessment of the major threats and impacts that have caused previous ecosystem degradation, evaluating their persistency and reversibility, to make sure they will not interfere with your restoration efforts.



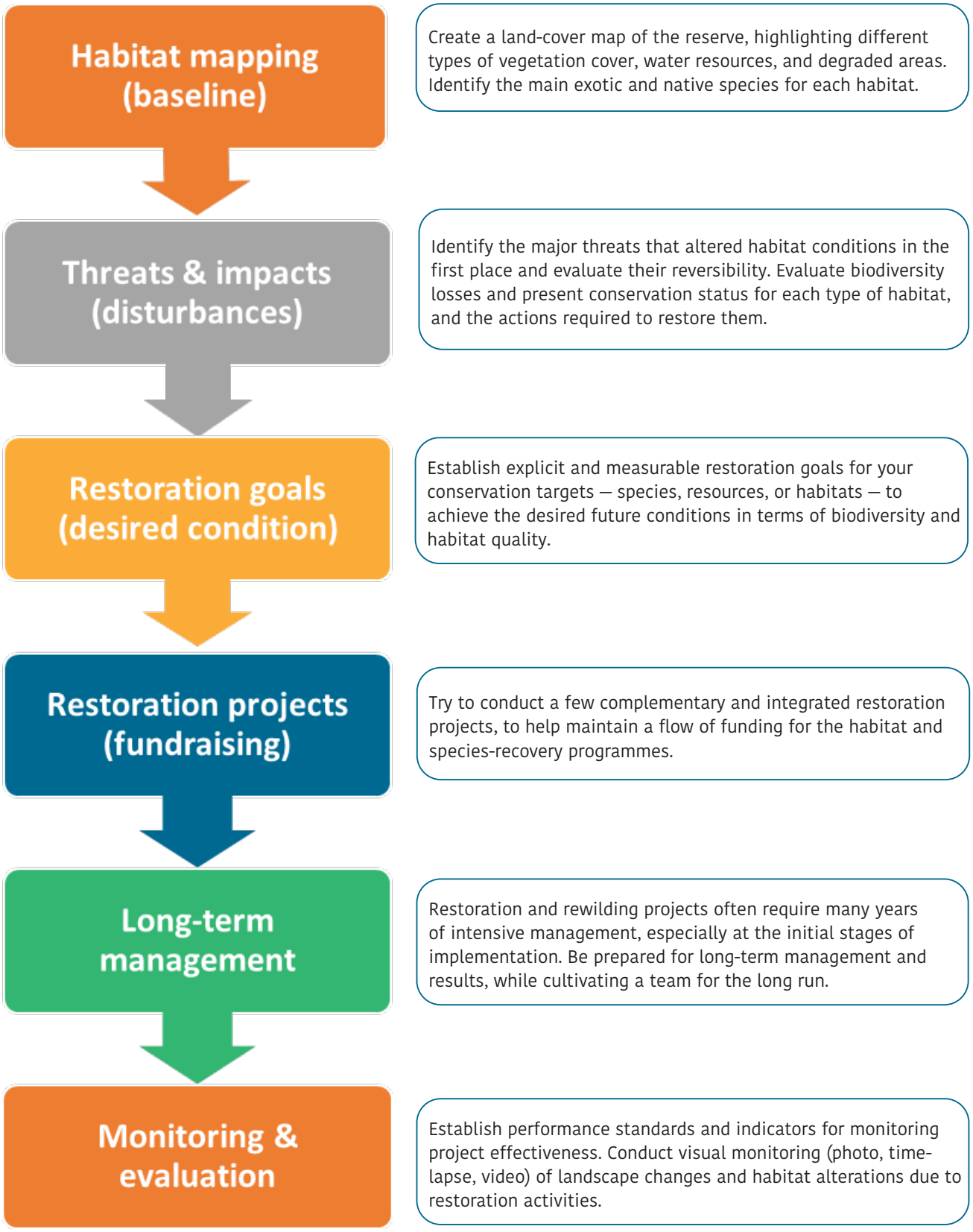
Rewilding Argentina is reintroducing Jaguars back to their original ranges in South America.

To enhance ecosystem restoration, consider rewilding, or the reintroduction of species that have been locally extirpated. For rewilding projects, identify species that have key ecological roles, such as seed dispersers, pollinators, and some predators, and evaluate their social-ecological feasibility and alignment with the reserve's conservation targets and goals. To prevent conflict between local populations and reintroduced wildlife, try to conduct continuous awareness campaigns, while also monitoring the community's perception about the conservation projects.

Establish explicit and measurable restoration goals for your habitat conservation targets to achieve a desired future condition in terms of biodiversity and vegetation cover. To be able to conduct long-term restoration processes, consolidate several complementary (and integrated) projects as part of a broader reserve restoration programme. Remember to include restoration activities starting with the first fundraising efforts to purchase the reserve's land.

Restoration and rewilding projects often require many years of intensive management and fieldwork, especially at the initial stages of implementation. Make sure to visually record and monitor habitat condition before the restoration interventions, with photographs or long-term time-lapse videos.

How to do restoration and rewilding



STEP 9 - MANAGEMENT TOOLS

What are the main tools to manage private reserves?

The Guapiaçu privately protected area (REGUA, Brazil) is restoring Atlantic rainforest habitat and promoting the reintroduction of extirpated Tapirs to Rio de Janeiro state.

What are the main tools to manage private reserves?

There are several planning and management tools that can provide useful roadmaps to community groups, nonprofits, families, and individuals interested in creating and managing private reserves. In this section, we summarise some of the most common and effective tools, which are also presented in more detail in the How-to-do section at the end of each Step. Every organised group requiring funds for reserve creation and management should consider developing at least some of the following tools: (1) **sustainability plan**, to define the activities and estimate the resources required to maintain the reserve and achieve its long-term goals; (2) **management plan**, to determine activities and land uses compatible with reserve conservation goals, and where they can be done; and (3) **business plans**, for the main income generating activities and based on the three pillars of sustainability: economic, environmental, and social.

Privately protected areas along the Tirunelli Kudracote corridor protect migrating habitat for elephants in Kerala (India).

Consolidating a nine-year economic sustainability plan

A sustainability plan is a strategic planning tool that allows you to envision the resources (financial, human), methods, activities, and timeframes required to accomplish the goals established for your conservation targets in the medium to long-term.

As described in 'How to do a nine-year sustainability plan' (p.29), the plan should be built collectively by the majority of the team members of your nonprofit organisation, and reviewed every three years to adaptively adjust it according to previous results and fundraising capacity.

Remember that less can be more for planning, and although you may have lots of supporting information for your plan, usually a five-page summary is all that is needed.

Preparing a management plan

As stated by Victoria Maldonado in her testimonial (see 'Management tools: reserve management plan', p.86), 'the consolidation of a management plan for a privately protected area can help us identify our conservation targets and establish long-term priorities, as well as estimate the funds and envision the means to conduct the necessary maintenance, restoration, and other activities'. A management plan is essentially a spatial-planning tool. Very simply put, it is a map of the property indicating the expected land uses for each identified territory or zone. The initial mapping to set aside a portion of the property as a privately protected area is already a first draft of your management plan, which should evolve to guide the development of all activities inside and near the reserve. At the end of this section, we present simple guidelines to create and periodically update an inclusive management plan (see 'How to do a Management Plan', p.89).

What are the main tools to manage private reserves?

Developing business plans

As mentioned in Step 3, private reserves should strive to develop models of sustainable living considering the three pillars of sustainability: economic, social, and environmental. In this sense, although the activities designed to generate income for the reserve should be managed efficiently as a business, they are not business-as-usual! They should be businesses with solidarity; solidarity for the planet, for all living beings, for the people who share the landscape with us, and for our own team of co-workers. Having said that, a sustainable business has also to generate surplus while complying with minimum requirements (legal, fiscal, operational, infrastructure, etc).

Thus, for each activity intended to generate income, it is advisable to develop a business plan. Besides saving time and money with trials-and-errors, a simplified business plan can also improve your chances of success when applying for a grant, since donors tend to appreciate self-sufficiency.

Building alliances

Sustainable privately protected areas cannot be seen and managed as isolated islands. Invariably, there will be situations with local stakeholders that, if not properly discussed or mediated, can result in conflict or disputes over resource use. Even more complicated, there could be national or regional development programmes — such as road construction and other infrastructure, incentives for monoculture agriculture, or housing developments — that can have deleterious effects over your conservation targets and goals. Creating and nurturing partnerships with local communities, individual neighbours, municipal governments, and as many local stakeholders as possible is one of the best ways to create a coalition that could help you cope with future issues. These partnerships should be mapped, and their eventual agreements should be envisioned in your plans, including the sustainability (nine-year), territorial (management plan) and business plans.

Monitoring and evaluation

Permanent monitoring and periodic evaluation of your activities are important to keep track of the observed results and measure the achievement of the proposed goals. Monitoring refers to the systematic and routine collection of selected information from your conservation projects and long-term programmes. It is mostly conducted to learn from existing practices and activities in order to improve them and make informed decisions for the future. Periodic evaluation should be conducted to assess each project's effectiveness (doing the right task) and efficiency (doing tasks in the best possible way), as well as to follow up on their long-term sustainability and the achievement of proposed goals through performance indicators.

What are the existing reserve management tools?

To evaluate reserve management capacity (dedicated managers), existing spatial planning tools (management plans, species action plans, zoning, mosaics) and the planning and monitoring of economic activities (business plans), participating organisations were asked to select which of the following items were in place, or being developed, at the time of the survey (Figure 17).

Although more than 70 percent of the reserves surveyed have management plans in place, only 26 percent have developed business plans for their income-generating activities. Forty-four percent of the respondents coordinate or participate in some kind of species action plan, both for animals and plants, and/or have monitoring plans in place for target or indicator species. Most of the reserves seem to have staff living on site (such as rangers, plant nursery laborers, fire brigade), but only 30 percent had a dedicated manager living on the reserve.

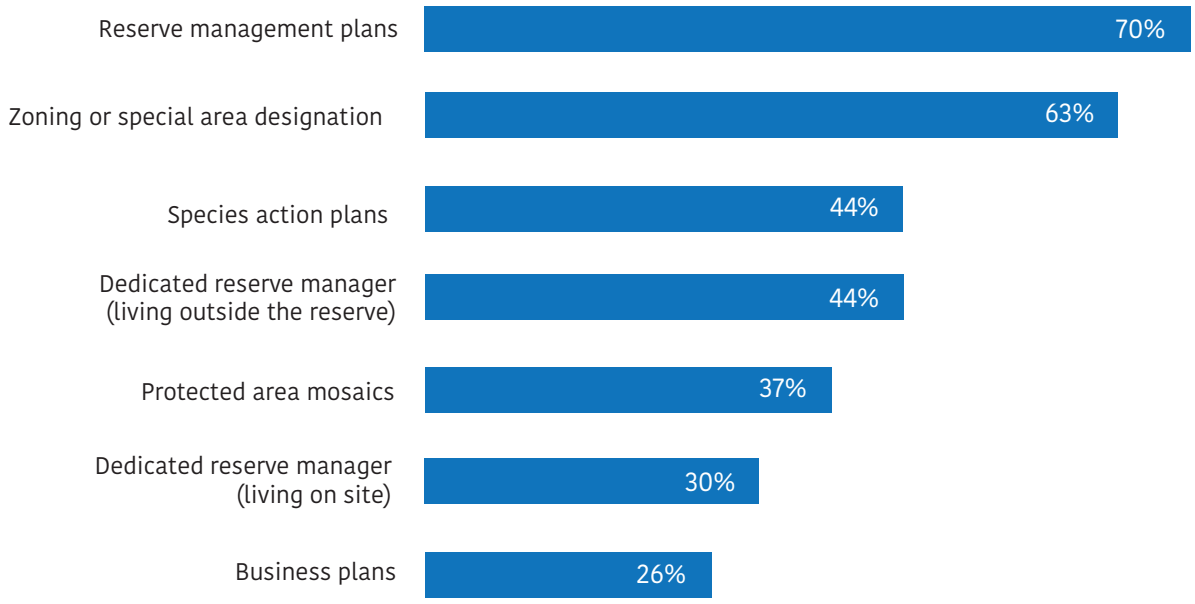


Figure 17. Reserve management tools. Percentage of responding organisations that have reserve management tools in place and dedicated managers.

Although more than 70 percent of the reserves surveyed have management plans in place, only 26 percent have developed business plans for their income-generating activities.

What were the lessons learned?

In the final question of the survey, participants were asked to distill their experiences as reserve practitioners and share advice on how to conduct long-term processes to create and manage privately protected areas. *What were the lessons learned?* The most common responses were grouped into four different broader categories (Figure 18).

The majority of the respondents have highlighted that creating and managing privately protected areas is a very long-term commitment, and as such should be planned and conducted accordingly: 'there is no rush in long-term projects!'Allow enough time to hear neighbours and other stakeholders, and have your social, economic and environmental assessments done to support daily management and strategic decision-making.

Our network of practitioners also agrees that you have to be creative and entrepreneurial, ensuring a diverse array of income-generating activities to operate and restore the reserve, while also being pragmatic and realistic.

Figure 18. Lessons leaned. Quotes from reserve managers and owners.

'There is no rush in long-term projects...'

[1]PES = payment for ecosystem services

'Management tools: reserve management plan'

Victoria Maldonado

Consultant, Chile

Victoria is a Doctor in Veterinary Medicine and MSc. in Conservation and Management of Wildlife with 30 years of experience in managing wildlife, policies, and legislation.

When we want to protect a wilderness area, we ask ourselves where to start. First there is the idea, the strength, the impetus that moves us to carry out this conservation project that we consider of great importance. And of importance not only for those who lead it but for a community, a locality, a country, and even the world. First, it must be clear that there are different types of people and institutions that may be interested in the conservation of a privately protected area.

Generally, foundations, universities, research centres, and long-standing NGOs have instruments that can support this work in the long term, which are generally included in their constitutional legal frameworks, their statutes, and mission. In some way, these institutions, according to how they were constituted, make it possible to ensure that the conservation activity lasts in time and, in most cases, have some level of financing that ensures at least basic operation and protection measures.

However, many of the examples of private nature conservation are driven not by institutions but by individuals, families, and communities who own or care for the land. Or the areas of interest to be protected for its biodiversity are in private properties. Conservation work is not so easy here. The private owner is asked how much he is willing to keep; many times it is not clear how to obtain financing to ensure protection activities in the long term; and, if funds are available, the question remains about what will happen when the person who started the project is gone; what will happen in 50, 100 years, or more.

But let's start from the premise that, as a private owner, we are committed and have the energy to fight against all adversities and that our goal and great reward is to protect a piece of land of importance for biodiversity.

In order to succeed, the consolidation of a management plan for the privately protected area can help us identify our conservation targets and establish long-term priorities, as well as estimating the funds and envisioning the means to conduct the necessary maintenance, restoration, and other management activities.

- ☑ Define how important the place is: know your habitats and biodiversity, so that you can establish priorities.
- ☑ Create a map of the area using satellite and drone images, or even Google Earth.
- ☑ Promote the zoning of the reserve according to its attributes, and based on the best available knowledge.
- ☑ Define a management programme for each zone, according to the objectives proposed for the private reserve.
- ☑ Continuously collect information and evaluate your actions, conducting a monitoring programme for feedback.
- ☑ Seek long-term protection and funding for the implementation of the programmes and protection measures.

'Protected areas, species action plans and fire management'

Weber Girão

Aquasis, Brazil

Weber is an ornithologist and conservation biologist, working in NE Brazil since 1996 for the conservation of the Araripe Manakin, trying to integrate science into public policies.

Private reserves can usually count on management plans to guide their actions; however, in places where they occur near other protected areas, they can be managed in conjunction, as a mosaic, as a strategy to promote mutual interests and tackle common problems. Along the slopes of the Araripe Plateau (northeastern Brazil) there are four privately protected areas in the tiny range of the Araripe Manakin, a bird species recognised as Critically Endangered globally.

One of the largest threats for this bird's already restricted habitat is the noticeable increase in the number of forest fires in the past few years. On the other hand, our ability to respond and cope with forest fires has also improved. This has been made possible by the integration of different fire brigades existing in the region, coordinated through a national action plan to prevent the extinction of this species. When some of the local fire brigades were at risk of being dismantled due to lack of resources, the participatory management council elected by different stakeholders had the mandate and the power to interfere and attract support for them. When areas in or near these private reserves were threatened by wildfires, three different brigades were equipped and able to respond.

The adoption of the Araripe Manakin as a flagship species in the region has also been instrumental for the success of this strategy. Besides serving as a practical indicator of priority areas for conservation, the charisma of the bird has been a great motivation for the firefighters. As a result of these efforts, the surrounding biota has also benefited, characterizing the Araripe Manakin as an umbrella species.

Identify potential partners in the proximities that might have local fire brigades (municipalities, protected areas, fire departments, large industries, etc). Learn about the fire response plans of each existing partner and try to find common or complementary interests. Look for emblematic species that can help motivate the fire brigades, and make them focus on a clear target, although many others will also benefit. At least once, take part in the fire response action.

- ☑ Identify potential partners.
- ☑ Integrate your efforts with existing protected areas and species action plans.
- ☑ Map existing fire response plans.
- ☑ Make sure the fire brigade knows why and who they are protecting.
- ☑ Take part in the fire response.

'Managing human-wildlife conflict'

Estefánia Gómez

Parque Jaime Duque, Colombia

Estefánia is a biologist, specializing in environmental law, and a lover of Colombian culture and nature. She is the monitoring and research coordinator for the Condor Program.

The conservation programme of the Andean Condor was born because of the concern of the Foundation Parque Jaime Duque about the fast loss rate of the condors' population in Colombia. Framed in our mission, we began this adventure importing three reproductively active couples of condors, aiming to start with the breeding and releasing programme.

However, we realised there was a human-wildlife conflict in El Almorzadero *páramo*, which led us to realise that our conservation programme should be grounded by the involvement of the local community. This is why we partnered with the Farmers Association Coexisting with the Condor (ACAMCO), who live in this *páramo*, where one of the biggest condor populations in the country lives. Together we declared their lands as nature reserves where they can still sustainably carry on their productive activities, such as sheep and goat farming.

We have learned that lack of support from both the public and private sector has led to mistrust, reducing the time or the acceptance of several projects in the area. After five years of work, 16 families joined the programme. Those who belong to ACAMCO work together, looking out for their well-being as well as for the condor and the *páramo*.

We have also found out that wildlife generates serious problems with local communities, since forfeiting domestic animals represents a high economic loss for their families, who very often earn less than the minimum salary in the country.

When executing these conservation projects, we often pay too much attention to the species biology rather than the reason why a species is threatened; mainly the conflicts with people. Comprehending why farmers are poisoning or shooting these birds helped us decide the next step: consolidating and strengthening the local community that is working to conserve the ecosystem and its resources.

Spreading knowledge on the importance of the *páramo* and its biodiversity, and the relation with human well-being also allowed local people to feel responsible for taking care of their territory. They have the right to stay there, have a dignified life, and use sustainable practices that lower survival and livelihood risks both for humans and wildlife. Solving conflicts within the association is an important chain to succeed.

- ☑ Communication is fundamental. The more people know about the project, the more successful it can be.
- ☑ Listen to the needs, concerns, and opinions of local communities. It allows us to attack important topics.
- ☑ Species conservation MUST be attached to community well-being; they are directly proportional.
- ☑ Good relations with all stakeholders, even if we have differences, reduces threats to the project.
- ☑ Love and passion for what you do should exceed limitations, so much that everybody gets inspired.
- ☑ Environmental education for kids and adults provides tools and empowerment on their natural resources.

How to do a management plan

A management plan establishes the uses and activities that are allowed on each portion of a private reserve's territory. It is an essential tool to guide management, restoration, and the development of sustainable activities. The first step in producing an inclusive management plan is to select a representative group of committed people that will be involved in compiling data, identifying management zones, discussing their uses, and periodically reviewing the plan. This can vary from a small group of family members to multidisciplinary teams. Larger nonprofits should try to involve as many people from their organisation as possible, as well as representatives from communities, municipal agencies, and other local stakeholders. Gender-inclusive teams are important in the development of the management plan, as local women may have different types of knowledge, roles, responsibilities, and perspectives.

To support all discussions and deliberations, the group should produce an assessment of the reserve's social-ecological characteristics and their present conservation status, including its surroundings. These assessments can be based on bibliographic reviews, interviews with local residents, and ideally supported by field surveys. They usually include the following elements, which should be summarised on a reserve map:

- **Biodiversity** (animal and plant diversity, and their conservation status)
- **Ecosystems** (mapping major ecosystems and their habitats based on vegetation cover)
- **Water resources** (springs, creeks, rivers)
- **General abiotic elements** (climate, topography, soil types, others)
- **Land uses and activities** (and potential threats)
- Other factors related to your specific **conservation targets**

Guided by the existing information and the reserve's conservation goals and targets, the stakeholder group should identify management units with similar characteristics, to propose management zones. You can have as many zones as needed, according to each reserve's characteristics. The table below exemplifies some types of zones and their uses for small privately protected areas.

Zone		Characteristics	Uses
Fully protected		These are core areas and fragments that maintain natural processes with little or no human intervention. They protect biodiversity, water resources, and key habitats (nesting, breeding).	Restoration, research, low-impact ecotourism.
Buffer/transition		These areas surround the fully protected areas to provide another layer of protection and promote restoration. They can create corridors between the fully protected zones.	Restoration, research, ecotourism, extractivism of forest products.
Sustainable uses	**Extensive**	Areas compatible with activities that do not require significant landscape alteration and facilities.	Agroforestry, ecotourism, extensive ranching.
	Intensive	These areas concentrate the infrastructure (administrative facilities, road access, lodging) for public use and reserve operation, as well as supporting economic activities.	Supporting facilities, organic agriculture, other activities.

For each zone proposed in the management plan, the stakeholder group defines the types of activities that are allowed and/or recommended. Specific guidelines for visitation, restoration, patrolling, awareness and education, research, and monitoring should be established. Management plans must be reviewed periodically to adjust priorities and timelines.

How to do a management plan

Select stakeholders

To produce a management plan, an inclusive and committed group of stakeholders should be selected from the onset. They will be involved in compiling data, identifying management zones, determining uses and rules for each zone, and periodically reviewing the plan.

Consolidate field assessments

The deliberations to identify management zones and propose their uses must be supported by maps, biodiversity and natural resource assessments, habitat area and conservation status, and other socio-ecological data from the reserve and surroundings.

Identify management zones

Zones have similar characteristics in terms of land use and conservation goals. In a privately protected area, these can be: Fully protected (core habitats, nesting, breeding); buffer (recovery areas, corridors), and sustainable use zones.

Define compatible activities

Guided by the reserve goals and conservation targets, the stakeholder group defines the types of activities that are allowed and recommended for each zone.

Establish rules for each zone

The management plan must contain clear rules and guidelines for each management zone, including the permitted activities and specific orientation for visitation, restoration, awareness and education, and research.

Promote restoration, awareness & research

Privately protected areas should always consider in their management plans activities and strategies that promote habitat restoration, biodiversity recovery, awareness campaigns, and community engagement.

Monitoring, evaluation & review

Management Plans must be periodically revised to adjust goals and timelines. Long-term monitoring programmes with measurable indicators are essential to provide the feedback to evaluate and update management plans.

Photo credits

- **Front cover (**clockwise, from upper left): Peter Hawman (Cotton-top Tamarin), Fabio Nunes (Grey-breasted Parakeet), Marigel Campos Capetillo (Red-eyed Tree Frog), Fabian Rodas (Amazon Basin Emerald Tree Boa), Trotsky Riera-Vite (Shuar elders), Trotsky Riera-Vite (Ocelot), Trotsky Riera-Vite (Three-toed Sloth), Lou Jost (*Magnolia chiguila*), Fabian Rodas (water stream), Tjalle Boorsma (Blue-throated Macaw), Sandesh Kadur/ALTO (Tarsier), Noval Suling/ALTO (Olive Ridley Turtle).
- Page xii: Adrian Forsyth (Villa Carmen Forest).
- Page 1: Alberto Campos (Araripe Manakin), Fabio Arruda (Oasis Araripe Reserve).
- Page 2: REGUA (Guapiaçu Ecological Reserve).
- Page 9: Corporación Serraniagua (Andean Spectacled Bear).
- Page 11 : Terry Whittaker (White-cheeked Gibbon).
- Page 11: VietNature (Dong Chau Forest).
- Page 12: Marigel Campos Capetillo ((Red-eyed Tree Frog).
- Page 21: Lou Jost (*Magnolia chiguila*).
- Page 21: Jaimes Culebras (Mindo glass frog).
- Page 21: Ecominga (Rio Zuñac Reserve).
- Page 22: Trotsky Riera-Vite (Shuar elders).
- Page 31: Kevin Schafer (Maleo Birds).
- Page 31: Ardash Raju (Maleo Bird habitat).
- Page 32: Fábio Nunes (Grey-breasted Parakeet vehicle).
- Page 39: Third Millennium Alliance (Choco Toucan).
- Page 41: FPWC (Caucasian Leopard).
- Page 41: FPWC (Aerial photo Caucasus Wildlife Refuge).
- Page 49: NatureLife Cambodia (Sarus Crane).
- Page 51: Tjalle Boorsma (Blue-throated Macaw).
- Page 51: Tjalle Boorsma (Barba Azul Nature Reserve).
- Page 51: Tjalle Boorsma (Ranger in Barba Azul Reserve).
- Page 52: Hutan (young Orangutan).
- Page 55: Alberto Campos (Oasis Araripe Reserve, Aquasis).
- Page 61: ANCOT (Marco Polo Sheep).
- Page 61: ANCOT (rangers in Tajikistan).
- Page 62: ANCOT (Tajik community).
- Page 69: AMPA (Community with plant nursery).
- Page 71: Peter Hawman (Cotton-top Tamarin).
- Page 71: Fundación Proyecto Tití (San Juan Nature Reserve).
- Page 72: Hutan (reforestation staff).
- Page 79: Rewilding Argentina (Jaguars).
- Page 81: Joana Macedo (Tapir with collar).
- Page 81: REGUA (Guapiaçu privately protected area).
- Page 82: MA Shajan (Asian Elephants in Kerala, India).
- **Back cover** (clockwise, from upper left): Associação Caatinga (man in greenhouse), Scott Trageser/ Third Millennium Alliance (woman bird-banding), Wildlife Trust of India (Annappara community), Corporación Serraniagua (team), Fundación Jocotoco (Canandé reserve team), Associação Caatinga (elderly couple), Marigel Campos Capetillo (woman), Fabio Arruda (ranger at Serra das Almas), Corporación Serraniagua (forum), Marigel Campos Capetillo (traditional drink), AMPA Perú (kid with drawing), Third Millenium Alliance (man with plant).

About the Authors

Alberto Campos
Co-founder of the Brazilian NGO Aquasis, Alberto has many years of hands-on experience as a conservationist, including the creation and management of public and privately protected areas. An award-winning conservation biologist (Future for Nature Award; Conservation Leadership Programme; Brazilian National Biodiversity Award) Alberto is presently conducting rewilding research at the University of British Columbia (Vancouver, Canada) to increase 'wildness' in all kinds of landscapes and people.

Lucia Guaita
Lucia is an environmental sociologist with an MSc in International Development from Wageningen University (the Netherlands). She works as a consultant and project officer for nature conservation organisations and foundations, such as IUCN NL, Prince Bernhard Nature Fund and Otter Foundation. Over the last decade, she lived in a diverse range of countries and social settings to research and understand what is most fascinating to her — how humans relate and interact with their surrounding ecosystem.

Bennett Hennessey
Bennett mixes the pleasures of life on this amazing planet with his duty, as an aware person, to improve the state of wildlife conservation. A Canadian U. of Toronto biologist living in Bolivia, with higher education training by Mbenjele, Uchupiamonas, and Chimane naturalists in Congo and Bolivia. He works half-time with the American Bird Conservancy Brazil Program, and the other half supervising the Barba Azul and Laney Rickman Nature Reserve and fundraising for Asociación Armonía in Bolivia. He believes strongly in productive, thrifty, priority-driven conservation, and in developing tools to help others achieve that goal.

Marc Hoogeslag
After extensive travels in Southern Africa and Latin America, Marc joined IUCN NL as a volunteer in 1999. At IUCN NL he worked on programmes supporting local NGOs in the conservation of wetlands, dry areas, and tropical rainforests. He was the co-founder of the Land Acquisition Fund in 2001 and has been in charge of this programme ever since. In 2019 he joined the team that initiated Operation Jaguar, a programme focusing on tackling the poaching and trafficking of Jaguars in Latin America.

References and further reading

- For more information on IUCN protected area definitions, categories, and governance types, see Dudley (2008). **Guidelines for applying protected area management categories**.
- For more on governance types of protected areas, see Borrini-Feyerabend *et al.* (2013). **Governance of Protected Areas: From understanding to action**.
- For more on privately protected area definition, best practices, case studies, and resources see Mitchell *et al.* (2018). **Guidelines for Privately Protected Areas**.
- For more on protected area planning and management plans, see Thomas and Middleton (2003). **Guidelines for Management Planning of Protected Areas**.
- For more on tourism partnerships and concessions for protected areas, see Spenceley *et al.* (2003). **Guidelines for tourism Partnerships and Concessions for Protected Areas: Generating sustainable revenues for conservation and development**.
- For several useful publications on protected area planning and management plans, see the IUCN World Commission on Protected Areas publications webpage. **IUCN WCPA Best Practice Guidelines for Protected Area Managers Series**.

Sustainable Nature Reserves:

Guidelines to create privately protected areas

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