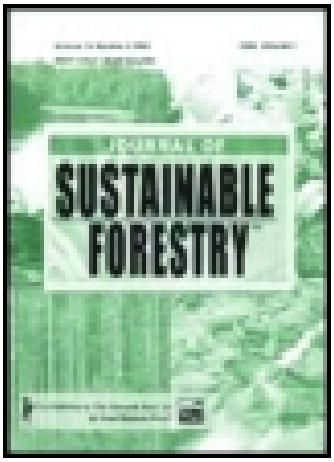


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# Money Matters: Financial Flows and Priority Setting Around Podocarpus National Park, Ecuador

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# Money Matters: Financial Flows and Priority Setting Around Podocarpus National Park, Ecuador

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*The patterns and processes by which money flows into, out of, and around a protected area are as critical to its long-term sustainability as those of any more tangible biological resource. The flows of financial resources around Podocarpus National Park (PNP), Ecuador are typical in that they may facilitate, hinder, or otherwise affect park management. This article focuses in particular on flows of conservation-related spending by governmental agencies and non-governmental organizations at PNP. Three trends currently affecting management are identified: priority-setting processes dominated by the paradigms of international donors, tensions between the underfunded park office and the NGO sector, and lack of long-term stable funding for community projects and official park objectives. The implications of other trends and conditions, including increases in long-term funding mechanisms like national environmental funds and possible shifts in priority-setting processes, may change conservation dynamics at PNP. Recommendations to address current money-related problems include the need for better forms of collaboration and grant-giving, implementation of accounting systems to track expenditures in relation to priorities, and attention to the unintended consequences of investing endowed environmental funds into unsustainable*

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*sectors and companies. Ultimately, it is important to stay attuned to the larger context of financial flows in which conservation activities take place, whether at the scale of one national park like Podocarpus or an entire national or international park system.*

*KEYWORDS conservation NGOs, financial flows, national environmental funds, Podocarpus National Park priority setting, sustainable funding*

## INTRODUCTION

Conservation scientists and practitioners are accustomed to studying and managing flows of biological and human resources into, out of, and around protected areas. At Podocarpus National Park (PNP) in southern Ecuador, these resources include water, timber, orchids, roads, birds and bears, crops, tree seedlings, cattle, mineral ores, and tourists. It is our underlying premise that understanding the patterns and processes by which these resources are distributed over the human-altered landscape, and the consequences of this distribution, can enable better management towards conservation goals (see other papers in this volume). I suggest in this article that the patterns and processes by which money flows into, out of, and around a protected area are equally as critical to enabling or hindering its long-term sustainability as those of any more tangible biological resource.

When money is viewed as a resource flow in this way, it becomes clear that the "problem" is not simply "there's not enough," although quantity is certainly part of the story. Lack of money for official park management may lead to paper parks and programs that are not of sufficient scale to meet the challenges facing a protected area (Brandon, Redford, & Sanderson, 1998). Indeed, lack of consistent and sustainable funding resources is an almost universally significant concern for protected area systems. In the last decade, many countries have established permanent national environmental funds to address this issue (Norris, 1999; Quintela, Thomas, & Robin, 2004). Temporal, spatial, distributional, and organizational factors, however, also influence the effect that a given quantity of financial resources may have. Well-funded conservation projects worldwide have been faulted for short timeframes that end without ensuring on-going viability, and for over-allocating resources to equipment and consultants. Inequitable distribution of what revenues protected areas do generate may increase socio-economic disparities and lead to conflict. Moreover, lack of planning and unclear priorities hamper effective spending of limited funds; the global priority models of some large conservation organizations were established explicitly to help guide conservation investments (Olson & Dinerstein, 1999; Myers, Mittermeier, Mittermeier, da Foneseca, & Kent, 2000). Recent attempts to

track the spending of such organizations in relation to their stated geographic priorities (Halpern et al., 2006) suggest one fruitful way to study whether money is flowing effectively around Podocarpus National Park.

In this article I show that understanding money as another type of resource flow is important for ultimate conservation success. I first provide a broad context to the question of financial flows at PNP, and then move on to give a qualitative and quantitative discussion of the conditions and trends in this arena, with an emphasis on (a) the Programa Podocarpus, a US$5 million co-management program funded by the Dutch embassy from 1997–2002; and (b) the relationship between Ecuadorian NGO Fundación ArcoIris and its international partners, most prominently The Nature Conservancy (TNC) but more recently Conservation International (CI) as well. This discussion will lay out three inter-related clusters of problems caused by the present configuration of financial flows, as well as recent positive developments. These problems center around (a) the relationship between priority setting and financial flows, (b) imbalances in funding distribution that create tensions among organizations and between public and private management initiatives, and (c) lack of stability and sustainability in management. Finally, I will offer some recommendations as to how various actors might be able to contribute to effective and equitable PNP conservation by understanding and addressing the dynamics of these flows.



## METHODS

This article is the result of a 10-day rapid assessment conducted in March 2005 with a class of 12 students, two instructors, and one teaching assistant from the Yale School of Forestry and Environmental Studies. During this time we spoke with a variety of actors involved in PNP management, with TNC and Fundación ArcoIris as our hosts. The data presented here are also based on management documents and limited correspondence with other actors from the region. In order to quantify funding distribution in relation to management priorities and threats, I analyze the spending patterns and priorities of the recently completed Programa Podocarpus as recorded in the program's final granting report (Programa Podocarpus, 2002). This analysis should be taken as approximate, in that it relies on my own interpretations and assumptions about some projects' objectives based on the brief descriptions in the above report.

I believe that money is not important only in the direct effects of which programs it funds. I am also concerned here with how flows of money modulate relationships between organizations, affect goals of capacity building and empowerment, or have other unintended consequences. In looking at this aspect of financial flows, I attempt to understand the sources and sinks of money as a resource: where does it come from, where does it go, and how are these decisions made?

## OF FINANCIAL FLOWS CONTEXT: TYPES

A vast variety of financial flows impacts PNP, from international donor dollars to black market payments for illegally harvested species (see Cronan & Cuoco, this volume), from government budgets for road building and park patrolling to the millions of dollars in remittances sent back to Loja and Zamora yearly from Ecuadorians in the United States, Spain, and elsewhere to their families. In order to limit the scope, I focus here on the context of money oriented specifically for conservation-related purposes in PNP and its unofficially-designated buffer zone (understood among park managers and organizations to indicate the lands proximate to the park's boundary, populated by people who are reliant on its watersheds and whose activities affect its ecosystems). However, it is worth noting that the relative weight of all these different types of flows, conservation-related or not, fundamentally structures the conditions and trends seen at the park—a point to which I will return in the conclusion.

### Official Park Management Financing

State money for conservation management is tight, especially when compared to other government functions. Ecuador's Ministry of the Environment (MoE) has a budget of around US$4 million, of which 1 million is allocated to the entire national park system (T. Eguez, personal communication, March 18, 2005). By contrast, the Ministry of Energy and Mines (MEM) has an US$18.5 million budget for 2005 (MEM, 2005). The MoE allocates individual park budgets from the US$1 million total; in 2003, PNP received around US$82,000 for salaries, basic overhead, and programs (MoE, 2005; see Table 1 for the past 4-years' allocations). This money from the national budget is, however, now supplemented with US$45,000 annually that comes through the country's National Environmental Fund (Fondo Ambiental Nacional,

**TABLE 1** Official Ministry of Environment Allocations to Podocarpus National Park (Including Salary, Overhead, and Programs)

| Year | US$ |
|---|---|
| 2000 | 36,392 |
| 2001 | 48,299 |
| 2002 | 64,987 |
| 2003 | 82,033 |

*Source.* Ministry of Environment, Ecuador (MoE), 2005.

FAN) from a capitalized fund initially created with Dutch monies. I will discuss the FAN in more detail below.

## International Organizations and "Project" Funding

The majority of money flowing into the provinces of Loja and Zamora for PNP-related conservation comes from international sources. These sources, which dwarf the annual official budget of the MoE, include foreign government monies, such as the Netherlands government or United States Agency for International Development (USAID); international organizations, like the Global Environment Fund (GEF) or United Nations Educational, Scientific and Cultural Organization (UNESCO); and private non-profit organizations such as the global-scale The Nature Conservancy (TNC) or Fundación Jocotoco, an Ecuadoran NGO with substantial foreign donors that purchases lands of high avian conservation value. This money flows in complex ways, though it is typically channeled at some point through in-country partner organizations. Thus, for example, in 1990, USAID gave TNC a large grant for its Parks in Peril program in Latin America and the Caribbean, which TNC then allocated in part to its Ecuadorian Program. TNC-Ecuador, in turn, allocated a portion of its budget to programs at PNP, most of which was channeled to Fundación ArcoIris, as TNC's "local partner" in the region, for "strengthening" the park. Projects included partnering with the MoE to improve park infrastructure (building the visitor posts at Cajanuma and Bombuscaro), increasing ArcoIris's capacity and staff, and implementing community-based enterprise projects like beekeeping and honey production in the Vilcabamba area. Beginning in 1998, TNC brought funding to ArcoIris and PNP through its Wings of the Americas, a program partly sponsored by Canon Corporation which links U.S. states with key migratory bird habitats in the tropics (Canon U.S.A., 2005).

ArcoIris at any given time has funding from multiple sources for multiple projects; most recently, Conservation International (CI) has begun to work in the region with partners including ArcoIris. One link down the chain, ArcoIris shares project funding and implementation with community-scale organizations. For example, the Fundación had collaborated with a group called Fey y Esperanza para Mañana to receive a United Nations Development Programme (UNDP) small grant for improving the production and marketing of *chuno*, a tuber that is ground to produce flour for pastries and breads. Half the UNDP money was earmarked for direct management by the community group rather than through ArcoIris. This collaboration, in turn, highlights the fact that beyond budgets *for* projects, there may also be flows of money generated *by* community enterprise projects that commercialize local products or engage in tourism.

The relationships, agendas, and power dynamics created by the way that money flows into Ecuador for conservation are important to understand

in a broad context. The structural adjustment policies wrought by the International Monetary Fund (IMF) upon developing countries, including Ecuador, in the 1980s and 1990s weakened states' ability and willingness to provide social services or environmental protection; into this gap the money and programs of international non-governmental organizations have flowed, bringing with them particular models of development and conservation. Keese (1998), for example, documents the way that the programs of Cooperative for Assistance and Relief Everywhere, Inc. (CARE)—whose $1.4 million budget was the largest influx of funds, governmental or non-, into the Ecuadorian Cañar region in the mid-1990s—were changing the physical landscape and socio-economic dynamics of the small farming communities with whom they worked. These "NGO landscapes" (Keese, p. 464) are a contemporary reality across the globe. Moreover, today the activities of large international conservation organizations in tropical countries are being increasingly criticized for what critics perceive as donor-influenced agendas that ignore the priorities of indigenous people (Chapin, 2004) and non-indigenous local people (Romero & Andrade, 2004). These organizations—foremost CI, TNC, WWF—all have a strong presence in Ecuador, though how such criticisms resonate in the Podocarpus context is a question that must be evaluated in its own right.

By far the most significant recent influx of foreign money to PNP conservation, in terms of both direct and indirect impacts on management dynamics, was the US$5 million Programa Podocarpus (PP) co-management effort funded by the Dutch government. Beginning in 1997, the PP brought both a vision of co-management with local organizations and a large sum of money available for financing capacity building and community-based conservation and development projects (Programa Podocarpus, 2002). The comanagement incorporated up to 57 organizations at its height, at least some of which were essentially created to access the PP project funding, and the Program emphasized small and short-term grants to build these organizations (Stern, 2002). The project officially ended in 2002, though the co-management committees created in four designated sectors around the park continue to exist and be supported by an ongoing limited version of the Program. The effects of PP will be discussed further below.

## Other Financial Flows

Other sources of funding that structure PNP dynamics include tourism revenues and government programs beyond the park's official management. Official park fees and buffer zone tourism activities represent the most important revenue sources in national parks like Ecuador's own Galapagos Islands. At Podocarpus, however, current revenues from tourist entrance fees are only around US$10,000 annually and, as Moran-Cahusac (this volume)

describes, the potential for tourism at PNP is presently limited. Moreover, tourism income may create problems of personal and communal jealousy and competition. Nonetheless, the *idea* of ecotourism revenues seems to be disproportionately powerful in generating support for protected areas among diverse sectors and the public. A US$5 million proposal that TNC and CI recently submitted to the Inter-American Development Bank to, in part, develop tourism potential in the region demonstrates this activity's potential to bring financial flows (Moran-Cahusac, this volume).

State programs for community development, agroforestry, or agricultural initiatives, as well as budgets for infrastructure and services like roads, educational system, or electrification, sum to more, far more than the total allocation to official Ministry of Environment park management. These types of programs also have important ramifications for the success of conservation-oriented programs and projects (see Wilkinson; Bond; and Bernardi— all in this volume).



## FINANCIAL FLOWS AND PARK MANAGEMENT

### Goals of a "Successful" Funding Structure

In order to understand any problems engendered by PNP's current financial flows, we must identify goals toward which a "successful" financial system should strive. In keeping with Clark's framework (2002), I suggest that a successful system is the result of an effective policy process, in which the questions of "how will resources be managed?" and "who gets to decide?" are addressed in ways that contribute to the so-called common interest. In this case, the common interest may be conceived as those objectives laid out in PNP's management plan: roughly, long-term conservation of the park's ecosystems within an integrated land-use system that allows for community development and sustained resource use (Apolo, 1984, as cited in Tello, Fiallo, & Naughton-Treves 1998).

Within this interpretation, we are interested, first, in improving the financial decision process; i.e., the interaction of all the various actors around PNP with respect to money, or the patterns and processes by which money flows around the Podocarpus landscape. Second, we are interested in ensuring that these flows contribute to just and effective conservation. For heuristic purposes, I therefore posit three goals of a successful system of financial flows related to PNP conservation: (a) that priority-setting regarding funds is an inclusive process that promotes common objectives; (b) that the distribution of funds promotes coordination rather than competition; and (c) that financial flows are stable, sustainable, and sufficient. In the following section I outline issues engendered by Podocarpus National Park's current financial flows that correspond to shortcomings in meeting each of these goals in turn.

## Conditions and Trends in Financial Flows

Financial flows and priority setting. The two questions raised above—"how will the resource be managed?" and "who gets to decide?"—are inextricably linked to financial flows. The source of capital has the power to dictate the terms by which it will be spent. The situation at PNP is hardly unique in exhibiting these "power effects of donorship" (Slater & Bell, 2002, p. 350, as cited in Mosse, 2004, p. 661). Those Northern government agencies and non-governmental organizations that have financed the majority of programs around the park through its short history have set the guiding models within which priorities are created. This asymmetrical relationship that characterizes "partnerships" forged in the name of conservation plays out at all scales (Romero & Andrade, 2004, p. 578). At the national level, the debt-for-nature swaps that came of age in the late 1980s are a prominent example: Between 1987 and 1994, 32 such transactions worth approximately US$128 million (and reducing countries' debt by some US$177 million) were implemented, largely by the "Big Three" conservation organizations (Jakobeit, 1996). Ecuador itself saw a US$9 million debt-for-nature swap in 1989, organized by WWF, TNC, and the Missouri Botanical Gardens (Jakobeit). These arrangements emerged during a period of growing global concern over deforestation and biodiversity loss in tropical countries, during which protected areas were seen as the primary solution by those organizations mediating the process; not coincidentally, the vast majority of these debt arrangements went to establishing and funding national parks.

At the scale of Podocarpus itself, it is the Dutch who have most recently and strongly established a dominant narrative of conservation in the region. Dispersing almost US$2 million in project, research, and capacity-building funds between 1997 and 2002, as well as almost another US$1 million in personnel and overhead expenses (Programa Podocarpus, 2004); the Programa Podocarpus was by far the largest financial actor in park conservation efforts. The program's model was in keeping with two major shifts in international paradigms: first, away from cordoned-off protected areas toward an integrated vision that promoted the benefits of conservation for local livelihoods and rural development (e.g., Wells & Brandon, 1992), and second, away from top-down models of project implementation toward more community-based and participatory management.

As Stern (2002, p. 27) notes, this model had at least two effects. First, the sudden and large influx of dollars designated for "participatory" management created a market for small organizations to spring up and capitalize on the conservation paradigm. Second, "international intervention in park management has brought with it a powerful discourse of degradation by local actors as the problem and community-based conservation as the solution," and the participatory rural appraisal methodologies used as a consequence of this diagnosis have "played a critical role in the development of

perceptions of local residents of these organizations and the Park" (Stern, p. 46). Among these is a perception that organizations create unrealistic expectations or make hollow promises by not following-up on participatory assessments (Stern). These dynamics suggest that the PP's agenda of participatory development-oriented conservation, backed by a well-publicized large sum of money, produced something of a "mirror" effect (Mosse, 2004, p. 652): The institutional desires of the donor induced a slew of new and existing groups—both larger NGOs and community groups—to adapt their own stated priorities and formal practices to reflect what they thought the PP wanted to hear.

The asymmetrical partnership's effect on conservation models and priorities plays out between individual organizations as well. TNC, for example, has adopted a methodology of working closely and over time with a so-called "local partner" organization, to build capacity and implement desired programs more effectively. They work to build technical, financial, and institutional capacity through trainings, strategic planning, and collaboration. It is not surprising, then, this large international group, whose consistent support since 1996 enabled ArcoIris to grow from an "ecological club" to a Fundación with dozens of employees, has played an enormous role in shaping ArcoIris's agenda and activities. Under Wings of the Americas, ArcoIris conducted bird research and produced species lists. The organization undertook a Conservation Site Planning exercise based on detailed TNC methodology for determining priority conservation targets and strategies; they have subsequently directed attention to community-based conservation in priority watersheds and conservation corridor design using spectacled bear habitat as a charismatic anchor. The corridor strategy—to "secure and connect nuclear areas"—resembles the landscape-level planning approaches that both TNC and CI are currently emphasizing. TNC, which in 2005 supplied approximately 40% of ArcoIris's budget (more at past points), is also collaborating with CI on development of a watershed eco-payment arrangement called EcoFondo (see below) in which ArcoIris is involved.

To point out these relations of power is not to deny that ArcoIris has benefited greatly or become a more effective organization due to its partnership with TNC—nor is it to pass judgment on whether TNC's priorities are right or wrong for ArcoIris and for Podocarpus. It is, however, important to understand the extent to which the financial source-sink relationship results in local partners and projects that mirror assumptions, models, and desires of exogenous donors. This same dynamic plays out in the relationships between local NGOs and the communities they approach for involvement in conservation initiatives with the possibility of large influxes of project monies.

That said, this relationship is certainly not necessarily a mere one-way flow of funds and agendas. While the funder has power to set the formal terms of the relationship, upon closer look the practices of recipient organizations and

communities may reflect processes of resistance, re-negotiation, or re-shaping of officially-received policies and models. As Mosse (2004, p. 651) writes, interventions are driven not so much by policy as by "the exigencies of organizations and the need to maintain relationships."

At PNP, funding relationships that do not exhibit "resistance" *per se* nonetheless show the way that local organizations may re-shape their rhetoric and description to take advantage of the models coming from outside donors. Long-standing project relationships that ArcoIris has with certain communities, for example, can be made to fit within an array of models like Conservation Site Planning or corridor conservation. Likewise, community organizations exhibit considerable agency in adapting their stated livelihood needs to match opportunities for resources from NGOs or government programs (Li, 2000). During our assessment, leaders in the rural workers' union UCOCPE (Únión Cantonal de Organizaciones Campesinos y Populares de Espíndola) in the county of Espíndola, southwest of the park, ran through a list of at least nine distinct governmental or international-donor programs under which the group had worked since its founding in 1984. While its leaders asserted that "we don't do it if it doesn't fit with our goals," they nonetheless are engaged in an ongoing process of adaptation depending on whether major funding is available for "coffee commercialization," "agroforestry," "agroecology," small loans for "community stores" for local products, or "food security and production." Whether this adaptation process is a largely rhetorical re-definition or also a re-definition of priorities in practice requires further examination.

Comparing official and de facto priorities. What can current patterns of expenditures on conservation tell us about the de facto priorities—the process through which stated priorities in overarching policies like the PP's co-management vision are translated into field activities? An ambitious recent attempt to compare several global NGOs' expenditure patterns to their priority models (CI's Hotspots, Birdlife International's Important Bird Areas, and the WWF Global 200) found that while patterns of spending did partially mirror these explicit schemes, there were both gaps and mismatches in the dispersal of limited funds (Halpern et al., 2006).

In practice, it is difficult to assess the extent to which actual expenditures and stated priorities may be similarly matched or decoupled around PNP, as standard accounting practices for organizations and public agencies are not set up to track spending in direct relation to goals and priorities. We can, however, deduce de facto priorities by looking at what types of projects are funded and what regions are targeted. Data were not available to do such a full analysis of all the diverse conservation-related money flows in the region, but analysis of the Programa Podocarpus provides a proxy and an example of this approach. The PP's final report (2002) contains a break down of the US$1,901,370 allocated to all projects and organizations under the program's co-financing program. We can see, for

example, with respect to spatial distribution (Table 2), that there is a fairly equal distribution of spending around the geographical sectors of the park, with less focus on the far southern end furthest from Loja and Zamora. With respect to the type of activity, the breakdown in Table 3 shows that approximately 25% of spending went toward community-based natural resource management, with another 7% each to the overlapping categories of

**TABLE 2** Programa Podocarpus Fund Allocation, by Location of Intervention

| Target area of project intervention | Total funds received (US dollars) | % Total |
|---|---|---|
| Zamora (NE) | 691,922 | 25.6% |
| Chinchipe/Palanda (S) | 281,884 | 10.4% |
| Loja (W, NW) | 573,873 | 21.2% |
| Nangaritza (W, SW) | 564,659 | 20.9% |
| General park | 754,515 | 21.8% |
| Total | 2,866,854 | 100% |

**TABLE 3** Programa Podocarpus Funding Breakdown by Type of Activity Funded. The "Priority Objectives" are Author's Own Characterization. Examples Drawn from Programa Podocarpus Final Report (2002)

| Priority objective | Examples of projects | Amount of project (in US dollars) | % of Total |
|---|---|---|---|
| Protect unique ecosystem examples and conserve upper watersheds | "Capacity-building [of MoE and regional university] for information production and exchange related to PNP management"; land tenure conflict resolution; botanical studies in *paramo* | 702,626 (446,538 for MoE capacity building and database creation) | 25.5% |
| Develop tourism and recreational opportunities | Development of tourism plans in Vilcabamba area and Shuar territory | 208,435 | 7.3% |
| Community livelihoods and sustainable alternatives | Improve production and commercialization; livestock management | 200,788 | 7.0% |
| Community/ organizational capacity building | Developing "social capacity," organizational strengthening for resource management | 218,298 | 7.6% |
| Community-based natural resource management | "Sustainable, participatory community-based resource management of watershed" | 729,611 | 25.4% |
| Regional management | Zoning projects; implementing co-management committees; management plans for corridors | 807,096 | 28.2% |
| Totals | | 2,866,854 | 100% |

community sustainable alternatives and capacity building, and 7% to tourism. Approximately 25% of the total went to the MoE or to activities directly related to mapping or management of the park's biodiversity. Finally, some 28% of the PP's funds were directed at regional-scale planning and management efforts.

From this sketch of the PP's financial flows we might infer that, in this program's viewpoint, management of the broadly-construed buffer zone is a greater priority than the strictly-defined protected area itself; that community-based activities and organizational capacity-building are the preferred strategies for park conservation; and that studies, diagnostics, and maps are preferred techniques. These priorities differ from the original 1982 objectives (Apolo, 1984, as cited in Tello et al., 1998) in placing greater emphasis on the park's social context than on straightforward protection of its unique ecosystems, a divergence that reflects shifts in both guiding paradigms and strategies over time.

There is, of course, no reason to assume that all priorities require equal levels of resource expenditure. It may cost much more to promote effective sustainable community resource use than to maintain boundary markers, guard salaries, and educational facilities. The larger point here is that tracking programmatic spending in relation to established priorities in this way can help to illuminate potential gaps or overlaps, and allow for a more grounded analysis of whether objectives are being met. This same type of analysis could be done regarding any individual NGO's goals, or regarding the relative spending to counter an array of conservation threats (e.g., how much spent to counter encroachment versus logging versus tenure conflict resolution, etc.).

Fund distribution, competition, and tensions in public versus private management. Competition and tensions among organizations working in the region were problems mentioned by almost all informants. The proliferation of NGOs and community organizations, fueled partly by Programa Podocarpus but also part of a larger trend in regional civil society growth ("Foundations," 2005), exacerbates this situation. As one ArcoIris employee phrased it, "there exists an insane competition" and "much jealousy here" among groups competing for a limiting funding pool (F. Nogales, personal communication, March 14, 2005).

This perception is shared by the official park management. The director of PNP explained that the MoE's 2005–2007 operational plan emphasizes "inter-institutional coordination" because "we didn't know what the various organizations around the park were doing" (L. Medina, personal communication, March 13, 2005). While these comments speak in the abstract to lack of communication, in concrete terms they refer largely to money. The park director lamented that private organizations received a far greater amount for their work than the total official park budget, and spoke of the need for the MoE to coordinate funding donations. Its operational plan states this desire clearly:

> Despite the recognition that the competition for outside funds is increasing, one form of continuing activity in the buffer zone is through help from international cooperation. This is thus a mechanism that needs to be strengthened and above all coordinated with the park, since many of the resources that are invested aren't even known by the park. (MoE, 2005, p. 25; author's translation)

According to a recent analysis the MoE conducted, PNP management needs around US$300,000 annually to do its job—expenses mainly to expand technicians and guard staff. This is more than double the current budget. In contrast, ArcoIris alone received approximately US$700,000 in project funds in 2004 (F. Nogales, personal communication, March 14, 2005). The park office's desire for greater authority, control, and respect in its management is expressed in terms of its displeasure with this imbalance of funds. But both local civil society and particularly international donors are reticent to work directly with the Ecuadorian government, holding the perception that what bureaucracy doesn't eat up—for example, all funds must go through Quito before arriving at the Loja office of the MoE—corruption will. Representatives of all the organizations we spoke with, from TNC to Unión Cantonal de Organizaciones Campesinas y Populares de Espíndola (UCOCPE), expressed frustration with the inefficiency of working with the government on programs. This dynamic can lead to its own inefficiencies, however, as public and private initiatives are duplicated due to lack of coordination. As an example, the MoE is working on agreements with hydroelectric projects to extract service payments, even as TNC, CI, and ArcoIris have initiated a separate funding mechanism based on payment for water services (see below and Redondo, this volume).

Analysis of the Programa Podocarpus funding breakdown suggests that, at least within this program, the relative amounts of project money received by different types of organizational participants may have been more equal than respondents' comments during our assessment trip suggested (see Table 4). Government agencies received similar levels of funding to NGOs. The MoE itself, however, received a total of US$396,136

**TABLE 4** Programa Podocarpus Funding by Type of Organization

| Organization type | Total funds received (US dollars) | % of Total |
|---|---|---|
| University | 308,507 | 10.8% |
| NGO (fundación) | 919,581 | 32.1% |
| Local association | 632,782 | 22.1% |
| Non-MoE Government | 444,848 | 15.5% |
| MoE | 396,136 | 13.8% |
| Co-management committees (joint government and civil society) | 165,000 | 5.8% |
| *Total* | 2,866,854 | 100% |

directed largely toward planning and capacity building; this clearly is far smaller than the total received by private organizations and municipalities.

The imbalance between donor financial flows for public and private management may have the long-term unintended consequence of decreasing state support for protected areas like PNP. It has been suggested that the PP allowed the Ecuadorian government to direct funds away from the park, "increasing dependency on external drivers of conservation initiatives" (Stern, 2002, p. 27).

Stability, sustainability, and sufficiency of funds for management processes. "When the project money runs out, the project ends" is a frequent refrain. For finite projects centered on planning, mapping, or assessing biological resources, a discrete time period was not necessarily perceived to be a problem. However, the time frame by which community-based conservation projects lived and died was a constant comment heard during the assessment. It is difficult to build the organizational and social capacity necessary to make an intervention self-sustaining within only a few years. The Programa Podocarpus exacerbated that phenomenon in the region, giving project grants with an average duration of 11–12 months for NGOs and community associations (Programa Podocarpus, 2002). This is just about enough time for a project to hire staff, plan its strategy, buy equipment, began building relationships and programs—and then disappear. Not surprisingly, this dynamic fueled perceptions that conservation groups spend all their money on trucks, computers, and salaries (Stern, 2002).

Short-term funding dynamics produce an atmosphere of instability *within* organizations, as well as in the relationship between organizations and local community targets. ArcoIris has fluctuated between 70 and 27 staff members in the last 5 years, depending on its active projects. Further, each time new money is sought, organizations must orient themselves to the terms of reference of the program or donor from whom they seek money, as was discussed above. Recipient organizations, moreover, often lack the authority to set their own time frame.

Programa Podocarpus encouraged the formation of new organizations without ensuring their long-term financial or institutional stability. The project had initially intended to work with a consortium of eight local NGOs, but it soon expanded its co-management offer, and explicitly decided to prioritize "capacity building" rather than setting strict requirements on the organizations to which it gave money. This capacity building took the form of small grants (< US$3000) to purchase items or create plans. Today, as the MoE's 2005–2007 operational plan states (2005, p. 10) that "a large portion of those organizations that were motivated by clientelism and financial support of the PP today have disappeared."

The shortcomings of many conservation grants' time frames are particularly acute in projects that aim to develop community-scale enterprises or commercialize local products. In such interventions, the explicit assumption

is that the initiative can eventually generate revenues enough to maintain and build itself into the future. The literature on existing cases provides a mixed evaluation of this hypothesis (e.g., Salafsky et al., 2001); certainly, examples of both "success" and "failure" abound. At PNP, the Vilcabamba beekeeping project provides one successful example, while ArcoIris's UNDP-funded *chuno* project, in partnership with the community producers' association Fey y Esperanza para Mañana, is more tenuous. Though the *chuno* project had achieved some success in reaching the Loja market, serious access problems persisted, and as of spring 2005 project funding had run out. In this case, the association's leader stated, the 33 or so families involved in Fey y Esperanza will continue to cultivate and process *chuno*, regardless of its commercial value, because it is a subsistence activity they conducted prior to this intervention. However, their ability to maintain and improve the simple machinery and bring it to market was in question if they didn't locate new funds. Whether such a project will, in fact, ever reach "self-sufficiency" in its finances is an open question.



### Some positive developments

Observations from the rapid assessment also show positive trends in financial flows that address some of the issues discussed above. These include the increase in long-term funding mechanisms, changes in priority setting processes, trends towards more coordination between the public and non-governmental sectors, and evidence of financial transparency.

### Increase in long-term funding mechanisms

In lieu of projects with time frames of 1 to 4 years, typical of foundation or bilateral aid grants, both the public and private conservation sectors are looking for long-term mechanisms. National environmental funds, such as Ecuador's FAN mentioned above, are one such tool. Over 100 such funds have been created in the past 15 years (Quintela et al., 2004), and at least 14 countries in Latin America and the Caribbean now have one or more (RedLAC, 2005). Operating funds are typically derived from invested endowments or debt swaps, as well as specified donations that are administered via the fund. The Ecuadorian Fondo Ambiental Nacional (FAN), created by statute in 1996 but only operational as of 1999, is a non-state organization that provides "a mechanism for long-term finance of environmental management" (FAN, 2005). With initial seed money from GEF/World Bank (US$4.3 million), a debt swap with the German government (US$2.9 million), the Dutch government (US$700,000), and the Government of Ecuador (US$1 million), as well as support from The Nature Conservancy and the Summit Foundation, FAN capitalized money for its first initiative–assistance to protected areas, through something called the Protected Areas Fund–in

2002. The fund currently has an endowment of approximately US$12 million, hopes to grow to US$35 million by 2010, and estimates that it needs a US$50 million principal for long-term sustainability (S. Sangüeza, personal communication, May 11, 2005). FAN has the MoE on its Board, as well as representatives from the business, academic, NGO, and other private sectors; this board defines policies, approves strategic plans and investment policies, and selects the executive director.

Payments for ecological services, such as carbon sequestration or water provision, are another largely untapped source for long-term conservation funding. Elsewhere in this volume Redondo describes the EcoFondo, an attempt to establish long-term PNP financing via municipal payments for watershed services; this fund, established with seed money from TNC and CI, will be administered through FAN. Both the FAN and the EcoFondo are examples of mechanisms being operationalized to address the problem of fluctuating and insecure funding for conservation, as well as international donors' concerns over giving money to the government for protected areas.



### Turning the priority-setting table

Several ongoing or nascent attempts to shift the way that priorities are established and funded, with increased participation from representative government bodies and local organization, are underway. One such initiative is a regional level planning process called the Regional Program for Environmental Action (*Programa de Acción Ambiental Regional*, or PAAR), which has the involvement of the provincial governments of Loja and Zamora, municipal governments, and civil society organizations from both provinces. This initiative is being supported in part by TNC and CI, and our limited exposure to it did not enable us to ascertain the nature and extent of regional participation. However, actors we spoke with expressed hope that this regional environmental planning exercise will result in a clearer agenda of priorities and goals that the government and civil society can then work to match with international donor funds. Another interesting initiative is underway in the county of Espíndola, where the mayor has called for a series of meetings with community organizations (such as UCOCPE) to establish local development priorities, to which NGOs and other regional organizations can subsequently attempt to match their resources and skills. ArcoIris is participating as an NGO in this process and several staff members applauded its objectives of reversing the typical project funding logic.

### Public-private coordination

The new EcoFondo will be allocated by a Funds Council composed of actors from FAN, municipal and local governments, civil society, and the hydroelectric utility companies, thus allowing for a more inclusive priority-setting

process. The PAAR process is similarly inclusive. Further, the organizations with which we interacted all expressed their rhetorical commitment to greater collaboration with municipal and local governments as a key to sustainable projects.

#### Reporting of financial flows

The publication of the Programa Podocarpus final report in 2003 is in itself significant. While one report is not itself a trend, this volume sets a strong example by enabling actors in the region to easily access full information about organizations' grants, projects, and capacity-building activities. Transparency is a source of greater accountability, the lack of which currently causes some of the lack of trust and tensions among PNP's various actors. On the national level, FAN has instituted a strong system of accounting, which will apparently soon become more publicly available online (S. Sangüeza, personal communication, May 11, 2005).

## RECOMMENDATIONS

The following recommendations are directed principally at international conservation organizations and donor groups, but are also relevant to ArcoIris and its counterparts, as well as the Ecuadorian government at all levels. Recommendations below correspond to the problems discussed above—priority setting, distribution and coordination, funding sources and flows.

### Priority Setting

Donors should encourage, foster, and participate in regional and local public processes. International donors, given their heavy influence over conservation paradigms and strategies, can be perhaps most effective in the long-term by funding and encouraging mechanisms that allow for broadly inclusive priority-setting processes. Both the PAAR and EcoFondo represent positive steps in this direction. The more that priorities are hammered out by "local" actors and not received from above, the more likely people are to feel ownership over the agenda. (My assumption is that this ownership, in turn, increases both management success and sense of empowerment.) For the same reason, working with government actors and within political processes increases the likelihood that conservation becomes part of a more coherent vision of government programs, rather than something that "foreigners" fund and do. In the Ecuadoran context, such coordination may be more effective on sub-national levels, given the degree of instability in Quito (see Cherney et al., this volume).

Explore models other than comanagement for effective conservation. In asserting that priority setting is best made an inclusive, participatory process, I am not suggesting that community participation and comanagement are the most desirable (or desired) formulae for all conservation activities around the park. Nor are participatory resource management and development projects the only necessary type of community intervention for effective long-term conservation of PNP. Education, conflict and titling resolution, enforcement, and trust-building between community members and park employees are also necessary (Stern, 2002), and while they must be done in a manner attentive to fostering good relations—such as the park's current "participatory enforcement" activities—these sorts of activities will entail different models than that which the PP brought.

Track financial expenditures in relation to priorities. My analysis has called attention to the need to look at potential gaps or points of overemphasis between PNP management goals or threats, and current patterns of conservation-related spending. Tracking spending in this way, whether in terms of geographic zones or types of activity, is a tool that can be used both within an organization, as part of its accounting system, and in a larger regional way to visualize the problems faced by the park. For example, is spending throughout the region part of a coherent strategy, or do we find that there are millions of dollars spent on road development next to the park boundary, but only a few thousand on park boundary protection? Such an exercise could be a useful part of regional or organizational planning exercises.

## Distribution that Promotes Coordination

Donors and international conservation groups must be aware of and sensitive to the problems caused by large outside funding sources. Recognizing the dynamics created by current financial patterns is a first step in improving them. While partnering such as TNC and CI do is an efficient strategy that has led to a stronger and more effective organization in ArcoIris's case, the tensions it creates may conversely impede coordinated actions with other groups. As I noted before, large conservation organizations can ameliorate this by continuing to support mechanisms and funds that do not privilege and cultivate only a few select actors.

All parties should investigate and encourage low-effort mechanisms for bringing stakeholder organizations together to share information about activities and disclose financial allocations. Both formal and informal ways are needed to bring the MoE, local governments, and private organizations together in forums where they can share information about park-related activities and financial disclosures—while, at the same time, not unduly increasing everyone's burden to attend redundant meetings or write useless documents. Internet forums (a few already exist) and websites are important

possibilities to explore, particularly for their utility in greater data sharing. That said, web-based communication encourages selective participation and access for the cyber-savvy and is not a cure-all (Uimonen, 2001).

Support the FAN as a bridge between international donors and Ecuadorian institutions. One reason for the disparity between public and private funding has been a mistrust of government agencies due to corruption and inefficient bureaucracies. FAN, although still in its proving stages, is a promising mechanism to enable international donors to overcome this issue. FAN's emphasis on financial viability and disclosure is key to building trust. Donors and conservation groups should support the development and capacity of FAN's budget and programs, and both sides should consider ways to encourage flexible donations that the fund can use to build its National Protected Areas System endowment. This endowment goes toward paying for the recurring costs of enforcement, administration, and maintenance that are necessary to effective park management—the basic costs that donors often balk at supporting.

## Stable, Sustainable, and Sufficient Funding

Ensure that long-term funding mechanisms based on investments do not promote environmentally harmful activities. Despite their benefits for providing stable, sustainable, and sufficient financial flows, funds like FAN have potential unintended consequences. While environmental trust funds can be structured as endowments, sinking funds, or replenishing funds—variations on the way that principle versus interest are spent—they generally involve investments (Bayon, Deere, Norris, & Smith, 1999; Quintela et al., 2004). It is thus critical to ask in what sort of companies national environmental funds are invested, what kind of economic activities they are supporting and driving. At the least, such funds should be part of a portfolio that encourages sustainability and national re-investment, rather than investing in foreign-owned oil, mining, or timber activities that serve to perpetuate the same environmental and social harm that environmentalists attempt to alleviate. While the international network of environmental funds is apparently beginning to consider aspects of so-called socially or environmentally responsible investing of their design (Norris, 1999), this issue is still notably absent from many discussions. The general emphasis continues to be on maximal fund capitalization with whatever asset strategy is required (e.g., Norris; RedLAC, 2005).

Ecuador's FAN currently has funds managed under two schemes. Those monies whose donors require an exterior manager (e.g., GEF, World Bank) are managed by Deutsche Bank, whose investment decisions are supposed to conform to any Work Bank investment policies (S. Sangüeza, personal communication, May 11, 2005). The second set of funds (US$8 million) currently includes German debt-swap money and the Ecuadorian state's

original donation, and is managed by a trust whose fiduciary committee includes members of FAN's board. These funds are apparently managed within the Ecuadorian stock market, and all investment policies are subject to the non-objection of donors (S. Sangüeza, personal communication, May 11, 2005). The FAN's Executive Director writes, "as there is not much offer of stock in Ecuador, strict environmental and social criteria to decide about investments cannot be applied. That said, of course, decisions should be convergent with our institutional principles" (S. Sangüeza, personal communication, May 11, 2005, author's translation).

Encourage long-term mechanisms beyond trust funds, like ecosystem service payments. Endowed funds are not the only way to create long-term financial flows. The proceedings of the 2003 World Parks Congress's stream on sustainable finance (Quintela et al., 2004) details other mechanisms that range across ecosystem service payments for water or carbon, tourism fees, debt-for-nature swaps, private enterprise partnerships, extractive industry fees, conservation incentive agreements, direct payments, tax structures, and World Heritage status. Some of these mechanisms are more likely than others to promote incentives that fit coherently into a larger vision of sustainability; some are simply infeasible presently at PNP, whether for political or other reasons, but may one day merit consideration. At Podocarpus, the EcoFondo is a promising development. Other mechanisms might eventually include a production or sales tax on timber or mining ores, which could generate additional conservation revenue, carbon credit reforestation schemes, and World Heritage status, which the MoE indicates is an option currently being explored. Overall, diversification of funding streams is the best basis for a more sustainable and sufficient system (Quintela et al.). This principal applies to an organization like ArcoIris as well: its autonomy and security increase to the extent that it is not dependent on one organization like TNC for the majority of its budget.

Encourage longer project timeframes. Financial sources can contribute to greater organizational and project stability and sustainability by adjustments in the way their monies flow. Particularly in projects that involve working with communities, donors should encourage somewhat longer time horizons, with more space built in for capacity building, and more possibilities for extensions given strong independent evaluations. Moreover, allocating a portion of the project budget directly to local management, rather than always through the mediating NGO, should become a more standard component of project expectations. Shifting money management to lower levels may require providing additional trainings, staff resources, and oversight, but I suggest that it is an important step if building organizations' capacity for self-sufficient management and decision making is a goal of the donor.

Recognize that "success" in community enterprise may not mean solvency. NGOs, donors, and community organizations need to have realistic expectations about achieving financial self-sufficiency in small-scale projects. Some

projects, such as commercializing *chuno* or promoting ecotourism in remote roadless rural areas, simply may never be financially viable on their own terms. Rather, subsidies may be part of long-term "success" conceived beyond financial terms (Salafsky et al., 2001). Strategic decisions must be made as to whether, how, why to support these activities for other reasons than money—and how to design place-appropriate projects in the first place.

## CONCLUSIONS

Money and the tensions and opportunities created by its availability across a management landscape are clearly related to the distribution not only of wealth but of other values as well—respect, skill, power, and well-being among them. These values, in turn, are directly linked to processes of empowerment and capacity building which have long-term consequences for the social and decision-making processes surrounding PNP conservation. This applies equally in the relationship between international donors and in-country recipients, and the relationship between project implementers and local community participants. This paper has argued that PNP will benefit from financial flows that are allocated through inclusive, equitable, and rational priority-setting processes that balance the interests of government and private actors and promote long-term sufficient funding.

Furthermore, it is important to recognize that there exist other flows of money that no one can "control"—but which, however, structure the social and physical landscape within which conservation activities attempt to act. Indeed, these flows may ultimately have the most fundamental impacts of all. Household remittances are perhaps the clearest example. Ecuadorians abroad sent back some $US1.6 billion to family members in 2004 (Fondo Ecuatoriano Populorum Progressio, personal communication, April 5, 2005). In Loja, it is estimated that some 47% of the provincial population has left for look for work abroad, the majority to Spain (86%) or the United States (6%), and remittance payments average approximately US$228 monthly (Fondo Ecuatoriano Populorum Progressio, personal communication, April 5, 2005). This flow of money in and labor out will have enormous consequences for land use and economic flows between urban and rural areas. Revenues from logging, both illegal and legal, the possibility of large mining concessions entering the area, and the increased commerce across the nearby Peruvian border are other flows whose trends impact the success of PNP conservation efforts. It is important to keep an eye on these larger flows and their potential effects, because money matters. Conservation science and practice will benefit from viewing money as a resource like any other, the patterns and dynamics of which need to be understood and managed for sustainability.

## REFERENCES


Apolo, W. (1984). *Plan de manejo: Parque National Podocarpus*. Quito, Ecuador: Ministry of Agriculture.

Bayon, R., Deere, C., Norris, R., & Smith, S. E. (1999). *Environmental funds: Lessons learned and future prospects*. Gland, Switzerland: International Union for Conservation of Nature (IUCN).

Brandon, K., Redford, K. H., & Sanderson, S. E. (Eds.). (1998). *Parks in peril: People, politics and protected areas*. Washington, DC: Island Press for The Nature Conservancy.

Canon U. S. A. (2005). *EcologyFund.com*. Retrieved May 17, 2005, from http://www.ecologyfund.com/ecology/info_birds.html

Chapin, M. (2004). A challenge to conservationists. *WorldWatch*, *17*(6), 17–34.

Clark, T. W. (2002). *The policy process: A practical guide for natural resource professionals*. New Haven, CT: Yale University Press.

Fondo Ambiental de Ecuador (FAN). 2005. *Unpublished case study*. Retrieved May 17, 2005, from http://www.conservationfinance.org/Documents/EF_profiles/English%20versions/Ecuador-NEW.pdf

Foundations assume tasks of the State. (2005, March 15). *La Hora,* p. B6.

Halpern, B. S., Pyke, C. R., Fox, H. E., Haney, J. C., Schlaepfer, M. A., & Zaradic, P. (2006). Global mismatches in conservation priorities and spending. *Conservation Biology*, *20*(1), 56–64.

Jakobeit, C. (1996). Nonstate actors leading the way: Debt-for-nature-swaps. In R. O. Keohane & M. A. Levy (Eds.), *Institutions for environmental aid* (pp. 127–166). Boston: MIT Press.

Keese, J. R. (1998). International NGOs and land use change in a southern highland region of Ecuador. *Human Ecology*, *26*(3), 451–468.

Li, T. M. (2000). Articulating indigenous identity in Indonesia: Resource politics and the tribal slot. *Comparative Studies in Society and History*, *42*(1), 149–178.

Ministry of Energy and Mines, Ecuador (MEM). (2005). *Gestion Financiera*. Retrieved May 17, 2005, from http://www.menergia.gov.ec/secciones/organizacion/sdoFinanPresupuesto2.html

Ministry of Environment, Ecuador (MoE). (2005). Plan Gerencial del Parque Nacional Podocarpus 2005-2007. Proyecto de Fortalecimiento de la Gestión Ambiental del Ministerio Del Ambiente Ec. 013301. Embajada Real de los Paises Bajos, Fondo Nacional Ambiental, Quito, Ecuador.

Mosse, D. (2004). Is good policy unimplementable? Reflections on the ethnography of aid policy and practice. *Development and Change*, *35*(4), 639–671.

Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Foneseca, G. A. B., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, *403*, 853–858.

Norris, R. (Ed.). (1999). *The IPG handbook on environmental funds: A resource book for the design and operation of environmental funds*. New York: Pact Publications, Interagency Planning Group.

Olson, D. M., & Dinerstein, E. (1999). The Global 200 initiative: A representation approach to conserving the Earth's distinctive ecoregions. In S. Stolton & N. Dudley (Eds.), *Partnership for protection* (pp. 59–68). London: Earthscan Publications Ltd.

Programa Podocarpus. (2002). Informe Podocarpus 1997–2002. Loja, Ecuador: Programa Podocarpus.

Quintela, C. E., Thomas, L., & Robin, S. (2004). *Proceedings of the workshop stream building a secure financial future: Finance & resources. 5th IUCN World Parks Congress*. Gland, Switzerland and Cambridge, UK: International Union for Conservation of Nature (IUCN).

RedLAC (Latin American and Caribbean Network of Environmental Funds). (2005). Retrieved May 17, 2005, from http://www.redlac.org/indexI.htmlRedLAC

Romero, C., & Andrade, G. (2004). International conservation organizations and the fate of local tropical forest conservation initiatives. *Conservation Biology*, *18*(2), 578–580.

Salafsky, N., Cauley, H., Balachander, G., Cordes, B., Parks, J., Margoluis, C., et al. (2001). A systematic test of an enterprise strategy for community-based biodiversity conservation. *Conservation Biology*, *15*(6), 1585–1595.

Slater, D., & Bell, M. (2002). Aid and the geopolitics of the post-colonial: Critical reflections on New Labour's overseas development strategy. *Development and Change*, *33*(2), 335–360.

Stern, M. (2002). *Building local support for protected areas: A comparative study of the measurement and significance of attitudes and perceptions toward two National Parks*. Unpublished master's thesis, Yale School of Forestry and Environmental Studies, New Haven, CT.

Tello, B., Fiallo, E. A., & Naughton-Treves, L. (1998). Ecuador: Podocarpus National Park. In K. Brandon, K. H. Redford, & S. E. Sanderson (Eds.), *Parks in peril: People, politics, and protected areas* (pp. 287–321). Washington, DC: Island Press for The Nature Conservancy.

Uimonen, P. (2001). *Transnational.Dynamics@Development.Net: Internet, modernization and globalization*. Stockholm, Sweden: Almqvist & Wiksell International.

Wells, M., & Brandon, K. (1992). *People and parks: Linking protected area management with local communities*. Washington, DC: World Bank.