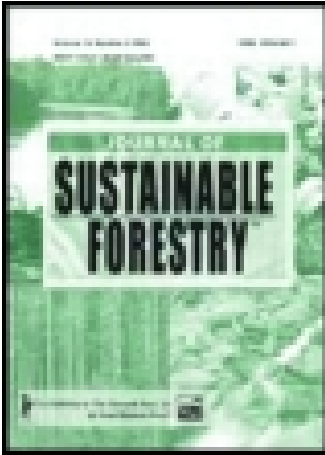


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Introduction

Development and Environmental Challenges, Podocarpus National Park, Ecuador

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Podocarpus National Park (PNP; 145,692 ha), established in 1982, is the only national park in southern Ecuador. It was established principally to protect Andean conifers, Podocarpus spp. In this introduction, first, we describe the methods that we used in our rapid appraisal of PNP. We detail our analytic perspective and the problem-oriented, contextual, and multi-method approach that we used. Second, we briefly describe PNP and its context. Our account of PNP management policy is a story about people who make up one large social process regarding how PNP will be used and who gets to decide. Within this social process, people are seeking values (e.g., well-being, wealth, respect) by using existing institutions and calling for new ones that use and affect resources in different ways. In this introduction we look at this social process, the idea of the “common interest,” and the need for management policy to help meet this goal. We also look at development and conservation as a decision-making process that must be understood and managed well if sustainability is to be had. The key to success in this regard, we argue, is to link “authority” and “control” in PNP management

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policy. Third, in this introduction we also give an overview of the articles in this volume and how they support this common interest outcome for the people in and around PNP.

KEYWORDS common interest, decision making, field trip, rapid assessment, social process, sustainable development and conservation

INTRODUCTION

Podocarpus National Park (PNP; 145,692 ha), now 23 years old, is the only national park in southern Ecuador. PNP was established in 1982 principally to protect the last large stands of Andean conifers (*Podocarpus* spp.) in this region. The park includes cloud forests, small lakes, and lowland Amazon forest. Four major headwaters flow from the park, providing the main source of water for the two main cities in the region, Loja and Zamora, as well as smaller communities. The park is rich in biodiversity and species endemism. Established by an Act of the Ecuadorian Parliament, the park was created for “sustainable development” purposes (United States Agency for International Development [USAID], 2003). This protected area and its buffer zone have the potential to be “motors of development, and an important source of the goods and resources needed for the social and economic welfare” (Kakabadse, 2003, p. ix).

PNP’s potential in this regard has not yet been realized, despite the hard work of a great many dedicated people. An active discussion is underway at present about development, environmental change, and poverty in the region, and what to do about it. However, the region is a “contested landscape” dominated by competing discourses (Brechtin, Wilshusen, Fortwangler, & West, 2003). One discourse focuses on development and calls for expanded natural resource exploitation and increased business opportunities. This discourse largely supports the existing power process and privileges those in charge now. The second discourse focuses on environmental degradation and calls for new practices that minimize exploitation. This discourse largely supports the growing non-governmental environmental community and their allies in universities, certain government agencies, and in other sectors of society. It supports the empowerment of new participants and their “community-based” practices, people who are now largely “outside” of the dominant discourse.

Both discourses justify their proposed formula/program in terms of helping people and improving lives, but in fact the challenge of poverty perplexes both discourses. In all this, the full human context is overlooked, misconstrued, or discounted. In so doing, the problem of development and/or conservation is reduced to largely a technical problem of “engineering” (Brunner, 2004). One way out of this contested landscape, discourse competition, and “engineering” trap is to use “effective interdisciplinarity to

make sense of the problem of environment and development” (Adams, 2001, p. 16). Such an approach is currently lacking in the PNP arena. However, the needed concepts and practical tools of interdisciplinism exist and await application (see Clark, 2002). This volume encourages their use in the PNP case and everywhere that similar challenges need attention.

In this introduction, first, we describe methods that we used in our rapid appraisal and in preparation of this volume. Second, we briefly describe PNP and its context. We describe PNP management policy as really a story about people who make up one large social process regarding how PNP will be used and who gets to decide. We also look at the idea of “common interest” and the need for management policy in PNP that helps people to find common ground. Common ground in development and conservation will only come about if an effective decision-making process is put in place and carefully lead and managed. The kind of decision-making process and functional standards needed are introduced. Third, in this introduction we also give an overview of the articles in this volume and how they support this common interest outcome that can secure a healthy future for the people in and around PNP.

METHODS IN RAPID ASSESSMENT

We were invited by The Nature Conservancy, Ecuador to conduct a rapid assessment of management policy in PNP, and hosted by ArcoIris. Both organizations actively work in the PNP region. We were asked to offer our perspective and see if we could help with the natural resources management and policy challenges that they and the people of Ecuador face. We spent 10 days in the field visiting numerous sites and organizations, and talking with over 50 people. We observed projects focused on water, forests, pastures, fires, grazing, logging, mining, orchid and wildlife poaching, road building and construction, tourism, subsistence farming, small-scale agriculture, reforestation, bird conservation, ecological research, program administration, coordination, and leadership. These experiences grounded us thoroughly in PNP and in the buffer zone in practical ways. This volume reports on our visit to Ecuador, March 10–19, 2005.

The Yale Rapid Assessment Course

For the last 10 years at Yale University’s School of Forestry and Environmental Studies, our course on “Rapid Appraisal in Forest Productivity and Biodiversity Conservation” has taken us to Mexico, Belize, Venezuela, Panama, Costa Rica, and Ecuador at the invitation of in-country hosts. Reports of these assessments are in Clark, Tuxill, and Ashton, 2003; Clark, Ziegelmayr, Ashton, and Newcomer, 2004; and Clark, Ashton, Dixon, and Petit, 2006.

We prepare a peer-reviewed report, like this one, for the *Journal of Sustainable Forestry*, our hosts, other people in-country, and the wider international community. Our last published report in 2004 was from the Condor BioReserve in northern Ecuador (Clark et al., 2004). All of these earlier reports serve as background for this one. In these earlier rapid assessments, we have looked at municipalities, communities, decentralization, ecological reserve and park management, issues of representation in decision making, biodiversity, watersheds, incentive systems, strategies for protected area management, spectacled bears and other featured species, non-timber forest products, environmental education, silvopastoral practices, decision making, and many other topics. We offered practical recommendations in each case.

The course is divided into three parts: pre-field trip assessment and preparation, the rapid assessment itself, and post-field trip and report writing. Detailed accounts of our rapid assessment approach are in Clark and Ashton (1999, 2004). These trips are problem oriented, contextual, and multimethod (Clark, Willard, & Cromley, 2000). In the pre-field trip phase, we prepare ourselves through reading, discussion, and planning. While in country, we gather considerable written material and conduct as many interviews as time allows. The trip itinerary is largely set by our hosts, in this case, The Nature Conservancy and ArcoIris. However, we have adjusted the schedule as opportunity dictated. Several class members are native Spanish speakers and others are fluent in Spanish. All these materials, observations, and interviews are used in our reports.

2005 Rapid Assessment to PNP

The 2005 course had 12 students. The students were well-experienced, both internationally and across a wide range of subjects and tasks. In our group we had four native Spanish speakers from Costa Rica, Peru, and Uruguay; six American students who had lived, worked, or visited Latin America before and were fluent or partially so in Spanish; and only two members with minimal knowledge of Spanish. Our hosts knew English, in many cases, so conversations were ongoing, in-depth, and substantive.

Our approach and intent was to understand and help address complex problems of sustainability and development. Students chose topics that were important to Ecuadorians and ones with which they had some experience. We looked at how to balance the many interests involved in PNP management. There are many issues at play—decentralization versus centralization, issues of participation (experts, officials, citizens, businesses, and others), and issues of governance and decision making. Presently, attention in the PNP arena is focused on biodiversity, water, private lands, buffer zone, private land management, forests, soils, education, markets/businesses, agriculture, and much more. We were introduced to many of these issues, and sought to understand as many as the time permitted. In this volume, we work to

bridge the gulfs between development and environmentalism, and between academia and real world decision making, in the context of PNP.

We visited and/or spoke with people at Catamayo, Salado, near Jimura, Andaluza, Bosque de Hanne, Fundación Jocotoco, Tapichalaca Reserve, Cajanuma park station, the herbarium at the Universidad Nacional de Loja and UNL forestry program, ArcoIris, Nature & Culture International, Estación Biológica San Francisco, Ministry of Environment, PNP park director, and Loja municipality officials. We visited local communities and spoke with a *campesino* organization, among our many stops in the region. We also went to Quito and spoke with The Nature Conservancy and Conservation International. We visited libraries, museums, and other repositories of information. We listened to numerous presentations and spoke with people in formal and informal situations. Conversations occurred in group settings and between individuals. Some conversations were brief, others extended over hours and days. Post-field trip analysis and writing was intensive and took about 6 months.

Sustainable Development and Conservation

We are interested in the discourses of sustainability, development, and conservation in practical ways. These are not disembodied constructs. They have real consequences and are used to direct policy and management that affects people's lives. What does the term "sustainable development" mean, and what is its power to draw diverse people in support? The term is widely used today in many fields as a goal and as a way to justify favored interventions purported to make people's lives better and use natural resources in ways that do not destroy them. The idea behind "sustainable development" has potential to dissolve the boundaries of disciplines, practices, and ideologies. Adams (2001, p. 4) explains that the term is simultaneously both "superficially simple and yet capable of carrying a wide range of meanings and supporting sometimes divergent interpretations." The Brundtland Commission has offered the dominant definition of sustainable development: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987, p. 43). This definition, however, functions more as a slogan than a serious theory or practical program for action. Neither development nor conservation has precise meanings. Mirovitskaya and Ascher (2001, p. 12) state that development is the "increased capability in the pursuit of wealth, well-being, or other values," and conservation is "both classic elements of nature protection and preservation, such as restoration and safeguarding of ecological processes and genetic diversity, as well as management of natural resources and ecosystems to ensure their sustainable use" (Mirovitskaya & Ascher; p. 47). However, as Adams (p. 383) notes, "sustainable development" is only the beginning of a process—a social and decision process. "It is a statement of intent, not a route-map."

This volume argues for fundamentally rethinking the concept of sustainable development. At present, people pushing for development often conflict directly with people promoting conservation. Often the way both groups conceive of sustainable development is practically limited and causes competition and conflict. A larger, more inclusive concept is needed—one that permits integrated problem solving by finding common ground. This requires moving beyond “technical” conceptions of either development or conservation and “engineering” to more pragmatic and humanistic understanding and actions. As Adams (2001, p. xviii) notes,

The world is not a machine, to be run by privileged super-mechanics, however skilled in environmental housekeeping. Rather than simply contributing to the enhanced efficiency of centralized bureaucratic and technocratic power, “green” development must also address the capacity of individuals and groups to plan and run their own lives, and control their own environments.

For this view to fully replace the present dominant “engineering” view, a reconstituting of the way many people and organizations operate is required. This volume supports such a reconstitution and suggests ways that both ordinary management decision making and constitutive decision making can be improved in the common interest.

PODOCARPUS NATIONAL PARK MANAGEMENT POLICY AND ITS CONTEXT

There are many problematic aspects to the management policy of PNP. The key to successful management policy is to understand the context and work within it to achieve the goals of sustainable development and conservation. The following introduces a method to map the context, and a problem-oriented technique to identify problems and find practical strategies for management. Many people limit their “mapping” of the context to biophysical or environmental aspects, economics, or some other part of the region; and in so doing minimize, overlook, or misconstrue human context dynamics. These errors result in misperceptions, judgments, and misguided recommendations. The approach we take focuses on humans and their interactions and the environmental (biophysical) setting in which people live and interact using genuinely interdisciplinary concepts and tools (Lasswell & McDougal, 1992). We are problem oriented and multimethod in our contextual examination of PNP’s actual problems. The approach this volume takes focuses both on the human social process dynamic that determines the fate of PNP and also focuses on the region’s resources, both natural and human.

Human Social Process—The Context

There are many ways to understand PNP management policy and its development and conservation challenges. Some ways are biological and technical, and others focus on human social interaction. These understandings are not mutually exclusive, even though they are typically addressed independently. The technical focus directs our attention to features such as species and ecosystem diversity, water quality, and other structural and functional parts of the ecosystem or landscape. The human social focus directs our attention to the way people organize themselves for a common purpose or for conflict and competition with one another. This volume appreciates both emphases and seeks to move beyond these two approaches. At its base, management policy is the human social process that decides if and how PNP will be managed and used (Clark et al., 2000). It is the social process that determines who will make important decisions about the future of the park and buffer zone, as well as who benefits and who is harmed by the resource use patterns adopted. Understanding social process is critical to managing PNP successfully. Empirically-based methods to map this social process or context are required. For actual problem solving, both the technical and social dimensions need to be carefully integrated using concepts designed specifically to do so.

PNP can be thought of as a human “arena” of recent construction. Government officials formally established it with their authority at the national level. Prior to that, the university and environmental communities researched the region and effectively promoted the PNP idea to the public and government officials, domestically and internationally. The way that this arena or situation is organized today—who participates, with what perspectives and values, using which strategies, and seeking what outcomes—determines how PNP management policy is unfolding and what is possible in the future. This contextual view of management policy focuses our attention on social features—participants, perspectives, situation (or arena), values, strategies, outcomes, and effects. This is the “social process” as described by Lasswell and McDougal (1992). These variables can be researched, described, and managed in varying degrees to bring about sustainable development and conservation. This contextual way of viewing PNP management and the human dynamic involved differs dramatically from that taken by people using only a biological and technical standpoint and methods. The two approaches—technical and social—to understanding PNP management policy are mutually compatible if dealt with through concepts that foster interdisciplinarity. At present in the PNP arena, beginning efforts are underway and much potential exists to capitalize ways and means for integration.

What is the social process or context of PNP? Stated most generally, people in the PNP arena are striving to maximize personal values (e.g., well-being, wealth, skill, respect, and others) by using existing institutions

(e.g., markets, power arrangements, associations) to get and use resources (both natural and human resources). At the risk of sounding too general or abstract at this point in this volume, this PNP social process is outlined in Table 1. Our task in rapid assessment was to empirically detail this process using data to the maximum extent that we could through our research (see the chapter on context and the human social process by Clark et al., as well as the chapter on the PNP arena and decision-making context by Cherney et al. in this volume).

Understanding this human social process at the heart of PNP management policy is key to meeting Ecuadorian people's and the park's common interest goals (goals are listed and discussed in the article on problem orientation, Clark et al., this volume). At present little published data on this basic human process exists for PNP. Such information on how the social process operates in the region would be invaluable if it were available to all parties. This information could be gathered, shared among interested people, especially officials, and used to advantage by all parties to create a situation where those who have authority work productively with those who have control of resources, in the common interest. Getting and using this kind of contextual knowledge practically and responsibly could greatly improve all aspects of PNP management policy.

In the final analysis, successful management, functionally speaking, is about people seeking values through institutions using resources. To date,

TABLE 1 A Generalized View of the Human Social Process at Play in the Podocarpus National Park Arena, Ecuador. Actual Management Requires that this Social Process be Understood in Practical and Realistic Detail to the Extent that time and Resources Permit. This Process Understanding can then be Used to Guide Programs for Sustainable Development and Conservation

People

With perspectives (people have identifications, make demands, and hold expectations) as well as beliefs (myths) based on a doctrine (ideology), formula (norms), and symbols that represent beliefs that guide how they behave and their value outlook.

Seek Values

Such as: power, respect, enlightenment, wealth, well-being, rectitude, skill, and affection that can improve their lives and bring security.

Using Institutions

Through techniques (e.g., based on the values of skill, power, knowledge, and so on) to affect organizational routines of government, parties, pressure groups, private associations, and even non-organized settings so that they get resources and can use them to improve their lives and bring security.

To Get and Use Resources

Such as unprocessed land, water, air, soils, plants, and animals, as well as processed land and human facilities and human energy to shape and distribute all value processes such as: power, respect, enlightenment, wealth, well-being, rectitude, skill, affection among people with different perspectives and beliefs; thus, new institutions are created and these may be sustained.

this social process in PNP remains limited in its effectiveness to achieve public interest goals. However, much potential exists to overcome past omissions. Methods to learn about human social process in the PNP arena exist and are partly introduced in this volume (see also Clark, 1997). The social process of Ecuador has been examined previously in Clark and Padwe (2004). These authors recommended that (a) analysis of existing experience within Ecuador, (b) use of the problem-solving framework that they proposed (the same one used in this volume), and (c) widespread diffusion of this knowledge to all participants, will help managers and policymakers in their efforts to find the common interest and promote sustainable development and conservation.

At present, most attention in PNP seems to be within the resources category (e.g., water, forests, biodiversity). There is a dramatic, systematic, and explicit lack of attention to people, values, and institutions (Table 1). Gains could be made in PNP management policy if more attention were put into these three categories—people, values, and institutions. The following is just one way to think about how to better link people, values, and institutions for gains in PNP.

Common Interest in Theory and Practice

We understand “common interest” to evolve from a democratic process that is open, reliable, fair, factual, honest, and reflects the interests of the majority of people affected by decisions of import. In the PNP arena, the common interest can only come about if the social process described above functions well, according to these and other standards (see Lasswell & McDougal, 1992; Brunner, 2002). The PNP management process is a distinctively human one through which participants share their particular perspectives and attempt through interaction to identify areas of overlap and arrive at some consensus that is both authoritative and controlling. The prescription or norms thus set are to be followed and enforced by all citizens. This is the path to sustainability.

The social process and its target of sustainable development and conservation in the PNP arena is a noble human concern, but it is vulnerable to less-than-noble human traits such as aggressive competition, destructive practices, and dogmatisms. This can lead to special interest domination of what should otherwise be a common interest process. Special interests are at play in many aspect of the PNP management policy process under way. Special interests are those of a minority that harm the majority. In principle, the legislation that formed PNP is a working specification of the common interests that has yet to be achieved on the ground in the PNP arena. It is this struggle between participants seeking common versus special interest outcomes that is the focus of the human social process today. These participants and their interests may be *principled* if they are well justified (based

on fairness), *expedient* when used to get one's way (keeps status quo in place), *assumed* when little or no evidence supports them (imaginary, presumed to be in the common interest), or *scientifically valid* when evidence supports them (real; McDougal, Lasswell, & Reisman, 1981). The present PNP arena and social process shows all these kinds of interests in competition. This is what was meant above regarding PNP's contested landscape and competing discourses.

At present, social process data shows that people in the PNP arena are having difficulty finding, securing, and sustaining their common interest. New ways for people to interact are needed (e.g., community-based initiatives, new markets, etc.). The PNP arena is not currently well organized to facilitate easy construction of new processes for finding common ground. In fact, the arena and human social process presently works against finding, securing, and sustaining common interest outcomes. Nevertheless, there is a great potential and opportunity to improve matters.

Linking Authority and Control

Perhaps the major functional barrier to progress toward finding the common interest is the obvious disconnect between those people with "authority" and those with "control." What are authority and control, functionally speaking? Authority is about who has the right to make decisions and enforce them. Authority is about expectations, including assumptions about whom (selected in a certain way, and using his control in a certain way) will be regarded as justified in what he does (Lasswell, 1971). For example, the PNP Director has authority because it is expected that he alone is authorized to make decisions about park management. In contrast, a citizen on the street does not have authority to make decisions about park management. Having authority exerts some degree of control, however minor it may be. Control is having the resources to enforce decisions. This means having base values—money, skill, knowledge, and so on—to control people and other resources. Control is needed to enforce compliance with authorized policy. For example, the ban on orchid poaching in PNP is only as good as the authority, and especially the control, behind it. If the park can fully enforce sanctions, then orchid conservation becomes possible. Control is needed to enforce both mild and severe sanctions. Currently, in the PNP arena, authorities have little control (few resources to enforce the rules or norms and follow through with effective, on-the-ground management). Clearly the institutions of public order, in this case PNP, need to be strengthened, including giving the park more resources. However, these resources must be applied directly in support of common interest process (not private, special interest processes). When public resources are siphoned off in support of private ventures, this is corruption (Reisman, 1979).

For the PNP sustainable development and conservation effort (arena and social and decision process) to function well in common interest, those with authority must work closely with those with control and vice versa. There are only three possible combinations of authority and control: authority dominates and is little connected to control, authority and control are connected in an effective system of public order, or control dominates and is little connected to authority (Table 2). In the PNP arena, government has authority but little control. For example, the Park Director told us, "We do not have the resources to actively enforce our border." He went on to make many other references to the need for control (resources). In terms of money, he stated that the operational budget for the park was US\$48,000. In terms of enforcement capacity, he stated that the seven park rangers under his control were inadequate to police the park. The director calculated that he would need a staff of 30 individuals and US\$300,000 for proper management. Clearly, his control is very limited despite his authority. In contrast, many environmental non-governmental organizations (NGOs) have relatively more resources in terms of money, knowledge, and skill than the park. These NGOs made many references to the need for more authority. Such groups, however, do have considerable control because of their money, knowledge, and skill.

While authority and control can be connected through a collaborative effort, PNP official management, the environmental NGO community, and others (e.g., business, local associations, other government agencies, etc.) do not work as closely with each other. Furthermore, some citizens and businesses are not following the law behind PNP as they mine, log forests, illegally poach orchids and wildlife, and so on. For the law that guides PNP management and its effective implementation to come about, authority and control must be integrated into a practical program. The conflicting social process underway at present is about different participants with different amounts of authority and control competing for influence or dominance.

The best way to bring about needed new patterns of interaction and new institutions is through "practice-based" learning projects (see Brunner & Clark, 1997; this volume, especially Cherney et al.'s "Understanding Patterns"). Practice-based projects are ones that take on actual management problems, not theoretical ones. Interventions seek on-the-ground improvements in management. Practice-based projects are at a human scale and produce results that are easily observable. They can be diffused and replicated or adapted, if they are successful, as needed to other people and new areas. This is a proven means for innovation, learning, and improvement (Brunner, 2002).

OVERVIEW OF ARTICLES IN THIS VOLUME

All articles in this volume support the goal of improving sustainable development and conservation. Subjects include park financing and priority setting,

TABLE 2 Authority and Control Must be Interlinked and Mutually Reinforcing for Podocarpus National Park Management Policy to be Effective and Serve the Common Interest by Meeting Sustainable Development and Conservation Goals

Authority dominates, little connected to control	An effective system of public order for PNP, authority and control connected	Control dominates, little connected to authority
<p>Problem: At present, government and officials have authority, but few resources for control outcomes. Arenas are established that exclude participants with control. The opportunity to combine authority and control to find the common interest is limited.</p>	<p>Problem: At present, there are not enough instances where authority and control are combined to produce effective decision-making processes. Where they are combined, management policy works relatively well.</p>	<p>Problem: At present, citizens, associations, and non-governmental organizations (environmental groups and universities) have relatively more resources than government to use to control outcomes. This control is not effectively combined with participants with authority.</p>
<p>Example: The director of Podocarpus National Park has been designated the central authority figure of the park by the Ecuadorian government. He is recognized as being responsible for managing the park, although he lacks the resources (financial, human, infrastructure, etc.) to adequately control outcomes on the ground.</p>	<p>Example: In most instances, regional law enforcement agencies are recognized by the broad public as having the right to enforce the laws of Ecuador. They also have the ability to actually enforce the laws on the ground (power to arrest and write citation).</p>	<p>Example: International NGOs, such as The Nature Conservancy and Conservation International, have substantial more resources than local groups and government agencies. The control over these resources gives them disproportionate control over outcomes on the ground, although the broad community does not recognize the NGOs' authority.</p>
<p>Solution: Those with authority should join forces with those people and organizations that do have resources for control. This means building cooperative partnerships for effective PNP management policy. In short, improve open, fair, and factual decision processes.</p>	<p>Solution: Continue to use instances where authority and control are already combined and expand the use of these instances everywhere possible. Strengthen decision making so that it follows standards that help people clarify, secure, and sustain the common interest. In short, improve open, fair, factual decision processes.</p>	<p>Solution: Those with control should join forces with people and organizations that do have authority. This means building cooperative partnerships for effective PNP management policy. In short, improve open, fair, factual decision processes.</p>

road development, cattle ranching, agroforestry, social interactions, watershed conservation, ecotourism, non-timber forest products, decision making, problem definitions, management policy, innovations, rapid assessments, and information gathering. While unique to PNP, Ecuador, the policy challenges identified in these articles are consistent with the findings of Rapid Assessments in other regions in Latin America (see Clark et al., 2003, 2004, 2006).

This introduction gives a basic outline of the management policy challenges in the PNP region. It is followed by two papers in Section 1 that serve as a foundation of knowledge in understanding rapid assessments and how “intelligence”—the process of collecting, analyzing, and disseminating information—can be used in helping achieve sustainability. Section 2 consists of 11 case studies examining different aspects of PNP management policy. Each provides recommendations on how to improve management.

The first three case studies illustrate methods we used to understand management policy in the region. In the problem-oriented overview by Clark et al., the authors explain the policy sciences’ analytic tool of “problem orientation,” and explore the biophysical, social, and decision-making challenges of the region. The second case study, by the same authors, clarifies how to create a social process map; and creates an initial map of PNP’s participants, perspectives, situations, values, strategies, outcomes, and effects. These elements make up the context of PNP. The third case study, by Cherney et al., further investigates the “situation” category of the social process map. The authors explain how to understand arenas—situations of participant interaction—and an arena’s relation to the decision process.

The next four articles directly address the sustainability of conservation and development efforts mediated by governmental and non-governmental programs in the region. Andrea E. Johnson explains how the patterns and processes by which money flows around the protected area are critical to the region’s long-term sustainability. Rafael Bernardi de León offers an assessment of regional road development. He describes the tension between improving infrastructure for development goals and halting infrastructure construction for conservation goals. He focuses on reducing the impacts of roads, while meeting development needs. Alvaro Redondo-Brenes’ article looks at the Pro-Cuencas Water Fund, a region payment initiative for environmental services for watershed conservation. His analysis looks at how to improve stakeholder participation to improve the Fund’s implementation. Cesar Moran-Cahusac investigates the status of ecotourism in PNP, and how it relates to the development goals of the Ministry of Tourism and the conservation goals of the Ministry of the Environment. His work concentrates on creating an inclusive ecotourism product for the park.

The following four articles address forest conservation in PNP, and the surrounding region. Cuoco and Cronan look at orchids as non-timber forest products. They focus on developing orchids as an international commodity to create economic benefits, while maintaining the viability of these rare and often endemic flower populations. Two complementary articles, Alice C. Bond’s “Contextual Analysis of Agroforestry Adoption . . .” and Kim M. Wilkinson’s “Agroforestry Systems and Podocarpus National Park . . .,” look at the possibility of sustainable agriculture in order to reduce pressure on the region’s forests. Bond explores the social and decision-making context for agroforestry, emphasizing institutional reforms; whereas Wilkinson investigates

how traditional, indigenous, and modern agroforestry practices can be integrated to reduce land extensification. Maura L. Adams continues the discussion of land extensification and intensification by looking at regional cattle ranching practices. She evaluates the economic prospect of intensification as an alternative to the environmentally harmful practice of extensification.

Section 3 of this volume is a synthesis of the management policy challenges identified in the case studies. It identifies three major, functional challenges—authority and control, the instability of institutions, and arenas—as the major factors leading to suboptimal management policy of PNP and its context. This article, in keeping with the complete volume, encourages efforts to develop management policy in the common interest.

RECOMMENDATIONS

For Podocarpus National Park and the surrounding region to meet the goal of sustainable development and conservation in the common interest, changes are needed in the current management policy dynamic. The recommendations offered in this volume to aid the present management policy process are directed at (a) developing a larger understanding of what PNP's management policy process actually is, (b) clarifying what is at stake in terms of values and the common interest, and (c) working to link authority and control in ways that promote common interest processes and outcomes. It is easy to justify these recommendations because they are supported by the United Nations (UN) Universal Declaration of Human Rights and many other international, national, and local conventions and policies. Our recommendations can be achieved by reallocating the limited resources available and by gaining new resources from ecotourism and other profitable means, the national government, and the international community.

Management Policy

The cases in this volume demonstrate that to date, the understanding of PNP's management policy is limited in scope and consequently needed actions. Most organizations and individuals in the region focus on the limited supply of tangible resources (e.g., money) and the unequal distribution of power. However, management policy is about more than finances and political clout. Management policy is a human social process in which people seeking values work through institutions to get and use resources. This is a value-laden process where technical solutions are unlikely to achieve an acceptable outcome in the broad public interest. Developing a

larger understanding of management policy process will allow more creative and flexible options to address current and growing management challenges. While this entire volume is focused on increasing the understanding of PNP's management policy process, Clark et al.'s articles on "problem orientation" and "social process" and Cherney et al.'s article on "understanding patterns," introduce an analytic framework designed to systematically increase process understanding and insight of the policy process with an eye toward making practical improvements.

The Common Interest

Ensuring an effective policy process requires clarifying what is at stake in terms of values and the common interest. Currently in the region, the common interest is not well defined. Instead, we see multiple competing claims about what is in the public interest. We suggest that innovative policy alternatives can create a process that allows diverse individuals and organizations to find common ground. We acknowledge that identifying the common interest is rarely a straightforward task. However, it is usually apparent to most people what is not in the broad public interest. When attempting to identify what is or is not in the public interest, Brunner (2002, pp. 12–14) suggests a three-part partial test: procedural, substantive, and practical tests. The procedural test asks a two-part question: (a) Is the process inclusive in representing a broad range of perspectives, and (b) are the participants involved willing to be held accountable for their actions? The substantive test asks if participants' expectations are supported by the best available evidence. The practical test asks if the process meets the expectations of all participants. All proposed solutions to PNP's management policy challenges should be subjected to these three tests.

Authority and Control

We suggest linking authority and control in ways that promote common interest processes and outcomes. This means improving the human social process so that people get the values they want through functioning institutions, and get and use resources in ways that support a successful PNP. This can be done by seeking new patterns of cooperation and co-management schemes. This requires creating new arenas and decision-making processes. Individuals and organizations that are authority figures in the region (e.g., the director of PNP) can develop partnerships with individuals and organizations that have control (e.g., NGOs, local people). This should be done in such a way that passes the three-part test for common interest.

CONCLUSIONS

Podocarpus National Park is one of the world's unique ecosystems. Its high levels of endemism and species diversity justify goals of sustainable development and conservation. However, the park and surrounding region are also situated in a unique social and decision-making context. It is not the natural raw resources, but rather the people in the region, that will determine its fate. Ensuring effective conservation and development requires a process by which people can clarify and secure their common interests. If this is not done, then resources will be wasted, people will remain in poverty, and time and opportunity will be lost. This volume offers new concepts and practical alternatives in support of a sustainable future for the region. These recommendations are not prescriptive in a narrow normal sense. They do not advocate for any particular special interest. They are broad suggestions to help the larger regional community find common ground by identifying, clarifying, and securing their common interests.

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