Promise or Peril?
The Fate of Indonesia's Protected Areas in an Era of Decentralization

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With the fall of the Suharto regime in 1998, the Republic of Indonesia entered a period of unprecedented political and social transition defined by the decentralization of resources and responsibilities from the central government to local government. These changes left no sector of public policy untouched, including the management and conservation of Indonesia's unique natural resources. The objective of this paper is to examine the impact of decentralization on the management of natural resources in Indonesia in the context of the nation's vast system of protected areas. More specifically, the paper explores the implications of institutional decentralization for the sustainable management of Indonesia's protected areas. The analysis presented ultimately reveals that the post-Suharto era of reform carries with it both risks and possible rewards for the country's ecological jewels. The paper concludes that the fate of the nation's parks and reserves is inextricably linked to the management structures adopted by the government and, importantly, the incentives that such structures engender in local communities to preserve or destroy surrounding protected areas.

Introduction

In the shadows of Indonesia's Tanjung Puting National Park a fierce war is currently being waged. Located at the southern tip of the Island of Kalimantan, Tanjung Puting is more than 400,000 hectares in size and contains a wealth of rare flora and fauna, including the endangered orangutan. The weapon of choice in this unfolding conflict is not a handgun or rifle (though those are sometimes used), but a more atypical weapon: a *chainsaw*. In other words, the prize sought is not the land itself, but rather the precious stands of trees that define Tanjung Puting National Park. For while these tropical trees play a crucial role in the functioning of the fragile ecosystem, they are also immensely valuable on the international timber market. With encroachment on the Park's resources increasing, the battle is not just about each tree felled, but about the very existence of Tanjung Puting and the immeasurable natural resources therein. Thus, the stakes are high and the time is short. And at the moment, the Park is losing.

Nearly two thousand kilometers to the northeast of Tanjung Puting in North Sulawesi is another of Indonesia's ecological jewels: Bunaken National Park. Bunaken is one of six marine national parks in Indonesia, stretching almost 90,000 hectares across five small islands and their surrounding waters. These waters feature steep walls of coral that are home to an amazing diversity of rare and colorful marine life. Unfortunately, like Tanjung Puting, the resources of Bunaken are also at risk. The 1990s saw continued depletion of coral and fish due to harmful fishing techniques that employed cyanide and dynamite. Unlike Tanjung Puting, however, the threats facing Bunaken are now being met head-on thanks to the efforts and cooperation of local stakeholders, the Indonesian government, and international donors (Erdman et al., 2004). Through the development of innovative management and financing strategies, a new sense of community ownership in the Park and increased funding flow are resulting in the restoration of this exotic ecosystem. In other words, in the fight for preservation, Bunaken is winning.

The cases of Tanjung Puting National Park and Bunaken National Park are indicative of a broader struggle in Indonesia over the management and preservation of the nation's natural resources. This struggle has only intensified in recent years due to a period of unprecedented political and social transition. With the fall of the Suharto regime in 1998, sweeping reforms were instituted at every level of government. The underlying objective of these institutional changes was the *decentralization* of resources and responsibilities to local government. Thirty years of authoritarian rule left many deeply suspect of centralized governance, fostering a consensus that government should be moved away from the center and closer to the people. The resulting legislation left no sector of public policy untouched, including the management and conservation of Indonesia's unique natural resources.

The objective of this paper is to examine the impact of decentralization on the management of natural resources in Indonesia in the context of the nation's vast system of protected areas (PAs). The particular question this paper seeks to answer is as follows: *what are the implications of institutional decentralization for the sustainable management of Indonesia's protected areas?* Does decentralization hold promise or peril for PAs? To address these queries, we will begin with a brief overview of the PAs system in Indonesia, and then move on to examine the implications of the recent reforms. This discussion will ultimately reveal that the post-Suharto era of reform carries with it both risks and possible rewards for the country's ecological jewels. Moreover, we will see that *protected areas management in Indonesia is presently at a crossroads and the current decisions regarding how the local level interacts with protected areas will determine their fate.* In other words, the type of management structures adopted will determine whether stories of other protected areas in Indonesia mirror that of Tanjung Puting or that of Bunaken. In the final section of the paper we will consider several strategies to encourage the latter. In addition, we will

conclude by taking a step back and examining the broader lessons embedded in the Indonesian case concerning the conservation of protected areas in developing countries around the world in an era of increasingly decentralized governance.

Indonesia's Protected Areas: A Global Ecological Treasure

Indonesia is arguably the most biologically diverse country in the world, rivaled only by the South American nation of Brazil (World Bank, 2001). With rich tropical forests, numerous endemic species, and rare marine ecosystems, the archipelago nation is truly a global ecological treasure. Indonesia has, for example, 515 species of mammals of which nearly 40 percent are found only in Indonesia (Surjardi, 2002). Also, there are over 38,000 species of higher plants nationwide, including 477 species of palm alone (earning the top rank in global palm diversity). Given these statistics, it is no wonder that Indonesia's forests and marine ecosystems attract international attention. Eighteen of the World Wildlife Fund's "Global 200 Eco-regions" are located in Indonesia, and two of Conservation International's 25 biodiversity hotspots are within the Archipelago (World Bank, 2001).

A key component of ensuring the preservation of Indonesia's invaluable resources is a comprehensive system of terrestrial and marine protected areas (PAs). Unlike many other less developed countries (LDCs), the Government of Indonesia has taken the first step in resource conservation through the identification of unique resources and the establishment of areas in which economic activity is restricted in recognition of their inherent value to the country and the world. Included in this system are 41 national parks (35 terrestrial and 6 marine), 181 strict nature reserves, 105 nature recreation parks, 56 wildlife reserves, 17 grand forest parks, and 14 hunting parks (Erdman et al., 2004). These PAs account for approximately 9 percent of the total land area of Indonesia, with the national parks making up well over half of this area. The management structure of the PAs system has traditionally been highly centralized, falling almost exclusively within the jurisdiction of the Directorate General of Protection and Nature Conservation (PHKA) in the Ministry of Forestry. In addition to the central office in Jakarta, PHKA maintains offices at the local level responsible for the day to day management of PAs. Not surprisingly, funding and staffing levels have almost always been problematic at PHKA. Moreover, the agency tends to favor the more prestigious national parks when allocating expenditures, leading to a concentration of resources (Sumardja, 2003).

Before moving on to the implications of decentralization, one important characteristic of Indonesia's protected areas deserves exposition. There is a tendency in the West to view national parks as vast tracts of land that are both isolated and uninhabited. Indeed, the reference to a "national park" often conjures up images in the western mind of Yosemite or Yellowstone, highly regulated parks that are distinct from surrounding communities. This model is not transferable to Indonesia where, in many instances, there are numerous communities living *inside* the park. For example, Kerinci Seblat National Park, one of Indonesia's largest protected areas, is home to nearly 300,000 people (Kerinci, 2004). Moreover, these communities are often heavily dependent upon the surrounding resources for their livelihood.

The Perils of Reform

As indicated in the introduction, the fall of the Suharto Administration in 1998 resulted in sweeping changes at all levels of government. After 30 years of authoritarian rule, there was an overwhelming desire to reduce the power of the center and increase autonomy in the regions. With the stage set for change, the government entered a new era[1] with the passage of two landmark pieces of legislation in 1999: Law 22/1999 on Regional Governance and law 25/1999 on the Fiscal Balance between the Central Government and the Regions. Law 22/1999 shifted the majority of public services to the local level and bolstered local autonomy through genuine local elections[2]. Law 25/1999 addressed the revenue needs of local government, increasing both the revenue allotments and the spending discretion of each governing unit. The unfortunate reality is that there was little consultation outside Jakarta on the structure of this legislation, a misstep that is reflected in its often vague and confusing content. Furthermore, both statutes took effect January 1, 2001, allowing minimal time to work out the details.

In terms of natural resource management and conservation, Laws 22 and 25 delegate responsibilities to all three major levels of government: districts/municipalities, provinces, and the center. As the World Bank (2001) states, "the natural resource sectors, conservation and the environment are the only sectors with functions assigned to more than one level of government under Law 22" (p. 94). Notably, the management of protected areas remains at the center, presumably as a means of coordinating the conservation efforts of the country as a whole. In many ways this makes sense: while resources are always *local* in nature, their preservation is in the national interest. The fact that management of PAs was retained by the center does *not* mean, however, that Laws 22 and 25 have no negative implications for conservation. Rather, the era of reform has created a series of perverse incentives—both monetary and institutional—in the management of natural resources that have heavily impacted the integrity of the protected areas system. The four most troubling incentives relate to (1) the generation of local revenue, (2) the newfound power of local elites, (3) the absence of conservation financing mechanisms, and (4) the weakened enforcement capacity of the center.

Perhaps the greatest perverse incentive inadvertently created by the deluge of legislation in 1999 relates to the new revenue generation regulations. One of the more puzzling aspects of the reforms was that, while a host of responsibilities were transferred to the local

level, revenue-raising capacity was retained almost in its entirety by the central government. In other words, local governments must rely largely on an intergovernmental grant from the center to fund their new mandates. Beyond the general grant, the greatest source of revenue under the influence of local government concerns the exploitation of natural resources. For example, according to the newly established revenue-sharing structure, 64 percent of forestry land rents and 32 percent of forestry resource rents go to the originating local government (World Bank, 2003a). Moreover, local governments are actively *encouraged* to expand their revenue base under the new revenue arrangements as much as possible. The consequences of this policy are not difficult to anticipate. Faced with pressure to increase revenue flows, district governments are turning to the one significant source of revenue they control: their natural resources. The Environmental Investigation Agency reported in early 2003, for example, that the taxation of illegal logs from national parks by district executives is now a regular occurrence across Indonesia.

In addition, local governments now also possess increased discretion in the enactment of new taxing mechanisms. Some local government have taken advantage of the indeterminate regulatory language and devised rather creative taxes of questionable legality. For example, a regulation enacted in the Sanggau District in late 2001 allows the local government to levy a 10 percent tax on any timber passing within the jurisdiction *whether or not the timber has the correct documentation* (CGI, 2003). Not only could this arbitrary assessment be perceived as encouraging illicit logging activities, but also "the payment of such fees for illegal timber may, in legal terms, make such timber legal" (p. 4). In taxing the timber, a district is essentially proclaiming that "the wood is of uncertain origin and thus 'found,' rather then of illegal origin and thus 'seized"' (Patlis, 2002, p. 48). The bottom line is that such taxation permits the transportation of illegal wood products and is therefore against national law.

A second perverse consequence of the decentralization reforms is the outright abuse or misuse of newfound powers by local politicians. Law 22/1999 and Law 25/1999 bestowed considerable governing authority on the regions with little or no preparation. Local communities are now engaging in meaningful elections for the first time. Similarly, politicians are adjusting to the fact that their constituencies are now the local citizens as opposed to the bureaucrats in Jakarta. As one might imagine, this is a complex transition, leaving ample room for abuses of power. In some parts of Indonesia, for example, power was handed over to local executives (known as "regents") yet to go through an election cycle. As such, their ties to the local electorate were weak to say the least. The result is that there are now numerous cases of local political elite "making the most of their newfound power and exploiting the forest for their own gain in ways similar to those of the former 'New Order' Jakarta political elite" (Environmental Investigative Agency, 2003, p. 15). It is no stretch of the imagination, in other words, to envision a local politician issuing tacit approval (i.e. turning a blind eye) to illegal logging in local protected areas in light of the personal benefits such an act is likely to yield. There is an overwhelming temptation for crooked politicians to, as one international expert described, "cash out now" on local resources while the opportunity exists (Merrill, 2004).

Outright abuse of power is not the only negative implication of increased autonomy for the preservation of PAs. It is also the case that well-meaning government officials are subject to increasing pressure from medium and large-scale industries to allow resource exploitation in areas that were once off limits. Given the inexperience of such officials combined with their lack of revenue options, they are often easy to manipulate. The World Bank (2001) refers to this as the "company town scenario," meaning that rural districts are easily subjugated by industries due to their dependency on the industry for employment, lack of technical capacity, and general prioritization of economic development over the environment. With the lack of strict environmental regulations in place, rural districts are more willing than ever to open protected areas to increased timber harvesting or mining. This tendency has only been exacerbated by the Asian economic crisis that struck just as these reforms were adopted.

Not only does Law 25/1999 encourage logging through the aforementioned revenue sharing arrangements, but it also provides no new revenue instruments to actually pay for Indonesia's protected areas (NRM Program, 1999). More specifically, it proposes no innovative financing mechanisms to (1) improve the amount of funding available to PAs, or (2) create a revenue stream to local governments that is specifically tied to the preservation of the parks. The first point is important in that the protected areas system has traditionally been woefully under-funded. The second point is significant in that local governments have little incentive to preserve the park if there are no substantive benefits flowing into their communities. Consider the handling of park fees (entrance/tourism concession fees). At present, park fees collected by a given protected area do not specifically benefit that PA or the surrounding communities. Instead, this money goes directly to the central government (Rock, 2000). This not only decreases the incentive to collect fees but also increases the perception of communities that the PA is purely an artificial construct imposed by and beneficial to the center. Clearly such a perception will engender little desire to preserve the PA's resources.

A final implication of decentralization is the weakening of the central government. From 1996 to 2002 the World Bank, in cooperation with the Global Environmental Facility, implemented the Kerinci Seblat Integrated and Conservation Development Project (KSICDP). Located in Sumatra, Kerinci Seblat is one of Indonesia's largest national parks. The objective of the project was to "secure the biodiversity of KSNP and stop further habitat fragmentation" (World Bank, 2003, p. 2).

Integral to the overall plan was the involvement of local communities in the protection of the park. By the Bank's own admission, the project was a complete failure. In the 2003 final report the Bank cites the following as one factor affecting the project outcome:

> The weakening of central government authority, linked with a breakdown in law enforcement, resulted in an increase in illegal logging and poaching in the park from 2000 onwards. The impact included an increase in the number of sawmills around the park (83) and increased violence and confrontation with park guards. In 2001 a complex of park buildings in *Kabupaten* Kerinci was attacked and burned by a group of illegal loggers and several park vehicles have been attacked since then. No one has been prosecuted so far for these criminal acts. (p. 14)

The above statement reflects the fact that decentralization inherently weakened the central government, thereby decreasing its enforcement capacity. This is particularly problematic due to that fact that the local level also lacks the capacity (or will) to uphold and enforce the law. To make matters more difficult, enforcement has been further crippled by the confusing and often nebulous nature of the new laws themselves. The same World Bank report states that another difficulty was that, while national parks stayed under central government control, "their working relationships with local governments were not reconciled under the revised Forestry Law" (p. 14).

The discussion above illustrates that institutional and fiscal decentralization can have the unintended consequence of actually *undermining* environmental conservation efforts. Before moving on, however, two important points of clarification are appropriate. First, the analysis presented here is not intended to imply that the recent decentralization reforms are the sole impetus behind the degraded condition of Indonesia's protected areas or its environment as a whole. To the contrary, sustainable resource management was hardly the hallmark of the Suharto Regime. Illegal logging, for example, is nothing new in Indonesian forests. Indeed, the deforestation rate in the 1980s—roughly one million hectares per year—doubled by the time Suharto was removed from power in the late 1990s (Forest Watch Indonesia et al., 2003). Of particular consequence are the weak institutional framework and corruption that so characterized the Suharto Administration in all sectors, including natural resource management. Regarding the institutional environment, the World Bank (2001) notes that, "Weak institutional and regulatory frameworks that had never been allowed to develop in the years of certainty under Suharto were now incapable of controlling natural resource exploitation" (p. 1). Under the New Order state, President Suharto *was*, in effect, the government. His toppling created an institutional and regulatory vacuum that other facets of the government were simply ill-prepared to fill. As a result, no individual or institution was able to step in and take charge in a competent manner.

Similarly, the abuse of newfound powers by local politicians (which was cited as the second perverse consequence of decentralization above) is a reflection of the culture of corruption created by Suharto. The blatant nepotism of his Administration greatly undermined the rule of law, a result that continues to hinder the protection of natural resources to this day. In addition, many communities that lost rights to local forests as a result of sketchy "top-down" forest allocation practices under Suharto are now clamoring for justice. Thus, "local pressures on forests have exacerbated the already critical strains imposed by large-scale operators" (World Bank, 2001, p. ii). While the threats posed by decentralization are very real, then, it is important to bear in mind the context from which they emerged.

The second point of clarification is that the problems addressed here are specific to the types of reforms adopted by Indonesia and the manner in which these reforms have been implemented. The rapid pace of implementation alone, for example, bred a confusion that could have been avoided under more incremental change. It is premature, therefore, to characterize decentralization and sustainable protected areas management as irreconcilable. It is the potential of decentralization to actually improve the management and preservation of Indonesia's protected areas to which we now turn.

The Promise of Reform: A Case Study in PA Management

Thus far we have focused on the landmark decentralization legislation passed in 1999 and its questionable impact on Indonesia's protected areas, a comprehensive system of terrestrial and marine parks and reserves totaling over 23 million hectares. This legislation does not, however, wholly embody the *spirit* of the decentralization that is at work in post-Suharto Indonesia. Rather, it is but one indication of a renewed demand to move government closer to the people. This section of the paper will consider the potential of the broader push to empower local citizens and the possible advantages this may have for PAs management in Indonesia. The best method to explore this potential is to return to a case briefly alluded to in the introduction, that of Bunaken National Park. The Bunaken case study is becoming increasingly well known and holds important lessons in the betterment of PA management.[3]

Covering some 89,000 hectares of land and sea, Bunaken National Park (BNP) is located at the northern tip of Sulawesi Island. The Park is home to an abundance of marine life, including over 1000 different types of reef fish and 400 different types of coral. In addition to the diversity of fish, BNP provides habitat to sea turtles, dolphins, giant clams, sharks, whales, the rare Indonesian coelacanth, and numerous stands of mangrove trees critical to fish reproduction. It is important to note, however, that this ecosystem does not exist in isolation. Some 30,000 villagers spread across 22 villages also call Bunaken National Park home. The capital of North Suluwasi, Manado, is also located between the northern

and southern sections of the Park. Local citizens from the villages and Manado interact with the Park on a daily basis. Many villagers, for example, make a living through fishing the waters of these islands. Also, the tourism business of Manado relies heavily on the colorful reefs of the Park, with divers from across the globe visiting to explore Bunaken's famed steep walls of coral. Finally, one must keep in mind that these communities existed *before* Bunaken was formally designated a national park in 1991.

Like many of Indonesia's protected areas, Bunaken came under increasing pressure in the mid-to-late 1990s, suffering from destructive fishing practices that utilized cyanide and explosives. Unlike the majority of other PAs, however, these unsustainable activities are now being addressed and overcome. How did this occur? For the purposes of this case summary it is useful to break down the response into four stages or components: the civil society awakening, the rise of co-management, the solidification of a park zoning plan, and the introduction of conservation financing. Before briefly considering these phases, however, the critical role of the US Agency for International Development's (USAID) Natural Resources Management Program (NRM) must be acknowledged. The dedicated support of international and local experts and *targeted* funding were paramount in the drafting of a park management plan, the strengthening of civil society and co-management institutions, conflict resolution between stakeholders, and the lobbying of government officials hesitant to embrace change. It must also be emphasized here that this summary is by no means comprehensive, and interested readers are encouraged to consult Erdman et al. (2004) for the complete case study from which this section is derived.

The first stage of response, the awakening of civil society, consisted of the self-organization of local stakeholders in response to the threatening of their livelihoods through unsustainable resource exploitation. The operators of local dive shops, for example, saw their tourism investments eroding with each piece of destroyed coral. With the aid of neutral facilitation by NRM, business rivalries were set aside for the sake of preservation, and in 1998 seven dive operators formed the North Sulawesi Watersports Association (NSWA). The NSWA not only provided a useful forum for discussion on park management, but also took concrete steps towards preserving the ecosystem by banning the anchoring of dive boats in the Park and assisting the BNP Office in the enforcement of regulations. Closely associated with the organization of the dive operators was that of a second group of stakeholders: the citizens of local villages. They too were concerned about the destruction of the reefs and its impact on their livelihood. Over the course of two years villagers became increasingly socially active, culminating in the formation of the BNP Concerned Citizen's Forum in 2000. The Forum provided communities with an influential voice far beyond the potential of any one person or community acting independently.

The awakening of local civil society combined with decentralization paved the way for the rise of co-management at Bunaken National Park. In essence, the co-management of PAs acknowledges the role of the national government in overseeing conservation efforts nationally, but also recognizes the importance of local ownership and influence in the management process. In early 2000, BNP was granted special "pilot project" status due to the perseverance of NRM lobbying in Jakarta as well as the greater acceptance of local autonomy pervading the government bureaucracy. A series of intensive stakeholder meetings ultimately came to fruition in December of 2000 with the establishment of the Bunaken National Park Management Advisory Board (BNPMAB) under Governor's Decree No. 233/ 2000. The three official functions of the BNPMAB are as follows:

1. Instill a sense of pride and ownership by local stakeholders in the conservation of Bunaken National Park;
2. Coordinate the policies of various government agencies with decision-making authorities within the park;
3. Support the BNP Office in formulating and funding conservation programs. (p. 50)

The crucial characteristic of the BNPMAB is its composition. All told, there are 15 seats on the Board, 7 governmental and 8 non-governmental. The governmental seats were allocated to Vice Governor, three provincial level ministries, two local governments, and the BTNM Park Office. Of the non-governmental seats, 1 seat was given to the private sector (the NSWA), 1 seat to an environmental NGO (WALHI, Indonesia's largest environmental NGO), 1 seat to a local university, and an astounding 5 seats to the Concerned Citizens Forum. The importance of this last allocation cannot be overstated. As the Erdman et al. (2004) case study notes:

> The concept of a legal body where village fisherman have the same voice as the top provincial government authorities was truly unheard of in Indonesian culture, and marked a major step forward not only for co-management of Indonesian protected areas, but for the very principles of democracy in North Sulawesi (p. 47).

A third key component of the Bunaken success story was the solidification of a zoning plan for the park. The development of a zoning plan for the park essentially recognized the importance of the resources therein as a means of survival for surrounding communities. Furthermore, it acknowledged the fact that conservation does necessarily require exclusion. Toward this end, the NRM team conducted numerous stakeholder workshops to develop a zoning system that was agreeable to all as well as simple to understand and enforce. The result was a three-zone system consisting of (1) a core conservation zone, (2) a village use zone, and (3) a tourism zone.[4]

The fourth stage of development towards the improved management of Bunaken was the introduction of sustainable financing in the form of park entrance fees. While such fees normally go directly to the central government, the push towards decentralization again afforded an opportunity to propose a different approach. In a huge political victory, NRM was able to gain approval under its status as a pilot project for 80 percent of all revenues collected to go to the BNPMAB to fund management activities.[5] First implemented in March 2001, $42,000 was raised over the ensuing 10 months despite drops in tourism following September 11th. In 2002, this number jumped to $109,000 due to an increase in the fee structure and the rejuvenation of tourism. With the new source of funding, BNPMAB was able to make substantive improvements in the management of the park, increasing monitoring and enforcement and engaging in conservation education across the park. In addition, funding was also given to local villages for specific environmentally friendly development projects.

The Bunaken case has obvious potential for guiding the future of protected areas management in Indonesia. Above all else, the results of the interventions there tell us that successful management of protected areas *must acknowledge the importance of local stakeholders and the contributions they have to offer*. This does not imply the complete exclusion of higher levels of government. Rather, it means that conservation efforts will not be sustainable absent the inclusion of those living in and around the park. Furthermore, "inclusion" refers to more than engaging in basic development projects to combat poverty or steer people away from utilizing the park's resources.[6] Genuine inclusion means providing a formal voice in the decision making process. Genuine inclusion signifies allowing sustainable utilization of resources through the development of zoning regulations. Finally, genuine inclusion necessitates creating a link between the park's preservation and improved quality of life in surrounding villages. Such principles will turn vicious cycles of exploitation and degradation into virtuous cycles of preservation fueled by prosperity.

Towards Sustainable Protected Areas Management

Despite the problematic implications of the post-Suharto reforms outlined in the second section, the unfolding story of Bunaken National Park provides hope that, in the long run, Indonesia's efforts to increase local autonomy will be beneficial to its prized system of protected areas. That said, Indonesian protected areas management is currently at a crossroads, and today's decisions regarding how the local level interacts with PAs will ultimately determine their fate. With this in mind, what additional reforms can be made to ensure that the right path is chosen? While there is no simple answer, let us consider three steps in the right direction.

Clearly one strategy is to further develop the co-management model now in place in Bunaken and begin replicating it elsewhere. It is critical, however, that this initiative be moved forward as soon as possible in order to capitalize on the momentum of Bunaken's success. The Park is currently garnering strong attention from the media and, as such, there is real potential to turn this spotlight into broader support for co-management arrangements in general.[7] Moreover, the demand for this is also strong with decentralization and democratization now in full swing. As one expert notes, pressure is building to 'return the national parks to the people' (Merrill, 2004). It is important to recognize, of course, that the specific steps taken in Bunaken may not be directly transferable to other areas. The exact replication of the Bunaken experience is not necessary, however, for it is the underlying principle of co-management that must be embraced as opposed to a single blueprint for reform. Indeed, each protected area will likely require a variety of adaptations on the theme of co-management based upon the local context.

A second step towards conserving PAs is the targeting of corruption in the forestry sector. Terrestrial protected areas face a unique challenge in that timber is a highly valued market commodity, and thus there are powerful incentives to ignore the law and exploit the forest. The bottom line is that illegal logging will not cease without a comprehensive crackdown on the shadow organizations driving the industry forward. While it is beyond the scope of this paper to develop a robust anti-corruption strategy, one significant measure would be the indictment of even one of the forestry bosses profiting from the rampant logging. Obviously they provide the impetus and organization behind voracious harvesting of the forest. From all indications, it is not terribly difficult to identify who these people are and what role they play (see Environmental Investigative Agency, 2003). The arrest of a logging kingpin would undoubtedly send shock waves through the industry and demonstrate in a tangible way that the Government of Indonesia is indeed serious about conservation and enforcement of the law.

A third reform concerns the revenue raising arrangements introduced by Law 25/1999. As discussed in section two, the new legislation offers local governments little control over their own revenue stream with the exception of the taxation of the local resource exploitation. This must change. First, the bulk of tax revenues generated from natural resources should be moved to the provincial level due to the existence of externalities that extend well beyond local districts and municipalities. Furthermore, the provincial level is generally better suited to handle the pressures of large timber or mining companies. Second, local governments need discretion over a broad-based tax mechanism. Lacking direct control over a tax instrument means that, should they need to generate increased revenue, they have no option but to continue harvesting the forest. The logical move here is to devolve the property tax—traditionally controlled by the central government—in its entirety to the local level. The property tax is administered at this

level the world over, and with good reason. Indeed, recent analysis suggests that only 40 percent of the property tax potential in Indonesia is currently realized (Lewis, 2002).

But wait. Would not the devolution of the property tax to the districts create even *more* resentment towards protected areas? After all, parks and reserves owned by the central government could not be subject to the property tax, right? Not necessarily. One approach worth considering would be for the central government to issue an annual "payment-in-lieu-of-taxes" (PILOT) to communities within or neighboring a protected area at a mutually accepted rate.[8] The use of PILOTs to compensate local government units with large areas of land owned by higher levels of government is a common practice in the United States.

A related approach would be for the central government to simply waive its tax exempt status. Such an approach is currently utilized in New York's sizeable Adirondack State Park, a patchwork of government and privately owned land in the northeastern section of the State that contains numerous communities. According to New York State's Real Property Tax Law, the State is required to make property tax payments on its land holdings within the Park, thereby avoiding a situation in which residents are forced to bear a disproportionate share of the cost of services (The Adirondack Council, 2003). Moreover, unlike private land owners, the State is not eligible for any usage-based reductions in property taxes and must pay the full assessed value. This means that "when New York State purchases land in the Adirondack Park from a private landowner, it is very often the case that the taxable value of the land increases, allowing local governments to collect more tax" (p. 5). Such is the case for the Town of Newcomb, NY, where "New York State's proposed acquisition of 6,300 acres of land adjacent to the Adirondack High Peaks Wilderness Area will result in a more than $343,000 increase in the taxable value of lands on the Newcomb tax rolls" (p. 3). Thus, conservation efforts by the State actually provide *tangible benefits* to affected local governments.

One innovative modification to the approach utilized in the Adirondack State Park would be to alter the "assessed value" of protected land based upon any changes in its condition. Continued illegal logging would obviously "devalue" the land within a PA, thereby decreasing the revenue stream of the local government. Conversely, reforestation efforts of previously logged land would increase the value of the land, creating additional revenue for the district. Essentially this approach would equate to a *conditional* intergovernmental transfer and would result in a powerful incentive for local officials to ensure that existing PAs remain intact. Creating such an incentive structure would be particularly important for PAs lacking the tourism draw or accessibility of protected areas such as Bunaken. Of course, in order for this strategy to be successful, the assessed value must yield revenue greater than the monetary benefits of extracting the resource.[9]

Conclusions

A brief consideration of the broader lessons embedded in the Indonesian case concerning decentralization and conservation is in order. Environmentalists have generally embraced decentralization as a positive change given the failure of centralized regimes to ensure sustainable natural resource management. Stories from countries such as Honduras—where a government policy declaring all trees as state property only exacerbated deforestation (Ascher, 1995)—were all too familiar throughout the seventies and eighties. Decentralized resource management offered renewed hope as the fate of natural resources was returned to those that valued the resources most. The recent World Resources Report, a joint publication of the World Resources Institute, World Bank, United Nations Development Program, and United Nations Environment Program, aptly summarizes the thinking behind the optimism.

> One key to smarter environmental management at the community level is to tap the ideas and energies of the community itself. In theory, the people who live closest to a natural resource stand to be most affected by its loss or alteration. They have a material interest in managing their environment sustainably. That's why decentralization…is an important development in environmental governance (2003, p. 89).

Yet, as the Indonesian experience demonstrates, decentralization does not ensure the conservation of protected areas. One explanation for this is the capture of devolved powers by the local elite who take advantage of weak accountability arrangements and exploit resources for personal gain. Clearly a process of "reform" that simply *decentralizes corruption* holds little promise for improved protected areas management. A second, more deeply rooted problem, however, is that the "material interest" cited in the quotation above is often absent in the case of government-mandated protected areas. The fact that parks and wildlife reserves are "owned" by the central government means local communities have no incentive to participate in conservation efforts. Indeed, the existence of such protected areas actually imposes a *cost* on communities in the form of restricted economic activities. As decentralization occurs, then, local communities have little motivation to use their increased autonomy for the betterment of the adjacent national park. Even when local accountability mechanisms *are* strong, the local sentiment may still be to exploit the park's resources to the maximum extent possible, regardless of the legality. Such is the paradox inherent in decentralization: what is in the interest of the country is not necessarily in the interest of the local community.

The bottom line, then, is that the conservation of protected areas in developing countries in an era of decentralization requires that local communities view the protected area as an asset as opposed to a hindrance. The Indonesian experience (and the Bunaken case in particular) suggests three strategies for accomplishing this.

First, although any national system of protected areas is best administered by the center, this does not mean that input from local communities is unimportant. Rather, communities can and should be deliberately involved in the management of a local protected area. While the type of board described in the Bunaken case study might be ideal, this is not always possible or necessary. What is paramount is that communities feel they have an adequate say in the governance of the park and its impact on their lives.

Second, the establishment of a protected area does not preclude the existence of communities and associated economic activities within the park. The first critical misstep often made in the establishment of a protected area is senseless talk of "relocating" resident communities against their will. Such propositions only engender animosity towards the park and the government. Similarly, while access to resources in protected areas must be regulated in some fashion, this does not mean that inhabitants in and around the park must be barred from engaging in any economic activities within the park (such as fishing, harvesting forest products, grazing livestock, etc.). As the Bunaken experience demonstrates, it is possible to reach compromises on both the types of activities allowed as well as the location of these activities within a protected area.

Finally, the conservation of protected areas in developing countries requires that local communities benefit in a tangible way from the existence of the park. Communities must not only be included in the decision-making but should stand to gain from the preservation of the protected area. Such benefits may take a number of forms. When a potential for tourism exists, the Bunaken model of entrance fee diversion makes sense. Employment of local residents at the park should also be a priority. In addition, as discussed above, the property tax can be used as means of reimbursing local communities that have a protected area within their jurisdiction. In the absence of some form of concrete compensation, communities will continue to perceive protected areas as artificial constructs unfairly imposed by a government unaware of local circumstances.

As biologically diverse ecosystems the world over face increasing threats to their preservation, tangible action to shore up support for protected areas must be taken quickly. As previously noted, the rate of deforestation in Indonesia in the 1980s was approximately one million hectares a year. During the 1990s this increased to 2 million hectares each year. The present rate is estimated to be *three million hectares per year* (Forest Watch Indonesia et al., 2003). Time is running out.

References

The Adirondack Council. (2003). Tahawus State Land Purchase. Tax Implications for the Town of Newcomb. Retrieved 11 January 2005 from: http://www.adirondackcouncil.org/tawstudy.pdf

Ascher, W. (1995). *Communities and Sustainable Forestry in Developing Countries*. International Center for Self Governance. The Institute for Contemporary Studies Press, San Francisco, California.

Consultative Group on Indonesia. (2003). Donor Statement on Forestry. Prepared for the 12th CGI Meeting in Bali, January 21-22 2003. Retrieved 5 March 2004 from: http://wbln0018.worldbank.org/eap/eap.nsf/Attachments/012103-12CGI-54-Forestry/$File/12CGI-54-Forestry.pdf

Environmental Investigative Agency, Telapak. (2003). Above the Law: Corruption, Collusion, Nepotism, and the Fate of Indonesia's Forests. Retrieved 5 March 2004 from: http://www.telapak.org-download-Above_the_law.pdf.

Erdman, M.V., P.R. Merrill, M. Mongdong, I. Arsyad, Z. Harahap, R. Pangalila, R. Elverawati, P. Baworo. (2004). Building Effective Co-Management Systems for Decentralized Protected Areas Management in Indonesia: Bunaken National Park Case Study. Natural Resources Management Program. Retrieved 2 March 2004 from: http://www.nrm.or.id

Forest Watch Indonesia, Telapak, Environmental Investigation Agency. (2003). Response and Recommendations to the 13th Meeting of Consultative Group on Indonesia on the Forestry Sector. Retrieved 5 March 2004 from: http://lnweb18.worldbank.org/eap/eap.nsf/Attachments/CGI-1203-CSO-forestry/$File/CSO-Forestry+.pfd

Haeruman Js. H. (2001). Financing Integrated Sustainable Forest and Protected Areas Management in Indonesia: Alternative Mechanisms to Finance Participatory Forest and Protected Areas Management. The Center for International Forestry Research, International workshop of experts on financing sustainable forest management. Retrieved 2 March 2004 from: http://www.cifor.org/fsfm/Papers/23Haeruman.pdf

Kerinci Seblat National Park. (2004). World Wide Web Homepage. Retrieved 8 March 2004 from: http://www.kerinci.org/index.html

Lewis, B.D. (2002). Revisiting the Property Tax in Indonesia: Current Practices, Recent Performance, and Near-Term Potential. Published in association with The Research Triangle Institute. Retrieved 10 January 2005 from: http://www.rti.org/newsletters/cid/2002oct/property_tax_Indo.pdf

Merrill, R. (2004). Personal Communication via direct correspondence.

Natural Resources Management Program. (1999). Decentralization of Protected Areas Management in Indonesia. Retrieved 9 February 2004 from: http://www.nrm.or.id

Patlis, J.M. (2002). Mapping Indonesia's Forest Estate from the Lawyer's Perspective: Laws, Legal Fictions, Illegal Activities, and the Gray Area. Unpublished document.

Rock, M.T. (2000). Using "Green Taxes" to Increase Revenue and Improve Environmental Management in Local Government Following Decentralization. The Natural Resources Management Program. Retrieved 2 March 2004 from: http://www.nrm.or.id

Sumardja, E.A. (2003). Public Sector Support and Management of Protected Areas in Indonesia. 5th World Parks Congress:

Sustainable Finance Stream. Retrieved 4 March 2004 from: http://www.conservationfinance.org/WPC/WPC_documents/Inst_A_Sumardja_v4.pdf

Surjardi, H. (2002). Indonesia's Biodiversity will be gone in Thirty Years. *The Jakarta Post*, 9 May Issue. Retrieved 8 March 2004 from: http://www.globalpolicy.org/socecon/envronmt/2002/0508indonesia.htm

World Bank. (2001). Indonesia Environment and Natural Resource Management in a Time of Transition. Published by the East Asia Pacific Office. Retrieved on 2 March 2004 from: http://lnweb18.worldbank.org/eap/eap.nsf/Attachments/Indonesia+Environment+Report/$File/Indonesia+ENVNRM+Transition-entire.pfd

World Bank. (2003). Implementation Completion Report on a Loan in the amount of US $19.1 million and a Global Environmental Facility Grant in the amount of SDR 10.2 million to the Republic of Indonesia for the Kerinci Seblat Integrated Conservation and Development Project. Report No. 25753, published by the Indonesia County Unit of the East Asia and Pacific Regional Office. Retrieved 8 March 2004 from: http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2003/07/08/000160016_20030708130947/Rendered/PDF/257530ID0ICR.pdf

World Bank. (2003a). Decentralizing Indonesia: A Regional Public Expenditure Review Overview Report. East Asia Poverty Reduction and Economic Unit, World Bank. Retrieved February 2004 from: http://lnweb18.worldbank.org/eap/eap.nsf/2500ec5f1a2d9bad852568a3006f557d/f3aa694ea4c089b1472569af00185795?OpenDocument

World Resources Institute, World Bank, United Nations Development Program, United Nations Environment Program. (2003). World Resources 2002-2004: Decisions for the Earth: Balance, Voice, and Power. Retrieved 21 April 2004 from: http://pubs.wri.org/pubs_pdf.cfm?PubID=3764

End Notes

1 This era is often referred to in the literature as the "era of reform."

2 Briefly, the general structure of the Indonesian government consists of three levels: central, provincial, and local. The central government is, of course, based out of Jakarta, the nation's capital. The secondary level is composed of provinces, of which there are presently 33 in Indonesia (up from 28 in 2000). While there is considerable variation in the size of each province, most have a slightly larger land area than the average American state. In many respects the provincial layer of government was actually weakened by the 1999 legislation, with few devolved responsibilities and no direct authority over the local level provided for in the bill. Finally, the tertiary level of government in Indonesia consists of 400+ local government units. There are two basic types of local government: districts (covering the more rural areas) and municipalities (covering the more urban areas). These are considered to be at the same administrative level, and, under the new reforms, are truly the principle providers of public services. While districts and municipalities, often referred to as "regencies," are further divided into sub-districts and villages, these lower levels have very little authority.

3 Please note that the specific facts about Bunaken and the stages of intervention related in this section are derived entirely from the recently released report by Erdman et al. (2004) entitled, "Building Effective Co-Management Systems for Decentralized Protected Areas Management in Indonesia: Bunaken National Park Case Study." A very informative document, interested readers are highly encouraged to access it at www.nrm.or.id.

4 Accounting for approximately 20% of the waters within the park, the core conservation zone allowed no fishing or tourism diving. The village use zone permits sustainable fishing practices by residents of the surrounding communities. The tourism zone excludes fishing of any type but allows both diving and the construction of environmentally friendly tourism facilities. Commercial fishing is not permitted in any form in any zone.

5 In addition, the Board was permitted to raise the fee for international visitors from $2.00 per year to $7.50 per year (Indonesian visitors still pay the nationally mandated $2.00/year). Acknowledging that the international fee was far below the willingness-to-pay of visitors (not to mention below that of many other prestigious parks around the world), this fee was then doubled to $15 per year in 2002.

6 The aforementioned final report for the Kerinci Seblat project confirms this, concluding that the assumption that local development would reduce poverty and reduce destructive behavior was flawed (World Bank, 2003).

7 The good news in this regard is that the early indications are that the government is in fact embracing the co-management model. In 2003 a Ministerial Decree was drafted by the Ministry of Forestry supporting the collaborative management of all protected areas (although this is yet to emerge in final form from the bureaucratic maze). Additionally, decentralized co-management is in fact already being implemented in small ways throughout nearly half of the national parks (Merrill, personal communication, 2004).

8 Values would need to be assessed on a unit of measure, such as by hectare or square kilometer.

9 Obviously there are a host of details that must be worked out before implementing this policy, such as how devaluation beyond the control of the local government or currency fluctuations are to be handled. More importantly, a careful analysis would need to be carried out regarding expected cost. The author recommends, then, that this be a topic of further study.