



# Lessons Learned from the Field

## Achieving Conservation Success in Papua New Guinea

BRUCE M. BEEHLER *and* ANGELA J. KIRKMAN, *editors*

Conservation International  
Woodland Park Zoo  
Tree Kangaroo Conservation Program



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Large longicorn beetle *Batocera wallacii*

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Zachary Wells, Lisa Dabek, *and* Gaikovina Kula



Youthful dancers at the YUS Conservation Area celebration in April 2009.



With the generous support of a grant from the Ministry of Environment of the Government of Germany through the German Development Bank (KfW), Conservation International and partners hosted a three-day workshop from 29 November–1 December 2011 at the National Research Institute, Waigani, National Capital District, Papua New Guinea. This workshop was attended by 45 experts on nature conservation representing nineteen national and international institutions as well as the Government of Papua New Guinea.

The purpose of the workshop was to identify and highlight key ‘lessons learned’ from ongoing efforts to develop protected areas in Papua New Guinea and sought to build on the recent success in establishing, in 2009, the YUS Conservation Area in Morobe Province—Papua New Guinea’s first national Conservation Area designated through Papua New Guinea’s Conservation Areas Act of 1978.

The workshop included a range of conservation practitioners working on conservation projects across the length and breadth of Papua New Guinea. The practitioners had the opportunity to share their experiences, so the result was a broad discussion about achieving nature conservation on the ground in Papua New Guinea.

The two chapters that form the bulk of this publication are not workshop proceedings. Instead they are the distillation of thinking on

nature conservation in the region, with the first chapter taking a broad view and the second more specifically focused on what can be learned from the experience in YUS. Both of these chapters have benefitted greatly from the various discussions—both formal and informal—that took place at this workshop. We thank those who participated and who made the workshop a success!

We also take this opportunity to thank others who made this all possible: André Baumgarten who planned and managed the event; James Robins and Georgia Kaipu, who provided for our needs on the campus of the National Research Institute; various officers of the PNG Department of Environment and Conservation (John Michael, Kay Kalim, Rose Singadan); and Gwen Sissiou of the Office of Climate Change and Development.

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Field scientist Gabriel Porolak radio collaring a Matschie's Tree Kangaroo.

# Lessons Learned Workshop 2011

29 November–1 December 2011

## List of Participating Institutions

9

Conservation International  
Tree Kangaroo Conservation Program  
Woodland Park Zoo  
James Cook University  
YUS Conservation Organization  
Department of Environment and Conservation  
The Nature Conservancy  
CELCOR  
Partners with Melanesians  
Wildlife Conservation Society  
Binatang Research Center  
UNDP  
PNG Institute for Biological Research  
The National Research Institute  
Tenkile Conservation Alliance  
Esso Highlands Limited  
Institute of National Affairs and LEAF Project  
Research and Conservation Foundation of PNG



Researchers mapping biodiversity treeplot on Yus Transect.

# Doing Conservation in Papua New Guinea

Bruce Beehler, Gaikovina Kula, *and* Angela Kirkman

## SUMMARY

Fostering the design, establishment, and long-term management of a protected area in Papua New Guinea requires action appropriate to unique local conditions. The initiative must elicit sufficient political will by government and local landowners and be consonant with local traditions and economic need. At this time there are few proven models for nature conservation in Papua New Guinea, so we stress the need to approach field projects as working experiments, with the goal being to test and prove a range of potential conservation tools. These tools should build on local participation and leadership in project design and development, and should avoid, at all costs, playing into the 'cargo mentality' of Papua New Guinean culture. All practitioners agree that field conservation projects will not succeed unless there is sincere local commitment supported by government at appropriate levels. For 45 years, formal protected area development in Papua New Guinea focused on creation of Wildlife Management Areas under the Fauna (Protection and Control) Act of 1966. Today these seem to be inadequately managed or protected in most cases, and do not bring local stakeholders substantial benefits. A new model is offered by the YUS Conservation Area, established through Papua New Guinea's Conservation Areas Act of 1978. Lessons from YUS and other similar efforts include the following: (1) much planning and analysis should precede commitment to a site for work; (2) expect to invest more than a decade in the effort; (3) need to build a trusting and respectful relationship with landowners is essential; (4) necessity of incorporating community needs with conservation goals; (5) need to build relationships with all levels of PNG government as project stakeholders; (6) need to plan for long-term sustainable financing. Our narrative concludes with a series of 'steps to conservation' for current and future practitioners of community conservation in Papua New Guinea, laying the groundwork for CA establishment and sustained management.

## INTRODUCTION

Field conservation in Papua New Guinea can succeed only if it addresses key needs and concerns of local stakeholders at the same time that it carries out the intended conservation intervention. This means that the conservation action must be well-nested within a series of processes that are relevant to the local political, legal, cultural, and social landscape (Sekhran and Miller 1995). Mismatches of process, breakdowns of communication, or failure to identify the mutual self-interest binding conservationist and landowner are just three reasons a seemingly sensible conservation initiative might founder (Borrini-Feyerabend 1997).

Papua New Guinean communities typically enter into a conservation project in the hope of improving their livelihood and economic well-being (Dudley 1993, West 2006). This is not a problem if it is combined with a sincere appreciation for the conservation objectives of the program. However, for conservation to succeed in a field site, a real and lasting level of community commitment is required—and this is most likely driven by heartfelt motives, not opportunism (Alcorn 1993). Many past conservation projects in the region failed because the external program officers dominated the planning and decision-making, causing the community to feel no ownership of the program. In some cases, lack of strong community feedback resulted in the deployment of an intervention inappropriate to particular conditions (Foale 2001). This problem has been oft-repeated because conservationists are forced to show ‘progress’ to their donors in the short term, and because local communities already have a sense of expectation, based on their experience with development projects and community projects offered by church groups.

The challenge for conservation organizations is therefore to be able to identify genuine community interest upon which collaboration can be built. In some instances, the only real way to find out the true views of a community is with time, the factor that most grant-funded projects lack. Mistakes will be made and relationships will need

time for repair. Time, resources, and patience are required for successful implementation of conservation programs in Papua New Guinea (Ellis 1997).

In this paper we address the issues of doing site-based community conservation in the field in Papua New Guinea, with a particular focus on achieving the conservation of natural habitat (forests, reefs, catchments, etc.). We explore the particular challenges of working in the Melanesian region, and, based on the lessons learned from a number of field projects, we synthesize the tools or processes that appear to have led to the best conservation results to date.

An overarching principle we embrace in Papua New Guinea (which applies to all Melanesia) is the utility of broadening the focus of conservation beyond the boundaries of a protected area to a landscape that encompasses hamlet, agricultural land, hunting land, and ancestral land. One must productively engage the community over a broad geographic work area in order to achieve sustainable management within the targeted Conservation Area.

Moreover, in Papua New Guinea, virtually all remaining natural habitats are owned by communities or clans, and even vast tracts of forest, though undeveloped, are valued for their use-values by the traditional owners (Lipsett-Moore *et al.* 2010). When one considers the basic facts of land tenure and the experience of conservation on private land elsewhere in the world, the concept ‘conservation without borders’ is a natural way forward (see also Salafsky *et al.* 1999, Western & Pearl 1989, Bennett *et al.* 1995, Norton 2000). Strict parks or nature reserves are an important piece of the global conservation puzzle, but in Papua New Guinea conservationists are aware that a field conservation program based only on creation of mandated no-use zones runs the risk of creating local resistance and ultimately failure of conservation. That is why development and conservation must be addressed in the same conversation in Papua New Guinea. It is a matter of balancing the interests and commitments of the negotiating parties.

## THE SOCIAL AND CULTURAL CONTEXT

Papua New Guinea (PNG) encompasses the major insular land masses of the southwest Pacific and hence a vast majority of its native (and largely endemic) biodiversity (Mittermeier *et al.* 2002). PNG supports a huge diversity of languages (ca. 845) each of which is evidence of a distinct customary culture. Papua New Guinea can be characterized by a number of peculiarities: the presence of government-recognized indigenous land tenure; the predominance of customary societies; predominance of natural resource-based subsistence lifestyle; a close kinship between community and environment; the communal management of wealth; egalitarian ('big man') political leadership; and weak provincial and National Government. Below we review how PNG's uniqueness can impact conservation initiatives.

*Land Tenure.* PNG is distinctive in supporting a regime of customary tenure over land and near-shore resources by indigenous owners. Local landowners maintain government-recognized tenure over their forest lands and reefs through an unregistered oral claim based on genealogy, prior settlement, and history of use. Thus, unlike the vast majority of the nations of the world, in Melanesia, state-owned, crown, or freehold land is rare, and unregistered customary (or traditional) land is predominant. This, not surprisingly, has major implications for habitat conservation, protected area development, endangered species protection, and natural resource management. This needs to be understood by all who seek to develop a project or program that involves rural land.

*Customary Societies.* Even today, most Papua New Guineans live a rural existence in customary societies. In these, customary patterns of decision-making, lifestyle, and world view dominate, in spite of the superficial inroads of western culture. People inhabit hamlets and villages rather than towns and cities. Houses, in most instances, are built following traditional designs and largely constructed of locally-harvested natural materials. Village law is enforced, in many instances, following custom.

*Egalitarian 'Big Man' Leadership.* In PNG, rural political leadership is typically egalitarian, not chiefly, and village leaders are selected not by lineage but through accomplishment and proven ability to lead. Thus societies are not caste-driven, and important village decisions are arrived at carefully and slowly, through wide discussion and consensus.

*Subsistence on Natural Resources.* Most PNG societies are swidden-agricultural, further enriched by locally-harvested bounty of the forest, rivers, and reefs. Thus most Melanesians have a close affiliation with natural environments, are good naturalists, and have a strong appreciation of ecosystem services. Many rural societies in PNG depend only partly upon the cash economy, instead obtaining most food and fiber necessary for their well-being from forest, agricultural lands, and reefs.

*Communal Management of Wealth.* The sources of wealth for many traditional PNG societies, in most cases, come from their ownership of land and waters. In terms of cash and goods, rural Papua New Guineans are impoverished when compared to western societies. Since this is a pattern that has predominated for centuries or millennia, PNG societies have addressed this poverty of material through custom-mediated communal sharing. Wealth is not accumulated, but instead is shared. In many interior societies, pigs are important indicators of wealth, and complex exchanges of pigs allow community leaders to build alliances and accrue political status. In this instance, power is gained by accruing indebtedness rather than concentrating material wealth.

*Weak Government.* The concept of nationhood is poorly realized in Melanesia, where cultural diversity has fostered strong local ethnic cohesiveness at the expense of a larger state-based polity. Local people's allegiance tends to extend no further than their language group or clan. In ethnically diverse Papua New Guinea, any government is a coalition of dozens of language groups, making strong party alliances impossible, and hindering the construction of stable alliances of power that can forge and implement a plan of national development. Instead, one finds continual change,

with attendant reorientation of short-term objectives from government to government.

*Impoverished National Treasuries.* Poorly-managed governments tend to mismanage national (and provincial) funds. This is evident in Melanesia. As a result, most governments operate near the boundary of insolvency, and as a result spend inordinate amounts of energy in search of revenue to meet the monthly civil service payroll and debt payments. Setting funds aside for the future is a rarity, and the income produced by extraction of non-renewable resources (old growth forest, oil, gas, minerals) is typically spent entirely rather than invested to produce a permanent source of annual state revenue (a sovereign fund).

*Oil Palm, Tuna, Timber, Gas, and Minerals.* In general, PNG remains under-developed economically, and the main sources of foreign exchange remain extractive industries (petroleum, mining, logging, fisheries) conducted for the most part by foreign-owned companies, as well as plantation cropping (oil palm, coffee, tea, copra, rubber). In most cases these offer little true development potential to rural communities, and rarely do rural communities receive long-term benefits from these operations (exceptions being locally-managed small-holder coffee and cacao farms). The mining and logging operations tend to be relatively short-term (several years to several decades) and upon departure of the company, the local societies must readjust to life as before. The industrial plantation economies are more permanent, but often introduce an undesirable 'captive employment' model, in which most worker income returns to the 'company store' and plantation-operated credit schemes. All of these operations instill in rural workers a basic misunderstanding of the fundamentals of for-profit enterprise, and instead reinforce the 'cargo cult' vision, in which Melanesians remain in poverty while foreign businessmen 'magically' accumulate great wealth.

*Cargo Cultism.* Cargo cults (Lawrence 1986) are one way in which impoverished Melanesian cultures have dealt with the psychic dissonance created by the extreme inequity between materi-

ally rich western societies and the materially poor Melanesian societies. The appearance, during World War II, of the United States military construction battalions ('SeaBees'), who quickly constructed airstrips that overnight attracted aircraft laden with all manner of material goods exemplified that material disparity that cargo cults sought to address. Cargo cults, then, provided either a culturally-appropriate 'answer' to the inequity, or, in the more pernicious cases, provided a delusive promise to 'get-rich-quick'. Today, we speak of 'cargo mentality' when rural communities come to view the outside aid agency or other entity working with them mainly as a source of material goods ('cargo'). Any good field project works hard to avoid the development of a cargo mentality in the community where it is working.

*Limitations and Opportunities in the PNG Context.* Because of the realities outlined above, doing effective field conservation in PNG is difficult. Our impression is that PNG government has used the fact of nationwide prevalence of customary resource tenure as a reason not to establish a representative network of protected areas in spite of international mandates to do so (e.g., the Convention on Biological Diversity). Nor has the National Government established robust legal frameworks for habitat conservation within limitations posed by customary tenure. Conservation NGOs in the 1990s mainly focused on the ICDP (Integrated Conservation and Development Project) as a means of locally-based conservation (Helden 1998, Saulei & Ellis 1998). These provided short-term conservation benefits, but by themselves did not generate the legal framework for permanent habitat conservation (McCallum & Sekhran 1997), especially in places where there was competition from other interests for development of the land.

On the more positive side, PNG is one of the last strongholds of natural humid tropical environments in the Pacific, certainly in large part because of the traditional conservation ethic of local communities (Mittermeier *et al.* 1998). Thus there remains a major conservation opportunity that should be grasped before it is too late. PNG supports large tracts of humid forest, mangrove,





YUS family tending their agro-forestry plot.

estuary, and nearshore reef environment that are of global significance (Mittermeier *et al.* 2002, Mittermeier *et al.* 2004). And local resource owners appreciate the value of these resources to their own well-being.

#### CONSERVATION AREA DEVELOPMENT IN PAPUA NEW GUINEA

In Papua New Guinea, an attempt was made in the 1960s and 1970s to establish National Parks. Several were established (e.g., Varirata National Park, MacAdam National Park) but have suffered from issues related to the changing expectations of customary landowners. In the 1980s, the National Government abandoned designation of such national protected areas based on land alienation. By contrast, the Wildlife Management Area (WMA) model, in which the National Government authorizes a local management plan for a custom-

arily-owned area, has had greater success in Papua New Guinea, albeit a success with limitations.

More than fifty WMAs have been gazetted. WMAs range in size from a few hundred hectares to several hundred thousand hectares. The model has been workable for a nation with customary land tenure: a local community (usually with the help of an NGO) develops a conservation plan for some part of its traditional lands or waters, following WMA rules. The community appoints a management committee, which develops a management plan for the designated area. The boundaries are surveyed, and the plan and survey map are submitted to the Department of Environment and Conservation (DEC) for certification. Once certified by the Minister of Environment, the plan and boundaries are published in the National Gazette of Papua New Guinea, which formalizes the nation's recognition of the WMA. At that point, the management of the WMA is entirely within the hands of the local landowners (through

a local committee and perhaps with help from a partner NGO).

Today, WMAs are commonly criticized because the legislation in which they are enshrined, the Fauna (Protection and Control) Act of 1966, does not fundamentally preclude the landowners or government from subsequently establishing logging or mining within the WMA. Typically, government priorities for economic development trump conservation. In addition, companies can make offers of wealth to change the minds of local landowners from protection to extraction. In other situations, consultations on the setup of a protected area inadequately engage the necessary government line agencies or community members. Moreover, increasing natural resource demands from growing rural populations may put dangerous pressures on WMAs which depend largely on self-regulation by local communities. In other cases, landowners simply change their minds when the benefits generated by the WMA do not meet their aspirations. A conclusion may be that the Act is not strong enough to provide long-term protection in the face of changing public and private priorities.

Perhaps the most famous example is Crater Mountain WMA—a 270,000 hectare community-managed reserve in the eastern highlands of Papua New Guinea. It was set up the help of the Wildlife Conservation Society and the Research and Conservation Foundation of Papua New Guinea, and has been communally managed for conservation for nearly thirty years (Ericho 1998). A number of development threats have arisen (gold mining, petroleum) that have directly threatened the future of Crater WMA and its resources. Today its future is uncertain.

WMAs, in general, suffer from the ‘paper park’ syndrome: most WMAs lack ongoing conservation management. As of 2013, the PNG Department of Environment and Conservation is not planning to designate new WMAs for PNG, though there is a desire to improve the effectiveness of existing WMAs.

## CONSERVATION VS. REALITY IN MELANESIA

There are many reasons why a conservation program fails to achieve its goals. Practitioners must honestly acknowledge that conservation is a high-risk occupation in Melanesia. Below we discuss some of the reasons conservation fails.

*Incentive to conserve.* Local landowners, in most instances, have only an imperfect understanding of the real value of habitat conservation, and their major concerns inevitably focus instead on family health and nutrition, primary education, and improved economic opportunity. Local landowners tend to see natural resources as limitless, although when queried they acknowledge the steady erosion of the local resource base (loss of wildlife, degraded fisheries, etc.) that is clearly a conservation issue of significance at the local scale. In spite of this last point, conservation NGOs often find only tepid interest among resource owners to conserve except in the most fundamental way. Typically, a local community is inspired to carry out a conservation project by an outside institution, such as a conservation NGO that has identified the area’s natural resources as significant. The vision and objectives of the NGO are invariably entirely distinct from those of the local community. Many conservation projects in the last couple of decades have failed to produce results mainly because the incentives driving the NGO differed entirely from the incentives driving community interests, and the community simply could not find a strong reason to give up something (such as development rights to its resources) without a tangible benefit being provided in return (Sheil *et al.* 2002), which is entirely understandable.

*Financial sustainability.* Nearly all conservation projects in Melanesia suffer from threats of insolvency over a relatively short time horizon. Usually projects are unable to get resources to the field in an appropriate and continuous stream, and the field project suffers from a start-and-stop phenomenon that strains community relations and causes loss of interest and trust among the local stakeholders. Even projects that solve these

short-term problems often fail to maintain the flow of necessary funds for more than several years, because of 'donor fatigue.'

*Lack of buy-in by communities.* Many NGOs, in their sense of urgency to carry out conservation (this urgency often driven by donors), seek to drive the conservation process with the community, and in doing so, lose the intellectual acceptance ('buy-in') of the community upon which the sustainability of the conservation program absolutely depends. Once this buy-in is lost, the community tends to think of the field intervention as a 'project'—a code word for an externally-driven activity that can be a source of 'cargo'. For long-term success, any community conservation project must have the heart and soul of the community, must belong to the community, and the community must want the conservation to succeed. Its goals need to be developed in consultation with the community and be closely aligned to the aspirations of that community.

*Defining 'community.'* A community is simple as an abstraction, but in the field, a community is a diverse and multi-layered assemblage of relationships, loyalties, and (often simmering) conflicts. It is very difficult for a conservation implementer to deal with a 'community' without creating jealousies and rivalries. Instead, the implementer should allow the community to organize itself and then deal not with individuals but with the seats of acknowledged authority (developed internally). Community-focused projects are best led through local governance structures, with the NGO conducting all work through elected officials representing that community.

*Cargo mentality.* If the community comes to see the conservation intervention as a means of obtaining cash and goods, it can bring out the worst of a community's cargo mentality. The main problem with this cargo thinking is that it creates an appetite that can grow and grow, killing the project. Instead, the local community must come to see the project as a way to help the community develop itself and improve itself, not as a source of profit for favored individuals. For

this reason, it is important that outside benefits that do come in to the community be clear communal benefits, not benefits that end up in the hands of a single family or individual. An example of a communal benefit might be books for a school library. An example of cargo might be a carton of beer for a village leader.

*Clan dispute over ownership and clan 'capture' of the project.* The scale of the conservation intervention must match up with the participating clans/landowners, and there must be accord among the local landowners about the program. Any apparent inequities of benefit can cause jealousies between clans and may threaten a program. The disputes over land ownership in the Lakekamu Basin in Papua New Guinea seriously impeded conservation activities there in the 1980s. This dispute arose initially over a planned foreign-run gold mine, and carried over to the conservation project essentially intact. The landowners transferred their cargo dreams that arose from the promise of the gold mine to the subsequent conservation project, and caused no end of trouble (Kalwij and de Koning 2000).

*Details of tenure.* Another failing is the neglect of detailed analysis of tenure and inheritance systems right at the start. Workshops focusing on custom, local historical timeline, and genealogy can save a lot of blunders later on, when agreements are being negotiated. It cannot be assumed that people will look after the details themselves. However the process of clarifying tenure to determine who needs to be part of decision making can itself be problematic, bringing longstanding disputes to the fore. Still it is an essential step. What has generally been observed in Melanesia is that a 'big man' and his followers who have succeeded in 'capturing' the conservation project will be involved in all things, whereas other groups with traditional rights will be marginalized.

*Lack of enterprise capacity.* Local communities invariably wish to develop and improve themselves, and they usually see enterprise and business as an obvious means of achieving these goals. The problem is that most rural customary societies do not have the skills or experience

to develop for-profit enterprises, and local conditions (especially isolation from markets) makes the chance of success low. It is thus very important that any enterprise-based conservation model determine how best to deploy enterprise opportunities. In some instances it is better to create useful cash flows without necessarily pushing for free-standing enterprises (e.g., having an outside business purchase local product on a regular basis through a negotiated contract).

### THE CONSERVATION AREAS ACT OF 1978

PNG's Department of Environment and Conservation has stated that future protected areas in PNG will be designated under the Conservation Areas Act of 1978. This is the law that was used to designate the YUS Conservation Area in 2009, and now is thought of as a model for future action. The Conservation Areas Act of 1978 places more authority within the National Government for oversight of the Conservation Area, thus creating a stronger structure for protecting natural resources from large-scale degradation or conversion over the long term. The governance of Conservation Areas is clearer than that defined by the other protective acts—giving the mandate to the Department of Environment and Conservation for management and monitoring. The details of this Act are summarized in the following chapter, so they are not repeated here.

### INITIATING DESIGN AND DEVELOPMENT OF A CONSERVATION AREA IN PAPUA NEW GUINEA

What follows is a prescriptive set of steps to site-based conservation, based on a synthesis of the long-term experience of the authors and the knowledge shared in the November 2011 workshop on community conservation in PNG, held at the National Research Institute in Waigani. This list is generic and underpins the more detailed steps in the formal creation of a nationally recog-

nized Conservation Area. We encourage the user to study the various steps suggested and select and order the activities that make the best sense for particular local conditions. Every conservation project in the field is an 'experiment' so one should think carefully, adapt, refine and innovate. We do suggest all practitioners take heed of the various suggestions and warnings offered below.

### Steps to Conservation

1. Develop cost estimates for conservation, which would include up-front mobilization costs and costs of the ongoing conservation intervention. Partition costs and identify credible sources of funding. Look for potential opportunities for co-financing. Recognize in-kind potential. Also conduct an economic development assessment of the overall area of interest, to determine how conservation may nest within the overall development framework.
2. Engage with DEC when initiating the conservation planning process, and keep DEC staff informed and involved throughout the process. Ensure that the proposal is consistent with DEC's country-wide conservation priorities to gain endorsement and long-term commitment.
3. Conduct a GIS-based regional priority-setting assessment for candidate conservation landscapes within the region of interest (e.g., a province or cluster of provinces or a large catchment). Independently identify blocks of habitat (ideally >100,000 hectares) as candidate conservation priorities within the overall area of interest. These should have long-term ecological sustainability, high biodiversity value, and should align with language-group boundaries to delineate a well-defined area of interest. This will allow for an objectively-selected array of candidate sites defined by ethnic boundaries, ecological importance, and habitat.
4. Collect information on National, provincial and local level government development plans for the entire focal area of analysis. Map out all existing mining, timber, and Special Agricultural and Business Leases (SABLs) in the area of interest.

Are any large infrastructure projects in development, and if what is their status? Consider the risk to the Conservation Area over time from development interests. Conversely, consider local infrastructure projects as potential sources of sustainable financing of the conservation activities, which might be seen as 'offsets.'

5. Carry out an in-country priority-setting workshop that builds on and socializes the data collected and synthesized by the preceding process. This would include expert stakeholders, would attempt to develop an overall sustainable development and resource management vision for the area of interest, and would include government agencies, NGOs, and community representatives, as appropriate. The workshop would develop a conservation priorities map, nested within a broader landuse plan for the area of interest.

6. Perform an initial field scoping of prime candidate conservation locations identified in the workshop through a low-profile community engagement process to determine local interest in developing a significant Conservation Area within each candidate site. At this stage it is necessary to consider community interest, level of political complexity, governance, motivation, and level of potential commitment. This ensures that the proposed conservation program will be led by the community—by a group that is engaged and proactive. At this stage it is important to acknowledge that 'conservation' can be considered by an isolated community as a valid form of economic development, and that it is important to be transparent about the economic opportunities afforded by conservation action in a target site. On another issue, the conservation team needs to plan carefully to address issues of communication and personal security during the development of the project. Both issues can be problematic in Papua New Guinea.

7. Review initial field scoping and prioritize candidate sites for further field review. Each of these field sites would include a potential Conservation Area within the larger target landscape; the community needs to be able to demonstrate sufficiently robust local governance to warrant further

assessment of capacity and conservation-inclination on the ground. A motivated, well-organized, and well-managed community will be a strong lead partner for the conservation action.

8. Carry out follow-up field visits to the candidate sites, and conduct due diligence on governance, land tenure, and conservation opportunity. Select the best community/landscape for conservation action. Bear in mind the long-term costs of increasing levels of complexity (more political boundaries, language groups, ethnic groups means more work and resources to achieve conservation success).

9. During the follow-up field visits, it is appropriate to address the issue of community aspirations and economic development, as well as individual vs. communal benefits from conservation action. Clarifying project benefits to the community is imperative, as the attitudes of community members are likely to evolve over time. The options need to be laid out for local decision.

10. Engage with selected communities that appear to have the greatest potential for a successful outcome. In collaboration with the community, detail a plan of action that would deeply involve them and their LLG and other appropriate governing bodies (using existing traditional or customary management structures) in the design and development of a Conservation Area. This is an important step in which the community agrees to collectively face the challenges and responsibilities of creating and managing a Conservation Area. The definition of community consent and the process for achieving it should be defined by the community itself. Including a grievance mechanism that is respected by all parties involved is also essential. Developing this action plan will very likely require multiple meetings and various iterations in what is the start of a long-term engagement.

The chapter that follows focuses more particularly on the details of establishing a Conservation Area on the ground in Papua New Guinea, and includes issues such as clan mapping and boundary-setting, among other things. Our main take-home point is that the selection of an appropriate site for conservation is critically important to the long-term success of a field conservation project. Plan well before committing on the ground.

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Drying YUS organic shade-grown coffee.



# Establishing a Conservation Area in Papua New Guinea— Lessons Learned from the YUS Conservation Area

Zachary Wells, Lisa Dabek, *and* Gaikovina Kula

## SUMMARY

This paper identifies lessons learned during the process of design and creation of the YUS Conservation Area through Papua New Guinea’s Conservation Areas Act of 1978. For forty-five years, formal protected area practice in Papua New Guinea (PNG) has employed the Fauna (Protection and Control) Act of 1966 to create Wildlife Management Areas (WMAs). Numerous Wildlife Management Areas have been legally gazetted although the literature on them is largely critical, questioning both conservation and development successes. In 2009, thirty-one years after formalization of the Conservation Areas Act of 1978, the YUS Conservation Area (YUS CA) became the first protected area gazetted under this legislation, breaking new ground for biodiversity conservation in PNG. This paper chronicles the engagement of local communities and multiple levels of government, the implementation of major parts of the Conservation Areas Act, and the process taken in YUS to reach gazettal, with the purpose of informing future conservation practice.

## INTRODUCTION

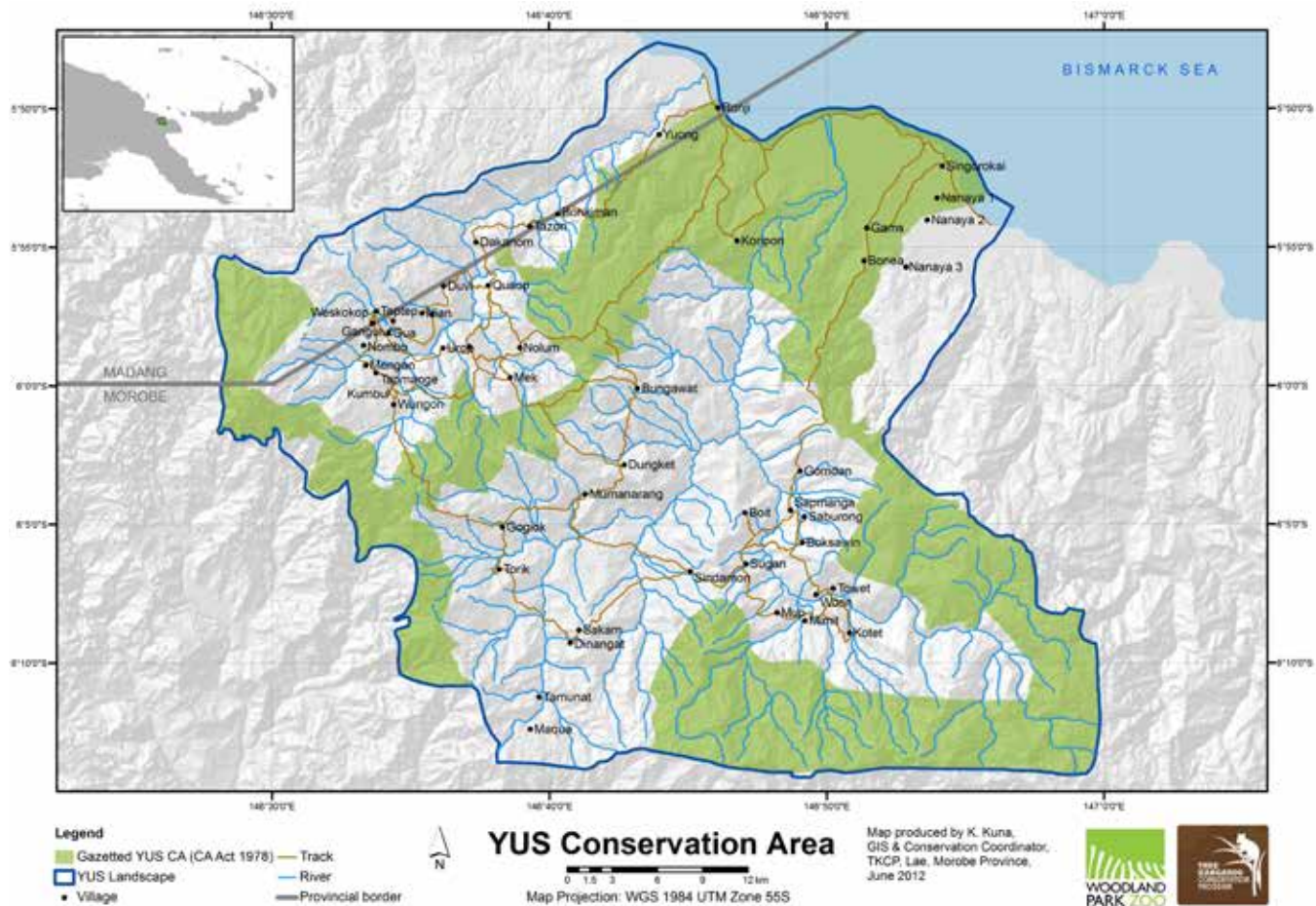
Papua New Guinea (PNG) occupies the eastern half of the equatorial island of New Guinea. The forests of New Guinea are still largely intact and the island is considered one of the three high biodiversity wilderness areas remaining on earth (Mittermeier *et al.* 1998, Beehler 1993, Lipsett-Moore *et al.* 2010).

The Huon Peninsula is one of the most distinct biogeographic provinces in PNG, with more endemic bird and mammal species than any other like-sized area in the nation (Wikramanayake *et al.* 2001). In addition to the endemic species, several other mammal and bird species of particular conservation concern occur on the Huon Peninsula, but little is known of their status. The Huon Peninsula is also believed to be one of the botanically richest areas in New

Guinea, with an estimated 5,000 species of higher plants (Johns 1993). The species richness of the flora is only matched in PNG by other areas with equivalent elevational range, such as the Bismarck Falls region extending from the summit of Mt. Wilhelm to the lowland alluvial and swamp forests of the Ramu River.

The YUS Conservation Area (YUS CA) is situated on the Huon Peninsula, with the majority of its extent located in Morobe Province. It roughly follows the jurisdictional boundaries of the YUS Local Level Government (LLG) with a few exceptions based on cultural relationships—clans, families, and language groups—and includes some portions of the Tewai-Siassi District of Morobe Province. These boundaries closely reflect the natural physiographic boundaries of three watersheds and are thus named for the three main river systems in the

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area—Yopno, Uruwa, and Som (YUS) regions.

The YUS area is a mixed landscape of forests, villages, grasslands, and agricultural areas. Based on data in the 2010 census, we estimate that the YUS LLG population is ca. 12,000. The area is remote, with no roads, and access is either by plane or foot travel, or by boat on the coast. As a result, there is no large-scale commercial development in the area. There are still large blocks of unlogged forest, some of which can be classified as pristine. The gazetted YUS Conservation Area currently includes 76,000 hectares of pledged core areas, plus additional buffer and multiple-use zones.

The rugged landscape includes many foot trails linking villages across the landscape. Six airstrips are maintained in YUS, and weekly flights service specific airstrips for delivery of goods and transport of people. Scheduled flights are few, thus time-bound travel schedules and deliveries require aircraft charters—an expensive proposition. Access to the area is also possible from the sea with private local boats for hire available from Madang to the west and Wasu to the east.

The YUS CA is a priority for protection for many reasons, including high biodiversity value, intact habitat, unique species, and a high degree of endemism. There are many species of global conservation significance present in the YUS CA for which the area must be managed. These include those species identified by IUCN as threatened or near-threatened. The area has remained of high value for nature conservation because of the subsistence lifestyle and relatively sustainable land-use practices of the people of the YUS area. The rugged terrain has played a major role in preventing large-scale development from taking hold in YUS, reducing associated threats to biodiversity. This isolation has also greatly constrained village development. YUS communities thus have restricted access to employment, markets, and government services.

While the Huon Peninsula and YUS area are storehouses of PNG's rich biodiversity, the nation itself is globally exceptional when it comes to human diversity. The influences of island

isolation and rugged topography that produced New Guinea's biological diversity have also contributed to the development of an incredible variety of human cultures and languages. PNG is the most linguistically diverse area in the world, with more than 800 distinct languages spoken. The people of Papua New Guinea, who own the land in a system of customary land tenure therefore play a great role in the fate of their nation's environmental management.

Customary land ownership in Papua New Guinea is enshrined in the National Constitution. It is commonly held that 97% of land is owned by Papua New Guinea's citizens in traditional clan-based structures. All YUS land is owned by local people.

Such a system of customary ownership provides a rich opportunity for learning lessons in how to engage local people in the creation of protected areas to conserve nature, and how to empower their stewardship. Moreover, successful experiences in Papua New Guinea could build momentum towards greater community participation in conservation, particularly in countries with state land ownership and a more centralized system of protected areas. The history of the YUS CA, from the inception of the protected area idea, through to gazettal, provides fertile ground for learning, in particular identifying challenges and opportunities to improve the process leading to this goal.

#### OVERVIEW OF POLICY AND LEGAL ANALYSIS OF THE CONSERVATION AREAS ACT

There are three existing legal structures for protected areas in PNG: National Parks, Wildlife Management Areas (WMAs), and Conservation Areas. A few National Parks were created prior to independence, but this structure did not fit well with near-universal customary land tenure. Before a National Park is declared, the area must be reserved under the Lands Act, a long and costly process, which leaves management of remote areas in the hands of centralised government authorities.

WMAs are by far the most prevalent classification of protected area in PNG today. WMAs, however, are widely criticized because the legislation in which they are enshrined, the Fauna (Protection and Control) Act of 1966, does not preclude destructive economic development on the lands encompassed by the WMA. This can (and does) occur when government priorities for economic development trump environmental conservation. Biodiversity protection can be threatened by the lure of royalties from logging and mining, and the minds of local landowners sometimes shift focus from protection to profit. Consultation on the setup of a protected area needs to properly engage the necessary line agencies to discuss alternative pathways to development prior to establishment of a protected area. According to a legal discussion paper completed in consultation for the PNG Department of Environment and Conservation (DEC) (Whimp 1999), “there is no provision in the Fauna (Protection and Control) Act that prevents a mining tenement or forestry permit being issued over a WMA.” Moreover, increasing natural resource demands in growing rural

populations may put dangerous pressures on WMAs, which depend entirely on self-regulation by local communities. In other cases, landowners simply change their minds when the benefits of the protected area do not meet their aspirations. This is a particularly relevant threat when communities expect, often to their ultimate disappointment, that protected areas will be a source of substantial income generation and development. A conclusion may be that the Act is not strong enough to provide long-term protection through changes in public and private priorities.

In comparison, the Conservation Areas Act of 1978 places a greater degree of authority with the Environment Minister who must authorize any development activities within a gazetted Conservation Area. It may be fair to say that the governance of Conservation Areas is clearer (and more restrictive) than that defined by the other protective acts. The Conservation Areas Act gives the mandate of management and monitoring to a multi-stakeholder management committee, reporting to the Minister, most likely through DEC.

The same paper by Whimp states that “Conservation Areas provide the only conservation mechanism that clearly allows management of the area to extend to controls over development. Existing land uses are not allowed to be changed unless either (a) the management plan [explicitly] allows it or (b) the Minister has authorized the development.” These more rigorous provisions regulating development activities in CAs, however, are counterbalanced by an onerous gazettal and management process. Moreover, the fact remains that local people own the land in question and the onus often falls to partners in conservation to meet the aspirations of landowners.

From Part 3, Section 12; and Parts 1 and 37 of the Conservation Areas Act, CA gazettal may begin in two ways. The first option is that the Minister may seek the recommendation that an area be declared a Conservation Area. Otherwise, a person, group or authority may make a written request to the Minister.

### Summary of the Conservation Areas Act 1978

#### a. Purpose

To provide for the preservation of the environment and of the national cultural inheritance by—(i) the conservation of sites and areas having particular biological, topographical, geological, historic, scientific or social importance; and (ii) the management of those sites and areas, in accordance with the fourth goal of the National Goals and Directive Principles.

#### b. Definition

“Area” includes— (i) a site, place or region; and (ii) a building or other structure including equipment, furniture, fittings and articles associated with or connected with the building or other structure; and (iii) in relation to the conservation of an area—the immediate surroundings of the area.

#### c. Governance

- (i) National Conservation Council—Part II, Section 4
- (ii) Conservation Area Management Committee—Part VI, Section 25

#### d. Steps in Establishing Protected Areas

- (i) Conservation Areas—Part III, Section 12–17 and 37

e. This Act is administered by the Department of Environment and Conservation.

## IMPLEMENTATION OF THE ACT: THE PROCESS TO GAZETAL OF THE YUS CONSERVATION AREA

The YUS Conservation Area on the Huon Peninsula evolved organically as many conservation initiatives do. A 1991 PNG Conservation Needs Assessment (Beehler 1993) considered the Finisterre Mountain range of the Huon Peninsula to be a “scientific unknown” and in need of scientific and conservation attention. Dr. Dabek and team first came to the YUS area in 1996 to determine the conservation status of the endemic Matschie’s tree kangaroo, which is listed as endangered under the IUCN Red List and is also exhibited in zoos in North America. Dabek had previously completed research on reproductive biology and behavior of this species and wanted to connect work in zoos with accomplishing conservation efforts in the wild. No long term biological research on the Matchie’s tree kangaroo had been conducted previously. This initial work helped to determine basic population estimates as well as collect information on the key threats to tree kangaroos such as hunting and forest clearing.

The idea of creating a protected area developed early on through discussions between local landowners and conservation biologists. There was the perception by local hunters of a decreasing trend in local wildlife populations, particularly of the Matchie’s tree kangaroo. One possibility that resonated with local hunters was setting aside portions of hunting land to allow wildlife to reproduce and ensure the sustainability of hunted species. The concept of setting aside a portion of one’s hunting land for a protected area was described as a “wildlife bank.” The protected area would serve as a safe place for tree kangaroos and other wildlife to reproduce, and when the young dispersed from the protected lands into the buffer areas the hunters would be able to harvest them sustainably. Through these discussions it became clear that there had been a similar practice of culturally-based tambu (taboo) areas in the past. Communities in YUS continued to express interest in conservation

over successive years of working with Dabek. In response, Dabek’s team formalized a partnership with YUS landowners and developed a field conservation program called the Tree Kangaroo Conservation Program (TKCP) at the Roger Williams Park Zoo and later at the Woodland Park Zoo, Seattle.

Initially one clan in the Yopno region of the YUS area, led by a collaborative tree kangaroo hunter, set aside forest for conservation and research. TKCP’s small team, employing local assistants, began to facilitate informal community meetings with landowners in surrounding villages, and ultimately in the other YUS regions, to discuss the decline of tree kangaroo populations and the desire by the hunters to create a sustainable resource for subsistence hunting. TKCP staff also shared information about tree kangaroo reproduction (e.g., that the species is slow to reproduce, producing only one offspring every one to two years) to emphasize the vulnerability of tree kangaroos as a game species and the need to manage the rate of harvest.

In all community meetings TKCP emphasized that there would be no compensation for setting land aside, highlighting that the purpose of the protected area was for the long term sustainability of YUS natural resources—of benefit to local communities. A second benefit was the diverse employment opportunities offered by the TKCP program in YUS. Furthermore, TKCP subsequently initiated several community initiatives that addressed local need regarding education and health.

### Lesson Learned

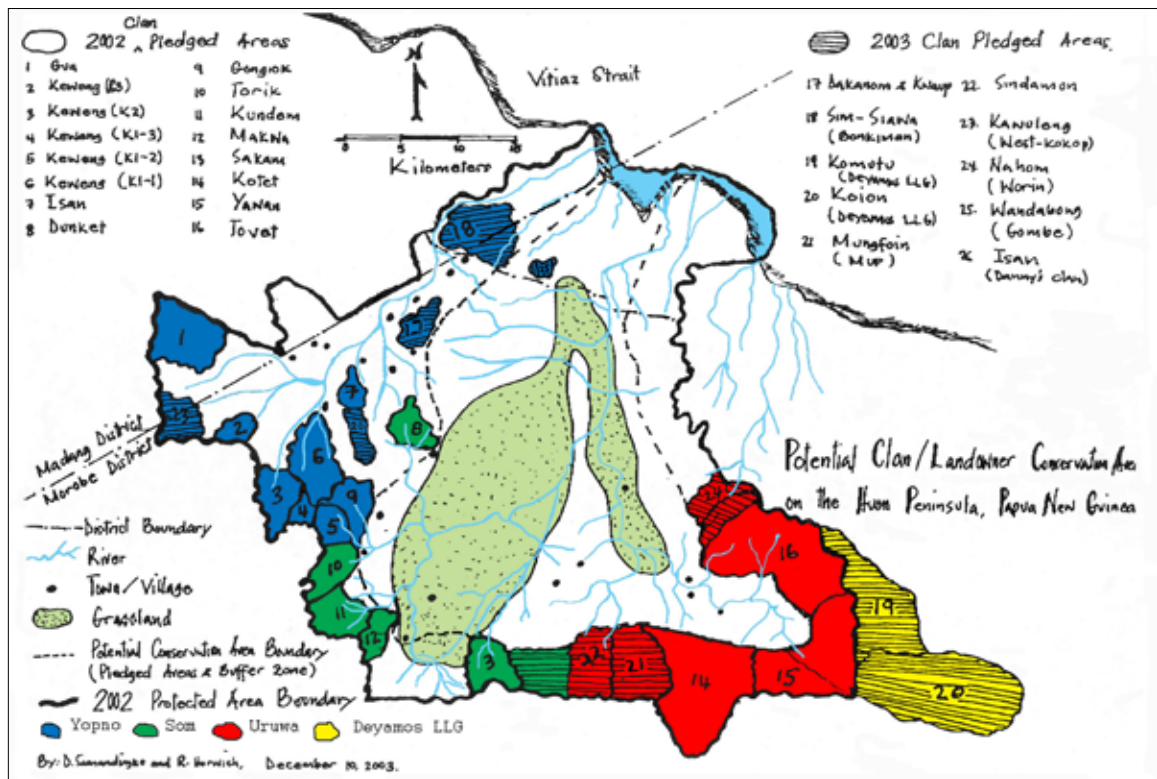
In these initial steps, any external proponents of a Conservation Area must be prepared to work closely with the local communities in a long and resource-intensive process. The landowners must then commit to set aside portions of their land for conservation purposes. The YUS experience illustrates the success that can be had following a long and committed partnership process. Even in YUS, however, there continue to be individual cases of mistrust and misunderstanding. Given the level of commitment required on the community side, the relationship-building between landowners and external partners is of the utmost importance.

From the early stages of partnership, TKCP took the approach of “community-based conservation,” focusing on local ownership, and prioritising community development needs as well as environmental needs. TKCP researchers took guidance from YUS leaders, and the Member of Parliament from Kabwum District, who came from the YUS LLG. The services that the YUS communities were concerned about were education and health. Many schools in the villages were closed because of a lack of teachers. As a response, TKCP sponsored a community education project in 1998 which provided teacher training scholarships for YUS students, as well as annual teacher training workshops for existing local teachers. This approach was appreciated by the YUS communities, and helped garner support for conservation efforts. Additionally, capacity training for local research assistants became another benefit of TKCP’s presence in YUS. It was evident that YUS communities could benefit from the Conservation Area in direct

economic terms, even without paid compensation for pledging land.

TKCP’s community approach sought to address services that were not being met by the government. The goal has been to initially fill gaps and then strengthen the direct link between YUS LLG and the provincial government agencies rather than replace government services. At this early stage, it was essential to build working relationships with the provincial government.

In 2005 TKCP initiated a community health project in collaboration with the Morobe Provincial Government and YUS communities. The health project supported training workshops for midwives (a need identified by the community and the Provincial Health Department) and an immunization project by establishing solar refrigerators in the village aid posts and health centers. It was significant that TKCP focused on community needs in addition to its conservation and research efforts, which helped build the long-term relationship with the broader community



First-cut landowner mapping exercise for YUS Conservation Area

and successfully improved access to government services. As the development of a protected area agenda advanced, it became evident that community development would need to become a complementary strategy in YUS.

Initially, the WMA approach was used as a framework for discussions about conservation in YUS since this was the only functioning protected area structure at the time. TKCP interacted with other NGOs in PNG to learn about WMAs. Representative YUS landowners traveled with TKCP staff to Goroka and Crater Mountain WMA to meet with landowners and learn the benefits and challenges of creating a WMA. Many aspects of the protected area approach in the early years were modelled after the Crater Mountain WMA, a product of the pivotal work of the Research and Conservation Foundation of PNG (RCFPNG) and Wildlife Conservation Society (WCS).

In 2001 and 2003 collaborative biodiversity surveys (or Rapid Biodiversity Assessments) were conducted in YUS with WCS and others to document the flora and fauna to be conserved in a proposed protected area. These were important data sets that underpinned the proposal developed for a protected area in YUS.

From 1996 to 2003, clans collaborated with project partners in drawing a proposed protected area boundary (see map). The Conservation Area creation process became much more formalized when, in 2005, a team from TKCP, Conservation International (CI), and the Department of Environment and Conservation facilitated a workshop with representatives from 26 local YUS clans to develop a plan for creating a protected area. At that time, an in-depth policy analysis was also carried out, during which local landowners and project partners discussed the pros and cons of all existing protected area legislation. At this time TKCP collaborated with Dr. Mac Chapin of Support for Native Lands (USA), the Cartography Department of the University of Technology in Lae, and YUS landowners on an indigenous mapping project which resulted in local language community resource maps for Yopno, Uruwa, and Som regions. This was another first for PNG and

### Lesson Learned

Land tenure in PNG has important implications for implementation of the Conservation Areas Act. To illustrate—an early step in the process towards gazettal of the YUS Conservation Area was the initial creation of protected area boundaries. Though these boundaries were drawn in close consultation with local landowners including the signing of land pledges, the unique and complicated customary system has necessitated a much longer and more thorough mapping process. Receiving pledges by individual clans and confirming those boundaries on foot with GPS is an ongoing process, with the goal of aligning GPS-generated coordinates as closely as possible with the initial boundary proposal. To date about 50% of the original 76,000 hectares has been confirmed through GPS mapping by project staff and local landowners.

was beneficial for visualizing the areas of proposed conservation as well as for other land uses.

The policy analysis was supported by the creation of a TKCP-sponsored Landowner Environmental Law Handbook, and resulted in the decision by local landowners to attempt to create PNG's first Conservation Area. The principle consideration in that decision was the significantly stronger levels of protection from threat of large-scale resource extraction afforded by the Conservation Areas Act in comparison with the Fauna (Protection and Control) Act. Also, in 2005, the first clan members used GPS units to map the land they were protecting, marking a shift from earlier estimates based on hand-drawn maps, and the beginning of a clan-based GIS mapping program which continues post-gazettal.

Compilation of the CA proposal for DEC included comprehensive information about YUS, the climax of a process that had stretched over many years and included a number of studies, consultations, and workshops. This first trial of the Conservation Area process was slow since each step was new for the government and the community. TKCP staff worked closely with, and provided support to, DEC throughout all steps of the Conservation Area gazettal process. The requirements of the Act strengthen the foundations of the proposed Conservation Area by obliging due diligence in relationship building and understanding the local context. The process

is resource intensive and may be a main hurdle toward establishment of future CAs.

At the request of the local landowners, the proposal for creation of the YUS Conservation Area (YUS CA) was taken to the provincial, and then the National, governments by international conservation organizations, namely the Tree Kangaroo Conservation Program of Seattle, Washington's Woodland Park Zoo, and Conservation International (CI), based in Arlington, Virginia (USA). An important aspect of this approach is understanding and mapping the responsibilities of agencies and partners including the Department of Environment and Conservation, the National Conservation Council, National Executive Council, Provincial and Local Level Governments, forestry and mining agencies, and local landowners. However, the exact responsibilities of each player in the setup of protected areas in PNG are not clear and communications among stakeholders can be time-consuming and expensive. The importance of making these links can be seen below in successfully gaining the support from the Morobe Provincial Executive Council (PEC), a step not required by the Act but yielding important evidence to DEC of Provincial buy-in.

One year after the formal landowner workshop, in 2006, the resulting proposal gained approval from the Morobe Provincial

Executive Council with strong leadership by the Governor (Morobe PEC Approval Direction No. 03/2006 and Meeting No. 01/2006). This step is not a requirement of the CAs Act, yet project proponents were advised that Provincial support was both necessary for the long-term sustainability of the YUS CA and for advancing the application. The Governor of Morobe Province, Mr. Luther Wenge, was a crucial supporter of the YUS CA and was instrumental in delivering the submission to the Minister for Environment and Conservation, Mr. Benny Allen, at that time. Moreover, from the viewpoint of implementing the Organic Law and the Government Planning Framework, which establishes the multiple levels of PNG Government, this step is very important to gain access to resources at the Provincial, District and Local Level Governments (LLG).

Following a meeting in which the Governor presented the approved proposal to the Minister for Environment and Conservation, a letter signed by representatives from YUS wards was sent to the Minister stating their approval of the proposal. The Minister subsequently published the proposal in the National newspaper for a 90-day comment period. The public notice requirement simultaneously functions to notify landowners within and the outside of the proposed area of the pending submission, necessary because engaging every individual in rural areas like YUS would be extremely difficult. The process in YUS served to highlight where boundary disputes might arise, and through resolution processes it highlighted landowners who were most strongly in support of the Conservation Area. Such a formal inclusion in the legislation is also important to avoid conflict over land use at the National and Provincial planning levels. In effect, it aids the mainstreaming of the Conservation Area agenda across other sectors in Papua New Guinean planning, government and civil society.

During the public comment period, several concerns were raised, indicating that the landowners and partners had not been able to generate universal support among the more

### Lesson Learned

Support of the Provincial Executive Council is not required under the Act. However, the decision made by the Morobe PEC in support of YUS CA may have strengthened the relationship between the local community members and TKCP as NGO staff and landowners promoting the conservation initiative were seen to have the support of the Morobe Provincial Government. The Morobe PEC decision also added significant value in the preparation of the National Executive Council submission. Perhaps most importantly, this step makes it possible for the YUS CA Management Plan to be crafted in line with government plans at the provincial, district, local-level government, and ward levels as the relationships between all parties are strengthened in the early stages. Strategies for management of the YUS CA can be made in parallel with government strategies aimed at land-use, rural development, and more. This alignment may serve to sustain the project in the field through the pooling of resources and coordination of plans and activities.



than 10,000 individuals living in the YUS area. Individual landowners in one of the 13 wards in the YUS Local Level Government protested the inclusion of their clan lands within the proposed Conservation Area, because surface oil had been found and they wished to explore options for developing that resource. These clans chose to remove their land from the pledged protected area.

In a letter from the Minister to TKCP, project proponents were advised to facilitate a meeting to address landowner concerns. Options at this stage included continuing with an altered proposal excluding lands in question, starting again with a submission for a WMA, or abandoning the process.

A follow-up meeting, open to all landowners, was held to address concerns. Representatives from DEC, NGO partners, and YUS landowners in support of the Conservation Area decided to proceed with an altered proposal, excluding the lands under question. Once a Conservation Area is gazetted under the Conservation Areas Act the local landowners could seek approval for development within the CA such as oil exploration; however the power to either allow or disallow such activities would reside with the Minister. This simultaneously represents a significant opportunity for protection afforded by the CA Act and an important consideration for land owners. To date, the exempted ward has not rejoined the YUS Conservation Area although individual landowners from that ward have expressed interest in re-pledging land. The CA landowners have decided to wait for full agreement from all clans in the ward in order to minimize the threat of dispute within those clans.

Following the public comment period, the next step in the gazettal process is submission of the proposal to the National Executive Council (NEC). The process towards completion of the NEC proposal is an arduous one, requiring substantial time and financial resources. The collection of data itself can be a major undertaking, including biodiversity studies that require teams of scientists (CI publishes these Rapid Biodiversity Assessments) to document key species in the proposed area, demographic data for the LLG,

as well as boundary estimations with local landowners. The YUS CA proposal sent to NEC included:

- Minutes of the meeting to address community concerns
- Updated boundaries excluding disputed lands
- List of key wildlife species of importance in YUS
- Letter from the PEC and letters of support from local landowners
- Substantial supporting documentation as required under the Act (key and threatened species to be conserved, biodiversity assessments, demographic information, current land-ownership and uses)
- Supporting letters from key government agencies, namely Forestry and Mining and Petroleum
- Letters from outside organizations (e.g., Tree Kangaroo Conservation Program, Conservation International) stating ongoing financial and technical support for the creation of YUS CA

This last inclusion may be considered significant as an additional constraint in the creation of CAs is the logistical and financial ability of the National Government to fund long-term management at site. CA proposals with indications of long-term, third party, financial support may be more likely to reach gazettal.

The most significant sources of support at this time were grants from Conservation International's Global Conservation Fund and a major grant from the German Ministry of the Environment (BMU) through the German Development Bank (KfW) to Conservation International and Woodland Park Zoo's TKCP for the "YUS CA Project." This funding allowed the project partners to build the infrastructure necessary for supporting a Conservation Area. The increased amount of funding was also critical in allowing TKCP to expand and address some of the communities' pressing development priorities, conduct land-use planning and management workshops, and develop a landscape-level management plan. It is

hard to imagine how this work would have been accomplished without the BMU/KfW support.

From Ministerial agreement to gazettal a number of steps remained. Following the public notice period the submission to the National Conservation Council (NCC) is to obtain advice for the Minister on a Conservation Area submission. However, at the time of the YUS CA submission, the NCC did not exist, so the YUS CA proponents sought and achieved approval from the Attorney General to proceed along an alternate route.

With the Attorney General's approval, proponents obtained letters of support from key National Ministries including the Mineral Resources Authority, Department of Community Development, PNG Forest Authority, and the Department of Provincial and Local Government Affairs, as well as approval from the State Solicitor of Landowner Land Pledges. This process followed the NEC submission format and is intended primarily to obtain comments on the validity of the landowner pledges and seek comment from agencies for which gazettal may have development and/or policy implications.

A revised proposal was then submitted to additional authorities for approval, beginning with the Department Heads Economic Sector Committee and proceeding to the Ministerial Economic Sector Committee. These committees are important in the approval of any NEC submission,

leading to the recommendation to the NEC for approval. Again, this stage requires addressing any concerns arising. A final proposal was then submitted to the National Executive Council for decision and recommendation for the Governor General's endorsement. With the arrival of that endorsement the CA was published in the National Gazette, and gazettal was formally achieved.

#### IMPLEMENTATION OF THE ACT: POST-GAZETTAL

Implementation of YUS CA is ongoing, with activities aimed at land-use planning and management, as well as capacity-building for future ownership of the management process by local landowners. Among the major components of the Conservation Areas Act that are in the initial stages of implementation for the YUS CA are:

- Development of the PNG's first Conservation Area Management Committee (CAMC) for the YUS CA,
- A landscape-level Management Plan for the area,
- Recruitment and training of the first indigenous Ranger team for a Conservation Area.

Under the Conservation Areas Act of 1978, each Conservation Area must have a Management Committee (CAMC) to "(a) manage the Conservation Area; and (b) to make recommendations to the Minister on the making of rules applicable within the Conservation Area; and (c) to advise the Minister in respect of co-ordination of development within the Conservation Area; and (d) to prepare a management plan for the Conservation Area outlining the manner in which land use will be managed and features of special significance conserved; and (e) to direct the work of rangers; and (f) such other functions as are determined by the Minister."

The Act stipulates that the CAMC should reflect the interests of the local landowners and the provincial government. The early reality of the YUS CAMC was that a committee was

#### Lesson Learned

Committee members decided early on not to gazette the names of individuals on the CAMC but rather their positions as important to the ongoing multi-stakeholder management of YUS CA. The YUS CAMC consists of:

1. Three representatives from the Executive Committee of the YUS Conservation Organization – a landowner constituted Community-based Organization which advises on management of YUS CA
2. Head of Terrestrial Programs from Department of Environment and Conservation
3. Senior Manager from Tree Kangaroo Conservation Program, the NGO partner for the management of YUS CA
4. Kabwum District Administrator
5. Program Advisor for Mining, Natural Resources & Environment Division, Morobe Provincial Administration
6. The Presidents of YUS and Wasu Local Level Governments

needed to engage multiple stakeholders in making decisions over the present and future of the YUS CA. As such, the first two meetings of the YUS CAMC in February and August 2011 led to a structure made up of key positions within government, NGO and local representatives. The YUS CAMC structure is currently undergoing an approval process facilitated by the PNG Department of Environment and Conservation with indications that the Committee structure and bylaws will be legally gazetted in 2013.

While the YUS CAMC is tasked under the Act with the management of the YUS Conservation Area, the reality of the geographic distribution of its members, combined with the recognized need for local ownership of the management process, means that day-to-day management lies with TKCP, a site-based PNG NGO which will be legally registered in 2013 and is focused on management and support of the YUS CA. It is currently staffed 90% by Papua New Guineans, with 80% directly from the YUS area. The development of a site-based NGO is an important and unique strategy for the management of the YUS CA, and one which may provide a model for other sites where CAs are currently being developed.

TKCP also benefits from a partnership with an advisory organization made up of local landowner representatives called the YUS Conservation Organization (YUS CO). Early on project partners understood that each clan pledging land to the CA needed to have a voice in landscape-level management and those representatives would need to make communal decisions as in the development of the YUS CA bylaws.

YUS CO includes 48 landowner representatives and was registered under PNG law in 2009 as an incorporated organization. When a clan pledges land to the Conservation Area that clan also collaborates with the other clans in the ward to nominate a representative to YUS CO. Clans aggregate on a ward level and nominate representatives to each of three YUS CO committees: Conservation, Education and Healthy Community Development. Additional seats on each of the committees are reserved specifically for female representatives from each of the YUS wards.

### Lesson Learned

Facilitating the development of a community-based organization (CBO) is a conceivable way to foster sustainable, local ownership over conservation and development activities. It also provides a benefit-sharing mechanism by which government or NGO partners can channel incentives to natural resource owners. A key lesson from the YUS experience is that both ownership/management and benefits/incentives must be linked as closely as possible to the landowners who are pledging land to the Conservation Area. The so-called Producer Principle, the principle of linking benefits from conservation and management responsibilities directly to the people who produce biodiversity benefits, is not new to conservation and development initiatives. It is, however, complicated by the Melanesian land-tenure system of communal, traditional ownership. With 54 villages participating in the YUS programs and numerous clans pledging land to the CA it would be difficult to allow each clan to have representation on the YUS community-based organization. The compromise in YUS has been to get the participating clans in each ward together and facilitate the election of several representatives from each ward. This allows the participating clans to work together with their neighbours but provides an opportunity to elect a representative who may be “closer” to them along family lines and geography. Still, YUS project partners face an ongoing challenge in balancing direct benefits to the clans participating in the program (such as fees for doing research on their land) versus more communal benefits (such as assistance with the construction of a foot-bridge between villages).

The YUS Conservation Organization’s mandate is “to foster wildlife and habitat conservation while also improving livelihoods for local communities within the YUS Conservation Area of Papua New Guinea.” Its goals are:

- To provide long-term management for the YUS Conservation Area
- To build local capacity to address needs in conservation, education, healthcare, and community development.
- To promote environmental awareness and conservation of natural resources and wildlife for present and future generations.
- To network with partners such as NGOs, churches and governments to establish an effective Conservation Area and to provide basic services and infrastructure to the community.
- To promote and facilitate research into the biological diversity of the YUS region for the benefit of the landowners, Papua New Guinea and the World.

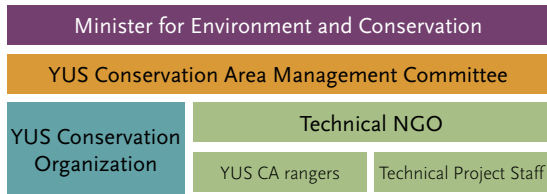


Diagram showing relationships between the key bodies in the YUS CA Management Structure

- To promote and encourage equal participation by all clan members and genders in all activities related to achieving the objectives of the YUS CO in the YUS region.

While the local NGO and advisory CBO ensure that local landowners create the management agenda for YUS CA, questions about the purpose and benefits from the Conservation Area are common occurrences. From the earliest stages, project proponents emphasized that there would be no compensation for land pledges and that the major benefits of the protected area would be sustainable natural resources, opportunities for employment as staff, and opportunistic responses to communal development priorities in partnership with the government. The project has sought to harness opportunities to promote local development and improve livelihoods where possible. Examples of development projects in YUS include support to coffee farmers through market partnerships and technical trainings as part of a conservation coffee initiative; a teacher scholarship program; health trainings; and small infrastructure projects, such as the installation of vaccine fridges at local health centers to facilitate the government's immunization program.

Priorities for these projects are locally driven and are focused on capacity building as often as possible, yet questions of compensation and motivation arise and will likely be a continual discussion. In the YUS Conservation Area, the model has been to view the CA as a wildlife bank providing sustainable hunting for the local landowners, a point that is emphasized in community meetings and in talks between landowners and local TKCP and YUS CO staff. However, misunderstandings, misinformation,

and sometimes conflicting priorities among villages do arise. The necessity of clear, honest, and constant communication is paramount. The early lesson here is that clarity among thousands of locals, outsiders, and government, particularly on the benefits of conservation and the roles and responsibilities of each stakeholder, is crucial.

The roles of the institutions involved in the YUS CA have evolved over time as have their staffing and structure. The local PNG NGO partner, TKCP, carries out day-to-day management, provides technical support, fundraising, and facilitates strategic partnerships with government and civil society. The NGO is staffed to provide the expertise needed to support the YUS CO in managing YUS CA and to ensure that local ownership is enabled throughout the initiative. YUS CO plays a crucial role in giving each clan a representative voice, facilitating landscape-level decision making, and advising the TKCP PNG NGO. Finally, Woodland Park Zoo and Conservation International collaborated to create a YUS Conservation Endowment to help fund the long-term costs of managing the YUS CA through the NGO. The endowment is housed at Woodland Park Zoo and funds will be dispersed to the NGO annually.

## CONCLUSIONS

Key lessons learned from establishing the YUS Conservation Area are:

- Have clear reasons for choosing a proposed protected area site based on factors including biodiversity, scientific knowledge, and community support and interest.
- Creating a Conservation Area is a long term process; for YUS CA it took 13 years to reach gazettal.
- Make sure the intentions and expectations of landowners and outside conservation organization are clear, transparent, and realistic. Building trusting and respectful long-term relationships is essential.
- Incorporate community needs with conservation goals.

- Build relationships with all levels of PNG government including LLG, District, Province, and National.
- Collaborations with local and international organizations and universities strengthen the approach to conservation and community support.
- Plan for long-term sustainable financing.
- Building local capacity is key for success. Long term goals should include hiring local staff members.
- Share knowledge and challenges with other groups to support protected area programs throughout the nation.

Tree Kangaroo Conservation Program and YUS Conservation Organization, with numerous partners including Woodland Park Zoo, Conservation International, and James Cook University, continue to support the YUS Conservation Area through the development of landscape-level Management Plans. The partners are working through the Conservation Area Management Committee to reach Government departments on Ward, LLG, District, Provincial and National levels. The YUS Landscape Plan, which includes a management plan for the protected area as well as land-use plans and guidance on a wide range of activities across the YUS landscape, are being developed through a nested approach, aligning activities in YUS with goals set out in the PNG Vision 2050, and Provincial and District Five-Year Development Plans. Within this YUS Landscape Plan lies the core management strategy for YUS CA, the development and implementation of a community-based Ranger and Ecological Monitoring Program, as dictated by the Act (Part VII, Section 38). Certainly, the coming years will continue to provide a wealth of lessons learned.

## ACKNOWLEDGMENTS

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OPPOSITE

View of the majestic highlands of the YUS landscape from a small boat offshore of the north coast of Morobe Province, Papua New Guinea.

COVER

YUS Conservation Area

BACK COVER

TOP ROW, *left to right*

*Rhododendron cristi*

Matschie's Tree Kangaroo

YUS forest mappers

SECOND ROW

Landowners in a resource mapping exercise

A cupping event for YUS coffee

THIRD ROW, *left to right*

Tree-mapping on YUS Transect

Giant forest gymnosperm high on the YUS Transect



CONSERVATION INTERNATIONAL



WOODLAND PARK ZOO

TREE KANGAROO CONSERVATION PROGRAM