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Forum Essay

Culture, kastom and conservation in Melanesia: what happens when worldviews collide?

Stacy Jupiter

Wildlife Conservation Society, Melanesia Program, 11 Ma'afu Street, Suva, Fiji.
Email: sjupiter@wcs.org

Abstract. Melanesia is one of the most biologically and culturally diverse regions on earth, yet its species and ecosystems are fundamentally threatened by rapidly growing and modernising populations that drive increased demands for natural resource extraction. Despite good intentions, many conservation projects in Melanesia have not succeeded, largely due to a failure on the part of researchers and practitioners to understand underlying differences between western and indigenous worldviews and issues surrounding land and marine tenure arrangements. Learning from these failures is critical in order to improve odds for future project effectiveness and sustainability. Here I present lessons from attempts across Melanesia at establishing protected areas, conservation agreements, ecotourism initiatives and research-action arenas. These showcase challenges and conflicts when worldviews collide and opportunities that arise when mutual expectations are clarified early on during planning processes. Factors that contribute to more successful outcomes include: respecting international protocols for free, prior and informed consent; co-creating research and management agendas with local communities; clearly articulating realistic expected benefits; and establishing locally perceived equitable and transparent benefits sharing mechanisms.

Additional keywords: conservation agreements, conservation finance, ecotourism, protected areas, research engagement, tenure.

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Introduction

The biodiversity of Melanesia is recognised by the global conservation community to be among the world's unique but most highly threatened hotspots (Mittermeier *et al.* 2011). The term Melanesia as a region generally applies geographically to Papua New Guinea (PNG), Solomon Islands, Vanuatu, Fiji and New Caledonia, as well as the Torres Strait Islands between PNG and Australia and the Indonesian provinces of Papua and West Papua (Kingsford *et al.* 2009). Among its many biological assets, Melanesia hosts one of the largest remaining areas of forest in the world in PNG, where an estimated 7% of global terrestrial biodiversity occurs in less than 1% of global land area (GoPNG 2010). Solomon Islands has the highest levels of avian endemism per unit area anywhere on earth, from which early research on bird communities underpins one of the fundamental rules of island biogeography, the relationship between biodiversity and natural habitat area (Diamond and Mayr 1976). Vanuatu hosts a substantial number of threatened species (Aalbersberg *et al.* 2012), while over 35% of Fiji's plants, birds and reptiles are endemic (GoF 2007). In addition, Melanesia forms a core component of the Coral Triangle Region, containing an estimated 75% of known coral species and 3000 species of reef-associated fish (Bellwood *et al.* 2003; Veron *et al.* 2009).

The original human settlers, initially arriving on the island of New Guinea from south-east Asia some 60 000 years ago (Keppel *et al.* 2014), encountered a varied assortment of plants and animals unique to these isolated island environments, which drove extensive language and cultural diversification built on these foundations of biodiversity. There are over 800 distinct languages spoken in PNG alone, while Vanuatu has the highest language diversity per unit area in the world (Lynch and Crowley 2001; Wurm 2007). Despite these linguistic and cultural differences, Melanesian people share customs of land and sea ownership, which facilitates persistence of cultural practice and language where a healthy resource base is maintained (Winslow 1977).

Melanesian worldviews on nature and conservation differ from some prevailing western perspectives in ways that affect how Melanesians and outsiders interact with nature, what types of responsibilities they assume, and the types of conservation actions and management systems that they independently design (Keppel *et al.* 2012*a*). One major difference is the Melanesian perception of humans as part of nature versus western views of people apart from nature, termed the nature–culture dualism (Descola and Pálsson 1996; Haila 2000). This perspective is not necessarily unique to Melanesians, but to a multitude of cultures who are grounded in their environmental settings (Ingold 2000). Second, the intrinsic values ascribed to species and ecosystems from an evolutionary-based worldview and consequent preservationist ethos are not shared by most

Melanesians (Foale 2001; Foale *et al.* 2016). From a Melanesian perspective, the definition of conservation cannot be meaningfully separated from 'sustainable use' (Govan and Jupiter 2013). Because maintenance of custom, group status and cultural stability requires the ability to access natural resources (e.g. for feasts, costumes, and ceremonial exchange), Melanesian people developed complex customary tenure and taboo systems (see below) that regulate access to, and use of, land and sea resources (Ruddle *et al.* 1992). Although tenure and taboo systems were not inherently designed to ensure sustainable management outcomes (Carrier 1987; Foale *et al.* 2011), stable resource availability for local use was sometimes a by-product.

The Melanesian definition of conservation deeply contrasts with western views that emerged from the roots of the early environmental movement and are still prevalent in some conservation circles today, whereby separating people from nature was deemed to be the best method to halt environmental degradation (Mace 2014). Imposition of these 'fortress' conservation approaches in Melanesia (e.g. through protected area establishment under a preservationist ethic that does not recognise local access to resources for sustainable use) would inevitably create conflict, as they are likely to be deemed illegitimate by local actors, thus undermining conservation outcomes (Siurua 2006). Although fortress conservation is unlikely to be applied in practice across Melanesia where customary land and sea tenure is enshrined in legislation, this has not stopped conservation agencies and governments from continuing to produce conservation plans, without consultation of local land/sea owners, which demarcate large areas as priorities for protected areas. The imposition of any conservation intervention framed through a nature–culture dualism worldview can have substantial social impacts on Melanesian communities by dispossessing people from their land and resources or creating inequality in relationships when biodiversity is commodified based on its intrinsic value and material goods, services or cash are exchanged for its protection (West *et al.* 2006).

Despite genuine and deep-seated customary relationships between Melanesian peoples and the land and sea, cultural practices and traditional knowledge have eroded considerably over the past several hundred years due to histories of exploitation of local resources for commercial extraction (Bennett 1987; Jupiter *et al.* 2014*a*). Opportunities to access fast cash or goods through agreements to allow logging, mining and industrial fishing have interacted with weakened customary governance systems and exposed Melanesian people to new technology, material goods and services, opening doors for development and its consequent positive and negative impacts (Winslow 1977). This is equally true for interactions with conservation interests. Annual deforestation rates across the broader Oceania region, which encompasses Melanesia, are nearly three times global average rates, with PNG reporting some of the largest global forest losses in the past decade (FAO 2011). Due to a combination of overfishing and population growth, it is predicted that no Melanesian country will be able to meet its food security needs from coastal fisheries by 2030 (Bell *et al.* 2009). These pressures, along with threats from invasive species, pollution and climate change, are accelerating regional rates of biodiversity loss (Jupiter *et al.* 2014*b*). It is thus imperative to implement timely and effective interventions, supported by appropriately designed research, in order to enable feedbacks within socio-ecological systems, including sustainable production land- and seascapes, which maintain species, ecosystems, cultural practice and local knowledge systems.

In this essay, in order to provide guidance to improve the future effectiveness of research and conservation approaches in Melanesia, I look to the past to learn lessons from well meaning projects and interventions that did not work as intended. I first provide the broader context of land and sea tenure systems across Melanesia, which inevitably influence the way that conservation interventions and research must be approached. Second, I describe examples of conservation intervention failure from attempts to establish protected areas, conservation agreements, ecotourism initiatives and research-action arenas that showcase challenges and conflicts when worldviews collide. I also compare these failures with examples of better practice to highlight opportunities that arise when mutual expectations are clarified early on during planning processes, though I note that these approaches may be context-dependent and not necessarily scalable across the whole region. Finally, I summarise important lessons learned for optimising success of future conservation efforts, which can be applied in Melanesia as well as more broadly when working with indigenous and local actors across the globe.

Land and sea tenure systems

Between 87 and 98% of land in Melanesia is held under indigenous tenure across Solomon Islands, Fiji, PNG and Vanuatu (Govan *et al.* 2009). Indigenous land tenure is presently recognised through constitutional and/or other legal protection across these four Melanesian countries, while there is also formal recognition of customary rights to use and access coastal waters (Hyndman 1993; Ward 1995; Muroa 1999; Foukona 2007; Techera 2012).

Traditionally, customary kinship-based groups regulated access to, and use of, land and sea resources under their territory, often in island systems across linked catchment to reef units (e.g. Fijian *vanua*, Marovo Lagoon, Solomon Islands *puava*: Ruddle *et al.* 1992). These access and use rights were well understood within customary governance systems, but were applied in a diversity of ways (Walter 1978; Hviding 1996). For example, in Marovo, while a single kinship-based descent group may have primary access and control over a single *puava*, they may also have joint rights over neighbouring *puava*, as well as rights to exercise secondary influence over how resources are used elsewhere through established kinship or reciprocal relationships with other groups (Hviding 1996). Using labour to extract resources and modifying land and sea systems is culturally regarded as a way to add value to and exercise rights over a place (Foale *et al.* 2016). This complexity of rights to use and access different environmental spaces presents real issues when development interests, particularly for extractive activities like logging, mining and fishing, and also for conservation, are trying to engage the rightful resource owners. When there are opportunities to access cash and other benefits, inevitably competing claims of ownership will arise and create conflict.

In Solomon Islands, PNG and Vanuatu, customary tenure boundaries largely have not been legally demarcated. Across

Solomon Islands, customary claim to a land area requires having detailed knowledge of genealogy (Cook and Kofana 2008). In certain areas of PNG, access to land can be claimed by knowledge of historical hunting practices: for instance, West (2006, p. 58) writes: 'A man who can trace back in time to show that his ancestor was the first to kill kile and kama, two important tree kangaroo species, on a piece of land holds claim to that land'.

But these processes of establishing formal claim to land or sea areas, for example to establish a lease, are fraught given traditional flexibility in tenure arrangements. Hviding (1996) describes an example of interactions between a transnational mining company and communities from Vangunu Island in Marovo Lagoon, where landowners came together in the late 1980s to attempt to create a uniform version of descent groups and landownership for presentation to the mining representatives to negotiate lease arrangements and compensation:

> 'Attempting to transform at least two distinct biases in filiation and descent group formation into one single *kastom* way of genealogical reckoning created considerable conflict between experts, especially in forums representing both bush and coastal people … Despite the explicit aim of defining one uniform representation of unilineal descent, the task turned out, predictably, to be largely unattainable' (Hviding 1996, p. 347).

The discussions became so drawn out that the mining company withdrew in frustration, much to the satisfaction of some of the elders and chiefs.

Tenure systems were also complex and varied in precolonial Fiji (Walter 1978); however, after cession to the British in 1874, the colonial officers sought to organise land tenure rights and took a cue from a meeting of indigenous chiefs in 1879, who stated that true land ownership lay at the clan, or *mataqali*, level, even though this was recognised as a simplification of reality (Ward 1995). Colonial officials spent the next few decades mapping land tenure parcels at the clan level around Fiji, which were formalised under the *Native Lands Act* of 1940, which legally removed the flexibility of older arrangements. Thus, the legacy of British colonial rule in a postindependent Fiji is that all tenure boundaries are legally demarcated, which proves advantageous when entering negotiations for establishing conservation areas because there is legal clarity on how the benefits should flow and to whom.

Conservation's cultural collision course

In the sections below, I provide some specific examples of conservation failures and conflict arising from mismatched expectations between outside actors and local communities in Melanesia. I also compare these cases to examples of better practice in order to extract lessons to guide future research and conservation efforts, noting that there are often specific contextual conditions prerequisite for success that are not ubiquitous across Melanesia.

Protected areas

The case of Crater Mountain Wildlife Management Area (CMWMA) in the eastern highlands of PNG is an illustrative example where divergent expectations between outside conservation agencies, including the Wildlife Conservation Society (WCS), and local landowners ultimately undermined the success of a well intentioned project to combine biodiversity conservation with sustainable livelihoods and development (West and Kale 2015). CMWMA did not exist as a named place before the arrival of WCS and partner organisations, with funding through the Biodiversity Conservation Network supported by the USA Agency for International Development's Integrated Conservation and Development program. It was created through relationships that WCS staff and other outside actors had with two tribes, the Gimi and Pawaia, and formally registered in 1994 under the *Faunal (Protection and Control) Act* of 1976. Registration required a legal description of the boundaries that were probably not comprehensively consulted, given overlapping tenure claims made when a mining company began prospecting in the area (West and Kale 2015).

A second, important way that conflict evolved was that the outside conservationists held very different worldviews from the Gimi and Pawaia about what it meant to achieve conservation through development. The conservationists generally believed that:

> 'in order to achieve conservation, there has to be a kind of slowing of the modern and the movement of surplus capital into out-of-the-way places and then a stasis of sorts' (West 2006, pp. 216–217).

Thus, the conservationists thought that a reasonable exchange for landowners preserving the forests would be to introduce them to opportunities to market local handicrafts, thus bringing a limited, small amount of income, and that once the project was finished, the communities would be on their own to maintain the relationships with buyers. Local community members had radically different perspectives. They believed that in order to achieve development:

> 'there has to be a speeding up of the modern and the movement of capital into the community' (West 2006, p. 217).

Their expectations for development included things like access to health care and education, roads and markets, which they felt was fair given the external value that the conservationists placed on their land. Furthermore, they believed that once they had entered into an agreement with the conservationists, reciprocal give and take would continue through a long-term relationship of the type that underpins the adaptive capacity of most Melanesian societies (West 2006). This lack of mutual understanding and clarification of project expectations were some of the ultimate drivers behind tensions that erupted in violence in 2006, causing WCS to withdraw from CMWMA (West and Kale 2015).

The CMWMA model can be compared with the long-term process of negotiation to establish the Sovi Basin Conservation Area (SBCA), broadly heralded as one of Fiji's biggest terrestrial conservation successes (Keppel *et al.* 2012*b*). A partnership of multiple organisations led by Conservation International and the National Trust of Fiji undertook many years of consultations with the 13 landowning clans, resulting in an initial five-year conservation lease agreement for SBCA, under which the

landowners agreed to cancel an existing logging concession in exchange for compensatory payments received through a trust fund (Vukikomoala *et al.* 2012). Between 2005 and 2010, the first management plan was drafted, based on inputs from local landowners and other stakeholders, and the terms of a 99-year lease were established. Definition of the boundary of the SBCA, a requirement of leasing conditions, was facilitated by the legal demarcation of the clan tenure boundaries in Fiji. This enabled development of a clear and transparent process for equitable benefits sharing with the landowners, which includes annual rent and royalty payments based on the forest timber value, as well as annual payments into community development funds supported by the conservation trust (Jupiter *et al.* 2014*a*).

The Government of Fiji is now holding up the SBCA process as the way forward for establishing new terrestrial conservation areas in Fiji. It has set a very good precedent in terms of ensuring direct consent and involvement of local communities in development management plans and structures, as well as tangible financial compensation. A major challenge remains to source funds for endowments to provide for landowner and community payments. A more sustainable approach would be to mainstream funding through national government mechanisms, as the Republic of Palau has done through their green fee, an added departure tax providing revenue to finance protected area management (Chape 2012). In Melanesia, the *Solomon Islands Protected Areas Act* of 2010 provides the legal mandate to establish a national fund for protected area financing, which in principle could be furnished with moneys from Parliament, revolving funds such as green taxes on new developments or philanthropic contributions, though to date this fund has not yet been established.

It should be recognised that establishment of the SBCA and transparent benefits sharing arrangement was facilitated by Fiji's codified tenure system (Jupiter *et al.* 2014*a*) and reasonably high local financial management capacity compared with other Melanesian countries. Where land tenure relationships are more flexible and boundaries unfixed, conflict has often erupted during processes to clarify land ownership or distribute compensation payments (Macintyre and Foale 2007). In some cases, as described above, this has arrested proposed logging when companies withdraw in frustration (Hviding 1996), whereas in others compensation payments have been used for court cases to resolve disputes over land claims (e.g. from goldmine development on Misima Island, Papua New Guinea: Jackson 2002).

Conservation agreements

Conservation agreements are typically designed where a conservation interest (individual or organisation) sets up an arrangement with environmental custodians whereby they are rewarded in return for protecting a place or species (Milne and Niesten 2009). Although these types of agreement offer some promise for conservation, they have the potential to backfire spectacularly in Melanesia when clear benefits sharing mechanisms are not established and monitored (e.g. Van Helden 1998). Furthermore, these agreements may foster a culture where payment is demanded for participation, resulting in perpetual subsidies (Foale 2001).

A case from Malaita, Solomon Islands, received considerable media attention in 2013. Earth Island Institute, a USA-based environmental organisation, agreed to make significant payments to community members from Fanalei Village, who traditionally hunt dolphins on a small scale for ceremonial use of their teeth, in exchange to stop the hunts. Mismanagement of the fund led to anger and retribution whereby at least 900 dolphins were slaughtered by Fanalei community members (Walter and Hamilton 2014). This scenario might have been avoided by ensuring adequate consultation to establish equitable benefits sharing arrangements and better oversight and transparency of fund distribution. However, I acknowledge that in many cases it may be impossible to reach consensus on benefits sharing arrangements that are locally perceived as equitable. Under these circumstances, conservation organisations and donors would be wise to redirect their investments elsewhere.

A different example of conservation agreements comes from Central Manus, PNG, where WCS spent several years working with local landowners to develop mutually agreed benefits sharing arrangements before any benefits distribution. The original model was developed under the aspiration that communities might receive financial incentives through international carbon trading platforms. WCS approached these discussions carefully by respecting the internationally agreed principles of free, prior and informed consent as they undertook consultations with 83 clans in 19 villages to inform them of the potential benefits for engaging (Jupiter *et al.* 2014*a*). Although carbon financing has not yet started flowing, the structures that were put in place enabled WCS to design conservation agreements with nine communities in 2015, resulting in short-term protection of over 20 000 ha of forest in Central Manus in exchange for small-scale development projects (e.g. footbridge and community centre construction, livelihood projects) funded by the Australian Government.

While this has been successful for forest preservation in the short term, these conservation agreements will soon run out, which begs the question of whether providing some sort of development in exchange for conservation sets an unsustainable precedent. Such types of agreements may create social unease by emphasising the disparity in wealth and power between rural landowners and environmental NGOs and donors (West 2006) or create within-community tensions through elite capture of the goods and services (Igoe and Brockington 2007). Should international carbon financing begin to flow, issues associated with commodifying intact forests based on their intrinsic biodiversity value are likely to emerge once human populations expand and people are confronted with a lack of space for agriculture, given that forests are generally valued by Melanesians as a place to practice swidden agriculture (Foale *et al.* 2016).

Ecotourism initiatives

Ecotourism initiatives have often been heralded as the key to bringing in a long-term, sustainable source of revenue to support local conservation efforts. The 1990s in Marovo Lagoon saw the growth of separate ecotourism initiatives funded by the World Heritage Program of the New Zealand Government and the World Wide Fund for Nature (WWF), in response to a report recommending small-scale tourism as an alternative to environmentally destructive activities and as a platform for World Heritage listing (Lees *et al.* 1991). However, data collected by Hviding and Bayliss-Smith (2000) show occupancy rates at several lodges between 2.9 and 25.6% during periods

between 1995 and 1997, meaning that many of the lodges were likely operating at a loss or required outside subsidies by external donor investment.

Furthermore, although lodges like Vanua Rapita in Michi Village of Marovo Lagoon have been regarded internationally as a flagship for conservation, their establishment did not necessarily manage to reduce encroachment from logging and development. Hviding and Bayliss-Smith (2000) write of Vanua Rapita:

> '[L]ocally it is regarded by many as a bizarre and lavish experiment, and as a business enterprise that may collapse in the near future. The reasons for this mismatch between alternative versions of reality tell us much about the politics and ideology of rainforest conservation' (p. 308).

These examples present a reality check on the practicalities of ecotourism as an effective conservation solution. Tensions have also been raised in Marovo Lagoon between yacht owners and community leaders who did not recognise national government anchor permits as legitimate for entering and accessing their local fishing grounds (Hviding 1996). While donors and investors are often well intentioned, many of these initiatives have been heavily subsidised with outside investment and set up with little understanding of business planning, marketing, and disparities in expectations between locals receiving outsiders and tourists seeking 'unspoilt' paradise (Hviding and Bayliss-Smith 2000). As ecotourism has been documented to sometimes cause conflict and changes in land-use rights, create negative social impacts, and produce environmental damage (see review in West *et al.* 2006), plans need to be critically evaluated before implementation to ensure management of expectations and placement only in areas guaranteed to have a steady tourist flow.

An example of where this has been done well is the Namena Marine Reserve in Kubulau District, Fiji. Various different organisations, including the Coral Reef Alliance and WCS, have supported local communities to establish and manage a diver pay system, revenue from which is used to offset management costs of the reserve and broader Kubulau traditional fishing grounds, as well as support community development projects and scholarships for Kubulau youth (Govan 2011). The system works in Fiji due to regular visits from dive tourists and care taken to ensure that the income is equitably distributed through a benefits sharing scheme designed with community leaders and managers. The model will not be applicable in areas without substantial tourism infrastructure.

Researcher engagement

A major way for researchers or tourists to inadvertently raise conflict in Melanesian communities is to obtain consent from national or provincial governments to do work or visit and then arrive to find that the communities have not been informed and demand payment for access to their land or resources. From a local perspective, such a demand would seem reasonable considering that they are the custodians of the resources which are clearly deemed valuable by outside interests. These conflicts can be mitigated by undertaking background research on local cultural contexts, including reading of anthropological and political economy literature, and ensuring adequate consultation with local communities before initiating any extended visit or research to clarify expectations for project benefits. In fact, a letter of consent from participating communities is required in places like Solomon Islands as a condition of receiving a research permit. Such background research and consultation requires time, patience and resources, as well as the willingness to listen and accept as valid local worldviews (Sillitoe 2009).

A second way that conflict is often unknowingly created arises when outside researchers do not realise that their approaches and worldviews are at odds with local knowledge systems and practice, such that local people are made to feel vulnerable, offended or used. First and foremost, researchers should be aware that their first priority in engaging with local communities should be to do no harm (Cochran *et al.* 2008). Piloting surveys with trusted informants may be a way to bridge knowledge systems and uncover potential areas of conflict before they arise. For example, in implementing a household survey to assess socioeconomic benefits derived from coral reef fisheries management, I was asked by external researchers to use questions from the USA Department of Agriculture's Guide for assessing food security (Bickel *et al.* 2000). In pretesting the questionnaire with Fijian colleagues, we realised that questions like 'In the last 12 months, did you ever cut the size of any of the children's meals because there wasn't enough money for food?' were offensive because they run counter to Melanesian and Pacific cultural obligations to provide food for the family (Haden 2009). While it might actually be the case that parents are not able to provide food for every meal for their children, no one would be likely to answer this honestly because it would bring shame on their family. Furthermore, the act of asking such a question raises mistrust.

A better approach is to recognise these differences in worldviews and knowledge systems and be able to integrate them through specific research-action arenas that are codesigned with local people, noting that communities are rarely homogeneous in their perspectives and aspirations (Agrawal and Gibson 1999), so consensus building is necessary. Research findings resulting from questions that are relevant and meaningful to local communities are more likely to be transformed into management action and policy change (Turner *et al.* 2008).

Lessons for moving forward

The success of any conservation intervention or research engagement in Melanesia depends on clarifying expectations from both sides during the planning and implementation process. This can best be achieved by undertaking early and frequent consultations with local communities and actors, respecting international principles of free, prior and informed consent, and integrating local perspectives and concerns into project design and management (Keppel *et al.* 2012*a*; West 2016). Identifying local champions with high social capital can be important for mediating internal conflict and building consensus (Gutiérrez *et al.* 2011), particularly given that a single Melanesian community is not homogeneous and may contain members with access and use rights that are geographically dispersed away from project sites (Foale 2001). Second, expected benefits to all parties need to be clearly articulated, realistic, equitable and managed transparently, particularly to

avoid situations where local elites capture the majority of the benefits (Berkes 2004). Lastly, it is absolutely critical to respect knowledge from different sources. Melanesian people possess a wealth of knowledge about species distributions, ecological processes and feedbacks that can be tapped into for designing conservation interventions (e.g. Whitmore 2015), but they hold this knowledge through different sets of worldviews that need to be recognised and valued. Conservation interventions that build on customary knowledge and practice, while integrating science in a culturally sensitive way, will be much more likely to be recognised as legitimate and implemented (Walter and Hamilton 2014; Whitmore *et al.* 2016).

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