

Chapter 2

The Land of Papua New Guinea: A Quick Conservation Reader for What CEOs and Directors Ought to Know



Large-scale resource development in Eastern New Guinea never happens without fight

(Beehler & Latam, 2020, p. 353)

We are in the beginning of a mass extinction and all you can talk about is money and Fairy tales of eternal economic growth

(Greta Thunberg To the UN Climate Summit September 2019)

PNG is among the few nations in the world where ordinary people by virtue of birth can claim to secure access land

(Baraka, 2001, p. 8)

To destroy willfully the rich cosmologies of more than 1,000 ethnic groups across the Largest island on earth should be considered a crime against traditional humankind

(Beehler & Laman, 2020, p. 326)

Abstract Papua New Guinea (PNG) is a precious place; it carries a globally recognized civilization of public land tenure that is over 47,000 years old and globally sustainable. But a typically found conflict between western economy and the environment on a finite land mass and ocean destroys what PNG was and what it can be and contributes. This conflict began with colonialism and is ongoing for over 60 years. PNG is widely out of hands of democracy and its citizens running a western ‘resource curse.’ This scheme is led by international managers, CEOs, corporate administrators and politicians usually implying there is a win-win, or a tech-way out to make everybody happy and wealthy in a ‘trickle-down economy.’ As CEOs are placed to PNG by their respective companies with a working visa, they just tend to use superficial and simplistic narratives applied globally but failing locally. All too often it was shown that those leaders simply balance and increase budgets and subsequent maximized profits but ignore the rest of their trusted leadership tasks, or even frankly do not have the skill and expertise to account better and wider, to act more holistically, and to safeguard future generations and their trusted resource and the world. There has been no good partnership whatsoever between actors, and the ‘public license’ was not achieved well. Driven from the outside, political correctness was left at the wayside, and bankruptcy with a boom-and-bust dominates. Such conflicts of sustainability become violent quickly on either side and leave ‘*bad blood*’ for nothing. Based on field work and public data and open access information here some basic overview of PNG, of PNG principles and how it can be handled and lead better by CEOs that

operate in PNG are initiated with a discussion in order to achieve a better sustainability on many accounts for all actors involved and for future generations as global role model to go by.

Keywords Papua New Guinea (PNG) · Landscape ecology · Natural history · Finite resources, Mining, CEOs, Unsustainable development, Economic growth impacts

2.1 Introduction

Papua New Guinea has vast resources—biotic, abiotic, cultural and spiritual (Sullivan 2015); it's equatorial, oceanic, of global relevance and very sophisticated featuring a sensitive fabric to be aware of, specifically the concept of public land tenure. App. 97% of the PNG land is in the hands of traditional land owners but no corporations or governments dominate (Baraka, 2001; Beehler & Laman, 2020). Private land ownership on a larger scale does hardly exist in PNG and can interact with ancient souls, e.g. in sacred burial sites; Holzknicht (1999), Beehler and Laman (2020). In PNG people care for the transition of the soul into a good future. Public consent (aka '*Social License*') is widely required for any project, certainly when it is extractive, and open pit and from abroad (see Henton & Flower, 2007 and Macintyre, 2007 for experiences). Already the amount of gold and copper, beside other minerals, are found here and accessible in world-record amounts, and it represents money on the table for the outside world to grab. And it does not end there: PNG also features perhaps the largest oil and gas resources in the Pacific (Beehler & Laman, 2020, p. 74). And while it will just last a few years (Beehler & Laman, 2020), it's just a matter of time when those resources provided by Mother Earth are to be developed (see The World Bank promoting PNG to investors <https://www.worldbank.org/en/country/png>).

It thus attracts many companies and their leaders, CEOs. And it's the CEO that can steer many good or bad decisions for PNG and its people (see for personal CEO examples with Jim-Bob Moffet in Flannery 1998, with Denis Reinhardt in Henton and Flower 2006, and several Australian examples on aboriginee land in Ludlam, 2021, p. 231). A CEO is the face of a company, accumulates all matters in one person, can also report, and influence, the 'board' and stakeholders of the company. A CEO comes with a large colonial hinterland. In PNG terms, a CEO is the '*Big Man*' of their capitalism and industrialization (Figs. 2.1, 2.2 and 2.3).

In earnest, the western world history with PNG is just app. 300 years old—perhaps less than 98% of the 47,000-year-old human history of PNG, but it has been one of influx from abroad, specifically a dominance from Australia in relation to gold mining (Nelson, 1982; Beehler & Laman, 2020), beyond Asian people migration, colonial and global input. With that come many outsiders to PNG, taking over and making decisions about this nation and its people; not all of them are done well, good, sustainable or with a relevant vision. In the absence of good governance, e.g. in forestry (Beehler & Laman, 2020) or mining (Henton & Flower, 2007), the CEO decisions are dramatic to PNG; it has already inflicted terror on PNG (see Bougainville leading to civil war and national crisis; Chan, 2016), a nation that was



Fig. 2.1 The grass dance: a deep-rooted link of people, nature and cosmology exist in Papua New Guinea, also used to appease and welcome foreigners

co-designed and 'aided' by Australia. That is simply the legacy to consider and to know; and so any new activities on that front should acknowledge it and take that fully into account.

PNG as a nation is to c. 86% rural (Baraka, 2001; Beehler & Latam, 2020; Mongabay, 2022). PNG has one of the least dense road systems in the world. Roads and bridges are needed for making mining, etc. feasible; often in PNG it includes airports also (Sinclair, 1978); impacts of those can be rather devastating (e.g. Hayan, 1990). In the rural tribal world, life is nature-based instead. The amount of internationally informed, highly educated and urbanized affluent citizens is lower than in the western world. And thus it appears as relatively easy to be a manager or CEO from abroad, be in the driver seat, and sit in places like the established 'Papua Club' in Port Moresby (a well described 'home' for Australians and British for the last decades 'far away from home'; Cousteau & Richards, 1999, p. 205). Many of such spin-off clubs are found, e.g. the yacht clubs and resorts. From personal experience, its here were PNG policy is made and discussed, almost unconstrained, often based on hearsay 'from the bush' and certainly without relevant input of PNG citizens (who tend to act in such establishments as barkeepers and cleaners; the local business management there is usually in Asian hands). Traditionally, females are widely excluded in such localities and not allowed to enter even (Cousteau & Richards 1999).

Fig. 2.2 Spirits and ghosts of Papua New Guinea remain in the driver seat



But as the gap between rich and poor increases, there is a strong difference between the international investors—lead by CEOs and Directors—and the locals in PNG (often lead by Big Men). The ancient view of nature in PNG came from the belief that the phenomenon of nature actually were the very origins of the human beings (Cousteau & Richards, 1999, p. 211; see also Flannery, 2002 and Beehler and Laman 2020 for underlying and entrenched concepts of shamanism, spirituality and sorcery; examples shown in Gillison, 1993). The ancient and dominating view in PNG is that nature and its embodiment still houses the ancestors, and so the villagers have often a moral obligation not to harm or create suffering for them. Nature is an indivisible whole where humans are embedded within! A widespread view in most indigenous societies (Suzuki, 1993), but this model and concept does not much exist in the western world and their investors (example in Henton & Flower, 2007), rather vice versa: The more narrow/parsimonious and less connected the better for them (as per economy textbooks; see Daly & Farley, 2010 for alternatives; compare with Demeulenaere et al., 2021 for instance for the wider value, role and appreciation of trees and habitats in Melanesia).

PNG offers us with a civilization of world-relevance, and it does so already for over 47,000 years (Diamond, 2011a, b); it's a place where one can see and connect first-hand with all what earth is about. This society actually lived sustainable for over



Fig. 2.3 Tourist artifacts present a link with deep culture and skill now available for international sale

98% of its time, turning the PNG highlands and other areas in gardens and fishery grounds (Cousteau & Richards, 1999 for a coastal example with clams). Beyond what the ‘*Noble Savage*’ image portrays (Ellingson, 2001), PNG offers us with one of the best global sustainability that mankind can produce, anywhere. Beehler and Laman (2020) refer to it as the grandest island in the world for a reason (Figs. 2.4, 2.5 and 2.6).

After Greenland—located in the Northern Hemisphere—PNG actually is the second largest island in the world (by area), and is actually the highest island in the world (by elevation). Beehler and Laman (2020) present many biodiversity aspects to justify it to be earth’s grandest island. The PNG nation consists of thousands of island. Its geology links with the Australian mainland (craton; but which in Australia essentially is quite flat, apart from a few coastal areas; see Flannery, 2002 for effects, Beehler & Laman, 2020 for topography and biogeography). Many CEOs operate in PNG because the earth plates in PNG bring the interior resources to the surface. That’s where the wealth sits and the resource curse starts (Molden, 2019; Ross, 2015). Located at the ‘Ring of Fire,’ PNG has the fastest rising ranges in the world with active volcanoes and sometimes with several tremors and earthquakes a day. Sink holes can be found.

Located at the Australian craton, PNG is part of the Sahul region (Flannery, 2002), which is the wider connected area between Australia and PNG (as its nearest



Fig. 2.4 Ridge to reef: all is connected in Papua New Guinea wilderness landscapes making environmental impacts severe

neighbor); its stems from a time when sea levels were between 55 and 130 m lower (Beehler & Laman, 2020).

One may say that Australia is dry and somewhat temperate, whereas PNG is essentially tropical and wet. PNG is known for its super wet zones making it difficult to operate in industrial conditions the ‘The West’ is used to. PNG shows some monsoon but with rain shadows, e.g. in Port Moresby making the capitol not so representative for PNG. By elevation, temperature cools down by app 0.65 °C/100 m. Dry events of El Nino can affect many ecosystem stresses; tsunamis are common. The operating business in PNG can change quickly.

2.2 (Foreign) Profits and the PNG Set up Mix Poorly

Whatever is said and for profits (see for instance The World Bank <https://www.worldbank.org/en/country/png>) PNG makes for a very complex (commercial) playing ground to operate in and for a company to make profits. The history shows colonial failures. The way how PNG is structured—a large main land, highlands, many steep and isolated valleys, a vast surrounding coastal area, few estuaries and thousands of islands—result into the situation that PNG is not really homogenous or unified.



Fig. 2.5 Tough but not impossible trails in Papua New Guinea

Instead it has one of the highest density of languages (over 700; e.g. Kulik, 2019), and many local tribes (see WIPO, 2006 for genetic theft and copyrights of indigenous people in PNG, Hagahai tribe) and customs; already the notion of ‘one land’ and ‘one nation state’ gets easily challenged in PNG (Chan, 2016; see Wilson, 2019 for the description of a double life). PNG is a country consisting of 1000 nations...PNG is not so united and it ‘bubbles’ all the time, politically and otherwise. Instead, Western nations often center around homogeneity; a singular tribe and a push for it with enforcements. Whereas PNG is virtually the opposite, a patchwork of tribes tried to maintain as a single unit trying to cater global expectations. Struggles, and fighting between tribes was part of the history (Matthiessen, 1987; Flannery, 1998 for first-hand accounts) and remains part of politics (Figs. 2.7, 2.8 and 2.9).

A good management and business theory for PNG has not been developed yet. Western models will not work well. Clearly, differential views should drive the management as there is no singular black or white. But to be considerate and to



Fig. 2.6 Crossing water is the rule of the day for working in Papua New Guinea landscapes

engage local community in a shared and mutual fashion that's what the international corporations are not so good at, as per track record and their legacy (examples seen in Henton & Flower, 2007; Kirsch, 2014). The western model trains CEOs in a different way, e.g. neoliberal (Duménil & Lévy, 2011). In PNG, the Masters of Business and Administration (MBA) comes easily to a full conflict on several grounds (Ludlam, 2021 for tightly related Australian experience on mining and indigenous people). Just think of insurance or liability, and then think of public land tenure, besides other factors (social aspects and global banking and stakeholder expectations; overview provided in Banks, 2008, with details in Mack, 2015; Beehler & Laman, 2020). Rural land is rarely sold or bought; it's not really thought of as a commodity, or something to be developed and used, or operated by foreigners and corporations abroad; it's fought for fiercely (Baraka, 2001). Many companies and their CEOs envision the world very differently though, pushing for profit for their stakeholders and economic growth in an assumed trickle-down economy instead and operating in a homogeneous 'westernized' top-down law-and-order society where land is private (see Asian Development Bank ADB 2012 for economic growth without relevant development; Coleman 2015 for relevant farming sectors etc.).

In contrast to PNG, many nation states in the western and Asian world achieved the national homogeneity—and subsequent institutions—as a wider process of nation-building. This process is based on a longer history of peoples moving in and out of an area, and then settled by a certain and long string of warfare, land annexations, diplomacy, power top-down events and agreed settlements of land claims with required citizen taxation; it involved usually a fight for the nation. And some of those



Fig. 2.7 Muddy roads can make operating in Papua New Guinea very difficult for everyone

rather tragic and traumatic (see examples provided by Diamond, 2011a, b for North America, etc.). Instead, the culture and nation of PNG is a function of geography and topography, and then, of the subsequent evolutionary history over millennia with sea levels determining islands, remoteness and boundaries. People lived and fought within that. This is how PNG got started, as a region, with recent global political events then assigning the actual PNG nation in just the last 50 years or so (Manning, 2005; Gosarevski et al., 2019). PNG as a nation is young, somewhat naive and fresh with a nice outlook (e.g. Miller, 1973), but the negative industrial footprint is already very obvious and corrupting minds of ‘politics’ (Chan, 2016; The Guardian, 2019, 2022). A balance was hardly achieved, yet.

PNG is not really fitting the western industrial set up, an economic theory, anthropological social science narrative, or a classic management model, even if now forced into via globalization (see Stiglitz, 2003 for a factual review). In PNG most people are not really registered, hardly full-time employed with a social security or pension system, they use additional currencies than money, and industry and taxation is not a main income model. Health care is to be ‘free’ but of very low performance. Salaries and debt might not be a main motivation for coming to work every day.

Surprisingly, and like in most parts of the world, corporations do not participate in a suitable tax model for the nation neither. This makes for an odd relationship unfolding in PNG with international working visas etc.

PNG is not only complex politically, but first and foremost geologically complex and dynamic; the newly defined PNG nation construct never was a stable entity, or much homogenous (Chan, 2016; see Beehler & Laman, 2020 for the wider New Guinea ‘unit’; Flannery, 2002 for the Australasian/Sahul region). And time and space



Fig. 2.8 Open water travel in basic unsecured conditions is reality in Papua New Guinea

are obviously linked and need to be seen as one unit! It's holistic and to remain intact. All other diversity comes from that and should be taken into account for nation-building by design¹ (as it was applied in PNG) and to operate there.

Already the mentioned geology will easily throw a curveball to any modern 'western-style' operation (see for instance Reuter Oil & Gas, 2018). PNG has a rich soil due to Pleistocene volcanoes. There are over 100 volcanoes of which app. 35% are capable to erupt (Cousteau & Richards, 1999 for examples). As a bad example stands the city of Rabaul, as one of the most geologically active places in the world. Volcano outbreaks in just recent times killed already many people; PNG is very unstable in that regard (see Chan, 2016 for experience and rescue operations). PNG is one of the most geologically active areas in the world affecting virtually all forms of business operations.

Further, PNG features a unique biodiversity and is located south of the Wallace Line and affected by the Weber Line which puts much of our western mind to a challenge also. That's because the PNG biotic resources of the nation—the biodiversity—is high, ancient and endemic, but it certainly is affected, and driven, by the

¹ Many other non-western nations suffer from similar problems, such as Pakistan and its former part of Bangladesh, or the Austrian-Hungarian Empire, former Czechoslovakia or Yugoslavia. None of those nations were inherently grown but just became a quick political western construct used for the global disposal. When the western demand stalled the entire new nation fell apart, often major bloodshed followed. That 'new nation' served its purpose, but nobody was really helped, certainly not the environmental aspects.



Fig. 2.9 Not all trips end well; flying in wilderness areas can be deadly

geographic set up. This in turn affects the people who live there, and how (classic descriptions made by Diamond, 2001; Beehler & Laman, 2020) (Figs. 2.10, 2.11 and 2.12).

This unique diversity sets the stage for the independence conflicts within the PNG nation, and the administrative headaches inside of PNG and its institutions, but also for outside of it. And so, PNG as a typical nation state, just as Spain or the British empire let's say, and with such minds of administration and economy, cannot work well (it hardly works well for Spain or England neither (e.g. <https://www.britannica.com/topic/Western-colonialism/Decline-of-the-Spanish-and-Portuguese-empires>), but PNG has it much more intense. And with over 700 languages—Wantok—what should the unifying language be? Melanesian Pidgin, Motu (as one of the dominating tribal languages), or English (and with the English tongue, there are at least four options to choose from: Oxford/Cambridge UK Standard, the Australian Standard, American English, or Indian English with India as the location in the world of the highest density of English speakers anywhere. And the New Zealand English is another option, so actually is Japanese, and also Chinese with two languages within: Mandarin and Kantonese)?

Clearly, if a local language dies, so goes the lifestyle that comes with it, often one that was sustainable for over thousands of years with a unique local adaptation (Kulik, 2019). Language is survival (K. Lester in Ludlam, (2022, p. 155).

So what do the CEOs tell us to do?



Fig. 2.10 People and their future sit at the core of the Papua New Guinea enterprise

Clearly, the profit and GDP metric that CEOs push for is pointless in the PNG setting, for the environment and beyond (Czech, 2019). It does not trickle-down well and does not feed people much in PNG (Madison, 1997). It creates unrest.

And what unified singular cultural model would such a diverse geography really follow for a good and robust governance scheme? Why is a western governance model needed really, and for what and for whom? While this might all sound theoretical to some, for a manager, director and CEO operating in PNG it plays a very practical role because already the baseline to start from is difficult to define, so what is the impact from that? Whom to hire, and who runs the strategic key positions and how to make it just, fair and inclusive in such a diverse human universe? How not to exclude? Simply looking at Australia, it was not well resolved there, yet.

And so the business model unfolds while there are many more fragments and smaller homogenous landscape units within PNG such as:

- The world-famous highlands of PNG are unique and quite fertile. They are well-placed being located just between the coastal people and islanders versus the forest people. When compared to the Western World industrial society, the Highlanders initially were never that abundant, wealthy, rich or influential (Matthiessen, 1987; Flannery, 1998); but that has changed, e.g. due to the introduction of the potato (Diamond, 2011a, b; Beehler & Laman, 2020) by the Portuguese providing a relatively large income to the local tribes after it got bartered up from the coast.



Fig. 2.11 Domestic violence and abuse are a severe problem in Papua New Guinea

Nowadays, other goods grown in the highlands add to that wealth too; it's a big culture and society.

- The other separate unit in PNG might be the coastal zone; it is famous for its marine link and similar to the islands mentioned below. But the coastalscape of PNG is pretty diverse of course far from any homogeneity, a universe of its own, e.g. Cousteau and Richards (1999).
- The islands then are another large universe of their own. It consists of a myriad of islets and small land masses connected with the ocean and coral reefs. Like the coastal zone, it has a direct link with the rainforest as well; many of those island forests are mountainous and easily present their own universe once more.

Many more landscape units exist, of course (see Lonely Planet Guide <https://www.lonelyplanet.com/papua-new-guinea>). Thus, when all is taken together, one will understand that 'PNG as a single nation hardly exists,' it actually cannot really exist



Fig. 2.12 Food reality in Papua New Guinea for many working people

and likely never will any time soon. From that, PNG cannot be managed well, and certainly not with a singular western world concept. PNG is a juggling act by design, hopefully without much trauma or bloodshed, as so many other colonial nations and CEOs experienced though. As a nation state it simply is a rushed and quick imperfect western construct that PNG citizens hardly asked for (Baraka, 2001); although PNG would likely take it, if offered well. But then, PNG is left alone with such a suicidal set up, while exposed to the outside pressures and Australian-type western and Asian predators, always pretending that ‘all is fine.’

But PNG can operate in itself, if left alone and if not overruled and over-powered by outside forces; as usually done though by the imperialism and neocolonialism. It’s a view widely found in PNG. This already makes life hard for managers and CEOs from abroad. Earning trust is part of the game indeed.

Leaving things to PNG tends to work best because PNG has clearly operated by itself for millennia, so why not now? Well, the answer is simply, why are PNG matters get meddled with and through CEOs: PNG has resources to offer. It's money on the table to grab for the winner while PNG is not really asked.

PNG remains then in the tribal world though and settles it that way (see Beltran, 2000 for a wider native and indigenous perspective). In the meantime, the resources are exploited under the umbrella of development, of modernity and of all what comes with it. PNG gets bullied and thrown around (Chan, 2016). When looking at what that really consists of, it's a rather empty package that PNG gets provided but does not agree with much. Many examples are described what this package consists of, e.g. copyright violations (The Guardian, 2022), clean up costs (Cousteau & Richards, (1999, p. 28), tribal dispute and worse (Henton & Flower, 2007; Kirsch, 2014).

2.3 What Does the PNG Set up Mean for Modern Business? A Crash Course on PNG Etiquette Will 'Crash'

PNG is community-based (MacIntyre, 2007), and this is not easily invested in, nor is it easily and quickly be used for natural resource purposes; hardly for any other exploitive schemes. In PNG, all is deeply connected; it's holistic and Ecology in pure form (compare with Naess, 2009 or Rozzi et al., 2015). In PNG, tribes are in charge and they try to be empowered more and more from their former masters and colonial powers; so is the trend and reality of times we are in (Blazey & Perkiss, 2016; see Short, 2010 for a reality review of indigenous legacy and recent trends). 'Business as usual' will fail in PNG (e.g. De Soto, 2000). There can be no quick crash course of PNG, or what it means to operate there for doing business in PNG. From the track record, western industrial business in PNG means '*boom and boost*' and a very high rate of risk and failure (The Guardian 2016) for an example. Instead, PNG has taboos and it values them. Complexities, and thus costs, will go through the roof the more one operates there, so will the turn-over. PNG requires time, expertise and fluency of the many local rituals and procedures (see Lonely Planet <https://www.lonelyplanet.com/papua-new-guinea> for a starter; Beehler & Laman, 2020 for New Guinea overall). Although it's precisely the history of western engagement, PNG is not a place for boom-and-bust type of resource exploitation; the latter is though what the western market scheme all is about (Stiglitz, 2003). It is set up that way (Rich, 2014). The Western world and its society are currently far from any relevant sustainability, whatever they say and claim otherwise (See United Nation's Sustainable Development Goals (SDGs [www/undp.org](http://www.undp.org)) and compared with reality, e.g. for the global forestry sector; Huettmann & Young, 2022). Thus, PNG will clash with the Western World and its attitudes once international business models get rolled out and scaled up. PNG remains the control site, for the other word that is out there.

Table 2.1 A short selected list of CEO's must-reads for operations in Papua New Guinea

Topic	Citation	Comment
New Guinea field experience	Flannery (1998)	A great introduction to New Guinea and with examples of 'development' and impacts, addressing CEOs
Perspectives on guns, germs and steel with a wider Papua New Guinea focus	Diamond (2011a, b)	A generic overview of Papua New Guinea topics and how they relate to modern global aspects of society
Generic Economic Growth impacts	Czech (2002), Daly and Farly (2010)	Limits of growth, in real live
Ok Tedi mine legacy, Mining business model	Kirsch (2014)	Specific example of mining gone bad in Papua New Guinea with one of the largest mines
Understand ecological and spiritual complexities intertwined for the land	Suzuki (1993) Gillison (1993) Baraka (2001) Demeulenaere et al. (2021)	Those are examples to introduce the subject; many more exist
First-hand account of Mt Kare gold rush and Bougainville/Solomon Island perspectives	Henton and Flower (2007)	Specific example of mining gone bad in Papua New Guinea with one of the first modern mines

As PNG also has 'mummies' and celebrates them those ghosts of the ancient times are still around; they watch us, and you must not annoy them (see Cousteau & Richards, 1999; Beehler & Laman, 2020). The use of land needs to be done accordingly (Table 2.1).

PNG factsheet (*Sources* Cousteau & Richards, 1999, Lonely Planet Guide PNG, Beehler & Laman, 2020, online sources; see text for citations).

- island size: area of c. 462,840 km² (overall app. 2400 km wide and 1000 km high).
- number of languages: over 800, and number of tribal cultures over 600.
- at least 47,000 years of human civilization.
- 20% of its imports in PNG is oil and gas.
- human population of c.7 millions.
- closest neighbor: Australia.
- former colonial nations: UK, Holland, Germany (Spain and Portugal), Australian Protectorate with a United Nations oversight; Japanese invasion and dominating U.S. + China influence.

As any workforce involves debates about working hours, salaries, hiring and working conditions disputes about labor, land and profits are resolved in PNG, in a PNG way. Foreigners operate in PNG under a visa, which creates complexities. That



Fig. 2.13 At the end of the day, water, land, cosmology and people all come together as ‘one’. That is true for PNG and anywhere else

will easily come to the forefront, and it involves frequently an international legal basis, making the cases more complex. But in a PNG world, it can mean to receive a ‘spell,’ get involved with sorcery and loose or not receive a visa (Fig. 2.13).

2.4 Beyond Just a PNG Factsheet, Some Quick Lessons from PNG’s Development

- traditional western views will hardly work, hardly be effective or successful in PNG.
- excluding local views and PNG views, Melanesia views, will fail.
- widely inclusive, equal, mutual and fair approaches must rule.
- mutual learning must be part of the project and be ‘built in’.
- multidimensional and multivalue approaches are currently the rule.
- long-term sustainability considerations are the only way forward.

Textbox 1: ‘Bush flights’ simply remain very risky, so is boating: Some experiences from Papua New Guinea

Flying can be fun...if somebody else pays the ticket and if it's safe and all 'in-time'. If not, you probably have the other side of the experience. Like anywhere in the entire world, bush flights are quite dangerous, specifically in cloudy terrain and wilderness, where maintenance is not guaranteed and certified, or proper tools often not available. Wildlife Biologists have been victim to that situation last decades, and many actually crashed or died. PNG shows a long and deep lasting legacy of bush flying, usually done for industrial and exploitive purposes (Sinclair, 1978); the cargo cult speaks to that fact.

Personally, in my life, I avoid flying, certainly small planes, helicopters and bush flights. I prefer walking. Thus far, I was always lucky with flying and subsequent solutions, but got many experiences.

I used in PNG once an air service provided by the church (as most of those are). This started out nicely—as booked—but the missionary flight then got delayed on departure already for ... 1.5 days. So I just got a sunburn while sleeping at the air strip waiting; traveled back and forth to the air strip, and mid next day we went off. Only 3 people fit in the plane, and after crossing a mountain range we landed after c. 40 min navigating through the clouds, finding a tiny hole eventually to fly down and to land. Navigation was done by sight; the airstrip was fresh-cut grass and we were the usual sensation of the villagers; save and sound.

More exciting was later the flight back out 10 days later. As everybody got excited and tense for waiting, the plane actually never arrived. The airstrip operator told us from his broken radio we were to wait a day in the jungle, but the no- show remained. A longer discussion ensued and perhaps the flight comes next week? I know of cases where people waited for three weeks. As I had an international flight to catch, with invited speaking engagements abroad, what to do? We got caught.

Well, I walked out.

I had walked 'in' in an earlier case; so what's the big deal? But complexities of that situation went quickly over the roof. In the village I found a guide relatively quickly, and off we went. I had no money for the guide but promised to pay everybody upon arrival. Well, that was a good assurance to arrive safely (cases have been heard of where carries get paid and then walk off, you get dumped in the middle of nowhere). The actual walk-out was bone-breaking, involved a super steep hill with mud in the heat, but worked. We stumbled into another village during church time and spoiled their service. We were the sensation; white man walking steep hills; people touched my legs in admiration! Staying at another village house on the way was another great experience, as one gets easily dragged into village life (a burial was ongoing with singing all night). At the morning at departure there was a mis-understanding on the price of the overnight stay, but I did not have to leave my camera behind as a payment

and we made it to a road eventually (some unsafe sections got crossed, rascals aware), and then were able to hitchhike to a market next to the airport we started, voila. 18 h later we were back home again; expedition completed. The bush plane was not even leaving for us yet, but instead I got my international flight connection out of PNG, went via Japan and had the guest presentations done abroad.

When in hell, keep walking.

I had another bush plane experience, similar style. As part of a funding scheme we were coerced into the template of bush flying (sounds great to administrators on paper, so they booked it), and thus—after months of preparation—we flew in. Fine (but I hate to be a village sensation and to be used that way).

But then, the flight out, again, to pick us up, did not arrive. The old story; we got trapped. With everybody watching, we were in the hands of an old Australian airplane company owner who knew the game; their game. I was able to 'text' from PNG to North America, and they relayed the message back to the US. Office in another time zone and then to a PNG field office *'we got stuck in the bush and the agreed pick-up plane did not arrive, please ask them.'* Well, this got pretty funny quickly as a single flight can easily cost \$6000 ...if available. But there was none available anyways. We heard a plane, but it went elsewhere (a coffee flight). We waited and saw in the evening another plane far away in the sky, but it went to 'Kaboom' instead, so we were told. And perhaps a passenger plane flew over us connecting Singapur with Sydney?

Waited over night in the village, and hoped for the best next day. The food ran dry, as we were at the very end of a strenuous field campaign; welcome to the jungle and true bush life. A few other passengers arrived from the bush trails (they knew that the plane was not to arrive the other day anyways). Well, that feels better...We saw a plane, but it flew over us. Apparently a hospital emergency flight that had priority. Eventually we got a plane, end of the day, and we were back 50 min after. Live can take crazy turns.

While bush flights are bad enough, the insane helicopter ordeals I was able to stay away from. But for readers interested, it's described in sufficient length by Beehler and Laman (2020), and I have 100% no wish to repeat those experiences with years of preparations, last minute change of plans, coerced budget revisions, international credit card payments in the thousands, pilots and anxieties. It's gambling in the air, stay cool.

Luckily, I had no bad stories really with buses and public transport PNG neither (we repeatedly appeased mysterious rascals by throwing betel nuts out of the window for them at an agreed road crossing; worked wonders), but those stories seem easily to exist manifold. However, to be complete, one should also speak about 'shipping'.

I took a ferry once to Sepik, it was a great experience. But just to find out there was no return ship from Wewak for the next 6 (!) weeks; all closed (in

the western world I spent years doing research from ferries, research boats and vessels, and the service office was usually fantastic; well, not here). At least the domestic airline was running. The complication here was that it was not just a ticket needed for me, but for the field crew members as well...so they demanded. Thus we (=I) bought those tickets, Aussie style, and left from a hotel. But a travel starting 4AM in the dark was not safe, and then even the plane crew was scared. But we got out, and once in the air, it was pleasant. Great views of the Bismarck Range and much money spent during a flight time of 35 min...

We also got out and returned safely from all our coastal travels over the years. I did several of those trips, often as an alternative to road travels, or to walking, or due to intense village fightings in the region that was to be avoided. Entire landscape got blocked that way. And so I like those boating trips indeed as I can do marine surveys and learn about the marine aspect better, too. However, not having a life vest - or spare fuel- on open water is a rather bad (deadly?) idea. Seeing the captain drinking 8 cans of beer in 2 h could be scary. And running out of fuel several times along the way, on the open ocean is even worse and when huge waves come in with the night on the way. Parts of such a deadly ordeal have famously been described by Hoffmann (2015).

On a concluding and sad note, I learned upon safe return in North America that our good and very friendly Australian bush pilot had crashed and died during rescue attempts (the crashed plane was not to be found in-time in the remote bush and steep slopes. Media release published here: <https://www.abc.net.au/news/2018-01-04/concert-pianist-tur- ned-bush-pilot-david-tong-dies-in-png-crash/9301562>). May our souls rest in peace.

Textbox 2: “*Hey Director, one cannot simply come here, take, grab, and then boast about the physical exploits for your own promotion*”: Some business examples gone wrong in Papua New Guinea

Among colonial-style experts Papua New Guinea is traditionally seen as a prime example for a collector’s heaven: It’s exotic, it carries a dangerous wilderness reputation, it’s colonial offering cheap labor and good visa and permits, and it allows for new taxonomic species descriptions to the investigator and curator; PNG is significantly undercollected, and much of such research occurs there (when compared to Papua due to research permits and repatriation legacies) (Beehler and Laman 2020). And so, locals are expected to be easily paid off for delivery and support. What’s wrong with it?

Well, it’s already wrong for geological surveys, as the strategic and wealth information can easily be used for the apparent exploitation and subsequent

destruction of the very land everybody lives on. Can you take a naïve-looking rock out of the PNG country (which then upon closer lab inspection might show a rare metal for a subsequent mining exploration? Answer: Yes). It's also wrong when considering the national ownership of those local resources and the land. It's further wrong when the actual gain is made manifold (“*exorbitant*”) outside of PNG but without locals included, acknowledged or even considered. In reality, there is a certain disrespect shown in such endeavors as outsiders just come and take; one will agree: it's intrusive. Beehler and Laman (2020) clearly state that in New Guinea overall, most of such collection research occurs in PNG (arguably because the permits and regulations there are very relaxed, hardly enforced, opposite to the Indonesian side).

This textbox addresses the Directors and CEOs specifically because those are often approving the international expeditions, collection trips, fund-raise for it, and use it for their own PR, reviews, tenure and promotion, also done for money and the economy (e.g. Blazey 2016). It's very clear that much extraction work like the one frequently carried out in PNG is widely done for self-boosting and self-promotion, contracting out on the cost of PNG. Many photographers, writers, NGOs and contractors operate that way. Work by The World Bank achieves hardly any other (Rich, 2014). So why approving of it?

It actually has a long legacy due to the colonial history, which tried to make those remote sites attractive, boost the western population there, the income and get the areas ‘organized and peaceful’. But see reality. Still, it's a long and established business model, but one that fools most people involved. Many examples exist, e.g. Germans that had to pay a lot of money for land parcels in Northern PNG (e.g. Metcalf, 2011 for Marquis de Rays scams for settlers, see also Spanish-German colonial property contracts, or the sales price for Queen Emma's palm plantation).

Starting with Australian gold seekers, and anthropologists and philanthropists, Streseman (1923) is a subsequent typical example for the colonial ‘*Ausbeute*’ (German word for an exploit), with many thousands of PNG specimen ‘collected and brought home,’ with the many decade-long Archbold expeditions as an easy follow up by the WW2 winners (Hoffmann, 2015; Beehler & Laman, 2020 list overall many many thousands of specimen taken abroad. Those are hardly documented or made available for a global audience, or for PNG citizens!). It's an easy consequence from there to get to the permits and work of Exxon and Mobile, or Chinese Nickel Mining once such a culture is entrenched and resources are frequently shipped away and consumed with global harm. What does PNG get, and how is global conservation, humanity and sustainability served?

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