

**Carbon Fraud & Illicit Networks:
Risks in REDD+**

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LIST OF ABBREVIATIONS

ABC	Australian Broadcasting Commission
ACC	Australian Crime Commission
AFP	Australian Federal Police
AOC	Asian organised crime
APEC	Asia-Pacific Economic Cooperation
BSP	Bank South Pacific
CCB	Climate Community Biodiversity
CCDA	Climate Change and Development Authority
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CEPA	Conservation & Environment Protection Authority
CERs	Certified Emission Reductions
CfRN	Coalition for Rainforest Nations
CO ₂	carbon dioxide
COI	Commission of Inquiry
COP	Conference of Parties to the Convention
CVA	Corruption Vulnerability Assessment
DEHSt	German Emissions Trading Authority
DFAT	Department of Foreign Affairs and Trade
EFF	Eco-Forestry Forum
ER	emissions reduction

ERU	emissions reduction unit
EU	European Union
EU ETS	European Union Emissions Trading Scheme
EUROPOL	European Police
FCA	Forest Clearance Authority
FCPF	Forest Carbon Partnership Facility
FMA	Forest Management Agreement
FPIC	free, prior and informed consent
FSC	Forest Stewardship Council
GHGs	greenhouse gas
ILG	Incorporated Land Group
INTERPOL	International Criminal Police Organisation
IPA	Investment Promotion Authority
IPCC	Intergovernmental Panel on Climate Change
IT	information technology
IT&S	Independent Timbers & Stevedoring Limited
ITTO	International Tropical Timber Organization
JI	Joint Implementation
JICA	Japan International Cooperation Agency
LLG	Local-Level Government
LNG	liquefied natural gas
LULUCF	land use, land use change and forestry

MRO	Metals Refinery Operations
MTIC	missing trader intra-community fraud
NFA	National Forest Authority
NGO	non-government organisation
NIHT	New Ireland Hardwoods Timber
OC	organised crime
OCCCT	Office of Climate Change and Carbon Trading
OCCD	Office of Climate Change and Development
OCG	organised crime group
PAC	Pacific Islands Broadcasting Association
PNG	Papua New Guinea
PRO	public relations officer
RECLAIM	Regional Clean Air Incentive Market
REDD	Reducing Emissions from Deforestation and forest Degradation
RH	Rimbunan Hijau
SABL	Special Agricultural Business Lease
SCP	situational crime prevention
SGS	Société Générale de Surveillance
TCA	Tenkile Conservation Alliance
TI	Transparency International
TI PNG	Transparency International Papua New Guinea
TOC	transnational organised crime

tCO ₂ e	one tonne of CO ₂
TRP	Timber Rights Purchase
UK	United Kingdom
UN	United Nations
UNCBD	<i>United Nations Convention on Biological Diversity</i>
UNCCD	<i>United Nations Convention to Combat Desertification</i>
UNCTOC	<i>United Nations Convention against Transnational Organized Crime</i>
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UNODC	United Nations Office on Drugs and Crime
UN-REDD	United Nations—Reducing Emissions from Deforestation and forest Degradation
UNICEF	United Nations Children’s Fund
US	United States
USAID	United States Agency for International Development
VAT	value added tax
VCS	Verified Carbon Standards
WCS	Wildlife Conservation Society
WMO	World Meteorological Organisation

ABSTRACT

The complex composition of carbon fraud renders it difficult to define and, as a result, even more difficult to detect. Owing to its relative infancy, 'carbon fraud' is yet to be recognised worldwide as a criminal offence distinct from interrelated offences like fraud and cybercrime. However, it is acknowledged that the few reported instances of carbon fraud have mainly been committed by sophisticated organised criminal networks, which have stolen millions of dollars from 'eco-financial' platforms. Those platforms were formed to combat climate change through buying and trading carbon credits to facilitate the continued emissions of carbon and other greenhouse gases into the atmosphere and to mitigate those emissions. The obvious contradiction in the basis for establishing these platforms is what makes them complex to understand and poorly regulated, although this situation is slowly changing as authorities and investors demand transparency and verification in carbon trading. The complexity of understanding financial trading on these platforms, their poor or lax regulatory guidelines and laws and the relative ease of stealing enormous sums of money from them has naturally attracted organised criminal groups to exploit these carbon trading hubs.

This thesis adopts a 'precautionary approach' in exploring methods that might effectively combat the emerging crime. It examines the United Nations-backed scheme, Reducing Emissions from Deforestation and forest Degradation (REDD+), another eco-financial platform originally developed primarily to compensate developing countries by preserving their rainforests from logging so that developed countries can continue to operate their carbon-intensive industries. While tracing the evolution of carbon fraud from the late 1990s, an analysis of the methods employed to combat carbon fraud, especially in REDD+ schemes is also undertaken. The thesis then investigates Papua New Guinea's (PNG's) REDD+ scheme and determines whether the REDD+ scheme is likely to fulfil its designed purpose of alleviating the livelihood of forest-dependent communities or become entangled in carbon fraud from the exploitation of organised criminal syndicates and through the malfeasance known to plague nations in the global South that have weak governance.

At the centre of the analysis is the view that REDD+ schemes are for the ultimate benefit of the indigenous communities where the REDD+ projects are located. Examining the schemes through this lens, the thesis explores the web of indigenous

cultural notions of PNG land tenure systems where the schemes are located. The thesis sets this against the backdrop of economic benefit and development to determine which groups (or group) ultimately benefit from REDD+ schemes: is it the financiers, the investors, the host nation, indigenous communities or organised criminal networks? The answer might provide a stronger platform to operate REDD+ schemes relatively free of illicit networks. In the process, the thesis contributes to the corpus of green criminology literature.

Key words: Papua New Guinea, REDD+, carbon fraud, green criminology, organised crime, corruption.

CERTIFICATION

I certify that this thesis:

1. does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and
2. to the best of my knowledge and belief, does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: _____

Dated: _____

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PREFACE

The production of this thesis fulfils the requirements of the Australia Awards Scholarship, under which it was taken. The selection of this doctoral research topic was based on my background. My siblings and I were the first generation in our family to be raised in the city. Both our parents were born and raised in rural villages in Papua New Guinea (PNG) and almost entirely on produce from subsistence farming. Living in the city and taking trips back to both our parents' villages gave rise to the stark contrast of living two different lives. Life in the city involved writing in books, typing on the typewriter (then later the computer keyboard) and living in Port Moresby, the capital city transitioning from colonial administration to a modern urban environment. Village life comprised fishing, hunting for pigs and general gardening. Living in the city was a life in the law, growing up with my father, who was the first lawyer from his entire village area, and my mother, one of the first women from her area to go to university. My first job was as a criminal defence lawyer where I became acquainted with organised crime and developed the desire to ensure the best outcome of any case I handled. While working, I encountered REDD+ and realised the magnitude of this United Nations-backed scheme in the early 2000s. Seeing REDD+ through this lens led me to undertake this research.

As the condition for doctoral research under the scholarship is that it must be a study of the scholarship holder's own country, this dictated the focus country and limited any fieldwork that might have been conducted for comparison in another country, for example, the Solomon Islands. PNG is Australia's closest neighbour and a stepping-stone for PNG-based criminals to cross over. Therefore, providing practical solutions for preventing crime, especially for the law enforcement agencies and the government offices to utilise, was crucial. I hope this provides some understanding to how this thesis evolved. This thesis is written in times of great uncertainty but also some of the most exciting times, when one can venture into attempting to develop new theories and methods to combat the ever-changing and conflicting world in which we live. Displaced people, blurred borders and confusing changes in climate and weather patterns are problems that will require a multi-disciplinary approach. If this thesis can in some small way contribute to the debate and shed new light on methods to deal with these issues, it will have left its small footprint as intended.

CARBON FRAUD & ILLICIT NETWORKS:

RISKS IN REDD+

BABIDA DAVID SEPMAT GAVARA-NANU

I INTRODUCTION

In many parts of the world, the massive extraction of natural non-renewable resources also results in the massive destruction of the natural environment and human rights abuse (UNICEF 2019).¹ For example, it is well documented that traditional or indigenous landowners in the Amazon are displaced from their ancestral homes by 'land grabs' through illegal logging and organised crime (for example Holmes 2016:83; Place 1993; Park 1992; Hunt 2009). Many scientists have concluded that this type of rapid environmental degradation has led to problems in the Earth's atmosphere, which have inhibited its natural ability to cool itself (Stern 2007). This is causing a global rise in temperature and other adverse weather conditions, otherwise known as 'climate change' (Stern 2007; White 2012:2; IPCC 2018).

Recognising this risk to the Earth, the United Nations (UN) has led countries to band together to address climate change. At the first meeting of the Intergovernmental Panel on Climate Change (IPCC) in 1988, scientists agreed that human activity needed to be addressed to save the planet from impending catastrophe. By December 1997, formal recognition was given to carbon trading platforms during the UN meeting in Kyoto, Japan, where nations explored methods to combat the escalating destruction of the world's rainforests and contain the release of considerable amounts of carbon

¹ In the last two decades, the world has transformed into a much more accessible global community. A rapidly growing population, prolonged armed conflicts, mass migration of displaced people and the proliferation of the internet have seen the boundaries and sovereignty of nations blurred and infringed by refugees, terrorists, transnational criminal networks and even other countries (for example Wuebbles et al, 2014). To curb and combat these issues requires enormous funding, while the same is also true for countries engaged in armed conflict. This has seen countries mainly in the global South allowing mainly multinational corporations to extract or harvest raw natural resources at unsustainable rates to finance the procurement of military equipment and provide housing, infrastructure (and other forms of tangible development) and employment, to cater for the increasing population, particularly in urban areas (Anand 2004).

emissions into the air. This meeting ended with the resolution of the *Kyoto Protocol*,² which developed carbon trading platforms and established a ceiling for the 170 nations that signed the *Protocol* to limit the amount of greenhouse gas (GHG) emissions they released into the atmosphere (Kyoto Protocol 1998).³ When countries need to emit more GHGs, the Kyoto Protocol allows them to buy and trade carbon credits as a commodity with other countries. This was the birth of the emissions trading scheme, also known as the 'cap-and-trade' scheme. This scheme provides nations with fixed amounts of carbon credits to trade with other nations that are able to stay within their limit, allowing them to accumulate carbon credits. Thus, nations that exceed their carbon credit limit can pay other nations for their surplus carbon credits in order to then continue to emit carbon from their carbon-intensive industries.⁴

The *Kyoto Protocol* came into force in 2005. That same year, Papua New Guinea (PNG) and Costa Rica, on behalf of the Coalition for Rainforest Nations (CfRN), proposed to the UN the implementation of the scheme called Reducing Emissions from Deforestation and forest Degradation (REDD). In its basic form, REDD is understood to be a concept devised as a compensation scheme for rainforest abundant nations (which are all developing countries located in the global South) to conserve their forests, in order to allow the industrialised developed countries (which are located in the global North) to continue operating their industrial businesses and activities that emit carbon (and other noxious gases) into the atmosphere (see Anand 2004).

REDD went on to become REDD+ (pronounced 'red plus') as a result of the inclusion of conservation methods. The scheme has been implemented primarily in developing nations where indigenous people own the majority of the land or have a land tenure system where they have some interest or claim to the land (Murray, Lenzen and Murray 2014).

Owing to the lucrative trade, financial institutions latched onto the global carbon credit trading market, which has been touted as a major financial discovery (Kehoe 2011). Major banks, such as Barclays, have utilised this market, which has evolved to become

² *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, UN Doc (1998).

³ The GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) (Kyoto Protocol 1998:19). However, the term 'carbon' is used to encompass all the gases and to describe all GHGs; therefore, reference to GHGs and carbon is used interchangeably, unless stated otherwise.

⁴ Article 6, Kyoto Protocol, 1998.

as important to the world's free economy as when share trading first started. Barclays was the world's first major bank to establish a carbon trading desk and since then has invested over £1 billion in emissions markets (Whitehouse et al 2011).

However, by the late 2000s, a new type of hybrid crime had emerged, stemming from the fraudulent manipulation of carbon credit schemes, namely the offence of 'carbon fraud' (Walters and Martin 2012; Gibbs and Cassidy 2016). As the carbon reduction initiatives gained momentum, they attracted the undesirable, that is to say, organised criminal syndicates, corrupt individuals and corrupt corporate entities.

This was seen with the European Union (EU) Emissions Trading Scheme (EU ETS). Shortly after its establishment, the scheme, valued at over €30 billion at the time, quickly attracted organised criminal networks, which exploited regulatory loopholes in the carbon trading scheme and stole substantial amounts of money and carbon credits (Europol 2009; Frunza 2013). Following a number of fraudulent activities, the EU tightened its regulation and enforcement over its ETS, and the attention is now placed on the voluntary carbon market, which is where REDD+ is involved.

Opponents of carbon trading argue that the concept will eventually fail, that it is unrealistic and has been transformed into a get-rich scheme designed by people and endorsed by governments who have placed too much faith in an unseen commodity that encourages corrupt practices (Bachram 2004; Anand 2004; Labatt 2007; Lohmann 2009; Gilbertson 2011).

A The Research Problem

Around the late 2000s, scholars predicted that the REDD+ scheme was in danger of being exploited by organised criminal syndicates, citing that the scheme is much too large to monitor effectively (Packham 2009; Vidal 2009; Younger 2009; Global Witness 2011). In October 2009, speaking of the REDD+ scheme, International Criminal Police Organisation (INTERPOL) officer Peter Younger stated:

Alarm bells are ringing. It is simply too big to monitor ... Organised crime syndicates are eyeing the nascent forest carbon market ... Fraud could include claiming credits for forests that do not exist or were not protected or by land grabs. It starts with bribery or intimidation of officials, then there's threats and violence against those people. There's forged documents too. Carbon trading transcends borders. I do not see any input from any law enforcement agency in planning REDD. Without monitorable and enforceable safeguards, and strict

controls and regulation, REDD may deepen the woes of developing countries—providing a vast pool of unaccountable money which corrupt interests will prey upon and political elites will use to extend and deepen their power, becoming progressively less accountable to their people. In the same way that revenues from oil, gold, diamond and other mineral reserves have fuelled pervasive corruption and bad governance in many tropical countries, REDD could prove to be another ‘resources curse’. Ultimately, this will make protection of forests less likely to be achieved and will do nothing to ameliorate carbon emissions (Packham 2009).

In short, Younger predicted that REDD is likely to suffer from carbon fraud emanating from organised crime. A jointly authored United Nations Environment Program (UNEP)–INTERPOL report (Nellemann 2012), highlighted the danger of carbon fraud to the World’s tropical rainforest and called for urgent government intervention. This call by UNEP-INTERPOL and Younger’s prediction formed the foundation from which this research was launched.

Some studies have analysed the criminal networks that defrauded the EU ETS (Frunza 2013; Walters and Martin 2014) and the potential for fraud generally in carbon markets (Bachram 2004; Bricknell 2010; South and Bernie 2006; White 2009, 2011; Walters and Martin 2014; McKie et al 2015; Gibbs and Cassidy 2016). However, there has been little research that has analysed specifically the emerging offence of carbon fraud based on empirical work that also explores the likelihood of organised crime syndicates infiltrating the REDD+ schemes. Moreover, there has been no such study that explores this phenomenon in PNG. This thesis seeks to address this gap.

This research provides one of the few sources of empirically based, academic study that concentrates on exploring crime in REDD+ schemes. The thesis investigates both the UN-REDD Programme and the voluntary REDD+ market, the latter of which allows for potential investors to become directly involved with funding and setting up REDD+ schemes to generate carbon credits for sale.⁵

1 *Research Aim*

The research investigates trends and issues affecting the REDD+ scheme in PNG and examines the possibility of carbon fraud being committed in that country by illicit networks, whether they be organised crime groups (OCGs), corrupt company executives, government officials or even village elders. The research also examines the

⁵ Unless specified in this thesis, when reference is made to ‘REDD+ schemes’, I mean both the UN-REDD Programme and voluntary REDD+ projects.

possible malfeasance of government officials in the exploitation of the REDD+ scheme. The thesis presents the argument that the financial donors of the REDD+ scheme along with the indigenous communities where the projects are implemented must have a say in determining who the recipients of the donor funding should be. Further, they must ensure the auditing of the expenditure and disbursement of the UN donor funds in order to enforce transparency.

The study identifies areas in the scheme that may be open to exploitation, and also common traits of past offenders, which can be used to devise crime scripts against possible perpetrators, be they individuals or companies, before they commit carbon fraud (Gibbs, Cassidy and Rivers 2013; McKie et al 2015; Gibbs and Pugh 2017). Anticipating the type of person or organisation that is likely to commit carbon fraud, or other criminal activities within the REDD+ scheme, allows the best allocation of the limited labour force and resources to cover the areas identified as susceptible to fraud to attempt to deter it. In this regard, the thesis explores the level of cooperation between regulatory and law enforcement agencies in PNG and how they might effectively use best practices when combating carbon fraud (Pink and Lehane 2012).

It should be stated that this thesis does not seek to present arguments in support of carbon trading markets or to prove the veracity behind scientific theories regarding climate change. Instead, the primary aim of this research is to determine the veracity of Younger's (2009) and INTERPOL's (2013) prediction and identify how the REDD+ scheme may be exploited by sophisticated organised crime syndicates (Standing and Stewart 2013; INTERPOL 2013; Nellemann 2016). In this regard, the thesis is concerned primarily with documenting the reports of carbon fraud and the potential for criminality in REDD+ schemes in general and not with detailing the history, operative and legal status of PNG's REDD+ projects, which have already been well documented in various official publications such as by Leggett (2011) and the PNG government (CCDA 2017) and in other areas of study such as environmental (for example Scheyvens 2012; Grussu et al 2014) geography (Pascoe 2018; Pascoe, Dressler and Minnegal 2019) anthropology (Filer 2015; 2017; Wood 2015) ethnography (Filer and Wood 2012; Leggett and Lovell 2012; Lipset 2014; Lipset and Henning 2016) and other legal studies (Venuti 2014).

2 Assumptions and Investigation

The research commenced on two assumptions. Firstly, that there are organised crime syndicates operating in PNG.⁶ Secondly, that there is a very high likelihood of organised crime syndicates infiltrating PNG's REDD+ scheme, based on expert predictions (Standing and Stewart 2013; INTERPOL 2013; Nellemann 2016). While carbon fraud has been committed by different actors, in its infancy, the research initially concentrated on establishing whether organised crime was present in PNG's REDD+ schemes. These assumptions necessitated different stages of investigation. The first stage was to determine whether organised criminal networks, be they transnational or local, might manipulate REDD+ projects in PNG. The second stage was to identify *how* those networks might commit carbon fraud in REDD+, while the third stage was to determine *how* carbon fraud can be deterred and prevented. This resulted in a single case study within New Ireland Province, which is an area in PNG, which in turn culminated in a revelatory study.

Originally, I had planned that Port Moresby and an existing REDD+ area such as Central Suau, would be the target areas for the fieldwork. The REDD+ project site, whilst yet to be identified, depended on the outcome of my initial interviews in Port Moresby. However, due to inductive approaches to the data and changing circumstances, I was eventually led to New Ireland. Despite this major variation in the original fieldwork plan, the collected data yielded significant results (discussed in Chapter VI) that show how an illicit network takes advantage of indigenous communities. A comparison of the actions of this network, whose members can be regarded as 'carbon cowboys', is made with other instances of carbon cowboys' infiltration that has occurred in REDD+ projects around the world. The methods of how carbon cowboys operate, are discussed and compared to help understand how they use, amongst other things, the media, photographs of indigenous communities and the promises of wealth, in order to obtain the indigenous peoples' consent to REDD+ projects. Whilst the fieldwork was conducted in PNG, I acknowledge and address the carbon fraud phenomenon, as a global issue and this explains why the introduction to the explanatory chapters of the thesis, namely Chapters III and IV, provide a general overview of how carbon fraud has affected carbon markets around the world.

⁶ The literature on PNG's organised crime scene is expounded in Chapter V.

Regarding the last investigative stage, an analysis of probable criminological theories was considered before narrowing down to the theory that might best support the effective preventative actions most suited to PNG's political, economic and social conditions.

Recapping this thesis' aims, the research sought to investigate whether there was credence to INTERPOL's theory that REDD+ schemes might be infiltrated by organised criminal syndicates by:

- investigating which organised criminal groups pose the highest threat level to PNG's REDD+ schemes (be they PNG-based OCGs, overseas-based transnational OCGs, or a combination of both domestic and transnational criminal networks)
- determining the areas in the REDD+ scheme that might be abused by organised crime syndicates, or in collaboration with PNG government officials.

3 Significance

Despite its prominence as a country with one of the highest crime rates in the world (Lakhani 2014; Lakhani and Willman 2014a; 2014b; 2014c), PNG has surprisingly not been the subject of much in-depth empirical criminological research. The research for this thesis is therefore timely, not only by adding to the literature regarding crime in PNG but also by investigating whether the REDD+ schemes are working in the country and determining whether the predictions of carbon fraud occurring in the scheme have any basis. The findings from the research are intended to assist in developing policy to combat fraud and corruption, not just in REDD+ projects in PNG but also in other REDD+ implementing countries.

The presentation of this research has three significant benefits. Firstly, it provides an original contribution to green criminology, which is expounded below. Secondly, the research is presented from the perspective of an indigenous Papua New Guinean and derives authority from that standpoint of relative marginalisation and status which is expounded below at page 10. Thirdly, the research contributes to understanding and interpreting regional security in the South Pacific region by highlighting areas in the REDD+ scheme that can potentially raise risks for the region.

(a) Original contribution to Green Criminology

Green criminology concerns itself with violations of human rights and social injustice (see for example White 2009:1-3; Lynch, Stretesky and Long 2018), which are concerns that accommodate any type of indigenous harm and perspective. The study of these harms against humanity, the environment and non-humans, broadly encapsulates the meaning of green criminology (Beirne and South 2007). Though there are other varied definitions of green criminology, according to White (2011:19) the field is concerned primarily 'with the study of environmental harm, environmental laws and environmental regulation by criminologists.' This thesis adopts this definition and is framed according to the key terms of harm, law and regulation. Particularly, it follows a critical, green criminology interrogation of the fit between regimes and practices in the reduction of environmental harm. It is concerned with how a regulatory regime imposes itself using values and measures that are translated into indigenous language and 'storytelling' (Pascoe, Dressler and Minnegal 2019) through the voices of the indigenous participants in this study.

In comparison with other branches of criminology, the study of green criminology is relatively recent, having been conceived along with environmental law after World War II in the 1960s (Beirne and South 2007; Wolf 2011). Recognition of green criminology as a specific branch of criminology seems to have quickly evolved in the 1970s (Goyes and South 2017) and developed in the 1980s in two generations of criminology (Lynch and Stretesky 2011; Lynch, Stretesky and Long 2018). By the late 1990s, studies on this branch had gained significant momentum, which was due mainly to catastrophic global events, such as war, acts of terrorism and high incidences of corporate pollution (South and Beirne 2006). Prior to the recognition of green criminology, instances of criminal harm to the environment that were mainly in Western societies were classified as 'white-collar' and 'corporate' crime (White and Halsey 1998), and they focused on the offender(s) rather than on the act, the omission or the victim(s) of the crime. Post the recognition of green criminology, it has been understood that because the harm is aimed at the natural environment, the victims are not individuals but society as a whole (South and Beirne 2006). According to Beirne and South (2007), based on this perspective, green criminology's methodological approach commences by

...problematizing the nature of crime: how it is defined, by whom and with what purpose(s) and effects? Which harms are defined as crimes? Which are not? Which harms are defined as both harmful and criminal? Which are defined as neither?

This methodological approach is adopted in this thesis which allowed green criminology, along with grounded theory, to shape and direct the investigative fieldwork. Despite its short existence, a small but stimulating body of literature has canvassed the 'traditional' areas of environmental crime such as illegal fishing, illegal logging (Green et al 2009; Alley 2011; Nelleman 2012; Lawson 2014; Mousseau 2016) and trafficking in flora and fauna (South and Beirne 2006; Elliot 2007; Halsey and White 2009; White 2009; White 2011; Walton and Dinnen 2016; Nelleman et al 2016). Due to the constant problems facing the world's natural environment, green criminology continues to evolve, and analysing the potential for fraud in PNG's REDD+ scheme stands to make a small original contribution to the growth of green criminology, which is accomplished in two ways:

- 1) by presenting new facts that were gathered first-hand through qualitative interviews, observations and interactions with people during fieldwork conducted in PNG from 2017 to 2019;
- 2) based on these new facts, grounded theory is utilised to formulate an approach to combat carbon fraud in PNG appropriate to PNG's circumstances and presented from a unique indigenous perspective.

The study touches on a global issue—climate change—which has been described as the most important issue facing the world (see for example White 2009). By exploring some criminological theories to determine methods to combat carbon fraud, the thesis does not seek to provide a definite answer to such a complex global problem but to present factual findings to assist in better regulating carbon trading in the REDD+ scheme and suggest utilitarian methods of combating fraud. To date, little has been done to actually present a detailed study that revolves around criminological issues and perspectives related to climate change as well as the associated carbon trading. However, much has been said about how climate change is simply fraud and speculation and that regulation and indeed carbon emissions are merely following natural cycles (for example Bachram 2004; Bricknell 2010). Despite this scepticism, it is clear that the developed economies are intent on pursuing carbon trading. As White (2011:50) suggested:

If, however, governments persist with baseline and credit schemes, and cap and trade schemes, then analysis needs to identify and consider the specific kinds of fraud associated with emissions trading schemes and associated activities.⁷

It is also on White's suggestion, that this study proceeded in order to formulate and provide countries some methods to combat fraud associated with carbon emissions trading.

(b) Indigenous perspective through Grounded Theory

Understandably, the existing green criminology literature concerning climate change has been written by academics from developed nations, probably with the expectation that the audience will also be from those developed nations. This is why authoring this work from an indigenous perspective uncovers some useful points for future study, which are expounded on in Chapter VII.

First-hand indigenous or 'home-grown' views by authors of any empirically based research must be careful to avoid bias and should present a balanced, objective and open-minded approach to the investigation and the subsequent discussion. Indigenous researchers who can provide this approach can contribute some notable features. Firstly, they can highlight issues that are deemed important by the local population, which when examined from an 'outside' perspective might be lost and thus not properly examined. Secondly, this perspective can reveal intrinsic details of cultures, traditions and other niceties of local workings, which through understanding can assist in providing or advancing pertinent theories. As long as the perspective can be fully explained, unpacking the problems in a logical sequence according to these niceties can provide valuable data that might not previously have been contemplated—or if they have, not fully explained to highlight their significance. This can assist in conducting research in similar areas in the future specific to the area where the indigenous research was conducted.

The *indigenous perspective* is differentiated from *indigenous research*, and this research concerns only the former. It employs Western criminological theories applied by an indigenous person in what can best be described as a 'decolonising' process

⁷ The research gap between criminal acts against the natural environment is slowly being bridged. Indeed, prior to the end of WWII, criminologists had yet to venture into researching the links between the environment and crime. White (2011; 2012) calls for criminologists to be proactive and take the lead in conducting in-depth studies of climate change and criminology and criminal justice. This study is beginning the work of following through on White's suggestion.

(Thiong'o 1989; Smith 2012). The thesis incorporates ideas to support arguments that literature concerning REDD+ should be written with the indigenous people in mind, who far too often have been marginalised. It is suggested that the corpus and the modus of green criminology is furthered when work is conducted that address this marginalisation (White 2011:141).

Using personal knowledge and experience provided a solid base to understanding the work required to uncover fraud. This work was based on my own experience, that of a person from the global South, formerly employed in PNG's criminal justice system with a background of formerly defending persons accused of serious crimes and understanding their attitudes and capabilities in crime commissions. This is the specific indigenous standpoint that informed the approach, including the targeting of interview participants and framing of questions to elicit appropriate responses. Such responses from the villagers in particular, come by way of 'storytelling' based on their perception and knowledge of climate change and carbon trading. This storytelling assisted in formulating the final conclusion of this research. The documentation of PNG villagers' storytelling, views and interpretation of climate change and the REDD+ scheme, has been published in other disciplines such as geography (Pascoe 2018; Pascoe, Dressler and Minnegal 2019) and ethnography (Leggett and Lovell 2012; Lipset 2014; Lipset and Henning 2016). This research differs by presenting indigenous voices for a criminological / legal study on REDD+ interpretation. This presentation should not be confused with 'indigenous green criminology', which mostly focuses on indigenous people as victims of crime (for example Weis 2019; Crooke et al 2018).

Amongst other factors, indigenous knowledge and storytelling played key roles in formulating the possible preventative methods to combat carbon fraud (discussed in Chapter VII). To properly appreciate the significant role indigenous knowledge had in helping to devise the theory in this research, a brief outline of grounded theory follows. Initially grounded theory was birthed from nursing studies by Glaser and Strauss (1964) but since then, it has been utilised in various disciplines, including criminological research all over the world such as exploring Israeli computer hackers' behaviour (Turgeman-Goldschmidt 2008), Maltese male criminals' reasons for staying in a life of crime (Clark 2011) and improving the policing of Mexican police (Santos-Reyes and Lawlor-Wright 2011). Through their practical guide-book, *The Discovery of Grounded Theory*, Glaser and Strauss (1967) laid out the invigorating basis and practical guide to

generate theory from data. As the data grows, it is continuously analysed, coded and verified to construct the theory.

When related to the subject matter, grounded theory can also draw on the experiences of the researcher (Glaser and Strauss 1967; Charmaz 2006), though it is mainly generated from qualitative research through semi-structured or unstructured interviews and observations. Importantly, verification (corroboration) and comparison of the data must be undertaken as it strengthens the generated theory. As Glaser and Strauss (1967:38) state:

One strategy for bringing the generation of theory to greater importance is to work in non-traditional areas where there is little or no technical information.

My research into the combined areas of (green) criminology in REDD+ schemes is relatively new with little directly related research available. I was able to make comparisons with other places where carbon fraud in REDD+ had been experienced, which I argue in Chapter VI, strengthens my conclusion. The places where carbon fraud occurred are all different. The affected populations speak different languages, have completely different customs, traditions and practices and are located in different parts of the world, however, they had one thing in common: being indigenous communities in forest areas. This commonality assisted in the theory construction.

As deduction from the data is the basis for grounded theory, my research sought not to confirm whether INTERPOL's / Younger's (2011) prediction was accurate or had any truth, but sought to determine, through empirical research, the existence or potential for this criminality in REDD+ schemes, i.e: does the current state of affairs in PNG's REDD+ scheme, lend support or discredit INTERPOL's prediction? A criticism of this study would be to ask why did I pursue, or persist with attempting to verify the prediction, when there does not seem to be publications of organised crime groups defrauding REDD+ schemes. I argue that this criticism can only be justified *after* a systematic line of inquiry is undertaken (as I have done in this thesis) to eliminate or confirm the prediction. To presume that there is no possibility of organised crime in REDD+, since there have not been any reported cases, is naïve, since organised crime groups are highly capable of stealthily manipulating climate change initiatives.

One thing to note in Glaser and Strauss' *Discovery of Grounded Theory* book (1967:161-183) is their outline on the benefits in devoting to library research and not relying on fieldwork alone to generate theory. Glaser and Strauss (1967:163) state:

...like field work, social research in the library must be directed with intelligence and ingenuity. Of course, in either the field or the library, the researcher may be lucky enough to stumble on conversations and scenes. These happy accidents are an invaluable addition to his data.....

In Chapters II and VI, I explain how I was lucky (blessed) when I stumbled on a new scene which enlightened my data's theory generation. In this new era though, the internet has made attendances to the library in person not necessarily required. As stated by Charmaz (2006:9) when referring to grounded theory research steps:

Researchers can adopt and adapt them to conduct diverse studies. *How* researchers use these guidelines is not neutral...we can use basic grounded theory guidelines with twenty-first century methodological assumptions and approaches.

Using the internet and online university libraries is the adaption to new technological advances in research. This does not mean we dispense with Galser and Strauss' advice on library research techniques. On the contrary, the guidelines are just as pertinent now, but applied to using the internet instead of the library. The plethora of data on the internet, requires the continuous sorting and modifying of data and conducting various searches in different search engines. In order to properly review all this data, a researcher must have some level of ingenuity to properly sort and eliminate what is not necessary and this is where grounded theory techniques are most relevant.

Admittedly at times, my data collection was disjointed, but in keeping with general theory techniques, especially of revising, verifying and integrating the data, the final theory eventually gained credibility as I also used other sources of data, notably videos and documentaries. As expounded in Chapter II, an inductive approach to following potential lines of inquiry resulted in me using indigenous knowledge to collect data from indigenous communities. However, I was careful not to force the data to suit any of the emerging theories that arose throughout the research, until I was able to compare and verify it; whilst also relying on various published sources to do so.

(c) Regional security

Compared with the rest of the world, the Pacific region is sparsely populated, with the island nations stretched over a great distance separated by a vast ocean. Mostly neglected in criminological research, the region is experiencing an apparent resurgence of interest to detect and prevent major crime, both domestic and transnational (McCusker 2006; Elliot 2007; Dinnen and Walton 2016). Currently, Chinese interests in the Pacific are competing with the United States (US) and Australia, as seen during the 2018 Asia-Pacific Economic Cooperation (APEC) meeting in Port Moresby. Addressing issues such as carbon fraud can assist in minimising the devastating effects on climate change and identifying regional security threats, since it has been suggested that there is a correlation between climate change, increase in crime and international conflict. This study has the potential to be important not just for PNG but particularly for Australia and New Zealand, which are seen as 'safe heavens' for people fleeing conflict or seeking refuge from environmental disasters (Wuebbles et al, 2014). PNG is also seen as a step to the Australian north region for OCGs to launch illegal activities that will infringe on Australia (Briggs 2010). To the extent that this is a problem for Asia-Pacific regional security, that problem is also addressed by some of the findings in this research. The research opens up a new dimension for workers in the forestry, conservation and climate change sectors to consider and look out for. Since the outcome of the Barnett inquiry, it has always been assumed that corruption is to blame for illegality in these sectors. However, the changing methods which criminals employ *and* the fact that illegal logging is now recognised as a form of organised crime, forces us to rethink *why* it is that corruption occurs frequently in these areas. This research highlights criminality to these sectors.

B Research Terms, Limitations & Outline

1 Research Terms: Bigmen, Wantok, Nationals, Gorgor, Masalai and Hausboi

It is necessary to explain some terms and references used in PNG when referring to ethnic background and nationality in order to understand phrases and words used by interview participants provided in this thesis. The terms 'expatriate' and '*masta*' usually refer to white Caucasians only. 'Asian' and '*Kongkong*' refer to anyone who is of East

Asian origin, namely Chinese, Malaysian Chinese, Filipinos or Indonesians.⁸ Africans are any black-skinned African, so that a white South African will still be considered and referred to as an expatriate or *masta*. Anyone from India, Sri Lanka and West Asia in general will just be referred to as Indian. Thus, during the course of conducting interviews, whenever references are made to Asians and *Kongkongs*, the participant always means Chinese or Malaysian Chinese and so forth, and not persons of Indian or Sri-Lankan descent, or from other parts of the West Asian region. The word 'indigenous' is not used in PNG as actively as it is used in other countries. Almost always, the term 'national' is used by foreigners to refer to any indigenous Papua New Guinean, unless they know that person's province of origin, which will be referred to instead, for instance, 'That man is from Morobe' or 'That woman is from Central'.⁹ Papua New Guineans themselves will usually refer to another Papua New Guinean by his or her province of origin, or provincial district of origin, *if* they are not from the same place, for example, 'That man is from Tari' (note that Tari is a district within the Hela Province).

(a) *Wantok*

Wantok, which literally means 'one-talk' in the Tok-pidgin language, denotes a common identity apart from a common language. The '*wantok* system', or '*wantokism*', is not a 'system' per se, it is rather a way that nationals generally go about dealing with everyday affairs, and it is based on a structure of support and reciprocity. This method of recognising and acknowledging relational ties is observed throughout PNG. It can also be a loose way of creating a bond with another person. Hence, people from the same village, district or province will see themselves as *wantoks*, even if they do not speak the same language, since in PNG, one province can have as many as 20 languages. The term is also used by nationals to greet and refer to one another when overseas. Thus, even if they are from different parts of PNG, if they meet each other outside PNG they will view each other as *wantoks* and foster a support network if called upon. The *wantok* system is akin to other strong family structures found in all levels of

⁸ The term 'Kongkong' was also used in Graeme Smith, 'Chinese Reactions to Anti-Asian Riots in the Pacific' (2012) 47 (1) *The Journal of Pacific History* 93, 101.

⁹ The term 'PNG Nationals', was also used in Graeme Smith, 'Beijing's Orphans? New Chinese Investors in Papua New Guinea' (2013) 86 (2) *Pacific Affairs* 327.

society and in other countries where strong family values and ties are intrinsically acknowledged, such as the Italian family system noted by Whyte (1943) for reciprocity.

The *wantok* system has the potential to quickly turn to fraud (Goddard 1995:65)¹⁰ and stifles legitimate opportunities for others as well. In a 2014 interview conducted by Lakhani and Willman (2014(d):14), one PNG business owner admitted she did not promote nationals to responsible managerial positions for fear that they would be pressured to steal by their *wantoks*. Instead, the business owner recruited expatriate managers for this task. In PNG, corruption can take on two forms specific to the country. These are in the form of wantokism and the *bigman* mentality. My own experience in these informal systems is provided here.

Traditionally, in the village setting, a person from the same area and not necessarily related is catered for and supported in areas in which he or she has requested or requires assistance. This assistance is far ranging. It could be assistance in making a garden, contributing food to a feast or fighting against an enemy clan or tribe. This type of recognition of a person's connection with another is what is considered '*wantok*', and reciprocity of the same type of assistance is usually given, but not necessarily expected, and is experienced in other Melanesian cultures. However, the strength and level of wantokism may vary (Nanau 2011). As the urban cities in PNG grew, the natural influx of people from the village swelled and its formal accommodation was either too limited or too expensive to be afforded by those who flocked to the towns. Consequently, they resorted to building shacks in some of the undesirable areas of towns or just outside the periphery of towns. Many people who flocked from the villages to the towns were apt to live firstly with relatives, and if they were not available, then with people from the same area. During these early days, cultural distinctiveness was more acute and integration with people from other areas was not as common as it is now. Inevitably, problems, and eventually deaths, arose when different groups clashed in the towns. Since it was better to have strength in numbers, people lived with other people who they considered their *wantoks* in these informal settlements. To this day, various informal settlements around PNG are named after the area from where the original settlers came—for example, in Lae, the Papuan Compound, and in Port Moresby, the Oro Compound.

¹⁰ The Queensland Supreme Court recognised and used the word '*wantok*' during the case of *R v Martens* [2007] QCA 137, where it defined it as 'Tok Pisin (Melanesian pidgin English spoken in Papua New Guinea) and means "close friend or relative". The Macquarie Dictionary also uses Tok Pisin. Both terms are accepted and used interchangeably in PNG.

Over time, as nationals gained and secured employment, they replaced expatriates in the higher bureaucracy and managerial positions, where they were likely to employ their *wantoks*. At first, such a practice was conducted as long as the *wantok* was properly experienced or qualified for the position, but this criterion has long ceased.

(b) *Bigman*

The *bigman* is a term used to confer status to a person over his peers. It can mean anyone who is materially wealthy, is knowledgeable in customs and traditional practices, or owns a large area of land, big gardens, shell money or many domesticated pigs (see for example Clay 1977; Standish 1978; Eves 2010:52; Luker and Monsell-Davis 2010). The *bigman* system, similar to the *wantok* system, means that when someone is called upon by a *bigman*, that person will usually perform a required task on the unspoken understanding that the person might benefit in some way, especially in cash gifts.

In the towns, the *bigman* mentality is commonly seen once a person secures a high position, usually a government position. It is then considered natural that the person will appoint his or her *wantok* in jobs. This is one of the main reasons that PNG politics are extremely volatile and deadly, since people will fight to ensure their *wantok* or *bigman* is elected into government (whether legally or illegally) so that once elected, he might give preference to his *wantoks* in the form of jobs, contracts, the provision of government services and just about anything to which the *bigman* might have some connection to (Saffu 1996).

Both the *wantok* and *bigman* concepts have become skewed over time and have evolved as PNG terms for nepotism, favouritism (Graycar and Prenzler 2013) or any type of action that will place a *wantok* in a position to help another *wantok* in both informal and formal settings (Tanda 2011). In PNG, people will recognise this as *wantok* and a form of corruption, depending on the circumstances. In short, *wantok* and *bigman* are good when used in the appropriate cultural context. However, money, greed and modernism has eroded and developed these concepts, making PNG's current state of affairs corrupt in many areas of government. In the central New Ireland area, there are two terms used for *bigman*: '*orong*' and '*masa*' (Jessep 1977:24-25), which refers to a man with oratory skills who is able to settle disputes, and who has knowledge of 'fish trapping, or shark fishing; or [who] know[s] the magic of crops and

food getting, or of healing and of some types of sorcery or counter-sorcery' (Jessep 1977).

Melanesian wantokism is not confined purely to PNG's setting. It is used in the Solomon Islands, Fiji, Vanuatu and West Papua (Nanau 2011). It is also used regionally. A brief illustration follows.

In 2005, the then PNG Prime Minister Somare (who also helped introduce the REDD concept), authorised the illegal removal of then Solomon Islands Attorney-General Moti from PNG (TI PNG 2013). Moti was wanted in Australia for charges relating to unlawful carnal knowledge of minors while he was in Vanuatu. He was transiting from Singapore through Port Moresby and onwards to the Solomon Islands. The Australian authorities became aware of his presence in PNG and communicated a request to the PNG police for his arrest, pending deportation to Australia to face the criminal charges (Gibbs et al 2007; TI PNG 2013). Moti was arrested by the Transnational Crimes Unit in the waiting lounge at Jacksons International Terminal. He was detained pending deportation but was released on bail. While he was on bail, Somare instructed the PNG Defence Force to fly Moti out of PNG to the Solomon Islands. This clandestine operation was carried out expeditiously during the night and elicited a huge backlash (Gibbs et al 2007; TI PNG 2013). In attempting to defend his actions in Parliament, Somare stated the following:

As the House will recall, a few days before the event, I made an off the cuff remark that the Attorney General designate of the Solomon Islands should be assisted with 'safe passage' through to the Solomon Islands because I consider this matter to be basically between the Solomon Islands and Australian governments. I made this comment against the backdrop that as a Melanesian Spearhead Group country we have a very closely tied relationship with the Solomon Islanders. (Gibbs et al 2007:43)

Somare had used wantokism as the basis for the operation. Somare avoided acknowledging that this was a criminal matter, that he had no right to involve himself in a criminal investigation and that PNG has been one of the highest recipients of foreign aid from Australia and therefore a strong tie also existed between the two countries. A board of inquiry recommended Somare's arrest, but this did not eventuate. The *bigman* mentality was also evident during this inquiry. Colonel Ur, who was at the time Acting Defence Commander, issued the verbal orders for Moti's removal. He explained, as per the following:

As Acting Commander I believe that the direction was from the government of PNG and it is my duty to carry them out and not question those directions ... In a high context culture like PNG, the mention of names of people that we have respect for is good enough for me to act upon their direction. (Gibbs et al 2007:12)

Colonel Ur was referring to the direction from Somare, so he acted upon those orders because Somare was a *bigman*. The colonel dispensed with military rules that required all orders for operations to be issued in writing. He also failed to consult a number of commanders and dispensed with military procedure based on his misplaced respect for Somare. Both concepts of *bigman* and *wantok* facilitate grand and state corruption, as canvassed in Chapters III and IV, where I show how corruption contributed to the first report of carbon fraud experienced in PNG's REDD+ scheme.

(c) *Gorgor*

'*Gorgor*' is a traditional form of injunction used by the New Irelanders to prevent any further work or any sort of activity from continuing in any situation.¹¹ The *gorgor* itself is made from a ginger root plant. It is difficult to know from when and from which part of New Ireland this practice originated; however, it is utilised in all parts of the province, including the outer, smaller islands. The practice of placing *gorgor* is more common in rural settings, so when someone disputes the making of a garden or house because of encroachment on their land, they will place *gorgor* on some part of the house or garden fence to stop the work from progressing (Jessep 1977). This is done by tying the *gorgor* in a knot around any part of the object in dispute. If the dispute concerns land, a row of *gorgor* might be tied and strung across an access road into the area. The person who is making the garden or house will then enquire around the village and ascertain who has placed the *gorgor*. Sometimes, the person who has placed it claims responsibility. The issues will then be resolved by way of compensation or removal of the house or garden. *Gorgor* will also be placed around the base of fruit trees to prevent their harvesting. With the arrival of commercial activity, *gorgor* has also been used in disputes at mining sites¹² as well as logging areas.¹³ Where land is concerned, it is used routinely. The *gorgor* must only be removed after local elders have successfully mediated its removal. The interviews revealed that this practice was routinely

¹¹ Bainton (2011) provides an analysis of the use of *gorgor* at the Lihir Gold Mine, New Ireland Province.

¹² Ibid.

¹³ Interview with Kade (Gavara-Nanu, Kavieng, 2018).

deseccated by the loggers through their employment of local *bigmen* or elders, along with the local police who removed the *gorgor* without first mediating the problem.

(d) Masalai and hausboi

'*Masalai*' and '*hausboi*' denote a spiritual base from which a clan originated and upon which they claim ownership to areas. These areas could be land or reefs, trees and stones. *Masalai* is a type of spirit or ghost and *hausboi* (English: house boy) describes an area where hamlets originally stood, in which customary practices and knowledge is imparted to clan members.

2 Research Limitations

The scope of this thesis is limited to PNG. The research was approached inductively. Consequently, it cannot be replicated because follow-up research will likely encounter a different empirical standpoint. Cultural differences affect how an inductive approach can be undertaken and are also not entirely consistent over time and place and types of interaction. Countries have variously unique indigenous populations, customs and traditions that will host and react to 'white-collar crime' in different ways. In this research, understanding the interface of the global or UN-derived regulatory regime of REDD+ and the PNG environment of values, traditions and customs demanded, or at least resulted in, an approach that has attempted to respect both the unique individuality of the environment and the universality of the regulatory problem. A justifiable criticism and limitation is that, because of the scope of the project, many gaps remain. Notably, INTERPOL and PNG's Climate Change and Development Authority (CCDA) may take greater prominence in an examination of the regulatory regime. The full extent of the problems encountered during the fieldwork are addressed in Chapters II and VI.¹⁴

¹⁴ The dissertation is a small step towards uncovering and understanding carbon fraud. The fieldwork was conducted with very limited resources from a small group of sources, and, admittedly, it could have succeeded better with approaching important line agencies. Unfortunately, in a doctoral study, conducting the research single-handedly means many important areas are overlooked because of time and resource constraints and the pressure of work. This was certainly the case in my situation.

3 Outline of the Thesis—Setting the Context

I have briefly introduced the problem that this research explores and the methodology employed to address the line of inquiry. To recap, this chapter has highlighted the following:

- *Carbon fraud* is an emerging criminal offence.
- This new crime is a threat to the successful operation of REDD+ schemes and other carbon trading schemes around the world.
- Organised crime and poor governance are predicted as threats likely to corrupt the REDD+ process and result in the theft of REDD+ financing (apart from other criminal offences).
- The research concentrated on an area in PNG as a single case study, where the exploratory fieldwork was conducted.
- The original main aim was to confirm whether there is evidence of Asian organised crime networks operating in PNG.

While this thesis focuses on carbon fraud and does so broadly from a green criminology perspective, I take that perspective to be somewhat interchangeable with social science–informed environmental studies with sensitivity to indigenous customary practices. In this regard, this is an inter-disciplinary discussion since criminology and law alone cannot solve this issue.

The existing criminological analysis of the manipulation of carbon markets and of the emergence of carbon crimes has been limited (Frunza 2013; Martin and Walters 2013; Gibbs and Cassidy 2016). A few have focused on preventative measures against carbon fraud (Gibbs, Cassidy and Rivers 2013; Gibbs and Pugh 2016). Most have focused on the EU ETS and made reference to the *potential* for fraud occurring in REDD+ schemes. None has conducted empirical work to address this. Since this issue is an emerging one, this thesis presents two parts to the reader in addressing these gaps. The first part from Chapters II to IV is descriptive and provides the background behind the establishment of carbon trading. The second part from Chapter VI onwards, presents the original findings and discussions. Chapter II unpacks the research methods as I explain the challenges, observations and fieldwork undertaken for this thesis.

Chapter III explores the issues surrounding climate change. In particular, it highlights the controversial issues that permeate climate change initiatives, which facilitated the commissions of criminal acts. The chapter presents the various initiatives before covering the basis and operation of REDD+ schemes and the scheme's establishment in PNG.

Chapter IV explores the history of carbon fraud, which is achieved by outlining a few of the most prominent of reported criminal cases of carbon fraud. The chapter looks in detail at the research problem and reveals a few common denominators of the culprits who have committed carbon fraud in REDD+ schemes. It delves into the relationship between corruption and carbon fraud and the intrinsic link between the two issues and illegal logging in PNG.

Chapter V considers the raskols, PNG's indigenous criminals, and confirms that they do not have the financial capacity and knowledge to commit fraud on the scale seen in the EU ETS or in the way it has been committed in the REDD+ scheme. The chapter then focuses its attention on the organised criminal syndicate reputed to operate in PNG, and which fits the profile and is recognised worldwide as an OCG—the Chinese Triads.¹⁵ This observation stems from media reports (which refer to both Chinese and Asian) that organised criminal networks operating in PNG are more capable than any other criminal or illicit network of manipulating the REDD+ scheme. The chapter offers tentative conclusions regarding whether these Chinese criminal groups are Triad societies. The chapter then attempts to evaluate the likelihood of other transnational organised crime groups manipulating PNG's REDD+ scheme. In this chapter, I develop crime scripts against which I evaluate whether carbon fraud can be perpetrated by the raskols, PNG-based Chinese criminal gangs or transnational organised crime gangs.

Chapter VI presents the significant results from the fieldwork conducted in the New Ireland Province and the discusses the REDD+ scheme in PNG and the risks it faces. It develops the scholarship on green criminology through providing the data collected from the single case study area in central New Ireland, PNG. Parts of the data is presented in table format in a chronological manner, between the years 2017 to 2019, which was

¹⁵ There is no conclusive evidence that Triads are in PNG so Chapter V draws on material which looks at Triad criminal activity worldwide and not in PNG, unless stated so.

when the fieldwork was conducted. Thereafter, an explanatory design is used in highlighting key points in the case study.

Based on the findings in Chapter VI, Chapter VII examines how to detect and prevent carbon fraud. The chapter borrows mainly from situational crime prevention (SCP) theory. Based on the crime scripts for carbon fraud developed in Chapter V, the scripts are analysed according to SCP theory, alongside the findings from the fieldwork. The SCP analysis is quite limited, owing to the absence of reliable data. Most of the work in this chapter revolves around the fieldwork conducted in PNG. Therefore, while not providing a truly tested mechanism for prevention, it is a starting point to test the suggestions.

Observations on organised crime's exploitation of the REDD+ schemes and the documentation derived from fieldwork are used to support the concluding view that the infiltration of REDD+ schemes in PNG does not quite follow the commonly perceived notion of OCGs as suggested by INTERPOL and other authors. Instead, carbon fraud arises through corrupt government officers embedded in the structures involved in regulating REDD+, from expatriate *carbon cowboys* and, surprisingly, from ordinary Papua New Guineans. These points are highlighted towards the end of Chapter VII.

II RESEARCH DESIGN

This chapter describes the journey that I took in undertaking the research and fieldwork, much of which involved simple observation and questioning. Taking the approach undertaken by Whyte (1943) allowed some interesting information to come to light. In *Street Corner Society: The Social Structure of an Italian Slum*, Whyte wrote about how his minimal interactive and observational role with a group of youths and young adult Italians enabled him to map out their relational ties and roles and uncover the intricate structures they played out in the slums of New York. Similarly, in this study, I allowed the data to dictate the direction of this work and was able to map out the roles of different actors in the REDD+ scheme. This chapter sets out the manner in which the research was undertaken, especially with regards to fieldwork and the data it yielded, which is presented in Chapter VI.

This chapter, also referred to as the *methods chapter* (Evans and Gruba 2005:84-85), will show how the research took an inductive approach (Whyte 1943) and as a result it is not likely to be replicated. However, it is likely that a researcher who accesses and interprets similar data will come to similar conclusions. The inductive approach meant that the descriptive parts of this thesis are presented in an anthropological way combined with cultural criminology that is unique to PNG's setting. Throughout the descriptive parts of the thesis, there are instances when I will depart from providing observations, to highlight certain points that may be important.

A The Hypothesis

The research explored the premise that OCGs will move from committing carbon fraud in the EU ETS and venture into defrauding the REDD+ schemes. Based on experience in PNG's criminal justice system and from a desktop review of newspaper articles and academic literature, I formed the view that this prediction was strong (since it came from INTERPOL) and that the most likely organised crime group that would infiltrate the REDD+ scheme would be the PNG-based Chinese. I initially sought to analyse the illicit networks likely to commit fraud in PNG. Apart from the Chinese crime groups based in

PNG,¹⁶ the other networks of focus were local criminals in PNG and officials in government departments through which the funding from the UN-REDD Programme is likely to pass. I also sought to determine the progress of the implementation of the UN-REDD Programme and the status of the voluntary REDD+ schemes. Analysing these groups required identifying the points of *opportunity* and *occurrence* of when the fraud might be committed.

The research first commenced on an exploratory basis as I sought to analyse the various REDD+ schemes in PNG and to compare PNG's schemes with those of neighbouring REDD+ countries, Indonesia and the Solomon Islands. Eventually though, as the research progressed, the fieldwork narrowed down and was focused in the central region of the New Ireland Province, with one formal interview recorded in the capital city, Port Moresby. The area where the fieldwork was concentrated is called *Sentral Niu Ailan*, which is the Tok Pisin equivalent of central New Ireland. In the first instance, a desktop review of case law was necessary. This was particularly so with regards to trying to measure PNG's organised crime scene. This was conducted by searching the PNG laws website (Paclii), which lists the national gazettes, legislation and 'published' judgments from the PNG courts and tribunals.¹⁷ This means that most of the cases remain out of the public's knowledge since the unreported judgments are not placed on the website.¹⁸ Despite this limitation, in the absence of verified and current police statistics, the Paclii website provides the most reliable factual accounts of

¹⁶ I spoke to several police officers in Port Moresby who confirmed that there are Chinese organised crime groups operating in PNG. I have not included this data since Ethics Approval was not granted at the time. After Ethics Approval was granted, I recorded three interviews with policemen who recounted their experiences in dealing with Chinese organised crime in Port Moresby and the provincial town of Lae. The cases involved human smuggling of other Chinese nationals into PNG in a container and of Chinese businessmen collaboration with raskols to commit armed robbery (see Table 2).

¹⁷ <<https://www.paclii.org/>>. The website is available free on the internet. Another website, PNGInLaw, requires subscription and is mainly accessed by private law firms and PNG government offices. Conducting a search of the Court Registries for case law, would have been time consuming. Staff at the registries are inundated with work and give priority to attend to lawyers' filing of court documents. I did not have enough time on the fieldtrips to conduct case research at registries. I would have had to decide which registry to go to and pay for the registry to photocopying the case files, since many of the files are hardcopy. Desktop research was therefore, more viable for this task.

¹⁸ For example, a search of the Paclii website for National Court cases with the term 'organised crime' brings forth only seven criminal cases: *The State v Taba* [2010] PGNC; N3939; *The State v Kapis* [2011] PGNC 51; N4305; *The State v Saku* [2011] PGNC 78; N4355; *The State v Taba* [2010] PGNC 70; N4083; *The State v Kapis* [2011] PGNC 24; N4232; *Suah v The State* [2009] PGNC 67; N3655; *The State v Pitaneoc* [2004] PGNC 248; N2514. Varying the search term to 'organised criminal' delivered only one criminal case: *The State v Girigi Goasa Mose* [2018] PGNC 317; N7388. While entering the term 'organized crime' provided only six criminal cases. Searching with the term 'rascal' results in 44 cases, while searching for 'raskol' brings 14 results - online searches conducted 5–6 June 2019.

criminal cases.¹⁹ The outcome of this review is expounded in Chapter V (Organised Crime in PNG).

A justifiable criticism will be that the data does not represent the entire country. A country-wide study was impossible based on financial constraints. It was initially intended that the data would be collected from the full spectrum of participants in the REDD+ scheme; these were landowners where REDD+ projects are located, government departments and agencies involved in the scheme, and international bodies based in PNG. However, as the research progressed it was limited to the police, forestry officers, non-government organisations (NGOs) and the traditional landowners where the REDD+ schemes are being implemented and those from the areas where implementation is planned. Because the research focused on PNG, the methodology employed may have limited applicability, perhaps only extending to places with a similar environment and culture.

Most doctoral fieldwork is conducted by the student researcher travelling to an area and staying there for a sustained period of time before returning to the university for a major and final write-up. My fieldwork differed from this since it was accomplished after a number of trips to PNG, collecting data and conducting observations, then returning to Australia to write up and transcribe the audios of the formal interviews, before returning to PNG with the transcripts to be signed by the participants. This meant the research conclusions constantly adapted to changes in the data and circumstances.²⁰

Initially, I had planned to approach for in-depth interviews key informants in law enforcement (mainly the police, but also customs, immigration and border security) and regulatory bodies (mainly the PNG Forest Authority and the CCDA, but also the Internal Revenue Commission) in Port Moresby, especially those in high-ranking positions with authority and experience. These groups were targeted based on the assumption that they would be able to provide the most viable information regarding the status of the

¹⁹ A significant amount of discussion is devoted to these cases in this chapter since they deal with the primary scope of the paper.

²⁰ The main reason that making numerous trips was possible is PNG's close proximity to Australia. This makes air travel relatively short between the two countries. The flight departing Adelaide to Kavieng is accomplished in a single day, leaving at approximately 6 am from Adelaide and arriving just before 6 pm in Kavieng (when there is daylight saving in Adelaide, there is a half-hour time difference, with PNG time ahead). If the fieldwork had to be conducted in another country, outside of the Pacific, it probably would not have been possible to make several trips and I would most certainly have collected the data on a single trip, or the maximum would have been two trips.

UN-REDD Programme and voluntary REDD+ schemes in PNG, and the presence of Chinese organised crime. To achieve this in-person contact required two applications to the Social and Behaviour Research Ethics Committee (Ethics Committee). The first application was submitted on 4 August 2016. On 6 September 2016, the Ethics Committee granted conditional approval, subject to the provision of additional information and amendments to documents to obtain informed consent from the participants. On 23 November 2016, the additional information was provided to the Ethics Committee and on 2 December 2016, the final approval was granted to proceed. To commence interviews with representatives of law enforcement and regulatory bodies, I had to obtain specific approval from the heads of those bodies. This process, however, proved problematic.²¹

The study of criminology, criminal law and other social sciences focusing on criminal activity, requires the satisfaction of ethical requirements before the commencement of fieldwork and in-depth studies (Israel 2004). For any type of research, when potential participants are approached to be interviewed, they may view the request with caution and perhaps scepticism, depending on the topic. When the topic concerns criminology, it adds an additional step or burden for the researcher to explain to the potential participant that their safety will not be compromised and, if it is, the steps that will be taken to rectify the situation. But for a topic as complex as carbon trading and REDD+, which even the majority of people in the Western world have no knowledge of or would struggle to understand, this was an extremely difficult topic to convey to the interview participants, particularly to the traditional landowners, before securing their formal consent to be interviewed. This issue of translatability is covered further in Chapter VI.

²¹ The facts I sought to investigate, relate to sensitive issues that might have jeopardised my personal safety. The questions that I had drawn up in anticipation of interviewing law enforcement officers were posed to establish, and therefore measure, the extent of organised crime in PNG. The questions had to be carefully crafted to neither implicate nor offend the participant and to ensure I was not placed in a possibly volatile situation with an irate police participant. I also wanted to limit, having my name and the research being known within the police force. This was particularly so with the law enforcement agencies, such as the PNG police, which have a reputation for corrupt and unethical behaviour and practices. I sought to limit the discussion of the research with participants to face-to-face contact and to avoid emailing documents to secure informed consent because there was a danger of them being forwarded to unsavoury characters. In this regard, it has been acknowledged that Chinese OCGs have infiltrated the PNG police hierarchy and national politicians (The Age 2005; Forbes 2005; The Australian 2010). I therefore wanted to avoid any chance of the networks being alerted to my work, especially since I have worked in PNG's criminal justice system while employed with the Office of the Public Solicitor, where I defended men accused of colluding with Chinese organised crime networks. Any meetings or contact with these men might have posed conflicts in my research and I wanted to avoid this.

Conducting fieldwork in any country is challenging but conducting it in a country that is dominated by rival tribal and ethnic differences, languages and customs is even more so. As Sean Dorney (2000) put it, PNG is too complex to understand. Textbooks cannot really prepare a novice researcher, such as myself, for the arduous work required to be undertaken in the field. But where the fieldwork is conducted in rural and remote areas without electricity to power recording equipment, with vast distances to cover by a four-wheel-drive vehicle and with the majority of the local population being non-English speaking, it poses great challenges. This forces one to devise methods to overcome these hurdles to complete tasks that are taken for granted in any 'modern' setting.²²

Villagers that I conducted the formal interviews with knew basic English, although they were shy about writing anything, even if it was to sign their names. I did not fare well with the participants from the government agencies either, because of the unreliable telephone and internet coverage in the whole of New Ireland, and because some had rudimentary English. Hence, reliability of communication was not good and quite expensive for what is essentially in PNG an evolving telecommunications market. This ruled out online surveys or asking questions of randomly selected members of the public. Both these methods were inappropriate owing to the sensitivity of questions regarding organised crime in PNG. There was also the danger that participants could email copies of the questionnaires to others and jeopardise the confidentiality required for such research. Further, any research method that required reading or writing for

²² Twice my audio recorder needed batteries, which luckily I was supplied with as it would have been difficult to acquire new ones in the villages where there are no stores. It should be made clear that I conducted almost all of the fieldwork alone and though I was on a scholarship which provided a stipend, most of the costs incurred in this fieldwork were borne by me which meant I was conscious of looking for cheaper options. Travelling and working mostly alone meant I was very cautious in my movements and the items I carried, so as not to attract unwanted attention from criminals. So for example, I never carried a laptop, powerbank or other types of 'modern' equipment, except for a camera which I would keep in a bag until needed. I only had a small audio recorder (which can fit in a shirt pocket) to record the interviews and I used paper and pen to record notes. My mobile phone is a small flip-phone which also fits in a shirt pocket. In addition, the vehicles which I hired should not be confused as having the same standards one would expect when hiring a vehicle in a country such as Australia for example. Some of the vehicles had previously been in accidents but were panel beaten so the body appeared sound. I only hired from smaller operators since they accepted part payments knowing that I would return to New Ireland, to settle the rest of their invoice. Parts of the inside of the vehicles did not work, notably airconditioning, some of the power windows and usb charging points (so I would not have been able to charge a powerbank for example). A number of times, as I was driving, the vehicles stalled due to engine problems and at least for one of them, the four wheel drive gear did not work. At one time I was bogged in a major ditch almost running into a mangrove swamp (see photos at the end of the thesis). I ventured into the fieldwork, approaching people sometimes at random, without having had any introduction or recommendation from another person such as a mutual acquaintance. Especially when I arrived into villages, people were unaware of my purpose so I approached then casually but cautiously and explained. A person not from the area would not have been able to do this and would have needed at least, an intermediary to introduce him / her to the local villagers.

participation (such as a questionnaire), the internet or a telephone or mobile phone was not achievable.

1 *The False Start*

Having secured ethics approval for this study in late 2016, the fieldwork commenced in 2017. In *Street Corner Society*, Whyte (1943) discusses how he set about engaging with the rules and values and also setting up participant-observer research. In my roles as a defence lawyer, I was a participant in many criminal cases. As a researcher, I was a participant-observer during fieldwork. The main difference between both roles being that as defence lawyer, I was actively involved (interviewing the defendants, explaining and reasoning with them for plea bargaining, defending them in court and being their advocate).

I had worked for a number of years in PNG's justice system and sought to utilise the contacts I had built over that period, primarily in Port Moresby. I proceeded to make contact with police officers and line up interviews before I was able to meet with the Police Commissioner. The meeting with the Commissioner was essentially to brief him about the research and obtain his approval to proceed. This was particularly important at the time because there was a much-publicised fallout between the Police Commissioner and the Port Moresby-based police fraud squad. The fallout culminated in the arrest and suspension of senior officers in the fraud squad (Radio New Zealand 2016; Mera 2016). From 2014 to 2016 was a time of great tension in Port Moresby and police were aligning themselves with different factions (Radio New Zealand 2016). There were also cases of police officers intimidating and assaulting members of the fraud squad who were carrying out their duties to arrest high-profile suspects (The National 2014; Faiparik 2015; Post-Courier 2016). Apart from the fraud squad, I also intended to interview members of the Major Crimes Unit, the Transnational Crime Unit, INTERPOL's Port Moresby office and other units that deal with transnational organised crime in PNG. Based on my experiences, I knew that these units were the best placed to provide valuable first-hand data on Chinese criminal networks and their propensity to engage in illegal environmental schemes, such as the smuggling of exotic flora and fauna (Berry et al 2003; Jiao 2016). This initial meeting with the Commissioner was therefore to follow the police chain-of-command in order to prevent any misunderstanding.

On three occasions the Commissioner agreed to be interviewed; however, at the very last minute, the meetings were cancelled or simply did not eventuate. I was not advised of the cancellations, despite my confirming the particulars of the meetings prior to flying into Port Moresby. Throughout this time, I had already obtained verbal agreement from a number of policemen to be interviewed, including from the various units on which I intended to focus. However, the policemen were hesitant to be interviewed without me securing approval from the Commissioner's office.

The continuous cancellation of the meeting with the Commissioner was a great impediment to the fieldwork proceeding. I did not know the reason this was happening and whether it would change. By mid-2017, it became obvious that I would have great difficulty securing interviews if I waited for the Commissioner's schedule to meet me. So, based on this experience, I sought a variation to the original ethics approval. This variation was to dispense with the need to obtain approval from the heads of the various government bodies and to allow me to approach officers directly for interviews. I also added to the Ethics Modification, additional groups of customary landowners since it became apparent that this group would be the most affected by the scheme because it would be held on their land. I wanted to confirm if the landowners were receiving the benefits that they had been promised. With this change, I found it difficult to devise a set research methodology. On 1 October 2017, an Ethics Modification was lodged. On 19 October 2017, the Ethics Committee requested additional information, which was provided on 30 November 2017. The Modification Approval was granted on 1 December 2017. I then was able to approach police officers directly.

2 The Change in Direction

After the Ethics Modification was granted, the revised number of target participants to be interviewed was 10 law enforcement officers, 12 regulatory officers, 5 NGO representatives and 30 landowners. The landowner group was broken down into areas of relevance for the intended comparison study. So of the 30 landowners, I had planned to interview 10 landowners from REDD+ project areas or who were planning to venture in REDD+ (April Salumei, Kamula Doso, Central Suau, East Pangia and Oro Province), 10 landowners from areas affected by illegal logging (Oro Province and Kamula Doso) and 10 landowners from areas that had experienced carbon fraud (Oro Province and Kamula Doso). In this research, I have used pseudonyms for all interview participants, whose real names are available for verification, subject to approval from the Ethics

Committee. The identity information of all the participants is securely stored and this includes the photos of the participants, who gave their consent to be individually photographed. The use of the photographs also made it easier for me to recall and match the information to the faces of the interview participants.

Whyte (1943:279) wrote that ‘the researcher, like his informants, is a social animal’ and that an account of how the research was done, involves a personal account of how the researcher lived during the study period. Whyte (1943:280) also suggests that the real account of the methods, be given, instead of the ‘logical-intellectual’ process, stated in most literature on methods. Some of my personal accounts are given throughout this chapter, including my reasons for undertaking the fieldwork in the inductive approach. For example, regarding the variation grant for landowner interviews, the Ethics Committee was of the view that the *snowballing* technique would aid the research with regards to landowner participants. I had envisaged that this would be conducted by calling village meetings, preferably in the evening when the villagers would have returned to their hamlets from their days’ activities. I planned that, during the course of the meetings, I would explain the concept of REDD+ and the purpose of the research. I would then allow the villagers to ask questions. At the end of the discussion, I would ask the villagers for a show of hands to answer particular questions. I would then count the number of people in favour. The questions would be general in nature such as how many people understand the REDD+ concept, how many people were in favour of REDD+ after my explanation, how many people were aware of illegal logging operations and so on. However, once in the field, it transpired that *snowballing* was not practical and the events which led to this conclusion are discussed further below.

The instruments that were approved by the Ethics Committee to obtain informed consent from the participants were a Letter of Introduction, Information Sheet and Interview Consent Form.²³ I had two sets of these documents: one set was in the English language, and I translated the other set into the Tok-pidgin language, also known as Pidgin English. The Transcriber Confidentiality Agreement was also approved.

The Letter of Introduction was written for the government agencies and departments. For interviews with other target participants, I would only give the participants the

²³ Appendix 1: Interview Consent Forms.

Information Sheet and the Interview Consent Form. The informed consent was obtained first by explaining to participants the purpose of the research and providing the usual forewarning and their right to refuse to answer a question, or to skip a question. I would then go through the Information Sheet and the Consent Form and allow them to ask questions. Once they were satisfied, we would commence the interviews. The reduced number did not distract from the insightful views I gleaned from participants, particularly when I returned to them with their transcripts for verification. The second meeting sometimes allowed for longer informal discussions because we had become familiar with each other after the initial meeting. It became clear that the quantity of the data was not as important as the quality and veracity and ensuring the case study structure was viable. In addition to these approved documents, prior to the interviews commencing, I would also show the participants the PNG map where REDD+ pilot projects had been initiated (this map was obtained from the website of the CCDA).

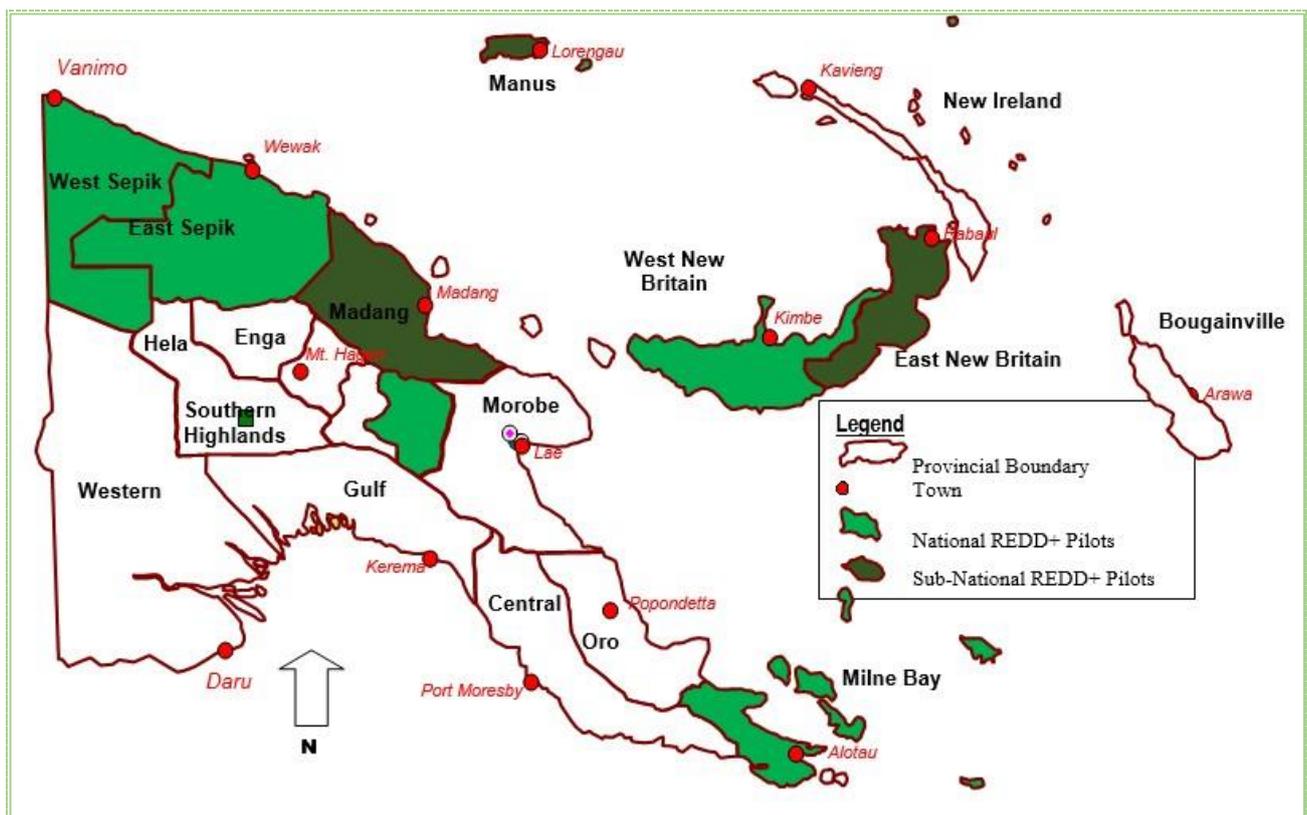


Figure 1: Map (shown to participants) of REDD+ project sites.²⁴

²⁴ Reproduced with permission. Source: CCDA website: <<http://www.cdda.gov.pg/about.html>>.

Although I did make the Information Sheet available for participants to keep, I found that not all the villagers wanted to keep the Information Sheet. A few of the formally employed participants elected to retain the Information Sheet. Regarding the villagers who can read Tok-pidgin, but did not want the Information Sheet, I assume they did not bother with this document because it contained too much information for their liking and they thought they would not require it for future reference. Those who were not fluent in English had no need for the document.

For the interviews conducted in English, the transcription was straightforward, but for those interviews conducted in Tok-pidgin, the transcribing could not be done by simply listening to the recording and then typing English. Instead I had to start typing in Tok Pisin, then to English. I was thus not transcribing immediately, but listening, forming the appropriate interpretation to ensure it corresponded to the English equivalent and then typing.²⁶ Though this option was an extremely long and drawn-out process, it served one very useful purpose of allowing me to review and listen to the words over and over again and thus helped to reinforce the evidence and key concepts that were emerging in the data.

B The Inductive Approach

Whyte (1943:283-285) wrote how he was able to overcome obstacles, criticism and changes in the planning and execution of his research. Similarly, I give my account here, of allowing the data to dictate the study. The change in direction and re-prioritising of interview participants meant I was relying more on word of mouth than I had initially anticipated. After realising that financial and time constraints would prevent me visiting all the originally intended areas of Oro, Kamula Doso, April Salumei, East Pangia and New Ireland, I readjusted my fieldwork plan to spend half of my time in New Ireland interviewing landowners and concentrate on the organised crime aspect in Port Moresby. Port Moresby was selected as a focus of this study based on the reported

²⁶ I conducted all the face-to-face interviews and typed the transcripts, even though I had secured ethics approval to engage a transcriber for the latter task. By the time I commenced the fieldwork, the transcriber I had originally engaged had resigned and I was posed with a dilemma. The data safety protocol that was approved by the Ethics Committee required the transcriber to agree to adhere to certain methods in the office environment. However, since the transcriber had resigned and changed employment, I was faced with two choices: one, to ask the original secretary/transcriber to transcribe in her spare time, or two, to transcribe the recordings myself, knowing that I could ensure the data would be protected. I chose the latter. This increased the workload from what I had initially anticipated.

high instances of Chinese/Asian organised crime activity, while New Ireland was selected based on its long history of logging deviance.

However, the past reaction I had received from the police hierarchy and the desire to avoid any conflict with law enforcement led me to consider researching the organised crime presence in an outer province. It made sense to conduct all the fieldwork in New Ireland Province. This change also safeguarded me by not upsetting those in the police hierarchy if (or once) they realised that I no longer required their consent to talk to their officers. Since the main target group was now in a different setting, I utilised my experience and heritage in approaching prospective participants for interview. For the landowners, I ensured I was attuned to the customary and traditional ways of the landowner participants in order to understand their answers and their reactions when I discussed the research with them. I would observe, ask, then follow those leads. Persons whom I viewed as potential candidates for interviews had some connection with logging; a run-in or conflict with the police regarding anti-logging issues, such as protests against the Asian logging company; or a connection with a REDD+ project, either directly or through having heard of it. None of these criteria were gained from books but from previous experience, proving that out in the field one must be prepared to change research methods to advance the project. For instance, the work in the Mandak area of New Ireland (further explained below), while providing clear access to potential participants, still necessitated a great degree of caution in approaching them. For example, Bana of Katedan village, knowing that I am a lawyer, asked for my advice on certain aspects of logging, and I would give insights and then enquire about his views. Once I was able to understand where he stood regarding logging, I then asked for an interview, which he obliged.²⁷

For the policemen in New Ireland Province, I established contact with the primary senior police officer in the province and thereafter I was able to comfortably interview his officers. I also took this approach knowing I will return to PNG after I complete my studies and interact with police in my daily work as a lawyer; I therefore did not want to aggravate relationships with law enforcement, even though it was in an outer province away from Port Moresby.

²⁷ Interview with Bana (Gavara-Nanu, Katedan village, 2018).

What then led me to decide to concentrate on New Ireland when there were four other documented cases of possible carbon fraud in PNG, as covered in Chapter IV? Suspected cases of carbon fraud had been documented in the Oro Province, the East Pangia area of the Southern Highlands Province, the Kamula Doso area of the Western Province and April Salumei. Initially, I had wanted to go to all these areas and conduct fieldwork and then conduct a comparative study of these areas so that it could be argued that the data gave a reliable and true representation of PNG's REDD+ schemes. However, the change in direction, scarce resources and the remaining time left for the project meant that I had to reassess the intended province of concentration. I then chose New Ireland based on a number of factors. The first was that it was the first province in PNG in which a REDD+ pilot project had been established. This was at the Yak Valley in the south of the island, but the project was later abandoned (Dept of National Planning 2005). I therefore wanted to establish why the project was abandoned and whether any new projects had been initiated. The second factor was that the island has had a history of illegal logging practices (Barnett 1989), so I wanted to determine whether there was organised crime in the logging industry on the island and if the organised crime networks might venture into the REDD+ schemes there. Thirdly, I wanted to report empirically on New Ireland's REDD+ and logging scene, which has been neglected in the academic literature since the 1980s. The other four provinces mentioned above have been the subject of various studies (and documentaries) about logging and REDD+ (Filer 1997; Ombudsman Commission 2002; Filer and Wood 2012; Filer 2015; Gabriel and Wood 2015; Wood 2015; Gabriel et al 2017; Global Witness 2018). So, I was going into New Ireland without much literature to guide me, but there was some basis to my decision to go there. It was chosen based on the scant literature available concerning logging practices and REDD+ projects in the province, but more so because of a previous significant report on logging and the perceived likelihood of Asian organised crime involvement. This report was the product of a Commission of Inquiry (COI) into PNG's logging industry. The COI was headed by a retired Australian judge, Tos Barnett. Barnett chose to hold part of the inquiry in New Ireland because, as he stated: 'New Ireland ... had been subjected to heavy logging for a long time and because the smell of corruption and transfer pricing seemed to be coming most strongly from that province' (Barnett 1989:9).

Since the 1989 COI, there has not been any other type of official or government-sanctioned investigation into PNG's logging industry to determine the state of affairs.

The Barnett COI found that there was rampant corruption by the logging industry in New Ireland through illegitimate corrupt networks between the heads of Asian logging companies, New Ireland Provincial Government heads, and prominent Asian businessmen based in PNG. This drew the research project to that area in order to investigate the logging industry and assess whether the state of affairs had changed since the 1989 Barnett COI. If not, was there any evidence of organised crime apparent in the industry? It was hoped that the province could provide an insight into whether logging companies, whether through legitimate or illegitimate means, might exploit the REDD+ scheme.

My initial trips to New Ireland mainly involved observation, and I allowed the meetings with the initial participants (and the yielded results) to dictate the eventual inductive change in direction. By 2018, I had proceeded to interview junior ranking officers in the police force. Lower ranking officers, especially non-commissioned officers, are at the forefront of crime fighting (prevention and detection) and deal with organised crime directly; thus, they are able to contribute more to the research than their superiors based on their on-the-ground experiences. By 2018, an inductive approach to the research had evolved (Yin 2014) and been adopted almost by accident. Prior to reaching this stage, the project proceeded with a vast absence of information, seeking to prove (or disprove, depending on the evidence) INTERPOL's hypothetical warnings of fraud, which were not supported by real fieldwork of any kind. Much of what is written here is also based on what I observed in the field.

When conducting any type of fieldwork over a prolonged time period, there is a danger of the researcher becoming immersed in the lives of the participants and thus the researcher might become biased towards the participants' views regarding the research topic (Whyte 1943; Yin 2014:76). I had to be careful to take note of this, not just because of the sustained period of research, but also because I am from the area and it is only natural for someone to become attached to the research and feel pity for the plight of his or her own people. Not warning oneself about possible prejudice can be detrimental to the entire project and I found that a daily reminder every morning of the research aim was essential to place the work in perspective and not be swayed by the personal opinions of informants.²⁸ In some respects, this approach was an obvious

²⁸ Many times however, I did find myself sympathetic to hearing the daily struggles the villagers faced against the logging companies and their attempts to retain their way of life, especially as this was seen to be an incentive for signing up for REDD+.

disadvantage for a researcher from a country as volatile as PNG to conduct criminology studies knowing that they must be sensitive to potential danger.

Logistical arrangements were important, especially the vehicle since I frequently drove alone on the highway for long distances and over difficult rural terrain. The four-wheel-drive vehicle that I picked up each time was pre-arranged and serviced. The compulsory items I took with me were a torch, a pre-paid mobile phone with additional pre-paid cards, water and bedding. These arrangements were always settled before I flew over to New Ireland to maximise my time in the field in those spaces of time. In the next section of the chapter, I provide a brief introduction to PNG, before moving on to New Ireland.

C Papua New Guinea

PNG is known as the 'Land of the Unexpected', a tag which rings true for both good and bad reasons. The nation continues to be entrenched in tribal beliefs and practices, and it is estimated that around 95% of the population live in rural areas (Laurance et al 2012). It has over 800 languages, the most in any country in the world. It occupies the eastern half of the island of New Guinea. West Papua, governed by Indonesia, occupies the other half of the island. Together they possess the world's third largest rainforest (covering a land mass of 28 million hectares) after the Amazon and the Congo (Park 1992:5; Shearman and Bryan 2011; Dix 2011).

Formerly a territory of Australia, after gaining independence on 16 September 1975, PNG had a promising start at nationhood. Since then, the country has been wracked with controversy, including votes of no confidence in the national government of the day, a 10-year civil war on the island of Bougainville, continuous nationwide law and order problems, and governance problems stifling aims for economic independence (Dorney 2000; Lakhani and Willman 2014). The government structure is based on the Westminster system and adopted common law, with the Queen represented by the Governor-General as the head of state. It is made up of 22 provinces, with most of its pre-independence laws derived from Queensland, Australia.

PNG has one of the world's highest population growth rates (2.3% per annum in 2007 of a little over 8 million people (PNG National Statistical Office). According to the UN, this growth explosion places a strain on the country's resources (UNESCO 2007). Although

PNG's land mass is some 460,000 square kilometres, its population is concentrated in the flat rural areas both on the coast and in the Highlands. However, a great proportion of the population in the urban areas lives in poverty, while those in the rural areas continue to live on subsistence farming, hunting, fishing and gathering, just as their forefathers did before independence. Infrastructure development is concentrated in the urban areas, especially the capital, Port Moresby. Much of the development is donor funded, especially from Australia, and PNG is one of the main recipients of Australian aid (DFAT undated).

The country has very fertile land, but the agricultural sector has been given little attention since independence (World Bank 2019). Though past national governments and the current government have announced that they will prioritise agriculture, this has not eventuated. It has vast natural reserves and its economy is anchored on the resource sector (Avalos et al 2013; Flanagan and Fletcher 2018; World Bank 2019). Holding an abundance of natural resources, PNG is wracked by the 'resource curse' that plagues many developing nations (Bringezu and Bleischwitz 2011; Laurance et al 2012; Avalos et al 2013; Flanagan and Fletcher 2018). Noting that non-renewable resources will eventually run out, experts have called on PNG's government to focus on other economic sectors (Flanagan and Fletcher 2018; World Bank 2019). One other such route to economic growth could be through REDD+. Satisfying the desire of developed countries to continue their business-as-usual, high-emissions industrial activities, while progressing the desire of developing nations to develop, places REDD+ on a popular agenda for conservation.

The land tenure system is extremely complex in PNG. The country recognises two types of land ownership under its *Constitution*: state-owned land (predominantly located in the urban areas) and customary-owned land (rural areas);²⁹ the latter comprises almost 90% of PNG's land area. The customary land is predominantly communally owned, so that different families belonging to the same clan, or tribe, make use of the land through subsistence farming, gathering of materials for the construction of houses and other general village uses.³⁰ Formal recognition of customary land ownership has been proposed through the registration of Incorporated Land Groups (ILGs), which will entrust legal authority in respective ILGs to use their land for commercial purposes (see

²⁹ *Land Act 1996* s 4.

³⁰ For example, interview with Bana (Gavara-Nanu, Katedan village, 2018).

for example Chand and Ondopa 2014). This suggestion has also been made to allow forest communities to be involved in the REDD+ process (Venuti 2014). However, history has shown that ILGs do not guarantee inclusion of all landowners and the PNG courts are plagued with countless disputes regarding the legitimacy of ILGs and whether they list the correct landowners.³¹ Examples of abuse of the ILG system include cases of ILGs listing children and deceased villagers on their clan sheet in order to boost their clan numbers on paper to achieve registration (Karigawa, Babarinde and Holis 2016). It has been argued that the ILG system has repressed the rights of landowners as well as facilitating other fraudulent actions (Avosa 2011; Act Now 2018). The process is substantially flawed, with instances of bribes paid to government workers to include fast-track issuance of certificates. Non-consultation of other landowners to confirm customary boundaries and other baseline data means that ghost names are also placed on a clan's register, or people who belong to a different clan are placed on the register without their knowledge (Avosa 2011). Gabriel et al (2017:213) examined 29 proposed oil palm projects that are associated with 51 separate Special Agriculture Business Lease (SABL) agreements in 10 provinces. They uncovered attempts by logging companies and landowners to keep involvement in SABLs secret through frequent changes in agreements and incorporation of various fake ILGs to muddy the trail. Therefore, there is no guarantee that landowners will be included in the REDD+ process if they form ILGs. This ILG complication has also been the primary reason behind the ability of foreign corporations to illegally log areas with impunity, through the abuse of Sections 11 and 102 of the *Land Act 1996* (Act Now 2018). Dubious ILGs are established and provide 'paper' consent for logging while the genuine landowners have not been consulted and are unaware of the approval for logging. This problem was highlighted during my fieldwork, as expounded in Chapter VI.

1 *Sentral Niu Ailan: A Single Case Study*

Pre-independence, New Ireland was part of German New Guinea and was then called Neu Mecklenburg. The province comprises one main island that is 360 kilometres long and several outer islands. The provincial town is Kavieng (pre-independence: Kawieng). It is located at the north-west tip of the island. Namatanai is the smaller town

³¹ The Local Land Court and the Provincial Land Court have exclusive jurisdiction to hear cases concerning ownership of customary land. Reported cases can be found on the Paclii website <<http://www.paclii.org/countries/pg.html>>.

located in the south-east of the island. New Ireland is around a two-hour flight from Port Moresby; at least one flight arrives every day in the afternoon from Port Moresby to Kavieng and returns early the following morning. Travel between the islands is by dinghy. The population on the main island is spread along the east and west coasts, with the Lelet area being the only significantly populated inland area of the main island. Originally, most villagers lived inland but the construction of roads along the coast naturally drew villagers to relocate near the road to access government services such as aid posts and schools (Jessep 1977). The colonial administration at the time also encouraged people to move to the coast. The province was discovered around the late 1800s by the Germans but seems to have been mapped in 1616 by the Dutch. Coconuts were first planted by the Germans and were the main cash crop before the planting of cacao. After independence, commercial logging commenced in various parts of the islands. Since then, the province has accommodated logging operations. Its economy is based on the cash crop of copra, oil palm, cacao and fisheries. It also receives taxes and royalties from hosting two world-class gold mines, the Lihir Gold Mine and Simberi Gold Mine, both of which are listed on the Australian Stock Exchange.

New Ireland is represented in the National Parliament by three parliamentary members. The island is divided into two electorates, Kavieng and Namatanai. The area to the north of the main island, including the smaller northern islands, is in the Kavieng electorate. The central part of the island onwards to the south, including all the smaller islands, is in the Namatanai electorate. Central New Ireland is located in the Namatanai electorate. There is a Governor of the province, as there are in all the other provinces. A Governor cannot hold a government ministry. New Ireland has many legal logging operations, but also reported illegal operations in the 1980s (Barnett 1989). The New Ireland villages that I visited during the fieldwork as data collections sites are those identified on the map.

Over a two-year period, from 2017 to early 2019. I conducted in-depth, face-to-face interviews with customary landowners, members of the PNG police and forestry officers based in the New Ireland Province, with one interview conducted in Port Moresby. A total of 29 individuals were interviewed face-to-face. A great many more villagers were engaged in informal discussions and observations. I was met with both enthusiasm and suspicion (from the people I approached to take part in interviews) at almost the same level. The informal observations also provided the added benefit of gaining access to real-life situations without unnecessary attention, so that I could observe situations

without creating same. The findings of the fieldwork and their significance are adduced under Chapter VI. This is done by presenting the data under the years collected, namely 2017, 2018 and 2019. The following map outlines the entire New Ireland Province and its district boundaries. The fieldwork was conducted in the middle of the island, being the Sentral Niu Ailan area.



Figure 2: Map of New Ireland LLGs.³²

Once the fieldwork had commenced, the problems of participant availability arose. This required refining my research techniques in the field. I had strived to ensure I reached my target participant number, but after experiencing difficulties I was forced to re-think my approach and methods. At first, I had only intended to interview landowners in the Barok-speaking area of the island, which has experienced extensive logging over the

³² Political Map of New Ireland Province by Alaisa, created 1 January, 2007, Wikimedia Commons <https://en.wikipedia.org/wiki/New_Ireland_Province#/media/File:Nipdistricts.svg>.

years, and which continues now. However, once the fieldwork had commenced, I realised that people in other areas around central New Ireland held similar views against logging and that seeking them out might add to the data. I therefore expanded the study area to include villages within the neighbouring Mandak-speaking area, which are located inside the logging concession and where there were reports of REDD+ project activities. Initially, I planned to limit the additional work area to villages along the east coast Mandak area, because of good road accessibility. However, it then expanded to the west coast Mandak area in 2018 after I met with villagers who confirmed that they were involved in a carbon trading project. The following Map 3 shows the villages within the Sentral Niu Ailan LLG, where the fieldwork was conducted.

The names of the villages which are underlined with the dark green marker, are the 32 village I visited and collected data. Along the east coast, Lamasong village is the start of the Mandak speaking villages, which continues until Kanam village.³³ Along the west coast, Bimun village is where Mandak speaking commences, until Kalagunan village.³⁴ The east coast villages of Lamasong, Konos and Pinikidu speak a slightly different dialect and are the Northern Mandak (Clay 1977). After Kanam on the east coast and Kalagunan on the west coast, commences the Barok speaking area, which eventually merges with the Patpatar speaking area. Lakurumau is within the Nalik speaking area and is not shown on the map which only shows most of the Sentral Niu Ailan Rural LLG area as marked out on Map 2.

³³ The villages I collected data from along the east coast were Lamasong, Konos, Konos Government Station, Pinikidu, Pinikidu Plantation, Lavatbura, Katedan, Lambuso, Malom No. 1, Malom No. 2, Lasigi, Kantubu, Pam, Katangan, Bulu, Lokon Plantation, Kanam, Karu, Belik and Bakan.

³⁴ The west coast villages I collected data from were Kono, Kalagunan, Kamalabuo, Dampet, Danu, Danu No. 1, Messi No. 1, Messi No. 2, Kanamaradan, Kaluan No. 2 and Ugana.

In undertaking this project, it was interesting to see the extent to which the participants were aware of world events and the issue of climate change. We read about the effect of climate change on the environment, especially in developing nations, but most if not all had no real understanding of world events, which held no significance in their lives.

In New Ireland, like most of the New Guinea islands, children inherit ownership of the land through the women (matrilineal society). So, children always belong to the mother's clan and are likely to be closer to their mother's people. It is not uncommon for them to lose contact with their father's relatives over the years. As with other parts of PNG, the land and anything on top of it belongs to the clan. This also extends to everything below, and this is evidenced in mining, oil and gas, and even the sea. The Western perception is that no-one can own the land except the state. This was imposed on the people by the colonisers when they first arrived. This has caused immense problems for the state where land that was previously thought *terra nullius* was in actual fact owned by the nationals. A clan's link to and ownership of land is passed down and this is recognised by other clans. Where a dispute over ownership arises, the dispute is brought before 'Line', the weekly meeting, for discussion and possible settlement. The Line is facilitated by recognised *bigmen* and always held in the open, usually in a central part of a village. If there is no resolution the matter is filed with the Local Land Court. This court does not follow the rules of evidence or the formalities observed in the higher courts.³⁶

Traditional ownership of the land denotes all the vegetation on that land. In the Mandak area and most of New Ireland, this involves a *masalai* (Tok Pisin: spirit). This *masalai* is both in the deep bush as well as in the ocean in stones and rock near the reef. Each clan has their own legend regarding how the *masalai* evolved. The clan land is not held only for the exclusive use of the clan. If another villager from a different clan wants to clear a spot to develop their garden, they usually need only ask a recognised head of the clan, who is more than likely to allow it. This might be done with conditions such as sharing some of the garden produce, or there might not be any conditions but only the implied expectation that the person making the garden will reciprocate such goodwill back to the clan in the future, perhaps by contributing to a feast. Planting garden produce such as sweet potatoes, taro and bananas is acceptable. But planting cash crops, specifically coconut, is not permitted because the coconut is a long-term crop, so

³⁶ *Land Disputes Settlement Act 1975*, s 35 (1).

this is seen as establishing ownership of the land (example Jessep 1977). Whilst much of the cultural discussion in this chapter is based on my knowledge and experience, the pioneering anthropological studies of Clay (1977) (who was based in Pinikidu village) and Sykes (1995, 1997, 2007) (who stayed in the Lelet plateau area) and the land tenure studies of Jessep (1977) (who was based in Kanam village) greatly assisted in reinforcing and the discussion and revealing past important practices.

2 Challenges in the Fieldwork

This brief background to PNG and the New Ireland Province helps to provide an understanding of how the fieldwork was conducted in the country and some of the cultural sensitivities the work encountered, especially when I was engaged in interviews. I attempted to obtain views with an equitable distribution of males and females. But this was not readily possible for a topic with which many people are not familiar. With regards to landowners, I sought views from people from different areas, which meant that the ratio of males to females would not necessarily be equal when very few people had knowledge of REDD+. But this ensured that the participants were not just key *bigmen*, but women and ordinary villagers too, so that I was able to glean a range of views from people of varying status during discussions.

When engaged in informal discussions, the women were quite open to discussing my research and expressing their views. This was particularly the case with the older women, or those who would refer to me as a subservient relation. So even if a woman was in the same age group as me, or younger, if she referred to me as 'son', 'nephew' or 'grandson', she would willingly and attentively engage in discussion. This is in keeping with the Mandak relational structure accorded to anyone who comes into the society (Clay 1977). The same is also followed in the Barok area. How one relates to another at first meeting is quickly identified by existing ties. If one knows the existing ties of a person, it allows each to work out how they will address each other. This is important to establish because to address a person directly or by name can be disrespectful, which will result in a breach of customary law and bring shame to both parties. It will then require some type of compensation to be paid by the offender to remove the shame (either cash, shell money, fresh garden produce, or all of these, depending on the severity of the shame).

For example, on my stops to speak to villagers, I would usually approach men or boys and greet them. The discussions were always amicable, spoken in Tok Pisin and commenced as general conversations regarding anything I sought to raise. I would then be asked where I was from. Even though I am from New Ireland, I am very light skinned, being of mixed parentage and part Caucasian. After identifying my village, someone would inevitably ask, 'So you are related to so-and-so?' or 'Would you know so-and-so?', and so on. I would answer, for example, 'Yes, he is my Tata' (title for a mother's brother) or 'Yes, she is my Pupu' (title for a grandparent). From these answers the relational ties would be established and someone would say, for example, 'Oh, your Tata is my brother', and thereafter that person would address and regard me as a nephew since my own Tata addresses me as his or her nephew.³⁷ Sometimes the relational tie would prevent discussion from occurring with females. A male cannot talk directly with his Tata's wife (*nasong*) or his Tata's daughter (*koko*) or his sister (*mimin*). Though with regards to *mimins*, depending on the familiarity of a male with his *mimin*, it would be permissible.

When discussions with women led to formal recorded interviews, the women were not as vocal as during the informal discussions. I assume this was because they were aware that they were being audio recorded and did not want to provide information that they feared might be incorrect, despite my assurances to them to be frank with their answers and not to be shy. I did not interview female participants alone, for two reasons. The first was to allay any cultural inappropriateness that might be perceived by other villagers, particularly their male relations, which might then place me in a compromising or dangerous situation. The second reason was to try to ensure the women were comfortable answering my questions by having someone else with them to assure them during a process that, for almost all of them, was their first experience of this type of audio-recorded, formal interview.

The biggest hurdle was that I worked alone and was therefore not able to cover a greater distance in New Ireland to interview more people. In particular, I had hoped to reach the Wettin Valley and interview villagers there regarding the initial REDD project, which was discontinued; however, I did not have enough funds and logistics to arrange that trip. Working alone also meant that most times I travelled alone, sometimes driving

³⁷ Note, the term 'Tata' is used by both a nephew and niece to their mother's brother. It is also used by the mother's brother to refer to his nephew or niece. There is no distinction in gender.

late at night to arrive at the next village. A great advantage to me is that I am from PNG and knew the risks in certain areas in the field beforehand, and therefore I was able to avoid them. This was especially so with safety issues. In one instance, after returning from Kavieng and while transiting through Port Moresby, I observed I was being followed at the airport and took precautions. While this has happened to me throughout my life in PNG, this instance was important for my research because the bag I was carrying contained my laptop, flash drives and audio recorder holding the interviews. If the bag had been stolen, I would have lost a great deal of data, even though I did have a backup on a hard drive for some of the evidence. The small things that are noticeable by someone who has grown up in PNG can help with safety in the long run.



Picture 1: Westcoast road, 2019



Picture 2: East coast-west coast road, Lambuso route, 2019



Picture 3: East coast, Barok REDD+ area, 2019

This knowledge is valuable when undertaking this type of work. I continue to go back to my villages and understand what it is like to live in the rural area where the forest and land is one's identity. In Port Moresby, I have fought on the streets, I have been stabbed by criminals and I continue to deal with the difficult law and order issues every other national faces in PNG. Such knowledge and experience have helped place me in a position to determine whether the REDD+ scheme is positively affecting the PNG communities and what problems carbon fraud might create. I am familiar with the social and traditional conflicts, including through having worked in a government service that continues to see corruption as a norm, rather than an offence, and that also helps me determine the impact these factors will have on the research.

Of the 29 people who were formally interviewed, four were women. Three of the four women were villagers and resided in their respective villages, and formal interviews took place with them in the company of their family member. The fourth woman was an employee of a Kavieng-based NGO and, being a researcher herself, she was familiar with these types of interviews. So, the interview was conducted alone at her office, in keeping with confidentiality requirements.



Picture 4: Karu village, east coast (data collection site), 2019

Table 1: Female key participants with accompanying relative.³⁸

Category	Venue	Accompanying family member
Villager	Dampet village, west coast	Elder brother
Villager	Pinikidu village, east coast	Husband
Villager	Karu village, east coast	Mother-in-law
NGO	Kavieng office	Not applicable

This type of fieldwork resulted in an inadvertent collection of data showing the *then* and *now* knowledge of landowners in interviews from 2017 to 2019. This was not the original intention; however, a mini-longitudinal study had evolved (Yin 2014:53). This was particularly so in the case of traditional landowners. At the commencement of informal discussions with local landowners and even the New Ireland police in 2017, the majority of the people I spoke with had not heard of the terms ‘REDD+’ and ‘carbon trading’. But by mid-2018, the topic of ‘carbon trading’ was being loosely discussed in certain villages along the central east coast. By early 2019, I found that when I broached the subject, many people had heard of the term ‘carbon trading’ though they did not know exactly how the scheme worked. I formed the strong impression that it was more widely discussed in 2019 than when I first started the fieldwork in 2017. However, the term ‘REDD+’ was still not known or used in discussions throughout this time.

The disadvantage of organising face-to-face interviews was mainly that it took longer to organise. This included travelling to villages to meet people who were willing to talk with me. However, if they were not there, then I had to wait for them. Time, therefore, did not permit me the opportunity to conduct more interviews. However, the advantages far outweighed the frustration associated with obtaining the interviews. The face-to-face interview was necessary firstly to establish an understanding of REDD+ and secondly to gain trust to be able to discuss a controversial subject that also sometimes involved questions regarding fraud and criminality, issues that are difficult to broach for discussion with any type of target participants.

The pre-interview explanations essentially covered three areas: (1) climate change, (2) the REDD+ concept and (3) organised crime. The explanations were necessary before

³⁸ Throughout the thesis, the blue-shaded tables display data sourced from my original fieldwork. Whilst data collated from secondary sources are displayed in green-shaded tables.

securing the participants' consent to be formally interviewed. It was not unusual for explanations to take a long time. With regards to landowners in particular, the explanations might be conducted over a few days to allow part of the first explanation to be comprehended by the participants. This was certainly the case in 2017 and 2018. Questions posed to the key informants, especially the police, concerned Chinese organised crime syndicates' involvement and determining whether there was any nexus between those involved in the illegal logging industry and REDD+.

Another issue that became apparent during the interviews was that villagers have different levels of allegiance to the companies conducting logging in the area. Since my work also touched upon logging and its possible illicit link to REDD+, I had to be careful in the manner I questioned and observed villagers. Sometimes villagers would advise me that they were against logging, but then later I would hear that the same villagers had signed consent forms for more logging to take place on their traditional land. This contradictory stance by the landowners required an ongoing assessment of the situation to ensure I was not offending villagers. In particular, I had to ensure I was able to assess where they stood because I wanted to avoid them making negative comments about the research to other villagers or notifying the Asian loggers. I formed the view that not engaging the villagers in a snowballing method was the right decision because of the difficulty of asking sensitive questions in an open forum, which meant villagers would openly show their allegiance and risk personal rebukes or attacks from other villagers. It could perhaps be done with the assistance of a group of researchers, but a single novice researcher would find it difficult to conduct and manage.

After transcribing the interviews, I then took the transcripts back with me to New Ireland, located the participants and secured their signatures on the transcripts and the Consent Form to confirm that they agreed with the contents of the transcript.³⁹ Meeting again, there was some familiarity with participant(s), who were more relaxed when I provided the transcript for their perusal, and this was followed by sharing and chewing of betel

³⁹ I did not realise that this process was not necessary. I had wrongly assumed all participants must be afforded the opportunity to read and then sign their transcripts as part of the verification process to satisfy ethical requirements. This wrongful assumption was due to my years of training and experience as a criminal lawyer, where interviews are concluded with the accused asked to sign their transcript after reading it and if they agree with it. Gaining the participants' signatures was tiring but it provided the opportunity to meet again, engage in more discussion and obtain further insights that had not been divulged in the first interview.

nut.⁴⁰ This created a relaxed atmosphere on subsequent visits, and informal meetings without recording equipment sometimes resulted in new information being extracted. This had the added benefit of extracting information that might not have been gleaned if I had strived to interview a higher number of participants and not bothered to return to speak to them a second time. It was through this method that I held discussions that helped uncover important points in the research. Villagers in particular appeared to appreciate that I had kept my word and made the effort to drive back to their village with their transcript, and so they were only too happy to talk to me in general. Most villagers spoke and understood rudimentary English, so when the typed transcripts were presented to them to review, they did not really bother to read them and quickly signed their Consent Form and the transcript, confirming that they had read the transcript. This was not the case though for the NGO representatives, police and other formally employed participants, who took their time to read through their transcripts before signing.

Discussions and interviews even took place in the vehicle I was driving. As evidenced in Table 13 (Interviews in 2018), of the 29 formally recorded interviews conducted, six were recorded in the vehicle. Five of these interviews occurred while the vehicle was stationary, while one interview was conducted while the vehicle was moving. With villagers and those in the rural areas, this was sometimes the only opportunity I had to interview them, and I did not want to miss the opportunity so I used the vehicle as the interview area. To set a date and time with the villagers would be practically impossible, or very difficult to keep to, because the villagers are mobile. They go to their gardens and attend to their village life. Unlike meeting participants in the city, just to reach participants in their villages was a task. Also, the inside of the vehicle provided privacy to conduct the interviews away from the earshot of villagers passing by. For informal discussions, villagers who caught a lift with me always provided some interesting points of discussion.

I started with the ambitious target of almost 60 participants, but by the conclusion of the fieldwork I had formally interviewed 29 adults who had given their informed consent to be interviewed. The following Table 2 lists the details of the participants.

⁴⁰ Betelnut is a small nut grown on the coast of PNG. One must husk the skin and then chew the small nut inside with a mustard stick and lime. It produces a reddish stain in the mouth and the contents are spat out. It helps to keep one awake and alert.

Table 2: Details of participant numbers

Government departments & agencies (4)	Civil society (3)	Participants from east coast villages (9)	Participants from west coast villages (6)	Main villages where I had informal discussions with villagers
Police	Caritas (Catholic Church)	Katedan	Konu	Silom
National Forest Authority	Wildlife Conservation Society	Malom	Dampet	Malom
Office of the Public Prosecutor	West Coast Development Authority	Lasigi	Kanemaradan	Katedan
Sentral Niu Ailan Local-Level Government		Konos	Kamalobo	Pinikidu
		Silom	Danu	
		Karu	Lelet (inland area)	
		Pinikidu		
		Lavatbura		
Sopau				

I curtailed the target group, particularly when it became clear that many of the target participants I hoped to interview were likely involved in some level of corruption in the logging industry and that attempting to interview them might increase the risk to me. This risk might not be apparent at first, but as I am returning to PNG after completing my studies, this possibility is best avoided.

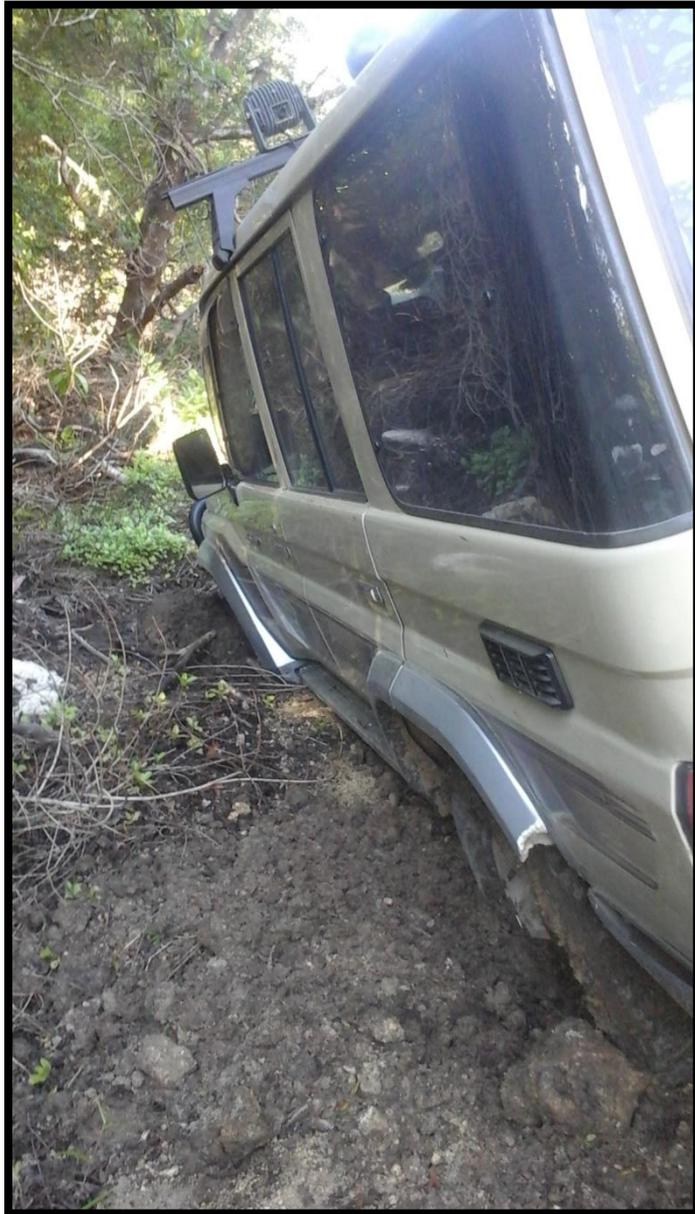
Regarding the interviews, it was not purely a matter of conducting them. The journey to reach to a village was tiring at times. In some instances, it necessitated driving long distances over unsealed roads, late into the afternoon and night and then driving back again to my accommodation.⁴¹ Most times when I travelled alone, I would pick up

⁴¹ My accommodation varied, depending on the sites I visited. Almost always, after conducting interviews, I drove back to my village, Pinikidu. Safety was the main reason for driving back and sleeping there. It was not just safety for myself, but for the hire car and my bags, which I always left locked in the vehicle, overnight, only because it was easier to drive in the morning, rather than packing up again and taking the bags to the vehicle. Sometimes however, I would stay at guest houses, if driving back to my village was too far and not wise, especially if it was late at night and if it was raining heavily. I did not sleep at the sites I visited because there had not been any prior arrangement, I did not want to impose on the villagers and because, I was wary of sleeping in an unfamiliar place with the hire vehicle parked outside. I did not take out any insurance so if the vehicle was broken into whilst I slept, I would be liable to pay for the damage.

villagers on the side of the road. This served three purposes. The first was plainly to assist people in need of transport in rural areas who might wait for hours before another vehicle passes. The second purpose was to talk and obtain their views on the topics and the third was to establish contact with people in the area. In the event I might need assistance, such as for a vehicle breakdown, I could call upon those whom I had assisted to reciprocate. Thankfully this was not necessary because all my trips were carefully planned and I always made contingencies for possible worst-case scenarios. I would take extra fuel and cash with me and lollies for the village children, which usually opened doors for friendly discussion with their parents and other adults. The more interviews I conducted, the better I became at articulating the key concepts, though being the only researcher, it was still tiring. Towards the end of my fieldwork time, word of my research seemed to have spread in the area where I was travelling. For example, I would be asked my opinion of certain aspects concerning climate change and carbon trading. This change of events is highlighted in Chapter VI under the 2019 fieldwork findings. It highlights the dramatic change in information dissemination among the villagers in the Sentral Niu Ailan Local-Level Government (LLG) area and how participant observation over a three years, allowed me to realise this change (as done by Whyte (1943)).



Picture 5: Accessing logging road, Barok area, 2019



Picture 6: An example of fieldwork difficulties, 2018



Picture 7: Negotiating fieldwork challenges, 2018

Being also part Mandak, I was able to discuss and make comments in the Mandak language, and this helped to settle some nervousness for the participants, knowing that they had their own *wantok* conducting the interview. But this was not always the case because the area towards the end of New Ireland comprises completely different language groups and so some discussion had to take place to establish trust and understanding with the participants. Because of the language difference, on at least two occasions I sought the assistance of a male relative who is from the west coast area and fluent in the local language. I sought him out specifically because I knew he was an open person, who approaches people in a friendly manner, is knowledgeable of relational and kinship ties in the various villages, practical with repairing vehicles and physically able to assist me in case of vehicle problems. While New Ireland is generally a peaceful province, there have been many horrific murders there and, as with any place, it is best to exercise caution when travelling.⁴² Since I wanted to cover a large area, the work sometimes necessitated that I drive throughout the night to various destinations. The highway is a rural highway with no street lights, and stones are thrown at vehicles, particularly on Fridays and Saturdays, which are the pay days for workers in the oil palm plantations. This usually occurs when groups of people, typically male

⁴² On the occasions I was conducting fieldwork, there were a number of armed robberies in Kavieng and Namatanai, two horrific murders and one prison escape from the Kavieng Correctional Institution.

youths, start the weekend by consuming alcohol and distilled home brew. One policeman commented to me that stone throwing at moving vehicles by drunken youths is extremely prevalent in the Lakurumau area.⁴³ He explained that the windscreen of the only police vehicle for the Lakurumau Police Station had been extensively damaged on numerous occasions by stone throwing drunkards along the highway. This was one of the many potential hazards I faced during the fieldwork when driving from village to village; however, thankfully, this did not occur in my case.

I travelled between villages by driving Toyota Landcruiser four-wheel-drive vehicles. This was done so that I was able to obtain views from different households from different villages to assess their views on logging and REDD+ and explore any possible correlation. Along the east coast of New Ireland, the road is completely sealed, but travelling from the east coast to the west coast, the road is rough, unsealed, rocky and in some parts steep, and it requires a four-wheel drive to pass through. The west coast area is completely unsealed and has few bridges. Many previous bridges have been washed away by heavy rains and debris from the mountains. I had to make numerous river crossings in the vehicle with almost half of it submerged. Driving during heavy and continuous rain made the journeys difficult when the fieldwork rolled through the wet season.

⁴³ Conversation with a police constable attached to the Lakurumau Police Station, located in the Karanalik-speaking area of New Ireland (Gavara-Nanu, Lakurumau Police Station, 2018).



Picture 8: River crossing—west coast

Public motor vehicles, such as taxis and buses, do not travel this route. Only large open-back trucks, although these are few so that when villagers flagged me down for assistance to go to the nearest aid post or clinic (many times), or to go to church (once), schools and other villages, I stopped and picked them up. During the course of travelling, inevitably conversations were struck up, and I would make an informal interview request. Some of the most interesting conversations ensued during these times. Through this informal forum, I gathered information from my passengers on their general views about logging operations in the area, conservation of the rainforest and whether they are satisfied with the royalties and other benefits from logging (if indeed they received any).

Summary

In this chapter I have presented the background to PNG and central New Ireland, being the area of focus for the fieldwork. I have covered how the research and fieldwork commenced, the problems encountered and the manner in which I was able to overcome those situations.

I have also discussed how I allowed the fieldwork to evolve inductively. It commenced as exploratory research before I finally located the evidence and confirmed how illicit networks might abuse the REDD+ scheme. This occurred towards the end of my research tenure. Since carbon fraud in REDD+ countries is an evolving criminological issue, it requires intimate knowledge of the target country. It follows that fieldwork in this area is best accomplished by researchers who are indigenous to the REDD+ specific country and who can map their target area with some precision before venturing into the field.

In the next chapter, I present the background to the development of carbon trading markets. This begins the background chapters to this dissertation, which allows one to understand how the evidence collected during the fieldwork fits into the analysis of carbon fraud and illicit networks.

III THE DEVELOPMENT OF CARBON TRADING MARKETS

It is necessary to delve briefly into the history of the evolution of carbon trading markets to understand the harm caused by carbon fraud and the manner in which organised crime syndicates have been able to seep into the EU ETS without detection. This chapter introduces the most basic of facts behind the carbon trading platforms that were introduced to the world under the *Kyoto Protocol*. After introducing the carbon schemes developed under the *Kyoto Protocol*, the chapter then sets out a basic introduction to the REDD+ scheme. The complexity and absence of checks and balances is highlighted especially when discussing the REDD+ scheme in PNG. Inevitably, in this chapter, some reference is made to the pitfalls of carbon trading markets. This is unavoidable because it helps to explain how the schemes work. The short background touches upon the environmental and scientific concepts behind these 'green ideas' (Anand 2004:22). By the end of the chapter, it will be shown that science has inadvertently contributed to making these schemes liable to fraud.

At Part B, towards the end of this chapter, the REDD+ scheme in PNG is briefly canvassed, deliberately highlighting the links that corrupt government officials have to both the logging industry and the REDD+ scheme, which lends some credence to theories that organised crime or illicit networks in the logging industry will take an interest in REDD+ (INTERPOL 2013; Standing and Stewart 2013; Nellemann et al 2016). This possible illicit nexus between REDD+ and the forestry industry is also developed in Chapter V.

Environmental law has been slow to develop. After World War II, the developed nations began to accept that environmental redress through the law courts was available (Tarlock 2002; Freestone 2018). As the years passed and concern about environmental issues developed globally, specific laws dedicated to certain areas of the environment evolved, such as water law, natural resources law and now climate change law (Freestone 2018). No longer was polluting rivers, seas and land an act against nature, but instead became to be accepted as acts against the communities at large (Freestone 2018). For climate change, this gradual acceptance has seen the merging of criminology, climate change and the law. A good part of this development was also driven by business interests, which meant that advocating the 'usual' conservation methods against a rapidly growing global population did not provide any incentive to act.

Hence, providing financial incentives to take responsibility for one's own pollution seemed a viable solution although the NGOs and green movement argue that it is impossible to place a value on the natural environment (Lohmann 2009; Wright 2006; Pearse and Böhm 2014) and that carbon trading markets are a farce (Bachram 2004; Anand 2004; Lohmann 2009; Lohmann 2010). It seems, however, that economics and development will override environmental concerns in the world today.

A *The Kyoto Protocol—1997*

Scientists have concluded that the increase in carbon emissions is the cause of the Earth's rapid atmospheric changes (Stern 2007; Dawson and Spannagle 2009; IPCC 2018; Spratt and Dunlop 2019).⁴⁴ It is estimated that between 1900 and 2005, the Earth's temperature rose by 1.4 °C (Linden 2006; IPCC 2018). Such findings brought the UN to meet with the World Meteorological Organisation (WMO) and establish the IPCC. This is the UN body for assessing climate change science.⁴⁵ By recognising the dire impact recorded by these scientific assessments, a number of international instruments paved the way for countries to lower their emissions by developing carbon markets (for example Stern 2007; White 2012; Wuebbles et al 2014; IPCC 2018). The 1992 *UN Framework Convention on Climate Change* (UNFCCC) and the 1997 *Kyoto Protocol* were two of the foremost UN instruments requiring nations to commit to cutting their emissions by 2 °C before 2020 (Milman 2013). A recent report has suggested that this be lowered to 1.5 °C before 2030 (IPCC 2018). But for this to happen, climate finance needed to be increased to US\$29 billion, which occurred in 2015 (UN 2015).

The *Kyoto Protocol* was a start for nations to recognise the urgency to lower their GHG emissions in order to combat climate change. The *Protocol* extended the 1992 UNFCCC. Various scientific studies have warned that the world is facing rapid atmospheric change, resulting in endemic environmental disasters that need urgent addressing through global efforts (for example Stern 2007; IPCC 2018a; IPCC 2018b; Spratt and Dunlop 2019). This acceptance by nations has seen a profound shift in the

⁴⁴ Although the veracity of the scientific reports pushing the climate change agenda continues to be challenged, it has generally been accepted that climate change is the reason behind the change in weather patterns around the world (for example Stern 2007; White 2011; IPCC 2018a). This has resulted in the topic of 'climate change' having raced to the forefront of world debates in recent years and being dubbed as the most pressing issue in the world today, affecting all fabric of life and humanity (see for example Anand 2004; White 2011:51).

⁴⁵ <<https://ipcc.ch/>>.

manner in which developed countries formulate their policies on development and business (Michaelowa 2012; Walters and Martin 2013).

The two initial instruments were joined by the 2001 Marrakesh Accords and the 2012 Doha Amendment to the Kyoto Protocol, before finally the 2018 *Paris Agreement*. The *Kyoto Protocol* to the UNFCCC (*Kyoto Protocol*) was ratified by 192 countries, of which PNG is one. The *Protocol* is a legally binding document for industrial countries to have reduced GHG emissions to 5% below 1990 levels by 2012 (*Kyoto Protocol* art 3.1). After the expiry of the *Kyoto Protocol*, the Doha Amendment to the Kyoto Protocol was adopted on 8 December 2012. This takes the commitment to continue to the year 2020 and increases the parties' commitment to 18% below 1990 levels.

The UNFCCC created three groups, according to their commitments to emissions reduction. These groups are listed under Annexures to the *Kyoto Protocol*, which carried their own set of duties to the *Convention*. Those countries in the Annexure I group, agreed to place limits on their GHG emissions. This group consists of industrial nations,⁴⁶ including developing nations moving towards developed nation status, specifically referenced as 'economies in transition' (*Kyoto Protocol*). Countries listed under Annexure II include those industrialised countries, which, apart from agreeing to limit GHG emissions, have agreed to fund the development and implementation of clean technology in developing countries. The last group, called Non-Annexure I, consists of developing nations who are not legally bound to limit, or even address, GHG emissions, but who can do so on a voluntary basis.⁴⁷ Some developed countries (such as the US) did not ratify the *Kyoto Protocol*, or ceased to take any active steps after a change of government.⁴⁸

The *Kyoto Protocol* required parties to develop national measures to meet their targets, but it also established the basis for three compliance markets. These are referred to as the Flexibility Mechanisms, or Kyoto Mechanisms, and they comprise:

- International emissions trading

⁴⁶ These industrialised countries were members of the Organisation for Economic Co-operation and Development.

⁴⁷ PNG is a Non-Annex I country.

⁴⁸ Such as Australia, which had a number of both federal and commonwealth schemes, such as the New South Wales Greenhouse Gas Abatement Scheme, which eventually closed on 30 June 2012, in order to avoid duplication to the Commonwealth Emissions Reduction Fund (see for example Foschia 2012).

- Joint Implementation
- Clean Development Mechanism (CDM).

A fourth mechanism known as land use, land-use change and forestry projects is also listed under the UNFCCC; however, it is not utilised by many countries and is rarely implemented and mentioned. Therefore, only the above three mechanisms are discussed here.

Stern (2007) estimated that by the next century, the Earth's temperature will increase to almost 10 degrees, which is four degrees more than most analysts have predicted. The increase in extraction and use of natural resources, which drives the development of all nations, is an extremely difficult situation to resolve. Nations rely on the extraction and sales of their resources to raise capital, with very few nations, for example, Singapore, having the ability to rely on non-resource services to fuel their economy. The use of resources is now being strictly monitored in most developed countries and alternative fuel sources are constantly being explored. Some analysts predict that this resource reliance will result in 'resource wars' or conflicts that will lead to displacement of large populations, loss of lives, destruction of the environment and a rising crime rate, all emanating from climate change (Stern 2007; White 2006; White 2011; World Bank 2012; Agnew 2011; Pease and Farrell 2011; White 2012; Spaner et al, 2013; Wuebbles et al 2014). While the economic effect of the mandatory markets has been beneficial for those countries in the carbon markets, it is questionable whether any emissions are being reduced. The brief description of the three mechanisms that follows shows why some analysts are concerned about their viability in combating climate change.

1 *Emissions Trading Schemes, Joint Implementation and Clean Development Mechanisms*

The emissions trading scheme was enacted firstly to provide a method to combat carbon emissions by industries (Kyoto Protocol). Article 17 of the *Kyoto Protocol* allowed for the trading of carbon credits. The *Protocol* encouraged countries to enact their own domestic legislation as well as enter into international legally binding agreements to reduce and limit GHG emissions.⁴⁹

⁴⁹ Some countries have refused to enact national emission reductions schemes, such as the US and Japan (Scott 2011). China plans to enact its own emissions trading scheme (Walker 2014), as well as Brazil, India and South Korea. Canada, after enthusiastically setting up their own ETS, disbanded it.

On 1 January 2005, the EU ETS was established, pursuant to the *Kyoto Protocol*, as the first multi-country emissions trading scheme to initiate mandatory compliance trading of carbon credit emissions. It is the central climate change mitigation body for the EU. It is the world's largest multinational emissions trading scheme, with 31 country participants, and it accounts for 73% of the value of the global carbon market (Frunza 2010). Participation in the scheme extends beyond EU countries and includes Iceland, Norway and Liechtenstein.⁵⁰ These countries trade carbon credits through their own domestic trading platforms. The South Korean ETS, established on 01 January 2015, is the second largest in scale. It seeks to decrease emissions by 21% below 2005 emission level. It is a 'cap-and-trade' scheme whereby participants are allocated a set number of credits by the regulator. Participants must keep their emissions within the imposed limits. This is practically impossible, so in order to continue business and release emissions, participants are allowed to buy and trade additional credits from other participants who have excess credits they are looking to sell on the carbon market. Placing a value on carbon to entice and influence the world's biggest emissions-producing companies has resulted in some changing their environmental and waste management practices. Unless there is a strong desire to abandon carbon fuels, which seems unlikely, there will not be a drastic halt to GHG emission rates owing to the daily use of fossil fuels for transportation, agriculture and energy creation (Bachram 2004).

The *Cambridge Business English Dictionary* defines a commodity as 'a substance or a product that can be traded in large quantities, such as oil, metals, grain, coffee, etc'. This definition demonstrates why most people would find it difficult to view carbon as a commodity since it is an abstract concept that cannot be easily quantified or measured, depending on the markets (Lohmann 2009; Martin and Walters 2013).

According to Bayon, Hawn and Hamilton (2007:4), the term 'carbon market' 'refers to the buying and selling of emissions permits that have been either distributed by a regulatory body or generated by GHG emission reduction projects.' In this case, the markets developed under the *Kyoto Protocol* were regulated by that instrument and

New Zealand has its own ETS, while Australia, which has been back and forth on the issue owing to government change, has not done so (Scott 2011).

⁵⁰ The countries in the EU ETS are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

provided the same authority to countries that ratified it. The GHG were all traded in carbon credits and this posed the problem of quantifying GHG emissions since they are an abstract commodity (Lohmann 2009; Martin and Walters 2013). Quantifying the carbon credits to an equivalent uniform amount was necessary to be able to trade.

The evolution of a formula recognised a uniform starting price range for GHG emissions as one tonne of CO₂ sold for €7–€30 on the EU ETS (Bayon et al, 2007). One carbon credit is equivalent to one tonne of CO₂ (tCO_{2e}). This problem in carbon trading, the first of many that will be highlighted in this thesis, shows the difficulties that confront the advancement, acceptance and safeguarding of carbon trading.

The buying and selling of emissions permits are distributed by a regulatory body or generated by a GHG ER project. In the first instance, this would be the body regulating an emissions trading scheme, such as the EU ETS, which sets the cap for trading, also known as *allowance-based transactions* (Bayon et al, 2007). In the second instance, this would be a REDD+ project, such as those in PNG, also known as *project-based transactions* (Bayon et al, 2007). The main difference between these two schemes is regulation and accessibility. The first is heavily regulated; the second is not. While the first is restricted to large companies, the second can also be accessed by individuals (in addition to large companies too) (Bayon et al, 2007:13). A short-lived voluntary exchange set mandatory cap-and-trade requirements. The Chicago Climate Exchange (CCX) was established to provide the trading platform for North America and Brazil; however, it collapsed after failing to secure legislative backing. Its aim was to join the EU ETS eventually.

Joint implementation projects issue emissions reduction units (ERUs) to a country that has made a commitment to reduce or limit their emissions (Annexure I category) from projects that reduce or remove emissions (*Kyoto Protocol* art 6). These projects can be located in another country or within the nation implementing the joint implementation mechanism. Both countries are Annexure II industrial nations. Approval must be given by the host nation before such a project can be implemented.⁵¹

CDMs are carbon offset projects located in mainly developing countries. These projects are funded by an industrialised donor country (that is listed under Annexure I to the *Kyoto Protocol*) seeking to earn credits to offset its GHG emissions (Begg et al 1999).

⁵¹ <<https://unfccc.int/process/the-kyoto-protocol/mechanisms/joint-implementation>>.

CDMs issue Certified Emission Reductions (CERs) to the industrial countries to attract and fulfil their respective Kyoto targets (Begg 1999:13-14). CDMs bring some relief by distinguishing developing countries' willingness to address climate change but they are voluntary and there are inherent problems in the system as a result of verification and monitoring difficulties, which can lead to corruption (DulaHazra 2018). Early on in the implementation, CDMs were considered to have a workable if not successful rate because of the non-interference of host governments. However, by the end of 2012, the CDM market had collapsed from trading around €10–15 per tonne in the period from 2009 to 2011 to €1 in November 2012 (Newell et al, 2013). The problem of accountability of donor funding has been documented in CDMs as well (Begg et al 1999; Drew and Drew 2010; Michaelowa 2012; DulaHazra 2018), and, as discussed below, similar problems are present in the REDD+ scheme.

(a) The Paris Agreement—2015

In 2015, 196 nations met in Paris to discuss and commit to finance, mitigation of emissions and adaption. Countries were at liberty to set their own targets but were encouraged to set ambitious targets.⁵² This targeting setting was not without its controversies because the US publicly blamed developing nations for being responsible for the majority of the world's GHG emissions. India delayed agreeing to the guidelines, but with the assistance of former US Vice President Al Gore, the country eventually agreed. This culminated in the execution of the *Paris Agreement* and led to the first real participation of the entire global community in making the commitment to lower emissions.⁵³ Under the UNFCCC, the *Paris Agreement* became the first truly global agreement to recognise the urgent need to address climate change and commit to ensuring the increase in global temperature remain below 2 °C.⁵⁴ It is a separate instrument to the *Kyoto Protocol*. The *Agreement* is not legally binding, and countries may opt out at any time with no consequence whatsoever other than being named and shamed by other parties and civil society. Even though it is not legally binding, the *Agreement* stipulates greater transparency in emissions reporting and that countries should report every two years, while it allows a five-year global reporting, whilst assisting smaller developing countries with the Capacity-Building Initiative for

⁵² <<https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>>.

⁵³ *Paris Agreement 2015*.

⁵⁴ *Ibid*, Article 2.

Transparency.⁵⁵ A consensus was also reached for the mobilisation of US\$100 billion a year in aid for developing countries until the year 2025 for actions on climate change adaptation and mitigation. The US, under then President Barack Obama, allocated US\$500 million of its pledged US\$3 billion to the primary UN finance vehicle, the Green Climate Fund. PNG ratified the *Paris Climate Agreement* (Kuusa 2016) and enacted the *United Nations Paris Agreement (Implementation) Act 2016*, thereby adopting the same as its domestic legislation.

(b) Against carbon markets

It has been argued that the poorer nations will be more affected by climate change while the richer nations will continue to contribute the most to global emissions (Bachram 2004), and that carbon markets will not bring any huge reductions in emissions (Pearse and Böhm 2014). Opponents of carbon trading schemes argue that the various forest and climate schemes are nothing more than attempts by the developed world and the wealthy to create a new financial market by capitalising on the fear instilled by climate change advocates. It is further argued that these schemes do not encourage conservation of the natural environment, and despite all the work in promoting climate change initiatives, industrialised countries in the global North continue to emit GHGs without regard for the environment (Bachram 2004; Lang 2009; Lohmann 2009; Pearse and Böhm 2014). Instead, carbon trading schemes are used as an excuse for countries in the global North to continue large-scale pollution while pressuring countries in the global South to implement schemes. According to Anand (2004), these schemes are encouraged only to rectify the wrongs of the industrial countries, while the countries from the global South are exploited and coerced to conserve their forests for little economic benefit, ultimately resulting at stifling development of those developing nations.

Scientists have joined this argument and stated that the warming of the Earth is a normal occurrence that was bound to occur, regardless of humanity's actions. Further, they argue that developed nations place economic development above environmental concerns (Anand 2004). For instance, Norway, which is a major contributor to climate change funding and one of the most prosperous countries in the world, has its economy anchored heavily in its offshore oil and gas extraction projects located the world over.

⁵⁵ Ibid Article 14.

Its own environment is quite pristine; however, it continues investing in non-renewable industries while pushing for a global carbon tax (ABC TV 2016). The major state-owned company, formerly known as Statoil, changed its name to Equinor. The rebranded company stated its change in name was to show the 'ongoing changes and that it supports the always safe, high value, and low carbon strategy ...' (Equinor 2018). The company invests heavily in renewable energies, mainly offshore wind turbine. For REDD+, Equinor announced in 2018, that it will be investing in the market (Equinor 2018). However, those from the developed world argue that carbon trading is the most viable method to fight climate change and they blame the developing world for its lack of action. They state that it is the only route by which to ensure forest communities benefit and rainforests are preserved. Humankind looks after what it values; therefore, by placing a value on the environment, especially on standing trees rather than felled trees, by way of the carbon produced, it may encourage preservation of the trees (Bayon et al 2007). The next section, which provides a brief overview of REDD+, also introduces some of the problems faced in that scheme.

2 Reducing Emissions from Deforestation and forest Degradation (REDD+)

In 1989, one of the first carbon trading ideas was touted, although at the time many thought this a ludicrous suggestion. The idea eventually took hold when AES Corporation, a US electricity company, funded an agro-forestry project in Guatemala to plant trees to offset their emissions. However, it was abandoned a few years later (Faeth et al 1994). Ten years later PNG, along with Costa Rica, introduced the discussions behind the REDD+ concept on behalf of the CfRN.⁵⁶ This was done during the Eleventh Session of the Conference of Parties (COP) to the Convention UNFCCC at Montreal, Canada, in 2005 (UN 2005: Agenda item 6). At the time, the concept was abbreviated as 'REDD' without the plus sign. The basic notion of the REDD scheme was for industrial developed nations to pay developing nations to conserve their forests in order to allow those paying industrial nations to continue 'business-as-usual' activities that emit carbon. Because the trees (and associated natural environment) in rainforests capture and store carbon (known as carbon sequestration), this defers and mitigates

⁵⁶ The Coalition for Rainforest Nations (CfRN) primarily comprises countries within the three largest areas of the world, covered by tropical forests, i.e: Amazonia, the Congo Basin and New Guinea. There are a total of 53 member countries of which PNG is one. The primary aim of the coalition is to responsibly manage their rainforests, taking into account climate change (see <https://www.rainforestcoalition.org>).

global warming (Park 1992). REDD highlighted the value of rainforests acting as carbon storages, as long as the trees are conserved and not cut. The more trees there are, the more carbon can be captured and stored by them.

Carbon is captured in different forms. The most common understanding is that trees store carbon that is exhaled by humans, and this in turn gives continuity to the process of photosynthesis; however, it is not just the trees that store carbon (Dawson and Spannagle 2009). The storage, also referred to as carbon sinks, is also found in coral in the seas, mangroves and peat forests (Hunt 2009). The latter refers to forests existing on water-logged, almost swampy land. This wetness of the land prevents leaves and fallen wood from decomposing fully. The ground becomes peat and holds large carbon reservoirs, which are far greater than those the trees on the peat forest hold themselves (Hunt 2009). Another route of major carbon emissions is through the destruction and loss of carbon sinks because when these are destroyed they release carbon into the atmosphere (Park 1992; Hunt 2009). Too much carbon in the air results in the acceleration of global warming. The idea behind REDD gained strong support following scientific proof that rainforest coverage has a significant effect of lowering global temperatures through the preservation of most of the world's biodiversity and carbon storage (Stern 2007; Hunt 2009). Since forests are a basin for biodiversity for over two-thirds of the world's terrestrial species, the urgency of preserving them is advocated on this basis as well. Carbon emissions from the loss of forest cover is estimated to contribute around 12% to 15% of annual GHG emissions. When considering the destruction and degradation of peat land, the total annual GHG loss is estimated to be around 20% (Global Witness 2011).

In December 2007, the REDD agenda was presented at the Thirteenth Conference of Parties (COP 13) to the UNFCCC at Bali, Indonesia. The REDD concept was expanded to include sustainable management of forest stocks and preservation of forests (UN 2007); hence, the '+' (plus) sign was included to show the incorporation of avoided deforestation and indigenous people's empowerment in the schemes. So instead of adding further letters to the abbreviation 'REDD', the '+' sign denotes the additions to the concept. The *COP 13 Bali Action Plan* recognised the parties' agreement to explore enhanced action on mitigating climate change through:

Policy approaches and policy incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (UNFCCC 2007: Bali Action Plan 1(b)(iii)).

By 2009, the REDD+ scheme was fully recognised by the UNEP as a mechanism to offset emissions and generate carbon credits. This is the concept of ‘avoided deforestation’. By December 2010 during COP 16 in Cancun, Mexico, REDD+ was officially confirmed as an emissions reduction (ER) scheme (UN 2010). During the same meeting, the UN endorsed the Green Climate Fund, which was established as the main financier of REDD+ projects around the world (UN 2010: Appendix III). The Fund recognises the *UN Declaration on the Rights of Indigenous Peoples*⁵⁷ as a basis for empowerment in the process of REDD+. Thus, REDD was provided as an alternative for carbon emission offsets to the platforms established under the *Kyoto Protocol*. The Warsaw Framework established support for REDD at the national and sub-national levels.

The REDD+ scheme forms part of the voluntary carbon market. This means that people or companies can choose to buy carbon credits on this market, without any restrictions from government institutions. The market for voluntary carbon credits is driven by profit-making intermediaries, corporates and individuals desiring to offset their carbon emissions (Bayon et al, 2007). Despite it being an international concept, there is no international law or uniform international standard in place requiring compliance, unlike the EU ETS, which stems from the *Kyoto Protocol*. Most of the investors seeking to trade on the voluntary market comprise large corporations seeking to purchase carbon credits and offset their emissions; this allows them to market their green initiatives and corporate responsibility and be seen as ‘carbon neutral’, a term used by corporates to describe their ability to offset their carbon emissions (Hamrick and Gallant 2017; Pham and Ramiah 2018). Airlines are typically such corporations (Labbate 2019) as well as financial institutions, large conference organisers and anyone else essentially seeking to reduce their carbon footprint (Hamrick and Gallant 2017). However, there has not been any conclusive evidence to confirm that companies that take on more environmental responsibilities and provide disclosure emit less emissions than those that do not take these steps (Pham and Ramiah 2018).

Along with wind and landfill methane projects, REDD+ schemes have generated the most sales of carbon offsets for a number of years, mainly from projects located in Africa and Asia (Hamrick and Gallant 2017). The REDD+ schemes are being

⁵⁷ *UN Declaration on the Rights of Indigenous Peoples*, GA Res 61/295, UN Doc A/RES/61/295 (2 October 2007, adopted 13 September 2007).

implemented in 21 Asian-Pacific countries, including PNG and its neighbours the Solomon Islands and Indonesia.⁵⁸ Part B of this chapter documents PNG's involvement in the REDD+ scheme.

As of 2019, there are a total of 47 member countries implementing REDD+ (apart from 64 countries implementing the UN-REDD Programme.⁵⁹ The UN-REDD Programme supports governments to prepare their own national REDD+ strategies to receive the results-based funding from the Programme.⁶⁰ From December 2013, the donors for the UN-REDD Programme committed US\$247 million, while US\$84 million had already been disbursed to REDD+ nations (Cadman and Reimer 2014). The REDD+ scheme is not limited to developing nations though, with some developed nations involved, such as the state of California in the US, hosting its own REDD+ schemes (Newell et al, 2013:137).

In 2007, the World Bank established the Forest Carbon Partnership Facility (FCPF), which is the umbrella term for the Readiness Fund and the Carbon Fund.⁶¹ Fifteen countries, referred to as 'Donor Participants', contribute to the Readiness Fund,⁶² while a total of 11 countries and organisation, referred to as 'Carbon Fund Participants', contribute to the Carbon Fund.⁶³ PNG receives funding under both funding mechanisms and this is discussed at Part B of this chapter. This is one of the main contributors to REDD+ financing, in collaboration under the UN-REDD Programme.

The FCPF's four objective as stated in its charter are:

- To assist eligible REDD+ Countries in their efforts to achieve Emission Reduction (ER) from deforestation and/or forest degradation by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+;
- To pilot a performance-based payments system for ER generated from REDD+ activities, with a view to ensuring equitable sharing and promoting future large-scale positive incentives for REDD+;

⁵⁸ <<http://www.un-redd.org/partner-countries>>.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ <<https://www.forestcarbonpartnership.org/design-process>>. The FCPF is different from the World Bank's Carbon Partnership Facility.

⁶² Donors for the Readiness Fund are Australia, Canada, Denmark, European Commission, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Switzerland, UK and the US (FCPF 2018).

⁶³ Donors for the Carbon Fund are Australia, BP Technology Ventures, Canada, European Commission, France, Germany, Norway, Switzerland, the Nature Conservancy, UK and the US (FCPF 2018).

- Within the approach to REDD+, to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity; and
- To disseminate broadly the knowledge gained in the development of the Facility and implementation of Readiness Plans and ER Programs (FCPF 2018).

The combined worth of both funds has increased over the years. In 2015, it was \$829 million and by 2018 it was \$1.299 billion (FCPF 2018). While successive FCPF annual reports provide mainly positive news of the progress of countries' efforts for REDD+ readiness, the reports have also consistently highlighted the biggest and previously unidentified risk of weak procurement capacities in several countries, which is delaying the implementation of the REDD+ scheme (FCPF 2015:51).⁶⁴

Under the UN-REDD Programme, there are three main stages that REDD+ nations must fulfil to establish their own schemes. Completion of each stage allows funding to be released for the next stage. These are (1) Readiness, (2) Implementation and (3) Results-based.⁶⁵ To reach the final stage, countries are funded to establish and achieve Readiness and Implementation. Most countries are still involved in the Readiness stage. Targets must be met, and the UN has a presence in developing the Readiness stage in most REDD+ implementing countries. PNG has also developed its national REDD+ strategy to guide its implementation of REDD+ and to secure the UN results-based funding (CCDA 2017).

Following the COP 15 meeting at Copenhagen, Denmark, in 2009, specific guidelines were developed, however, the meeting was disorganised and heated because of disagreement among countries that opposed the Copenhagen Accord. The document was drafted based mainly on the contributions from the US, China, India, Brazil and South Africa. It was finalised on the last day of the conference; but because of opposition from other countries, the Accord was neither adopted nor passed unanimously. The Accord was, therefore, not legally binding, although it did recognise climate change as one of the greatest challenges of this era and encouraged action.

⁶⁴ 'Procurement capacities' is the term stated in the FCPF Annual Report. The UNDP defines the term as "the process through which individuals, organisations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time. Capacity Development helps strengthen institutions to perform better and more consistently over time and to respond to and manage shocks and changes" (UNDP 2010:4).

⁶⁵ <<https://www.un-redd.org>>.

However, importantly for REDD+, 'substantial finance' to fund the scheme was approved at this meeting (UNFCCC 2010).

The UN has set ambitious targets through the implementation of the Six Global Forest Goals, but which can be implemented through REDD+. Importantly, global forest goal 1 aims to 'increase forest cover by 3% worldwide', and it is envisioned that by 2020 countries should 'halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally' (UN ESCOR 2017). As shown further down this part, even though PNG is aware of these important aims and obligations the government has failed to take any steps to meet the targets.

An estimated US\$30 billion will be pumped into the REDD+ scheme in the implementing countries every year from year 2020 onwards (UNEP 2014). REDD+ operates under both the voluntary carbon markets and the UN-REDD Programme under country levels, but PNG has no legal framework to guide the operations of both markets. An inherent danger of markets that operate in this type of environment is their potential to use non-partial or false data, which can easily be manipulated by the sellers of the credits as well the buyers, the latter by fraudulently reporting the discharge of their corporate responsibility. Regulation is therefore key to driving the demand of credits in the REDD+ scheme. However, developing a uniform regulation will prove a difficult task, since nations do not want to be seen to have their sovereignty interfered with or infringed and will take charge of issues affecting them and not be dictated to by the financiers of REDD+.

Various problems of the REDD+ scheme plague its effective operation. The most glaring problem is that despite many countries implementing REDD+, they continue to export round logs. Implementing REDD+ does not prevent a country from conducting logging, however, since conservation of rainforests is the basis for REDD+, where both are pursued by a country's government, it creates conflicting national interests and policies between REDD+ and the logging industry. Deforestation can be avoided in one area but might result in logging companies going to another area to cut the trees and defeating the primary purpose (Newell et al 2013:137). For PNG, it has been argued that curtailing or stopping logging will have a negative economic impact. The same is argued for other top log export dependent countries like Indonesia and Malaysia. While the UN and countries around the world (particularly those in the global North) agree that the rate of global carbon emissions must be reduced to avoid the predicted future

environmental catastrophes, achieving the reduction target that they set is proving to be an extremely ambitious and difficult task, especially since the economies of industrial nations are based on industries that are emission intensive. Therefore, to allow continuous production, albeit with a long-term view of achieving the ER target, the concept of REDD+ gained support above other climate change schemes. More importantly, for the REDD+ implementing countries, the compensation to be paid to them for the preservation of the rainforests is advocated as a major avenue to alleviate the standard of living of forest-dependent communities (Angelsen, Brockhaus, Sunderlin and Verchot 2012; Cadman and Reimer 2014). It is arguable, however, whether alleviation of any kind will be realised in REDD+ implementing nations when major concerns related to indigenous participation in the REDD+ schemes are not embodied into laws (Boas 2011; Venuti 2014; Jodoin 2016).

This conflict of interest between emission intensive industries, the extraction of non-renewable resources and the conservation of the natural environment poses a difficult task to balance for key regulatory regimes. Despite the criticisms levelled at REDD+, it has been hailed as the most promising, if radical and controversial, international scheme to improve the standard of living of rainforest dwellers (Hatcher and Bailey 2011; UNEP 2014). However, as will be seen next, the REDD+ scheme in PNG faces challenges that are anchored in the very offices that are supposed to implement the scheme.

B REDD+ in PNG

PNG began exploring the REDD+ concept in 2005 after then Prime Minister, Michael Somare, called for the establishment of a Coalition for Rainforest Nations at the World Leaders Forum at Columbia University (Filer 2011). Together with an American born adviser, Kevin Conrad, whose parents were missionaries in PNG, Somare devised the concept of saving the world's forests and being paid to do so by the international community (Filer 2011). Despite its heavy involvement in the conception of REDD+, successive reports continually show that PNG is not ready to implement REDD+ because of corruption and the absence of legislative safeguards (Wickham et al 2010; Greenpeace 2010; Leggett 2011; Filer and Wood 2012; Babon and Gowae 2013; Ogle 2014; Cuthbert et al 2016; Gapare and Peinado 2017).

The PNG government has failed to properly legislate for a scheme that it helped devise. The uncertainty and reluctance by PNG to properly develop the scheme in a logical and precise manner has always been evident and is the main reason that carbon fraud was able to be committed in 2009, when the first Climate Change Office was established.⁶⁶ This first office, then named the Office of Climate Change and Carbon Trading (OCCCT), came under the direct supervision of Somare through the Office of Prime Minister (Leggett 2011:8; Babon and Gowae 2013) and, because of the absence of policy and law, was operating in a grey area and lacked direction.⁶⁷ Many of the staff members of that office originated from the home province of the then Prime Minister, such that a perception of wantokism and nepotism was obvious.⁶⁸ The first managing director of the office was formerly an adviser to Somare and hailed from the same province (Babon and Gowae 2013).

Owing to the lack of laws, there was also confusion as to which department the OCCCT should fall under. There was a tussle between the then Department of Environment & Conservation⁶⁹ and the Department of Forestry over which department should oversee the OCCCT (Leggett 2011:8-9; Filer 2015:200). As a result of the 2009 carbon fraud case, the OCCCT was disbanded and renamed the Office of Climate Change & Environment Sustainability before changing its name again in 2010 to the Office of Climate Change & Development (OCCD) (Babon and Gowae 2013). It underwent a restructure and renamed itself as the present CCDA in August 2010.⁷⁰

⁶⁶ This instance of PNG's 2009 encounter with carbon fraud in REDD+ is analysed in the following chapter.

⁶⁷ Even the (then) Governor of the Eastern Highlands Province, Mal 'Kela' Smith, asked the PNG government if he could be the exclusive carbon trader for PNG. When his offer was rejected, he immediately took out a full-page advertisement and admonished the OCCCT as having no legal basis.

⁶⁸ Somare has a long history of corruption, especially concerning illegal logging in his home electorate (Barnett 1989). In 2011, he was found guilty of breaching PNG's Leadership Code and in 2012, a Singaporean criminal court found that he had received \$1million in bribes from a Chinese company (*Public Prosecutor v Lim Ai Wah and Thomas Philip Doehrman* [2016] SGDC 249), but no action was taken against Somare back in PNG. A deal was also made between Somare's close government members and two senior Taiwan government officials in order for PNG to give legal recognition to Taiwan as a separate nation from China. Money was transferred to an account in Singapore; however, to date no investigation has been conducted into the matter, despite the two Taiwanese officials receiving long prison sentences for their squandering of the money. Somare's son has also been linked to a notorious criminal.

⁶⁹ The former Department of Environment & Conservation changed to what is now the Conservation & Environment Protection Authority (CEPA).

⁷⁰ Climate Change & Development Authority's website: <<http://www.cdda.gov.pg/about.html>>.

PNG is now in the second stage of the UN-REDD Programme. In 2010, the country received just under US\$6.4 million for the first phase, which was the Readiness Programme (UNDP 2010; Gapare and Peinado 2017). In 2015, PNG received US\$3.8 million from the World Bank's FCPF while also being in receipt of funds from the EU and the Japan International Cooperation Agency (JICA) (UNDP 2010; Gapare and Peinado 2017). In 2015, PNG received grants from the EU (€5.8 million) and the UNDP under the UN-REDD Programme (€2 million) to develop the first National Forest Inventory (UNDP 2015). In July 2017, the FCPF, through its Readiness Fund, allocated additional Readiness funding for 15 countries, which included PNG (FCPF 2017:6). The CCDA continues to receive aid for training and meeting funding donor requirements, with collaborative support from public–private partnerships. Such as major oil and gas company Oil Search Limited and the United States Agency for International Development (USAID), both which fund tailored submissions for funding support from the UNDP (Ure 2018). In 2019, it was revealed that PNG, along with the other Pacific counties, has received over US\$1.1 billion under the UN-REDD Programme from climate fund donors and multilateral and bilateral sources in the last decade, but has failed to precisely track how that money has been spent (PNG Loop 2019).

Instead of PNG aspiring to mitigate and offset its own emissions, it seems that its main goal is to attain external funding through the UN-REDD Programme and other climate change mechanisms. This is a common approach taken by most implementing countries in REDD+ and CDM schemes (Michaelowa 2012). The FCPF (2015:68) has stated that the 'corner-stone for success on REDD+ and low-carbon land use will be ownership at the highest political level'. This shows how the FCPF (and other financiers) encourage and work with participating countries to develop accountability and transparency practices. REDD+ requires national governments to be committed, enthusiastic and genuine in implementing REDD+. This is problematic since most of the participating countries are perceived to be highly corrupt and weak states with high rates of corruption on a grand scale (Larmour 2011; Transparency International 2018). Therefore, poor governance in participating countries threatens the REDD+ scheme. Whilst compliance, governance and accountability are required by the UN and donors, the principles are largely absent in REDD+ frameworks. Enacting uniform guidelines for all REDD+ countries to implement as a safeguard against fraud is not possible because each country's circumstances and cultural settings are different. Corruption has been a constant thorn in PNG's side (Dorney 2000). Over the years, PNG has

been consistently ranked by Transparency International in the top 50 of the world's most corrupt countries (Transparency International 2018). The Fund for Peace's *Fragile States Index* has consistently held PNG in the mid-50s range out of 178 countries; with 2017 so far being its lowest grading of 48 out of 178 countries and 2009 being its worst year when it was elevated to 61.⁷¹ The higher the grading, the worst a country is.

The first officially recognised pilot carbon sequestration project was in Weittin Valley, Lak, in Southern New Ireland Province (Dept. National Planning 2005), but this was abandoned. The area was not new to conservation as from 1993 to 1996, Lak had been an integrated conservation and development project administered by the United Nations Development Programme (Cooke 1997). However, competing interests, especially from logging, disrupted the project even though the area proved not particularly profitable for the logging company (Cooke 1997)

By 2009, PNG had two REDD+ projects implemented with the guidance and majority funding from the UN-REDD Programme and the International Forest Carbon Initiative (Filer 2015). Additional funding was also given by Australia, Norway and the EU. The first UN-REDD-backed project was the April Salumei scheme, comprising 521,000 hectares of forest owned by 160 families and inhabited by an estimated 20,000 people (Filer 2015). As in most parts of PNG, despite language groups located near each other, the languages are totally different and distinct, though customs and traditions are similar. It is located towards the north of the mainland. A few large corporations, such as Australian airline, Qantas Airways Limited, have acquired credits from the project. Qantas markets the credits on their website for passengers to choose to offset their emissions from flying by electing to contribute to the scheme when they purchase their plane tickets.⁷²

The second project, Kamula Doso is in the Middle Fly District, in the Western Province. It is located towards the south of the mainland and comprises 800,000 hectares (Wood 2015). It comprises the speakers of the Kamula and Doso language groups.

By 2018, however, the then OCCD lost control of these projects, and the April Salumei project is now administered by a private developer whilst the Kamula Doso project is constantly threatened of being logged by major Malaysian conglomerate Rimbunan

⁷¹ <<http://fundforpeace.org/fsi/country-data/>>.

⁷² <<https://www.qantasfutureplanet.com.au/>>. Website accessed 16th April, 2020.

Hijau (RH) and other logging companies (Wood 2015).⁷³ Nevertheless, the current CCDA website continues to list these areas, along with other sub-projects, as REDD+ scheme areas managed by the CCDA.⁷⁴

It is difficult to determine the exact number of carbon projects in PNG (Melick 2010). This problem is mainly due to the CCDA not strictly requiring carbon project developers to register their projects with them, prior to their commencement and engagement with customary landowners. Projects might only be detected by other government agencies, such as CEPA, which requires a developer of any project that affects the natural environment (such as mining and logging) to submit an environmental impact assessment plan before the commencement of any work. Apart from the April-Salumei and the Kamula Doso carbon projects, the other well documented REDD+ sites are Central Suau in the Milne Bay Province (see for example Pascoe 2018; Pascoe Dressler and Minnegal 2019). Initially when REDD+ commenced in PNG, there were four pilot project sites earmarked in the provinces of West New Britain, Eastern Highlands, Sandaun and Milne Bay, which represent the four regions of the country (Scheyvens 2012). As of 2020, only the Central Suau area and the Kamula Doso area are the remaining official REDD+ projects under the UN scheme administered by the CCDA, whilst the other sites have been abandoned due to funding constraints (Scheyvens 2012) or taken over by private developers, as in the case of April-Salumei. Apart from REDD+, other carbon projects in PNG are based on a 'payment for environmental services' ("PES") such as Wanang Yus Conservation, Tenkile Conservation Area and 'blue' carbon projects (Lipset and Henning 2016) for marine conservation.

PNG is concentrating on developing the UN-REDD Programme under the UN's strict guidelines to receive funding with the Green Climate Fund, while the voluntary market is not monitored (Ministry of Environment 2017). However, the failure to actively monitor the private market has created large-scale problems, especially for customary landowners, who are approached directly by private developers. A 2010 report by Greenpeace concluded that PNG was not ready for REDD+ because of the absence of various factors, most importantly, no specific legislation to govern REDD+. The

⁷³ According to Filer (2015:181), this project is not a REDD+ project since it does not incorporate conservation and sustainability methods under the 'plus'. It is only concerned with avoided deforestation and forest degradation and so is based on the older REDD scheme, that is, without the '+' sign.

⁷⁴ <www.cdda.gov.pg>.

absence of appropriate laws means that despite the national government's previous stance of banning the voluntary market, private developers can still directly approach forest communities to arrange private partnerships. This unclear stance was what contributed to the carbon fraud incident in 2009 (expounded in the next chapter). A 2014 paper reported that the government of PNG was taking steps to fight fraud in REDD+ (Ogle 2014:29), but by 2019, nothing substantive has been done. Corruption, therefore, poses the biggest impediment to the successful implementation of REDD+ and could link it to organised crime. This link is explored in Chapters V and VI. While not outwardly displayed, the corruption in the scheme is implied based on the many problems evidenced in the implementation of REDD+. Much has been written on the need to have in place good governance systems in REDD+ participating countries (for example Michaelowa 2012; Pearse 2012; Cadman 2014; Vijge et al 2016). The aim for the UN-REDD Programme is not only to ensure the scheme is operational but also to improve overall good governance structures in all participating countries by attaching conditions that must be satisfied before funding is released (Pearse 2012; Cadman and Reimer 2014). Indeed, this might be one of the few solutions: the UN can heavily influence the structure and management for PNG and other developing countries implementing REDD+. These conditions are attached as part of the funding for different stages.

1 *Problems in REDD+ in PNG*

PNG's government has continuously advocated for the recognition and compensation of small island states' struggle against climate change (The National 2019d:28). However, PNG and the Pacific states have not taken any major steps to mitigate their own emissions. For instance, even though PNG has a prominent extractive industry, it has not sought to impose a carbon tax on the mining, oil and gas, or logging companies or encourage them to curb their emissions. While some of the biggest carbon emitters in PNG have been implicated in controversial environmental damage and corruption claims, they are also the biggest employers and on favourable terms with the National Government. Corporates such as RH, Exxon Mobil, Interoil and Oil Search have a dubious history with the environment. Bougainville Copper Limited, the former operator of the giant world-class Bougainville Copper Mine, refused landowner demands to curtail tailings and this led to the bloody 10-year civil war (Regan 2014). When customary landowners filed in Australian courts a claim for damages against the former

Rio Tinto–owned OK Tedi gold mine, the PNG national government blocked the lawsuit by enacting legislation that prevented the landowners from seeking redress overseas.⁷⁵

The PNG national government’s lack of will and direction comprises five main factors inhibiting the REDD+ scheme in PNG. These are 1) corruption and lack of political will (which translates to lack of transparency in the process and the issue of good governance; 2) absence of a legal framework; 3) difficulties in monitoring, verification and reporting;⁷⁶ 4) enforcement at international and domestic levels; and 5) non-inclusion of indigenous communities in the REDD+ consultative process (Greenpeace 2010; Wickham et al 2010). These obstacles are all intertwined and indicate a failure of the state in meeting its international obligations. They are not confined to the REDD+ schemes, as described above; the factors are also present in the government’s dealings with large corporate interests.

(a) Corruption and lack of political will

In PNG, over the years the government has displayed obvious links between environmental crime attributed to state-sanctioned decisions, corrupt actions by departmental heads and deliberate omissions by the national government to prevent environmental harm, enforce PNG’s environmental laws and rectify dire situations caused by corporate investors in PNG’s resource sector (Regan 2014). Much of this dishonest action and inaction by the national government and those in authority is the result of corruption. Subsequently, there is a danger in the state collaborating with corporate interests to allow environmental incursion, which might result in fraud in the REDD+ schemes (Michalowski and Kramer 2006). This is state-sanctioned crime and the manner in which it is conducted is obvious and oppressive to the customary landowners where the projects are located.⁷⁷ PNG has legislation to combat corruption, but the executive arm of government consistently frustrates the process to hold its

⁷⁵ *Compensation (Prohibition of Foreign Legal Proceedings) Act 1995.*

⁷⁶ Currently the Verified Carbon Standards (VCS) is used to determine verification <<https://verra.org/>>. While the Climate Community Biodiversity (CCB) has different standard levels with the Gold Level being the highest to certify the genuineness of a project <<http://www.climate-standards.org/ccb-standards/>>.

⁷⁷ A recent example of the corruption made world headlines in 2018, when the former PNG Prime Minister, Peter O’Neil and the Minister for APEC announced in October 2018 that it had bought 40 Maserati vehicles and two Bentleys to transport delegates around Port Moresby during the APEC summit. The purchases were through an intermediary in Sri Lanka who received a commission, even though the government could have placed the orders directly with the manufacturers. There was a large public outcry denouncing the wasted expenditure at a time when the public health system and education system are gravely suffering (The National 2019).

government members to account. All leaders in PNG are placed under the watchful gaze of the Ombudsman Commission—an institution established pre-independence, which has withstood various attempts to remove it. The Ombudsman Commission has been consistently criticised by various governments, although its funding is also controlled by the government, which allows it to keep a strong rein on how the body functions (Masi 2006).⁷⁸ In recent years, open attacks on the democratic process and institutions have led to grave concerns over the PNG government's ability and commitment to fight corruption.

While corruption is spread throughout PNG's government bodies and departments (Greenpeace 2010), the government bodies and departments consistently faced with corruption allegations includes the Department of Lands & Physical Planning (Numapo 2013; Mirou 2013; PNG Ombudsman Commission 2014; Act Now 2017), the Department of Health, the National Housing Corporation, the Electoral Commission, the Department of Forestry (Barnett 1989; Greenpeace 2010; PNG Auditor-General 2017; Transparency International PNG 2018), the Police Department (The Australian 2010), the Department of Education, the National Identification Office and the Conservation & Environment Protection Authority.⁷⁹ Six of these bodies play important roles in the REDD+ scheme, increasing the likelihood of corruption and carbon fraud occurring somewhere along the implementation of the schemes.

While it is common knowledge that all countries experience corruption on some scale, the level of corruption also has much to do with cultural acceptability (Booth 1999; Follain 1995; Graycar and Prenzler 2013). For instance, Scandinavian countries experience a low threshold for corruption, others such as the Chinese and eastern European countries have an imbedded cultural acceptability. To achieve something in those countries, it is not uncommon to pay a small bribe to facilitate the completion of a task, or to give something in appreciation, although these are acts of corruption (Graycar and Prenzler 2013:28, 140). PNG's corruption has been attributed to wantokism, nepotism, cronyism and patronage (Graycar and Prenzler 2013:8-9). These types of corruption allow for organised crime to fester because of the willingness of

⁷⁸ The two main legislations that deal with misconduct by national politicians and other leaders are the *Constitution*, Division 2 and the *Organic Law on the Duties and Responsibilities of Leadership*.

⁷⁹ The Conservation & Environment Protection Authority was formerly the Department of Environment & Conservation: <<http://www.pngcepa.com/about-us/>>.

corrupt government officials (Holmes 2016:139) and illustrate how REDD+ schemes may be foiled.

PNG's inconsistent and contradictory environmental laws and policies place both its UN-REDD Programme and the voluntary REDD+ scheme at risk of being corrupted. In 2017, PNG released its National REDD+ Strategy report, which highlighted unsustainable commercial logging as a major cause of forest degradation and deforestation. Despite committing to REDD+, the National Forest Authority (NFA) continues to issue logging concessions without any signs of abating.⁸⁰ While the national government has stated that it intends to ban the export of round logs by 2020, no preparatory work has been done to accomplish this.⁸¹ PNG's unenviable title of being the top country of origin for illegally sourced timber destined for China also strengthens questions regarding the genuineness of PNG's commitment to REDD+ (Lawson 2014; The Oakland Institute 2016). Calls for PNG to ban logging in order to develop REDD+ have failed to materialise (Greenpeace 2010). Though not specifically defined under PNG's forestry laws, the word 'concession' is commonly used to encompass any type of licence, permit or agreement that allows commercial logging (both small and large scale) to take place. The types of logging concessions consist of the Forest Management Agreement,⁸² Timber Permit,⁸³ Timber Authority⁸⁴ and Licence.⁸⁵ There is also, what is commonly referred to as a 'Forest Clearance Authority' which allows for small scale logging to clear areas for agricultural (or other land use)⁸⁶ and roads.⁸⁷ The name, 'forest clearance authority' is not specifically defined in the *Forestry Act*, 1991. It is used to describe the authority that is granted to an applicant who applies to do a roadline clearance and to do any type of agriculture. However, all

⁸⁰ Section 1, *Environment (Prescribed Activities) Regulation 2002* defines "concession area" as "an area set aside for logging under a timber permit".

⁸¹ China is the ultimate destination for PNG's logs and is a prominent investor in PNG, providing aid and initiating the development of infrastructure in rural parts of PNG. The PNG government is careful not to disrupt its relationship with China. So great is China's growing influence and involvement in the PNG economy that in 2018, Australia announced that it will develop a naval base in PNG, in order to maintain a constant military presence (Medcalf 2018). This announcement was viewed by many as simply keeping an eye on China's growing influence not just in PNG but the entire South Pacific.

⁸² Section 58, *Forestry Act*, 1991.

⁸³ Section 77, *Forestry Act*, 1991,

⁸⁴ Section 87, *Forestry Act*, 1991.

⁸⁵ Section 91, *Forestry Act*, 1991.

⁸⁶ Section 90A, *Forestry Act*, 1991 and Section 163, *Forestry Regulation*, 1998.

⁸⁷ Section 90C, *Forestry Act*, 1991 and Section 161, *Forestry Regulation*, 1998.

forms of concessions have been subject to abuse by logging companies to undertake illegal logging (Lawson 2014).

However, REDD+ falls under the Ministry of Environment, Conservation & Climate Change. This confusing structure compounds opportunities for misdirection and mismanagement. The (then) Minister John Pundari, during the COP 23 Climate Change talks in Bonn, Germany, called on developed industrial nations to stick to their commitment and play their role in ER schemes. Pundari has also omitted to declare his conflict of interest in commercial dealings with the logging company RH. Both of Pundari's security companies provide security services to the RH-owned, Vision City shopping mall, cinema, Grand Palace Restaurant and the RH office complex, all in Port Moresby. Pundari has also failed to distance himself from public scrutiny by not declining to provide facilities for REDD+ training workshops at his motel, Dixie Bungalows, in Port Moresby, which has hosted a number of workshops funded by the Port Moresby-based UNDP office (PNGi 2018). Pundari, as the (then) minister responsible for the REDD+ schemes, benefiting directly from the funding in a private capacity, represents the most direct form of corruption in his ministerial office.

(b) Poor regulatory framework

PNG is yet to enact legislation that specifically deals with REDD+ and maps out how the scheme can be implemented in the country, including how it will deal with priority issues identified by the UN (Costenbader 2009:169).⁸⁸ It has introduced some laws to begin this process but, as I discuss immediately below in this section, these laws are ambiguous and fail to incorporate key principles required for REDD+ as dictated by international guidelines. The absence of laws to adequately deal with the REDD+ scheme casts uncertainty.

Most notable among the absent principles is the inclusion of indigenous participation in the planning of REDD+ schemes, according to which the indigenous landowners must give their consent before any project commences. Consent from traditional landowners in any type of extractive project in PNG must be given freely. This is referred to as *free, prior and informed consent*, or FPIC for short. The second (Equality and participation) and fourth (Natural resources and environment) National Goals and Directive Principles

⁸⁸ Some of these key issues include indigenous peoples' rights, gender equality and forest governance. Issues that feature in discussions in the thesis <<https://www.unredd.net/about/what-is-redd-plus.html>>.

in the Constitution, call for the participation of all citizens in ensuring that natural resources are developed for the collective benefit. Section 51 (Right to freedom of information) of the *Constitution* gives specific justiciable rights. Schedule 2.3 of the *Constitution* is unique to PNG; it allows for the development of the underlying law through the incorporation of traditional customs and laws that are not repugnant to the general principles of humanity.⁸⁹ This role has been placed on the courts in concert with the traditional interpretation and development of case law. FPIC is therefore entrenched and a guaranteed right for PNG citizens under the *Constitution*.

The *UN Declaration on the Rights of Indigenous Peoples* requires FPIC to be observed at all times for any commercial activity likely to affect the lives of communities.⁹⁰ REDD+ was initially championed as the economic saviour of forest-dwelling communities, particularly in developing countries.⁹¹ It is estimated that around 1 billion people live in and depend on forests (Global Witness 2011). As the REDD+ scheme has progressed, it has become clearer that involvement of indigenous people is taking a back seat to the financing priorities of corporate entities and national governments.

Murray, Lenzen and Murray (2014) analysed indigenous communities' involvement in the development of the REDD+ framework. They found that most of the forest communities in REDD+ countries are not involved in developing the REDD+ framework. Further, there is no set criteria to determine who owns the carbon, as opposed to the trees, which are acknowledged to belong to the traditional or customary landowners. Murray et al (2014) conclude that, because of the complex financial structure that revolves around REDD+, there is a high likelihood that only developed nations will benefit from the carbon trading. Further, because of the commercial benefits, those nations will lose sight of the conservation purpose of REDD+, leaving forest communities no better off than when REDD+ first commenced.

Vijge et al (2016) highlighted the unrealistic expectations by the CCDA expecting rural based landowners to have the capabilities and access to technology, to obtain REDD+ information from the CCDA website. They conducted a survey of seven REDD+ countries including PNG which they identified as lacking community involvement in the

⁸⁹ *Constitution*, Schedule 2.

⁹⁰ Articles 10 and 18.

⁹¹ Submission to Secretariat of the UN Framework Convention on Climate Change, 20 March 2008.

development of the REDD+ scheme. Further they found that the CCDA's only attempt to involve communities is through an open access web portal. With the majority of PNG's population living in rural areas, this is obviously a failed attempt to include communities.

The National Government's lack of clear direction in recognising FPIC is shown in its primary climate change law. The *Climate Change (Management) Act 2015* recognises the rights of customary landholders (Part VIII); however, a contradiction arises in that the Act only requires 85% of landowners living on the land to give consent to any climate change activities to take place on their land.⁹² This does not allow the other 15% of landowners the opportunity to make an informed decision through FPIC. Instead the Act allows for the development of a REDD+ project to take place *without* their consent. It is not explained why consent can be sought from only 85% and not the full 100%, which is clearly not what FPIC embodies.⁹³ The same section allows for any company or individual to deal with any group that has title to the land, regardless of how that title has been procured, which can be through corrupt means, as shown in many instances (Karigawa et al 2016). The *Climate Change (Management) Act, 2015*, defines FPIC as:

a consultative process to obtain consent of potentially affected landholders by engaging in an open and informed dialogue with REDD+ and other climate change related project proponents interested in establishing REDD+ and other climate change related projects in areas occupied or owned or used by landholders.⁹⁴

However, the process by which FPIC is to be obtained is not prescribed. Section 87 states that the process of obtaining landholders' FPIC is prescribed under the regulations. Nonetheless, to date, no regulations have been enacted to complement the Act. This means that the process of obtaining FPIC is open to being abused by potential developers. The Act defines a landholder as any person who has customary ownership or user rights over land or sea.⁹⁵ It also includes a person who occupies

⁹² *Climate Change (Management) Act 2015*, s 89.

⁹³ *Ibid.*

⁹⁴ *Climate Change (Management) Act 2015*, s 3.

⁹⁵ *Ibid.*

government land and an owner of land that is neither government nor customary as a landowner.⁹⁶ In addition, it states that the rights of landowners must be respected.

A biased requirement under the Act is that any agreement for climate change activities must satisfy a vigorous requirement before being seen as legitimate.⁹⁷ Section 90 of the Act leaves the sharing of benefits to be set out in the agreement between landowners and developers, whether through the UN-REDD Programme or private developers. This ambiguity can cause an unfair disadvantage for landowners with limited understanding of English and legal processes and terms. Section 93 of the Act stipulates that the benefit sharing shall be prescribed by the regulations; however, as with FPIC, no regulations have been passed to give effect to this section. However, a key requirement missing in the Act is that any agreement should also be drafted in a language spoken by the landowners and not just in English. While the Act calls for benefits sharing climate change projects, it is silent on how the landowners will benefit.⁹⁸ There is no reference in the Act to leakage, permanence and additionality, three key areas open to abuse that must be regulated for effective performance of a scheme.

To date, the PNG government has not clearly set out how customary landowners will benefit from REDD+ and has left it largely to developers to negotiate this process. The privately developed April Salumei project has set the benchmark by declaring that everyone within the development area will benefit equally, regardless of how big their area of land is or how many trees and plants they have tied up in the agreement (Filer 2015:199). This may or may not prove viable in other provinces where villages may seek to benefit according to the size of their land area and species of trees contained within it.

The PNG courts have interpreted a likely time frame for obtaining consent. In *Maniwa v Malijwi*,⁹⁹ the customary landowners disputed the issuance of an SABL by the Department of Lands to a Malaysian-owned logging company, which planned to develop an oil palm plantation. The Court was of the view that the FPIC process should be conducted over a period of 6–12 months at a minimum, which would allow for a

⁹⁶ Ibid.

⁹⁷ Ibid s 90.

⁹⁸ Ibid s 93.

⁹⁹ *Leo Maniwa v Aron Malijwi* [2014] N5687.

number of meetings to be held at various villages to provide as much opportunity as possible, for as many villagers as possible, to ask questions regarding the proposed project. Government representatives must accompany the developer to these villages when conducting the consultation. The presiding judge also referred to the Fifth National Goal and Directive Principle (which concerns 'Papua New Guinea Ways') as relevant to guide the obtaining of FPIC. This brings a third National Goal and Directive Principle into the assessment of FPIC and demonstrates how important the process is, since it relates to three of the five National Goals and Directive Principles. Discussing how the Asian developer had obtained the consent of the landowners, the Court stated the following:

I do not consider the consent purportedly signed by the Directors of the landowner company for the grant of SABL represented the wishes of the majority of the landowners, if not all the landowners. There was no awareness conducted by the representatives of the State, more particularly the officers from the Department of Lands and Physical Planning and the East Sepik Provincial Government with the landowners to sufficiently inform and educate them of the intentions of the Government regarding SABLs and the effect the SABL would have on them and their land.

I am also not satisfied that the meeting held at Turumu Primary School on 25 July, 2008, met the requirements of meaningful consultation with the landowners. The first thing to note is that, the meeting lasted for only 50 minutes. That very clearly was insufficient time to gauge the landowners' views on SABL. Furthermore, only 18 people spoke in the meeting. That meeting was the only one held. There is no evidence of similar meetings being held.

For the landowners to be sufficiently informed of the new Government policies such as introduction of SABLs which would adversely affect their traditional lifestyle; more in-depth awareness meetings should have been conducted. This could have been achieved by Government officers travelling to the SABL areas and talking to the landowners in their villages. This exercise should have been done over a period of time, say six or twelve months or even more so that the people were made aware of and understood what SABL is about, its benefits, advantages and disadvantages and so on. To me, this is the true Papua New Guinea way of consulting with people in the villages, especially where new projects are introduced in their areas and especially where SABLs would attract other projects, such as the introduction of oil palm plantations in the SABL areas. In introducing projects such as this which would have permanent and long term effect on their land, genuine and meaningful consultation with the landowners must be carried out among the landowners. This is emphasized by the *Constitution* in the Directive Principles under the fifth goal, which provides for promoting and protecting Papua New Guinean ways.

Thus, in line with *Maniwa*, extensive consultation with landowners must be done in accordance with the traditions and cultural practices of the area. Different parts of PNG follow different lineage systems, and land is passed from generation to generation either through the males, which is a patrilineal society, or through the females, which is a

matrilineal. In PNG, the patrilineal area is found on the main island of Papua, while Milne Bay Province, to the south-east of the mainland, is a matrilineal society along with most of the islands that make up the New Guinea islands. It is therefore important when discussing FPIC to do so while understanding the land tenure structure and customs and traditions of an area.

In 2009, the PNGFA reviewed the *National Forestry Development Guidelines* and developed a new policy titled the *Forestry and Climate Change Framework for Action 2009–2015*, which was aimed at promoting the participation of customary landowners in REDD+. It listed goals for achievement by 2015, but by the time that year ended, none of the goals had been met. In 2010, the (then) Department of Environment & Conservation reviewed its policy, the *National Climate Change Policy Framework*. A 2010 report found that PNG lacked the capacity to effectively implement the UNFCCC (as well as the *United Nations Convention on Biological Diversity* [UNCBD] and the *United Nations Convention to Combat Desertification* [UNCCD]) (Wickham et al 2010).

In 2013, the OCCD reviewed its policy, the *Climate Compatible Development for Papua New Guinea*. Despite these two other reviews, there has been no specific mention or guideline of how the participation of customary landowners will be achieved. The *National Climate Compatible Development Management Policy* of 4 August 2014, underpinned by PNG's Fourth National Goals & Directive Principle, envisaged a strategy that combined PNG's economic development with mitigation and adaptation, to 'climate compatible' development. The Preamble to the PNG *Constitution* sets out five non-justiciable National Goals and Directive Principles.¹⁰⁰ These National Goals and Directive Principles are, in theory, to guide all laws and decisions for PNG's future. The Fourth National Goal & Directive Principle is specific to the environment and landownership, by which the CCDA works, and it states:

4. Natural resources and environment.

We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.

WE ACCORDINGLY CALL FOR—

¹⁰⁰ The National Goals and Directive Principles are (1) Integral Human Development, (2) Equality and Participation, (3) National sovereignty and self-reliance, (4) Natural resources and environment and (5) Papua New Guinean ways.

(1) wise use to be made of our natural resources and the environment in and on the land or seabed, in the sea, under the land, and in the air, in the interests of our development and in trust for future generations; and

(2) the conservation and replenishment, for the benefit of ourselves and posterity, of the environment and its sacred, scenic, and historical qualities; and

(3) all necessary steps to be taken to give adequate protection to our valued birds, animals, fish, insects, plants and trees.

In the mid-2000s, the national government undertook what was deemed at the time to be a major path to economic empowerment by releasing three milestone policies.

These were the *Development Strategic Plan (2010–2030)*, the *Medium Term Development Plan (2011–2015)* and *Vision 2050*. The *Vision 2050* policy incorporated the five National Goals and Directive Principles. Pillar 5 of *Vision 2050*, targets Environmental Sustainability & Climate Change and it is upon this Pillar that REDD+ (apart from other climate change activities) is based. Pillar 5 aims to:

- 1.17.9.1 Reduce greenhouse emission by 90 percent to 1990 levels;
- 1.17.9.2 Assist the majority of Papua New Guineans to become resilient to natural and human disasters and environmental changes;
- 1.17.9.3 Establish a Sustainable Development Policy in all sectors, especially forestry, agriculture, mining, energy and oceans by 2015;
- 1.17.9.4 Develop mitigation, adaption and resettlement measures in all impacted provinces by 2015;
- 1.17.9.5 Conserve biodiversity at the current five to seven percent of the world's biodiversity;
- 1.17.9.6 Establish a total of 20 national reserves, wilderness areas and national parks;
- 1.17.9.7 Establish at least one million hectares of marine protected areas;
- 1.17.9.8 Conserve and preserve cultural diversity;
- 1.17.9.9 Provide 100 percent power generation from renewable energy sources;
- 1.17.9.10 Provide 100 percent of weather and natural disaster monitoring systems in all provinces;
- 1.17.9.11 Integrate environmental sustainability and climate change studies in primary, secondary and national high school curricula; and

1.17.9.12 Establish an Institute of Environmental Sustainability and Climate Change.

None of these goals has been achieved. They are stated in full to show how ambitious the government has been to develop these policies yet it continues to fail to pass effective legislation and involve the customary landowners in the process. In 2011, the national government changed after a political impasse.¹⁰¹ The new government under Peter O'Neil pledged to continue to support *Vision 2050*; however, nothing has changed.

It was not until 2015 (almost 10 years after REDD+ was introduced in PNG), that Parliament finally passed the *Climate Change (Management) Act 2015*. The only law that deals specifically with conservation, the *Conservation Area Act 1978*, has not been amended to cater for REDD+. This is the main law regarding conservation, which is exactly what REDD+ is concerned with. The *Climate Change (Management) Act 2015* alone is inadequate. This Act established the functions of the CCDA,¹⁰² including monitoring of all climate change activities¹⁰³ and the protection and enforcement of landholders' rights.¹⁰⁴ The Act outlines the eligibility, composition and general duties of the board of the CCDA.¹⁰⁵ The Act attempts to bring some accountability into the scheme by detailing the criteria for appointment of key positions in the CCDA management, so that there is no centrality of decision-making in the few people who will determine the distribution of REDD+ funding. For example, funding will be controlled by a national board of directors who will decide on the allocation of funds to sub-national entities. However, this contradicts the goals of *Vision 2050* since that policy envisages greater participation of the citizens for economic growth, but there is no direction from the national government of how this can be achieved in REDD+. The CCDA develops and implements policy and the legal framework to meet those international obligations (to receive funding) and the domestic obligations under *Vision 2050*. In PNG, Acts will have an accompanying regulation passed by Parliament in order to give effect to the

¹⁰¹ *In Re Constitution Section 19(1)—Special Reference by Allan Marat; In Re Constitution Section 19(1) and 3(a)—Special Reference by the National Parliament* [2012] PGSC 20; SC1187. O'Neil challenged the validity of the former Prime Minister, Somare's occupation of that office. The Supreme Court ruled against him, but O'Neil defied the decision and took office by force.

¹⁰² *Climate Change (Management) Act 2015*, s 11.

¹⁰³ *Ibid* s 11 (1), (p).

¹⁰⁴ *Ibid* s 11 (1), (q).

¹⁰⁵ *Ibid* ss 12, 13 and 16.

practical areas of an Act as well as stipulate the forms and the manner in which the documents must be set out. Yet to date no regulation has been passed. In fact, the Act must have a regulation in order to be effective since several provisions in the Act refer to 'the' regulation.

A glaring anomaly in the Act is the absence of both specific guarantees for traditional landowners to be fairly compensated when allowing REDD+ schemes to be undertaken on their land and to specify the manner in which landowners will benefit from participating in REDD+. This defeats the basis for the international birth of REDD+, which was to improve the standard of living of forest communities directly, especially those in the rural areas.¹⁰⁶ To date, there is no clear or distinct policy or law that deals with how customary landowners will be included either in PNG's attempt to achieve ER targets or in disbursements and allocation of funding received from external financiers. There is no law or clear provision(s) in existing law, for benefits sharing; instead this interpretation is left to the discretion of the investor. This poses a danger to fairness in the sense that while landowners in one project might receive a generous and appropriate benefit-sharing arrangement from the developer, the opposite might be the case for another project.

However, concern comes with the fact that the National Climate Change Board is the sole authority under the Act, to determine how funds will be disbursed.¹⁰⁷ Its members comprise seven government officers and two from the private sector.¹⁰⁸ The Act goes to some length to encourage transparency. There is an Appointment Committee, which decides who will sit on the National Climate Change Board.¹⁰⁹ The committee comprises seven members, five of which are government officials, one from civil society and one from the private sector. A Screening Committee decides on the appointments of *ex-officio* members of the National Climate Change Board as well as the appointment of the managing director.¹¹⁰

¹⁰⁶ This is continuously emphasised on the website of the UN-REDD Programme <<https://www.un-redd.org/>>.

¹⁰⁷ *Climate Change (Management) Act 2015*, s 13 (e).

¹⁰⁸ *Ibid* s 16.

¹⁰⁹ *Ibid* s 17.

¹¹⁰ *Ibid* s 18.

But the efforts of transparency are brought into question further down the Act, where it allows a quorum of only eight members to make the decision. It also includes an unusual and questionable section that allows meetings to be held outside of PNG if there are 'special' circumstances.¹¹¹ There are no criteria for what might be considered 'special', leaving that decision to the board members to determine and, thus, open to abuse. All funds coming into PNG from external sources, including the UN, shall be channelled and held in four trust accounts, collectively referred to as the Climate Change & Green Growth Trust Fund.¹¹² The disbursement of funds shall be done according to the provisions of the *Public Finances (Management) Act 1995*.

The Act imposes a 'climate administration fee' of 7% to be deducted from the total value of all funds received by *any person* involved in climate change activities to pay into the trust funds, or risk criminal sanctions.¹¹³ This section is vague, there is no explanation of the purpose of the 'fee', and considering that the 7% is to be charged on all instances of receipt of funding, it seems an arbitrary fee. What purpose will the 'climate administration fee' serve? Why can it not be charged once off? Why and how was the figure of 7% arrived at? Why would the board hold its meetings outside of PNG? Would this not be an unnecessary expense?

The Act sets criminal sanctions for contravention of the Act to be prosecuted by the Office of the Public Prosecutor in the National Court on indictment.¹¹⁴ This includes imposing strict reporting requirements on carbon-intensive industries. However, the CCDA has raised any awareness of these requirements for industries and to date no criminal prosecution has been brought under the Act.

2 Logging and its conflict with REDD+

An examination of the relationship between the logging industry and the national REDD+ scheme shows the confusion in PNG's regulatory environment in trying to accommodate the two completely different industries. The *Forestry Act 1991* was initially passed to allow for greater involvement of customary landowners (Babon and Gowae 2013). However, this has failed to be achieved and the National Forestry

¹¹¹ Ibid s 27 (4).

¹¹² Ibid s 37.

¹¹³ Ibid s 38.

¹¹⁴ Ibid s 107.

Development Guidelines directly contradict the aims of REDD+ schemes. The National Forestry Development Guidelines refer to REDD+ but omitt to state precisely how the rights of indigenous communities would be respected. The policy calls for the incorporation of indigenous land groups forming what is termed as ILGs. The existing framework assumes that participation of indigenous communities in REDD+ can only be achieved through the ILGs (Venuti 2014:144). This requirement places a huge obstacle before indigenous communities and shifts the responsibility from the state, which is supposed to strive to ensure FPIC, to the customary landowners to register ILGs, a process entirely foreign to them (Act Now 2017). When one considers that villagers who are largely illiterate must go through the tedious process of incorporating a land group it seems an unnecessary and unrealistic requirement to fulfil. It requires obtaining the signatures or fingerprints (where a person cannot read and write English) of all clan or tribe members, whether they are in the village, another part of PNG or elsewhere in the world.¹¹⁵ The appropriate forms must be identified and filled out in English.¹¹⁶ The landowners must then design their ILG seal or stamp and place an order with a stationery shop, which would be located in a town. After this stamp is acquired, all documentation for lodging must be stamped with it. All documents must then be lodged with the Registrar of ILGs in Port Moresby.¹¹⁷ After lodgement, however, it can take months before an ILG certificate is created. A villager will need to make frequent checks with the registry to confirm if the ILG certificate has been created. This is a logistical challenge and may be daunting for villagers. If the villages are located far away from town, it is expensive to pay for transport from the rural areas to town to attend to this whole process. The process can take months and even years. Disputes regarding the authenticity of ILGs have recently been occupying the courts.¹¹⁸ It is difficult to determine who are the original inhabitants and landowners of areas. This is certainly the case where commercial developments will take place as villagers try to ensure their names are in the ILG in order to benefit from the projects, or dispute one clan or tribes' claim to ownership over the area.

¹¹⁵ *Land Groups Incorporation Act 1974*, s 5.

¹¹⁶ *Ibid* s 3.

¹¹⁷ *Ibid* ss 5 and 6.

¹¹⁸ See for example, *Kanga Kawira of the Hewa sub clan of Kutage Tribe v Kepaya Bone & Others* [2017] PGNC 164; N6802; *Alex Bernard & P'Nyang Resources Association Inc. v Nixon Duban & Others* [2016] PGNC 121; N6299; *Wandiago Kau & Others v The State* [2016] PGNC 429; N7010.

Not involving the customary landowners from the beginning, which still continues, raises the possibility that the government deliberately intends to bypass the landowners entirely without securing FPIC. In 2018, CCDA unveiled its five-year corporate plan 2018–2022 to guide the CCDA ‘in achieving its strategic goals ...’; this included *Vision 2050* (Kama 2018). Again, key REDD+ implementing priorities were not specifically stated regarding how these goals would be achieved, and indigenous involvement was not prioritised.

Summary

This chapter has briefly mapped the development of carbon trading markets devised under the *Kyoto Protocol*. The chapter has also touched upon how the REDD+ scheme evolved. I have shown how PNG has not attempted to seriously combat its own emissions and I have briefly mentioned how corruption is stalling the full implementation of the UN-REDD Programme in PNG. The combination of a complex scheme and weak or inadequate climate change laws is a catalyst in any country for drivers of carbon fraud, and this might occur in PNG.

This chapter has discussed the anomalies in the legislation and proven there is a great gap between what the national government says it is doing to implement the REDD+ scheme and what it is actually doing to achieve the aims of the REDD+ scheme. It has shown that corruption, which is embedded and displayed so openly in PNG, will be a hurdle to achieving the REDD+ aims and that there is a likelihood of the customary landowners being sidelined in the implementation of the scheme. Based on PNG’s poor history in disregarding indigenous rights and concerns with logging operations, liquefied natural gas (LNG) and mines, the lack of laws seems deliberate. In the next chapter I explore the crime scene in PNG to determine whether organised crime might infiltrate the scheme.

The next chapter introduces ‘carbon fraud’, the crux of this thesis, by examining some of the prominent instances of carbon fraud that have adversely affected the carbon trading markets. The chapter briefly shows how carbon fraud was perpetrated by the different illicit networks, such as the organised crime gangs in the EU ETS, ‘carbon cowboys’ in the voluntary REDD+ markets, corporate carbon fraud and state–corporate fraud scenarios that facilitated environmental crime through fraud. The next chapter also forms the last explanatory part of the thesis before the analytical chapters commence.

IV CARBON FRAUD

‘Any business that is based on a deception is fundamentally corrupt ...’

Alan Kohler 2018¹¹⁹

Chapter III introduced the history of the evolution of emissions trading markets. The latter part of that chapter canvassed the problems inhibiting REDD+ implementation, which are contributed largely by the corrupt actions (or omissions) of government officials and the absence of international and domestic regulation and guidelines. This chapter attempts to clarify the opaque subject of ‘carbon fraud’ by examining its emergence. Starting from when it first rose from the exploitation of lax and non-existent regulation in the EU ETS, to the exploitation experienced in the REDD+ scheme, the chapter shows the previous and predicted methods of carbon fraud perpetration. While there are now many reported instances of fraud being committed all over the world in carbon trading schemes, the most prominent and relevant cases to PNG’s situation are discussed below. These cases will illustrate how carbon fraud perpetration is extremely varied. Towards the end of the chapter, the major carbon fraud instances in REDD+ will be introduced. I show how the perpetrators of carbon fraud in REDD+ have certain common factors of operation. I use these factors when I analyse the organised crime scene in Chapter V. This analysis is conducted against fraud crime scripts developed by Levi (2008). By comparing the common REDD+ fraud factors in this chapter with the organised crime actors in PNG in the next chapter, I determine the veracity of INTERPOL’s (2013) prediction, that is, that REDD+ is in danger of being manipulated by organised crime syndicates.

While scientists, environmentalists and NGOs work tirelessly to promote climate change initiatives and devise methods to conserve the Earth’s natural resources, the criminal elements of the world continue to threaten the good work of environmental conservation and sustainability (see for example Walters and Martin 2012). The notion of carbon fraud unveils and redefines offences, harm and the manner in which crime is committed; some of which may not previously have been known to the justice system but were borne firstly out of the EU ETS carbon trading system scandal in 2009 (Lohmann 2009; Frunza 2013). These ‘new’ or modified offences include fraudulent accounting and

¹¹⁹ On 13 October 2018, Mr Alan Kohler granted me permission to use this quote in this thesis.

under-reporting of carbon emissions (Haque and Islam 2016), as well as the manipulation of carbon emissions measurements (Lohmann 2009). Many of these associated crimes have been documented well in work that is still relatively new in the green criminology arena (for example Lohmann 2009; Martin and Walters 2013; Frunza 2013).

Fraud and corruption have been an intricate part of history since humankind realised great material benefit can be obtained faster through deception and manipulation (Graycar and Prenzler 2013:3). From Biblical times when Jacob posed as his elder brother, Esau, to be blessed with first-born rights from their father, Issac, acts of fraud have evolved to become the most sophisticated type of crime, traversing obstacles set by lawmakers no matter how complex. The Chinese secret societies, commonly referred to as Triads (see for example Broadhurst 2011; 2012) were borne from the necessity to survive, maintain identity and accumulate resources during the Han dynasty from 206 BC to AD 220 (Antonopoulos 2013), though some reports are that they were firstly formed during the Qing dynasty (see for example Broadhurst 2011). Originally, these societies were regarded as types of Brotherhoods, since they were comprised of men from similar backgrounds from mainly poor livelihoods who did not have family or clan members to support them. They eventually engaged into criminal activities, especially controlling the dock work at ports, thus allowing corruption to flourish in their societies for the drug opium trade to flow (Booth 1999:190; Bresler 1980; Graycar and Prenzler 2013:22). The same seems to be true of major criminal organisations that have weathered history, such as the Sicilian Mafia (Follain 1995; Graycar and Prenzler 2013:16). The history behind the Mafia and Triads belies the fraud perpetrated to this day. The heights of ingenuity and greed in the western world have always been evident during eras of great wealth and scepticism. Take for example, the gold rushes in South Africa and Australia in the late 1800s, marketed by shrewd con artists to the English public, with millions of unsuspecting investors duped into false investments (Falstead 1950); the stock exchange in the US and now, it is argued, the carbon trading markets (Bachram 2004; Lohmann 2009). This is no surprise to some who view the trading of derivatives on the stock exchange and carbon trading markets as similar in organisation to markets of speculation (Lohmann 2009; Gibbs and Cassidy 2016).

The techniques of committing fraud have evolved drastically since Edwardian times and are now being perpetrated the world over, owing in part to the spread of colonialism

(Falstead 1950; Bachram 2004). Technology has enabled fraud to be committed at an exponential rate through the use of mobile phones and computers, and the World Wide Web has encouraged a 'dark' information technology practice among the most cunning of fraudsters. The surge in cybercrime in recent years poses the greatest challenge for law enforcement worldwide in all areas of crime, as witnessed when the computer was the tool utilised by criminal networks to infiltrate the EU ETS (INTERPOL 2013).

As a result of the infancy of carbon trading markets, compared with other forms of commercial trading, the relevant literature that examines criminal activities in carbon markets is small (Benson et al 2009; Lohmann 2009; Frunza 2010, 2013; Martin and Walters 2012, 2013; Gibbs and Cassidy 2016). Literature on corruption and governance of carbon trading markets, especially concerning CDMs and REDD+, is well established (for example Larmour 2011; Cadman and Reimer 2014). In identifying the academic literature that deals with carbon fraud, it was noted that very few studies analysed actual fraud cases; rather, they mainly outlined the *risks* in various green energy schemes. Meanwhile, some studies argued that carbon markets are masked as neoliberal governance schemes endorsed by governments in the global North and, therefore, the schemes are inevitably prone to corruption and fraud (Bachram 2004; Lohmann 2009; Pearse and Böhm 2014; White 2011; Aguilar-Støen 2017:92).

Carbon fraud is difficult to identify in that there has yet to be made a distinction between what actions are legal and illegal. Owing to the numerous actors in the climate change / carbon trading arena, overlapping issues and various domestic and international jurisdictions, the challenge is to try to make sense of the carbon trading web and produce an analytical base for criminologists to explore carbon fraud as a single area for thorough analysis (Wright 2011).

As shown in the previous chapter, fraud and corruption in REDD+ is inevitable in the current REDD+ structure. The vacuum that REDD+ presents to criminal networks might be described in two words: 'complex' and 'evolving'. These two factors alone have allowed the theft of large amounts of money from the EU ETS, because the system of trading is profound and novel and therefore difficult to comprehend. Combined with the ability to trade carbon credits for large sums of money, the attraction for criminals is too hard to resist. Funding of climate change initiatives and the carbon trading markets is extremely difficult to track and although various recommendations have been made, the overarching need advocated in the literature is for 'good governance' from host

countries of CDMs and REDD+ schemes to ensure the funding is utilised for its intended purpose (Michaelowa 2012). Having established how fraud and corruption have permeated various countries, the next section will illustrate how the carbon market become the target of criminals, willing to traverse anywhere in the world to perpetrate fraud.

A *The Emergence of Carbon Fraud*

This section maps, firstly, the emergence of the term 'carbon fraud'. Secondly, it discusses the instances of carbon fraud. Where possible, the personal details of the offenders are stated to illustrate the different characters who have committed carbon fraud.

The immediate attraction that carbon trading markets presented to the organised crime syndicates in 2009 is highlighted in its most obvious characteristic, which is that carbon is an unseen commodity. This defies the usual 'tangible' commodity (Lohmann 2009; Martin and Walters 2013). The quantification of the unseen commodity was problematic at first because it involved complex calculation. Carbon fraud stemmed from this confusion, which has allowed for an array of situations when fraud can be committed. Depending on the circumstances, instances of carbon fraud can overlap into several classifications of how we view the crime. It can lie within the ambit of *environmental crime*; it can require addressing *governance* issues in countries where carbon schemes are located, whilst at the same time considering prevention of carbon fraud (Larmour 2011; Cadman and Reimer 2014). If commission of the crime involves foreign actors, it can be *transnational* in nature (Wright 2011; Frunza 2013). If the crime is perpetrated by highly structured criminal groups, then it is *organised crime* (Frunza 2013). When overseas crime groups or illicit networks commit the crime and transfer the proceeds of crime to other jurisdictions, it is *transnational organised crime* (Frunza 2013). Depending on the perpetrators and method, it can be *white-collar crime* (Gibbs, Cassidy and Rivers 2013; Gibbs and Pugh 2017). Where the internet is used to manipulate trading, it is *cybercrime* (Frunza 2013; Funk 2015). Because of this overlap of potential crimes, some argue that as long as carbon markets persist, fraud will occur (Bachram 2004; Lohmann 2009). It seems that where there is much to lose, there is also much to gain. If we can understand the emergence of this new type of crime, the latter *may* be achievable.

In 2011, the Australian branch of the accounting firm Deloitte predicted that carbon fraud will become the *fraud crime of the century* (Deloitte 2011). Although the carbon markets are still developing, the complexity concerning how previous fraud cases have been committed unfortunately gives credence to Deloitte's prediction. It is the 'worlds' fastest growing commodities market', valued at roughly US\$176 billion per year (INTERPOL 2013; World Bank 2012), of which US\$148 billion per annum is traded on the EU ETS (INTERPOL 2013).

There is no official definition of carbon fraud. However, tracing the history of carbon fraud reveals how the term arose and in what setting the fraud was committed. This in turn distinguishes the different levels and type(s) of the resulting harm. This latter outcome is particularly important when discussing preventative measures, which I do in Chapter VII. The term seems to have been first used in 2012 by Walters and Martin (2012:6) and INTERPOL (2012) when describing the fraudulent acts committed on the EU ETS. Other writers have referred to fraudulent acts in carbon credit trading as 'carbon emission accounting fraud' (Haque and Islam 2016), 'carbon credit fraud' (Deloitte 2009; Europol 2009), 'VAT fraud on carbon emissions markets' (Frunza 2013), 'carbon trading fraud' (Thornton 2012), 'carbon trading crime' (INTERPOL 2013), 'carbon crime' (Murray, Lenzen and Murray 2014) and 'carbon carousel fraud' (Corporate Watch 2010). I suggest that 'carbon fraud' is an all-encompassing term that describes *any* type of fraud related to carbon credit activities and transactions.

Lohmann (2009) explicitly stated the problems in CDMs and contended that all carbon markets are inherently unregulatable and will forever be plagued by fraud, corruption and scams. Lohmann then explained how corruption through conflict of interest is apparent throughout all the carbon markets and it is impossible to distinguish the actors who benefit from carbon trading from those who are also charged with verifying the emissions.

White (2011) discussed fraud in the context of green criminology or environmental crime. This thesis adopts this approach because carbon fraud is the result of an environmental issue, it is not strictly white-collar crime, though perpetrators have been white-collar criminals (Gibbs, Cassidy and Rivers 2013).

Martin and Walters (2013) examined the brief history of the evolution of carbon trading as a commodity on the EU ETS, before discussing the carbon fraud discourse at the time, engaged in by both public and private actors. Importantly for this study, Martin

and Walters (2013:36-37) identified areas in the voluntary carbon market that are vulnerable to fraud and corruption, with the following scenarios likely to give rise to fraud:¹²⁰

- 1) when local (indigenous) people are pressured to consent to implement CDM schemes
- 2) when local (indigenous) people are disadvantaged when reviewing CDM agreements, which are written in English, which is a language that they are unlikely to understand
- 3) when the verification process of CDM projects and the likelihood of countries with weak governance that are hosting REDD+ projects are subject to fraud and corruption on a grand scale, especially when those countries are expected to receive donor funds of between US\$17–33 billion every year.

McKie, Stretesky and Long (2015) provided one of the first studies to identify carbon crime through the analysis of companies and organisations that seek to hold themselves out as carbon actors. The study showed that it was not possible to distinguish between criminal and non-criminal organisations, but it did suggest the possibility of profiling possible offenders of carbon fraud (McKie et al 2015:474). Calculating the likelihood of when fraud might occur and in which situations it might occur could help distinguish genuine and non-genuine carbon actors.

Gibbs and Cassidy (2016) discussed the emergence of various crimes in the EU ETS. They noted that because of the complexity of carbon markets, most of the studies regarding the problems in the EU ETS revolved around compliance issues while a few examined criminal activities. Those articles that did examine the criminal activities did so through green criminological or white-collar or other criminological frameworks. They then suggested future research into the EU ETS, noting that after the EU put in new safeguards, reports of fraud had almost ceased.

Analysing prior instances of carbon fraud will help trace the evolution of the harm and may assist determination of whether there exists a nexus likely to be used by organised

¹²⁰ Fraud and corruption must necessarily be considered together. However, for the purposes of this thesis, corruption is not considered in detail.

crime syndicates to commit fraud in REDD+ schemes. INTERPOL (2013:11) identified five main areas where carbon fraud may be committed:

- (i) Fraudulent manipulation of measurements to claim more carbon credits from a project than were actually obtained;
- (ii) Sale of carbon credits that either do not exist or belong to someone else;
- (iii) False or misleading claims with respect to the environmental or financial benefits of carbon market investments;
- (iv) Exploitation of weak regulations in the carbon market to commit financial crimes, such as money laundering, securities fraud or tax fraud; and
- (v) Computer hacking/phishing to steal carbon credits and theft of personal information.

The next section discusses some of the instances of fraud in the EU ETS before examining carbon fraud cases in the REDD+ scheme.

1 Carbon Fraud in the European Union Emissions Trading Scheme

The EU ETS was the first carbon trading market established under a regulatory authority stemming from the *Kyoto Protocol*. In its infancy, the EU ETS lacked solid operating guidelines and effective security measures. The uncertain and constantly evolving policy and procedures created gaps in the trading structure. Introduced without comprehensive regulation, it was easily infiltrated by European OCGs, which stole an estimated total of €5–10 billion from the EU ETS (Europol 2009; Frunza 2013). The EU ETS fraud was not one major crime committed by a single organised crime syndicate, but several instances of fraud, perpetrated by various non-related illicit networks. Two particular periods of fraud in the EU ETS were reported; these were the year 2008 to 2009 and then 2010 to 2011 (Reuters 2011; Frunza 2013).

Frunza (2013) documented how OCGs evolved into transient operations utilising technology and the internet to steal from the EU ETS. The sophisticated use of technology was the most prominent feature in the commission of the fraud in the EU ETS (INTERPOL 2013; Frunza 2013). This was the emergence of cybercrime venturing into environmental crime. Some of these groups were sophisticated and comprised members who were hardcore criminals. They originated from all over Europe, but predominantly from Hungary, the United Kingdom (UK) and France, as well as Israel and Asia (Frunza 2013). The OCGs also had individuals who possessed specialised

skills, were well educated and were quite wealthy (Frunza 2013; Funk 2015). But not all of the fraud was committed by strictly criminal syndicates. Some cases involved individuals who were savvy investors and investment fund managers (Boston 2018), loosely formed networks or two or three individuals, who had no prior criminal convictions but saw the opportunity to commit fraud on a grand scale (Funk 2015).

Suspicion over fraudulent trading was raised in May 2009, when the carbon trading markets saw an unprecedented spike in the trading of carbon credits. At the time, one credit (which equates to one tonne of carbon) was worth €12–50 (Frunza 2013). This alerted the French trading platform, BlueNext, to suspend trading and this action was quickly followed in other EU countries (Szabo 2008; Frunza 2013). After the suspension, it was confirmed that fraudulent trading had been occurring with large amounts of stolen credits and money falling into the hands of the fraudsters.

A cooperative effort by law enforcement authorities in the UK, France, the Netherlands and Spain led to the arrests of members of various illicit and criminal networks after it was estimated that 90% of the market had been compromised (Europol 2009; 2010). It also resulted in the retrieval of cash, weapons and sophisticated computer hardware, which had been used to commit the offences (Europol 2009; 2010).

One instance considered to have some elements of deception but not falling into the carbon fraud category was when the Hungarian government swapped CDM credits for another carbon asset that it needed to sell (INTERPOL 2013). Technically, this action did not violate the *Kyoto Protocol*, but most European countries deemed this action as 'credit recycling', which, if allowed to continue, would negate the whole purpose of carbon reduction and render the EU ETS useless (INTERPOL 2013). Following this and the carbon fraud cases which I discuss immediately below from paragraph (a) to paragraph (d), the EU ETS revised its rules to counter fraud, and the European Commission made two major legislative changes designed to prevent fraud from occurring in high-risk areas of the ETS by dispensing with value added tax (VAT) (Newell et al 2013:139; Gibbs and Cassidy 2016). On 30 July 2009, the UK made carbon trading zero-rated for VAT, the French removed VAT altogether from carbon markets, Denmark passed emergency laws, while others, such as Belgium, introduced a reverse charge mechanism that removed the need to pay VAT every time carbon credits are sold (Seager 2009a; 2009b). The following methods of carbon fraud have been prominent.

(a) Hacking and phishing

In early 2010, Matthew Beddoes, then 31 years old, the son of a miner, high-school dropout and self-taught computer whiz, met online Jasdeep Singh Randhawa, then 36 years old, originally from India who had previously smuggled cigarettes into the UK (Szabo 2014; Funk 2010). Together they devised a scheme in which the latter sent an email to the German carbon emissions registry in Bonn, where an unsuspecting registry employee accessed the email (Szabo 2014; Funk 2015). The email contained a Trojan horse malware called Zeus, which took an hour to fully infect the trading system. This resulted in the theft of hundreds of thousands of carbon permits from the German Emissions Trading Authority before it shut down the website. Randhawa then transferred 426,108 carbon credits worth €10 each. Beddoes and Randhawa accessed the Spanish registry and stole 350,000 carbon credits worth €15 each (Szabo 2014; Funk 2015). Both men were eventually caught and convicted.

(b) Value added tax fraud through the 'carousel' method

The 'carousel' method was previously used by European criminals to claim tax on mobile phones passing from one European country to another, before returning to the country of origin (INTERPOL 2013; Gibbs and Cassidy 2016). The criminals employed this same technique also known as missing trader intra-community fraud (MTIC), to siphon VAT from various tax offices. The criminals purchased credits from jurisdictions that did not charge VAT on the credits. The criminals would establish legitimate carbon credit brokerage shelf companies. After receiving the carbon credits, the shelf companies would legitimatise a sale to a genuine and unwitting buyer who paid the VAT charged. The criminals then onsold those credits, but this time with the VAT. Instead of remitting the VAT to the tax registries in the countries where the credits were sold, the criminals pocketed the VAT and funnelled the funds through a web of foreign companies incorporated in various tax haven nations, such as Hong Kong and the Cayman Islands. Approximately €5 billion in VAT was stolen from several national tax offices, which made its way into the pockets of the criminals (Frunza 2013).

(i) France

The French carbon registry, BlueNext, sustained the heaviest single loss with an estimated €1.6 billion swindled by a French–Israeli criminal network. The loss was so

catastrophic that it was dubbed by the French media as the ‘fraud of the century’.¹²¹ Twelve French–Israeli citizens were convicted after it was found they had purchased carbon credits from the EU ETS and then sold them on BlueNext where they charged VAT of 19.6% before they then disappeared from the public eye (Szabo 2008; Frunza 2013).

To commit this type of fraud, the criminals had incorporated companies and imported voluminous credits free of VAT from other European countries. This illegal transaction continued undetected with genuine market participants purchasing the credits. The VAT should have been remitted to the French tax office, from whom the market participants would have been able to claim back the VAT. However, after selling the credits, the criminals did not remit the VAT to the French government. Instead they stashed away the proceeds or laundered the illegal revenue through various accounts all over the world (Frunza 2010). Members of the network were eventually arrested and brought to trial. Some of the offenders were not only organised crime members but also blue-collar individuals who, up to that point, had no prior criminal history (Frunza 2013).

The French Court of Auditors found that there were ‘three original flaws’ that allowed the fraud to occur: firstly, the VAT collection system had not been secure, secondly, the market access was simple and poorly controlled and, finally, the market was not subject to external control.¹²²

(ii) The United Kingdom

On 14 June 2012, the Crown Court convicted three men of East Asian descent of MTIC fraud of VAT that amounted to a total value of £39 million.¹²³ Sandeep Dosanjh was sentenced to 15 years imprisonment, Navdeep Gill to 11 years, and Ranjot Chahal to nine years. All three men were also barred from acting as directors of companies for 12 years. The court found that they had devised an elaborate scheme to deceive Her Majesty’s Revenue Office of tax on carbon credits. The men operated a company named KO Brokers Ltd, which was incorporated in 2006 and registered for VAT in 2008.

¹²¹ This figure might have been exaggerated since Frunza, Guegan and Lassoudiere (2010) estimated the entire loss of the EU ETS at €1.3 billion; therefore, the French loss would have been less.

¹²² After the trial, the bloodthirsty nature of organised crime came to fore when four members of the criminal network were brutally murdered. They were Amar Azzoug, Samy Souied, Claude Dray and Al Taieb (Chambers 2016).

¹²³ *Sandeep Dosanjh, Navdeep Gill and Ranjot Chahal v R* [2013] EWCA Crim 2366.

By setting up two artificial trading chains, the men used KO Brokers to buy legitimate carbon credits on the EU ETS and then onsold them to blue-chip companies like Shell and British Petroleum while pocketing the VAT destined for Her Majesty's Revenue Office. It took just 69 days (from January to May 2009) for the men to swindle the VAT and transfer the money overseas to various commercial banks in Hong Kong, Australia and New Zealand. After conviction and on appeal, the men argued that they should not be sentenced according to the common law offence of fraud of 'cheating the public revenue', which allowed for large sentences. Instead, they argued they should have been charged and sentenced for statutory fraud, which has a maximum of 10 years imprisonment under UK criminal laws.¹²⁴

Their sentences were reduced: Dosanjh to 13 years, Gill to 10 years and Chahal to 8 years. Highlighting the transnational nature of the offence, the High Court noted that during the period of criminal operation, around £500,000 was stolen every day before being transferred to the other side of the world at 'breathtaking speed', and that the crimes would have required 'an enormous amount of planning'.¹²⁵

(iii) Germany

In April 2010, investigators began focusing on irregular trading by Deutsche Bank on the EU ETS. Fraudulent activity was detected and by December 2012, almost 500 law enforcement officers raided the Deutsche Bank headquarters and numerous properties and seized large amounts of evidence. The evidence was so voluminous that it took years for authorities to analyse millions of emails and thousands of recorded telephone conversations before making arrests (Hübner and Gould 2015). By 2016, the Frankfurt Regional Court convicted six former employees of Deutsche Bank of tax fraud from carbon certificates through the carousel method (Hübner 2016).

The court received evidence that the men had employed the carousel fraud method to purchase emissions certificates abroad, using German companies that all held accounts with the German Emissions Trading Authority (DEHSt).¹²⁶ The certificates were purchased abroad, less the sales tax. The certificates were then sold inside Germany to intermediary companies, but this time, VAT was added, which is 19% of the sales

¹²⁴ Ibid.

¹²⁵ Ibid, paragraph 52.

¹²⁶ DEHSt is the abbreviation for the German *Deutsche Emissionshandelsstelle*.

price. The last company would then sell the certificates abroad and collect the reimbursement of the VAT from the German tax office, though it had never been paid.

The presiding judge, Honourable Martin Bach, was critical of the bank's lack of security measures over its employees' actions and found that without the painstaking work of technology savvy investigators, it would have been nigh impossible to prosecute the case. All six men held responsible positions with the bank and had actively circumvented the regulations to assist an international criminal network to steal around €850 million between 2009 and 2010. However, only the most senior of the former bank employees—Mr Helmut Hohnholz, who was then regional sales manager in the bank's global market division and was the only accused to plead not guilty—received jail time of three years, while the rest, who admitted to the crime, were fined and placed on probation. Hohnholz was deemed by Judge Bach to have been a 'culprit' and not merely a 'helper' in the fraud (Hübner 2016). None of the men personally enriched themselves; nevertheless, they were deemed by the judge to be complicit in the fraud. The bank was heavily criticised for failing to prevent staff from seeking corner-cutting methods to achieve profits. Judge Bach held that the fraud could not have taken place without the assistance of the bank's employees.

Deutsche Bank was not deemed liable for the actions of its former employees and the bank had repaid the money to the German tax authority. The men appealed the sentences, and in mid-2018, Germany's Federal Court of Justice affirmed the convictions and sentences for all but one of the men, whose appeal was allowed because of a lack of evidence. During this time in July 2014, the German authorities issued arrest warrants for two male Pakistani nationals, Mobeen Iqbal and Ashraf Muhammad, who were behind the issuing of instructions for the illegal transactions.

(c) Fraudulent accounting

Owing to the difficulty of monitoring and verification of CDMs, there is a high potential for crimes to occur in this market (Gibbs and Cassidy 2016:244; DulaHazra 2018). Mandatory ER projects have resulted in companies deliberately misreporting and furnishing false calculations to regulators of the emissions so that they can emit more than allowed (Lohmann 2009; Haque and Islam 2015). CDMs are similar to REDD+ as emission offset projects and fraud has been well reported in this market. The fraud is

tied to corruption, so that many of the instances of fraud are within the ambit and knowledge of local government officers.¹²⁷

(d) Ponzi schemes

Anne Masters Scholtz was a carbon trader who built up a multi-million-dollar ponzi scheme in the US. By using the Regional Clean Air Incentive Market (RECLAIM), Scholtz sold non-existent carbon credits until she was exposed (Talley 2009; Gibbs and Cassidy 2016). The exposure came after she deceived officials at the company, AG Clean Air by telling them that Mobil would purchase US\$17.5 million worth of RECLAIM trading credits from her (Gibbs and Cassidy 2016). AG Clean Air paid Scholtz US\$12.5 million for credits thinking it would sell them to Mobil for a profit. This never eventuated, and the scheme was uncovered in 2005. Scholtz plead guilty to six counts of wire fraud in 2005 and was sentenced to five years' probation with one year of home detention (Talley 2009; Gibbs and Cassidy 2016). At the time of her conviction she owed millions of dollars to duped investors, who filed numerous civil lawsuits against her to recover their money.

2 Corporate Carbon Fraud

Powerful international corporations have been convicted of fraud. There are cases of international companies in the global North manipulating poorer countries, predominantly in the global South, to extract their natural resources. Such extraction done through illegal means or through seemingly legitimate means.¹²⁸

In 2015, it was discovered that German car making company Volkswagen had been installing a secret software device in 580,000 of its diesel vehicles sold in the US alone. The device was activated when the vehicles were tested for emissions and the readings would show as considerably less than the true emissions reading. This allowed the company to stay within its emissions limit. The supposedly low-emission-producing vehicles provided an attractive investment to buyers wanting to lower their carbon

¹²⁷ Car manufacturing (along with pharmaceuticals and petroleum companies) has a long-documented history of environmental corporate offences (Simon 2000). Determining what is legitimate and illegitimate entrepreneurship is difficult, as shown in the early work of Szanz (1986) who explored this link. For carbon fraud, the German car manufacturer Audi, was reported for understated emissions readings from its vehicles.

¹²⁸ For example, a legitimate way can be through securing large tax exemptions. This is commonly the case in mining.

emissions footprints. This was false marketing by Volkswagen. The vehicles were recalled by Volkswagen and the company admitted to rigging around 10 million diesel engine vehicles that were sold in the US. The rigging had been taking place for nearly a decade.¹²⁹ This type of fraud fuels arguments that carbon trading platforms hold no genuine basis for carbon reduction (Bachram 2004; Lang 2009). This resulted in the company paying more than \$US25 billion in penalties and fines under US laws, as well as compensation to its US customers. The company plead guilty, before the US courts, in March 2017 to fraud, obstruction of justice and falsifying statements. The company was sentenced to three years' probation and a fine of US\$2.8 million. The presiding judge stated, 'This is a case of deliberate and massive fraud' (Carey 2017). In June 2018, Volkswagen was fined €1 billion by the German authorities for the same emissions scandal (Boston 2018).

Other examples of corporate fraud include where businesses market themselves as 'green', but provide no evidence to support this, or if they provide some evidence, the company grossly overstates the value of investment in emission offset schemes (White 2011:49-50). Meanwhile, some businesses oppose inclusion in carbon reduction schemes, citing it as a threat to conducting business, when no evidence exists to support their argument that inclusion will result in loss of business. These instances are dishonest, misleading and may constitute fraud, and they have an element of 'green washing' (White 2011).

3 Carbon Fraud in REDD+ Schemes

To determine the likelihood of OCGs defrauding REDD+ schemes, a determination of existing fraudulent activities in REDD+ schemes is necessary. Although numerous instances of fraudulent activity in REDD+ have and continue to occur worldwide, some notable instances in the Asia-Pacific region are highlighted in this part, which are relevant for this thesis.¹³⁰ The voluntary carbon offset markets is driven by adventurous entrepreneurs seeking to promote the schemes to large corporations. Individuals are also able to buy credits from this market to offset their carbon footprint, but they are not the target of the promoters. To launch these projects, great promises of wealth are

¹²⁹ But the company admitted to committing the fraud over six years.

¹³⁰ Deliberate fraudulent activity may not be a legislated crime but can still result in harm. This is highlighted since there are instances of fraudulent activity around the world, which are not considered criminal acts and thus, are not punishable according to a country's criminal laws.

made to the landowners where REDD+ projects are intended, resulting in the fraudsters being able to secure the landowners' signatures on power of attorney agreements. These agreements are marketed to the world as documents that give the fraudsters full authority to receive money on behalf of the landowners.

Literature on the analysis of possible carbon fraud in REDD+ schemes is scarce (Lohmann 2009; Global Witness 2011; Greenpeace 2010; Nellemann 2012; INTERPOL 2013; Greenpeace 2015; Walters and Martin 2012; 2013; Martin and Walters 2013). However, it has been suggested that there is a direct link between forestry crime (illegal logging) and the possibility of criminality in REDD+ schemes (INTERPOL 2013).

As the implementation of the UN-REDD Programme is yet to be fully functional worldwide and the voluntary REDD+ system yet to effectively run, little is known of the extent of crimes in the REDD+ framework. Some of the few cases of fraud have occurred in developing nations that are prone to corrupt practices in governmentality. A 2014 assessment of REDD+ implementing countries by Transparency International (2014) found that very few of these countries had in place policies and procedures to penalise corruption and fraud if it occurred. Serious concerns have been raised regarding the lack of transparency and accountability safeguards of the spending of UN and donor funds in the REDD+ countries (Cadman and Reimer 2014). This lack of accountability and transparency causes much doubt concerning those agencies entrusted to run the REDD+ scheme for their countries (Nellemann 2012). As shown below, in PNG's case, the absence of checks and balances opened the doorway for dubious deals by government officials and even implicated PNG's then Prime Minister.

According to a number of reports and articles, crimes that will occur in REDD+ schemes are identical to or closely associated with crimes that are occurring in illegal logging around the world (Global Witness 2011; Nellemann 2012), for example, illegal land grabbing, assault and intimidation on the indigenous population (Nellemann 2012:31), forcing and/or coercing indigenous forest communities to sign away any rights they have to the forest (Cubby and Wilkinson 2009), and the misappropriation or diversion of REDD+ donor funds intended for the indigenous landowners. These types of harm occurring in logging have been recorded in PNG, and they are perpetrated by foreign actors in the forest industry who employ law enforcement and regulatory authorities to commit these crimes (Dateline 2005; Boni 2013). Illegal logging has also been known

to use professionals in legitimate roles to advance its operations and this may extend to crimes in REDD+.

We know from the work of green criminologists such as White (2006; 2012), Walters and Martin (2012; 2013), Martin and Walters (2013), South and Beirne (2006), and Elliot (2009) that extensive work has been done to highlight and combat these types of offences and that the Asia-Pacific region has long been exploited by illicit networks in the illegal timber trade (Green et al 2009; Global Witness 2011; Nellemann 2012; INTERPOL 2016). Two significant reports highlight the possible link between illegal logging and the REDD+ scheme: Global Witness's 2011 report, *Forest Carbon, Cash & Crime* and the joint-authored INTERPOL and UN 2012 report, *Green Carbon, Black Trade: Illegal Logging, Tax Fraud and Laundering in the Worlds Tropical Forests*. These reports noted a number of specific risks, such as illegal logging, lack of police involvement, illegal land grabbing, theft and misappropriation of REDD+ funds and the manipulation of measurements to exaggerate results in order to receive higher payments. Global Witness's report examined these risks in detail and put forward recommendations to circumvent the possible infiltration by organised criminal elements and corrupt government officials in the REDD+ scheme.

The INTERPOL-UN (2012) report examined ways to disrupt illegal logging to ensure the efficient implementation of the REDD+ scheme. Three issues are common in both reports. Firstly, the reports state that the risk of organised crime and corruption is extremely high. Secondly, apart from Costa Rica, all other REDD+ implementing countries are classified as highly corrupt and have weak governance systems. Finally, effective implementation of REDD+ hangs on the willingness of national governments to implement impartial and independent policies and law reform. The three highlighted issues are intertwined and are tied to government objectives.

Since the potential crimes in REDD+ are identical or closely related to crimes in illegal logging, there is a high probability that they might be committed by the same actors who commit illegal logging (Nellemann 2012). For commercial logging, this may mean that the registered logging companies must be monitored because of the potential to commit carbon fraud. This may allow for the development of prevention techniques by knowing which companies (and other associated actors) to focus on. However, while those actors, primarily logging companies, may be known to authorities in REDD+ countries, the REDD+ scheme threatens to attract a completely different set of criminal networks

from outside a REDD+ country. These criminal networks may be highly organised, highly structured and well connected internationally, revealing a level of sophistication not encountered before by a REDD+ country's law enforcement and regulatory authorities (INTERPOL 2013). Detection of these international criminal networks may, therefore, be extremely difficult, especially as most REDD+ countries are developing nations with very limited logistics, personnel and expertise in the prevention of organised crime.

So far, it seems REDD+ schemes have not attracted organised crime gangs. Instead white-collar and blue-collar individuals and networks have travelled to REDD+ countries to deal directly with indigenous communities and coerce them to part with their forests.¹³¹ Such men have come to be known as 'carbon cowboys' (Lang 2008; 2009; Jong, Torres and Salazar 2014; Aguilar-Støen 2017) The term arose after a series of television documentaries uncovered Western men posing as carbon brokers, going into remote communities and coercing the locals to sign over rights to their land on the mistaken belief that they would benefit greatly (Aljazeera 2009; 60 Minutes 2013; Aguilar-Støen 2017:91).

In the context of REDD+, the areas of fraud being committed have been identified as:

- verification, claiming credits for forests that do not exist (Lohmann 2009; Brown 2010; Larmour 2011; Global Witness 2011)
- land grabbing from indigenous traditional or customary landowners
- bribery of government officials
- actual violence and intimidation of indigenous landowners
- the manipulation of forest carbon measurements and baselines, and double counting of credits (Lohmann 2009; Brown 2010; Larmour 2011; Global Witness 2011). Calculation of carbon stocks can be overestimated, the verification process can be falsified and non-existent large tracts of land can be claimed,

¹³¹ Some cases are close to being fraudulent. In Liberia, British national Mike Foster entered into an agreement with the Liberian Government to market the country's forests for US\$2.2 billion (Global Witness 2010). The deal did not eventuate, which led the Liberian Government to lodge a complaint of fraud with the UK. Foster was arrested but the UK police cleared him of any wrongdoing. That did not stop the Liberian Government requesting that he be extradited to the country for questioning over the contract.

which would lead to a REDD+ company in the voluntary market, or a country under the UN-REDD Programme, receiving payment for providing false data¹³²

- illegal logging on land claimed to be conserved for REDD+ schemes
- theft, misappropriation and diversion of REDD+ funds
- falsification and forgery of documents to facilitate money laundering
- tax evasion (Global Witness 2011).

With regards to verification, how can one be so sure that there actually exists a REDD+ project in some remote part of the world? As a historical example (and mentioned above on page 85), consider England in the 1800s, when thousands of investors lost their life savings investing in gold mines that were supposed to be operating in South Africa but were non-existent (Falstead 1950). The scheme was promoted by well-known members of the English aristocracy, which spurred the unsuspecting English public who believed the mines existed (Falstead 1950). Over a century later, this dilemma is also apparent in REDD+ schemes as well as CDMs (Drew and Drew 2010).

Although the UN-REDD Programme provides verification guidelines, the existing problems have arisen from the voluntary market. As canvassed in Chapter III, there are stages that must be satisfied before funding is released by the UN. Due to the stringent requirements of these stages, it may take years for the conditions to be satisfied before funding from the UN and the donors is released after each stage of completion. Moreover, because of the lengthy wait and the promises of great wealth by private developers to the indigenous landowners, the latter opt to partner with private developers, preferring not to wait for the UN coordinated implementation of REDD+ (The National 2010). Based on the above discussion, I have identified three scenarios that will facilitate crimes in both the UN-REDD Programme and the voluntary REDD+ scheme.

- 1) The first instance of fraud has in fact already occurred in PNG and may likely reoccur: that of carbon cowboys entering PNG to manipulate nationals to sign over their land rights through power of attorney. In PNG, carbon cowboys have

¹³² Note that this would be the same danger when dealing with trading 'blue carbon', which is carbon stored in the coral reefs and mangroves (Lipset and Henning 2016). The verification process for this would be more difficult and expensive since for coral, it has to be checked under water and this necessitates diving gear, sea transportation, fuel and all the other necessary accompanying logistical costs. This would be a similar process for mangroves except no diving is involved.

traversed into remote communities to obtain the landowners' signatures on 'consent forms' to allow the carbon cowboys to have controlling interest and commence carbon projects.

- 2) The second instance is when the funds *enter* a REDD+ country under the UN-REDD Programme. The funds may then be misappropriated by corrupt government officials, or through the collusion of corrupt government officials with organised crime syndicates. They are unlikely to be misappropriated *before* leaving the UN-REDD Programme because the institution has in place strict reporting and accountability mechanisms to ensure that REDD+ funds are utilised for their intended purposes.
- 3) The third instance is that which concerns this study the most: the possibility of organised crime syndicates (be they transnational or domestic) manipulating the REDD+ schemes in either the UN-REDD Programme, or voluntary REDD+ projects.

The following instances of fraud and manipulation have occurred in Peru, the Philippines and PNG, with a particular focus on PNG. The common factors are identified in how the carbon fraud was committed.

(a) Peru

On 9 October 2010, an Australian man, David Nilsson, arrived in the Peruvian city of Iquitos (Jong, Torres and Salazar 2014). After meeting various government bodies and NGOs, he then travelled deep into the Amazon and met with various tribes, including the Matses tribe, the owners of a territory that is estimated to be half a million hectares. Nilsson convinced some of the tribespeople, such as the Jaguar tribe, to effectively sign away their rights to their rainforest which would allow him, through his company, Sustainable Carbon Resources Limited, to issue carbon credits in exchange for billions of dollars. Despite the joint venture agreements drafted in English and despite most of the tribespeople being illiterate, Nilsson assured them that they would receive great wealth while protecting their natural habitat. In reality, Nilsson had no intention of assisting the tribes or to save their forests. In his own words, Nilsson sought to receive 'billions' of dollars by marketing the forests to foreign potential investors by claiming to have the authority from the tribes to do so (60 Minutes 2013). Nilsson also planned to cut the trees in the future and plant oil palm after the carbon projects concluded (60 Minutes 2013). Nilsson was not employed or endorsed by the UN or any credible

verification authority. He lied to the tribespeople by stating that his company was associated with the UN. He was a known fraudster in Australia (Bodenham and Cubby 2011). He had swindled hundreds of thousands of dollars in the early 1990s, by selling non-existent blocks of land supposedly on the coast of Claireview, north Queensland to unsuspecting investors from Nauru, who paid up to AU\$70,000 for each block of land which was supposed to comprise five acres a block (60 Minutes 2013). Nilsson's deceit of the Peruvian tribes eventually unravelled when the Australian news programme *60 Minutes* (2013) exposed him.¹³³

In two short videos uploaded to *YouTube*, they show Peruvian men signing documents in what appears to be a community hall packed with locals who are witnesses the signing.¹³⁴ After signing, one of the men addresses the crowd using a microphone. These type of formal signing ceremonies supposedly legitimatised or created an aura of authenticity to Nilsson's deals with the Peruvians. In another short video, Nilsson and his entourage are travelling on a motor boat during which ironically, Nilsson refers to himself as a 'carbon cowboy'.¹³⁵ A third video shows local Peruvian members of Nilsson's team, relaxing inside a house before they make the journey down the river back to town.¹³⁶ Nilsson is the cameraman in the house and tells the Peruvian occupants that he will post the video on the website of a man named Jim King.

Thereafter, a series of short videos show Nilsson's group embarking onto what he calls a new boat;¹³⁷ and the group disembarking from the boat.¹³⁸ A follow-on video shows what appears to be officials making mobile calls.¹³⁹ Another appears to show them standing and waiting (for something).¹⁴⁰

When interviewed by 60 Minutes, Dr. Dan Pantone, who had been engaged by Nilsson to introduce him to the Matses, stated that the tribespeople '...completely trusted him

¹³³ In 2013, the Peruvian Federation of Small Farmers criticised the lack of regulation of 'carbon pirates' and acknowledged that investment in forest carbon trade may in fact accelerate deforestation and lead to land grabs (Llanos and Feather 2011).

¹³⁴ <https://www.youtube.com/watch?v=H7G6i_zn1IM&feature=related7>, <<https://www.youtube.com/watch?v=3CQtQKYiJAA>>.

¹³⁵ <<https://www.youtube.com/watch?v=KNhhZjzqnwo>>.

¹³⁶ <<https://www.youtube.com/watch?v=JnsoS-oyR-o>>.

¹³⁷ <<https://www.youtube.com/watch?v=evaShIA3dz8>>.

¹³⁸ <<https://www.youtube.com/watch?v=gJ0GFya-8YA>>.

¹³⁹ <<https://www.youtube.com/watch?v=1mmfUsaxnQs>>.

¹⁴⁰ <https://www.youtube.com/watch?v=Pu2_wRa7uBE>.

[Nilsson]...' and that they '...opened their homes to him...' Nilsson was able to play on the emotions of the people and gain their trust by lying to them. According to Pantone, Nilsson told the tribespeople that he was part Australian Aboriginal, that he grew up in extreme poverty and that he was a successful businessman in Australia. Through these types of lies, Nilsson portrayed to the tribespeople that he had experienced the type of hard life they were going through and so he knew what he was doing by presenting them an opportunity improve their standard of living. Nilsson promoted himself as a role model that the Peruvians could aspire to emulate, i.e: if he (Nilsson) could rise up from being a poor indigenous person to a successful businessman, then so could they. These lies worked since he secured signatures which provided him power-of-attorney over the tribes' forests. Unknown to the tribes, by signing the document, they had agreed to hand over half of all their profits to Nilsson *and* locked themselves into an agreement for over 200 years though they were told it was for 25 years.

In the 60 Minutes programme, Nilsson tried to market the carbon project to an undercover 60 Minutes producer in a hotel room.¹⁴¹ Nilsson is exposed when the 60 Minutes' camera crew and the reporter, walk into the room whilst the deal is taking place and confront him with his lies. The Peruvian foray was not the only of Nilsson's carbon cowboy attempts. He had also tried to do the same in PNG and the Philippines. After Nilsson departed Peru, a Peruvian judge issued a warrant of arrest for Nilsson who has so far, evaded arrest by not returning to the country. Nilsson used the videos and photos of his meetings with indigenous Peruvians to market his scheme. .As shown in Pictures 9 and 10, Nilsson posed with Peruvian landowners who were dressed in traditional attire (Picture 9) or as simple bare-chested villagers (Picture 10) to possibly invoke viewers to perceive his dealings as genuine, appearing as a westerner bringing development to rurally based communities, neglected by their governments.

¹⁴¹ Nilsson tells the undercover producer that he has controlling interest over the forests for 200 years but the carbon project will only run for 25 years.



Picture 9: Nilsson and Peruvian tribespeople¹⁴²



Picture 10: Nilsson and an indigenous Peruvian tribesman

¹⁴² Pictures 9 and 10 reused under Fair Dealing for Criticism or Review, <<http://cde.peru21.pe/ima/0/0/0/5/4/54504.jpg>>.

In 2015, it was reported that Nilsson had set his sights on the traditional aboriginal landowners of the Lower Gulf in the Top End of Australia (Carpenteria Land Council Aboriginal Corporation 2015).

(b) The Philippines

The island of Mindanao, on the border of the Philippines and Indonesia, welcomed *Shift2Neutral*, an Australian registered company, which claimed to be the ‘leading neutraliser of carbon emissions in the world’ and was owned by Australian Brett Goldsworthy.¹⁴⁴ Goldsworthy had ventured into the Philippines with promises to an indigenous tribe that they would benefit from carbon credit sales, yet this did not eventuate (Lang 2008; Walters and Martin 2013:99). Goldsworthy obtained the signatures of the villagers to grant him power-of-attorney over their land (Lang 2008). After obtaining the villagers’ signatures, Goldsworthy left but did not return to Mindanao to fulfil his promises. By 2011 he publicly claimed to have secured almost AU\$1 billion worth of carbon offsets deals using the forests of the Maluku Islands in Indonesia (Shift2Neutral 2010a), the Amazon (Shift2Neutral 2010b), Philippines, Sarawak Province in Malaysia (Fogarty 2010), the Democratic Republic of Congo and the Solomon Islands (Shift2Neutral 2010c).¹⁴⁵ Whoever bought credits from these projects, received from Goldsworthy, a carbon certificate(s) which could supposedly be sold on for a handsome profit. Goldsworthy marketed his dealings by extensively posting photographs on the Shift2Neutral website and Facebook page, showing signing ceremonies and other occasions where the indigenous people were dressed in traditional attire and were supposedly giving their consent for his activities.

The website for Shift2Neutral no longer exists. Goldsworthy released “official” press releases to document “milestone” signings and carbon activities. The two snapshots of Goldsworthy’s activities in Mindanao, provided below were taken from the website, REDD-Monitor. The first shows Goldsworthy in signing ceremonies with the indigenous Mindanao islanders. The second is supposedly of soil, trees and carbon measurements, in an attempt to legitimise Goldsworthy by implying he is knowledgeable in environmental and carbon assessment.

¹⁴⁴ The website, REDD-Monitor, documents Goldsworthy’s venture into Mindanao, Philippines <<https://redd-monitor.org/2010/12/16/shift2neutral-in-the-philippines-fraudulent-incompetent-or-both/>>.

¹⁴⁵ *Shift2Neutral v Fairfax Media Publications Pty Ltd* [2014] NSWSC 86.



Picture 11: Mindanao landowners and Goldsworthy signing¹⁴⁶

¹⁴⁶ Pictures 12 and 13 reused under Fair Dealing for Criticism or Review, <<https://redd-monitor.org/2010/12/16/shift2neutral-in-the-philippines-fraudulent-incompetent-or-both/>>.



Picture 12: (Supposed) soil, trees and carbon assessment by Goldworthy¹⁴⁷

The Oakhill College in Sydney was a recipient of Goldworthy's carbon certificates and believed that it had made history to become the first 'carbon neutral school in the world'.¹⁴⁸

The Australian media exposed Goldworthy's carbon project in Mindanao as a scam and revealed that no benefits were flowing to the indigenous people there.¹⁴⁹ In a claim for defamation filed by Goldworthy against an Australian media company, the trial judge found the carbon certificates to be 'valueless' and that the carbon credits were 'non-existent' and 'bogus'. He also found Goldworthy's claims to the contrary to be 'false and deceptive'.¹⁵⁰ On appeal, the trial judge's decision was affirmed.¹⁵¹

¹⁴⁷ Ibid.

¹⁴⁸ Ibid.

¹⁴⁹ Today Tonight, Seven News.

¹⁵⁰ Above n 133.

¹⁵¹ *Shift2Neutral v Fairfax Media Publications Pty Ltd* [2015] NSWCA 274.

Goldsworthy's LinkedIn profile continues to list him as the owner of Shift2Neutral and he promotes himself as a leader in green assessment.¹⁵² He is now operating another 'green' venture called Sakura Oil and is marketing it as an emissions reduction company.¹⁵³ Ironically, on its website, Sakura Oil states that it is a carbon neutral company having purchased carbon credits from Shift2Neutral, with the link provided to the website of Shift2Neutral.¹⁵⁴ However, clicking on the link results in an 'error' message advising that the site no longer exists.

(c) Papua New Guinea

A case of fraud committed on one side of the world had its origin on the other side in PNG. In December 2010, the City of London Police arrested two British citizens who had arrived back at Heathrow airport from Canada (Evening Standard 2013). David John Dowes and Ian David MacDonald had sold non-existent carbon credits, which they claimed were generated by the April Salumei project.¹⁵⁶ These men had cold-called the English public, many of them elderly people, and coerced them to purchase worthless, non-existent carbon credits netting the men around £3 million (Evening Standard 2013; The Insolvency Service 2015). The victims believed that they were making valuable investments and were sold carbon credits for £7.50 a unit from the April Salumei project and £3.75 a unit for the Lake Murray project (The Insolvency Service 2015).¹⁵⁷ The victims were led to believe that the credits would appreciate in value quickly, which would allow them to be sold on for a handsome profit (Lang 2009).¹⁵⁸

¹⁵² <https://www.linkedin.com/in/brett-goldsworthy-4b3a6733?challengeId=AQF_zxpGRjBR7gAAAXGRlpC7cf3K5wgoIRU0KeOK_I_VgHgZcQrwRJuseVelAK4FsK8NFfUgYz9ec-lMaGmEIlPcl2ya7YSNKg&submissionId=1f7acb9f-bf2b-0716-529e-6aef1cc7e128>. Accessed 19 April, 2020.

¹⁵³ <<https://www.sakuraoil.com>>.

¹⁵⁴ Ibid. Website accessed 11 April, 2020.

¹⁵⁶ *Crown v Macdonald & Downes* 720127038.

¹⁵⁷ There was nothing to indicate the fraud was suffered by anyone in PNG. The initial carbon credit units were marketed to London Carbon Neutral. This company then sold the units to the vulnerable victims. Earthsky Ltd and London Carbon Neutral were among six other companies which the Secretary of State for Business, Innovation & Skills, petitioned the court, to have wound up in the public's interest.

¹⁵⁸ The April Salumei area was previously a Forest Management Area earmarked by the NFA for logging. Later on it was turned into a project under the UN-REDD Programme before the OCCD released it to become a private REDD+ project managed by Australian company Pacific Forest Alliance. World Markets AG April -Salumei project is headed by Mr Stephen Hooper of the University of Western Australia from the Natural Resource Management, Centre of Excellence. The website of Pacific Forest Alliance states the company's aim is to 'assist indigenous communities to find commercial solutions to in [sic] the reduction or cessation of full scale commercial and unsustainable logging'. The website

On 18 April 2013, the Kingston Crown Court in England convicted both men who became the first people in the UK to be convicted of a carbon crime. They were sentenced to a combined 12 and a half years for the fraud. In 2015, Earthsky Limited which was the company both men incorporated in England in 2001 and ran the boiler scam under, was wound up by order of the British High Court.

As noted earlier, corruption in REDD+ schemes is highly likely due to the complexity in the scheme (Lohmann 2009; Larmour 2011; Nelleman 2012). With billions of dollars earmarked for REDD+ implementation in forest-rich nations, the lure for criminal networks to those countries is great. However, the corruption and fraud may also come from within government institutions. PNG's then Prime Minister, Somare, had been implicated in illegal logging (Barnett 1989) and various corrupt practices while he was in Parliament. In some respects, this adversely affected the REDD+ scheme in PNG then, and these troubles have carried over from when the scheme was established in 2005 to the present day. It is probably one of the closest examples to illustrate the *potentially* corrupt ties between the logging industry, government and the REDD+ scheme predicted by environmental crime experts (Nellemann 2012; Standing and Stewart 2013). According to Standing and Stewart (2013), the sophistication of logging companies to conduct illegal operations raises the possibility of a high degree of manipulation occurring in REDD+ schemes. As to exactly how the manipulation will occur has yet to be identified. In 2009, Somare, still Prime Minister, criticised the US for not improving its climate policy (The Sydney Morning Herald 2009). Then, in 2010, at the Oslo Climate and Forest Conference, Somare declared PNG was 'ready' to act in REDD+ and urgently needed the money to do so (Somare 2010). He stated that PNG's abatement program required:

- US\$715 million to US\$1 billion in resources from 2011–2015 broken down into:
 - US\$71 million for readiness payments;
 - US\$118 million for pilot program costs;
 - US\$526–811 million for performance-based payments.

He then attempted to reassure the audience by stating:

(<<https://www.pacificforestalliance.org>>, accessed 30 October 2018) lists two projects in PNG, the April Salumei REDD+ project and the Lake Murray conservation project. The latter is located to the extreme west of the main island.

Of course in all of our development, mitigation and adaption actions, PNG subscribes to principles of transparency, equitability, safeguards and professionalism. We believe PNG's approach to Fast Start Funding can be used as a model for all REDD+ countries and we are happy to share our experience with anyone interested.

Somare omitted making it known to the conference that at the time (1) there was no legislation or policy in PNG to regulate REDD+ activity and protect the funds, (2) that in 2005 carbon fraud had already occurred in PNG when carbon certificates were printed and marketed as being genuine but actually had no value, (3) that the then office responsible for climate change was implicated in facilitating the fraud and (4) that Somare himself had co-signed and promoted the valueless carbon certificates when no carbon legislation had been passed to allow and regulate this. Somare further distanced himself from the need to recognise indigenous peoples' involvement in planning REDD+ and stated that the issue of 'corruption' should not prevent the immediate funding of the scheme to PNG, despite claims that his own nephew was peddling carbon schemes back in his province (Lohmann 2009; Lipset and Henning 2016).

The 2005 incident Somare omitted to acknowledge, involved Paul Tiensten, who was part of Somare's cabinet and the then Minister for Trade and Industry. Tiensten wrote to an Australian, Gregory Thomas Corby of Climate Assist (PNG) Limited and stated that Prime Minister Somare had agreed for Climate Assist (PNG) Limited, to sell carbon credits on behalf of PNG and that the government unconditionally guaranteed 'all actions undertaken for the monetization of these credits'.¹⁵⁹ The letter signed by Tiensten was sent at a time when there was no legal framework for the trading and dealing of carbon credits in PNG.¹⁶⁰ The fact that only Somare and Tiensten signed documents to purportedly show the support of the PNG government raised the question of how they could legitimately represent the entire government without having debated

¹⁵⁹ Letter at <https://i1.wp.com/www.redd-monitor.org/wp-content/uploads/2009/07/ca_authorisation.jpg>.

¹⁶⁰ Different companies were also implicated. A South Australian registered company named Carbon Planet Limited, headed by Mr Jim Johnson and Dr Srin Sundaran; it has since been placed in external administration (Australian Securities and Investments Commission website accessed 30 October, 2018 <<https://www.asic.gov.au>>). Climate Assist (PNG) Limited, headed by the former Director of South Pole Carbon Asset Management; was deregistered in November 2010 by the Australian Securities and Investments Commission. It is listed as registered on the website of the PNG regulatory body of businesses in PNG, the Investment Promotion Authority, but no Annual Returns have been filed since November, 2008, which might indicate that the company is not operating (Investment Promotion Authority website accessed 30 October, 2018 <<https://www.ipa.gov.pg>>). Swiss based South Pole Carbon Asset Management does not mention PNG on its website but does list two other REDD+ projects that are in Matavén, Colombia and Karibe, Zimbabwe (Accessed 30 October, 2018 <<https://www.southpole.com>>).

the issue in Parliament and legislating for it. Somare has been accused of impropriety in PNG's forestry industry and of receiving bribes in PNG and abroad (Barnet 1989; *Public Prosecutor v Lim Ai Wah*¹⁶¹). He was also accused of pushing for REDD+ acceptance, yet doing nothing to stem illegal logging in PNG because of his conflict of interest with logging companies. The then Opposition Leader, Sir Mekere Morauta, publicly condemned the manner in which Somare and the Office of Climate Change were operating (Morauta 2009).

Then in 2009, the then director of the now defunct OCCCT, issued carbon certificates to various Australian registered companies seeking to trade carbon credits on the open market (Lang 2009; The Economist 2009). That office was responsible for overseeing the development of the REDD+ schemes in PNG and was the regulatory body at the time. In the early days of establishment, the office was operating on an ad hoc basis with little direction and structure (Filer 2015). The director claimed the certificates to be authentic currency notes (Filer 2015).¹⁶² Appearing in the investigative segment *People and Power* for television station *Aljazeera* (2009), the director explained to the interviewer that the certificates were printed as 'examples for internal office use' so that he could 'see what they looked like' (Lang 2009). Following this investigative report, which exposed the director, he was publicly chastised by Somare (who was still the Prime Minister) and suspended before eventually being dismissed.

Years later, the former director and Tiensten found themselves behind prison bars. Tiensten was sentenced to nine years imprisonment for 'dishonestly applying for the use of another' K10 million.¹⁶³ The money was given to Travel Air Limited, a company owned by Mr Eremas Wartoto, which had no aircraft at the time but had proposed for the money to be used as subsidy for passengers in the rural areas of East and West New Britain Province.¹⁶⁴ On appeal by Tiensten, the conviction and sentence was confirmed by the PNG Supreme Court¹⁶⁵ and an application for bail based on safety reasons was rejected,¹⁶⁶ leaving Tiensten to serve the full nine years. The former director was sentenced in 2012 to 30 years imprisonment for murdering a former PNG

¹⁶¹ *Public Prosecutor v Lim Ai Wah and Thomas Phillip Doehrman* [2016] SGDC 249

¹⁶² These certificates were placed on the web. They are in Appendix 2.

¹⁶³ *The State v Paul Tiensten* [2014] PGNC 224; N5563.

¹⁶⁴ *Ibid.*

¹⁶⁵ *Paul Tiensten v. The State* [2014] PGSC 74; SC1468.

¹⁶⁶ *In re Bail Act, Chapter 340, Application by Paul Tiensten* [2014 PGSC 29; SC1343.

national rugby league representative who he shot outside a nightclub in Port Moresby.¹⁶⁷

Following these scandals in PNG's government, most prospective carbon cowboys left the country. By late 2009, a few of the carbon cowboys remained in PNG and had aligned themselves with local political figures. Australian Kirk Roberts was one such person. Roberts was associated with James Kond, who was then the Deputy Leader of the National Alliance Party, which was the political party of most of the cabinet members (Wood 2015). The television program, *Aljazeera* (2009) noted how the REDD+ scheme advanced by Roberts was based on promises of great wealth and development and that both men facilitated interests from landowners in the Kamula Doso area in the Western Province, the Lower Ramu area in the Madang Province (Cubby and Wilkinson 2009), the East Pangia area of the Southern Highlands Province (The National 2010a; Lahoc 2010) and the Oro Province (Wood 2015).

In the Western Province, they coerced Wisa Susupie, the Chairman of Tumu Timbers, and Mathew Kolenbow, a director of the company, to sign agreements for carbon trading in their area (Cubby and Wilkinson 2009; Wood 2015). Kolenbow was of the view that he and his fellow clan members will receive billions of US dollars from the carbon project (Aljazeera 2009). A local lawyer, Godwin Haumu, is shown in the documentary. However, a legal battle ensued with a company named Independent Timbers & Stevedoring Limited (IT&S), headed by Neville John Harsley (Aljazeera 2009).¹⁶⁸ IT&S claimed ownership of the same area for which Roberts claimed to have obtained consent of the landowners to reserve for carbon trading. As a result of this overlap, both parties went to the PNG National Court and disputed the operational rights to the area. While it seems Robert's manner of brokering these deals with the landowners may have been legal, it was still highly questionable in many respects and failed a number of vital criteria necessary to establish that FPIC from landowners had been obtained before the landowners signed the agreements for REDD+. According to Harsley, this was what set IT&S apart from Roberts, since IT&S had done its due diligence and social mapping. Harsley stated: 'without doing the process of landowner identification, you are not following the letter of the law' (Aljazeera 2009). In PNG, a

¹⁶⁷ *The State v Yasause* [2012] PGNC 248; N4871.

¹⁶⁸ An online search of IPA company records confirmed that Neville John Harsley is a former director of the company. Search conducted on 22 June 2019 at <<https://www.ipa.gov.pg>>.

rightful or genuine landowner can be extremely difficult to identify and this issue also caused problems for Roberts when many landowners claimed to have disagreed with the carbon project occurring (Lahoc 2010; The National 2010b).¹⁶⁹

Roberts is also filmed addressing large numbers of landowners at Hanau village in the Oro Province¹⁷⁰ on 08th October, 2009, promising money and development, all the while speaking English.¹⁷¹ There is no translator and he uses complicated words such as 'biodiversity' without explaining the meaning. He states there will be lots of opportunities from carbon trading but pauses and struggles to name them. Roberts later stated that people living in the PNG bush are 'quite ignorant and uneducated ...' when refuting claims that he had coerced landowners (Cubby and Wilkinson 2009).

Roberts travelled extensively throughout PNG promoting his carbon projects. Apart from documenting himself going to Hanau village, he does the same going to Apenda village in the Southern Highlands Province, Lake Campbell and Somongapa villages both in the Western Province. He appears to have chartered planes, hired vehicles, stayed in one of the most expensive hotels in PNG, *Airways Hotel* when he was in Port Moresby and treated landowners and others to restaurants and hotel dining (Al Jazeera 2009). Roberts was backed by the Australian company, Carbon Planet Limited which gave Roberts' company, Nupan (PNG) Trading Corporation Limited,¹⁷² millions of Australian dollars to kick-start the carbon projects (Gridneff 2009). He seems to have been better funded than Nilsson and Goldsworthy who were really one-man operations. Roberts hired a video production team with at least two camera operators who videoed the signing and welcome ceremonies hosted by the villagers.

Roberts' media team posted the videos on the internet and created a website showcasing Roberts' work in PNG. The website: 'www.carbonwantok.org', is no longer available. Wood (2015:221-222) notes Roberts' extensive use of the media, that during 2009 to 2010, a large amount of material was placed on the website and that

¹⁶⁹ For example, *Dumal Dibiaso v Kola Kuma* [2005] PNGLR 680; *Tunu for Luhalipu Clan v State* [2002] PGNC137; N2190.

¹⁷⁰ The Oro Province is also referred to as Northern Province.

¹⁷¹ Wood (2015) provides the most comprehensive of reports regarding the state of affairs during this time. He also shows how the Aljazeera segment used media that was taken by Roberts to promote his REDD dealings with the landowners.

¹⁷² Nupan (PNG) Trading Corporation Limited changed its name to Kuwemea Limited. The entites have since been removed from trading by the Investment Promotion Authority. Online search conducted 11th April, 2020 <<https://www.ipa.gov.pg>>.

'Roberts used his website to demonstrate the existence of contracts and agreements between himself and his supporters.'

At the beginning of all the videos, a catchy title appears, 'A Breath of Fresh Air', before showing villagers in elaborate traditional dress welcoming Roberts and his associates, then showing the speeches and also the signing of documents. Most of the footage of the speeches are centered on Roberts, but it also shows local government officials, supposedly giving endorsement to Roberts. As with Nilsson's photos all the footage is an attempt to convince the viewer that Roberts' projects were legitimate. The following snapshots were taken from videos posted on the internet by Roberts' media team, showing Roberts dealings in Hanau village, Oro Province.



Picture 13: Traditionally attired dancers awaiting Roberts' arrival, Hanau village¹⁷³

¹⁷³ Pictures 13 – 19 show the Hanau village ceremony, reused under Fair Dealing for Criticism or Review. <<https://vimeo.com/7345689>>, <<https://vimeo.com/7428832>>; <<https://vimeo.com/7585874>>



Picture 14: Hanau villagers, beating kundu drums to welcome Roberts



Picture 15: Roberts being carried into Hanau village



Picture 16: Roberts lowered from traditional type litter, to address the villagers



Picture 17: Roberts speaking english to the villagers at Hanau village



Picture 18: A supposed 'government official' addressing Roberts



Picture 19: Supposed 'government officials' who endorsed Roberts

At Apenda village in East Pangia, Roberts continued making his promises of wealth to a huge crowd that welcomed him. People flocked from all over the area to hear his speech and witness the transferring of the Power-of-Attorney to Roberts' company, Nupan Limited. Since then, Roberts has not returned and East Pangia remains as it was before he arrived.¹⁷⁴ Whilst there have been detailed examinations of PNG's REDD+ scheme and its major carbon projects, being April Salumei (see for example Leggett and Lovell 2011), Kamula Doso (see for example Wood 2015), Central Suau (Pascoe 2018; Pascoe et al 2019) including on blue carbon (Lipset 2014; Lipset and Henning 2016); forestry and REDD+ academics have neglected to conduct any empirical work into the Pangia area and generally the Southern Highlands, except in other areas, such as for example the various ethnographic and anthropological work by Stewart and Strathern (1999a; 1999b; 2000; 2002) and Strathern and Stewart (2000), legal and ethnographic work by Liria (2004; 2009) cultural-linguistic work by Fullingim (1987) governance work by Haley and May (2007) and economics work by Burkins (1984). The feasibility therefore, of this area for REDD+ activity has not been truly assessed. The East Pangia area is home to around 48,000 people (Lahoc 2010) and is one of the 20 local-level governments of the Southern Highlands Province. Originally earmarked for logging, despite Roberts' carbon project never eventuating, neither has logging. It is likely that the high costs and distance from a viable log pond have hampered logging from commencing. To transport the logs through the Southern Highlands down to Lae, the nearest coastal town connected by road, would be precarious and extremely costly. However, the nearest possible log pond would be across to the adjacent Western Province using the river networks into the Kamula area. This might explain why IT&S wanted to build a road into the area and connect the two provinces.

There are six snapshots below, taken from the promotional videos of Apenda village, showing (1) Roberts being led down to the meeting area walking on a bed of freshly cut leaves, (2) traditional dancers / warriors welcoming Roberts, (3) crowd of people waiting for Roberts to address them, (4) Roberts addressing with a Caucasian camerawoman in the frame too, (5) the crowd listening to Roberts and finally (6) Roberts and the

¹⁷⁴ At the end of Roberts' promotional video, various people are thanked from the following villages: Kauwo, Apenda, Undiapu, Pokepiko, Laiyo, Pokale, Mele, Morea, Yakiliyapu, Tengai, Pondiyapu, Talipiko, Molo, Pawai, Alia and Tindane. The Pangia District Affairs Officer also attended.

facilitators being interviewed after the ceremony and stating that all the people in the area supported Roberts and the proposed carbon projects.



Picture 20: Roberts being led into Apenda village¹⁷⁵



Picture 21: Traditionally attired warriors, welcoming Roberts

¹⁷⁵ Pictres 20 – 25, show the Apenda village ceremony, reused under Fair Dealing for Criticism or Review, <<https://vimeo.com/6410085>>; <<https://vimeo.com/6185638>>.



Picture 22: Villagers at Apenda village waiting for Roberts' speech



Picture 23: Roberts speaking english at Apenda village



Picture 24: Crowd at Apenda village, listening to Roberts



Timothy Tepi, Kirk Roberts & James Kond discuss carbon trading in the East Pangia Region - 02 Aug 2009

Picture 25: Roberts with Tepi and Kond, after the signing ceremony at Apenda village



Picture 26: Traditionally attired warriors at Lake Campbell, welcome Roberts¹⁷⁶



Picture 27: Roberts being led into the village, Lake Campbell

¹⁷⁶ Pictures 26 to 31, of Lake Campbell village, reused under Fair Dealing for Criticism or Review, <<https://vimeo.com/7498955>>.



Picture 28: Traditional welcome, Lake Campbell



Picture 29: Entering the village common haus



Picture 30: Roberts speaking to villagers inside the common house



Picture 31: Traditionally attired villager, listening to Roberts, Lake Campbell

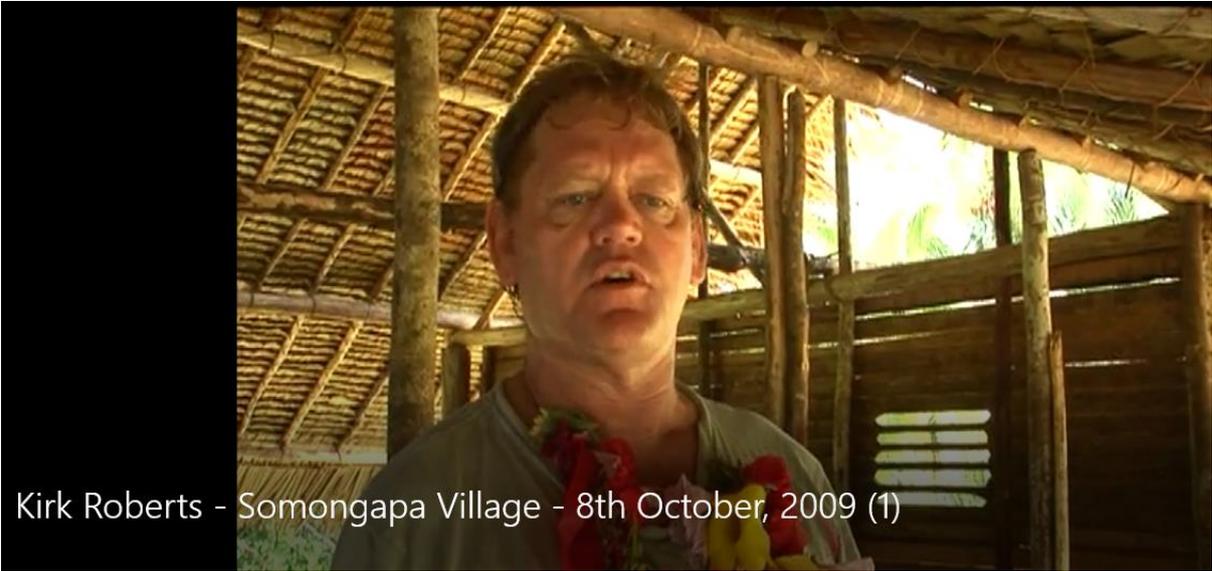
During his speech at Somongapa village Western Province, Roberts emphasises on how the villagers will become 'famous' by consenting to the carbon projects

commencing in their village, that they should be patient for the projects to develop and that many good things will come to them. Thus, giving them a global profile.



Kirk Roberts - Somongapa Village - 8th October, 2009 (1)

Picture 32: Somongapa village, cameraman and villagers awaiting Roberts' speech¹⁷⁷



Kirk Roberts - Somongapa Village - 8th October, 2009 (1)

Picture 33: Roberts speaking at Somongapa village

Roberts' extravagant promises riled many landowners and caused confusion and division among them. The Governor of the Western Province issued a public statement,

¹⁷⁷ Pictures 34 and 35, show the Somongapa village ceremony, reused under Fair Dealing for Criticism or Review, <<https://vimeo.com/7343655>>; <<https://vimeo.com/7464175>>.

warning Roberts not to return to that province or else face being arrested (Radio Australia 2011). Roberts eventually left PNG and never fulfilled any of his promises to the rural communities he visited (Wood 2015). In answer to this type of confusion caused by Roberts and other carbon cowboys, the then Secretary for the Department of Environment & Conservation, Dr Wari Iamo, stated: 'the main problem is that the carbon cowboys [are] going direct to the resource owners ... bypassing the State ... to get their consent' (Aljazeera 2009). Later that same year, Iamo stated that the PNG government did not support voluntary carbon markets and that any existing operating projects would be suspended (Wood 2015). Iamo added that Somare had directed for the immediate ban of all voluntary carbon programmes and the prosecution of anyone who persisted in pursuing the programmes.

The criticism Roberts received from the PNG government and the international community, was well documented by the media and as a result, Roberts' main financier, Carbon Plant Limited, attempted to distance itself from him. However, Carbon Planet did not recover from the negative hype Roberts generated and brought to them. In mid-July, 2010, the company was placed into voluntary administration after 10 years of operation (Booth 2010). Carbon Planet had been dodging other controversies prior to this, including allegations of fraud and conflict of interest for its engagement of a senior Australian academic who had been heavily involved in PNG's REDD+ policy formulation and was a past forestry academic (Eco-Forestry Forum 2009).

Reports of human rights violations have been made relating to REDD+ in PNG. It was reported that a chairman of another landowner company in the Kamula Doso was kidnapped and forced at gunpoint to sign over his clan's land rights for a REDD+ project (Wood 2015). Later he denied this, stating he was bribed to fabricate the kidnapping story (Wood 2015). However, some commentators stress that there will always be human rights violations when the indigenous population protests the destruction of their surroundings (see for example White 2011:51; Llanos and Feather 2011). Moreover, some countries known for their human rights abuses are also REDD+ implementing countries, such as PNG (SBS Australia 2005; Boni 2013). Further, there have been claims of police being directed to enforce company policy and objectives.¹⁷⁸

¹⁷⁸ *Andy Asuma v Tiong Juk Chuong* [2018] PGNC 187; N7275.

Summary

This chapter has canvassed some prominent instances of carbon fraud in the different carbon trading schemes around the world and in particular in PNG, since it is the focus of this thesis' fieldwork. From 2009 when organised crime syndicates defrauded the EU ETS to current issues surrounding carbon cowboys in REDD+ schemes, the cases covered reveal that carbon fraud can be committed in a variety of ways, some of which are quite complex. There is no single type of offender; instead, the perpetrators are well-established multinational corporations, individuals, OCGs and professionals. In PNG's case, it is clear that carbon fraud is intertwined with corruption and good governance issues and this is likely the same for other developing nations implementing REDD+ (Pearse 2012; Cadman and Hearse 2014; Vijge et al 2016). I have not covered in detail instances of fraud that have occurred globally in the Joint Implementation mechanism and CDMs because of lack of reported cases. However, lack of transparency and accountability also pose problems in these markets. In PNG's case, these two mechanisms are not being implemented.¹⁷⁹

Organised crime in PNG is the focus of the next chapter where I investigate whether there is any likelihood of organised crime syndicates committing carbon fraud in PNG's REDD+ schemes (which is the basis of this study's exploration). This provides analytical findings on the structure of organised crime in the country.

¹⁷⁹ The CCDA website, under the tab 'Our Work' lists the emissions reduction activities being conducted in PNG. Website accessed on 06 April, 2020 <www.cdda.gov.pg>.

V ORGANISED CRIME IN PNG

The previous chapters explored the establishment of the REDD+ scheme (especially in PNG) and uncovered weaknesses in carbon trading markets that were exploited by organised crime groups (OCGs) notably in the EU ETS. This chapter is primarily concerned with verifying the theory by INTERPOL (2012) and other commentators, that OCGs will infiltrate REDD+ schemes. This is done providing the background to PNG's organised crime (OC) environment, based on literature review, case law (both PNG and Australian) and fieldwork conducted in PNG, which involved simple observation and four in-depth interviews with policemen. In addition, the evaluation draws from my professional experience.

Exactly what OC *is* and what type of structure constitutes an OCG in PNG does not seem entirely clear to many people, including the police. Many consider OC to be the literal meaning of *organising* a task, so that where there is some degree of planning involved in the commission of an offence, the PNG police may deem that as 'organised crime'. For example, when interviewed, one police officer stated that OC is when a group of raskols meet to plan a robbery: 'At the meeting they decide who will be the driver of the get-away vehicle, who will hold the firearms and who will be a look-out.'¹⁸⁰

Measuring the true extent of the presence of OC in general is extremely difficult (Barberet 2014; Sansó-Rubert Pascual 2017) and the same difficulty is experienced for measuring criminal networks in PNG, owing to the lack of official data (Biles 1976; Akmeemana et al 2014; Lakhani and Willman 2014).¹⁸¹ The problems I encountered in the fieldwork, which were explained in Chapter II, severely limited my ability to obtain data from the Port Moresby police, and this limitation qualifies this summary. There is also yet to be any empirical research into OC in general in PNG, and this is probably due to its clandestine nature.¹⁸² In the absence of verifiable data, I only canvass the documented cases of OC in PNG.

¹⁸⁰ Interview with Petrus (Gavara-Nanu, Kavieng, 2018).

¹⁸¹ Despite having a social media account, the PNG police do not have a police website to provide crime statistics to the general public. Social media account: <<https://www.facebook.com/pages/Royal-Papua-New-Guinea-Constabulary-Police-Headquarters/126104667537303>>.

¹⁸² Email correspondence in 2018 with Professor T Wing Lo, of the University of Hong Kong, confirmed that there is no hard evidence of Triads established in the Pacific, including PNG. The Professor

The small body of work regarding OC in PNG is mainly authored by overseas academics, emanating principally from Australia (Dinnen 2001; Windybank 2008; Briggs 2010; Broadhurst, Lauchs and Lohrisch 2014) and the UN (UNODC 2016), with a short article by a PNG police officer (Mitna 2014). The majority of this work focuses on the PNG criminal - raskols and not on other criminal groups. Other information is gleaned from literature concerning the Pacific region within which PNG is mentioned as illustrative of OC activities (Windybank 2008; Henshaw 2008; Schloenhardt 2011; Lindley and Beacroft 2011; UNODC 2013; Peake and Dinnen 2014; Dinnen and Walton 2016; Walton and Dinnen 2016).

OC is defined in various instruments. For the purpose of this thesis, the definition adopted is as per article 2 of the *United Nations Convention against Transnational Organized Crime* (UNCTOC):

- (a) 'Organized criminal group' shall mean a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit;
- (b) 'Serious crime' shall mean conduct constituting an offence punishable by a maximum deprivation of liberty of at least four years or a more serious penalty;
- (c) 'Structured group' shall mean a group that is not randomly formed for the immediate commission of an offence and that does not need to have formally defined roles for its members, continuity of its membership or a developed structure.

This noted, it is important to make the subsequent observations on the domestic OC scene, particularly accounting for primary illicit syndicates that would be in a position to infiltrate the REDD+ schemes, as predicted by INTERPOL (2012).

Also of significance is information concerning the domestic criminals known as raskols . Raskol gangs are unique to PNG and their incidence is thought to be connected to the extent of organised criminal syndicates operating in PNG. Researchers have posed the question whether OC has evolved from what are, essentially street gangs (Wright 2005:28). In evaluating the question, I considered whether OC syndicates might *not* infiltrate the REDD+ scheme simply because doing so is too difficult or not viable. The provisional measurement of OC in PNG proceeded as follows.

confirmed that this is primarily because there are no Chinese speaking criminologist who have done research in that region.

The first step was to determine whether TOCs operate in PNG capable of directly defrauding REDD+ schemes. Secondly was to ascertain if raskolshave evolved into OCGs, as predicted by Harris (1988), capable of infiltrating REDD+ schemes. The third step was to determine whether raskols might team up with foreign OCGs to infiltrate the REDD+ scheme.

A Transnational Organised Crime Groups

This section explores the possibility of foreign or transnational OCGs entering PNG specifically to commit carbon fraud. TOC refers to the OCGs that operate globally such as Triads, Yakuza and Italian Mafia that are based overseas and are known to conduct illegal activities outside their countries of origin. One of the earliest reported cases of TOC, described by Small and Gilling (2009), involved Anglo–Australian crime groups during the 1960s using PNG’s capital, Port Moresby, as a transit hub to smuggle amphetamines into Australia. Some suggestion has been made of OCGs from Russia operating in the Pacific (but not necessarily in PNG) and reports of Australian outlawed motorcycle gangs teaming up with Nigerian gangs to smuggle drugs out of PNG to Australia in exchange for weapons (Michael 2014). Since then, the reports of sophisticated OC in PNG have been almost solely attributed to PNG-based Chinese criminal networks who are widely known as involved in the illegal logging industry (Chin 2008:120) and may have the most direct opportunity to illegally infiltrate the REDD+ schemes. A suggestion that the Taiwan Triad gang, The Four Seas is operating in PNG and the Solomon Islands (Broadhurst et al 2014) does not seem likely in the absence of evidence to confirm this or any other Triad gang activity in the South Pacific.¹⁸⁶ The next section examines weak state theory to determine if PNG is susceptible to TOC.

1 Weak State Theory, Political Elites and Transnational Organised Crime

PNG has been described as a weak state (Dinnen 2001; Windybank and Manning 2003; Windybank 2003; Gosarevski et al 2004) verging on the brink of disaster and with

¹⁸⁶ Email communication with Professor Wing To Lo of Hong University (Gavara-Nanu, 2018). In my experience as a criminal defense advocate, I encountered many OC activities committed by both nationals and foreigners. However, my desktop research did not reveal any academic literature specifically on OC in PNG. It is outside the scope of this thesis to measure the true extent of OC activity in PNG.

a dismal governance record (Transparency International 2018). The country has one of the highest crime rates in the world (Lakhani 2014; Lakhani and Willman 2014a; 2014b; 2014c).¹⁸⁷ It is often assumed that this is due to the lack of employment and economic opportunities and poor government services, but much of it is tied in with cultural structures, obligations and wantokism (Dinnen 1997; 2001). Since the country is so culturally diverse, ethnic rivalries abound. In many of the cultures, conflict plays a role in dispute resolution (Dinnen 1997; Dorney 2000). For years after independence, crime in PNG was divided into two broad categories: that which was committed in the urban areas by PNG criminals and that which was committed in rural areas during tribal or clan conflicts (Banks 1993:128-131; Roscoe 2014; Lakhani and Willman 2014). By the early to mid-2000s, a new dimension emerged when reports surfaced of Chinese citizens being arrested for OC (PAC 2004; 2007)¹⁸⁸. Despite scant but strong evidence-based reports of OC, including TOC, the national government has never fully acknowledged it (Papua New Guinea Today 2018).

PNG authorities have not adequately acknowledged and addressed the full effects that OC might be having on PNG's economy, its social, cultural and political situation, and its security. These are the most important factors in detecting and preventing OC permeating society (Holmes 2016:20-28). This is reflected by PNG's non-ratification of the UNCTOC also known as the *Palermo Convention*. This lack of knowledge of OC means that law enforcement resources may be misdirected to target what might not be an OC activity, or fail to detect instances of actual OC, allowing an illegal activity or network to flourish. Further, where a PNG-based foreign OC group is operating, their illegal activities may be carried out undetected. Mainstream media devotes little attention to the issue, except when special police operations uncover illegal activities and illicit relationships. Consequently, the PNG public seems ignorant of the dangers and extent of OC and TOC.

While it cannot be fully confirmed that OC is extensive in PNG, weak state theory suggests the possibility that OC syndicates have already established a foothold in PNG's civil society and state institutions and therefore could exploit the REDD+ projects. This assumption is applicable if PNG is a weak state. A weak state is one in

¹⁸⁷ The country has around 7,500 police officers (The National 2019:7). Recruitment in the police force is often hampered by funding so that there is one police officer for every 1,168 citizens (Post-Courier 2019; The National 2019:7).

¹⁸⁸ PAC is abbreviation for Pacific Islands Broadcasting Association as stated in the List of Abbreviations.

which there is a weak or compromised monopoly over the legitimate use of physical force or dominion or sovereignty by an appointed leader according to largely agreed means. Sansó-Rubert Pascual (2017:33) suggests that high levels of crime correlate to a higher real presence of OC.

According to German social scientist Max Weber (1919), the state is 'a human community that claims the monopoly of the legitimate use of physical force within a given territory'. Holmes (2016) in this way concluded that weak state theory describes a condition of state dependence that draws on Weber's definition and then posits what the state would look like if the sovereign capacity was not fully engaged. Holmes cited Stewart Patrick's definition of weak states:

Poorly performing developing countries are linked to humanitarian catastrophes; mass migration; environmental degradation; regional instability; global pandemics; international crime; the proliferation of weapons of mass destruction (WMD); and, of course, transnational terrorism.

Thus, according to Holmes, where a ruling body has no or little control over its territory, law and order will break down or operate in the service of those actors who are able to exploit resources only nominally under the jurisdiction of a duly appointed authority. This occurs in many parts of PNG and most other developing countries. However, PNG does not fall entirely within Patrick's definition. While PNG has a high crime rate, the country has not been cited or challenged by the UN or INTERPOL for any international issues such as regional instability or transnational terrorism. Weak state theory can only partially account for the proneness of PNG to hosting OCGs. Patrick acknowledged this by stating that the relationship between OC and weak states is complex and that OC might not be present in one state that has the same attributes as another weak state.

Since gaining independence PNG has struggled to shrug off the cloak of corruption in almost every sector of government (Masi 2006). It has 'one of the world's most complex development environments' (Dinnen 2017:1). Despite the country's cultural complexity and diversity, the predictions over the years that the country will disintegrate into complete chaos have not eventuated and PNG's sovereignty continues to remain intact (Dorney 2000).

Many of the countries implementing REDD+ projects are weak or fragile states (Fund for Peace). Holmes (2016) points out that, since most TOC groups are based in countries that are not fragile or weak, weak state theory's ability to explain TOC is limited (Holmes 2016:90). Nations that host the most well-known OCGs are not weak

states. They include Japan, which has the Yakuza, Italy which has La Cosa Nostra, and the US and Canada, which have the Sicilian Mafia (DEA et al 2006:9). OCGs operating in these (developed) countries do so in a completely different environment to developing countries, mainly because the former have, in general, effective law enforcement bodies that are staffed and resourced at a much better standard than are developing nations' equivalent bodies. The law and order situation is generally not as volatile as it is in some developing nations. Some OCGs in developed countries have a unique place in society where they are recognised as being integral to providing jobs and business opportunities and are revered by the general public. For example, the Yakuza can thrive because the country does not outlaw the organisation or its members. It is even common for members of Yakuza to be consulted by legitimate businesses. Other groups like the 14K Triads in Taiwan and Hong Kong and the American Mafia, while legislated against, are tolerated by society. However, owing to the magnitude of their crimes in the past, the OCG host nations have developed specific legislation targeting organised crime.¹⁸⁹ No such specific laws exist in PNG, most probably because OC, as defined internationally, is not experienced on the same scale as in developed countries.

What is also distinguishable between these nations and all weak states is that the former group do not suffer from large and blatant environmental crime on the scale experienced in most developing countries. PNG's environmental problems are more connected to government corruption (Walton and Dinnen 2016). Thus, PNG has one symptom of Patrick's definition, mainly *environmental degradation*, but it does not qualify in that there is governmental durability.¹⁹⁰

As a result of their smaller geographical terrain, unlike other parts of the world, the Pacific Islands are generally not considered havens for OC (Broadhurst et al 2014). PNG and the Solomon Islands seem to be the exception because of their natural resources, especially timber, which has attracted illegal logging dominated by Asian logging companies (Greenpeace 2010; Broadhurst et al 2014). Walton and Dinnen (2016) analysed the globalisation of South Pacific countries and their economies and

¹⁸⁹ For example, in the US, the Racketeer Influenced & Corrupt Organizations Statute of 1990, and the Continuing Criminal Enterprise Statute of 1970. These laws are extensions of federal laws from the 1970s.

¹⁹⁰ Violent conflicts, power-hungry actors and greed are the basis for the exploitation experienced in countries that have a high crime rate, resulting in a vacuum in moral standards (Homes 2016). The main requirements for effective TOC are 'sophistication' and 'technological knowledge', since traditional methods are now seemingly effectively nullified by law enforcement and intelligence controls.

concluded that licit networks' OC activities over natural resources are likely to come from the political elites of South Pacific countries.¹⁹¹ For PNG and the Solomon Islands, it was suggested that this will occur mostly in the logging industry. There is strong evidence to support this suggestion (for example Barnett 1989; Filer 1997; Zwartz 2010; Lawson 2014; Mousseau 2016). No other industry in PNG has received widespread acknowledgement of corruption than the forest industry, where Asians are the dominant players.

2 Transnational Unorganised Crime

Some criminal activity has attempted to exploit the proximity of PNG to Australia by transporting illicit goods across the Torres Strait to the north of Australia (McFarlane 1998; ACC 2015). A few instances of border incursions have occurred there, but they are not significant (Faiparik 2018; Lyons 2019). The main threat has been identified as the smuggling of illicit drugs, mainly marijuana (Halvaksz and Lipset 2006) and methamphetamines (Northern Queensland Police 2012; UNODC 2013:64; Michael 2015; ACC 2015). Most of the Australian cases of drug smuggling along the border, either by sea or air, are carried out by Australian residents who collude with PNG nationals and Torres Strait Islanders. The level of planning is poor and there is no evidence of a highly organised, structured syndicate behind these importations. Most drug importation from PNG seems to have been attempted by risk-taking individuals or small groups with very limited funds and the following Table 12, records these reported cases.

¹⁹¹ Walton and Dinnen (2016), in effect, have identified a 'hermit crab' network (Le 2012). Members of this network are not targeted by criminals but are those looking for criminal opportunities to exploit.

Table 3: Cases of transnational crime by unorganised networks:

Year	Offence	Number of offenders	Origin of offenders	Particulars
1996	Importation of cannabis	2 (husband and wife)	Australia	The pair conspired to bring 300 grams of cannabis from PNG to Australia. The husband was found with the drugs after arriving on a flight from Port Moresby. Both were convicted and the wife's appeal on sentence was dismissed. ¹⁹²
1997	Conspiracy to import 200 kilograms of cannabis	5 men	1 PNG man, 4 Australian men	The men planned to hide the drugs in a light aircraft and fly to Australia via the Torres Strait. ¹⁹³ The PNG man was well educated and had studied applied physics in a South Australian university, where he met his Australian co-conspirators. As he was about to fly out of PNG with the drugs he was arrested by officers of the PNG Drug Squad. The prisoner was a first-time offender and was not part of any raskol gang.
1999	Importation of cannabis	1	Australian	The prisoner routinely purchased drugs from people who allegedly imported them from PNG. ¹⁹⁴ There was no evidence to suggest this was a scheme that involved a highly organised raskol gang or syndicate.
2002–2003	Conspiracy to import cocaine	3 men	Australian	The men conspired with some Torres Strait Islanders to smuggle cocaine from PNG to Australia via the Torres Strait. The men paid the islanders a substantial amount of money, but the drugs were never procured. The three men were sentenced to prison for terms that ranged from 7 to 8 years. On appeal, their sentences were affirmed and their appeal dismissed. ¹⁹⁵
2009	Conspiracy to import cannabis	1 man	Australian	The Adelaide man attempted to smuggle into Australia from PNG 500 kilograms of cannabis. ¹⁹⁶ He was unemployed and addicted to cannabis and had conspired with two others, but the drugs were intercepted in PNG and were a little under 19 kilograms. He was sentenced to three and half years' imprisonment. There was no sophistication in the planning.
2014	Importation of illicit drugs	1 woman	Nigerian	The woman travelled from Nigeria to Australia. She arrived from Port Moresby and was found to have almost 3 kilograms of methamphetamine. ¹⁹⁷

¹⁹² *R v Mary Helen Byast* [1997] QCA 276.

¹⁹³ *The State v John Goea Kevandi* [1997] PGNC 10; N1531.

¹⁹⁴ *R v John Edward Parsons* [1999] QCA 402.

¹⁹⁵ *R v John William Lake* [2007] QCA 209.

¹⁹⁶ *R v Alexander Stuart McMurray* [2011] QCA 319.

¹⁹⁷ *R v Jacqueline Obianuju Agboti* [2014] QCA 280.

2015	Importation of illicit drugs	1 woman	PNG	The woman was arrested in Cairns, after arriving on a flight from Port Moresby. Mary Yawari (the second wife of the late Governor of the Southern Highlands) had almost 4 kilograms of ice concealed in her bag. The drug had an estimated street value of AU\$5 million. She pleaded guilty before the Supreme Court and was sentenced to 9 years, 6 months' imprisonment (Kim and Cluff 2015).
2018	Importation of illicit drugs; dealing in proceeds of crime	3 (2 men, 1 woman)	Australian	The group had conspired to import cocaine from Peru via PNG, then onwards on a small craft across the Torres Strait. They were part of a syndicate in Peru. The cocaine never arrived in PNG (AFP 2018).

These cases are obviously concern for Australia, which estimated that between 2013 and 2014, preventing and detecting crime cost Australia AU\$36 billion in lost income and costs incurred (ACC 2015). In all the cases detailed in Table 12, there was no evidence to suggest that a sophisticated (raskol) gang facilitated the smuggling. There was also no evidence to suggest that a sophisticated syndicate within the meaning of TOC (according to the UN's definition) was involved.

Weak state theory is therefore not a sufficient explanation (Schultze-Kraft 2016). Except for the exploitation of natural resources such as illegal fishing and illegal logging (Walton and Dinnen 2016), TOC networks are unlikely to make these countries permanent bases for operation. There have been no reported cases of TOC doing so and, as shown in Table 12, illicit networks use Pacific nations primarily to transit illicit drugs to the lucrative Australian (ACC 2015) and New Zealand markets with Pacific countries like PNG merely being a stop-over. For example, TOC networks are unlikely to store and hide proceeds of crime in remote locations because this is not feasible, both practically and economically, and will draw too much attention from villagers. Separated by the great expanse of oceans, the Pacific islands are mainly accessible only by boat or light aircraft. To date there have been no reports of OCGs using the islands as storage areas. The cases show that the drugs are en route and remain in Pacific countries only for a short period of time, either accompanied (as in a yacht) or unaccompanied (as in a container). The exception to this will be PNG, which grows a high-grade marijuana plant that is smuggled into Australia. Unlike weak states in West Africa, PNG has remained intact and immune from domestic-originated predatory OCGs (Ruth, Matusitz and Wan 2015). Further, a transnational criminal from another country is unlikely to enter a country and conduct illegal activities without drawing the attention of

law enforcement. TOC is unable to flourish as the market is too small for it in PNG for most types of illegal activities.

Therefore, TOC groups will not travel to PNG to commit carbon fraud. In PNG's context, it means politicians and other government officials are more likely to excel in corruption to achieve bigman status within their wantoks than to cooperate with OCGs, whom they will not trust entirely nor be able to manipulate. The extent of TOC, therefore, is likely limited to natural resources, specifically timber. It is also difficult to keep money in PNG or to launder it because of PNG's anti-money laundering laws and procedures by the Bank of PNG. Corrupt government officers might network not just with domestic OC syndicates but with foreign ones too to exploit REDD+. Seen in this context, Dinnen and Walton's (2016) and Walton and Dinnen's (2016) suggestion that the real OC link is between the political elite and licit and illicit actors is the most likely possibility.¹⁹⁸ Even though there is some evidence that OCGs are present in PNG (as discussed below), they are PNG-based Chinese networks who have been there for many years and seem to not have any connection to overseas-based Triad gangs. Instead, carbon fraud in REDD+ attracts carbon cowboys, as already seen in the reported instances in Peru, the Philippines and PNG. These carbon cowboys seek the adventurous and entrepreneurial gamble of securing REDD+ project areas for marketing to the world. Carbon cowboys will likely enter PNG and collude with government officials to secure some type of legitimacy for their work to allow them to market this 'legitimacy' and secure funding for their REDD+ projects. If a foreign-based or transnational OCG does infiltrate the REDD+ scheme, it will likely be accomplished with the involvement of corrupt government officials. This is the same argument presented below for PNG-based OC syndicates.

B Scripts for REDD+ Fraud in PNG

To assess the capability of infiltration by fraudsters in REDD+ schemes, I firstly identify the steps necessary to commit carbon fraud in both the REDD+ voluntary market and under the UN-REDD Programme. Cornish (1994) developed the notion of 'crime scripts' to assist in the detection and prevention of crime. The 'script' concept looks at factors which (might) motivate a likely offender to commit a crime. Once precisely identified

¹⁹⁸ Note that these are two separate articles with the same authors.

these factors can be then be manipulated to disrupt or prevent the crime from occurring. In order to be effective the scripts must be identified to the crime. This obviously means that a crime script for committing robbery of a gas station, will be different from the commission of fraud in a bank. Identifying crime scripts allows for an assessment to be made of the main attributes of criminal gangs to determine their potential proficiency to commit the fraud.

A fraudster need not be in the jurisdiction to commit the fraud (Levi 2008). This was the case with various fraud cases committed in the EU ETS. The typologies of the OCGs (UNODC 2002; Le 2012) that committed carbon fraud in the EU ETS varied. Some consisted primarily of standard 'criminal mesh networks'. These are 'decentralised and self-organising', whereby actors have a horizontal relationship and deal directly with each other and perform their specific tasks with no core body (Le 2012:127). These networks analysed by UNODC (2002) and Le (2012) are fluid, with fraudsters recruiting capable people to pool resources and perform key roles in the fraud. Some of these people are unwitting players in the whole fraud scheme, such as in the Deutsche Bank fraud where bank staff actively traded on their clients' instructions, unaware of the insider fraud.¹⁹⁹ Matthew Beddoes, the computer whiz kid, was specifically recruited to hack various carbon registries (Funk 2015). There also appeared to be no distinction based on ethnicity in these criminal networks. Beddoes was recruited by Pakistani fraudsters, while the Deutsche Bank staff were instructed by East Asian clients. Some of the fraud, such as the French BlueNext incident, was likely perpetrated by OCGs built on the patrimonial model (Le 2012:125) since those groups had close French and Israeli connections.

For REDD+, face-to-face interaction between fraudster and victim(s) is necessary, because agreements must be brokered with indigenous communities (as seen with David Nellson in Peru, Brett Goldsworthy in the Philippines and Kirk Roberts in PNG). Face-to-face interaction belongs with the script for carbon fraud. As seen in the REDD+ fraud schemes, the acts took on a transnational nature (von Lampe 2011). In this type of fraud, the perpetrators operate by cultivating overseas investors, flying into the target country, travelling to the target areas, then departing from the country and marketing the credits overseas to unsuspecting investors, unaware that the signatures of indigenous

¹⁹⁹ The Deutsche Bank fraud and the Mathew Beddoes fraud, were covered in Chapter III.

people were obtained under false pretences and not in accordance with FPIC procedure.

Carbon cowboys seem to be at the margin of organised criminal activity. They can exploit the opportunities created by the REDD+ regulatory domain and arrive in target countries equipped to make payments to officials in exchange for access to sites. Nellson, Goldsworthy and Roberts have a number of things in common. The most prominent is that they were 'adventurous offenders' willing to cross their borders for 'criminal foraging' after having identified that the lucrative REDD+ target did not exist anywhere else (von Lampe 2011). These factors placed them in a number of volatile situations. For example, they exposed themselves in those countries and may not have been able to utilise local contacts effectively because of language barriers. They also may not have fully comprehended the most efficient way of dealing with and manoeuvring in the legal system (von Lampe 2011). But their ability to do these things displays their level of capability.²⁰⁰ They were willing to operate within a foreign country, mostly single-handedly and they were not shy about being videoed to create an aura of authenticity for their operations. These carbon cowboys had defined their goals in space and time (von Lampe 2011a; 2011b:151). For REDD+ in the voluntary market, the goals seemed to be securing as many landowner signatures as possible, obtaining video footage of the signing ceremonies for marketing and then selling these so-called carbon credits from that project. Achieving such goals was not necessarily illegal and there may be no legal justification for preventing such actions (von Lampe 2011b:152).

In the case of the UN-REDD Programme, the government officials are in positions of authority and if temptation presents itself, fraud can be committed while they are performing their official duties (Levi 2008:394). This has been noted particularly for officials in the PNG Department of Finance, where in one case listed below in Table 5, there was evidence that some officials conspired and misappropriated almost K4 million over 14 months.

Levi (2008:392) provided the likely crime scripts for committing any type of fraud and outlined a process of nine steps. Interestingly, Levi (2008:413) predicted that fraud in carbon markets should be expected to occur. The year after the prediction, the first cases in the EU ETS were detected. I applied these steps to fraud in REDD+ by

²⁰⁰ As shown by carbon cowboy Roberts in PNG, who frequently took customary landowners and government officials to dine in Chinese restaurants and hotels.

formulating the steps based on the fraudulent conduct by Nellson in Peru, Goldsworthy in the Philippines and Roberts in PNG. Carbon fraud covers a broad range of fraudulent actions and omissions on the carbon markets and since there are some emerging patterns of how the crime is committed, but not much information regarding the possible perpetrators in PNG, formulating the crime scripts specifically for REDD+ was necessary. This provides the most appropriate approach to take (Rowe et al 2013:4; Leclerc 2013:1). As discussed in Chapter III, the REDD+ fraudsters (carbon cowboys):

- 1) flew into the REDD+ countries
- 2) made contact with indigenous communities
- 3) discussed REDD+ with them
- 4) held 'formal' signing ceremonies
- 5) obtained the signatures of the indigenous landowners
- 6) flew out of the REDD+ country
- 7) marketed the indigenous landowners' area as a carbon project within which the carbon cowboy had exclusive authority.

These seven steps were then applied using Levi's (2008) fraud steps for both the voluntary REDD+ markets and the UN-REDD Programme, as shown in Table 4.

Table 4: Crime script for carbon fraud in REDD+ in PNG

Step	Levi's fraud scripts	Voluntary market REDD+ fraud scripts	UN-REDD Programme fraud scripts
1	See a situation as a 'financial crime opportunity'.	PNG's lack of effective laws to protect customary landowners, is a 'situational opportunity' for financial crime. This unregulated scheme has been deemed at high risk of infiltration by organised crime syndicates (INTERPOL 2012).	
2	Obtain whatever finance is needed for the crime.	Fraudsters need to go to REDD+ areas; therefore, they will need funds for transportation (airfares, hire vehicles), accommodation and food, and may need to pay 'advance' fees to local contacts prior to arriving in the REDD+ country (as done by Nellson in Peru).	Significant funds required to bribe government officials in key positions to sign documents to facilitate the fraud. This can be done in three ways: 1) by legitimising a logging company as a REDD+ project, 2) by

		Fraudsters will also need money to stage signing ceremonies (as done by Nellson and Roberts in PNG) and to entice and host landowner <i>bigmen</i> and government officials (as done by Roberts when he took them to lunch at hotels and Chinese restaurants).	assisting in misappropriating funds, and 3) by providing fake or inflated invoices for goods and services provided under the UN-REDD Programme.
3	Find people willing and able to offend (if necessary for the crimes contemplated) and who are controllable and reliable.	May need to send emails to contacts prior to arrival (as done by Nellson) and meet with as many government officials as possible to pitch REDD+ project idea and to establish a link. The people willing and able to offend are likely to be either blue-collar or professional facilitators who understand the implications, or unwitting licit networks.	Identifying key government officers in the CCDA, Department of Forestry, Department of Finance and other line agencies that deal with the disbursement of funds under the UN-REDD Programme.
4	Obtain any equipment/data needed to offend.	Obtain maps of the REDD+ area that show the villages located within area (possibly from the PNG Mapping Bureau), confirm the socio-demographics of the area and transportation arrangements to reach the area. Photocopy agreements (if already drafted) for distribution and signing by indigenous landowners. Obtain camera equipment to video record signing ceremonies to use for marketing.	Obtain documentation to implement REDD+ project; write out false or inflated invoices.
5	Carry out offences in domestic and/or overseas locations with or without physical presence in jurisdiction(s). This will usually involve manipulating—with varied degrees of complexity, technology and interpersonal communication skills—victims' perceptions of what is happening.	A fraudster's physical presence is necessary to carry out REDD+ fraud. For this fraud, interpersonal skills and social networking are extremely important to (1) convince customary landowners to agree to sign consent forms to partner with the fraudster for the REDD+ project, and/or (2) meet, sway and bribe government officials to facilitate the fraud (and misappropriate funds from the UN-REDD Programme).	
6	Minimise immediate enforcement/operational risks. Especially if planning to repeat frauds, neutralise law enforcement by technical skill, by corruption, and/or by legal arbitrage, using legal obstacles to enforcement	Bribe law enforcement and other agencies to allow entry into villages, particularly if the area is remote or not accessible without permission. Commence/defend litigation disputing right to commence	1) Pay bribes to key officials in government agencies who authorise documentation; and/or

	operations and prosecutions, which vary between states.	REDD+ in the area; pay lawyers to execute 'legal' documents to facilitate creation of REDD+ area (as done by Roberts regarding the Kamula Doso area in Western Province, PNG).	2) Divide the misappropriated money and pay the officials their share.
7	Convert, where necessary (e.g. where goods rather than money are obtained on credit), products of crime into money or other useable assets.	This step may not be applicable. Since the main objective of REDD+ fraudsters is to obtain signatures of the indigenous landowners, there is no theft of money or carbon credits. Instead the documents that contain the signatures of the landowners are marketed to potential investors to show that the forest community supports the REDD+ project.	The misappropriated money must be laundered and may be transferred out of PNG.
8	Find people and places willing to store proceeds (and perhaps transmit and conceal origin).	As above, this may not be applicable. The 'proceed' from the REDD+ fraud is essentially the document containing the signatures of indigenous landowners. In addition, a fraudster can use and market permits, licences or any other official documentation as tools to claim legitimacy of a REDD+ project in order to attract investors.	It is likely that the money will be laundered outside of PNG using the assistance of blue-collar individuals, professional facilitators or unwitting licit networks.
9	Decide which jurisdiction(s) offer the optimal balance between social/physical comfort and the risk of asset forfeiture/criminal justice sanctions. Indifference in any one state or sub-state arena may suffice to neutralise an investigation, and staffing inadequacies as well as corruption may be the cause of official inaction.	As above.	The fraudsters will likely have devised a method of laundering their proceeds of crime and identifying possible safe havens such as the Cayman Islands, Cook Islands and Hong Kong.

As adduced in the crime scripts, certain skills and attributes are necessary to accomplish carbon fraud in REDD+. These seem to fall into two groups, firstly (potential) fraudsters/carbon cowboys must be able to plan and coordinate; they must have patience and possess knowledge development (incapacitation of local and regional authorities, perhaps through bribery). Secondly, fraudsters must have, or be

capable of forming, networks for securing funding and logistics, bypassing legal processes (especially with the police) and economic network development (supply chains). This means that ethnicity cannot be a factor because identifying willing actors in the fraud means finding people with the necessary skills or opportunity to commit the crime through daily interaction (crime pattern theory). This is especially true for people who may be involved in the disbursement of funds under the UN-REDD Programme who work in those key agencies.

Based on these scripts, an assessment is made of the three PNG crime groups ((1) raskols, (2) Chinese criminal networks and (3) raskol-Chinese criminals combination) capability by attempting to evaluate the organisational structure, then identifying prominent variables and addressing them systematically. General themes or patterns that both raskols and PNG-based Chinese criminals possess are highlighted to determine whether the two groups could collaborate for carbon fraud. Some background information about raskol gangs is given here to highlight the characteristics of actors capable of committing carbon fraud in the REDD+ institutional framework (Sansó-Rubert Pascual 2017) or whether they are capable in general of committing sophisticated OC. I then determine the characteristics of PNG-based and foreign OC groups.

C Raskols—Threat to REDD+?

Examining the raskol is the first step to determining whether strictly criminal OC syndicates will infiltrate the REDD+ scheme, as predicted by INTERPOL (2012). This section commences by exploring the crime problems in PNG from a historical perspective. The word ‘rascal’, also spelt ‘raskol’ in the lingua franca of Tok Pisin (which is also spelt *tok-pidgin* and usually referred to as *pidgin-English*, *pidgin* and *pisin*), seems to have been coined in the 1960s to describe groups of young men who took part in petty crime (Harris 1988). Later the term became attached to any person who committed serious crimes (Harris 1988; Goddard 1995:58; Luker and Monsell-Davis 2010).

Australia granted independence to PNG on 16 September 1975. The transition to self-government was peaceful and smooth, but some commentators argued at the time that independence was given too soon and that PNG should have allowed Australia to continue developing the country for at least a further 10 years (Dorney 2000; May

2004). Reports of serious crime soon began to occur after independence with the rise of the raskols (Dorney 2000; May 2004; Luker and Dinnen 2010) and cessation moves by New Ireland and Bougainville. It is debatable whether an extension of Australia's administration over the country would have made any difference to present-day PNG with so many tribal and ethnic groups.²⁰¹ Prior to independence, very little crime was reported in the urban areas, most probably due to the fact that the population living there were expatriates. After independence, urban drift increased significantly with shanty towns built on the fringes and thereafter, raskol activities increased. These shanty towns are referred to as 'settlements' in PNG. The urban settlements are generally recognised as breeding grounds for the activities of raskol gangs (Harris 1988; Dinnen 1993; Luker and Monsell-Davis 2010) who prey on the defenceless. Previously, raskol gangs limited their crimes to the less developed suburbs and the rapidly expanding, urban settlements (Harris, 1988; Dinnen 1993; Goddard 2005; Luker and Monsell-Davis 2010), but nowadays they operate in all urban areas. The types of crimes committed by raskols are mostly sporadic and opportunistic in the urban areas (Harris 1988; Schiltz 1985; Goddard 2005).

The problems reported since independence have mainly occurred in the capital city, Port Moresby. The city is consistently ranked in the top 10 of the 'worst' and 'most dangerous' cities in the world to live in (Fickling 2004; Pash 2016; Post-Courier 2017). Elsewhere in PNG towns after independence, the crime rate started to increase, which was also attributed to the loosely bound raskol gangs. Successive national governments have attempted and failed to curb the high crime rate, such as through community policing (Dinnen 1993b) and tougher laws (Dinnen 1993c), while raskol gangs themselves and NGOs have also attempted to move away from crime, for example by establishing themselves as community work groups (Kirkland 1992:6-9; Luker and Monsell-Davis 2010:104).

The evolution of raskol gangs has been documented since the 1960s (Nibbrig 1992) and the disturbing escalation of violence in their crimes has been noted. Most of the studies were conducted in Port Moresby with some studies conducted in the Momase region (Kulick 1993; Roscoe 2014; Lipset 2017) and the Gulf area (Bell 2006). The earliest gangs adopted Western names like Texas Gang, the Nazis and the Mafia

²⁰¹ Crime rates in PNG differ between regions due to ethnic composition and development. Tribal fights are mainly concentrated in the highland areas but also break out in other parts of the mainland from time to time.

(Schiltz 1985:143). Others used abbreviations to represent their place of origin, such as Goi-Pex 105 and KGK.²⁰³ Goi stands for Goilala, a district in Central Province, while 105 when turned upside down looks like 'Goi'. The KGK members were from Kairuku, Goilala and Kerema. The first two areas are located in Central Province, with Kerema being the adjacent province. Another gang called Koboni was also prominent, made up of members from Central Province. Koboni, in the Motu language, can be taken to mean ghost or phantom.²⁰⁴ Most gangs in Port Moresby are aligned by ethnicity but may cooperate with other gangs of different ethnic composition to commit a crime, such as a robbery (Schiltz 1985; Harris 1988). These ethnic gangs were formed in the areas that were illegally settled by people from various parts of PNG in the early days of Port Moresby's establishment. So, for instance, East Boroko has the Bomai gang, which is where many people from Chimbu Province settled.²⁰⁵ The 6-Mile area has the 6-Mile Tigers, comprising Eastern Highlands men, Konedobu area has Goi 105 and Sabama area has Kips Koboni, comprising mainly men from Kerema and the outer Central Province (Harris 1988).²⁰⁶

Outside of the urban areas, violent crime is not as prevalent, though it does occur (Strathern 1985; Kulick 1993). Instead, rural crime is usually attributed to old village conflicts²⁰⁷ especially regarding the rightful ownership of customary land (Allen and Monson 2014; Lakhani and Willman 2014b:10; World Bank 2018). It is not unusual in PNG for traditional rival clans or tribes to endure a period of warring before mediating the matter and then enjoying a significant period of peace before the fight is ignited again, which can be many years later.²⁰⁸

²⁰³ These two gangs were in existence while I was growing up in Port Moresby.

²⁰⁴ To my knowledge, even though these raskol gangs were well known, they were never held responsible for major criminal offences, such as a sophisticated armed robbery of a bank. In my experience, those crimes that resulted in large amounts of money being stolen, whether by robbery or through fraud, were committed by working-class nationals who were not necessarily connected to raskols.

²⁰⁵ Bomai is an area within Chimbu Province. It is likely that the first squatter settlers in East Boroko were from that area.

²⁰⁶ Appendix V expands on raskol characteristics.

²⁰⁷ Although *State v Wingkeoc Pitaneoc* [2004] PGNC 248; N2514 involved the contract killing of two small boys. This case, however, was not an organised crime, but committed by a villager on the promise of receiving PGK1,500-00 (AU\$630-00).

²⁰⁸ Such is the value of land to Papua New Guineans who attach life to land as do many other indigenous people around the world (Park 1992).

Many of these conflicts are generational in nature, and the main reason the conflict started in the first place will have been lost over the years (Lakhani and Willman 2014b:2).

These traditional conflicts from the villages often carry over to the city; this happened in a murder case in which I was involved. This case happened in 2008, when I defended three men accused of murdering their tribal enemy in Port Moresby.²¹¹ Due to the fact that the crime was committed in the city, it was initially mistaken by witnesses, to have been committed by raskols, during a failed robbery attempt on the victim. The men were from Enga Province in the highlands, where their tribe was engaged in an ongoing tribal fight with the victim's tribe. The men saw the victim standing at a market buying betel nut. They approached him from behind and chopped him on the side of his head with an axe. Two of the accused were discharged during the trial because the judge found they had no case to answer and the third man was found guilty of wilful murder. The offender had not been in trouble with the law before, but killed the victim, as it was expected of him back in his village to do so. In this instance, these men would not be regarded as raskols. They had killed, not for personal gain but tribal rivalry. People who commit offences during the course of a tribal conflict, or who are interrelated to the conflict, are not referred to or regarded as raskols, whereas people who commit armed robbery on the rural highways and in villages are regarded as raskols (Kulick 1993). It seems that the difference between tribal fighters and raskols lies in the fact that the fighters are not pursuing an act to enrich themselves personally, as opposed to raskols which is sometimes their primary reason.

By the early 2000s, some robberies committed by loosely formed raskol networks, began to have some level of organisation to their execution, and this is the case nowadays.²¹² Here I use the word 'networks', instead of 'gangs', since most of the robberies are committed by persons who do not normally associate with each other, or identify as a gang; but are only brought together to commit the robbery. This organisation is now an aggravating factor used by the court in sentencing a prisoner.²¹³

²¹¹ *The State v Titus Aiko, Andiki Bus and Nisi Bale* [2008] PGNC 71; N3324 <<http://www.paclii.org/pg/cases/PGNC/2008/77.html>>, where I appeared as Defence counsel along with Mr Frederick Kirriwom. The Prisoner was sentenced to life imprisonment.

²¹² Interview with Petrus (Gavara-Nanu, Karu, 2018).

²¹³ *The State v Anis* [2002] PGNC 100; N2236; *The State v Malara* [2002] PGNC 135; N2188; *The State v Louis* [2017] PGNC 115; N6755.

These raskol networks are quickly dissolved after the crime, with many members returning to their everyday life as a villager or a supposedly legitimate actor in society. The offenders may only have agreed to take part in the crime due to pressure from wantoks, or to fulfil a need for quick cash. A few of the network members, who are hard-core raskols will continue with their criminal pursuits after the crime.²¹⁴

Cases that resulted in the theft of substantial amounts of money were committed by men loosely brought together to commit the offence, with the majority of offenders not career criminals, but, which had exceptional planning. This was so in a bank robbery planned and executed by the bank's security guards, which resulted in K5 million in cash being stolen.²¹⁸ However, as will be shown in the later part of this chapter, the success of major robberies in PNG, are dependent on the facilitation of highly capable individuals; and that the raskols themselves are incapable of committing well organised crime.

1 Structure of Raskol Gangs

Harris (1988) predicted that raskol gangs would evolve in one of three ways. The first was into 'sophisticated criminal organisations increasingly institutionalised' and able to carry out their activities at will; the gangs would become 'vertically integrated organisations' (Harris 1988:44-45). The second scenario was that they would become restless and lead a revolution, and the third was that they would assume political and economic leadership of PNG. Harris (1988:46) stated he was 'already aware' that Australia and the Philippines were destinations for smuggled electronic goods, automobiles and jewellery and that gang members were running shops to pawn stolen

²¹⁴ Two short examples of raskol networks illustrate this fluidity. Whilst these two cases are an indication of how loose raskol networks might be, these types of quickly formed groups fail to net substantial money. In *The State v Saku & Others*, four national prisoners were found to have assisted other criminals to rob a rural coconut plantation of K75,751 in cash (AU\$32,000).²¹⁴ The prisoners, who were all villagers, did not take part in the actual robbery but assisted in providing lodging and transportation (a small dinghy and outboard motor) to ferry the robbers to the plantation. Despite the prisoners not benefiting personally from the proceeds of the crime, the judge found the crime to be 'a major, organised crime' and sentenced the prisoners to terms of 6–8 years imprisonment.

In *The State v Taba*, the prisoner assisted his superiors to steal from their employer (a major tuna canning company) a container filled with 1,000 cartons of canned fish, which was valued at K58,399 (AU\$25,000).²¹⁴ The prisoner was a casual employee at the time of the offence and received K2,000 cash (AU\$850) after the canned fish were sold on the black market. He was sentenced to two and a half years imprisonment, with the judge finding that he had 'acted with others in an organised crime'.²¹⁴ While both cases involved planning, the offenders were not part of a highly organised and highly structured well-established criminal organisation.

²¹⁸ *The State v Caspar Louis & 5 Others* [2017] PGNC 115; N6755.

property and launder money. Harris (1988:46) also stated that marijuana was being smuggled into and sold in the US. A year later, Harris (1989:4) alleged that raskol gangs had established smuggling links with gangs in Hong Kong, the Philippines, Taiwan, Japan and Queensland. These allegations appear to have created unrealistic predictions. Harris (1988:25-29) also predicted the gangs would be run professionally and efficiently, and that gang members would not be able to leave gangs. Again, this has not transpired and the fluidity of joining and leaving raskol gangs, without repercussions, sees them remain like the street gangs formed pre-independence. The gangs are not bound according to any particular values or beliefs nor is there any strict form of initiation to join a gang (as found for example in the Chinese Triads) (Booth 1999; Goddard 2005; Lo and Kwok 2017). Instead, entry into a gang is simply by invitation, or the willingness of established gang members to allow a person to join in order to make up the numbers to commit petty offences, to break and enter and steal from a dwelling, or to simply become involved in criminal mischief. A potential gang member wishing to join will voice his willingness to take part in the commission of an offence and show a level of comradery with existing gang members. This might be by taking part in binge drinking of alcohol. Leaving raskol gangs is also voluntary without fear of repercussion from gang members. Although Schiltz (1985:144) records some instances of gang members having to recount oaths of loyalty and obedience. The evidence since 1988 does not support any of Harris's predictions and the structure of raskol gangs has not changed much since 1988. Certainly, there is no evidence of raskol gangs being operated under a horizontal leadership structure.

The current state of raskol gangs appears to fall into one category of OC, that of 'flux networks' (Le 2012:127). Flux networks are 'highly unstable, small, have little structure and there is little trust among members; and they are usually formed for a single crime or for a handful of criminal opportunities' (Le 2012:127). However, because these groups are largely opportunistic and ad hoc in nature, they do not necessarily meet the definition of OC and might not be considered as such (Le 2012:127).

Going by the definition of 'organised crime' under the UNCTOC, and by the definition of 'mesh networks' and applying the characteristics of raskol gangs and the crime scripts for fraud, it seems they cannot be classified as OCGs, nor would they fall under the UNODC typology framework. So raskols are not OCGs but (groups of) individuals that take advantage of opportunities (Reed 2011). They are street gangs, or 'toughs' (Miller

1966), although members do not necessarily live on the streets like the early street gangs of London's seventeenth and eighteenth centuries (Shore 2015).

(a) Factors needed to commit carbon fraud

This short part looks at the factors required to succeed in OC and for carbon fraud, mainly, planning, coordination, patience, financial networking, access to logistics and the ability to deal with law enforcement. Planning for fraud can be meticulous and take many months or weeks (von Lampe 2011b:153). Fraudsters choose and shape crime settings to suit them, so rather than wait for favourable settings, carbon cowboys create such settings (von Lampe 2011b:153). Depending on the fraud, a certain skill set is necessary (such as technological or persuasion skills). They must have sufficient funds or be well funded. In the cases discussed previously the carbon cowboys were middle-aged men from Western countries and possessed an entrepreneurial streak. In contrast, raskols and their gangs do not have a set modus operandi and are almost always opportunistic who mostly commit violent crimes without any sophistication. . They can comprise a few members or hundreds (Harris 1988) but there does not seem to be any structure in the organisations. This implies that gang numbers could be exaggerated by members or that, once incarcerated, a person might mis-identify with a gang to avoid rape or harm in prison from other prisoners (Reed 2011). Raskols therefore, do not possess the factors or characteristics required to commit (carbon) fraud of any type.

If a particular skill set is required to commit a crime, OCGs may use (through bribes, or threats or blackmail) legitimate actors, known as facilitators to perform the task (Morselli and Giguere 2006; Levi 2008; ACC 2015). The actors may be bribed, which means they are not legitimate at all. To network effectively, verbal skills are important. This allows criminals to establish links with exploitable ties and to socialise well (von Lampe 2011). If the fraudsters do not possess these types of networking and social skills, they will not be able to seek out facilitators. It appears that raskols do not utilise legitimate actors in their illegal activities. A review of cases involving high-value fraud (see Table 5) shows that none involved raskols. Few fraudsters are career criminals and a scan of PNG's prominent cases shows that the fraud was committed by people in key government positions who abused their position to do so.

Table 5: High-value fraud cases

Government dept/ position	Fraudster	Description of fraud	Sentence
Governor of Oro Province	Sylvanus Siembo	Siembo conspired with two senior public officials and misappropriated K100,000 which was intended for the construction of a road.	6 years, with 3 years suspended. ²²⁵
National Gaming Board/Chairman	Daniel Mapiria	Mapiria misappropriated over K3 million, the property of the National Gaming Control Board.	9 years fully suspended and ordered to pay K1 million in restitution within 18 months. ²²⁶
Unemployed	Moko Essi Kom	Kom submitted claims under a false name to the Department of Finance. Over 14 months, he received various payments totalling K3,780,000. He was not part of a raskol gang.	8 years. ²²⁷
National Housing Corporation/Managing Director	Paul Asakusa	Asakusa conspired with Alois Kingsley to draw a cheque for K50,000 to purchase a home for a teacher. Instead, Kingsley deposited the cheque to his account then shared the money with Asakusa.	Not available. ²²⁸
Member for Pomio and Minister for National Planning & Monitoring	Paul Tiensten	Tiensten directed his Department Secretary to pay K10 million to Travel Air, a company owned by Eremas Wartovo, as subsidy for people from his electorate.	9 years. ²²⁹

²²⁵ *The State v Sylvanus Siembo & 2 Others* (Unreported 30 May 2002) CR 1220 of 2000.

²²⁶ *The State v Daniel Mapiria* (Unreported 2004) CR 1118 of 2000.

²²⁷ *The State v Moko Essi Kom* [2009] PGNC 311; N6199.

²²⁸ *The State v Paul Asakusa (No 1)* [2010] PGNC 101; N4056.

²²⁹ *The State v Paul Tiensten* [2014] PGNC 224; N5563.

Government dept/ position	Fraudster	Description of fraud	Sentence
Governor of Western Province, Chairman of Provincial Supply & Tenders Board and businessman, respectively.	Ati Wobiro, Modowa Gumoi, Norman May	The men conspired to defraud the province of K350,000 by paying it to a charity and then withdrawing the money to pay scrutineers of the 2012 general elections.	Not available. ²³⁰
National Intelligence Organisation/Director-General	Maika Bruno	Bruno used K96,000 office funds for his personal expenses.	3 years. ²³¹

(b) Other factors: Previous high-level fraud, longevity in gangs and structures

Apart from being unstructured, raskol gangs do not weather time. The majority of Port Moresby raskol gangs mapped out by Harris (1988:43) are no longer in existence.²³² Of the original gangs from 1963, none are in existence, while of the 20 gangs from 1975, only three have been cited, namely Koboni (Luker and Monsell-Davis 2010; Reed 2011:24; Rasmussen 2015) Bomai and Goi 105 (Reed 2011:24). Only one gang formed in 1980, Mafia, still exists (Reed 2011:24). Raskols it seems have no serious desire to construct a criminal business (Reed 2011).

In this section, it has been argued that raskol gangs are not OC gangs or networks, that raskol gangs (on their own or with other raskol gangs) are incapable of committing sophisticated crimes and that raskol gangs and their individual members are not capable of committing carbon fraud. The following section addresses the relationship between raskols and Chinese criminals. A starting point in considering this relationship is to analyse the case of Kapis, who is probably the only raskol to have admitted in open court to having links with a Malaysian Chinese and government ministers in committing three successive robberies. These were on the Metals Refinery Operations (MRO) in Port Moresby, and the Kerema and Madang branches of the BSP.

²³⁰ *The State v Ati Wobiro (No 1)* [2016] PGNC 240; N6398.

²³¹ *The State v Maika Bruno* [2017] PGNC 12; N6596.

²³² Harris provides the earliest form of gang mapping in 'The Rise of Rascalism' (1988).

D Raskols and Chinese Criminals

Table 6 lists the three biggest bank robberies successfully executed in PNG before the offenders were apprehended. These were the Maybank robbery in Port Moresby, the Bank South Pacific (BSP) Kerema branch robbery and the BSP Madang branch robbery. In the three cases, only two offenders had prior convictions and were active raskols. They were involved in the BSP robberies. The rest of the offenders had no prior convictions, and some held important positions in their employment. Both BSP robberies involved a foreigner and political figures and so are analysed in Section C. Here, I consider the Maybank robbery only because it was committed by nationals who might be considered low-income earners but with no obvious raskol affiliations. This is done to demonstrate that raskol gangs are not involved in the planning and preparation of such crimes, and that gangs that commit this type of crime in PNG fall mainly under the description of a mesh network (Le 2012).

The Maybank robbery was committed on the morning of 4 October 2013 (Geteng 2013). Prior to this, offenders had met a handful of times in August and September 2015, during which the robbery was planned. A number of people were involved (Pokiton 2016b; Post Courier 2018c).

Table 6: Biggest bank robberies in PNG

Victim	Offenders	Particulars of robbery	Raskols / prior convictions	Sentence
Bank South Pacific, Kerema Branch	William Kapis, David Kware, Noah Karo and Jack Kivare	Kapis and group stole K850,000. Noah Karo was the Bank Branch Manager.	Only Kapis had prior convictions. All others had none.	Offenders sentenced from 4 to 7 years. ²³³
Bank South Pacific, Madang Branch	William Kapis and others	Kapis and a new set of co-offenders stole K2.4 million. All co-offenders were facilitators. There was evidence that a Malaysian Chinese coordinated and funded the robbery.	As above.	Offenders sentenced from 10 to 30 years. ²³⁴
Maybank (PNG) Ltd	Caspar Louis and five others	Offenders were aged between 32 and 45 years, married and had stable jobs. They were employed as security guards and stole K5,960,000 cash during transit from Maybank to Bank of PNG.	No. None of the offenders identified with any raskol gang.	The offenders received sentences ranging from 12 to 22 years imprisonment. ²³⁵

The MRO-BSP robberies are some of the few high-profile and publicised cases where a raskol networked well with a range of actors to commit a series of robberies.²³⁶ It shows how individuals involved in raskolism, may step up into OC, but this depends on their entering another network, one that has features of prudence and patience that is not evident in raskolism. These cases show how raskols have occasionally (and most often, ineffectually) been used by actors who do have the ability and networks to

²³³ *The State v William Kapis David Kware, Noah Karo & Jack Kivare* C.R No. 395 of 2009.

²³⁴ *The State v William Kapis* [2011] PGNC 51; N4305.

²³⁵ *The State v Caspar Louis & 5 Others* [2017] PGNC 115; N6755.

²³⁶ *The State v Kapis & Others* [2011] PGNC 24; N4232; *The State v Kapis & Others* [2011] PGNC 51; N4305. For a better understanding of the facts of this case, the decision is attached as Appendix 3: Raskols Bank Robbery.

conduct OC activities. The discussion that follows, also shows how *wantoks* facilitated the robberies.

During his allocutus²³⁷ before being sentenced, Kapis alleged he was financed by government politicians and a PNG-based Malaysian Chinese businessman to carry out the MRO-BSP robberies. The prisoner named the businessman as William Lee, who had told him that he operates a 'black bank' that provides finance to PNG politicians, bureaucrats and PNG-based Asian businessmen. The prisoner alleged that Lee boasted that he is 'connected' with the former PNG Prime Minister, Paias Wingti (Governor of the Western Highlands Province in 2019), Patrick Pruaitch (Opposition Leader in 2019), Tony Aimo (former Minister of Correctional Services) and Arthur Somare (son of the former PNG Prime Minister Michael Somare). The prisoner also made the admissions during a video-recorded police interview (Gridneff 2010). He specifically named the Members of Parliament who financed the bank robberies as Aimo, Pruaitch and Francis Marus (the former Deputy Speaker of the Parliament) (Bore 2010b).²³⁸ An accomplice to the prisoner, who was captured and interviewed separately by the police, corroborated these statements (Kiala 2010). The robberies were considered by the police to be the work of a 'well-organised crime syndicate'.²³⁹ Indeed, when recounting his robberies Kapis admitted that various people played roles in the robbery. He did not know what had happened to those people after his arrest, since they were never arrested even though he identified them to police as his accomplices (some were state witnesses).

The allegations by Kapis demonstrate that the crimes were conducted in part due to wantokism, the *bigman* system and reliable funding from an elite core group. It is important to note that all the politicians implicated in the robbery naturally distanced themselves from Kapis, claimed their innocence and called Kapis a liar on the floor of Parliament. For the purposes of this thesis, I proceed on the assumption that Kapis's allegations were true and I look at the people, Kapis alleged, had played a role in the

²³⁷ Allocutus is the term recognised and used by the PNG courts when a prisoner explains in open court, anything relevant to the crime committed, including asking for leniency and giving the reasons why leniency should be shown, prior to being sentenced.

²³⁸ The prisoner named these politicians during his trial, but the judge refused to consider this as evidence, stating that the allegations were contested, unsubstantiated and had not been tested through cross-examination. Subsequently, there have never been any official police investigations to confirm whether these politicians were involved or if there exists a person named William Lee.

²³⁹ As stated by a police officer during a case: *In re Bail Act, Chapter 340, Application by Joyce Maima & Rueben Micah* [2008] PGNC 225; N3611.

robberies. In his recorded police interview, Kapis admitted that, left to his own devices, he would be incapable of executing the robberies.²⁴⁰ He did not complete high school, reaching only Grade 8; he had no money and he grew up in an urban squatter settlement with limited opportunities to meet people from the high and middle-income class. However, he had gone to school with the former Deputy Speaker of the National Parliament, Francis Marus, with whom he met up in a nightclub in Port Moresby. Knowing that Kapis had been convicted for robbery before, Marus helped recruit Kapis to commit the robberies. The other politicians whom Kapis alleged financed the robberies were (and at least one is still currently) national government politicians. As for William Lee, it seems he would not have met Kapis if not for the introduction from Kapis's *wantoks*. There was no other evidence to suggest that Kapis met other foreigners during the planning of the robbery, or that Lee and the politicians met other members of the gang who committed the MRO-BSP robberies.

This short factual account suggests the following general propositions: (1) (by Kapis's own admission) that raskols are incapable of committing sophisticated crime on their own, (2) that it is highly likely that Chinese criminals will limit their contact with offenders by only meeting with the (gang) leader and (3) that an introduction between the raskol(s) and the Chinese criminal is likely to be initiated through a (high-level) contact already known to the Chinese criminal.

1 Structure of Raskol–Chinese OCGs

In this part, a detailed examination is undertaken of the conniving combination of raskols and Chinese OCGs in high-risk crime commission. Although ethnicity initially played a part in establishing the groups that planned the MRO-BSP robberies, the composition of the different groups that committed the different robberies did not follow this line.²⁴¹ Kapis and his groups were loosely organised and extremely flexible, and

²⁴⁰ The video is uploaded to the internet and Kapis speaks in pidgin: https://www.youtube.com/watch?v=h9_hG-CpjEI.

²⁴¹ After the meeting with William Lee and Marus, the formerly fragmented group of Kapis, *wantoks* and friends evolved into an OC group, within the definition of the UNCTOC. A number of different variables allowed this to happen. The most prominent of these was the entry of the entrepreneurial Malaysian Chinese William Lee and perhaps the three politicians. Three different groups committed the three different robberies, with certain actors present throughout all the robberies. These actors consisted of the 'core group', comprising Kapis and his wife Pauline, and the coordinating group, comprising William Lee and the politicians. From the time of the first robbery, the group transformed to become a domestic OCG. But once Lee departed PNG after the commission of the robberies, transferred the proceeds of crime overseas and used the proceeds to purchase property in Singapore, the group took on a transnational element (Albanese 2012). As stated during his interview, Kapis went to Singapore where Lee showed him

introductions between network members were based on social and *wantok* relations. In considering how the crimes were committed, it is evident that the respective groups formed for the commission of the MRO robbery, the Kerema bank robbery²⁴² and the Madang bank robbery, followed the social network model (Le 2012:126) with no real hierarchy. Within this network model, Kapis and others operated under a *directed network* (Le 2012:127). This is where a group is formed for a specific purpose under 'core organisers' who direct the operations of the group. This was clearly the case in all robberies with William Lee (with the backing of Members of Parliament) providing direction to Kapis. The MRO robbery in particular illustrates how the use of government contacts and a legitimate business through Lee, enabled the robbers to launder the proceeds of crime. Using Lee's legitimate gold export licence, the MRO gold was removed from PNG to Singapore, where properties were acquired using the money earned from the sale of the gold. This suggests a further dimension of the model of OC networks, since the use of legitimate business and political connections was prominent. The groups displayed a hybrid OC structure, or a 'hermit crab' type hybrid (Le 2012:128), which involves the use of legitimate businesses as fronts to facilitate money laundering, in this case through William Lee, and provide a licit area for criminals to operate. Hermit crab networks will also seek out connections with political actors such as politicians (in this case Pruaitch, Marus and Aimo). As a result of the wantokism and social networking methods, the OC typologies were mixed in this case. There was a directed network (Kapis and others), which was directed by a hermit crab core network (William Lee, Pruaitch, Marus and Aimo); this was created according to *wantok*, social networking and environmental conditions.

Von Lampe (2011) notes that criminals are able to condition to advantage (as done in these cases) and not confine criminal activities to a rigid structure. There was no formal OC unit; instead, it seems that Kapis and those in the directed network and below understood that William Lee and politicians ('Lee and Co') were in the controlling position and respected that. This may be attributed to their positions in society as *bigmen* and the fact that Lee and Co were funding and planning the operations. Lee and Co were four men occupying legitimate roles and they used their legitimacy and status as politicians and businessmen to exploit criminal opportunities. Using social

properties on Orchid Street, which Lee stated were purchased using the proceeds from the sale of the gold bars from the MRO robbery.

²⁴² *The State v William Kapis, David Kware, Noah Karo & Jack Kivare* CR No. 395 of 2009.

networking analysis, Morselli and Giguere (2006) examined legitimate actors who organised a series of drug distribution chains. The study confirmed how legitimate actors played key roles to ensure the success of the illegal activity, how those actors brought necessary expertise and resources, and how upperworld actors have become the organisers of crime rather than being vulnerable to underworld actors. Similar to the characteristics found in Morselli and Giguere's (2006) study, Lee and Co were the actors who instigated the crimes by recruiting a known criminal, Kapis. All logistical arrangements were facilitated by Lee and Co, who also assisted with helping the directed network make contact with key 'insiders' in the MRO-BSP robberies (although the case law shows that Lee and Co did not deal directly with the insiders).

The groups were formed according to the conditions around them, with most of the convicted offenders enlisted into the group according to the needs and circumstances of Kapis, in some instances at the very last minute. For example, on the way from Lae to Madang to rob the bank, Kapis's primary vehicle encountered mechanical problems. The criminals were able to overcome this problem by enlisting licit and illicit actors to swap and repair vehicles and complete the robbery as scheduled. This illustrates how the changing environment shaped the way the offenders changed their plans (von Lampe 2011). An understanding of the particulars of these groups is necessary to show the social relationships and a timeline to illustrate how the social settings shaped the direction of the crimes. This is done through Tables 6 to 8 below. The tables are sequential: they build upon each other and narrate the offences. From the narratives the relationships can be understood. The information in these tables was taken from the facts provided in the court case, video interview and media reports. While Kapis was a hardened criminal, there is no evidence to indicate that he was aligned with or was part of a raskol gang when these crimes were committed. It seems that Kapis had no investment in promoting a raskol gang name.

The tables below are arranged in order according to how Kapis narrated the events during his recorded interview. William Lee's importance is clear throughout all three robberies. The tables show that Kapis was the focal point in all the robberies and that the crimes were ably assisted by insiders who encountered the opportunity and succumbed to the temptation (Levi 2008) to exploit it (Cornish and Clarke 1986). This is the biggest difference between raskol gangs operating on their own and when in cooperation with Chinese OCGs. In this instance, the 'reasoning criminal' (Cornish and Clarke 1986) was a factor in the commission of the crimes, unlike with the raskol gangs,

which are opportunistic. It may be assumed that William Lee helped elevate the planning and networking of the crimes. Although the crimes were facilitated through *wantok* contacts, it was the funding and facilitation by Lee that provided access to the opportunities. One policeman I interviewed recounted the time he was based in Port Moresby in the early 1990s and police officers investigated a case in which a Chinese shop owner provided guns and a vehicle to raskols to execute a robbery of another Chinese-owned store.²⁴³ The informant stated:

We apprehended the raskols and, after beating them, they identified the Chinese shop owner as the one who planned the robbery and supplied them with the guns and vehicle. We then apprehended the Chinese shop owner who admitted to this. He was arrested and charged but his case was dropped for whatever reason and he then left the country.

Clearly then, Chinese OCG involvement with raskols is necessary to elevate the success rate of a crime.

²⁴³ Interview with Petrus (Gavara-Nanu, Karu, 2018).

Table 7: Details of offenders in MRO robbery: K78,000 cash and gold bars and nuggets worth K2,060,115.56

Name	Place of origin	Job	Role in robbery	Criminal experience
William Lee	Malaysian Chinese	Businessman based in Port Moresby who resided in Hohola suburb	Contributed to funding the robbery. He then received all the gold and smuggled it out of PNG as legitimate sourced gold using his gold export licence.	Not known ²⁴⁴
Silas Hombi	Wewak	No fixed employment. Police reservist	Provided police uniforms and police lights for the vehicle. He also provided the hire car used to commit the robbery and load the gold.	Has prior convictions for robbery. ²⁴⁵ Is being investigated for rape
Philip Bokom	Not known	Policeman	Provided uniforms.	Not known
Pauline Boni Moses	Wewak and Hanuabada	Not known	Next door neighbour to Silas and second wife to Kapis. Introduced Kapis to Silas. Was good friends with Fiona. Pauline was the key link in the robbery.	Not known
Kapis	Wewak	Raskol	Husband to Pauline. Executed the robbery on instructions from Silas and Pauline.	Attempted murder; murder; rape; armed robbery; escape from custody
Fiona	Not known	Sales and Marketing Manager for MRO	Good friends with Pauline and took offenders to her office. She disarmed the security systems to allow access and opened all the safes as she knew the combinations.	Not known
Tom Gabi	Not known	Smelter at MRO	Accompanied criminals into MRO office and loaded gold into getaway vehicle.	Not known
Dose	Not known	Security guard and driver at MRO	Was the driver of the MRO bus and took the criminals to MRO where	Not known

²⁴⁴ William Lee named in video confession of Kapis <https://www.youtube.com/watch?v=h9_hG-CpjE>.

²⁴⁵ *In re Bail Application by Hombi* [2010] PGNC 84; N4080.

			he helped load gold into the bus.	
Peter Markham, Paul John, John Mark, Jackson Sandy and Mathew	Peter Markham from Markham. The place of origin of the others is not known. All recruited by Silas	Not known	Peter Markham and Jackson Sandy loaded gold onto bus. John Mark and Paul John guarded the 2 MRO staff. Mathew drove Pauline.	Not known

Table 8: Details of offenders in Kerema Bank robbery: K830,000

Name	Place of origin	Job	Role in robbery	Criminal experience
William Lee	Malaysian Chinese	Businessman	Facilitated funding for robbery.	Not known
Tony Aimo	Wewak	Minister for Correctional Services	Funded robbery. Gave K10,000 cash to Kapis while eating at Lee's restaurant.	Nil
Pauline Boni Moses	Wewak/Hanuabada	Not known	Notified Kapis of plan to rob Kerema bank. Went to school with Daphne Karo from Grade 7 to 10 in High School. Bought airline tickets for Kapis and Timothy to fly to Kerema from Moresby.	Not known
Daphne Karo	Hula, Central	Not known	Daughter of Noah Karo, the Manager of Kerema bank. She called her father and told him of the plan, which he agreed to.	Not known
Noah Karo	Hula, Central	Bank branch Manager	Accommodated the robbers at his home and opened the bank for robbers to steal the money.	Nil ²⁴⁶
Kapis	Wewak	Raskol	Flew into Kerema from Port Moresby. Slept at Noah Karo's house at Kerema,	Attempted murder, murder, rape, armed robbery,

²⁴⁶ *Noah Karo v The State* [2009] PGSC 19; SC998. At the time of the robbery, Noah Karo had no prior convictions.

			then committed the robbery with Timothy the next day.	escape from custody
Timothy	Not known	Not known	Stayed at Noah Karo's house then committed robbery with Kapis the next day.	Not known

Table 9: Particulars of offenders who committed the Madang robbery: K2.5 million

Name	Place of origin	Job	Role in robbery	Criminal experience
William Lee	Malaysian Chinese	Businessman	Funded robbery.	Not known
Tony Aimo	Wewak	Minister for Correctional Services	Funded robbery.	Not known
Patrick Pruaitch	Wewak	Minister	Funded robbery.	Not known
Francis Marus	Talasea	Deputy Speaker of Parliament	Funded robbery and went to school with Kapis.	Not known
Pauline Boni Moses	Wewak/Hanuabada	Not known	Sent over to Madang all the police uniforms.	Not known
Kapis	Wewak.	Raskol.	Committed robbery.	Attempted murder, murder, rape, armed robbery, escape from custody
11 <i>convicted</i> offenders (2 women, 9 men)	Wewak: 4 people Goroka: 2 people Manus: 2 people Kerema: 1 person West Kove: 1 person Chimbu: 1 person	Unemployed: 5 Teacher: 1 Raskol: 1 Manager: 1 (Credit Corporation) Self-employed: 3	Various roles including kidnapping, stealing, hiring cars, driving the cars, arranging accommodation, police uniforms, dinghy and fuel.	10 no prior convictions; 1 had prior criminal experience and close associate with Kapis

Tables 6 to 8 demonstrate that William Lee was present in all the criminal operations, along with Kapis and Pauline Boni Moses, and there were also a number of connections through provincial representation.²⁴⁷

The MRO-BSP robberies confirm that raskols can successfully network with government officials and Chinese in committing robberies. But even with these two elite core group actors, there is no evidence of raskols committing fraud *with* them. It is likely, therefore, that raskols will be employed by the Chinese and/or government officials only in situations that require violence and/or intimidation, or where the target must be physically acquired and the Chinese and government officials do not want to run the risk of exposure.

Cases of government officials who committed fraud can also be analysed as 'corruption' and, as illustrated by the cases in Table 3, the offenders were tempted to commit the fraud during their work routines (Levi 2008). These offenders were themselves the guardians in the system, so by removing themselves as guardians, opportunity became too tempting for them to resist (Clarke 1997:2; Levi 2008). According to Tilley (1997:101), when examined from the micro level, it is apparent that an offence will occur when the 'adequately motivated' offender meets the 'sufficiently suitable' target, in the absence of guardianship or salience handling over the target. Here, Noah Karo was the guardian for BSP as the branch manager, while Fiona was the guardian for MRO as the sales and marketing manager who held all the combinations for the safes. They chose to relieve themselves of their positions as guardians and become offenders. This illustrates Tilley's (1997:103) assertion that the proximal conditions are what need to be disrupted and contorted in order to prevent crime. Both Karo and Fiona were long-term employees and there was no disruption to their routine to dissuade them from the crimes.²⁵¹

Determining the exact properties of the choices available to an offender will help determine how carbon fraud may be committed (Cornish and Clarke 1989:108).

²⁴⁷ This cooperation between William Lee and the criminals may indicate that the Chinese and raskols have developed a relationship over time. The exact period when the relationship was forged has not been investigated, nor has it been determined how long a raskol gang will be engaged by the Chinese before no longer being required by the latter.

²⁵¹ The absence of guardianship and salience handling does not mean that fraud will definitely occur, since individual morals differ and the presence of a motivation for offending does not necessarily mean that a person will offend. However, disruptions to routine may deter possible thoughts of offending (Albanese 2014:266).

Identifying the 'choice-structuring properties' is key to disruption. These properties are those innate features that make particular types of crimes so attractive to particular individuals. Motivation differs for different crimes for individuals and might be said to be measured on different levels, which might differ depending on the time of the day the offence is committed, for example, a burglary occurring in the night as opposed to a brazen armed robbery of a bank occurring during the day. Obviously, for crimes of passion the level of motivation might be unmeasurable since such crimes are usually committed spontaneously without planning. Therein probably lies the likely factor for measurement—planning. If the planning is painstakingly done, the motivational level is very high. This is usually the case for financial crimes, especially where large sums of money are involved.²⁵²

The same can be attributed to the level of sophistication involved in the execution of the plan. Time will be taken to select the members of the team based on their personal attributes to execute a financial crime, for example for one that requires hacking a bank's computer security system to transfer out large sums. This will produce a higher level of motivation than a 'smash and grab' type robbery by a gang whose members might not possess any particular attribute but were selected for their willingness to take part. This type of crime would likely result in some level of collateral damage suffered by the perpetrators of the 'smash and grab'. Tilley (1997:105) suggested that those with a low level of crime readiness will most likely be deterred from committing crime if situational prevention techniques are introduced into their routine and provided an analysis of the lengths to which people are prepared to go to commit crime. As reasoned by Tilley (1997), those with a higher level of crime readiness are willing to go to greater lengths to secure their objective.

Tilley's analysis confirms my assumption above that the higher the planning, especially where it is tedious in nature, the higher the level of motivation. The level of motivation is thus measured according to the objective, so for financial crimes, where the amount is large the motivation level is high (for example the Brink's-Mat gold bar robbery in England in November 1983, dubbed at the time the Crime of the Century, and the MRO-BSP robberies). Therefore, financial crimes attract the most planning and this attribute is required to commit carbon fraud in REDD+. Applying motivation in this context to

²⁵² The level of planning is always a factor in sentencing by courts of offenders. A high degree of planning will tend to cause an increase in the sentence handed down by the judicial authority (as in the MRO-BSP cases).

REDD+, it is clear that REDD+ would naturally attract a high level of motivation for the offender, and this is seen in the past cases with the carbon cowboys in Peru, the Philippines and PNG.

Therefore, motivational elements should be considered to assess the possibility of carbon fraud occurring. Inevitably personal benefit is the basis for commission of an offence, especially by those in positions of respectability and high-status occupations (Gottfredson 1990:184), as demonstrated by the politicians who funded the MRO-BSP robberies and the fraud cases highlighted in Table 3 above.

The above discussion demonstrates that prevention techniques can be directed at the groups that are most likely to commit the fraud, which requires a physical presence and it is not practical for them to be at these places, for the reasons expounded in the next section.

As outlined in the previous section, the criteria necessary to commit carbon fraud are met by the tri-level structure of the raskol–Chinese network owing to the inclusion of elite and foreign actors. Addressing the key points below, which were highlighted in Levi's (2008) crime scripts, also confirms this.

(a) Planning, coordination and patience and carbon fraud

In the MRO-BSP cases, there were three levels of gang or network structure. The 'hermit crab' hybrid (Le 2012) comprised William Lee and the three politicians; the 'directed network' included Kapis, Pauline Boni Moses and Silas; and the 'mesh network' incorporated the rest of the participants. Hence, this model satisfies the criteria of *planning, coordination and patience*, as displayed through the manner in which the robbery was conducted. Not all of those people who worked under the directed network had known each other before those robberies. In addition, much of the evidence of the state witnesses confirmed they were licit actors who did not know that they had been recruited to facilitate the commission of a crime.²⁵³ These facilitators each played a role in ensuring the robberies were executed.

²⁵³ Upon learning the real reason for their engagement and, despite having the opportunity to notify the police, these people refrained from doing so in fear of Kapis and others.

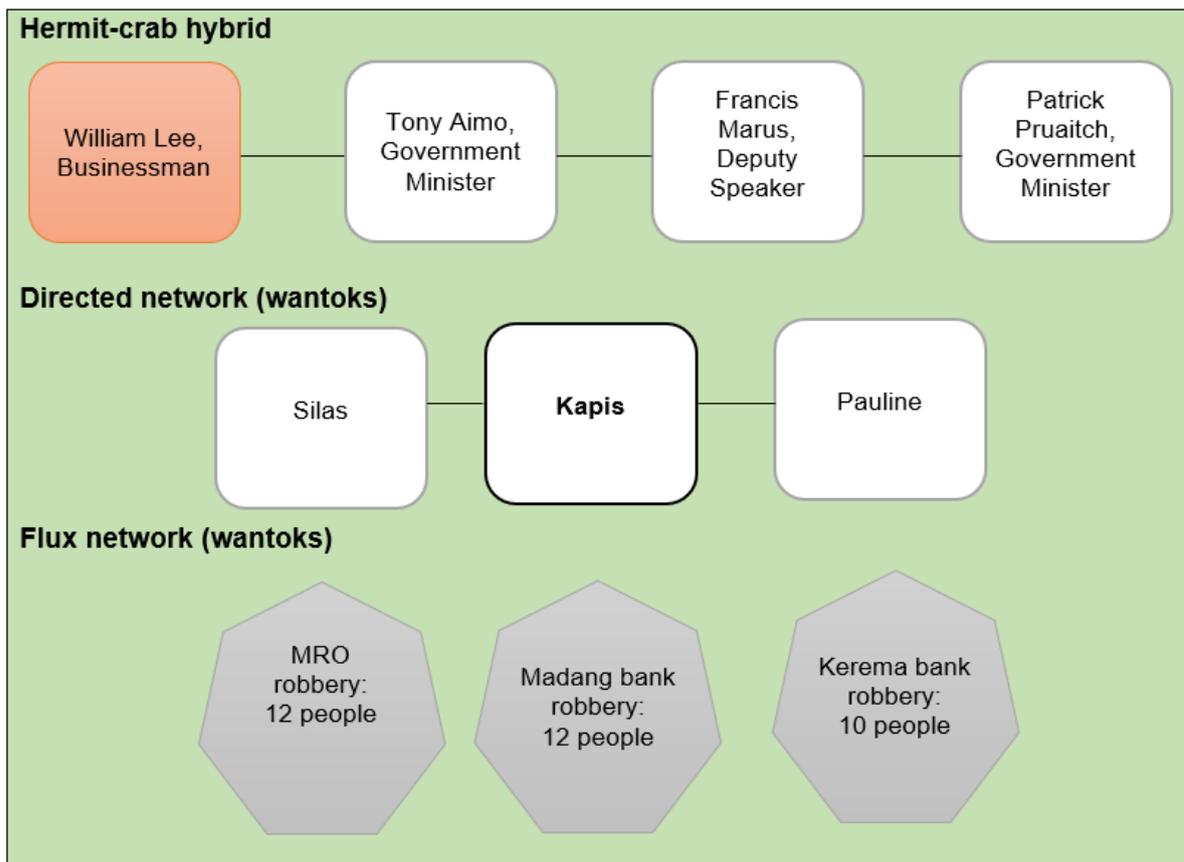


Figure 4: Tri-level structure of raskol-Chinese OCG in MRO/Madang/Kerema robberies

2 *Financial Networks, Logistics and dealing with Law Enforcement*

Figure 4 shows that the flux networks were reliant on the directed network, which in turn relied on the hermit crab network. The hermit crab network provided the funding, but it was the directed network that was able to develop the plan and change it to suit the environment. The directed network acquired all the logistics (police uniforms, police lights, hire cars, accommodation, a dinghy, firearms and ammunition) and recruited those in the flux networks through wantokism. Tables 4–6 listed the origins of the members of these networks, and many were from the same area. Those key actors who were not *wantoks* were closely tied in some type of ‘proximal relationship’: childhood friends (Kapis and Francis Marus, Pauline and Daphne Karo, Pauline and Fiona); long-time neighbours (Pauline and Silas); husband and wife (Kapis and Pauline); father and daughter (Noah Karo and Daphne Karo); or work colleagues (Marus, Aimo and Pruaitch were in the same political party as well as being parliamentarians). These proximal relationships were strengthened by wantokism: Kapis, Pauline, Silas, Aimo and Pruaitch were all from the same area. Pauline, Noah Karo and Daphne Karo were also close

wantoks (Pauline was mixed Hanuabada, which is within the province adjacent to Noah Karo and Daphne Karo's province; both provinces speak a common language: Motu). These proximal relationships (Tilley 1997) and wantokism facilitated the bonding of the offenders.

We know from the cases that police members were heavily involved in the robbery (supplying the police uniforms and lights, monitoring the police radio and relaying the information that no police were on patrol) either actively or passively (by avoiding patrolling areas that Kapis and his gang were operating in). This also confirms that the tri-structure networks were able to deal with law enforcement through bribery.²⁵⁴

Using the MRO-BSP robberies as case studies, this section has illustrated how wantokism and the inclusion of licit networks played key roles in the effective organisation and commission of the crimes. The raskols' lack of structure, lack of discipline and the huge difference in education and cultural views between raskols and Chinese criminals means that sustained engagement of raskols by Asian gangs is unlikely, except for a few or one-off crimes that are likely to involve force and violence.²⁵⁵ This type of arrangement cannot work for carbon fraud, which requires sustained patience and cooperation between key contacts and a high degree of

²⁵⁴ Another example of raskol-Chinese criminal cooperation occurred in 2011, in Port Moresby; when raskols shot dead Malaysian Chinese businessman Wong Tee, who had been the general manager of the department store Tango Trading (Ukaha 2011a; The National 2011). Tee had just driven past the Hohola Police Station when a vehicle full of nationals drove up alongside him and fired several times from a shotgun. Tee drove onto the nearby freeway, but the assailants followed him and fired more shots at him. Tee's vehicle came to a stop on the freeway, and he was slumped over the steering wheel, dead. The assailants drove past him without stealing anything. In my discussions with a policeman attached to the Hohola Police Station, he stated the police investigations had not been able to uncover any suspects because no witnesses had come forward (Discussion with Constable Leni (Gavara-Nanu, Boroko, 2015). Tee was a long-time resident of PNG and some reports speculated that he was killed over a debt he owed to another Malaysian Chinese businessman resident in PNG. If it is true, it demonstrates how Asians and raskols might cooperate in the commission of a crime; in that the raskols will commit the offence, the Asian will not be present at all and the police might be bribed to frustrate official investigations.

²⁵⁵ That Chinese would consider raskols as partners in the offence(s) is highly unlikely. The manner in which raskols conduct themselves does not conform with the Chinese lifestyle. Where Chinese criminal networks in general are more business minded, with formal structures (Lo and Kwok 2017), raskol gangs are loosely bound, each member seen as equal apart from the leader, who probably has the most experience in committing serious crime (Schiltz 1985). The raskols will commit the offence, then for a short period they will have funds which is quickly and carelessly expended. It is therefore more likely that the Chinese criminals will view raskols as inferior to them. The raskols themselves will most probably accept this treatment, since without the Chinese they will not be able to enjoy the proceeds from crime. This is not to say that raskols will feel physically threatened by the Chinese. On the contrary, the Chinese would be wise to maintain some separation to ensure secrecy. This will most probably be done by communicating with a few raskol gang leaders who are able to instruct their members to do the bidding of the Chinese, as seen with the MRO-BSP cases.

intelligence. The next section attempts to determine the type of Chinese criminals that are based in PNG. I argue that they are not Triads, as has been suggested (The Age 2005; Eroro 2012; Broadhurst et al 2014) but loosely structured Chinese criminal networks, which, I argue, may be the only viable criminal networks, based in PNG, capable of forging criminal links between raskols and the illegal logging operations. INTERPOL (2013) has suggested that illegal logging operations pose a threat to REDD+ and the analysis here seeks to investigate this claim.

E Chinese Criminal Networks or Triads?

The first major wave of ethnic Chinese and Malaysian Chinese immigration to PNG is estimated to have occurred in the 1970s (Chin 2008), although smaller groups had been living in the country prior to this. The Malaysian Chinese and Chinese successfully established small businesses across the breadth of PNG. Many can trace their roots to the East New Britain Province. This group refers to themselves as the ‘Old Chinese’ (Chin 2008). At the time of PNG’s independence in 1975, many Chinese were offered the opportunity to apply for Australian citizenship (Chin 2008:118). This caused a mass exodus of Chinese from PNG to Australia, but those with the largest business interests remained in PNG. There are no reports of Chinese OC during the pre-independence years and thereafter for the following 30 years. However, prior to independence, in 1946, in the case of *King v Hor Mui*,²⁵⁸ six Chinese nationals were convicted of the murder of another Chinese national who failed to pay protection money. This is probably the first reported matter that provides a glimpse into the way in which the early Chinese settlers in PNG operated. They arrived in a foreign country but continued to take charge of matters in the same way they had done back in China. No similar court cases have been reported since. Criminal prosecutions against Asians involved in transnational matters are also rare.²⁵⁹

The term ‘New Chinese’ refers to those have who arrived in PNG in the last 20 years. It is common to hear reports of police raids on ‘New Chinese’ establishments and also illegal raids conducted by unruly nationals on the same businesses, but rarely so for ‘Old Chinese’ businesses, though the latter were expelled from Bougainville by the

²⁵⁸ *King v Hor Mui* [1946] PGSC 1.

²⁵⁹ Interview with Meanhiina, Senior State Prosecutor, PNG Office of the Public Prosecutor (Gavara-Nanu, Kavieng, 16 August 2018).

islanders during the civil war (Regan 2014:75). Nationals view Old Chinese as hardworking, fair and honest in their dealings with the nationals. Many Old Chinese families have family members who have married nationals and so a protective bond exists with the nationals. Most of these 'New Chinese' originate from Fujian Province and are extremely scrupulous in their business practices and relations with PNG nationals (Smith 2013; Chin 2010; Wani 2018). Nationals resent the New Chinese for their attitude, which can be mistaken for aloofness, their low payment of wages and their general air of superiority over nationals (Windybank 2008; Chin 2008; 2010).²⁶⁰ In 2009, contempt by nationals against the Chinese and other Asians in general, resulted in the 'anti-Asian' rioting that occurred mainly in the Highlands region, Lae, Madang and Port Moresby; after local NGOs protested over Asians' involvement in business activities that are reserved for nationals (Smith 2013; Chin 2010). For around a week, Asian-owned shops were looted and burnt, while four nationals and three Chinese were killed (Chin 2010; Smith 2012). A Parliamentary committee established to investigate the rioting was short lived and made no findings after its members resigned.²⁶¹ Nevertheless, Asians, particularly Chinese, remain in PNG and, despite the riots, continue with their businesses (legal and illegal) (Chin 2008; 2010; Smith 2013).

Chinese criminal networks in PNG are, according to reports, unlikely to be significant (in size and operations) compared with Asian crime groups in Australia and other developed countries. One report (DEA et al 2006) describes Asian criminal networks, also known as Asian organised crime (AOC), as:

fluid, multi-faceted and diverse. They are distinguished by a high level of criminal entrepreneurship. AOC groups use both personal relationships and specific business and technological skills to maximize profit. AOC includes Chinese groups like triads; loose criminal affiliations; migrant smuggling organizations; Vietnamese street gangs; Korean groups; and to a lesser extent, the Japanese Boryokudan or Yakuza.

²⁶⁰ In *The State v Eric Naks Lako and Keith Lasi Aira* (2016) PGNC 14; N6182, two prisoners were sentenced to death and life imprisonment respectively for the brutal killing of four Chinese adults in their store. Both prisoners had been employed by their victims and, prior to the murders, they had complained to the victims about their low wages and long working hours. Nothing was done to rectify their complaints so the two men broke into the store early in the morning and killed the Chinese.

²⁶¹ I appeared before the committee to advise a representative from the Bank of PNG. The hearing was in dissary and did not take very long. My client was the only person to testify for that afternoon and there was not much clarity on how matters would proceed thereafter. I was not surprised when the entire proceedings concluded without any findings presented. The formation of the committee was more a 'knee-jerk' reaction to the rioting.

As explained in the introduction to this chapter, obtaining any type of data on PNG's OC environment was very difficult, especially data concerning foreign criminal networks operating in PNG. In this section, data were sourced from mainstream online media (*Loop PNG, Post-Courier, The National, The Age, Pacific Islands Report, One PNG, Sydney Morning Herald*), case law (Paclii website) and the Australian Federal Police website.²⁶² Interviews with police informants were not detailed enough because of the officers' limited exposure to working in Port Moresby and other high crime areas in PNG. With regards to the case law, the search was expanded to other South Pacific countries to try to establish the extent of OC in the region that might have some correlation to PNG's own problems.²⁶³ Cases from the South Pacific show that drugs are imported by Asians, US citizens and Europeans, all destined for the Australian market. This is illustrated in Table 10, which details the Pacific countries where Asian criminals have committed criminal offences that have been reported. As a result of this limited information, I present a number of alternative explanations to suit different circumstances.

The presence of OC in PNG has only been detected and acknowledged in the last decade. In 2004, while referring to Port Moresby, one UK crime specialist stated that 'there were signs that foreign crime syndicates are already operating "silently" in the capital, using nightclubs as fronts' (PAC 2004). The specialist predicted that within five years (from 2004), 'organised crime will take a stranglehold in Port Moresby' (PAC 2004). It appears the prediction may have been accurate because in 2006, a National Court judge found that Asian criminals were behind the theft of a 20-foot container from the main Port Moresby wharf (The National 2006). In that case, a Malaysian Chinese, Joseph Siew Fong Ng, was sentenced to three years' imprisonment for his role in stealing almost K175,000 (AU\$75,000) worth of axes and tinned meat, which were packed in the container. Based on the evidence, the presiding judge was of the view that this crime was committed by an OCG. The late Justice Davani stated:

I have seen that this offence bears the hallmark of organised crime. A lot of people were involved and, no doubt, monies may have been exchanged either

²⁶² Online searches conducted from 2017 to 2019.

²⁶³ Few completed reported cases of Asian criminal activities can be found in PNG's case law website, Paclii. However, one civil case did cast some light on a common Triad criminal activity. In the case of *Lin Wan Xin v Wang Yanhong* [2001] PGNC 9, N2160, the plaintiff, a Malaysian-Chinese national, instituted proceedings for defamation alleging that the defendant, also a Malaysian-Chinese national, had published that the plaintiff was involved in OC and facilitated human smuggling into PNG. The plaintiff succeeded in his claim and was awarded damages.

before or after the crime ... Each person had a part to play, from the forklift driver to the security guard, to the truck driver, and those who unloaded the goods and distributed them to various parts of the city.

Organised crime has gained a foothold in major cities and countries in both Asia and the Western world and it is emerging in this country as a revenue earner for a lot of our people. Those who are manipulating the strings are those with cash to spend ... and people involved in this crime are those who benefited from the cash and the goods stolen. It is corrupting the bureaucratic machinery and, unfortunately, a lot of it is not prosecuted because of lack of resources or threats and intimidation to witnesses.

The case did not establish conclusively that an OCG was behind the theft. I was involved in a related case before the same judge, in which two PNG nationals and a Chinese man were accused. I provide my account of this case later in this chapter to illustrate the relationship between Asians and raskols.

A brief historical look at the Triads helps in assessing their capability to commit carbon fraud. Triads have survived for centuries through years of secretive existence, adapting their criminal structures to suit their environment (Booth 1999). So long as their profit-driven aims are met, Triad groups operate independently of each other and have network and gang structures (Le 2012). The history of the Triads can be traced to the Shaolin temples in China's Fujian province before they fled to Hong Kong and the outer islands after the Communist Party took over China (Bresler 1980; Wright 2005). They are one of the most well-known OCGs in the world and, while they are experts in all manner of crime, they are most notorious for drug trafficking. Triads are also known for fraud that requires information communication technology. Such offences include communications fraud, software piracy, plastic card fraud and malware attacks (Smith 2014).

Triads continue to be active in Hong Kong, Macau and Taiwan (Lo and Kwok 2017), while mainland China continues to host various secret societies (Bresler 1980). Outside of these areas, the Triads and secret societies have thrived in other countries that host significant Chinese populations and have large and well-established Chinatowns (Wright 2005). The extent of the presence of Triads in PNG is virtually unknown, but it seems that the media and uninformed politicians have contributed to the public's perception that Triads are definitely operating in PNG (PAC 2004; The Age 2005; Forbes 2005; PAC 2007; The Australian 2010; Bore 2010; Pacific Islands Report 2010a; 2010b; Ukaha 2011; Erero 2012). There is also confusion on when to use the names 'Triad' or 'Mafia'. One of the earliest uses of the terms Mafia and Triads was reported in 2005, when the then Police Minister Bire Kimisopa stated that the 'Chinese mafia have

bought off officials throughout the system' and that several Asian criminal gangs were 'colluding and targeting government officials' (The Age 2005; Forbes 2005). Kimisopa added that if the officials did not cooperate they were threatened with murder and revealed that 16 senior police officers were linked to Asian crime figures, after a police investigation was conducted. Later in 2005, a police constable was convicted of theft after he confiscated two poker machines and delivered them to an Asian-owned store.²⁶⁵ In the same year, the then lawyer for the Police Department, Superintendent Sam Bonner, attempted to prevent a police raid from proceeding at the gaming premises of Albert Khoo, a Chinese man long suspected of having ties to the Chinese underworld in PNG (Forbes 2005). Unnecessary glorification and incorrect use of the term 'Triads' by the media, occurred in 2010, when the media reported an attempted murder and described it as the first Triad-style attempted 'hit'. Mr Tan, the owner of a supermarket in Port Moresby and a Malaysian Chinese, was trailed by two Chinese would-be assassins who opened fire on the victim as he was about to drive his vehicle into his yard (Bore 2010; Smith 2013). The victim survived and the offenders were arrested soon after. The offenders could not speak or understand English. At the time they were apprehended, they had seemingly taken a wrong turn and were lost.²⁶⁶ It was difficult for officials to determine how they were allowed entry into PNG. It transpired that the Chinese men had been hired by relatives of Mr Tan (Smith 2013:334). They left Port Moresby soon after the incident, after a magistrate in the District Court granted them bail, despite the fact that bail applications for attempted murder can only be heard and granted by the National Court.

Chin (2008) predicted that Triads would enter PNG once the LNG projects were established. Chin (2008:126) also predicted that Triads will almost certainly establish themselves in PNG if there is a large quantity of money passing through the hands of the mainland PNG–Chinese community. Why the establishment of the LNG projects would attract Triads is not entirely clear. Though the Ramu nickel mine has brought a large influx of Chinese workers, it is also difficult to fathom how the Triads might operate in an LNG site because they are located in remote parts of PNG, accessible mainly by helicopter and in places known for heavy tribal fighting where outsiders rarely venture. If Triads are linked to the oil, gas and mining industry, they may be connected to the

²⁶⁵ *The State v Jimmy Naime* [2005] PGNC 76; N2873. The policeman received K200 (AU\$60) for the goods from a Chinese man. The policeman was fined K300 and sentenced to four years imprisonment.

²⁶⁶ Discussion with Constable Papa (Gavara-Nanu, Port Moresby, 2015).

Ramu nickel mine in Madang, which is owned by the Chinese government. But in the absence of verifiable data, it is unlikely that Triads are playing any part in or dictating any aspect of the mine's operations.²⁶⁷ Mining, however, has not been a predominantly Chinese industry, since it is mainly Australian and Canadian companies that have invested heavily in PNG's world-class mines and oil and gas projects.

For PNG, it seems that Asian criminal syndicates mainly consist of two groups, Chinese from mainland China and Malaysian Chinese. In one interview I conducted with a policeman, when asked which nationalities commit crime in PNG, he stated: 'Oh yes, that one, you don't hear of white man, only the Chinese criminals.'²⁶⁸ The same policeman then recounted a case of human trafficking of Chinese nationals in PNG.

²⁶⁷ Triads may be operating in PNG, since there has always been substantial Chinese investment in PNG in retail, restaurants, large-scale logging operations and property.

²⁶⁸ Interview with Constable Nambex (Gavara-Nanu, Kavieng Police Station, 26 March 2018).

Table 10: Reported cases of transnational crimes in the Pacific region.

Country where offence committed	Year	Offender	Nationality	Particulars	Sentence
Vanuatu	1989	Cheung Siu Wah	Chinese	Wah had imported into Vanuatu from Hong Kong containers of cocaine destined for Australia. Wah was involved with Triads.	Sentence of 5 years and fine of 200,000VT. ²⁷²
Fiji	1997	Yeung Sze Wai Alice, Fong Pak Hung and Ho Kwok On	Chinese	The three had flown into Fiji and bought goods using false credit cards. They were apprehended after store staff alerted police.	18 months to 2 years, fully suspended, fined \$300 each and deported. ²⁷³
Fiji	2002	Wong Kam Hong	Chinese	Hong lived in Hong Kong. He imported 300 kilos of cocaine from Myanmar into Fiji, intended to forward it to Australia.	12 years. ²⁷⁴
Kiribati	2003	Wong Kam Chung	Chinese	Chung imported containers of cocaine into Fiji via Kiribati.	
Vanuatu	2008	Chavdar Koleff	Norwegian	Koleff arrived from Venezuela into Port Vila with 298.7 grams of cocaine. He stayed in Port Vila for 2 months, waiting for his accomplice Dean O'Connor, to arrive on a P&O cruise. They met in Koleff's hotel room where Koleff gave O'Connor bedsheets that had been soaked in water and cocaine with 50% purity. The drugs were destined for Australia with an	Sentenced to 4 years, 6 months. ²⁷⁵

²⁷² *Public Prosecutor v Cheung Siu Wah* [1989] VUSC 6; Criminal Case 005 of 1989.

²⁷³ *The State v Yeung Sze Wai Alice, Fong Pak Hung, Ho Kwok On* [1997] FJHC 229.

²⁷⁴ *The State v Wong Kam Hong & Tak Sang Hao* [2002] FJHC 273.

²⁷⁵ *Public Prosecutor v Chavdar Koleff* [2008] VUSC 5.

				estimated street value of AU\$145,000.	
Fiji	2012	Phanat Laojindamane, Lum Bing, Zhand Yong and Jason Zhong	Chinese and Thailand	The offenders had flown into Fiji from Hong Kong women from Thailand, who they forced into prostitution.	(Court direction). ²⁷⁶
Fiji	2012	Muskan Balaggan and Elton Xhemali	Indian and Chinese respectively	Xhemali arrived into Fiji from Hong Kong. Later, Balaggan flew into Fiji from Melbourne. Both were supposed to travel together to Australia with 521.6 grams of pure cocaine.	(Court direction). ²⁷⁷
Fiji	2017	Aidan Alec Hurtado	American	Hurtado flew into Fiji from Sydney. His bag contained 20.5 kg of cocaine. The drugs were destined for another country.	17 years. ²⁷⁸

1 *Illegal Activities*

Chinese criminal networks conduct most of their criminal activities in Port Moresby and other urban centres like Lae (Wani 2018). They are both fluid in structure and highly entrepreneurial in PNG, as they are in other countries (Berry et al 2003). An online search for reports of Chinese involvement in fraud in carbon markets failed to return any results.²⁸² However, Chinese criminal groups are well known for other types of fraud, such as credit card fraud, tax evasion and identity theft (Berry et al 2003). They are also involved in illegal gambling (Smith 2013:335); human trafficking²⁸³ (Loop 2018); prostitution in brothels (Chin 2008; Porosapot); money laundering (Chin 2008:123); illegal logging (Greenpeace 2006; Alley 2011); counterfeiting goods, including beer (Post-Courier 2019a; 2019c) and cigarettes (Pokiton 2016; Wani 2018); firearms and

²⁷⁶ *Zhang Yong v State* [2012] FJHC 1368; HAM.166.2012; *The State v Phanat Laojindamane, Lum Bing, Zhang Yong, Jason Zhong* [2012] FJHC 1486.

²⁷⁷ *The State v Muskan Balaggan & Elton Xhemali* [2012] FJHC 1147.

²⁷⁸ *The State v Aidan Alec Hurtado* [2017] FJHC 446.

²⁸² Search conducted on 7-9 June 2019.

²⁸³ Interview with Nambex (Gavara-Nanu, Kavieng, 2018).

ammunition (The National 2012; 2014a; Wani 2018); pornography (Wani 2018); illegal fishing; illegal land acquisition; and trafficking in flora and fauna (Chatham House 2014; UNODC 2013). In addition, it has been confirmed that Asian syndicates work to corrupt government officials to obtain visas, passports and investment approvals (Windybank 2008; Loop PNG 2018a: 2018b) and possibly to manufacture the drug ice (ABC 2014; ABC 2015; Uhr 2014).

In 2018, a Chinese national admitted in the Port Moresby District Court to being part of a highly organised smuggling ring that brought into PNG guns, ammunition, pornographic material, blank bank savings cards, drivers licences, work permits, passports, vehicle registration papers and counterfeit cigarettes (Wani 2018). He was caught after trying to smuggle K7.3 million worth of cigarettes. It seems that Chinese criminal networks have grown in PNG in the last 20 years as predicted by Chin (2008) and Smith (2013).

The PNG Customs Office seems to be one of the few government bodies to keep some form of records demonstrating that, well before 2018, Chinese groups were attempting all sorts of illegal activities in PNG. The Customs Activity Reports from 2010 show that in January there were seizures of contraband and undeclared alcohol in small Asian-owned shops. Also, a pontoon ship was detained for stealing fuel from an abandoned mine, and the crew were charged for being in possession of pornography (Customs 2010). In June 2010, a number of Asians were found to have imported large quantities of undeclared perfumes, while a Thailand-based ship contained large stashes of pornography and illegal plants (Customs 2010). In July 2010, vehicles imported by Asians were undervalued to avoid paying taxes (Customs 2010). In September 2010, a group of Chinese nationals living in PNG were charged for attempting to smuggle into PNG large quantities of cigarettes, while in the same month, a Singaporean-owned shipping vessel owner was charged for not reporting an accident at a PNG port and for attempting to bribe the attending customs officers (Customs 2010).

The following year was no different. In February 2011, a joint operation between customs and a police task force uncovered several rounds of ammunition for a 9 mm pistol and shotgun ammunition in several small Asian-owned shops in Port Moresby (Customs 2011). In June 2011, a Malaysian-owned logging company was found to be attempting to import undeclared goods. The following Table 11, details the types of offences committed by Chinese criminals in PNG, which have been reported.

Table 11: Particulars of Chinese offenders in PNG

Province	Offence	Number of offenders	Other particulars	Source	Date
Not reported	Stealing, assault, possession of pornography	1 man	The offender had a number of convictions over the years, before the National and District Courts and had been deported and had re-entered PNG. He was reported as a leader of the PNG-based 'Chinese Mafia'.	Post-Courier (Erero 2012; Post-Courier 2018); Loop PNG (Vincent 2018); PNG Immigration (Immigration 2018); The National (2018); professional experience (I defended the co-accused on the stealing charge before the National Court)	2005–2018
Malaysian Chinese	Stealing	1 man	The offender, along with several others, stole almost K175,000 (AU\$75,000) worth of axes and tinned meat in a shipping container.	<i>The National</i>	2006
Not reported	Illegal entry	104 men	Immigration and Labour officials raided the Chinese-owned Ramu nickel mine and found workers without proper visas.	<i>The Sydney Morning Herald</i> (2008)	6 November 2008
Fujian	Attempted murder	2 men	The men trailed a Malaysian Chinese businessman to his house and opened fire but missed. They tried to escape but were caught by police.	<i>Pacific Islands Report</i>	5–6 January 2010
Fujian	Drinking in public	1 male	The offender had been drinking beer on the streets with a national before being	PNG Law Reports	2011 ²⁸⁴

²⁸⁴ *James Lee v The State* [2011] PGNC 331; N4310.

			apprehended by police.		
Fujian	Conspiracy to defraud	1 man	The offender conspired with a national to present a false cheque to another store and receive goods.	<i>The National</i> (2012)	11 March 2012
Not reported	Contempt of court	1 man	The offender was charged under the <i>Copyright & Neighbouring Rights Act 2000</i> . He was not permitted to leave PNG, but flew to China without seeking court approval.	PNG Law Reports	2012 ²⁸⁵
Not reported	Possession of unlicensed firearm, illegal aliens	4 men	Police raided a Chinese store and arrested the owner who had an illegal weapon and his 3 Chinese workers who had no visa.	<i>The National</i> (2012)	26 December 2012
Not reported	Receiving stolen property	2 men	The offenders were found to be in possession of a forklift that had been reported stolen. They also did not have any passports.	<i>One PNG</i> (2013)	20 September 2013
Fujian	Possession of illegal firearm and ammunition	1 male	The offender, who was a store manager, had kept hidden 2 firearms. Arrested after police raid.	<i>The National</i>	21 July 2014
Not reported	Attempted murder	3 males	The 3 men, along with their security guards, attacked a lone national after he refused to pay their illegal fee to use their Eftpos machine to check his balance.	<i>Papua New Guinea Today</i> (PNG Today 2015)	13 January 2015

²⁸⁵ *The State v Chris Chan* [2012] PGNC 346; N5534.

Fujian (Fuzhou city)	Fraud	1 man	The offender managed a shop and was found to have made illegal electricity connections to his business.	PNG Law Reports	2015 ²⁸⁶
Fujian	Fraud and misappropriation	1 man and 1 woman (husband and wife)	The couple worked for a visa company for Chinese citizens working in PNG. They stole over K1 million from their employer.	<i>Loop PNG</i> (Yagi 2016)	10 February 2016
Fujian	Selling counterfeit cigarettes	5 men	Police raided their premises and found 26 cartons of cigarettes.	<i>Loop PNG</i>	5 October 2016
Not reported	Assault	1 man	Offender assaulted a national.	PNG Law Reports	2017 ²⁸⁷
Fujian	Smuggling counterfeit cigarettes	1 man	Customs officers discovered K7.3 million worth of counterfeit cigarettes. The offender also admitted to smuggling into PNG blank ATM cards, drivers' licences, work permits, passports, duplicated motor vehicle registration papers, guns, ammunition, pornography and illicit drugs.	<i>The National</i> (Wani 2018)	12 February 2018
Fujian (Fuqing City)	Misappropriation and fraud	1 male	The offender purchased an <i>Easipay</i> meter illegally loaded with K5,000 electricity units. He pleaded guilty.	PNG Law Reports	2018 ²⁸⁸

²⁸⁶ *The State v Zheng Yuhui* [2015] PGNC 184; N6093.

²⁸⁷ *The State v Yuting Shi* [2017] PGNC 308; N6983.

²⁸⁸ *The State v Xie Xiao Fang alias Jack Sia* [2018] PGNC 326; N7387.

Shandon	Bribery of police officer	1 male	The offender offered K10,000 cash to the police officer investigating the offenders' company for human trafficking, forgery and other transnational crimes.	<i>Loop PNG</i> (2018)	7 May 2018
Fujian	Selling fake beer	2 men	Public laid official complaint after buying their beer.	<i>Post-Courier</i> (Zarriga 2019)	2 and 7 January 2019

Based on the information in these tables, the Customs reports and the 2018 Port Moresby District Court case, there appear to be three main markets for Chinese illegal activities. Counterfeit goods that are made by the Chinese are sold to ordinary nationals (Post-Courier 2018; Zarriga 2019; Post-Courier 2019). Goods stolen by raskol-Chinese networks that are sold to both nationals and Chinese. Whilst thirdly, the importation of firearms is done by Chinese with evidence indicating that it is for their personal use (Gridneff 2012; PNG Today 2014; Wani 2018) and not for the black market, as well as counterfeit passports and other identification documentation that are sold to illegal Chinese and other nationalities illegally in PNG (Wani 2018; Loop PNG 2018a).²⁸⁹ This data indicates that in PNG, Chinese or Asian criminals are willing to turn their hand to any illegal activity in urban areas, while logging has been problematic in rural areas.

2 *Illegal Logging*

Illegal logging is one of the most well documented of OCs worldwide, with an estimated annual turnover of US\$100 billion (Brack 2006; Green et al 2009). In 2013, the UN estimated illegal logging in the Asia-Pacific to be worth US\$17 billion, making it the second highest paying illegal activity in the region (UNODC 2013:87-99).²⁹⁰ At the time, most of the illegal timber was taken from Malaysia and Indonesia. But by 2014, PNG became the world's largest exporter of tropical logs, with illegally felled logs among this (Mousseau 2016). According to the UNODC (2018), Asian criminal networks, particularly Chinese, are the main perpetrators of environmental crimes such

²⁸⁹ There have been allegations of the Chinese networks illegally influencing the General Elections (The Australian 2010) but there has never been any evidence to confirm this.

²⁹⁰ Sales of counterfeit goods topped the list with US\$24.4 billion.

as illegal logging. They on-sell the timber to Western nations, disguising and rebranding it as legitimately sourced timber.

In a 2007 study into the PNG forest industry, the International Tropical Timber Organization (ITTO) found that lack of transparency in the process of awarding logging permits encouraged opportunities for corruption and that, while PNG had strong laws to combat illegal logging, it was almost impossible to implement those laws, especially when forest officials were compromised by the logging companies (ITTO 2007). Twelve years later, it seems that nothing has changed in PNG's forest industry.

Most of the logs illegally obtained in PNG are shipped to China, Korea and Japan (Nellerman 2012:14). These countries then on-sell the cut and processed timber to Western nations, which buy legally felled logs shipped with illegally logged timber, so that it is virtually impossible to distinguish them. As a result, Western nations buy illegally felled timber without knowing it (Nellerman 2012:23, 41). This is of great concern as it has been predicted that, without greater government intervention for conservation efforts, most of PNG's forests will soon be removed, either through deforestation or forest degradation (Shearman and Bryan 2011). The PNG National Government, though, continues to downplay such concerns and just as eagerly, attempts to demonstrate its commitment to sustainable forest management systems, such as when the NFA launched its web-GIS forest monitoring portal, which updates land-use change and highlights the development of its multi-purpose National Forest Inventory.

Since the release of the Barnett report (1989), little has changed to curb the rampant government malfeasance induced through bribery by the mostly Malaysian-dominated logging companies (Greenpeace 2010). The Barnett report highlighted the abuses by PNG politicians and senior government workers who openly received bribes to facilitate favourable but illegal transactions for the export of round logs, such as undervaluing, undermeasurement and under-grading of logs (Barnett 1989:277-281). In particular, the report found that many New Ireland provincial politicians openly admitted to the COI to soliciting money and gifts for themselves personally, for relatives, including spouses, and for their political parties (Barnett 1989:312-334), including transfer pricing.²⁹¹

²⁹¹ During the fieldwork in 2018, it transpired that the traditional landowners identified during the Barnett Inquiry (1989) as victims of fraud still had not recovered any compensation from the part-Chinese, part-New Ireland businessman Bruce Tsang. An online search of the IPA website showed that Bruce Tsang

Many Asian logging companies operate in rural PNG, securing impunity from local law enforcement agencies through bribing the police. For instance, one person related to me that he was present when an Asian, who was the manager of a logging company, paid a bribe to a policeman.²⁹² This informant had accompanied the manager to visit the then police commander in Kavieng some years ago. At the police station, the manager, a Malaysian Chinese, gave K10,000 cash to the commander to instruct his officers to turn a blind eye to some events. Exactly what those events were, was not clarified to me.

From the foregoing discussion, it does seem highly likely that Chinese criminal networks will perpetuate forest crimes, which could extend to carbon fraud, under the guise of logging companies. How this link between illegal logging and REDD+ might lead to carbon fraud is unclear. It might be through engaging raskols to intimidate local landowners to consent to their land being logged, or to sign an agreement under REDD+. Government officials might be bribed to certify an area as REDD+ to receive funding under the UN-REDD Programme, all the while having the area logged. Other activities can be carried out that do not involve dealing with the customary landowners, such as bribing forestry inspectors to obtain favourable reports or permits; and bribing and intimidating government officials to divert REDD+ funds. However, it is widely acknowledged that illegal loggers will employ *legitimate* means to accomplish their illegitimate activities in order to present themselves as a legitimate operation. Whilst it is known that Asian loggers engage the PNG police to terrorise and pressure local landowners to allow logging to take place on their land (Wood 2005), the Asian loggers are unlikely to engage raskols to conduct this activity since this may lead to landowners retaliating and harming the raskols and the Asian loggers.

Thus far, this section has shown that Chinese criminals only engage raskols for violent crimes. It is known that government officials can be corrupted quite easily. Based on these two facts, it appears that if Chinese criminal networks are to infiltrate REDD+,

had divested all his interests in his companies to his family members, notably one of his sons who still conducts business in New Ireland. The villagers told me that Tsang had left PNG many years ago for Australia, although his former businesses in Kavieng continue to display his name. One shop is called Tsang and another Bisi Trading, the latter a reference to his first name, Bruce. All this is a reminder of his existence but tells of his ability to evade law enforcement and avoid paying for his fraud. Nothing has changed it seems. He returns to Kavieng to visit family and, when confronted by villagers to pay them their outstanding royalties, he tells them that he is bankrupt but will try his best to repay them (Conversation with various villagers from Konos and Amba village (Gavara-Nanu, Konos village, 2018).

²⁹² Conversation with Kelly (Gavara-Nanu, Kavieng, 2018).

they would do so *without* raskols and would enlist the help of corrupt government officials.

So OC syndicates may engage government officials to facilitate illicit work in REDD+ in order to appear to have some type of legitimacy. They can also use 'facilitators', persons who have had no prior connection with crime, to facilitate illegitimate transactions (ACC2015), such as lawyers, accountants, bank managers and public servants. It is probable therefore that utilising these individuals, rather than raskols, would be a core operational mode of OCGs in REDD+. This is highly beneficial to the criminals because they can isolate and use persons who do not fit the criteria of a criminal (or raskol) and will not draw attention to themselves in conducting their work. This scenario played out in Peru where David Nellson used an unwitting Peruvian academic, to access remote tribes and continued to use his services until the academic became aware of what was happening (60 Minutes 2013; Jong et al 2014).

Organised criminals can also use technical experts to manipulate data reading. Since voluntary markets do not operate by relying on legally mandated restriction of emissions (unlike regulated markets), the data from REDD+ schemes have the potential to be fragmented and not impartial (Bayon et al 2007). This is obviously due to the fact that REDD+ schemes are assessed on their individual merits. No single REDD+ scheme is the same as another since they operate in different countries at different locations, with different regulations and laws. Professional facilitators can, therefore, manipulate or be manipulated to provide incorrect reduction figures, which might result in the criminal syndicate receiving an inflated payment for what they are actually entitled to. This danger in operations was highlighted by Bayon, Hawn and Hamilton (2005), who cited the lack of uniformity, transparency and registration in voluntary markets. This makes it possible for aspects of such markets to be manipulated. Regulation of these markets through a uniform standard may be the key factor to ensuring their operation is not hampered. However, this criticism of voluntary markets is unlikely to prevent them from being adopted. Voluntary markets are more attractive than regulated markets because they have much lower set-up costs and have the potential to benefit the local forest-dwelling communities and protect the natural environment (Bayon et al 2005:13).

The following findings can be extracted from this section:

- 1) There is no strong evidence to show that Triads are operating in PNG.

- 2) There is evidence that loosely bound Chinese OCGs are operating in PNG.
- 3) Chinese OCGs are involved in gambling, prostitution and smuggling, among other activities.
- 4) The PNG logging industry is dominated by Asian logging companies.
- 5) Asian logging companies are in a likely position to commit carbon fraud in REDD+ schemes. However, it is not known how they might do so.
- 6) If OCGs attempt to corrupt REDD+ schemes, it will be done with the assistance of licit networks, especially those employed within the government agencies and departments that oversee the REDD+ scheme. OC syndicates will avoid the use of street gangs, because they do not wish to introduce more risk.

Street crime will always be the priority of the police, while white-collar crime goes largely unchecked (Dinnen 1993:24). Violent crimes require a quick response from police and, with the stretched workforce and limited logistics and finance, attention will be placed on those areas that pose the most immediate danger to the public. This leaves fraud and corrupt activities to toil away quietly before eventually being detected.

Summary

In this chapter, I have discussed weak state theory and the likelihood of transnational OCGs entering PNG to commit carbon fraud. I have argued that TOCs will not travel to PNG to commit fraud and if fraud is to be committed it will be done by PNG-based OC networks or by carbon cowboys. I have explored the OC environment in PNG. I have canvassed the typology of raskol gangs and argued they are not OCGs but common criminals engaged in unorganised, opportunistic or expressive crime. I have then explored foreign OC networks, including Chinese OCs in PNG and dispelled the assumption that they are Triads. They are instead loosely bound criminal networks comprising New Chinese who have arrived in PNG in the last 10 years. However, I have conceded that this finding could be incorrect owing to the scant data and so there might be a strong Chinese OCG network with connections to Triads. While I have made findings in the previous section that there is evidence of OCGs operating in PNG, I qualify this by stating that those PNG-based OCGs appear to be operated by 'New Chinese' who have been in PNG for the last 10 years and are very loose in structure. Finally, I have affirmed that carbon cowboys are the group that is most likely to commit carbon fraud in REDD+ schemes in PNG and there are already existing cases. I argue

that INTERPOL's (2013) prediction that REDD+ schemes are in danger of being manipulated by OC networks needs to be confined to carbon cowboys only, especially since INTERPOL could not predict the exact manner in which a link between illegal logging and REDD+ schemes might result in carbon fraud.

In the next chapter, I present the data collated over three years of fieldwork in New Ireland. The most significant findings are presented first and the discussion follows. I also present my personal experience with encountering carbon cowboys in New Ireland and this strengthens my argument that carbon cowboys, and not TOCs / OCGs will be the group most likely to manipulate and defraud the REDD+ schemes.

VI REVEALING CARBON FRAUD IN NEW IRELAND

This chapter discusses the data that was collected in New Ireland to establish whether there exists a link between illicit actors in PNG's forestry institutions and the REDD+ schemes in PNG. Although there appears to be some evidence that alludes to this link, if the evidence is so minute and it cannot be corroborated, it will not be sufficient to confirm that OCGs specifically, will abuse the REDD+ scheme. However, the data did indicate that the abuse in REDD+ may be perpetrated by carbon cowboys and this possible link was pursued employing grounded theory. The significant findings are explained and the common denominators extracted to help show how the carbon cowboys may enter, take advantage of and abuse a REDD+ scheme. The conclusions to this chapter, are presented within the last chapter of this thesis.

A Data & Significant Findings

The data and findings are not presented for every trip I made to New Ireland, but only for those trips that yielded important points for analysis and discussion. The data collection sites were as mapped in Chapter II and comprised villages along the east and west coast of central New Ireland with one formal interview conducted at Port Moresby.

While Lae and Port Moresby have a definite Asian crime presence (Lakhani 2014), the same cannot be said for New Ireland, which has one of the lowest crime rates in PNG.³⁰⁵ A few ethnographic studies into central New Ireland's culture and raskolism showed that, because of New Ireland's strong traditional culture, raskolism is unlikely to have a foothold in the communities (Clay 1977; Jessup 1977; Sykes 1995; 1999). Sykes (1995; 1999) analysed the issues of youth restlessness and unemployment in central New Ireland. At the time of Syke's fieldwork, the probability of criminal activity occurring was low. This situation had not changed at the time of my own work. No Asian OC activity has been reported in the province, and there appear to be two reasons for this. Firstly, few Asians live permanently in New Ireland or Kavieng. Secondly, there is no market for these types of illegal activities to flourish. New Ireland's formal economy is

³⁰⁵ Interview with Nambex (Gavara-Nanu, Kavieng Police Station, 2018); Interview with Petrus (Gavara-Nanu, Karu, 2018); Conversations with the New Ireland Provincial Police Commander (Gavara-Nanu, Kavieng Police Station, 2018).

small, with the majority of the population being subsistence farmers. If they are hungry, they simply go to their gardens and harvest produce. For protein they go fishing in the sea, or rivers, or they go to the bush and hunt wild pigs. Almost all villages have domesticated pigs and chickens for consumption. The main cash crops are copra, cacao and oil palm. Bêche-de-mer is harvested and sold when it is in season. Where logging is conducted the landowners receive royalties (however, payment dates are very uncertain). According to the New Ireland Provincial Police Commander,³⁰⁶ the crimes committed in the province are predominantly 'soft' crimes, such as illegal brewing, fighting and stealing, with very few cases of 'hard' crimes such as armed robbery, murder and rape.³⁰⁷ Instances of robbery are usually committed by criminals from other provinces, who travel to the province specifically to commit those crimes before returning to their home provinces.³⁰⁸ New Ireland is also seen as a refuge for criminals wanted in other provinces. They hide in the small slums scattered around Kavieng town waiting for the situation in their home province to cool down before returning by boat.³⁰⁹ Although New Ireland has a water police section, there is no fuel to power the speedboat for operations, so criminals pass through the sea borders without checks.³¹⁰

The most common type of illegal activity or 'soft' crime that takes place in the village communities is illegal distillation and consumption of alcohol, referred to as 'home brew'. This is brewed mostly from young coconuts, but also pineapples and other fruit. Marijuana consumption among youths has also become a common 'soft' crime but rarely leads to major crimes being committed. Being an island has helped insulate the province from the modernisation gripping other parts of PNG. This fact may help explain why the population is still closely connected to their customary practices and traditions.

The following Tables 12, 13 and 14, present the details of persons interviewed during the fieldwork and the names used in the tables are pseudonyms, as stated in Chapter II.

³⁰⁶ A Provincial Police Commander is the most senior police officer in a province and usually holds the rank of Senior Inspector or higher.

³⁰⁷ Conversation with the Provincial Police Commander of New Ireland Province (Gavara-Nanu, Kavieng, 2018).

³⁰⁸ Interview with Constable Tobaras (Gavara-Nanu, Kavieng Police Station, 2018).

³⁰⁹ *Ibid*; above n 258.

³¹⁰ *Ibid*.

Throughout this chapter, I provide unedited quotes (except for the English translation) from the interview participants. Throughout the study period I also sought to determine the general evolution of carbon trading companies in PNG that have arisen since carbon trading grew in popularity. An online search of the website of the Investment Promotion Authority (IPA)³¹¹ for business group names that have the word 'carbon' in them, or which have listed 'carbon trading' as their business activity, revealed that 39 such business groups had been incorporated from 2009 to 2019. While nine companies with the words 'carbon trading' forming part of their company name had been registered.³¹²

Another search of the IPA website for companies, business names and associations that use the word 'carbon' revealed a total of 69 groups, the majority of which were formed after 2009. Another search for groups using the word 'redd' revealed nine groups, of which six were companies, while three were business names. A search for the word 'emissions' showed one business name registered.³¹³ The people listed as directors and who registered these groups include lawyers (both nationals and expatriates), accountants and also people living in rural areas with a higher level of education than the 'ordinary villager'. The ordinary villager can be perceived as someone who has little or no formal education and who relies almost entirely on substance farming or fishing, hunting and gathering. The company online searches played an important role in the explanatory research, expounded further below.

2017

Although I only managed to conduct the single interview in 2017 in Port Moresby, most of my time was spent in New Ireland, where I settled into identifying and visiting potential data collection village sites, along the east coast of central New Ireland.³¹⁴ I also began introducing my research to prospective participants and conducted simple observations. Table 12 records the details of that single interview.

³¹¹ The government agency in PNG, which registers and regulates the conduct of commercial entities.

³¹² Last online search conducted on 9 April 2019.

³¹³ Online search conducted on 18 September 2018, at <<https://www.ipa.gov.pg/>>.

³¹⁴ Data collection village sites along the west coast were visited and identified during 2018.

Table 12: Formal audio-recorded interview in 2017

No.	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
01	Forestry	26 June	Port Moresby	NFA Headquarters	Gini	Male	59 minutes, 13 seconds	10:42 am

2018

In 2018, I conducted 17 formal recorded interviews, as noted in Table 13, below.

Compared with 2017, whilst conducting simple observations, I noted there was a slow emergence of knowledge among people in New Ireland concerning the topic of carbon trading, especially towards the end of the year. Villagers' gossip was frequent on the rumours that other villagers had signed up for lucrative carbon trading projects that some white men were starting.

Table 13: Formal audio-recorded interviews in 2018

No.	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
01	Police	24 March	Karu	N/A	Petrus	Male	27 minutes, 47 seconds	07:40 pm
02	Landowner	25 March	Malom village	Villager's house	Lakat	Male	23 minutes, 21 seconds	09:14 am
03	Villager	25 March	Malom village	Villager's house	Tambu	Male	12 minutes, 07 seconds	09:49 am
04	Landowner	25 March	Katedan village	Hausboi	Bana	Male	17 minutes, 04 seconds	11:16 am
05	Police	26 March	Kavieng	Kavieng Police Station	Nambex	Male	35 minutes, 59 seconds	06:34 pm

No.	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
06	Landowner	24 April	Silom village	Inside vehicle	Pilai	Male	14 minutes, 44 seconds	05:43 pm
07	Villager	25 April	Lokon village	Inside vehicle	Reeana	Female	08 minutes, 47 seconds	08:41 am
08	Landowner	25 April	Kaluan village	Inside vehicle	Gabby	Male	15 minutes, 14 seconds	03:37 pm
09	NGO	30 July	Kavieng	NGO office	Kade	Male	51 minutes, 34 seconds	02:39 pm
10	Landowner	14 August	Kavieng	Inside vehicle	Kelly	Male	20 minutes, 29 seconds	01:35 pm
11	Landowner	15 August	Kategan village	Villager's house	Bilau	Male	1 hour, 04 seconds	04:59 pm
12	Office of Public Prosecutor	16 August	Kavieng	Niu Lodge	Meahiina	Male	38 minutes, 49 seconds	02:28 pm
13	Landowner	11 September	Kavieng	Inside vehicle	Solo	Male	34 minute, 30 seconds	03:32 pm
14	Police	12 September	Kavieng	Kavieng Police Station	Tobaras	Male	30 minutes, 46 seconds	09:59 am
15	LLG Member, Ward 16	13 September	Kalaguna to Kamalabo	Inside vehicle	Gudi	Male	22 minutes, 32 seconds	07:34 pm
16	Landowner	14 September	Dampet village	Villager's house	Masa	Male	1 hour, 18 minutes, 51 seconds	07:04 am

No.	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
17	Landowner	14 September	Dampet village	Villager's house	Anek	Female	1 hour, 18 minutes, 51 seconds	07:04 am

2019 and New Ireland Hardwood Timbers Inc

In 2019 I undertook a concentrated effort to track and corroborate information obtained in late 2018, by talking to local landowners. I conducted 11 formal recorded interviews as listed below in Table 14.

Table 14: Formal audio-recorded interviews in 2019

No.	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
01	NGO	16 January	Kavieng	Niu Lodge	Manu	Male	45 minutes, 41 seconds	07:18 pm
02	Landowner	20 January	Konos	House	Mero	Male	43 minutes, 16 seconds	03:05 pm
03	Landowner	20 January	Konos	House	Sotti	Male	43 minutes, 16 seconds	03:05 pm
04	Pastor	20 January	Pinikidu village	Pastor's house	Pastor Jacob	Male	23 minutes, 05 seconds	06:35 pm
05	Landowner	20 January	Pinikidu village	Pastor's house	Marama Martha	Female	23 minutes, 05 seconds	06:35 pm
06	NGO	21 February	Kavieng	NGO Headquarters	Tati	Female	26 minutes, 32 seconds	09:24 am

No	Group	Date	Location	Venue	Name	Gender	Duration	Time of interview
07	Police	22 February	Lakuruma	Police Station	William	Male	40 minutes, 03 seconds	02:50 pm
08	Landowner	23 February	Kavieng	Niu Lodge	Brendon	Male	16 minutes, 51 seconds	10:53 am
09	Landowner	10 March	Lavatbura village	Villager's house	Bulu	Male	24 minutes, 24 seconds	12:11 pm
10	Landowner	10 March	Konos village	Villager's house	Masa	Male	55 minutes, 42 seconds	02:58 pm
11	Landowner	10 March	Konos village	Villager's house	Ross	Male	55 minutes, 42 seconds	02:28 pm

Here I commence by recounting four key interviews, two conducted in Kavieng town in August and September, one conducted in Katagan village and one in Dampet village. The interviews show how logging companies flaunt landowners' concerns, how carbon cowboys have arrived in New Ireland and the state of PNG's carbon trading regulatory body.

Misappropriation and Oppression by logging companies

Conducted in Kavieng town, the interview with Kelly reflects the discussions about logging, that I had with other New Irelanders. Kelly is from Lasigi village which lies along the east coast of central New Ireland and is part of the Mandak language group. He is a strong speaker in public gatherings and was formerly a military police officer in the PNG Defence Force, rising to the uncommissioned rank of Sergeant. Perhaps due to his previous occupation, he is very forceful in how he conducts himself and is regarded as a community leader. Kelly recounted how logging used to occur in his area when he was a small boy. It is now no longer logged due to strong opposition from the

villagers. Ironically, Kelly revealed that for a number of years he had been a core member of a landowner logging company, although he had not been an executive.³¹⁵ Even though he was not an executive, he was recruited by the executives to liaise with people from other villages, to consent to logging.

Kelly revealed how the Chairman of the landowner company and his close associates, routinely expended landowners' royalties and levies, without any regard for the villagers. Major decisions on expenditure was theirs alone. For example, K35,000 was spent to send a single female student to go to the Philippines to study in a vocational school. After a year, the student returned to New Ireland without having gained a qualification because there was no funding to continue the scholarship program. This, according to the villagers, was a complete waste of money and could have been put to better use for an entire community school in the area. The student was the daughter of one of the directors of the landowner company.

Kelly also recounted how the landowner company and the Malaysian logging company, would engage lawyers to obtain injunctions against villagers to prevent them from protesting against the logging operations and from convening an annual general meeting to vote for new executives. This ensured the current executives remained in their positions and received the various payments from the logging companies and the NFA, intended for the landowners but which they squandered. The tactic was to file their applications for injunctions before the National Court in East New Britain Province, despite there being a National Court sitting in Kavieng.³¹⁶ The landowners in New Ireland, were thus, required to travel to East New Britain to attend court. As East New Britain is another island, travel there is either by plane or small craft boat (dinghy). Both modes of travel for a villager are logistically challenging and very expensive. Since most villagers do not own a vehicle, they need to catch and pay the fare for a highway vehicle. If going by plane, a villager must travel to Kavieng. Since there is only one flight out of Kavieng every morning, the villager will arrive into town before midday and must then look for a place to sleep in Kavieng and catch the early morning flight the next day. The flight from Kavieng to Tokua airport at East New Britain is around 20-30

³¹⁵ Interview with Kelly of Lasigi village (Gavara-Nanu, Kavieng, 14 August 2018).

³¹⁶ The East New Britain Province occupies half of the island of New Britain. The other half comprises West New Britain Province. East New Britain lies to the west of New Ireland and is its closest neighbouring province. The provincial town of East New Britain was formerly Rabaul, but after a volcanic eruption, it is now Kokopo.

minutes. Tokua airport is out of the main town so the villager will have to catch and pay the fare of a highway mini-bus from Tokua to town and finally walk the rest of the way to the court precincts.

If catching a dingy, the villager must first catch a truck to the west coast and go to the specific villagers from which dingys depart shores early morning from west coast New Ireland, to East New Britain. Once in East New Britain, villagers must look for cheap accommodation, unless they have relatives whom they can stay with. After court, they must pay their way back home again.

The villagers' travel difficulties to East New Britain are precisely why the logging companies and landowner companies institute the legal proceedings in the different province, knowing that there is a very high likelihood that the villagers will not travel to East New Britain, or will arrive late to court. With the villagers absent from court, unable to defend the application, the injunctive orders will likely be granted by the judge. A National Court judge has jurisdiction to hear all matters, criminal or civil in nature, unlike magistrates who can only preside over civil matters that do not exceed a claim over K10,000 and minor criminal offences which are punishable under the *Summary Offences Act 1977*. In practice, a case should be filed in the province where the facts of the claim arise. Exceptions are given for urgent applications such as an application for an injunction, meaning such an application can be filed and moved before a judge sitting in any province in PNG. As long as the judge is convinced there is genuine urgency and merit in the application, the judge will hear the application. The granting of the orders lies on the applicant addressing and satisfying the injunctive principles laid down by case precedents. It is at the discretion of the judge to order a matter to be transferred to the province of origin or to continue to hear the matter until substantive hearing.

Since the landowner company did not have any money, it relied on the developer, the Malaysian logging company, to fund all the litigation and their operations. The developer, in turn, deducted the legal expenses from any royalties or levies to be paid to the landowners. Owing to excessive and careless spending by the executives, the landowner company always relies on the logging company for all expenses. As a consequence, the payments that are supposed to go to the landowner company and the landowners continue to decrease. Kelly also stated that a tactic employed by many of the logging companies is to enrich and isolate the directors, especially the chairman, of

the local landowner company and thereafter use them to coerce the landowners into signing consent forms to allow logging to take place.³¹⁷

Kelly agreed that the logging company never conducts any awareness raising for the villagers about their rights and that the police were routinely engaged to remove *gorgor*. The logging operations brought law and order issues to the logging camps and the surrounding villages because of the influx of workers from other parts of the island and from other parts of PNG who would become drunk on pay days and cause major disturbances.³¹⁸

Under the *Environment Act 2000*, it is compulsory for companies whose commercial activities will disrupt the natural environment, to lodge an Environmental Impact Assessment Report with CEPA.³¹⁹ The report must be approved before the commencement of the activity. This report will confirm whether the developer will be able to mitigate environmental disturbance (which is assessed before the commencement of a project) and confirm care has been taken by the developer to minimise damage to the natural environment. Thereafter, yearly reviews are conducted by CEPA officers at the site to ensure the environmental impact is kept within the approved notice. If there is damage, the developer must prove that a reasonable effort has been taken to rehabilitate the natural environment.

CEPA officers tasked with making environmental assessments before the commencement of a project, and every year thereafter, must attend to the project site to see the affected areas, conduct their assessment and draft their reports. Except for airfares to major ports and the travelling allowance, CEPA lacks funds to provide its officers with hire vehicles and allowances for fuel to travel to project sites. So for logging, developers step in to provide logistics and extra cash allowances, among other goods. The logging company employees will meet the officers on arrival at the airport and then check the officers into their accommodation, which is usually the most popular

³¹⁷ I observed many instances of chairmen of landowner companies, being treated favourably by the Asian loggers. I use the word chairman deliberately since they were all men.

³¹⁸ While I was conducting fieldwork in 2017, two murders were committed by logging workers from other provinces. Both suspected workers left the logging companies, but that did not stop the locals from intimidating and assaulting the *wantoks* of those two workers. On one occasion I arrived at the logging site, just as a truck was departing the national workers' camp site. The truck brought some men who, upon arrival, had assaulted a man from Rabaul because they suspected the Rabaul man's *wantok* as the person who killed one of their youth and left his body on the side of the road.

³¹⁹ *Environment Act 2000*, ss 47-51.

accommodation in Kavieng (often demanded by the government worker). The officers are given cash to spend as they please, while their food, drinks and other items like cigarettes and betel nuts are all paid for by the logging company. This can be seen as a subtle form of bribery for a favourable report to be issued by the CEPA officers so that the logging can proceed despite major environmental damage. It is not surprising therefore that many project sites in PNG have environmental problems, such as the OK Tedi gold mine in Western Province and the Bougainville Copper Mine where environmental problems caused the 10-year civil war.

Midway through 2018, while in New Ireland, I made some observations about the arrival of two CEPA regulatory officers into the province to conduct inspections of logging operations. Kavieng is a small town, so new-comers and foreigners are easily distinguishable and noticeable. I noted that the inspection officers were well received by the logging companies. They were picked up from the airport and brought to the logging camp by the logging company's driver. Each had a fast-food lunch pack and was provided accommodation by the company on site at the logging camp.³²⁰

I have been told that NFA compliance officers are more demanding for favours than other corrupt government regulatory officers.³²¹ Forestry officers dictate to the logging company which accommodation they want to stay while in Kavieng, and they demand cash, alcohol, food and women.

During one trip to Kavieng, I stayed in a lodge next door to a forestry officer and observed him drunk and being transported by employees of the logging company with food and women after he had issued his report.

Corruption in Logging

I extensively documented first-hand accounts from villagers of the type of corruption they experienced from logging. Most of the villagers interviewed were semi-literate or did not know what they should expect from the conduct of the loggers. But at Katagan village, I interviewed Bilau who was the exception to this. Whilst Kelly was a former 'insider' of a landowner company, Bilau represented the ordinary villagers' outlook to

³²⁰ I met the two CEPA officers but did not obtain their names.

³²¹ Discussions with Petrus (Gavara-Nanu, Karu, 2017-2018).

logging in general, except unlike the ordinary villager, Bilau knew his rights being a former manager in a logging company.

Katagan village lies along the east coast of central New Ireland within the Mandak speaking group. It is around a three-hour drive from Kavieng. It has a long history with logging in its area. Apart from logging, the main cash crop the villagers rely on are the coconuts to produce copra. With the price of copra having dramatically dropped over the years, villagers relied more on the logging royalties. Bilau used to work in the East New Britain for a Japanese logging company. Based on his experience, Bilau knew that many of the logging practices of the Asian logging company were illegal and corrupt. He compared the way the logging was taking place in Katagan, to when he used to manage logging in East New Britain. For example, as outlined in the Logging Code of Practice, traditional sacred sites must be marked by spraying the boundary with bright fluorescent spray paint, which will warn the loggers that the area is protected and they must not cut the trees in that area. This spray painting of the area is performed by the loggers themselves along with their surveyor *before* cutting any trees in the area. Despite this, loggers frequently and deliberately breach the sacred site boundary area and harvest all the logs in the area. Under the Logging Code of Practice, such a breach will incur a standard K3,000 payment directly to the landowners from the logging company. However, Bilau and his clan complained to the Malaysian logging company that this amount did not compensate them adequately for the loss and they received an additional K18,000 from the company. Bilau stated that this payment was less than the value of the logs that were harvested from their sacred site.³²² I think that if not for Bilau, his clan members would not have known that they had been wronged by the incursion to their sacred site. If they did, I do not think they would have been able to receive an additional payment. Bilau summed up the issues they face with logging companies, the landowner companies and people's attitude to royalties when he stated:

Well the...the problem is the um, the general population here do not understand what the advantages and disadvantages are. So you see, there is a big difference there. That is why all the..the population here, they just want money only, alright. All they're worrying about is the..their land and what they get out from the land which is ofcourse, royalties. Argh, as long as um, they get money out of their piece of land, or clan land,

³²² Bilau was also aware that the loggers smuggled into PNG and sold cigarettes and mobile phones, which they sold to the local community. These items arrived on the barges that arrived at New Ireland to load the cut round logs for export.

um, they..they don't care whether the..the land is being used and destroyed, they don't care about this. So you see, the..the point now is for me after having 15 years with a..a multimillion company, a Japanese company at Open Bay...argh..it's a very sad and sorry situation to see this..argh, arggh, logging companies going on because they are not following the right system of logging. So as you can see, we should be preserving and looking after young trees below 45cm. But you know there are some areas here, I have observed, they..they..all are below 45cm..they are just destroyed, you know. They cut down all the above 45cm diameter and then all the small trees they do not want to protect the forest for the future, alright. So you know it's also, arggh, arggh, very sad that um, nobody, nobody, even the um, clan company, which is supposed to be looking after the people's um, concern and rights, they don't talk to the developer to stop them doing this type of operation. Argh, I don't know but the way I look at it is like, they have shut them up, you know. They, they're being bribed and they are not doing anything constructive or meaningful to save the land.

Bilau recalled that in 2014, a collection of PNG-based NGOs, headed by an NGO from Hong Kong, arrived in his village and raised awareness regarding logging, during which they touched on carbon trading. This was when he first heard about carbon trading. He could not recall the names of the group which conducted the awareness. This was the first time I had heard of some type of awareness-raising on carbon trading. However it seemed from Bilau's explanation of his understanding of carbon trading, that the NGOs that conducted the awareness, were not well versed with the concept. Bilau explained his understanding of carbon trading:

..maybe they come, they put up something like [a] capturing umbrella or something, to capture the air from the big trees. Then they store them up in tanks and then they sell this as oxygen.³²³

This explanation was what he understood after hearing from the NGOs and from officers of the CCDA in 2016 who spoke of carbon trading when he was working in Rabaul. Soon after this interview, it became apparent that the lack of awareness over carbon trading / REDD+ by NGOs and the government, was a major issue in New Ireland.

³²³ Interview with Bilau (Gavara-Nanu, Katagan village, 15 August 2018).

Awareness raising and the 4 winds

Leaving Katagan village and driving further down the east coast one will arrive at the Karu junction. Along New Ireland, there are four main routes that are used to cross from one side of the island to the other. The Karu junction is the third route along the highway. From the junction, it will take around 20-30 minutes to drive over to the west coast if one is driving a four-wheel-drive vehicle. Larger vehicles will take longer and, if it is raining, even longer. On reaching the west coast, one must turn right and drive back north to eventually reach Dampet village. The road is unsealed all the way. Dampet villagers have also had a long history with logging and rely on the logging royalties too. My journey here was by chance. In September, 2018, I was driving down the highway and gave a lift to a relative. We began talking about my research and he mentioned that there was a family in Dampet village whom he heard, had signed up for carbon trading and he suggested that he could introduce me to them. I had not planned and was not prepared to travel that far, but I did not want to miss the opportunity so we drove there and arrived late in the night, around 10:15 pm.

Here I met brother and sister, Masa and Anek, respectively. Masa was obviously the older of the two. After introducing myself and explaining my purpose, I then provided the background topics to the interview. The process lasted late into the night as the brother and sister also asked me questions.³²⁸ They recounted to me that they had heard that a group of villagers had conducted an 'Awareness'³²⁹ about carbon trading, at the outstation called Konos on the east coast of central New Ireland.³³⁰ Masa and Anek had not attended the first awareness in person, but they sent their two nephews to observe. Konos is referred to as a 'town' by the villagers, but it actually only comprises four small trading stores, three of which are owned and run by Chinese. It is also the headquarters of the Sentral Niu Ailan LLG. It has a permanent small police station, a rural branch of the leading bank in PNG, Bank South Pacific, and a court-house where

³²⁸ After satisfactorily answering Masa and Anek's queries and confirming their agreement to be interviewed, the time was approaching midnight. I advised them that we would conduct the formal interview early the next morning. I then drove to another village where I had arranged accommodation. Early the next morning I drove back to Dampet village and by 7 am I had begun to interview the participants formally.

³²⁹ The villagers used the word 'awareness', although they may have referred to meetings, either big or small, informal discussions, or just discussions with a small group of people. I use the word 'awareness' in the same context of discussion as the villagers did. However, it is doubtful whether the villagers actually understood what it is that qualifies as an 'awareness'.

³³⁰ Interview with Masa and Anek (Gavara-Nanu, Dampet village, 14 September 2018).

either the District or National Court presides when on circuit. It also has permanent structure homes for government employees and police personnel stationed there. Except for the bank branch, the court-house and the Chinese-owned stores, almost all the buildings are dilapidated. But being so centrally located makes Konos the ideal area to bring this awareness to the people.

The interview at Dampet village uncovered the first strong evidence indicating carbon cowboys had arrived in New Ireland. It also showed how villagers perceived the term 'awareness' and the manner in which the carbon cowboys were gaining support from villagers to sign up to a carbon trading project through the carbon cowboys' promises of great wealth. The villagers explained to me the requirements set by the carbon cowboys, which villagers must meet to achieve that wealth. The villagers also discussed their efforts to meet those requirements including the struggle to earn money necessary to meet the formal requirements. The interview also revealed how carbon cowboys illustrate carbon trading to villagers, by discussing the 'four winds'. This false illustration is either deliberate, or ignorant by the carbon cowboys, implying that the carbon cowboys do not have a basic understanding of what carbon trading and REDD+ is.

Anek and Masa told me that the villagers behind the promotion of carbon trading originated from a newly established church group that was part of a global group of churches, which originated from Australia headed by an American. My informants / interviewees told me that the head of the group was the lead pastor who advised that the church group was spearheading the carbon trading awareness. As with the people from the west coast, those from the east coast were quickly signed up and registered during the awareness.

Four winds

Many of the villagers who signed up had no idea about the actual details behind carbon trading, but signed up because they were related to the promoters (either directly or through marriage) and because they were excited about the prospect of receiving the millions of kina that were promised during the awareness. They did not know the specifics about carbon trading but had been advised that in carbon trading there are four types of 'wind'. As Anek stated:

The explanation they gave..like many of us, we did not really understand the type of explanation they gave. But they told us that there are 3 types..sorry 4 types of wind which we..trees give, even grass gives it, flowers give it..these colours which they talked about at Konos. They said one is green, one is blue, one is red and one is yellow. So we didn't have questions.....So they said from those 4 types of wind, they will come and will get the wind out of the trees. But they didn't go deep to explain how they will do this, no. Which is why there are some..like..we are village people yah and some types of questions we have, it's a bit funny, but we asked 'how, when the air is removed from the tree, won't the tree become dry?' Like we had questions like this.

These winds are what the developed countries are after. They will remove these winds from the trees to give to the developed world who need it because these countries have almost no good wind left. What is good or bad wind was not made clear to me. However, Anek stated that as developed countries need these winds urgently, they are willing to pay a lot of money to obtain the wind.

Awareness

The awareness raising itself was not without controversy. Anek alleged that during the awareness at Konos, a fight broke out between villagers who supported logging and those who wanted carbon trading. The local Konos rural police were present during the fight, but they were only a handful in number so they had to call in reinforcements from the Lakurumau Police Station to effectively quell the disagreement. The situation could have become serious because machetes were being carried by most of the villagers and, at one stage during the argument, it seemed that the opposing groups would use them on each other.

Masa and Anek did go to Konos later, where they met with Ellison, the local representative of the American. He told them that the American's carbon trading company was called New Ireland Hard Timbers. The Dampet villagers relayed to me how they were told that villagers to the far south of the island, were the first to sign up for carbon trading and were now receiving hundreds of thousands of kina. So much money was being received that someone they knew, who worked at the Simberi Gold mine,³³⁴ had resigned from his job to go back to his village and collect his monthly payment, which was being credited to his bank account. As Anek stated:

³³⁴ The gold mine is located on the small island of Simberi, within the New Ireland Province.

But true true, from what I heard about that boy, one boy from Las Kona.³³⁵ They are landowners of...landowners who are getting that..what's that thing [referring to payments]..he works at Lihir [the gold mine]....argh Tabar [other gold mine]. So him, he said like this, 'Why should I waste my time again working here at Simberi? And this money here, it's the same amount which I get paid every fortnight. The work [pay] yah...it's small compared to the amount of money which they [carbon project developers] pay into my account.'" So he resigned from his work and he packed everything [his belongings at mine site] and he went already back to the village.

Anek and Masa told me that even the Governor of New Ireland had encouraged his relatives to register and join this scheme. Anek stated:

....And from my own eyes, we were doing this work [opening bank accounts] we were standing in line at Konos at the bank [she lowers her voice to almost a whisper] and the Governor brought his people, his children and they are inside this [carbon project] already.

Requirements for carbon trading membership

Anek told me that at the awareness session it was announced that villagers who signed up to the carbon trading scheme must organise 50 or more of their own clan members to join. They must then organise each clan members' identification photos to be taken, in order to apply for their national identity cards. Thereafter they must open bank accounts, then have their land surveyed and finally incorporate their land groups. This all had to be done within two weeks as the documents were to be submitted to the group to take to Kokopo, in the East New Britain Province where they would meet with the American. The villagers were then told that the American would fly back to America with their documents but that he would return 'soon'. Upon his return to PNG, all the villagers' bank accounts would be credited with large sums of money. In rushing to meet this time frame, Anek stated that their clan had collectively expended around K4,000 (around AU\$2,000) to organise these requirements for all their clan members. This included travelling to Kavieng and organising with the bank in town to send four bank representatives to their village specifically to open bank accounts for the villagers.

³³⁵ "Boy" is used to also refer to a male youth or a young adult man, or a single unmarried man and sometimes even a male of any age, if the person using the word is around the same age as the person whom he is referring to. "Las Kona" = Last Corner, a name used when referring to the very southern tip of New Ireland.

All this money was raised from marketing of garden produce at the Kavieng main market. This itself is quite a task since anyone wanting to sell their produce must harvest from their gardens (most often deep in the bush) and carry the harvest to the roadside where they wait for a passing truck. This frequently necessitates sleeping on the side of the road as trucks heading to town for market usually depart by 1 am in the morning, so that they arrive with the fresh produce between 5 am and 6 am. When a truck arrives, the villagers jostle for space to sit and store their harvest on the truck, then pay for transport and travel to Kavieng. At the market, they unload their harvest from the transport, then finally sell their produce.

This type of work is physically and time demanding work for very little returns. It had to be done continuously to bring in the money Anek and her clan had already spent. In New Ireland, prices of fresh market produce are quite low compared with the rest of PNG, so it would have taken considerable effort for the villagers to raise this money. Anek and Masa had diligently kept records of all their expenses, but when I enquired if they were to be reimbursed they stated this was never clarified to them by the representatives of the American.

After our interview, Masa and Anek stated that they were now quite hesitant to join the carbon trading scheme as there were too many unanswered questions and they feared they might be cheated out of their land in the same way logging companies had done to other villages. Masa likened the carbon trading to logging, in the sense that many promises had been made by logging companies, yet never fulfilled. The villagers did not want to fall into the same problem with carbon trading.

An online search of the register of the IPA showed that no company existed by the name of New Ireland Hard Timbers. The closest name was New Ireland Woods Limited. It was not owned by any foreigners but by PNG nationals from Lihir Island, where the gold mine is hosted.³³⁶ The company's registered address was care of Lihir Environmental Services Limited. A further search of the IPA website showed that Lihir Environmental Services Limited was no longer operating. These search results prompted the question at the time: Were PNG nationals also attempting to defraud the REDD+ scheme by deceiving villagers to think there was an American willing to pay money for access to their trees on their land? If this was true, it would have been a new

³³⁶ Lihir is an island located in the New Ireland Province. It hosts a world class gold mine.

dimension in carbon fraud – that of indigenous people defrauding their own communities. However, the following year would unveil the true threat of carbon fraud which I expound under section 1 below.

Kavieng – September, 2018

In September 2018, I interviewed Solo, from Kono village, west coast, central New Ireland. He was the only person in New Ireland, whom I spoke with who had some hands-on experience in dealing with REDD+. He was educated, married to a teacher and had spent some time in Port Moresby, where he went to school and later worked. In 2008, while in Port Moresby, a lecturer at the University of PNG recruited him and some other youths to travel to the lecturer's village, which is in the Open Bay area of West New Britain Province. There, the youths spent around two months where almost every day they would venture into the forest and measure the width of trees, identify the tree species and count the number of trees in a 'block'. These blocks had been drawn up on maps to identify the customary landowners so that they would be aware of the data after it was collected. Returning to Port Moresby, Solo, his friends and the lecturer attended the then Office of Climate Change. According to Solo, when they arrived at the office, the staff were milling around the reception area or appeared to be walking aimlessly in and out of the building. When Solo, his friends and the lecturer provided the data to the staff, the latter group were surprised and wanted to know how it had been collected and how they should utilise the data.³³⁷ As Solo stated:

When we arrived back [to Port Moresby] we took all our data inside [the climate change office] and gave it to them [office staff] but they were confused asking what is this data that we got, they didn't know how we got that data and how we did that work.

Solo and his group soon realised that they knew more about REDD+ than the staff of the office. He also noted that almost all the staff members were from a particular region in PNG. When first established, almost all the senior managerial positions were occupied by people from the same region as the Prime Minister. A few of those individuals had questionable backgrounds.³³⁸ Solo returned to the village soon after and did not know what came out of their efforts. He had heard 'talk' that a white man

³³⁷ Interview with Solo (Gavara-Nanu, Kavieng, 2018).

³³⁸ Such as the fleet manager and managing director, both of whom were convicted of criminal offences. This point was covered in Chapters III and IV.

was conducting carbon trading in the Susurunga area, southern New Ireland and now the white man was moving towards Dabanot village in central New Ireland.

The name of one individual kept resonating in the west coast as a person who was encouraging villagers to oppose logging and advocating carbon trading with the promise of great wealth. Though I did not meet him, I learned that he was from the area and at one stage had been employed by the New Ireland Provincial Government before moving to Port Moresby where he was reportedly working with the CCDA.³³⁹ I did not believe he was a qualified environmentalist; however, because he was from the area and had some knowledge on the topic, he was regarded by the villagers as someone with authority in carbon trading. It seems likely that villagers along the west coast first learned of this concept from him.³⁴⁰

Solo recounted that this person and a group of his friends, had visited a number of west coast villages and talked about carbon trading but did not ever use the term 'REDD+'. They then publicly announced that they would return to the village with some white people who would explain carbon trading in detail. The entire village and all the surrounding villages harvested produce from their gardens and prepared pigs to be slaughtered. They also prepared traditional dances for the event. On the day marked for the arrival of the delegation, the villagers waited, but it was all in vain as the delegation never arrived.³⁴¹ The interview with Solo was one of the last that I did in 2018 before departing New Ireland for a brief period.

I returned to New Ireland in January 2019 and it seemed that there was a general feeling of expectation about carbon trading, among most of the central New Ireland villages along the east coast. This new and heightened level of expectation was not due to any official awareness raising conducted by government authorities or NGOs, but due to word of mouth by villagers. The enthusiasm for carbon trading was high, with many more people thinking that they would receive large amounts of money just by signing a form to register their interest to take part in carbon trading. When I spoke to

³³⁹ Even though I was given the name of this person, I have not stated it in this thesis as the allegations against him could not be verified or corroborated.

³⁴⁰ Interview with Solo (Gavara-Nanu, Kavieng, 2018); Interview with Masa and Anek (Gavara-Nanu, Dampet village, 2018).

³⁴¹ Conversation with Solo (Gavara-Nanu, west coast, 2018).

people in New Ireland (not just the villagers, but also those who worked in Kavieng town) I found that the term carbon trading was still used rather than REDD+.

However, what was interesting was to know *why* the discussion of carbon trading was now taking place in most villages. People were interested to know what they had to do to receive the large amounts of money promised to them by the Americans. There was not much discussion on *how* this would happen. There was also little discussion on the benefits of conserving the forests for future generations, of being able to access the area to hunt wild game, or of preserving their cultural and traditional burial sites. This type of attitude by the villagers was very much akin to what some commentators have argued is the Western outlook of those engaged in carbon trading, in that the focus is more on making money than on the conservation of rainforests and offsetting of emissions (Bachram 2004; Lohmann 2009; Pearse and Böhm 2014).

Many people I spoke to were excited that they could receive income to preserve their forests. But what made it even more exciting was that the income was highly lucrative, as promised to them. I did not correct people or try to educate them when I heard their stories of the millions of US dollars that await villagers and their clans that sign up for carbon trading to preserve their trees, since I wanted to record their true views on the subject. I found that the landowners did not necessarily place much emphasis on their children's education, either for the current generation or for future generations. Whilst they were pleased that the promised money could be used to build more schools, they were not necessarily interested in developing a higher level of education. There was no discussion by the villagers about investing and earning a passive income, or about whether the Americans were educating the villagers on the importance of how to manage their newfound wealth. With such promises of wealth, many villagers were asking if this might be just a 'cargo cult'.³⁴² With the cargo cult, promises were made to villagers in the early 1970s that cargo would freely tumble out of the sky towards them and a person would arrive to make them all rich (Walter 1981). This invoked a following of masses, particularly in PNG's Highlands and Momase regions as local individuals used the ignorance of the villagers to deceive them and prey on the women and girls in the group.³⁴³ To this day in PNG, cargo cults persist primarily in the more remote

³⁴² Ibid; interview with Pastor Jacob and Marama Martha (Gavara-Nanu, Pinikidu village, 2019).

³⁴³ See *The State v Steven Tari Nangimon Garasai* [2010] PGNC 145; N4137, where the defendant was convicted of multiple counts of rape. He was a cult leader in Madang Province.

regions. The lack of translation in the April Salumei REDD+ project, also had villagers thinking that the project was a cargo cult (Filer 2011). Villagers who felt strongly on this, distanced themselves from discussing the carbon project.

While I was conducting fieldwork in January 2019, I met up with Dampet villager Anek, whom I had interviewed with her brother Masa in September 2018. She was waiting on the side of the road at the Karu to west coast junction, trying to flag down any passing vehicle to transport her across to the west coast. I happened to be driving that way and so I gave her a lift. During the journey, she told me that her clan had decided to proceed with registering for carbon trading with the Americans.³⁴⁴ This change in mind by her and her clan was not properly explained to me, but one can only assume it was because of the need for money. She confirmed that they were yet to see the unknown and mysterious American. They planned to proceed despite the confusing and obvious discrepancies in the story and the likelihood of it being a cult, as she herself had mentioned in 2018.

Masa and Anek's decision to continue with fulfilling the criteria to join the Americans' carbon trading scheme starkly contrasted with that of Marama Martha, wife of a local pastor (Pastor Jacob) and stepdaughter of Ellison, the main person who was promoting carbon trading in the community on behalf of the American. I drove to their village and met them sitting under the high stilted home. When interviewed, Marama Martha stated that she had no desire to sign the consent form for carbon trading as the concept had not been clearly explained to her.³⁴⁵ Despite relentless requests from her relatives to attend family meetings on carbon trading, she shied away from those requests and concentrated on her daily village life and duties as a pastor's wife. Her husband, Pastor Jacob, had the same view. Pastor Jacob stated that the promoters of carbon trading told him the 'internet' will scan the forests on their land to remove the 'oxygen' and afterwards money would appear in their bank accounts automatically.³⁴⁶ Referring to one of his meetings with another villager who was promoting carbon trading, Pastor Jacob explained:

I met one of them and asked him, "Can you explain properly to me about what you understand about what this carbon trading is about?" He told me, "Whichever clan that

³⁴⁴ Conversation with Anek (Gavara-Nanu, west coast, 2019).

³⁴⁵ Interview with Pastor Jacob and Marama Martha (Gavara-Nanu, Pinikidu village, 20 January 2019).

³⁴⁶ Ibid.

signs up, then the oxygen from their land only..some internet or something..the internet will show them overseas or somewhere..so those people will be compensated only.” But I was not sure because I know that everywhere there is oxygen from all the trees, so what type of internet will come? Hard to understand that so I was not convinced to go into that type of work.³⁴⁸

Pastor Jacob said that villagers were signing up only due to the promises of wealth:

The thing which is making people excited to fill in this [carbon trading joining] form is not really concerned with how this thing will happen or what, but what people are thinking, which we see, is that it is all based on the benefit which will come from it. So people don't want to know how this [carbon trading] will happen or whatever, but they said, 'the quicker you sign up and become part of it, the quicker you will benefit.'

By 2019, it became clear that villagers were developing false narratives which, unintentionally promoted the carbon trading push by the Americans. Most it seemed, wanted to believe that there is credibility to the stories of earning large amounts of money, without damaging their natural environment. I heard stories from landowners of large sums of cash and cheque payments that were supposed to have been given to villagers in southern New Ireland and a certain clan in Lelet. As the stories became frequent, so too grew the amount that was alleged to have been given.

For example, in March 2019, Brendon from Lelet, told me that he knew of a clan in his area, called the Laragat clan, which had received from the Americans US\$2 million to spend as they saw fit.³⁴⁹ Brendon confidently told me that he had seen the cheque presentation himself. After I pressed him further, Brendon admitted that his wife had seen the presentation and informed him about it. After further questioning, Brendon confirmed that his wife had arrived late to the so-called presentation, after it had been done and that she had been told by other villagers of what had happened, then she in turn had told Brendon. The next day, when I spoke to a man from Kanemaredan village, which is on the west coast of central New Ireland, he confidently told me that he was going to preserve all his traditional land from logging as he had seen one clan receive US\$30 million and he wanted the same too.³⁵⁰ I asked him if he knew this to be a true fact, or if he had only heard it. His expression implied I was crazy to ask such an

³⁴⁸ Ibid.

³⁴⁹ Conversation with Brendon (Gavara-Nanu, Kavieng, 9 March 2019).

³⁵⁰ Conversation with Sotti (Gavara-Nanu, Kavieng, 9 March 2019).

absurd question and he said that of course it was true. When pressed further, he admitted that he had not actually seen the presentation but had heard about it from Brendon. The latter had been sitting quietly next to us and when he heard his name mentioned by the other, he looked at me sheepishly.

There was a single uncorroborated account that gave *some* credence to the theory that logging companies might take advantage of the REDD+ scheme. Manu, of Danu village on the west coast, and the head of a local NGO, revealed that logging companies were coming to the area under the guise of green projects to conduct clear felling.³⁵¹ However, no evidence was presented, or found by me, to corroborate this allegation. After this interview, I departed New Ireland for a brief period.

I returned to New Ireland in late February 2019 and during this time my earlier conclusion of PNG nationals committing carbon fraud, was proven wrong. This is because, this month, the mysterious American finally arrived in New Ireland and there was not one, but three of them. On Friday 22 February 2019, I was staying in a lodge in Kavieng when in the evening I saw three Caucasian men in the company of a group of around 10 nationals who seemed to be checking-in to the lodge. Obviously, other Caucasian guests were at the lodge as well at the time, but what drew my attention was that the men were talking and laughing quite loudly with distinct American accents. They had arrived at the lodge in two vehicles, and many of the nationals seemed to be middle-aged men.

During the day, I had met some villagers in town, and they had told me that there would be a carbon trading awareness conducted at Konos and the launching of a carbon trading project in the Lelet plateau region. So, that night, I assumed the men were the Americans who had arrived for the carbon trading programs. The room I was staying in was next to the carpark and very early the next morning I heard men with American accents talking loudly and opening car doors as if they were getting into vehicles. When I looked out the window, the vehicles they had arrived in the previous night had departed. Driving from Kavieng to Konos takes around two and a half hours. I speculated that they were leaving early in order to arrive at Konos and prepare for the awareness session. I intended to drive out immediately to Konos but I was delayed and

³⁵¹ Interview with Manu (Gavara-Nanu, Kavieng, 16 January 2019).

did not leave Kavieng until around 12 pm. At this stage I had not yet confirmed that the Americans were linked to the carbon trading projects.

My efforts to arrive in Konos in time to witness the so-called awareness did not eventuate. I arrived late just as the group of Americans, along with their national associates, were driving out of the precincts of the Konos LLG chambers. I confirmed with a group of nearby villagers that the group was the same group of men I had seen the previous night.³⁵²

There were many vehicles around and a very large gathering of people at Konos. I saw groups of people streaming in and out of the LLG Chambers. This was the first time that I had seen Konos so busy. I spoke with a group of men near the side of the road. In answer to my specific questions, they recounted what had transpired. The following facts were of significance to me. I did not note them down immediately during the discussion to avoid drawing attention to my reasons for taking notes. With so many people around, I did not know who was already aligned with the group or against it, and I did not want to trigger any disputes. So, after I left the group of men and returned to my vehicle, I jotted down quickly, the significant points that I could recall. These were:

- The so-called 'awareness' lasted for around one and a half hours of talking, mainly by the Americans.
- The group comprised a father and son team from the US, while a third man was from Canada.
- The Americans spoke English without any translation to the gathering, which comprised entirely PNG nationals, mainly villagers from central New Ireland.
- The Americans did not explain to the people how the carbon would be traded, but said the air or oxygen from New Ireland was needed in the developed countries and they would not cut the forests and the landowners would be able to preserve their forests for future generations.
- There was a very large crowd of people but after the Americans gave their speeches, they only allowed two questions to be asked from the crowd, one from a man and one from a woman.

³⁵² Conversation with Billie of Lavatbura village (Gavara-Nanu, Konos sub-station, 23 February 2019).

- The woman villager had asked the Americans if they would provide money to assist villagers meet the requirement they set of incorporating their land groups, opening bank accounts, obtaining identification cards and so on, but the Americans said they would not do that.
- The Americans stated that there were two types of carbon activity: the first was carbon credits and the second was carbon trading (if this is true, it shows the Americans' lack of understanding of carbon markets).
- The monetary benefits from carbon trading would be shared on a ratio of 70:30, being 70% to the landowners and 30% to the Americans.
- The Americans told the gathering that they have been around New Ireland since 2012 and have a clan group in Namatanai (which is south of the island) who are already benefiting from carbon trading.
- The Americans were not accompanied by any government officials from the CCDA, NFA, CEPA or any New Ireland Provincial Government officials.
- They did not give out any brochures, leaflets or other types of informative material.
- They did not show any videos to explain carbon trading.
- They did not mention REDD+.
- They did not explain at all how the funds were to be received by the landowners.
- They had a pre-printed list of all the names of clans in the area for people to sign next to their clan name, confirming that they want to participate in carbon trading.
- The Americans stated that they only required two senior clan members to sign this form to represent an entire clan and bind them to the agreement.
- The signing was done by the villagers immediately after the Americans departed Konos. They left behind a national in the LLG chambers, who was apparently working with the Americans. He directed villagers on which pages to sign the forms.
- LLG officials had accompanied the Americans into a welcome ceremony and appeared well acquainted with the Americans.

The men told me that the Americans left Konos for the Lelet plateau for the launching of a carbon trading project with the Laragat clan (this was the clan that had been mentioned by Benson during his interview in 2018). The Americans were going to hand

over a cheque of several millions of US dollars to the Laragat clan, which was the first clan in the area to fulfil all 14 steps of becoming a qualified carbon trading project.



Picture 34: NIHT welcomed by a choir in front of Sental Niu Ailain LLG Chambers, Konos³⁵³



Picture 35: Strauss of NIHT, addressing the crowd in front of the LLG Chambers

³⁵³ Pictures 41, 42, 43, 50, 51, 52 and 56, reproduced with permission.



Picture 36: Baquie addressing the crowd at Konos from the LLG Chambers

These points were elicited from the men in response to my specific questions. In particular, I had attempted to ascertain whether any government officials had accompanied the Americans, what attempts the Americans had made to translate their presentation into pidgin and whether visual aids were used. From my discussions with this group of men and others who were there at the time, it was clear that even though they were present and heard the speeches by the Americans, the villagers still did not understand what carbon trading was about. I formed the strong impression that the main basis of the speeches by the Americans was to gather as many new signatures as possible, based on more lucrative promises.

On the final fieldwork trip to New Ireland in March 2019 I interviewed Bulu of Lavatbura village. This is a coastal village on the east coast of central New Ireland, situated near Konos. Lavatbura, along with the villages of Pinikidu, Sominim, Konos and Lamasong, comprise the Northern Mandak (Clay 1978).³⁵⁴ Bulu recounted how some nationals, in collaboration with officers from NFA, were collecting from landowners' signatures on forms for a reforestation project. He confirmed that they were not told of the negative

³⁵⁴ According to Berle Clay (1972; 1974), of the Northern Mandak villages of Lamasong, Konos, Sominim, Pinikidu and Lavatbura, only Lamasong and Pinikidu were originally coastal villages. The people of Konos, Sominim and Lavatbura lived in the bush but migrated to the coast in the early 1900s.

impacts of reforestation. The villagers, wanting to shift from logging to reforestation, were told they would be paid too, so they willingly signed up. Bana, a man from Katedan village, who has had his land logged for many years, aligned himself with this particular group.³⁵⁵ During the course of discussions with various landowners who had signed up for the reforestation program, it became clear to them that fraudulent misrepresentations had been made to them by the Forestry Minister and the logging companies.

It appears that the group does not intend to carry out reforestation but is trying to access the reforestation levies, despite having no right to those monies. These levies are paid by logging companies into the Forest Authority Trust Account. If not accessed, the funds will remain in the account and must then be given to landowners through the local landowner company, which holds the timber rights permit to the area. It is doubtful, though, that the landowner company will give any of the levies to the landowners. By obtaining the signatures of various landowners, the group had discussed and, in a way, connived with officials from the NFA to then access the funds by demonstrating that they had support from the local landowners. However, the group had no experience in logging or reforestation. It is difficult to understand how the officials from the NFA could allow this to happen when they should be aware that reforestation levies are directed to the landowner company and that no other group or person can access that funding. At first, when interviewing Bulu, I assumed that the false reforestation project might be an attempt at carbon fraud and was tied to the Americans. I later learnt this was not so, it a separate case of corruption involving other people.

I then travelled to Konos village and obtained *the* first-hand account from those driving the carbon trading program with the Americans. I interviewed the chairman (Ellison) and the vice-chairman (Ross) of the landowner group that was partnering with the Americans.³⁵⁶ Here at last, I was able to talk directly with the people on the ground in central New Ireland, who were leading the 'awareness' for carbon trading. The interview uncovered many new aspects on villagers' understanding of foreign concepts, dispelled some of the accounts relayed to me by other people; and showed the extent of the deceit employed by the American carbon cowboys. Both Ellison and Ross are well

³⁵⁵ Conversation with Bana (Gavara-Nanu, Katedan village, 2019).

³⁵⁶ Interview with Ellison and Ross (Gavara-Nanu, Konos village, 10 March 2019).

educated and so speak English fluently. However, the interview shows how educated men, be they Westerners or nationals, can fall prey to carbon cowboys. I confirmed with Ellison that the (correct) name of the American owned company is New Ireland Hardwoods Timber, abbreviated as NIHT (villagers pronounced 'NIHT; as 'night'). It was not called New Ireland Hard Timbers, as related to me by Masa and Anek in 2018. However, I confirmed that this company name was not registered with the IPA as either a locally incorporated company or a foreign registered company.



Picture 37: Traditional welcome for NIHT at Konos February, 2019

Chairman Ellison stated that he had first heard of the Americans in 2016, when he was in Rabaul. He was asked to join then, but decided to be “wise” and wait and observe things. Then in 2018, he decided to join and had first organised his clan to sign up to the project. His clan members had been active in promoting carbon trading to the community. I think in an effort to portray NIHT as a genuine and well-established

company, Ellison stated that NIHT has the support of clans from Karu village to Bol village and that NIHT has other operations around PNG. The Americans had told him they have operations in Konoagil towards the south of New Ireland, West New Britain, East New Britain, Bougainville and Kavieng. They also told him that they have operations in 40 countries. Ellison confirmed that his clan members were expending their own money to conduct awareness among other villages. Ironically, but perhaps not surprisingly, after almost two years of promoting carbon trading to other villagers, they were waiting for the carbon trading concept to be properly explained to them by the Americans. This statement corroborated Pastor Jacob and Marama Martha's interview in which they stated that Ellison did not seem to understand what carbon trading entailed, but still insisted that they sign up for the project. Vice-Chairman Ross stated that in the beginning of the awareness, other villagers were making fun of them and rubbishing the project. He had not slept or rested well since becoming involved in conducting meetings and awareness to drum up support. He had sought funding from the New Ireland Provincial Government through a formal submission for financial assistance to conduct carbon trading awareness raising, but this was not secured. Ellison stated that his clan required the assistance of other knowledgeable people like me to advise them of how carbon trading works. This was an ironic request and confirmed that the villagers and even the organisers and supporters of the Americans were unable to explain a concept that they (the villagers) had been entrusted to conduct awareness about. This begged the question of how they were conducting awareness without knowing how carbon trading works. It is most likely that the awareness conducted by Ross involved encouraging villagers to sign up for the carbon trading project with NIHT in the belief that they will receive a windfall of money.

Ellison told me that the Americans explained to him that there are four types of wind, namely green, blue, red and yellow (thus corroborating what was told to me the previous year at Dampet village by Anek and Masa). Of these four types of wind, the Americans told him that the blue wind was the most valuable and was only found in the forests of central New Ireland. This was why they were also excited to share it with the developed countries. As stated by Ellison:

...they [NIHT] explained that there are 4 types of carbon. There is red carbon, blue carbon, grey carbon and the brown carbon. Places like Lelet there's grey..mountain area, no big forest tree there so...that's where they get the carbon. But different value. But the highest valued carbon is the blue carbon, that's why they [NIHT] got the uniform

blue. Yes but, but, central New Ireland, is a blue carbon [inaudible] it's a high value...Aargh, central Niu Ailan value of carbon is the highest in Papua New Guinea, because we also have oil palm which provides it....

Here we see some aspects of what might be described as exaggerated storytelling by Ellison who emphasised that only central New Ireland has the highest valued carbon in the whole of PNG. Though in fairness, it may have been the Americans who told Ellison and his clan that their forests contain the exclusive and highly prized 'blue carbon'. In my discussions with others, they spoke of events and things in general, as if they themselves had first-hand dealings with the event and did not hesitate to back up what I (or indeed any other person would) regard as a rumour or suggestion. Recorded examples of this was during my discussions with Anek in 2018 and with Brandon in 2019. Lipset and Henning (2016:159) note this type of exaggerated storytelling:

In the ethnographic record, of course, rural Melanesians are famous for a great many things, sacred and profane, but breathless optimism and unfounded expectations about what modernity might have to offer is certainly one of them.

As to the practical running of the project, both men were not entirely sure since the Americans had never explained it to them. However, Ellison stated that NIHT owns a satellite which will scan the land. Ellison recounted to me what he was told by the Americans:

They will come and make a survey. They will use their own plane. When they get the data, they collect every map, they put it into the system and then they do the survey according to that map. Which clans, where they are located, how big is that map..it's already there and they just come and collect it. I was in Rabaul and they came and collected it in Konaogil.³⁵⁷

NIHT has made large promises to the villagers and fuelled huge expectations about the supposed windfall. Ellison said that the Americans told him that the villagers will have so much money from the blue carbon, that they will not know what to do with it.

According to Ellison, Steve Strauss of NIHT, told him:

³⁵⁷ Interview with Ellison and Ross (Gavara-Nanu, Konos village, 2019) [Statement made at 29minutes, 59second point of recording].

What are you going to do with millions? You don't know because you will compete with the global economy.

Both Ross and Ellison showed the trust they have placed in NIHT. As Ross explained:

So since this project is a new concept to us..argh..currently at the moment, we..we still don't know or we..still too early for us to..argh..like to tell you what effect it will have. But according to them and we trust them, when they told us that it won't have any effect to the..to the resources and the environment. From what they told us, we believe them. We believe that..argh..when..when we're given what is..which is ours, we believe that it will change everybody's life from where we are now to..you know, some..argh, good standard of living.³⁵⁸

Ross stated why they trust NIHT:

I mean one thing that I refer to what, argh, what's his name, Phil, argh, Phil Baquie said. He said "We are here not to fool you, but we are sorry if we have..we have done..or if we have fooled you long time ago. But we are here to..not only to work with you but to hold your hands and we all work together. We want to be partner with you." That's what he said. This is something that argh..you know, it really motivates us to be working, I mean, to allow them to come and we work together to [inaudible].³⁵⁹

Ellison stated that when the Americans were in New Ireland in February 2019, they had told him they had a cheque for him and his clan for US\$4 million.³⁶⁰ However, since Ellison's clan had yet to fulfil the 14 steps required by the Americans for acceptance as a viable carbon project, the Americans were taking the cheque back with them to the US. The Americans told him that they did not want to give him the cheque yet, in case other villagers might say that the Americans were trying to bribe Ellison before the project actually started.

Ellison relayed similar sentiments to Ross and recounted how the Americans told the villagers that they were genuine in their efforts to bring development to the region, just like the Australians were doing. Here the Americans were evoking the villagers' emotions by referring to World War II. According to Ellison:

³⁵⁸ Ibid. [Statement made at 52minutes, 26second point of recording].

³⁵⁹ Ibid. [Statement made at 51minutes, 09second point of recording].

³⁶⁰ Interview with Ellison and Ross (Gavara-Nanu, Konos village, 2019).

One thing about the speech by Steve [Strauss], who is the chairman of carbon, he said that, one thing he said, "We did..America and Australia won the war to rescue you, Papua New Guinea. But now you have sold yourselves to the Asians ah, these people destroy..they come to cheat you all. We come to help you all."

This type of statement will likely easily draw support from New Irelanders since the island was the first landing in PNG for the Japanese soldiers in World War II. New Irelanders died and were also enlisted by the Japanese soldiers.³⁶¹

Other types of grand claims the Americans made during their February trip to New Ireland was that they had gone to Namatanai and given US\$13 million to clans at Konoagil, saying that they would be able to receive money from the carbon credits for 100 years. However, the NIHT website states carbon credit trading will run for only 30 years. Whilst outside of New Ireland, they had given landowners in Bougainville US\$8 million.

The discussions and interviews in February and March 2019, would support the view that what occurred is that the American men exploited villagers' ignorance, lack of education and emotions during the awareness at Konos, in order to drive their plans to obtain landowners' signatures. Upon my request, Ellison and Ross authorised me to include in this thesis, the Letter of Intent that was being used by NIHT to enter into what they deemed legally binding agreements with clans that sign up to the carbon trading concept.³⁶² The strength and legitimacy of this Letter of Intent is discussed further below.

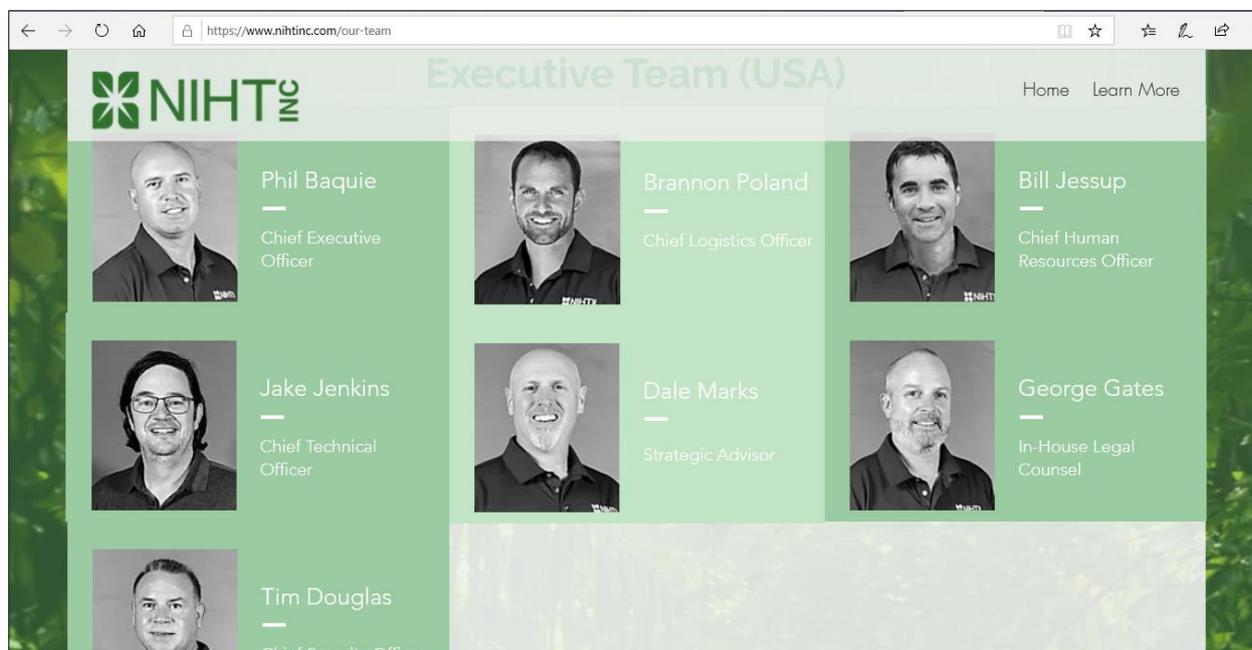
A Google search of some of NIHT's employees, shows their background which helps explain why NIHT has not explained to Ellison, Ross and other villagers how the carbon project will work. Phil Baquie, NIHT's Chief Executive Officer, has a webpage where he states he is founder of the Oxford Counseling Centre, but there is no mention of any experience in carbon projects and REDD+.³⁶³ The same goes for Brannon Poland, who

³⁶¹ Such words used by NIHT would likely evoke emotions from my family. My grandfather, Reverend Ezeikel Paska, was in the *Lemetai* Japanese unit during WWII. Whilst headed by Japanese officers, this unit also employed nationals for a type of community policing and enforcing Japanese orders. The Lemetai were accused of beheading locals during the war. After the war my grandfather would not discuss his role. An account of New Irelanders' experience during the war is found at <<https://pngvoices.deakin.edu.au/collections/show/4>>.

³⁶² Appendix 4: NIHT Letter of Intent.

³⁶³ <<http://www.oxfordcounselingcenter.com/dr-phil/>>. Website accessed 21st April, 2020.

presented himself to the Konos gathering, as an investor³⁶⁴, but is listed on NIHT's website as the Chief Logistics Officer and is a Real Estate Agent in Oxford.³⁶⁵ George Gates is NIHT's legal advisor, but his experience, listed on his LinkedIn profile, does not show anything related to climate change law or international law.³⁶⁶



Picture 38: NIHT website³⁶⁷

Ironically, whilst advocating their work as carbon traders, NIHT seemed to be slowly enticing the landowners to allow logging to take place, by promising immediate royalty payments. Ellison explained to me that his clan was very pleased to allow logging by NIHT, because they would be given all the machinery to do the logging and they would be paid upfront before the logs would be shipped. With regards to the machinery, Ellison explained:

³⁶⁴ Interview with Ellison and Ross (Gavara-Nanu, Konos village, 2019).

³⁶⁵ <<https://www.zillow.com/profile/bmpoland/>>. Website accessed 21st April, 2020.

³⁶⁶ <https://www.linkedin.com/in/george-gates-7b558715?challengeId=AQHV7ft5-E5mAAAAXGbXohnHQwQdZxkZ6fVEiuUZtecL8YsQDXYJkJn-5fBjZp6lqiBUJOUNfjMoY4VN_7JW3zS_K_a3rKU4A&submissionId=da153823-ffc0-0716-34e3-3f23a8730909>. Website accessed 21st April, 2020.

³⁶⁷ Pictures 40, 41, 45 and 46, reused under Fair Dealing for Criticism or Review, <<https://www.nihtinc.com/>>.

...and how many [chainsaw] machines they [landowners] want to harvest selected timber cut, and the [portable] sawmills. The sawmills they [NIHT] will give and they [landowners] can select which type of [tree] species they want to cut and then send.

With regards to royalty payments, Ellison stated:

The company [NIHT] will pay royalties straight away before shipping the logs overseas where they will be sold. So all the people are happy about this. There are 3 types of royalties. Number one is a tree felling, number two it's for timber cut [sawing], number three is when the logs go to the ship now....They [NIHT] will bring 10% to the National Government, 10% to the Provincial Government and 70% will go to each clan and the members of the clan. Plus, another 10% will go to the company registered by the clan. For the ILG for the clan, they [NIHT] will pay with the 70%.....to run all the very big development plans for whichever type of business...The President of..argh carbon..from America came, Philip. He came told us, assured us that only if we agree, then we will sign one Intent Agreement with them [NIHT] and the clans signed already after hearing his assurances.³⁶⁸

This payment proposal is unfeasible for any logging company operating in PNG and not in line with the way of making payments under PNG's forestry laws. Another unrealistic suggestion to entice the landowners to be on board, is NIHT's promise that they will share in all the profits. Ellison:

Another thing they talked about, they talked about this, they discussed is argh, profit, benefit will go to the landowners..benefit will go to landowners, plus profit sharing with all landowners. So this is one thing we are excited about it because it is the first time a company will share profits with the landowners.

After completing the interview with Ellison and Ross, I travelled back to Kavieng where I met Kade, whom I had interviewed in 2018. Kade was employed by Caritas, the civil society arm of the Catholic Church. He was from Karu village and one of the educated nationals from the Karu area. Through his work with Caritas, he has taken a lead in protesting against logging and educating his people. He had also been present at the Konos awareness conducted by NIHT. Unlike me, he had witnessed the entire event. I had seen him at Konos but had not been able to speak to him earlier, so I was glad to catch up with him and ask him of what he thought of the awareness. During the course

³⁶⁸ Interview with Ellison (Gavara-Nanu, Konos, 2019) [Statement made at 3minutes 26s to 5minutes 18s].

of our discussion I told him how I had arrived late and had wished that I could have seen the representatives of NIHT. Kade then stated that he had taken a video of the entire event and asked if I wanted to view it.³⁶⁹ This footage reveals some common points of the ways that carbon cowboys operate and their use of media and traditional welcome events staged by landowners. It shows how carbon cowboys will use the footage of such events to legitimise and market their so-called carbon trading operations. I discuss this further below and draw on the existing documentary footage, which can be viewed on YouTube, of how the carbon cowboys entered Peru, the Philippines and PNG.

³⁶⁹ Kade then offered to transfer the recording onto a flash drive to give to me. Thus, I was able to acquire footage of the awareness. This video is available for viewing. Unfortunately, I had not obtained ethics approval beforehand to include this because I had not contemplated that I might use video in this work.

B Discussion of Findings

The significant findings highlighted above corroborate much of the speculation that the REDD+ schemes in the voluntary market, will be subject to abuse. The discussion that follows is based on only the 29 formal interviews conducted around the central New Ireland region and my observations there of everyday occurrences from 2017 to 2019. The data show that it is significantly more likely that carbon cowboys, than any other illicit network, will commit carbon fraud in REDD+ schemes in PNG.

As the number of informants grew from year to year, so too did the number of villagers who were able to say that they had at least heard of the term 'carbon trading'. This did not extend to them knowing the term 'REDD' or 'REDD+'. Instead, the term 'carbon trading' was used by villagers and the promoters of the schemes and even by NGOs. 'Carbon trading' was the term used to refer to the actual activity even though the villagers and the Kavieng-based NGOs admitted that they had little knowledge of the concept. The term 'REDD' or 'REDD plus' was never used except by one NGO member who admitted that there was not much information available to enable him to fully understand it.³⁷⁰

1 NIHT—Carbon Cowboys are Back

The manner that carbon cowboys venture into REDD+ schemes, shows that a carbon cowboy might be considered as a person who travels to remote locations in developing forested countries, to fraudulently gather support for carbon REDD+ projects from unsuspecting indigenous landowners to market for investment. Members of NIHT can therefore, be classified as carbon cowboys based on the highly irregular manner in which they conduct their activities. In the absence of laws regulating the voluntary REDD+ market in PNG, NIHT's fraudulent activities are being conducted at will, whilst it seems, they enjoy the support of the Sentral Niu Ailan LLG. NIHT legitimises its attendance at villages in this manner and plays on the villagers' emotions by referencing WWII and portraying themselves as economic rescuers by promising unimaginable and immediate wealth, which provides a sense of empowerment to the villagers. The Americans promise the villagers that they will be able to dictate how they will earn

³⁷⁰ Interview with Manu (Gavara-Nanu, Kavieng, 2019).

money and on what terms, and that all they need to do is allow carbon to be extracted from their trees.

(a) False promises

The allure of immediate wealth drives the villagers' support for NIHT. NIHT promises landowners that every single piece of logging machinery will be provided to them by NIHT to keep, such as chainsaws and portable sawmills for the villagers to saw the trees into planks.³⁷¹ NIHT promises to ship over to central New Ireland the containers for the villagers who can load with their planks, in their own time, and then NIHT will export those containers. All expenses without exception will be paid by NIHT. The profits from the sale of the timber will be shared with the landowners. NIHT announced they will buy a hotel in Rabaul in East New Britain. This will be their PNG headquarters but they will open an office in Konos and employ locals there too. They claimed they will open their own bank in Rabaul, because, as they explained, they will be transferring huge sums of money from the US and need to handle everything themselves to ensure the transfer is fast. The villagers were very impressed with this level of commitment shown by NIHT, although NIHT did not explain to them how they would manage to satisfy all the laws and regulations required before they can open a bank or invest in PNG. Nevertheless, this was all impressive and encouraging for landowners, who proceeded to sign up for the carbon project.³⁷²

NIHT claimed to have given a cheque for millions of US dollars to the Laragat clan, which is also referred to as the Larex clan. However, the Konos Police Station Commander revealed that a Laragat clan member had confirmed he did not receive any money from NIHT.³⁷³ Interestingly NIHT's website does not state anything about payments made to villagers, nor does it show any photos of cheque presentations.

It seems the only way the villagers' support for NIHT will abate is if these promises are proven to be false. The main factor that seems to be in NIHT's favour in maintaining this deception to the villagers, is the long distance between villages and the lack of, or absence of communication among them. It seems NIHT anticipates that the villagers will not be able to confirm with other clans the veracity of their claims and will blindly

³⁷¹ Interview with Ellison and Ross (Gavara-Nanu, Konos, 2019).

³⁷² Interview with Masa and Anek (Gavara-Nanu, Dampet, 2018).

³⁷³ Discussion with Konos Police Station Commander (Gavara-Nanu, Konos, 2019).

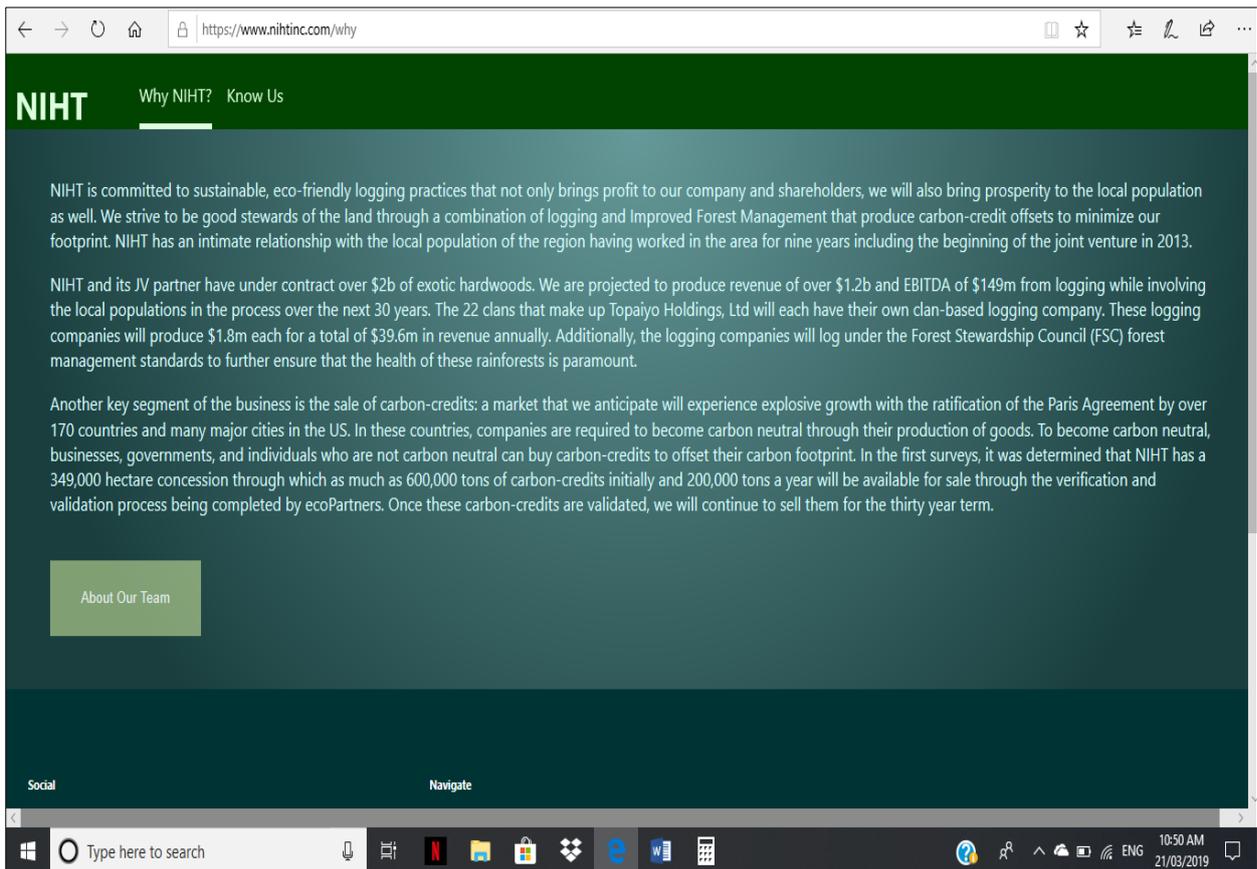
trust all that NIHT states, which has worked for NIHT so far. Konoagil is located towards the southern end of New Ireland. Parts of Konoagil lack mobile phone coverage and is too far for villagers to visit and confirm the reports. It remains to be seen the state of awareness that villagers have regarding NIHT's claims of their joint venture involvement in carbon trading and REDD+.³⁷⁴ NIHT's claim that Konoagil clans are involved in carbon trading is likely to be false, based on the deception NIHT is giving to the central New Ireland villagers. The lack of vehicle access and phone coverage, due to the remoteness of these villages, proves that, even in this age, there is a huge discrepancy in the dissemination of information between different areas. However, some type of payments will need to be made to villagers who have voiced that they want to see immediate benefits and not hear consistent promises of development, such as has been the case for logging.³⁷⁵

(b) False representations and false marketing

NIHT's website propounds numerous claims to impress the reader. However, a first-hand account of NIHT activity in New Ireland reveals the truth. At the Home page of the website, NIHT claims to have an intimate relationship with the local population, having worked there for over nine years. This is not the case. NIHT has no close bond with the villagers, nor does NIHT possess intimate knowledge of the Mandak cultural practices. NIHT's trip in February 2019 was their first to the area. Many people told me they had never heard of nor seen NIHT before that day (of course, those villagers that did not attend the awareness day at Konos have still never seen the NIHT representatives). This is contrary to what NIHT proclaims on their website, where they state that they have been working for a long time, with the people of central New Ireland and the adjacent New Britain island, in carbon trading schemes.

³⁷⁴ Interview with Senior Constable William (Gavara-Nanu, Lakurumau Rural Police Station, 22 February 2019).

³⁷⁵ Interview with Pastor Jacob and Marama Martha (Gavara-Nanu, Pinikidu village, 2019).



Picture 39: NIHT website (snapshot taken 21 March 2019)

In the second paragraph of the website, NIHT claims to have US\$2 billion worth of exotic hardwood under contract. This claim is likely to be false for two reasons. Firstly, NIHT does not have any right, either legal or equitable, to standing logs in the area. It also has no right to conduct 'sustainable' logging or any other type of large-scale commercial activity in the area, as it claims on its website. This is because the entire area it claims to have under contract, is under a Timber Rights Purchase (TRP) permit granted by the NFA to the local landowner company. Under PNG's forestry laws, landowner companies are awarded a TRP, FMA or FCA.³⁷⁶ They then invite or engage Asian logging companies as contractors to cut the trees. In return, the Asian logging companies pay royalties, taxes, levies, premiums and other associated fees to the national and provincial government and the landowner company. Therefore, the landowner company has the pre-existing right over all logging activity in the area until the expiration of the TRP. This TRP is subcontracted to the Asian logging company, which is conducting large-scale commercial logging in the area.

³⁷⁶ TRPs were to have been replaced by FMAs once the Forestry Act 1992 came into effect, but some logging companies have succeeded in extending their TRPs.

Once a TRP is issued for an area anywhere in PNG, the permit holder holds the exclusive right to log that area commercially, subject to obtaining the consent of traditional landowners. A competing logging permit cannot be issued for the same area by the NFA and would be illegal. There is no evidence to indicate that NIHT has obtained the relevant government approval or entered into an agreement with the landowner company to share the area for logging. Such a sharing agreement would not be possible without a payment of compensation to the landowner company for the income it will forfeit from relinquishing a portion of the TRP area. Any attempts to commence logging in the area on the scale envisaged by NIHT, even if conducted by the landowners, would represent purely commercial logging and may be deemed illegal by a court if challenged. For any type of commercial activity to occur in central New Ireland, the TRP must either expire or it must be recalled and cancelled by the NFA, but neither has happened.

Secondly, an agreement between NIHT and the landowners, such as the Letter of Intent, is likely to be ruled as void if challenged in court. This is because it is largely in favour of NIHT, it is in English, it was executed by the landowners without prior extensive FPIC consultation and it therefore contravenes the *Fairness of Transactions Act 1993*. This law requires that all parties to an agreement must be on the same level of understanding prior to executing an agreement. This is to ensure that one party does not take advantage of the ignorance or lack of understanding of another party.

Since a TRP exists over the area NIHT claims to have under contract, NIHT would not be able to move onto the land and the PNG courts are likely to refuse NIHT, if they applied to the court for such orders. For example, in *Woodlark Mining Ltd v Vitroplant*,³⁷⁷ the defendant company was granted three agricultural leases over 60,000 hectares on Woodlark Island in Milne Bay Province. The court found that the defendant had no capacity to conduct oil palm operations and no experience in doing so. Further, it held that the plaintiff-company had an existing mining tenement over the same area of land and that therefore Vitroplant could not conduct operations in the area. There had been an abuse of process and the Lands Department had erred in granting the agricultural leases to Vitroplant.

³⁷⁷ *Woodlark Mining Limited v Vitroplant Limited*: O.S. No. 321 of 2008.

NIHT states on its website that the Forest Stewardship Council (FSC) and the Société Générale de Surveillance (SGS) will be engaged for quality control of the logging. However, FSC itself has received widespread complaints about PNG's logging industry and SGS has been suspended. Interestingly, NIHT's operations manager, a national, has been working with SGS, and on the NIHT website is listed as still working with them.

An examination of the operations of NIHT and its Letter of Intent revealed some disturbing facts, including lack of clarity about the company structure, and raised questions over its actual existence. On the Letter of Intent, NI Holdings (PNG) Limited is listed as the company that is entering into the agreements with the landowners, despite the company's name being New Ireland Hardwood Timbers Incorporated.

The various online searches of the IPA website (from late 2018 to 03 May 2019) show that there is no company named NIHT registered with IPA as an overseas registered company seeking to do business in PNG or as a domestic company. NIHT might be registered overseas; however, it must still register with IPA as a foreign registered company, without which it cannot conduct business in PNG. NIHT has told the villagers they want to engage in carbon trading (and logging) in central New Ireland and has secured many signatures; but this has not been preceded by awareness raising according to the FPIC process enunciated in the case of *Maniwa v Malijiwi*.³⁷⁸ In the short time that the NIHT Americans were in New Ireland, they did not conduct any Awareness or meetings regarding carbon trading or REDD+ in conjunction with any PNG government department or agency. Instead they were facilitated by Sentral Niu Ailan LLG officials who are known to be heavily involved with facilitating the corrupt logging practices of the Malaysian logging companies in the area.

It is unclear whether NI Holdings (PNG) Limited or NIHT are executing the Letter of Intent with the landowners. However, an online search of the IPA website revealed that there is no record of NI Holdings (PNG) Limited.³⁷⁹ NIHT's website states that it works closely with the landowner company Topaiyo Holdings Limited, which acts for 22 clans in Sentral Niu Ailan. An online search of the IPA website showed that Topaiyo Holdings Limited was incorporated on 24 June 2010. The IPA records show that there are 11

³⁷⁸ *Leo Maniwa v Aron Malijiwi* [2014] PGNC 25; N5687.

³⁷⁹ Online search of IPA website, conducted on 18 March 2019, 20 March 2019 and 11 April 2019.

national directors for Topaiyo. However, even though Topaiyo purports to represent 22 clans in New Ireland, only five of the directors are listed as New Irelanders. Of these five New Irelanders, only one of them has a New Ireland address. The other four have addresses in Rabaul, East New Britain, which suggests they reside there. This information is at odds with the NIHT website statement, that Topaiyo is a landowner company representing 22 clans.

The Letter of Intent lists what appears to be a sister company to Topaiyo Holdings Limited, which seems to be the primary landowner company for the 22 clans. The sister company is named Senilan Development Limited. However, an online search of the IPA website returned no results for Senilan Development Limited in any of the registry databases.³⁸⁰

The results of the IPA online search imply that Senilan Development Limited and NI Holdings (PNG) Limited have not been incorporated with IPA. If they were incorporated overseas, they are required to register with IPA as foreign companies, but there is also no record of this. It appears that they do not exist. The main implication of this finding is that any agreements, or Letters of Intent, between these non-existent or unregistered companies and anyone else would be void and thus of no legal effect.

Perusing the Letter of Intent, it becomes clear that logging is the main agenda for NIHT. References are made to 'timber' rather than 'trees'. Only two lines in the whole document refer to 'REDD+' and 'carbon trading', while the rest of the document is devoted to logging. It is poorly drafted with obvious spelling and grammatical errors. This leads one to question whether NIHT is serious in executing professionally drafted, legally binding documents, or simply presenting such a document to indigenous communities as a formality to impress them, while overlooking the fact that Western-educated people might be among those communities, with a far greater understanding of drafting legal documentation than NIHT. For example, in one sentence the word 'ensure' is used instead of 'insure'. The absence of any interpretation is confusing and worrying. The agreements sighted are all in English, while the awareness was also conducted in English.

NIHT's method of venturing into New Ireland and its questionable business practices in trying to develop a carbon trading or REDD+ project fall within the fraud crime scripts

³⁸⁰ Online search of IPA website conducted on 18 March 2019 and 11 April 2019.

developed in Chapter V. While it is even likely that some of those engaged with NIHT are unaware that NIHT is conducting its activities in a fraudulent manner, those at the forefront of the company, especially those coming to New Ireland, are unlikely to fall within this category since they have been making unsupported promises of great wealth to the landowners. It is also clear that NIHT is conducting these supposed carbon trading activities on its own, without endorsement from the CCDA or any other responsible government agency.

The evidence collated can definitely be said to confirm that NIHT followed a number of common practices that resonated throughout the data collection period. I suggest that these are applicable to the whole of New Ireland and not specifically Sentral Niu Ailan. This is because interviews and discussions were conducted with participants who recounted their knowledge and experience from other parts of New Ireland. These common factors are:

- The logging companies conducted their operations without regard for landowner concerns.
- The payment of royalties to landowners was erratic.
- The natural environment was being damaged extensively by clear-felling operations, which are illegal.
- The landowners were not satisfied with the manner in which logging operations are conducted on their land.
- The police were brought in by logging companies to resolve landowner grievances.
- Only a handful of people were benefiting from payments from the logging operations. These people were listed on the company extract as executives of the landowner companies, but they did not hold any major power or say in the operation of the companies, which were centralised to the chairman and his close associates and relatives.
- Despite many years of logging operations, the villagers continued to live as they have previously.
- The villagers had never witnessed any government-endorsed awareness raising on climate change, REDD+ or carbon trading.

Based on the reports of carbon cowboys in Peru, the Philippines, the Kirk Roberts-PNG cases canvassed in Chapter VI and the NIHT case, some common elements emerge from these cases showing how these carbon cowboys conducted their fraudulent activities. Two documentaries assist in making this assessment, namely 'Carbon Cowboys' (*People & Power* segment, Al Jazeera) and 'Carbon Cowboy' (*60 Minutes*, ABC TV). For Kirk Roberts, a number of self-promotional videos were downloaded from the internet and analysed that show Roberts speaking to villagers in the Southern Highlands Province, the Western Province and Oro Province to 'launch' carbon trading projects and encouraging the locals to sign agreements to hand power-of-attorney to Roberts to manage the use of the land. The correlation between the two documentaries, Roberts' promotional videos and the video recording of the Americans at Konos is strikingly similar. I now expound on those similarities in techniques employed to coerce indigenous communities to sign up to the fraudulent carbon trading projects.

(c) (Traditional) Welcoming ceremonies and media marketing

Traditional (and sometimes elaborate) welcome ceremonies are performed for the foreigners when they arrive at the meeting area and during the signing of the agreements. The vast majority of the locals who sign the agreements do not possess a basic understanding of the nature of the documents they are signing because of limited or no formal education. For example in Peru, Nellson attempted to coerce the Matses tribe to sign documents granting him power-of-attorney over their forests for 200 years.³⁸² The agreement, however, concerned mainly logging and, as revealed during the *60 Minutes* exposé, Nilsson also had plans to log the entire 450,000 hectares owned by the Matses and replant it with oil palm after the REDD+ agreement expired. Whilst in the Philippines, Goldsworthy entered the island of Mindanao and conducted a traditional signing ceremony with tribes there (Cubby 2011). He promoted the ceremony by posting numerous photos on his Facebook page and this was comprehensively documented on the website, REDD Monitor.³⁸³ Goldsworthy filmed and photographed the signing events, then using this footage and the signed documents, he

³⁸² Nellson had also been to PNG and the Philippines before heading to Peru (60 Minutes 2013). The signing ceremonies of the directors were also visually recorded <https://www.youtube.com/watch?v=H7G6i_zn1IM&feature=related7> and of Nellson travelling on a boat in Peru <<https://www.youtube.com/watch?v=KNhhZjzqnwo>>.

³⁸³ <<https://redd-monitor.org/2010/12/16/shift2neutral-in-the-philippines-fraudulent-incompetent-or-both/>>.

marketed these and misled clients to thinking that he had the full support of indigenous communities on Mindanao.

Roberts carried out the same in PNG and NIHT are now doing this too. The documents the carbon cowboys presented to the villagers to sign were power-of-attorney, except for NIHT, who presented a Letter of Intent. Woods (2005:221) writes that Roberts ‘..used his website to demonstrate the existence of contracts and agreements between hilsemf and his supporters.’ Roberts’ operations appear to have been better funded compared to Nilsson and Goldsworthy. Roberts engaged a media team which seems to have also comprised of two cameramen, he lived in hotels and travelled extensively around PNG promoting his carbon projects and securing power-of-attorney over villagers’ land. He chartered light aircraft that took him and his group to Western Province, flew by plane to Oro Province and to the highlands and hired vehicles to drive to the villages. In PNG, most of the private hire vehicle companies, provide their vehicles on a ‘dry hire’ meaning customers will have to purchase their own fuel when they pick up their vehicle. Fuel costs will have added to the costs incurred by Roberts along with the accomodation for his team and accommodating landowners when needed.



Picture 40: Traditional welcome for NIHT at Konos



Picture 41: Welcome speech to NIHT at Konos

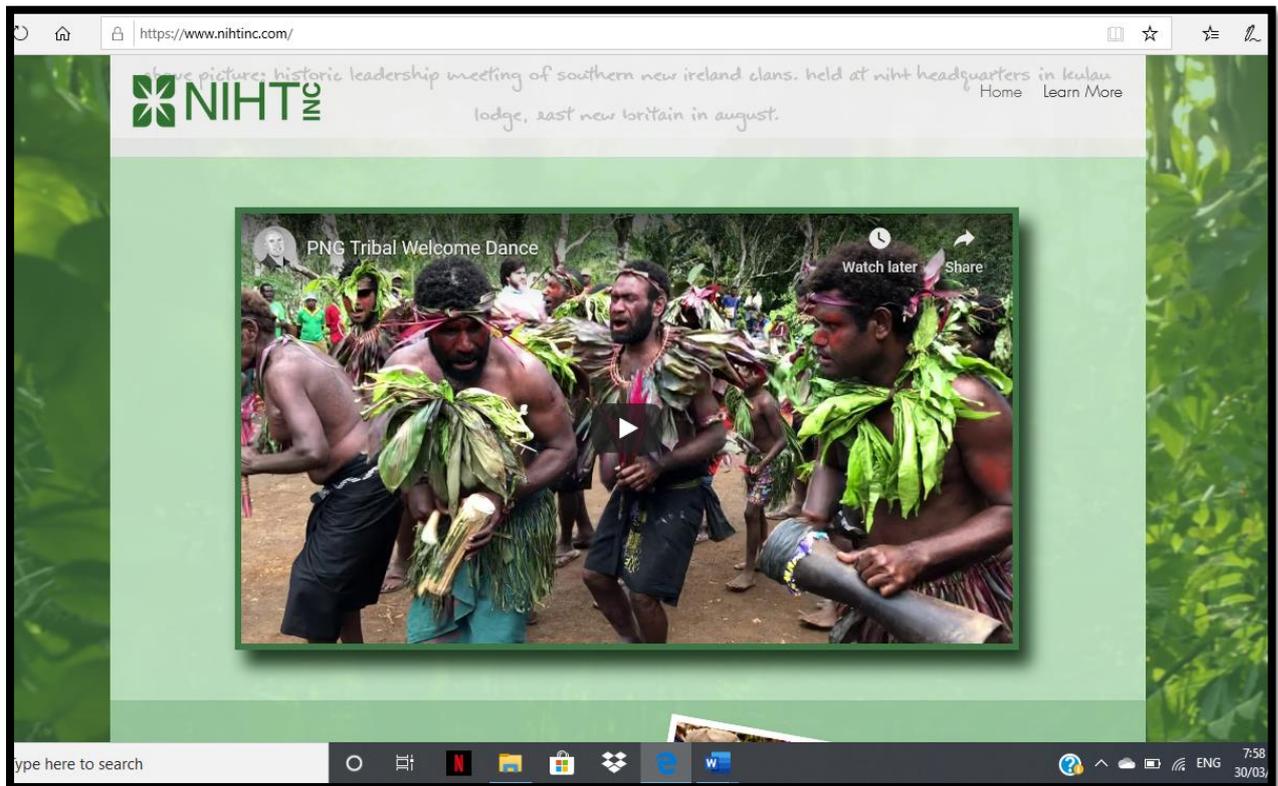


Picture 42: Signing of NIHT forms at Konos

NIHT has utilised footage taken from New Ireland showing villagers performing a dance, to present an image of cooperation with NIHT and consent from the landowners, but this is hardly the case.³⁸⁴ In early 2020, I searched for NIHT's website and found that the

³⁸⁴ On NIHT's new website (<<https://www.nihtinc.com/copy-of-home>> accessed 23 June 2019), a link is provided to explain the meaning of carbon credits (<<https://www.youtube.com/watch?v=IQyrnq4CEEw>>). This website has been completely revamped, and NIHT uses videos to imply it has the full support of the villagers.

site had been revamped again. NIHT placed another video of a “PNG Tribal Welcome Dance” on their website to imply they are fully supported by the locals there.



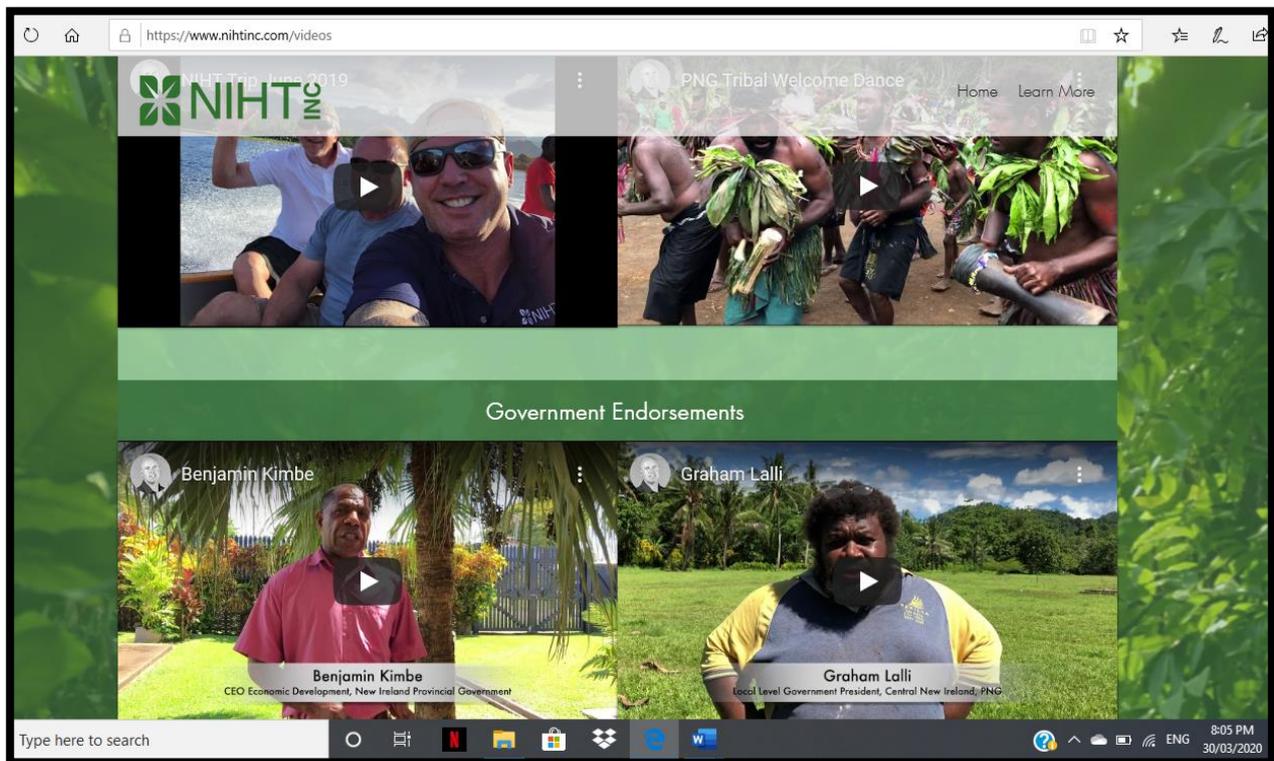
Picture 43: The "PNG Tribal Welcome Dance" stated on NIHT's website.

Like NIHT, the other carbon cowboys promised villagers huge amounts of money if they signed their forms for carbon trading, thereby raising the expectations of the local population. However, they did not provide a detailed explanation to the people of how the money will be paid to them, its exact origin or when the people will receive the money.

(d) False official government endorsement

The carbon cowboys must engage local contacts to introduce them to villagers and add credibility to their schemes. In their revamped website of 2020, NIHT has a web page showing “Government Endorsements” but this is misleading. It has Benjamin Kimbe, alleged to represent the New Ireland Provincial Government and an alleged LLG President of Sentral Niu Ailan. However, the alleged President was voted out of this position in the 2019 LLG elections and so is no longer the President. Both men do not have any authority to bind either the provincial or local-level governments. The videos are really of both men explaining their understanding of the concept of carbon trading and their views on why it is needed to help the world. They do not make any official

confirmation that NIHT has government endorsement in their dealings with the local communities. If any government approval is to be given, NIHT must secure environmental approval from CEPA through the submission of an Environmental Impact Assessment report. NIHT must have also registered with the CCDA *prior* to commencing any work. Neither of these prerequisites have occurred.



Picture 44: NIHT website of "Government Endorsements".

In Peru, Nilsson told the tribes that his company was from the United Nations. In PNG Roberts had James Kond accompany him all over the country, the latter a member of the ruling government party at the time, whilst Goldsworthy portrayed his company, Shift2Neutral, as having Australian government endorsement too.

Based on the data regarding NIHT, some points of irregularity in their conduct can be seen. Whether those aspects of their conduct are criminal acts and fraudulent in nature is not entirely clear without further investigation. These points are:

- 1) Obtaining FPIC is likely to be bypassed entirely. This is not strictly a criminal offence, but if an aggrieved person challenges the validity of the agreement in court on this ground, the court is likely to hold that a carbon trading project is void

for failing to obtain FPIC, pursuant to PNG National and Supreme Court precedents.³⁸⁵

- 2) Landowners' willingness to enter into carbon trading agreements is driven by their fear of logging's negative impact and highly destructive environmental practices.
- 3) The promise of quick wealth attracts (mostly) illiterate villagers to sign (or place their thumb mark) on the registration forms.
- 4) OCGs are unlikely to venture into rural areas to undertake carbon fraud.

In the next section, I highlight prominent areas of concern expressed by villagers and I continue to draw from areas in the data that corroborate my (grounded) theory that carbon cowboys are the most likely offenders in REDD+.

2 Corruption

Corruption is rife across all three levels of government (national, provincial and local). This seems to be the biggest problem in the implementation of REDD+ and without clear laws, is likely to fester (Larmour 2011:158). Funds for the UN-REDD Programme might be misused once they arrive in the REDD+ implementing country and not before, since the donors and the UN have stringent accountability verification steps in place. As canvassed in Chapter III, the government body that regulates REDD+ has experienced instances of corruption at the national government level since it was formed. The New Ireland Provincial Government continues to endure corrupt practices, while the LLG level does not fare better. Below under part (a), I explain how the LLG became involved in a conflict of interest by not scrutinising NIHT properly and advocating conservation, whilst being openly aligned with the Malaysian logging company.

³⁸⁵ *Leo Maniwa & Others v Aron Malijiwi & Others* [2014] PGNC 25; N5687; *Hiu Teck Lau & Others v Leo Maniwa & Others* [2016] PGSC 47; SC1528; *Ina Enei v Rimbunan Hijau Limited* (2012) PGNC 392; N4402; *Rimbunan Hijau (PNG) Limited v Ina Enei* [2017] PGSC 36; SC1605.



Picture 45: Oil palm plantation, east coast, Nalik area

(a) Sentral Niu Ailan Local-level Government

The Sentral Niu Ailan LLG lacks good governance, and checks and balances are missing. According to numerous reports from the villagers, many of the top officials misappropriate funds to cater for their immediate family and themselves, while they fail to deliver on basic services. The LLG Chambers are dilapidated despite receiving budget allocations for maintenance every year. The LLG makes no effort to educate villagers on important issues that might affect their lives, such as logging and carbon trading. No effort is made to intercede on behalf of the villagers who complain to them of the illegal logging practices by the Asian logging companies. The conflict of interest of LLG officials was apparent during the awareness by NIHT, where the LLG officials facilitated and spoke of environmental conservation even though they were heavily involved with the logging operations. This was obvious when the logging companies paid for some of the officials to fly to Port Moresby and stay in the Stanley Hotel, owned by RH, the biggest logging company in PNG, in order to obtain signatures on permits for

the extension of logging operations.³⁸⁶ On a number of flights back from Kavieng, I met the LLG officials in town who were also travelling to Port Moresby.

While this type of corruption by LLG officials is frowned upon, it is sometimes joked about by the villagers and it does not seem that they are aware of the loss of what they should be receiving in services from the LLG. Much of their non-reaction is grounded in the traditional relationships between villagers and LLG officials, who are themselves villagers.

Villagers' ignorance of the laws and process is also a significant factor. When the people are not aware of what they are entitled to expect their government to provide, they will not question their officials. The LLG officials are related to villagers, and therefore they are bound to the traditional obligations all villagers observe. Though they are LLG officials, they still live in their villages and do not shy away from contributing in cash and in kind to traditional feasts and ceremonial mortuary events. This is also a contributory factor in people's acceptance of the small levels of corruption, since they know that when in need, the officials might contribute to their requests, especially at traditional and customary events.

Within the LLG Konos area, the officials seem incapable of holding and investing the money they supposedly squander from the LLG coffers. They do not display outward or obvious signs of wealth. Most do not have large houses or expensive cars. Whatever money they misuse from the LLG is squandered on themselves personally and spent on their immediate family's need for food, school fees, school uniforms and the like.

³⁸⁶ Interview with Kelly (Gavara-Nanu, Kavieng, 2019).



Picture 46: Sentral Niu Ailan LLG, Konos

(b) New Ireland Provincial Government

Grand corruption has been embedded in the New Ireland Provincial Government for many years. New Ireland's politicians have a history of corrupt dealings in the forestry industry with Asian loggers (Barnett 1989), which has resulted in criminal prosecutions and the dismissal of high-profile New Ireland public servants who sought and received financial gifts from Malaysian logging companies.³⁸⁸ The island's self-governing agenda does little to dispel this perception.

The current Governor of the province is of mixed Chinese descent and very close to the PNG-based Asian community. A plausible reason that logging has continued for so long in the province is due to the Governor's alleged links to facilitating logging by Asian companies. He has voiced opposition against logging and promised to impose a moratorium on the exports of round logs from the province within two years.³⁸⁹ Yet some NGOs view this promise as an election gimmick since the Governor has made this promise repeatedly over the years but has failed to implement it.³⁹⁰ The Governor

³⁸⁸ For example, *Re Gerard Sigulogo* [1988-89] PNGLR 384.

³⁸⁹ Interview with Kelly (Gavara-Nanu, Kavieng, 2019).

³⁹⁰ Interview with Kade (Gavara-Nanu, Kavieng, 2019).

has also omitted to tell the public that he was the government official who persuaded landowners in central New Ireland, to sign consent forms for the logging operations in 1975 when he was Minister for Primary Industries. This committed the landowners to 70-year timber permits. In 1994, the PNG Ombudsman Commission found that he had blatantly abused PNG's finance laws by negligently authorising the approval of a loan from the Government of Malaysia for the construction of defence force barracks in Port Moresby when he was Finance and Planning Minister in the national government (Maino 1994). The Ombudsman Commission was scathing in its criticism of the Governor (then minister) and the national government:

Such an alarming disregard for the laws of Papua New Guinea and the constitutional principles on which those laws are based, is disheartening, to say the least. If the National Government disregards the laws then how can it expect the People to respect the laws? (1994:65)

At the opening of the last section of the highway connecting Kavieng to Namatanai, the Governor had his picture placed on all the billboards, even though funding for the highway came from the Australian Government (Post-Courier 2019c). The province has seen little development, despite hosting an array of resource projects³⁹¹ and the Governor having once been PNG's Prime Minister. He has himself been implicated in many dubious deals (Maino, Waugla and Tetang 1994). In 2017, the PNG Auditor-General's Office investigated the expenditure of millions of kina into the building of two Governor's residences in the province (driven by the current Governor). The Auditor-General's Office found it to be a dubious project and could not see how it would benefit the people of the province (Auditor-General 2017).

³⁹¹ Notably the Lihir and Simberi gold mines.



Picture 47: The controversial Government House, Namatanai (No occupants), 2019.³⁹²

The same office formed the view that senior public servants in the province had developed a scam to submit and approve for payment, bogus claims from the provincial treasurer. It recommended fraud investigations into the provincial government (Auditor-General 2017). It is extremely difficult to see how the Governor could not be aware of these fraudulent activities occurring in a small province with an even smaller workforce in the provincial government.

In 2019, an investigation by the Ombudsman Commission found that the former Member for Namatanai Open, who is the son of the current Governor, abused his powers in awarding a contract for road construction to a company that had not yet been registered with the IPA (Post-Courier 2019:7). The contract had been awarded to a non-existent company. This regime of corruption in the province, is unlikely to change with the current Governor remaining in that position.

³⁹² Photo taken 18th July, 2019.

(c) National Government

The previous National Government of 2019, of which the New Ireland Governor had been part of, handled resource projects without due regard to its policies such as *Vision 2050* and the National Goal and Directive Principles.³⁹³ Bending the rules and breaking laws for the benefit of outside interests is a clear indication of grand corruption (Graycar and Prenzler 2013).³⁹⁴ While the people miss out on opportunities, instances of bribery abound, and this led to a number of government Members of Parliament defecting to the opposition in April 2019 and the Ombudsman Commission referring the then Prime Minister to be prosecuted (Kuku 2019).

Anti-corruption work requires measuring the scale of the corruption to identify the areas that could be blocked from fraud (Graycar and Prenzler 2013). Obviously, eradicating corruption is paramount to ensure better systems and policies and to make those in public roles accountable for their actions. Anti-corruption techniques and greater pressure from regional monitoring bodies like APEC's anti-corruption body (which looks to prevent illegal logging), should place greater pressure on the PNG government to improve governance. Curtailing or even withdrawing aid, as has occurred in some African nations (Mutonyi 2005), is unlikely to happen to PNG.³⁹⁵

3 Translatability and Free, Prior and Informed Consent

In this section, I discuss the translatability issues I encountered during the fieldwork, especially regarding the difficulties conveying the concept of carbon trading and REDD+ to villagers. Most of PNG is undeveloped and the majority of PNG's population live in rural areas, with limited access to formal education. In many parts of PNG, populations are illiterate or have rudimentary comprehension of English. The experience of translating the REDD+ concept from English to the lingua franca in the April Salumei REDD+ project has been documented (Leggett and Lovell 2011; Filer 2015). The April Salumei project, which covers an area where an estimated 14 different languages are spoken, is continuously plagued by such ownership verification issues and it requires

³⁹³ In May, 2019, James Marape became PNG's Prime Minister.

³⁹⁴ At the time of writing, the national government was headed by Peter O'Neil as Prime Minister.

³⁹⁵ Australia has always placed good governance as a priority area in its donor funding. Australia is PNG's biggest donor and needs PNG to be an able ally especially since it is geographically located above Australia and since Australian companies are heavily invested in PNG's economy.

good public relations with the villagers to maintain the project (Filer 2015:187).

Translatability difficulties was one of the obstacles that presented in the study; this included the lack of understanding of the carbon trading concepts demonstrated by the people promoting the scheme on behalf of the Americans. This difficulty in translatability allows NIHT to take advantage of people's ignorance and bypass FPIC procedures.

From my experience, obtaining consent from interview participants (before proceeding to ask questions) entailed describing and answering their questions before securing their consent. This required long explanations of the definitions of climate change, carbon trading, carbon emissions and so forth. To explain 'climate change' and 'carbon trading' in another language (in the majority of cases it was Tok Pisin), when there are no words in Tok Pisin to match it exactly, required illustrating those concepts using images that were familiar to the participants. For example, the villagers were able to understand examples of weather changes and that these are connected to climate change. Illustrations I gave included unusual heat waves, long periods of drought that have a dire consequence on the harvest of garden produce, rising sea levels and disappearance of wild game.

The explanation made sense to the landowners, as this was something they know and therefore, could visualise. It was difficult to explain carbon strictly scientifically and to do so from English to Tok Pisin was near impossible. So I learned that to do the latter was unnecessary and dispensed with it altogether. Most of the time during my explanations the villagers were quiet and, it seemed, attempting to comprehend my explanations. They were apprehensive when interviews first commenced, but as the interviews continued, they slowly became more confident and answered questions.

It became more complicated when I had to explain how the 'white man' has devised a method to calculate one tonne of carbon that they can sell or trade in order to allow them to continue to emit carbon — basically, to allow them to continue putting bad smoke into the air. The irony was not lost on the villagers. Some would ask: why would someone pay another person to simply make more bad smoke again? People who have received limited formal education and need time to process such information. But it was even more difficult when they asked questions in Tok Pisin, such as, 'How can you weigh air?', and as Anek asked: 'If the air is removed from the trees do the trees

become dry and shrink?’³⁹⁶ I explained an analogy with carbon by referring to fumes emitted from vehicle exhaust pipes. As noted by Filer (2015:181-185, 192) and Leggett and Lovell (2012) when discussing awareness of the REDD+ April Salumei project, ‘Given that most of the village conversations were conducted in Tok Pisin, it is hard to imagine what was actually said here, let alone what was understood: “Was it air in a bag?” was one such question. Landowners at the Kamula Doso project are also documented as having lacked an understanding of REDD+ and carbon trading (Wood 2015). Whilst Lipset (2014:236) recorded the same confusion in his research involving communities whose lives revolved around lakes and mangroves and their venturing into blue carbon.

The initial process before the actual interviews was mentally exhausting at times so that, after conducting an interview, I would have to rest and compile and review my notes for the remainder of the day. It was in this manner that interviews usually proceeded, even if there was enough daylight left to conduct more interviews. I was too tired after explaining and describing the REDD+ process to the participants, specifically by giving visual examples. This time also allowed me to review the data continuously and build up the evolving theory affirming carbon cowboys as the likely carbon fraudsters in REDD+ and not OCGs.

As seen above, explaining the concept of selling carbon is not easily achievable with largely illiterate populations. This issue should be of great concern to the citizens of all REDD+ implementing countries, since the gist of the development of the REDD+ scheme was to receive compensation for the preservation of rainforest and the natural habitat within it (Hatcher and Bailey 2011). Literature is scant on the prospect of what might occur in a REDD+ country if the indigenous community is not involved in the development of the framework from the beginning of implementation. Though FPIC seems to be completely ignored in voluntary carbon projects.

The single NIHT-conducted meeting — or awareness, as referred to by the villagers—at Konos was not sufficient to fulfil the criteria of FPIC and the timeframe suggested in *Maniwa v Malijiwi*.³⁹⁷ In that case, there were several awareness meetings. The number of people who asked questions (18 people) during one of those meetings, was

³⁹⁶ Interview with Anek (Gavara-Nanu, Dampet village, 2018).

³⁹⁷ *Leo Maniwa & Others v Aron Malijiwi & Others* [2014] PGNC 25; N5687.

deemed insufficient. Compared to the awareness at Konos by NIHT, only two people were allowed to speak. Clearly then, the single meeting held by NIHT at Konos, failed the minimum threshold criteria set in *Maniwa*. Although there were LLG officials accompanying NIHT, they had no authority to represent and bind the PNG National Government in resource development projects with foreigners.³⁹⁸ The *Maniwa v. Malijiwi* case seems to be the current case authority to determine if FPIC was properly secured where a party mounts a challenge on this basis in court.

The National Court decision was upheld by the Supreme Court in the case of *Lau v. Maniwa*.³⁹⁹ In dismissing the appeal, the three man Supreme Court bench affirmed the National Court's emphasis on the Fourth National Goal and Directive Principal in the *Constitution*.⁴⁰⁰ This NGDP is therefore, the starting point in any challenge to FPIC.⁴⁰¹

Probably the most contentious issue at present is ownership of carbon in REDD+ projects that are located on customary land. Recently, it has been suggested that customary land should be utilised using best practice international standards, but this suggestion assumes that no-one will have an issue with this being done. Registration of land boundaries in a formal system will not guarantee an end to disputes and has created many problems in PNG (Act Now 2017).

The landowners interviewed stated they own carbon because it is produced by their trees. They can decide whether to allow REDD+ or to allow commercial logging or

³⁹⁸ The consultation process that took place in the April Salumei REDD+ project has been deemed a success, such that in the absence of regulations, the manner in which FPIC was obtained can guide future REDD+ future projects (Venuti 2014:145).

³⁹⁹ *Hui Teck Lau & 2 Others v. Leo Maniwa* [2016] PGSC 47; SC 1528.

⁴⁰⁰ 4. Natural resources and environment.

We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.

WE ACCORDINGLY CALL FOR—

(1) wise use to be made of our natural resources and the environment in and on the land or seabed, in the sea, under the land, and in the air, in the interests of our development and in trust for future generations; and

(2) the conservation and replenishment, for the benefit of ourselves and posterity, of the environment and its sacred, scenic, and historical qualities; and

(3) all necessary steps to be taken to give adequate protection to our valued birds, animals, fish, insects, plants and trees.

⁴⁰¹ This noted above, it is easy to see the converting title for land is an unrealistic method of commodity creation. It exasserbates rural conflict and where used as security is unlikely to be forfeited for other people to take up. In reality, the only other people who will take up such a security are other nationals who might be able to afford to since foreign investment in an area for the title will bring problems.

small-scale logging, or to clear areas to make gardens, gather materials to build their bush material homes and so forth.⁴⁰² In restricting their movements and activities on their own land, REDD+ schemes must compensate the landowners for their involvement.⁴⁰³ This requires indigenous landowners to place some value on this 'air', which is fully owned by the landowners since it is derived from their trees on their land. This would be the same for coral reefs and carbon sinks, for peat rainforest cover and for mangroves as well. The concept of owning the air is complicated for villagers to comprehend. The ownership of carbon was only recently devised; historically, there has never been any single owner of carbon, or any other type of gas (Murray, Lenzen and Murray 2014). It would be true to say then that until recently the air has been considered ownerless, incapable of being owned. The National Government at one stage made a representation that the carbon would be owned by landowners (Wickham et al 2010), but nothing has eventuated from this.⁴⁰⁴

It has been well documented in other REDD+ projects, that landowners are expecting to receive almost all the money from the projects and are more inclined to deal directly with the private developers (including carbon cowboys), and that this poses a danger (Leggett and Lovell 2012). To entice landowners to sign up, these carbon cowboys make exaggerated claims about how much money the landowners will receive. This

⁴⁰² For example, interview with Masa and Anek (Gavara-Nanu, Dampet village, 2018).

⁴⁰³ Ibid.

⁴⁰⁴ There have been two cases where landowners claimed ownership and the loss of potential earnings from the sale of carbon credits. Both cases were dismissed by the National Court which held these claims to be purely speculative. The plaintiffs in both cases relied on the evidence of Cossey Yosi, who appears to have some training in forestry. Yosi compiled a report detailing the loss incurred by the landowners and provided unsubstantiated estimates for loss, including lost potential carbon credits. This case highlights the need for people to be properly trained in quantification and evidence presentation in courts. It also brings a new dimension in damages claims not seen before with regards to carbon credits. In the case of *Gramgari v. Crawford* involving landowners from Lower Ramu, Bogia District and *Gau v. G & S Limited*, involving landowners from the Rai Coast District, the National Court, having established that the plaintiff-landowners had shown that the Defendants had trespassed on their customary lands and conducted illegal logging, refused to damages sought and awarded nominal amounts. Apart from the claim for suffering and environmental destruction, Chem-Clean Environmental Services Limited was the environmental company engaged by the Defendant-logging companies that refuted the landowners' claim for carbon credits. It is owned by the same person who owned Chem-Clean Limited which was the consulting company that forayed into the April Salumei area and conducted feasibility studies that helped position April Salumei into evolving to become a REDD+ area (Filer 2015:191-192). Chem-Clean Limited has ceased operating having been removed from the IPA registry (online search conducted 13th April, 2020). The fact that the owners of Chem-Clean Limited changed clients from REDD+ developer to logging company, shows how a company will change views to accommodate its commercial aims. There is nothing wrong with this since companies strive to make a profit. However, it highlights how working in the forestry, conservation and climate change sectors, can result in situations of conflict of interest, which require full disclosure in order to ensure transparency and accountability, the absence of which might result in corruption and fraud.

unrealistic expectation given to landowners poses a great problem to achieving REDD+ aims as it causes people who are not genuine landowners, to stake claim to larger areas of land.⁴⁰⁵ All the villagers I interviewed were also of the view that they will receive the majority of the money and this was due to NIHT's claim that they would receive 70% of all the income generated from carbon trading.

My research uncovered only one PNG organisation attempting to provide a clear explanation to villagers about climate change and carbon trading. The Tenkile Conservation Alliance (TCA) is located in the Yus Conservation Area, Lumi area, which is next to the April Salumei area.⁴⁰⁶ It aims to protect the rare tree kangaroo and its website also states its work mitigates climate change. It has produced colourful brochures with illustrations and is written in Tok Pisin explaining carbon trading and related concepts. These brochures are free to download from its website for distribution.⁴⁰⁷ I downloaded some of these and used them during my fieldwork. I found, however, that most villagers are not particularly interested in reading. It is possible that videos, posters or one-page leaflets might be better received by the villagers.

4 Complaints About Logging

Logging has hampered the lives of villagers and brought little improvement. The villagers receive very little money sourced from royalties. Apart from logging royalties, when cash is needed, villagers market their fresh garden produce at local markets or at the main Kavieng town market. They still live as they did before the logging operations commenced. They are quite entrenched in cultural practices and live in homes with sago palm thatched roofs and bamboo walls. Even though several Asian logging companies have logged the central New Ireland area since the 1970s, there has been absolutely no improvement to the lives of the locals, and this situation is replicated throughout the rest of New Ireland. In a sense, the villagers are environmental victims as a result of the broad level of unfairness they suffer from the inaction of the landowner companies, the complicity of forestry officers and the manner in which they are taken advantage by foreign logging companies.

⁴⁰⁵ This has occurred in my village, where a clan lodged an application to incorporate their land group, and stated they own an area of land traditionally owned by my family. This has resulted in an objection being lodged with the Department of Lands, to the clan's application.

⁴⁰⁶ The TCA is run by an Australian couple and its board members are mainly Australians.

⁴⁰⁷ <<https://www.tenkile.com/>>.

All the landowners interviewed complained about logging. The complaints concerned clear-felling destruction, which is prohibited under PNG's forestry laws; the deliberate desecration of sacred *masalai* and *hausboi* sites by loggers; the blocking, redirecting and polluting by heavy machinery and oil of rivers that they used to collect drinking water and for washing; and the exploitation of local women by the Asian workers.

(a) Landowner companies' fraudulent practices

Past and present landowner companies are notorious for misusing landowner payments.⁴⁰⁸ Regarding the main landowner companies in the central New Ireland area, I found that people who are close to the landowner company chairman and the directors benefit from cash or in-kind payments.⁴¹⁰ These payments are ad hoc and can vary from a few hundred kina to store goods. The only people who claimed to be pleased with the logging operations were those who were close to the executives of a landowner company and therefore benefited in some way, whether by ad hoc cash payments, receiving store bought food or housing from the logging company, or by cash contributions to funeral expenses for relatives.⁴¹¹

Many villagers do not receive anything during the whole lifespan of the logging operation in their area. Meanwhile, the only 'development' that takes place is the logging access roads, which remain unsealed for the duration of the logging in all areas. Whilst community infrastructure and buildings, like Churches and health clinics, do not receive any assistance.

⁴⁰⁸ Wood (2015) also documented the corrupt practices of landowner companies in the Kamula Doso region, suggesting this type of behaviour is not a province specific problem.

⁴¹⁰ Interview with Pilai (Gavara-Nanu, Silom village, 24 April 2018); conversations with villagers (Gavara-Nanu, central New Ireland, 2017-2019).

⁴¹¹ Interview with Pilai (Gavara-Nanu, Silom village, 2018).



Picture 48: Village, westcoast, 2019



Picture 49: Run down health clinic, Karu, 2019



Picture 50: Catholic Church, Karu, 2019

These roads used to transport felled logs are the main and only change to the area, allowing villagers to access remote parts of the forests to create gardens without the need to manoeuvre through previously thick rainforest. However, these roads are no better for local small vehicles because they are cleared for the large, heavy-duty logging trucks that carry logging equipment and felled logs to and from the area. After the logging ceases in the area, no further work is done to improve the road and the people are left with little more than a cleared area. Landowners who had signed consent forms to allow logging operations also complained about the delay in receiving their royalty payments, and in many cases, to not receiving anything on the appointed date for payment. The villagers told me that they feel cheated and are suffering from the logging operations. They do not receive the benefits promised to them. In one instance, one woman told me that her clan has waited almost two years and is yet to receive any royalties despite three shiploads of logs cut exclusively from the clan's land and exported by the logging company.⁴¹² All landowners interviewed said they were in favour of the REDD+ concept after I explained it to them.

⁴¹² Conversation with Kila (Gavara-Nanu, Karu village, 2019).



Picture 51: Logging access road, 2019

(b) Logging companies' illegal practices and problems

Asian loggers are relentless in their pursuit of securing signatures of landowners on consent forms to allow them to cut new areas. These consent forms must be signed and then submitted to the NFA to confirm that the customary landowners have given consent for logging to proceed. Landowners recounted how they are hounded almost on a daily basis by the Asian logging supervisors and the local public relations officers (PROs),⁴¹³ who drive to their homes at odd hours, stop them on the side of the road and even look for them in their gardens in order to secure signatures.⁴¹⁴ To stop being disturbed, the landowners agree and sign the consent forms, only to realise their mistake once they see the large number of logs leaving their forests on logging trucks. Later, when they attempt to protest, the landowners are reminded that they had signed the consent forms and they are threatened with being locked up in police cells for preventing the logging operations. They are also threatened with having to pay for the

⁴¹³ Public relations officers, commonly referred to by the villagers as PROs, are usually villagers themselves, engaged by the Asian logging companies to liaise directly with the villagers on anything related to the logging company. PROs are usually used to pressure landowners to sign the consent forms. If the villagers have complaints against the logging company, the PROs refer them directly to the Asians. So, in reality, there are no public relations conducted by the PROs.

⁴¹⁴ Interview with Bana (Gavara-Nanu, Katedan village, 2018). In the National Court case of *Buarang & Others v Viva Success Ltd & Others*, the plaintiff alleged that a Malaysian supervisor of the defendant company pestered him continuously, even on the side of the road, to coerce him to sign the consent form.

loss of business for the number of days the operation is stopped and they are told this loss will amount to hundreds of thousands of kina.⁴¹⁵ With no money and in fear of the police, the landowners have no choice but to accede to the logging.

Asian loggers also deliberately get people who are not the rightful landowners, to sign the consent forms.⁴¹⁶ Once these consent forms are signed, the Asian loggers immediately move their heavy machinery into the customary lands and commence logging operations.⁴¹⁷ The villagers are left to fight over this issue by taking each other to the Village Court or the Local Land Court. Some view this as a tactic to divide the landowners while the logging continues.⁴¹⁸ Though both the Village Court and the Local Land Court have original jurisdiction to deal with traditional land ownership issues, they are increasingly accused of nepotism and wantokism if the presiding magistrate is somehow connected to either party, which happens frequently. Although the Village Court and the Local Land Court play an important part in the conflict resolution process, they contribute to many of the disputes.

When interviewed Kade lamented how the Karu villagers are no longer together; fragmented by years of conflict because villagers who are against logging, are opposed by others who support the Asian logging operations so that they can receive some money, despite the huge environmental destruction.⁴¹⁹ Kade stated:

Karu went into these conflicts and many clans have split yah. So we don't have this argh..community as it used to be anymore. The community has split yah..argh following the attachments of clans. Like for example, where clans share boundaries and there is a dispute. Some [clans] the logging company comes and gives them money so they support this clan whilst the other clans support the opposing clan, so it is confusing.

Many of these disputes turn into physical violence. While the locals are disputing ownership of the land, the logging continues.⁴²⁰ This sometimes becomes deadly for the Asian loggers. Constable Tobaras recounted a number of times when national

⁴¹⁵ Ibid.

⁴¹⁶ Interview with Kelly (Gavara-Nanu, Kavieng, 2018); interview with Kade (Gavara-Nanu, Kavieng, 2018).

⁴¹⁷ Above n 234.

⁴¹⁸ Above n 236.

⁴¹⁹ Interview with Kade (Gavara-Nanu, Kavieng, 2018).

⁴²⁰ Ibid.

logging workers assaulted their Malaysian co-loggers at a logging camp in Namatanai, and also when villagers on Lavongai Island assaulted Malaysian workers so badly that the foreigners had to be transported back to the main island where they were admitted to the Kavieng General Hospital for several weeks.⁴²¹

Asian tree cutters who work alongside the national workers have exclaimed in disbelief when they see the huge rainforest in New Ireland and the valuable tree species contained within it.⁴²⁴ They admit that in their native Malaysia or Indonesia, they no longer have such huge trees and they are eager to cut as many trees as possible especially since wages for both national and Asian workers, are paid according to the number of cubic metres of each log they fell.⁴²⁵ This also means that chainsaw operators will cut as many trees as possible, which is the reason for the clear felling. The bigger the tree, the more they are paid.

Social problems are common as a result of foreign workers taking young PNG village girls as wives who bear their children. Foreign workers in PNG are separated from their families for a whole year, flying back once a year for their annual leave, which is usually for two to three weeks. Consequently, they start a new family in New Ireland. When the foreign workers leave the area once their contract term expires, they leave behind their village wives and mixed-race children.⁴²⁶ Many of the mixed-race children are stigmatised in the community because of their mixed background, and they grow up fatherless. The former wives of the foreign workers are also ridiculed by their community and family, who most probably had previously benefited from the relationship through cash gifts, assistance with transportation, medicine and food from the Asian worker. This is particularly so if the foreign worker is a camp manager or a supervisor because they are usually assigned a four-wheel-drive vehicle and have access to the fuel stored in bowsers at the camp site. The family of the Asian worker's former national wife may also be subject to ridicule from the community after he has left, so they take it out on their daughter. Most times, the former national wife will not be able to marry again and endures loose and promiscuous relationships with village men.

⁴²¹ Interview with Tobaras (Gavara-Nanu, Kavieng, 2018).

⁴²⁴ Conversations with national loggers (Gavara-Nanu, central New Ireland, 2018).

⁴²⁵ Ibid.

⁴²⁶ Conversations with villagers (Gavara-Nanu, central New Ireland, 2018); simple observations (Gavara-Nanu, central New Ireland, 2017-2019).

Land grabbing has in recent years been amplified through logging and oil palm expansion. One well publicised instance of this occurred in 2011, when on 04 March, the PNG daily newspapers reported that the entire Lavongai Island in New Ireland had been sold to Malaysian timber company Tutuman Development Company Limited, secured through SABLs as a cover for their illegal logging using legitimate and legal means (Filler 2011). By circumventing the title issuing process and manipulating the documentation, Tutuman was able to conduct logging until the public uproar pushed the establishment of the SABL COI, which recommended the cancellation of that particular SABL (including others around PNG).

Many of the villagers recounted their experience with developers and landowner companies using the police to remove the *gorgor*. Villagers were reluctant to report any cases of abuse or encroachment on their land by the logging companies because, in their minds, the police had already sided with the loggers and there would be no action taken on their complaints.

Secondary crimes also result from logging. The ships that come in to load the logs also bring in their own food, such as rice and tinned fish, vehicles and fuel, thus bypass paying import taxes. It has been suggested that the absence of proper checks on these logging ships allows the trafficking of Asian women into PNG as sex workers and that PNG police are aware that logging camps are meeting points for the trade of guns in exchange for drugs (Windybank 2008; Zwartz 2010; Dept of State 2018). However, my own fieldwork revealed this to be highly unlikely in the logging camps in New Ireland. There is evidence that the logging ships bring in smaller items such as mobile phones and pornographic paraphernalia.⁴²⁷ There is also evidence that the logging ships depart from PNG with gold mined illegally by Asian workers in the deep forests.⁴²⁸

(c) The police

The New Ireland police understand that their role is to serve and protect lives and property.⁴²⁹ They will therefore respond to the loggers' call for assistance. Yet when villagers complain to the police of illegal logging, the police advise them that their

⁴²⁷ Interview with Bilau (Gavara-Nanu, Katagan village, 2018); interview with Nambex (Gavara-Nanu, Kavieng, 2018); observations and discussions at logging camps, 2017–2019.

⁴²⁸ Interview with Senior Constable William (Gavara-Nanu, Lakurumau, 2019).

⁴²⁹ Interview with Constable Tobaras (Gavara-Nanu, Kavieng, 2018); interview with Senior Sergeant Nambex (Gavara-Nanu, Kavieng, 2018).

complaint is regarding trespass and is a civil matter, which the villagers should take up in court.⁴³⁰ This causes immense problems for landowners in New Ireland because access to good lawyers in the province is limited and the few who practise there, charge high rates that the villagers cannot afford.⁴³¹ The villagers are also unable to comprehend the legal process and are reluctant to pursue the matter in the courts.⁴³²

Kade recounted how youths from his village were frustrated at the Asian loggers' disregard for the protests against logging on their land.⁴³³ In retaliation, the youths set fire to a bulldozer owned by the Asian logging company. The police apprehended several youths and held them for several weeks in the police cells without charge. After negotiations, the youths were released without charge. Kade himself, frustrated with the Asians' lack of respect, confronted a Malaysian driver who was driving a heavy-duty loader for logs through his village. Kade stopped the vehicle in the middle of the road, climbed into the cabin and forcefully removed the key from the vehicle's ignition.⁴³⁴ In the evening, the police drove into the village, armed with high-powered firearms. They demanded to know who had confronted the Asian driver. The situation appeared likely to turn volatile had it not been for the arrival of Kade's older brother, a former policeman known to the Namatanai Police Station commander. The matter was mediated that night in the village and no further action was taken.

Senior Constable William, a commander of a rural police station with 23 years' experience, is from the Namatanai area. A logging operation is located near his village. He confirmed that the Police Commissioner had issued a directive that police officers were prohibited from being stationed at logging camps.⁴³⁵ The police stationed at the camp near his village are from the Namatanai Police Station and from the Mobile Squad, the latter a specialist unit that frequents trouble spots in PNG. These police are paid directly by the loggers. Allegations of police brutality upon communities in remote areas has been well documented (SBS 2005; Boni 2013). William recounted his own run-in with his comrades. When the Asian loggers stray onto his customary land, his relatives frequently call him so he can go warn them to leave the area. He has done so

⁴³⁰ Ibid.

⁴³¹ Interview with Kade (Gavara-Nanu, Kavieng, 2018).

⁴³² Ibid.

⁴³³ Interview with Kade of Karu village (Gavara-Nanu, Kavieng, 30 July 2018).

⁴³⁴ Ibid.

⁴³⁵ Interview with William (Gavara-Nanu, Lakurumau, 2019).

on countless occasions and has experienced disputes with the other policemen who are based at the logging camp.⁴³⁶

Unlike other parts of PNG, in New Ireland, the police are not as actively engaged in enforcing the objectives of logging companies against landowners (for example Wood 2006). The police manipulate the understanding of the villagers into thinking that what they are objecting to is not correct. However, cases of police overstepping their roles and powers are known to occur.⁴³⁷ I did not witness any police abuse; however, while I was conducting fieldwork, a youth was brutally bashed in police custody and died (Post-Courier 2019b); his death was not logging related.

Levels of police brutality in New Ireland seem to be lower than in other provinces. This is likely due to *wantokism* where a strong connection exists between police officers and the villagers (*wantoks*) so that it is paramount to ensure that ties and relations with others are not damaged. As a result of these strong cultural and family attachments, the police are also aware of the relational ties an accused has with someone. For this reason, they might not want to assault them or intimidate villagers. For example, of the four police officers I formally interviewed, two of them were from New Ireland, while the other two were married to New Ireland women. The cultural ties and *wantok* system in PNG usually sway the way the police deal with offenders or suspected offenders. In the case of the bashing to death of the youth in the police cells, the police later sought to appease the villagers. The Police Department paid for all the funeral expenses and presented pigs and garden produce to the family of the deceased. All the police officers involved in the bashing were arrested and detained (Post-Courier 2019b). This act by the police was also driven by the fact that the Konos Police Station Commander was from the same area as the deceased youth, spoke the same language and observed relational ties with people from the village of the deceased. To prevent retaliation from the villagers and maintain a safe working environment for her officers, the commander led them to compensate the family of the deceased.⁴³⁸

The fieldwork discovered that little has changed since the 1989 Barnett Report findings and in fact it seemed that the illegal logging by Asian logging companies had grown

⁴³⁶ Ibid.

⁴³⁷ Interview with Kade (Gavara-Nanu, Kavieng, 2018).

⁴³⁸ I had been in the area conducting fieldwork and witnessed this compensation exchange where a pig, garden produce and cash was given.

worse. Although there is some evidence in the reviewed documentation that suggests logging companies could manipulate REDD+ schemes, the limited fieldwork data did not support this theory. However, the detrimental effects of logging are a driving reason that explains why people have signed up so willingly with NIHT, as they seek an alternative source of income to that received from logging royalties. Here we see a trend in villagers' willingness to consent to logging knowing there are problems, but doing so in order to derive some income, as they aspire for modernity. Yet when presented with the benefits of carbon trading by NIHT, naturally it has attracted the villagers with the great promises of easing the burden of environmental damage and the uncertainty of payments which is essentially how logging operations have been conducted in PNG.

5 Lack of Awareness

Even though a number of REDD+ workshops had been held in the provincial capital, Kavieng (Bush 2016), most villagers had not heard of the REDD+ concept until I explained it to them. Only one person from an NGO based in New Ireland, seemed familiar with the basics of the concept.⁴³⁹ However, it appeared all New Ireland NGOs and other community groups, such as Caritas, were not conducting any awareness on this issue, only against logging.⁴⁴⁰ During their own public awareness, some NGOs mentioned carbon trading as an alternative income source to logging royalties, but only briefly as they are not familiar with the concept. The NGOs do not use the term REDD+ but 'carbon trading'.⁴⁴¹ Other NGOs representatives I interviewed had not heard of REDD+ and were not familiar with it. They also lacked the resources to conduct awareness raising regarding it and had had no discussion with the provincial government regarding conducting such awareness raising.

This is unfortunate since REDD+ was wholeheartedly favoured by the landowners I spoke with. Towards the end of formal interviews, I would ask participants if there was anything they would like to add for the record; all wanted more awareness raising to be conducted in their area and villages regarding REDD+ and carbon trading.

⁴³⁹ Interview with Manu (Gavara-Nanu, Kavieng, 2019).

⁴⁴⁰ Caritas is a community organisation operated by the Catholic Church.

⁴⁴¹ Interview with Manu (Gavara-Nanu, Kavieng, 2019).

Therefore, civil society must be engaged as stressed by the UN-REDD Programme (Cadman and Reimer 2014). However, civil society lacks the capacity to conduct the awareness raising needed to spread this knowledge and needs government support. But even the government seems unable to do this. In a television news report, this was acknowledged by the former Climate Change Manager who stated that the CCDA found it hard to bring this information to the people because of a lack of funding (EMTV 2015).⁴⁴²

As shown in this chapter, villagers do not have access to information and therefore must rely on and trust people who speak (English) well and carry some type of authority. Conducting this awareness would allow the people to demand transparency and accountability, since these must go hand-in-hand for the scheme to work.

6 Summary

This chapter has highlighted several facts. Most importantly, it has provided no confirmation to the theory that OC will venture into REDD+ (at least not in New Ireland) as it appears there is no OC activity (except for illegal logging) being perpetrated there either by raskols or Asians, or a combination of both. Instead the fieldwork findings support the prediction that there will be extensive carbon cowboys' infiltration. Since there have never been reports of OC activity in the province, this state of affairs is likely to continue, even with the possibility of REDD+ being established. There is no rationale for OC elements to enter the province to infiltrate REDD+, particularly when there is no clear commodity to acquire.

Having arrived at this first conclusion above and based on the significant facts presented in this chapter, I draw other inferences backed by the first-hand fieldwork findings, most of which are applicable for New Ireland, though some generalisations can be made. It is noted that by late 2018, I had formed the view that a new category of likely fraudsters in the REDD+ scheme had arisen, namely local New Irelanders, who I assumed were attempting to use the carbon trading concept to elicit confidential information from New Irelanders, especially villagers, such as bank accounts numbers, from other locals and possibly to procure some type of payment from them by using a

⁴⁴² The then Manager, when interviewed by PNG news in 2015, also stated the problem of translatability was extremely difficult since PNG has over 800 languages. Interview available at: <https://www.bing.com/videos/search?q=png+office+of+climate+change&&view=detail&mid=29EB07FA9F9347468FCF29EB07FA9F9347468FCF&&FORM=VRDGAR>.

fictional American. This assumption was based on the information I had acquired from Masa and Anek in late 2018, the IPA online searches that confirmed the ownership of New Ireland Woods Limited (and showed that there was no company called New Ireland Hard Timbers), and of discussions with other participants (such as Solo), who mentioned a person from the area, was travelling around New Ireland, drumming up support for carbon trading. However, that person did not seem to have any in-depth knowledge of carbon trading. This earlier assumption was proven not to be, after it became clear in early 2019, that NIHT were the carbon cowboys. The fieldwork data, along with reported cases of carbon cowboys in other parts of PNG, demonstrate that there are some common traits with similar types of carbon cowboy incidents in other parts of the world. In particular is the use of the media to market and stage signing ceremonies to attract investors. The fieldwork findings also corroborate most of the areas of concern highlighted by Global Witness (2011), INTERPOL-UN (2012) and other scholarly work on carbon fraud (Martin and Walters 2013; Gibbs and Cassidy 2016).

It is apparent that there is ineffective activity monitoring of foreigners in the province. This occurs because the Climate Change Office within the New Ireland Provincial Government is ineffective, while the NGOs and civil society based in the province have very little knowledge of carbon trading and REDD+,⁴⁵³ with nothing being done to educate the people about the benefits or dangers of the REDD+ process. Further problems in the REDD+ system are compounded by the host province, which has a provincial government with very weak governance systems headed by a very weak Governor's office. A contradiction from this government is evident given it has stated that it will place a moratorium on round log exports yet it has not taken any steps to prepare for this. The provincial government's lack of will, or its willingness to turn a blind eye, is suggestive of a corrupt system. In some instances, it has vigorously opposed the logging projects before suddenly allowing them to continue. Past and present New Ireland provincial governments have displayed inconsistent priorities for

⁴⁵³ One employee I interviewed of a Kavieng NGO, the Wildlife Conservation Society (WCS), stated they had secured funding to conduct a REDD+ demonstration activity project in New Ireland and another province. It seems the awareness raising did not occur, or that the funding was not enough. Issues concerning REDD+ are handled by another WCS branch office, which is based in another part of PNG. The WCS has produced a report on REDD+ abatement levels in PNG.

development and environmental conservation, and this type of inconsistency has confused the province's population.

Despite the national government's previous stance banning private REDD+ projects, carbon cowboys are active in PNG. The harm resulting from the activities of these carbon cowboys cannot be underestimated. Indigenous people are coerced to expect and rely on expectations of large sums of money. For PNG, land disputes can lead to serious problems, including tribal fights and death. This is how serious the fraudulent actions of illicit networks like NIHT can be to forest communities. Spreading lies and creating expectations of huge wealth can create divisions among the people between those who believe NIHT's promises and those who do not. As occurs in other resource projects in PNG, landowners can fight each other or ask the court to make declarations over ownership, but even with such orders, rarely does that settle the matter. A loss in court can result in tribal fights and requires more allocation of resources by law enforcement to quell the fights and monitor the situation until mediated.

What is needed, though, is for more awareness to be conducted on REDD+ and carbon trading. Villagers in central New Ireland were in favour of carbon trading but had no knowledge of how carbon trading or REDD+ actually works and seemed more interested in learning about how they would receive payment. Any future awareness or education in New Ireland (and probably the rest of PNG) regarding climate change, REDD+ and carbon trading must utilise interpreters and audio-visual aids to improve the public's understanding of the key concepts of carbon trading, climate change, REDD+ and carbon fraud (including OC). Documentation and awareness raising must be conducted in the recognised language of the target area, whilst reading and audio-visual materials should also be produced in the area language. The language barrier will be the biggest hurdle in PNG, unlike in other REDD+ implementing countries, which might possess a single or a few languages. In these events, the UN should be more active and provide a mentoring and monitoring role and have a larger say in directing how the schemes are implemented.

Owing to the small number of formal interview participants, this research does not represent a comprehensive account of the views of the landowners in central New Ireland and in PNG. Areas for investigation that this thesis could not cover include documenting whether there is a likelihood of other notable crimes of misappropriation of funds, misreporting of emissions and tree stock, and deliberate miscalculation of

emissions. Since no progressive REDD+ project was studied for this research, these areas could not be analysed; however, they could be in a comparative study with an existing REDD+ project in PNG. Work would need to be done in the south of the island, where NIHT has claimed that a clan is already receiving millions of kina from their involvement in carbon trading projects with NIHT. Exploratory work would also need to be conducted at the Wettin Valley, Lak, Southern New Ireland, which was the first REDD+ pilot project in PNG, to determine why the project failed. The answers might shed light on the issue of awareness or funding needed from the CCDA. Just as important is the need to conduct interviews with representatives of line agencies, such as NFA, the police (to measure the extent of OC) and the CCDA (to determine the full extent of REDD+ activity in PNG).

In the future, it would also be fruitful to study whether people support logging or REDD+ and whether the logging companies have become directly involved in REDD+ schemes. A future longitudinal study, using the data from this work as the starting point, would be highly beneficial, especially if the same people can be interviewed again to ascertain whether they have obtained a better appreciation of the topic and to examine the state of affairs in New Ireland's REDD+ schemes. Gathering data from such a study could further reinforce the areas for concern and generate new findings to inform detection and prevention. The next chapter discusses prevention techniques and then concludes the thesis by incorporating the findings from this discussion chapter.

VII CONCLUSION, REMEDIES & FUTURE DIRECTIONS

The previous chapter presented the fieldwork data and highlighted some common denominators of how carbon cowboys, in conjunction with corrupt government officials, infiltrate the REDD+ schemes. Using Levi's (2008) scripts on fraud, it was established that it is unlikely that strictly OC syndicates will disrupt, infiltrate or manipulate REDD+ schemes. Instead, the (limited) evidence collated has shown that carbon fraud is likely to be perpetrated by white-collar and blue-collar individuals and networks. Based on the fieldwork undertaken in New Ireland and the previous cases involving carbon cowboys in Peru, the Philippines and other parts of PNG, as canvassed in Chapter IV, carbon cowboys are the most likely offenders in REDD+ schemes.

In this chapter, an exploration is undertaken of prevention techniques that might provide a starting point to combat carbon fraud. This is done by recommending changes to alter the environment in which the fraud might occur. According to the crime scripts developed in Chapter V, to commit carbon fraud in REDD+, the offender must physically travel to a REDD+ country, travel to the target village(s), meet with customary landowners, obtain their signatures (and any footage), then depart the REDD+ country before marketing the secured signatures and footage to prospective investors, including placing the material on their websites. This chapter utilises those scripts for crime prevention through situational crime prevention (SCP). The chapter also explains the importance of attaching this protocol to green criminology; carving out a place for *climate change criminology* as a distinct area in the field that can help identify and combat associated environmental crimes.

I begin this chapter by briefly looking at environmental crime before defining 'carbon fraud' and stimulating discussion by attempting to categorise it in the field of criminology. The previous chapter demonstrated how under the voluntary REDD+ scheme in New Ireland, carbon cowboys will deal directly with customary landowners, firstly through a local landowner company, and that the LLG is the only government body or agency that will be involved. Using law enforcement and the wider criminal justice system might limit any possibility for fraud. Therefore, what is needed is a mechanism that not only combats carbon fraud in government systems but also at the grassroots community level. The following outline of SCP is presented as a compressed and basic overview only, highlighted for future investigation.

A Defining Carbon Fraud

As Williams (2006:316) noted, an indigenous community may have little regard for a large industrial disturbance but view the destruction of a sacred site by minor oil pollution to be far more damaging. Correspondingly, the types of harm that are prominent to nationals may not constitute harm under Western standards. As noted by Clay (1977) when discussing the translatability of the perspectives of New Irelanders, it is difficult (and probably impossible) to translate the loss suffered by a national into a Western view. Harm or loss from indigenous perspectives may not be quantifiable since some losses are immeasurable. Examples are loss of traditional knowledge, practices, stories or legends, and customs, and desecration of sacred sites and burial sites, which are foreign concepts for Western perspectives to fully comprehend. These types of views were expressed by interview participants during informal discussions when many of the landowners raised concerns over the destruction of their sacred *hausboi* sites, *masalai* sites and removal of the *gorgor* by Asian loggers without discussion, apology or appropriate compensation. This issue regarding these types of 'traditional' harm was raised as much for discussion by the landowners as was the issue of non-payment or delay of their royalties. Therefore, I found that when discussing REDD+ issues it was important not only to record issues regarding the economic or benefit-sharing process in REDD+ but also to record local communities' views on environmental harm.

Environmental crime usually comprises those actions and omissions that are deemed illegal by the state (White 2011). However, often what is held to be illegal by the state fails to take into account the harm against non-humans and therefore fails to provide appropriate penalties and remedies (White 2011). White (2005:278) grouped environmental issues into three different types of harm. The first group is known as 'brown' issues, which denotes issues related to urban life and related pollution, such as littering, air pollution and noise pollution. The second group is termed 'green' issues; these issues relate to wilderness and conservation. The last group is called 'white' issues, and it refers to the impact of technology and scientific work. According to this classification, the prevention of illegal logging and REDD+ fraud will fall under the 'green' issue group because it concerns the wilderness and conservation. Since REDD+ connotes conservation methods according to the '+' sign, this grouping is apt. This also means carbon fraud in REDD+ can be considered under *conservation*

criminology (Lynch, Stretesky and Long 2018). One might also classify it along with the third grouping since REDD+ is also based on scientific analysis of climate change. Carbon fraud in REDD+ can be considered under green criminology given that REDD+ focuses on the preservation of rainforest and land. Already, some countries are implementing this path by banning deforestation.

Still, there are evolving crime categories that require consideration, like ecological or eco-global criminology (White and Halsey 2006; White 2011), conservation crime/criminology and invisible crime (Herbig and Joubert 2009). Eco-global and conservation criminology are concerned with issues regarding transnational ecological harm and with determining justice for the harm caused to all eco-systems, including humans (White 2011). In formulating justice for the harm suffered, eco-global criminology requires social change by demanding that it is only through the people that change will occur. So, for example, climate change action has been brought about by many different groups that have forced countries to address this issue. This has culminated in the *Paris Agreement*. Recognising the international perspective or transnational nature of these types of harms, eco-global criminology demands an international response from non-government actors, which is transnational activism itself. This is extremely important where governments and corporations do not do enough to address ecological problems when conducting business activities that result in environmental damage, which are conducted in the name of 'progress' (White 2011).

With regards to climate change, White (2011:39-41) stated there are four instances when social conflict related to climate change will arise. These are (1) conflicts over environmental resources, (2) conflicts linked to global warming, (3) conflicts over differential exploitation of resources and (4) conflicts over transference of harm. The last category has been used to describe crimes that allow the release of toxic air pollution that destroys the ozone layer or that is invisible and transcends international boundaries and jurisdictions. It has also been used to describe government and corporate financial crimes (Minkes 2010).

By grouping environmental harms in this manner, White (2005) overcame the generalisation of environmental crimes and invokes ideas for possible responses to prevent environmental victimisation (for example Herbig and Joubert 2009; White 2009, 2011:19). Since most environmental laws are enacted to prevent and minimise damage to the Earth and rather than humans (Williams 2006:313), it is important to develop a

classification of carbon fraud to cover possible victims. This classification allows us to take the first step towards developing a plan for crime deterrence, since crime prevention necessitates specification of the crime (White 2008:3). Regarding environmental crime prevention, White (2008:2) stated that it is connected to ecophilosophy, such that anything to do with the environment must entail consideration of ecological disturbances and this is directly connected to human and animal interaction. So, for example, to prevent poaching of ivory, human contact with wilderness areas could be curtailed, monitored or simply banned. This decision would affect a great number of people, the most affected of which would be the villagers from the area, and then tourists, which has a ripple effect on the local and national economy. Hence, any effort to protect the environment should be made without placing human interests at risk.

Identifying the harm caused by carbon fraud will in turn lead to identifying the appropriate responses that will combat carbon fraud. This determination may allow us to delve into possibly predicting the behaviour of likely offenders, as well as explaining and controlling their actions (Gottfredson and Hirschi 1990:185).

So what is carbon fraud? While the term has been used routinely by the media and academics (Walters and Martin 2012:6; INTERPOL 2012; 2013; Haque and Islam 2016; Deloitte 2009; Europol 2009; Frunza 2013; Murray, Lenzen and Murray 2014; Corporate Watch 2010), to date, there does not seem to exist an official definition of this term. Over the course of writing this thesis, I have coined a lexical meaning considering the literature, the fieldwork data and the various instances of fraudulent activity committed during the course of any type of carbon trading transaction, as canvassed in Chapter IV. We know that carbon fraud was used to describe the theft of carbon credits by European OCGs in the EU ETS; that it was used to describe the VAT fraud committed in the numerous European carbon registries by illicit networks based in Europe; that the term also covered the false and under-reporting of emissions by car manufacturers Volkswagen and Audi in Germany; and finally, that it described the fraud regarding the coercing of non-English speaking indigenous forest landowners of Peru, the Philippines and PNG to sign power of attorney documents—effectively to hand over their land rights under false promises—for a REDD+ project. All these cases have been described as cases of carbon fraud. I suggest that using one single term for all *fraudulent* activities connected to carbon fraud will provide the first step towards countering the associated offending acts. Hence, my definition of carbon fraud is:

any type of fraudulent act or omission associated with carbon emissions trading activity knowingly committed, either directly or indirectly, by a person, group of persons or corporate entity, against another person, group of persons, corporate entity, country or animal that results in monetary or any tangible benefit to a person, group of persons or corporate entity for which it was not intended.

This definition might be modified in the future as more cases of carbon fraud are discussed and dissected.⁴⁵⁴ The definition means that an animal or a nation cannot commit the offence but can be victims of carbon fraud. This definition ensures that the victims of carbon fraud are wide ranging. Settling on the above definition of carbon fraud allows for the formulation of preventative action.

Larmour (2011), when discussing corruption in REDD+, suggested that the REDD+ scheme be run by a completely new agency and not an existing body that has been linked to corruption.⁴⁵⁵ For PNG, this may be untenable. The CCDA, while a 'new' agency in the sense of its name change, is still run along the same lines as the two previous climate change offices. The minister formerly responsible for that office has been implicated in dubious deals, along with the employees of the same office. A change in responsible agency will still see that new body works alongside the NFA and other agencies and departments that are highly corrupt because the current forest and conservation policies are all tied in with REDD+. Working with these bodies and the same people might be inescapable. This suggested avenue to escape corruption is extremely limited, if not non-existent in PNG. A rotation policy and training of staff is also advocated, but the complexity that encourages corruption (Larmour 2011:165) is the hindrance that will likely see fraud being committed on some level.

Determining the exact avenues that provide the opportunity for fraud to occur is pivotal to intervening and preventing the crime by removing conduits for fraud. This might be achieved by employing foreigners trained by the UN in every step of the process of finance and verification. However, the sheer magnitude of training enough staff for the PNG REDD+ scheme, or even all REDD+ implementing countries, renders such training logistically impossible and expensive. It would go against the idea of empowering

⁴⁵⁴ This definition could be applied in legislation. It could also be defined as "an act or omission that is designed to exploit a carbon trading regime to defraud its principals, including its intended beneficiaries, stewards, wildlife and natural wilderness, against its legislated purpose" (Willem de Lint, 2019).

⁴⁵⁵ Noting that fraud and corruption in REDD+ is highly likely, SCP is a possible tool since it can be utilised for crime *and* corruption (Graycar and Prenzler 2013). The Corruption Vulnerability Assessment (CVA) is one method to combat fraud *and* corruption. It provides an enhanced due diligence, in particular for those who will be at the forefront of handling climate funding. Intertwined with the criminality that accompanies actions in carbon fraud are the corrupt acts that facilitate the offence, as canvased in earlier chapters. Therefore, such a problematic solution should encompass anti-corruption techniques too.

nations to look after their own schemes and would likely be viewed by countries as an infringement of their sovereignty.

Global Witness (2011) urged the donor community to take the following specific steps when providing support for REDD+:

- 1) Provide adequate financial and technical support to REDD+ countries to build law enforcement capacities and improve governance, making use of benchmarks to enable monitoring of improvements.
- 2) Promote reforms in law enforcement and governance, and consider other ways that existing aid and funding programmes can be used to ensure appropriate REDD+ implementation.
- 3) Address their own role in encouraging corruption and illegal behaviour, including eliminating the import of illegally sourced timber and prosecuting their own citizens who offer bribes to government officials abroad.

These suggested steps promote good governance and encourage prevention of corruption in the schemes.

According to Halsey and White (2009:37), when considering any type of environmental harm, it must be done within three broad philosophical frameworks, which are the anthropocentric, biocentric and ecocentric perspectives on the human and environment connection. Since carbon fraud is an emerging offence, it is important to consider these frameworks, which set the foundation for formulation of the preventative approaches.

The ecocentric perspective subscribes to the notion that a balance is to be struck between economic sustenance on the one hand and ensuring the survival of all living things on the other. This balance is to be tailored by developing rules to allow this. Where there is an economic need to commence or continue environmental exploitation but there are serious concerns about the lasting effects of that exploitation, ecocentrism holds that the potential exploitation be halted until there is solid (scientific) evidence to show the effects. This view approaches the economic gain from a cautious angle, the 'precautionary principle'.

The REDD+ scheme is based on conservation and as such it could be viewed as biocentric, but when considering that economic benefit is the only reason that preservation and conservation is driven, then really it is ecocentric in nature. This notion concurs with what the REDD+ scheme aspires to. Long-term views on sharing

the Earth with other humans and non-humans in a sustainable manner is what many would completely aspire to and is the responsible thing to do.

Carbon fraud can be categorised under a number of overlapping offences, harms and crimes. Should it be treated generally under the scope of green criminology or is it a specific type of environmental crime since it is concerned with the environment?

Carbon fraud has been committed by OCGs, so it also has an OC perspective. It revolves around the major topic of climate change, so it is a transnational crime issue too (Wright 2011). There are some instances where state–corporate crime might occur, which can fall under the umbrella of carbon fraud and result in the removal of any possible state-imposed penalty. Is it even a crime that is punishable by the state?

Should carbon fraud be treated simply as ‘fraud’, which is an offence punishable in most countries? This allows it to be classified as white-collar crime (Gibbs, Cassidy and Rivers 2013), especially since for REDD+ it concerns the manipulation and theft of money and in some cases land grabbing and other white-collar crimes. Meanwhile, for other carbon trading platforms, it concerns the manipulation of their operating systems in order to steal carbon credits or money, or understate the amount of released emissions. If the latter is concluded, it removes any issues surrounding enforcement and penalty, since existing laws can penalise the offender. It is perhaps a combination of crimes placed under this broad definition. From the offences committed by OCGs in the EU ETS to the false portrayal of fast money given to indigenous forest communities in PNG, the category of white-collar crime is clearly a good fit. Gottfredson and Hirshci (1990:184-185) confirmed the wide scope of situations in which white-collar crime can be committed, either by respectable employed people and by unemployed people living in relative poverty. Carbon cowboys in REDD+, such as NIHT, are not strictly career criminals; but the manner in which they conduct their business is, I suggest, highly fraudulent. This does not necessarily mean that their actions are unlawful under PNG’s criminal law. This is why, I suggest, carbon fraud needs to be specifically legislated against. The table below shows categories of harm unique to REDD+, as canvassed in Chapter IV, which can be dealt with under PNG’s existing criminal laws. Some of the harms overlap into different categories and some are not strictly criminal acts under PNG’s *Criminal Code*:

Table 15: Harm in REDD+

Harm specific to REDD+	Categorising the harm: criminal or civil	Criminal Code Act 1974
Land grabs (displacement through promises)	Civil (Torts, Human rights)	Not applicable
Land grabs (displacement through intimidation and assault)	Civil (Torts, Human rights)	Not applicable
Unfair Benefit-Sharing Agreement with customary landowners	Civil (Torts, Commercial)	Not applicable
Unfair Power of Attorney Agreement with customary landowners	Civil (Torts, Commercial)	Not applicable
Diverting (theft) of REDD+ money	Criminal (Stealing, Misappropriation)	Section 372 / section 383A
Illegal logging under the pretext of conducting REDD+	Civil (Torts, Trespass)	Not applicable
Coercion of government officials	Civil (Fraud under the civil burden of proof)	Not applicable
Bribery of government officials	Criminal (Official corruption)	Section 87
Falsification of documents to appear as legitimate REDD+ projects	Criminal (Forgery and uttering)	Section 462 / section 463

This table illustrates that much of the harm specific to REDD+ is civil in nature and not criminal. Since the harm suffered through illegal logging, under the pretext of REDD+, is extreme and can be perpetrated by sophisticated OCGs, it is unfair that redress is only possible through the civil courts for what are, essentially, sophisticated criminal acts. I argue, therefore, that carbon fraud should be legislated as a criminal offence to allow not only the state to take action and bear the costs of prosecuting such cases but also the criminal courts to impose criminal penalties befitting the magnitude and severity of harm suffered from the crime. Accordingly, carbon fraud may be more aptly classified as white-collar crime since, apart from offences by TOC groups, the existing cases of fraud have been committed by persons of high social status, holding senior positions in companies. Their general characteristics before engaging in carbon crimes naturally denoted a high level of respectability afforded to them (Gottfredson and Hirschi 1990:184).

B Situational Crime Prevention

SCP was developed in Britain by Ronald Clarke and Derek Cornish (1986). According to Ekblom (1994), crime prevention is 'the intervention in mechanisms that cause criminal events'.⁴⁵⁶ Clearly then, the overall aim is to disrupt the links that join events leading to the commission of an offence. Cornish (1994) emphasised the use of situational prevention to combat crime generally. It has been used to combat OC specifically (Cornish and Clarke 2002; von Lampe 2011; Leclerc 2013), including OC in illicit environmental markets (Graycar and Felson 2010; Huisman and van Erp 2013; Rowe et al 2013; Gibbs and Pugh 2017; Lynch, Stretesky and Long 2018). What makes the exploration of SCP interesting for this thesis is that it is a departure from the usual academic and political discourse on crime control in PNG, which has focused on violent crimes, street crime, tribal fights and gangs. The attraction to SCP is its flexibility: not only can it be incorporated into policing but it is also capable of being incorporated into any type of managerial structure sufficiently resourced to implement it.⁴⁵⁷ SCP provides a practical method that might provide a solution not just for PNG but also for contributing to regional stability in the Pacific region. SCP can be utilised by various actors and systems and not just by law enforcement bodies. Indeed, private institutions can employ SCP where appropriate logistics are present (Clarke 1997). This means a community grassroots effort can engage in SCP rather than rely solely on law enforcement, which many times is unable to perform because of logistics and funding constraints.

One of the earliest texts on crime prevention in PNG is a brief paper by David Biles (1976), which recognised that limiting opportunity and involving community is key to disrupting criminal activity (a third option concerned the courts imposing certain guidelines).⁴⁵⁸ These two areas possibly hold the key to limiting carbon fraud in REDD+.

⁴⁵⁶ Combining SCP with Ekblom's (2011) 5Is framework could assist in combating carbon fraud, especially where this combination has been suggested to be effective in the context of organised crime (Rowe et al 2013).

⁴⁵⁷ Thus, for REDD+, this means that the involvement of the government bodies; in particular, the NFA and the CCDA are involved from the very beginning in managing the fund to ensure they are utilised for the exact purpose.

⁴⁵⁸ Biles' reasoning was in the context of street crime in urban areas, his focus was on Port Moresby, the capital city. Biles determined as key to crime prevention: opportunity, motivation and court action.

Clarke (1997:4) defined situational prevention as comprising measures that reduce opportunities that are (1) directed at highly specific forms of crime, (2) involve the management, design or manipulation of the immediate environment in as systematic and permanent a way as possible, and (3) make the crime more difficult and risky, or less rewarding and excusable as judged by a wide range of offenders.

Any type of SCP framework must be applicable to illegal logging and REDD+, since both are closely tied. The prevention of organised timber theft and related corruption therefore provides an avenue for possible replication onto the closely related REDD+ scheme (Graycar and Felson 2010). White (2008:2) referred to this as 'environmental crime prevention', noting that various considerations must be made to achieve prevention because of the possible global harm towards humans and non-humans. Unlike SCP, which inevitably curtails certain liberties of humans, the effects of environmental crime prevention can be much more profound and affect an extremely large proportion of any given population set.

Four key principles must be addressed when seeking to utilise SCP (Clarke 1997):

- 1) a theoretical framework based mainly on routine activity and rational choice theories
- 2) a standard methodology based on researched action
- 3) a set of opportunity-reduction methods
- 4) a body of elevated practice including studies of displacement.

Gibbs, Cassidy and Rivers (2013) studied routine activity theory as a means of combating fraud in the carbon markets. Noting from earlier literature that much speculation has been on the carbon market, they examined those fraud cases that occurred in the EU ETS. To clamp down on carbon cowboys, crime scripts focused on the entry ports could be developed. The airport is the most likely port of entry. It is the easiest and also the safest for carbon cowboys when entering a REDD+ country, particularly for the first time. Accommodation will be in a hotel or established lodging place as they sort and plan their travel. After making contact, depending on their target area, they will hire their mode of transport to travel there and probably purchase fuel as well. They will stage the event and will not stay too long with the community. They may fund the event itself and take pictures or record it as well.

As pointed out by Clarke (1986), SCP examines the social organisations that play a part and not the criminal justice system such as the courts or law enforcement departments. Bearing this in mind, SCP against REDD+ carbon fraud can only be determined involving the organisations, individuals and groups that play a role in REDD+ projects in PNG.

Limiting the opportunity and increasing the risk of detection at key points of the funding process could be effective in preventing fraud (Clarke 1997). Addressing carbon fraud prevention concerning the landowners is more difficult and variable since there will never be the same point of contact, except in limited instances. Because villagers are mobile, it is impossible to determine where prevention can be most effective. Therefore, the best option is to control the areas that can conclusively be regulated. These are the points managed by the different levels of government, which will always involve checks and balances and leave a paper trail.

Since SCP departs from most criminological theories by not focusing on the criminal but rather on the environment in which the offence was committed (Clarke 1986), an analysis of that environment is necessary to identify the steps taken to commit a crime. The absence of a capable guardian over a suitable target will draw the criminal (Clarke 1997:2). Thus, when the 'adequately motivated' offender meets the 'sufficiently suitable' target, in the absence of guardianship or salience handling over the target, the crime will occur (Tilley 1997:101). Possible perpetrators come from diverse backgrounds and nationalities. Therefore, noting the difficulty in identifying the likely perpetrators and having arrived at the preliminary finding that the existing OC networks and raskols in PNG are extremely unlikely to commit carbon fraud, it appears that analysis of the financial process in REDD+ is more appropriate for developing SCP methods in a developing country.

The carbon cowboys or criminals are likely to be from developed nations. They will bypass government departments and line agencies to make contact with the landowners and promote their schemes directly to the indigenous communities. Most likely these carbon cowboys have falsified the purpose of their visit to the REDD+ countries, perhaps entering under a tourist visa, which for most countries is the fastest and most convenient visa to apply for. It is also likely that they have dubious business and criminal pasts in their home country and most likely have been involved in failed commercial ventures before their move to the REDD+ scheme. In the REDD+ country,

they present themselves as knowledgeable in REDD+ and hold formal signing events or ceremonies to signify the relationship between themselves and the landowners. However, the documents that they present to the indigenous people are written in the English language and they are never translated into the local language.

(a) Prevention at ports of entry

Border security and immigration officials must be involved in SCP, because the customs desks at the entry and departure ports where customs officers process passports and visa on arrivals, allow legal scrutinising of foreigners on application for visas. They do so from stamping foreigners' passports, examining declaration cards and scrutinising foreigners' travel documentation and purpose of visit. The difficulty lies in monitoring foreigners' sticking to their travel itinerary while they are in the country. This difficulty might necessitate removing visa-on-arrival arrangements in countries that offer this to short-stay visitors. This would allow the processing function to rest with the consulate or embassy outside the REDD+ country by screening all foreigners *before* they enter the country. If they are to visit the REDD+ areas, those foreigners will be obvious, and by conducting awareness early on, their presence can be reported, and they will be removed. Effective questioning can lead to this. For instance, many carbon cowboys are likely to be on tourist visas because if they were to enter on a working visa, they would be required in most countries to produce their work identification, contract and other work-related documents. With a tourist visa, a strict itinerary must be produced detailing their places of visit and intentions there. They must also validate the purpose of a visa, including the registration of carbon activity with the CCDA and the registration of foreign entities at IPA.

However, the issue for PNG is that there have been no evaluations of SCP methods to apply to carbon fraud; hence, the difficulties that might be encountered for implementation are not known. Nevertheless, because of the infancy of REDD+, this absent aspect of research is to be expected at this stage and is an area for future investigation.

In PNG's context, considering that the NFA is routinely accused of corruption, I suggest that the use of forestry and the police, at least in PNG, should be limited because of their propensity to corruption and high likelihood of being bribed by carbon cowboys or other illicit networks. The Customs office in comparison, is unlikely to be (as) corrupt and this has much to do with their environment of operation, which is conducted in the

open and can be scrutinised by a large number of people from other countries, such as when processing passports in airports. The bias that forest officers who are based at logging camps have towards the logging company is apparent.⁴⁵⁹ Their government pay is supplemented by the company developer, who also houses and feeds them at times. Therefore, the likelihood of the officers being biased towards the logging companies operating under the pretext of REDD+ is strong, and certainly they are conflicted in their duties since there are no regular checks or patrols for the logging operations to ensure environmental compliance is adhered to.⁴⁶⁰ This supports Tilley's (1997:103) assertion that the proximal conditions need to be disrupted and contorted in order to prevent crime through the opportunities and corrupt associations formed over time.

By analysing the risk and measuring it, steps can be formulated through receiving answers to particular questions framed in an *integrity framework* (Graycar and Prenzler 2013:59). Important questions unique to REDD+ might be:

- What are the carbon fraud risks?
- What are the opportunities for the fraud to occur?
- What controls are in place to identify and manage the *potential* for fraud *before* it occurs?
- Are there resources to identify the fraud risks?
- Who can identify the fraud risks? Would it be government organisations, NGOs or villagers?
- Are government, NGO or company staff properly trained to identify these risks?

Based on the data, the answers are as follows:

- The risks to carbon fraud include all those risks outlined in various reports, such as Greenpeace (2010), Global Witness (2011) and INTERPOL (2016).
- The opportunities for fraud in REDD+ are through two avenues: the voluntary market and the UN-REDD Programme.
- There are no controls in place to identify and manage the potential for the fraud before and during the time it occurs.

⁴⁵⁹ This was observed on several occasions.

⁴⁶⁰ Interview with Kade (Gavara-Nanu, Kavieng, 2018).

- There are no resources to identify the risks.
- Anyone can identify the risk. This should be concentrated in customs and border security.
- No single government agency, except probably the police in the context of wider fraud, is trained to identify the risk.

As seen in Chapter IV, a similar pattern is followed by the carbon cowboys *before* and *during* obtaining the signatures of landowners. Disrupting the steps will likely prevent entry into the country by these carbon cowboys. Coordinating the customs and immigration and border control agencies could render this disruption effective immediately, since it is known that the carbon cowboys operate mostly on their own; therefore, preventing their physical entrance into the country can be achieved. Key data that would have assisted this research was to have determined how the NIHT personnel arrive at Rabaul in the first place and what visa they used to enter PNG.

(b) Prevention by indigenous communities

What then is the advantage of involving indigenous communities in detecting possible carbon fraud? For voluntary REDD+, the indigenous communities may be the first to notice the potential for illegal activity on their land. Encouraging their involvement would support them to actively oppose and report suspicious activity likely to lead to the commission of a criminal act. This would be beneficial to REDD+ countries who lack the capacity for effective monitoring of criminal networks by formal law enforcement bodies, for example, monitoring the arrival of foreigners in a village. Because of the remoteness of REDD+ project locations, the involvement of the local community is vital to monitoring. For parts of PNG, this could be problematic, since tribal and clan allegiances might influence any decision to determine whether any actions should be taken. Wantokism and the *bigman* mentality would be influential, and communities may not want to take action, or they may be willing to ignore any type of fraudulent activity because of their relationship with the offender(s). Moreover, as seen with NIHT, the *wantoks* may be sitting board members on the landowner company that facilitates the carbon cowboys' trip to the villages.

When educating communities about carbon fraud prevention, clarity and translatability must be provided not just for the scheme itself but also for criminological terms relating to carbon fraud and associated crimes. Such clarity and translatability must be conveyed before REDD+ projects begin, to allow villagers to comprehend all aspects of

the scheme. This is the starting point of indigenous involvement in carbon fraud prevention, since one of the ultimate aims of green criminology is to ensure the ordinary layperson is able to comprehend the impact of environmental harm in order to avoid it. This is particularly important for green criminology since environmental harm can be largely avoided if the public understands the causation and harm inflicted by actions.

(c) Prevention by rural Local-Level Governments

Preventing carbon fraud in the government offices and at the community level requires identifying the 'choice-structuring properties' as key to disruption (Cornish and Clarke 1989:108). These properties are those innate features that make particular types of crimes so attractive to particular individuals.

The diversion of REDD+ financing through the UN-REDD Programme by corrupt government officials is highly probable. The funds are sourced externally from the UN's Green Climate Fund, or other donor fund or country. The money goes to the Department of Finance, which then releases it to the CCDA. The CCDA Board then decides how to utilise the money. Hence, this likely fraud scenario is activated when the externally sourced funds enter PNG. The *Public Finance (Management) Act* provides the applicable provisions for disbursement of donor funding; however, despite the Act, successive governments have bypassed the process and diverted funding based on 'priority' tasks, which are frequently ad hoc. This represents an area open to abuse and has resulted in the COI into the Finance Department.

In this chapter, I have explored the usefulness and appropriateness of using SCP against carbon fraud, and I have applied it to the facts relating to my research. Owing to the infancy of this type of research, much of the determination and direction of the use of SCP has concerned areas that I observed and decided were needed the most in PNG. This might vary from country to country. However, the benefits of implementing SCP to persons *not* strictly from a criminal justice agency provided its attractiveness. As an international scheme, REDD+ requires delivery approaches that are as uniform in nature as possible across all REDD+ countries so that it can implement and thereby network and monitor the effectiveness of SCP for improvement. This is why SCP utilised by airport security personnel and indigenous people could be a successful avenue. It is largely a basic preventative approach to tackle a complex scheme. For indigenous people, the option to police the system themselves rather than under law enforcement may be more alluring.

These ideas offer practical solutions, but their practicality is problematic because they have not been tested, and therein lies the problem. Only through experience will effective mechanisms be identified. Unfortunately, this means fraud will have been perpetrated by this time and victims will have suffered what criminologists and policy researchers are attempting to prevent. The least that can be done is to minimise the fraud by providing some starting point for design prevention. It is not the intention of this thesis to provide a single answer, or even a series of answers, to the issues but to invoke further discussion since much of what is covered in this chapter is speculative and will require further empirical research, especially in the area of state–corporate crime related to REDD+ projects. In the next chapter, I provide concluding thoughts on this research journey before offering encouragement and some direction for improvements in future research.

C Summary

This thesis has covered a complex and rapidly evolving topic concerning climate change and fraud in the REDD+ scheme. The research has confirmed that there are inherent problems in PNG's REDD+ system, which are attributed primarily to inadequate laws, lack of information dissemination to nationals and lack of initiative at all levels of government to address climate change in general. PNG's rampant corruption in its forest industry, coupled with this weak governance, casts serious doubt over the workability of the scheme.

The REDD+ scheme was introduced in 2005 and by that same year, the first case of carbon fraud was reported. It occurred in PNG, ironically the same country that, along with Costa Rica, had first proposed the scheme to an international body. That fraud was perpetrated by the director of the office responsible for carbon trade and the REDD+ scheme in PNG, along with a government minister who issued carbon certificates that were even signed by the Prime Minister. Later, they denied them to be of any value. These cases were canvassed in Chapter IV. By 2010, the first reports of carbon cowboys emerged from Peru, then later from PNG (as well as other countries). Since that time, despite all the well-researched international recommendations to safeguard the scheme, PNG has failed to act, and the schemes have basically remained stagnant. This places in danger not only PNG's schemes but also those in other REDD+ island countries in the South Pacific.

For example, in 2011, Global Witness made recommendations for the successful implementation of the scheme:⁴⁶¹

1. Incorporate mandatory auditing of REDD+ financial flows and transparent and publicly available registries of REDD+ finance and activities into national monitoring systems for REDD+.
2. Include civil society in policymaking and oversight of national REDD+ processes, for example through a formal role such as seats within a multi-stakeholder body responsible for the design and implementation of REDD+.
3. Establish broad-based independent monitoring capable of assessing performance and verifying governance reform. Importantly, ensure that carbon

⁴⁶¹ Global Witness (2011:2) has been actively involved in uncovering corrupt practices in REDD+ and in the forestry industry in Liberia, Cambodia and has conducted case studies in conjunction with other NGOs in Indonesia and PNG.

measurement methodologies and calculations are designed to be difficult to manipulate and easy to verify objectively.

4. Build capacities at all levels, including among civil society, within government institutions and in forest law enforcement to ensure all stakeholders can engage effectively in REDD+ design and implementation. For law enforcement agencies this includes improving international coordination, with neighbouring and regional countries as well as with timber importing countries.
5. Undertake law reform, with the law enforcement and regulatory community engaged in the design of national REDD+ programmes to avoid loopholes, prevent unanticipated illegal activity, and ensure REDD+ is practical and enforceable.
6. Establish independent conflict resolution mechanisms that are available at national and international level to hear complaints and address conflicts that arise between governments, communities and other stakeholders.

These recommendations provide safeguards to ensure REDD+ funds are used as intended. For PNG, this research and the fieldwork findings show that all six recommendations seem to have been ignored. PNG has not been able to track and acquit its spending of the donor funds (PNG Loop 2019); civil society does not seem to have a great say in REDD+ design; the law enforcement and regulatory bodies are not entirely certain as to what REDD+ is and, therefore, are incapable of detecting (and preventing) carbon fraud; and there is no conflict resolution available except for the court systems, which are not readily accessible to rural based villagers. Importantly, what is missing from these recommendations is the need for greater awareness and involvement with villagers.

Through the research I confirmed that organised criminal networks exist in PNG, including in the form of Asian logging companies; however, they are unlikely to be the most *direct* threat to the REDD+ schemes. My research findings from central New Ireland suggest that the biggest threat is from white-collar criminality. Because of the uncertainty of how the scheme is supposed to operate, carbon cowboys can take advantage of it and conduct their business in ways that suit their interests, even if that is fraudulent. NIHT is doing this and has the cooperation of low-level government officials (LLG officials). Whether this cooperation occurs in conjunction with the fraud is not known, but these officials have been able to represent themselves as having the full authority of government in order to appear to legitimise a project required by carbon cowboys. This false appearance persuaded many people at the grassroots level to consent to the private carbon trading projects. At least in the central New Ireland Province, there also may be an abuse of the *wantok* and *bigman* systems to avoid accountability and transparency. For example, many of the promoters of the carbon

trading project were encouraging their relatives to sign up simply because they were related or connected to them, even though there was no proper dissemination of information to the signatories. I suggest that my findings resonate with the challenges being faced by indigenous communities in other REDD+ implementing countries.

I have presented novel suggestions for carbon fraud detection and prevention, which were garnered from the facts I gathered from central New Ireland. However, it is fair to say that the discussion on prevention may carry little weight until more in-depth studies are conducted on carbon fraud. Through the research it can ultimately be concluded that, in the domestic context, the national government is the most important body to lead the way in addressing carbon fraud and improving the REDD+ schemes, but where the government is corrupt the REDD+ scheme will be hard pressed to operate legitimately, especially within the realm expected by the UN and donors to the scheme.

The research brings to light the disconnection between government agencies and departments at all levels, allowing those in government and the carbon cowboys to infiltrate the unaware and less formally educated rural communities. In this regard, a comparative case study in a South Pacific or Melanesian country would have added more credibility to the types of issues presented, although this might be difficult to achieve with PNG, which is regarded as too complex to fully understand (Dorney 2000) and therefore compare. However, a comparative study will still be useful in the future and can be accomplished by a larger research team with more planning and better funding. Questions should be asked such as to what extent does the language barrier restrict obtaining FPIC, does OC exist in the country such that it might pose a danger to REDD+, and are wantokism and the *bigman* mentality problematic to the successful implementation of REDD+? Noting that wantokism and the *bigman* mentality are present in other Melanesian nations, the answers to these questions may shed light on how to combat carbon fraud in the South Pacific or Melanesian region.

These answers are needed because the solutions to this problem are much bigger than any country can hope to solve independently. Indeed, such an internationally devised scheme must have an internationally formulated response taking into account the views of the indigenous people. Most importantly, developing the scheme requires raising the awareness of the rural communities. Unless these types of actions are taken, it has been suggested that the divide will grow deeper between the global North and South (White 2011:51).

What I have uncovered in central New Ireland is likely to be only a fraction of what is an ongoing problem, not just in PNG but on a global scale. Many of the target places for carbon cowboys are rural and isolated, where the population is largely oblivious to the clever manipulations of fraudsters, always with the promise of big money. This isolation is resulting in cases of carbon fraud in REDD+ going undetected and unreported. But if closer examination and ongoing monitoring of suspicious dealings of carbon cowboys with indigenous communities occurs, this may reveal an emerging and global crime trend. I suggest that carbon fraud in REDD+ is a much bigger problem than has been thought and has not been understood to exist at the global level, or if it has, it is not being seriously addressed. A global response, therefore, requires global efforts be made to eliminate the exploitation of indigenous communities posed by carbon cowboys from developed countries.

In relation to PNG, grand government corruption will allow fraud to be committed by people in authority in the government agencies that oversee REDD+. It is difficult to envisage how logging and REDD+ can be compatible in a country when one scheme is based on conservation and the other based on extraction. However, this is exactly what NIHT is advocating in their carbon trading project, concerning areas that are already legally under licence to another logging company. The hypocrisy apparent in PNG's national government pursuing both REDD+ and logging seriously undermines the national government's commitment to REDD+.

Carbon fraud, corruption and protecting indigenous rights in the scheme need to be addressed through cross-disciplinary involvement. The fields of climate change, economics and criminology must collaborate to address this for as long as the global North persists with carbon trading. Conservation of the natural environment must be genuinely pursued, and economic gain should be a secondary consideration where future lives are at stake.

APPENDIX I

APPENDIX II

APPENDIX III

APPENDIX IV



Picture 52: House at Karu



Picture 53: Log pond at Karu



Picture 54: Log pond at Karu (masalai area)



Picture 55: West Coast forest



Picture 56: Travelling during fieldwork in West Coast—2018



Picture 57: East coast to west coast road—Karu junction



Picture 58: Log pond, west coast—2018



Picture 59: Hardwood logs for shipment, west coast—2018



Picture 60: Vehicle bogged during fieldwork—2018



Picture 61: Kuleu, Pinikidu village, East Coast



Picture 62: Pinikidu - Tigak, East Coast



Picture 63: Beautiful Family



Picture 64: Traditional New Ireland dance



Picture 65: Pinikidu



Picture 66: Konos village, East Coast



Picture 67: Kapidan village, East Coast



Picture 68: Malom village, East Coast



Picture 69: Kono village, West Coast

APPENDIX V

Raskols are a menace to the PNG people, a constant thorn in the side of a nation with an abundance of natural resources striving for development. Raskol activity has a devastating effect on business in PNG. As a result of the volatility of the crime rate, businesses must give consideration to employing methods of crime prevention and factor in loss of business from criminal activities (Lakhani and Willman 2014c).

Businesses sometimes employ raskols to allow the smooth operation of business (Lakhani and Willman 2014d:17; Lakhani 2014); for example, most men who are employed in security as guards, help ensure their own raskol gang members do not target their employers (Schiltz 1985).

The documented studies of raskol gangs show them to comprise entirely males, who range in age from youths to middle-aged men (Schiltz 1985; Harris 1988; 1989; Goddard 1995; Dinnen 2001). Some raskol gangs, may employ the *bigman* mentality in their criminal pursuits (Goddard 1995) such that members want to be regarded as the *bigman* or leader within their gang or community. Once this status is achieved, they will be commonly referred to as *Fada* (meaning father), or Senior, or Big Boy, terms connoting respect and admiration (Reed 2011). The gangs do not necessarily have a hierarchy and can operate as a group, or have one leader, or several leaders (Harris 1988; Reed 2011). There is no regular elevation to these leadership roles, which seems to depend on age, length of time in the gang and bravado in committing offences (Reed 2011). The older men who have been with the gang for a long period of time or are able to control other gang members, are seen as leaders (Reed 2011).⁴⁶²

Raskols are not the 'reasoning criminal' presupposed by Cornish and Clarke (1986), especially with regard to fraud cases. They seek out 'sneaky thrills' (Katz 1988) to allow them to boast their bravado and increase their perceived masculinity amongst peers. Their primary aim seems to be to outdo other gangs in the complexity of a crime (Pacific Islands Report 1999; Reed 2011) or escape from a dangerous situation in order to boast and promote their own gang's name and show off their solidarity and prestige to their peers (Reed 2011).

⁴⁶² For example, in *The State v Endreka*, three youths were part of a five-man raskol gang that robbed on the highway a truck hauling store goods. In their allocutus, the youths stated that their reason for robbing the truck was that the older two gang members (who escaped police apprehension) had forced them to.

This fluidity in raskol life, also referred to as rascalism (Harris 1988; Nibbrig 1992; Goddard 1995; Luker and Monsell-Davis 2010; Lipset 2017), means it is quite easy for one to unwittingly associate with someone who is a raskol. Since raskols seem to be those mostly aligned with having a lower economic status. Association with raskols is frequently by relation. Schiltz (1985) examined the relationship of raskols to *wantoks*, showing how the former will utilise the latter for information, for assistance in committing crimes and for somewhere to stay. Nationals who have relatives who are raskols are resigned to having them as relatives or through marriage.⁴⁶³

For many men, even if they know there is an easier way of making money, albeit illegally, they might not pursue it until they either meet up with others or are driven to desperation (Goddard 2005; Reed 2011). Based on his individual in-depth interviews, Goddard (2005) revealed that the decision to join raskol gangs is not confined to a lack of economic opportunities. Raskols team up for a variety of reasons: they may be disillusioned after not being able to further their education;⁴⁶⁴ they may need to earn money to support their families (Schiltz 1985); they might only take part when necessary to supplement their formal income (Schiltz 1985) or to gather enough money to pay for their education expenses; or they may simply want to experiment with the raskol life before returning to being law-abiding citizens (Goddard 2005).

The desire for fast money, the excitement of taking part in committing a crime, the spending of the proceeds of crime for short-lived pleasure (Dinnen 2001) and the recognition received among peers and the community of being a raskol gang member (Reed 2007) are more alluring than holding down a regular job, which is sometimes considered mundane (Goddard 2005). One raskol gang member who was interviewed by Goddard was a university dropout, while another conceded he intended to train in accounting and management in order to run a profitable and sophisticated raskol gang

⁴⁶³ As an example of how raskolism can easily infiltrate everyday life, see for example the case of: In *The State v Vira Yaurabe* [2016] PGNC 71; N6253, where the prisoner stabbed her husband after a fight at the market. She pleaded guilty and on arraignment stated the following:

When we got married and were living together, he (the Deceased) was taking drugs and home brew. Sometimes he is a 'raskol man'. While we were living together, I gave birth to our first child. He would often get drunk then come home and beat me up. He drinks everyday and we always fight. My life was not good. After our second child, he continued to do the same thing. Even after the Police shot him in the leg, he continued to do the same thing. We left him and moved in with my parents but he continued to beat me up. He would also keep raskols in our house.

⁴⁶⁴ For example, in *The State v Joe Kovea Mailai* [1980] PGNC 33; N272, the prisoner was part of the street gang Mafia of Hohola and had resorted to breaking, entering and stealing after dropping out of school. He was from the Gulf Province and aged around 15 or 16 years.

(Goddard 2005:91). These findings corroborate those of Dinnen (2001) and Reed (2007), suggesting that over the years the motivations for joining raskol gangs are still the same and no evolution of these gangs has occurred (Katz 1988).

It is argued here that while individual raskols may aspire to joining foreign criminal networks, they are only instrumentalised by these entities or must leave behind the attributes of raskolism. The willingness expressed by some raskol members to Goddard (2005) to operate their gangs in a business-like manner means some raskols might be attracted to joining foreign criminal networks from whom they could learn the business acumen that many criminal organisations possess, such as the Triads (Booth 1999; Lo and Kwok 2017), Yakuza and the American Mafia (Follain 1995). The raskols' common way of disposing of the proceeds of a crime almost immediately, may attract those raskols wishing to accumulate their ill-gotten gains. Goddard (2005) found that none of the participants he interviewed who were convicted felons, had any bank savings accounts or held assets to display their accumulation of proceeds of crime. Instead, they were apt to spend the cash (if cash was stolen) or sell stolen goods and use the cash to buy beer and indulge in binge drinking sessions. Some would divide up cash among other raskol gang members, friends, family members and *wantoks* (Schiltz 1985). Two short examples are given below that illustrate that raskolism is extremely varied in PNG.

Uncle Karo

Karo is an uncle from my father's side of the family. From my knowledge, he had never been in trouble with the law, but in 2013, he took part in the biggest bank robbery in PNG, which was carefully coordinated with the guards, who escorted millions of kina in cash to PNG's Central Bank (The National 2014c). Prior to this robbery, I do not think other relatives considered him a raskol.⁴⁶⁵

⁴⁶⁵ Karo was part of the gang which conducted the Maybank Robbery listed in Table 4 below. *Thomas Karo v The State* [2018] PGNC 587; N7799.

Elmo

I went to high school with Elmo. He came from a good family. His mother was a nurse and his father a very senior public servant. His elder sister became a doctor. After high school he was unemployed for a few years before joining the police force. If one took away the police uniform, you could classify him as a raskol. He was involved in many illegal activities, providing firearms and communicating with other raskols on a regular basis, which occurred once in front of me in public. Despite the conflict between his criminal connections and his duties, he was still in the front line of fighting crime and was killed in 2012 while attending to a complaint near a hotel in Port Moresby (Ukaha 2011; 2012).

In the past, raskols were portrayed and glorified as Robin Hood characters (Kulick 1993; Strathern 1985; Goddard 2005; Wood 2006). Currently this is not necessarily the case, except perhaps in remote parts of the country that still cling to the cargo cult mentality. As explained by Kulick (1993:10), villagers in rural areas frequently draw comparisons between raskols, cargo cults and mythical figures, and in some cases, portray raskols as well-known movie characters, such as Rambo,⁴⁶⁶ who would one day save them all (Wood 2006). Vigilante action by the public against raskols is common all over PNG and is accepted and, indeed, expected. So raskols do not command any great respect among the people and certainly not the police, who routinely employ the unwritten policy of 'shoot first, ask questions later' so that even the most daring and seemingly well connected of raskols may be killed before they reach long and sustained periods of notoriety. This can be seen in the case of Kapis. Kapis had robbed two banks and a gold smelter. When he was apprehended, he was shot in both legs. He was tried and convicted but managed to escape. Despite stealing millions of kina, he was not able to evade police and was shot dead at a roadblock after less than a few months on the run (The National 2013).

⁴⁶⁶ Rambo, the movie character played by Sylvester Stallone, was a muscular, cunning hero who underwent secret military missions and faced great death defying odds, to free oppressed characters. It There were a number of sequels to this Hollywood blockbuster movie.

Table 16 shows the types of crimes committed in PNG by (1) raskols, (2) Chinese criminals, (3) government officials, (4) jointly by these groups and (5) by Triads. The table was compiled from the review of case law and media reports, to determine the extent of cooperation among the illicit networks in PNG. The most important finding is in the last column under 'Fraud', which shows that this offence is committed by PNG-based Chinese, Triads and Chinese in collaboration with government officials. There has not been any reported case of fraud committed by raskols.⁴⁶⁷

The 'Fraud' column shows that Chinese in PNG, Triads, government officials together with Chinese and government officials themselves commit fraud. Financial crimes are committed by the PNG-based Chinese, Triads and government officials. Fraud and financial crimes are broad headings and do not necessarily mean that the PNG-based Chinese, Triads and government officials would be capable of committing carbon fraud in REDD+. The left-hand side of the table shows violent crimes; moving further right, the non-violent crimes appear. The table is based on information from the Paclii website, media reports and anthropological literature.⁴⁶⁸

The extent of government and law enforcement collusion with Chinese criminal networks in PNG is unknown but could possibly be quite high because of PNG's underfunded and understaffed law enforcement agencies and their lack of capability to detect or deter these types of crimes. One example of Chinese criminal-government collusion is given here. In 2012, a joint law enforcement operation resulted in one suspected Chinese crime boss being deported to China (Erero 2012). This supposed crime boss, Kevin He Kai Gui, returned to PNG in 2017 under suspicious circumstances and was later removed again (PNG Immigration 2018; Vincent 2018; The National 2018).⁴⁶⁹

I met Kevin He Kai in 2005 because he was connected to Joseph Siew Fong Ng, the Malaysian Chinese man who received three years' imprisonment for his role in stealing

⁴⁶⁷ However, because the Paclii website does not list all cases, this finding might not be entirely accurate. The only way of confirming this would be to conduct a physical check by attending the police station to peruse their files and attending the various court registries to conduct searches there. It is highly likely though, that, based on the in-depth empirical work on raskols that has been canvassed above, the raskols are incapable of committing fraud.

⁴⁶⁸ There are 46 PNG cases listed in the Bibliography. But the table is also based on researching other cases on the Paclii website.

⁴⁶⁹ It was alleged by a Member of Parliament that He Kai Gui had bribed immigration officials who allowed him back into PNG. However, He Kai Gui denied this and argued he only wanted to be reunited with his PNG wife and children which was why he sought re-entry.

a container of goods from the Port Moresby wharf (discussed earlier in this section). Kevin He Kai was charged, along with my client (a national) and another national, for the theft of two 30-foot containers from the Port Moresby wharf. One container contained axes and the other contained canned meat. After the close of the prosecution's case, I made a 'No Case to Answer' submission for my client, as did the lawyer for the other man and He Kai's lawyer. Justice Davani (the same judge who sentenced Fong Ng) discharged my client and the other national but found that He Kai had a case to answer. At the conclusion of the trial, He Kai was found guilty and received a sentence of three years. After serving his sentence (he was released early), He Kai contacted me and asked me to represent him in his appeal; however, I declined the request. I recalled during the meeting that he had complained of some police harassing him and had claimed he was an innocent businessman trying to make an honest living. He further accused his previous lawyer of colluding with the police to extract money from him unnecessarily. He told me he was also close to senior police commanders. I did not know whether to believe him but soon afterwards he was deported (Erero 2012).

Table 16: Crimes by raskols, government officials, PNG-based Chinese and Triads around the world

	Pre-meditated murder and attempted murder	Serious assault	Sexual assault	Robbery	Counterfeiting	Smuggle drugs, firearms and illegal items	Financial crimes	Cybercrime	Fraud
Raskols									
Chinese in PNG									
Triads									
Raskols and government officials									
Raskols and Chinese									
Chinese and government officials									
Government officials									

BIBLIOGRAPHY

A *Articles/Books/Reports*

ABC, 'Papua New Guinean woman jailed for almost 10 years for importing 4kg of ice', *News*, 12 February, 2015 (Sharnie Kim and Renee Cluff) <<http://www.abc.net.au/news/2015-02-12/png-woman-sentenced-cairns-amphetamines-airport-seizure/6089202>>.

ABC, 'Crime syndicate busted, eight charged for drug and firearm offences, police say' *News*, 20 October, 2014 <<http://www.abc.net.au/news/2014-10-20/nine-arrested-for-allegedly-importing-drug-precursors-from-png/5826008>>.

Act Now, 'Customary Land Registration: Too Dangerous to Touch' (Land Registration Paper, Act Now, 2017).

Agnew, Robert, 'Dire forecast: A theoretical model of the impact of climate change on crime' (2011) 16 (1) *Theoretical Criminology* 21.

Aguilar-Støen, Mariel, 'Better Safe than Sorry? Indigenous Peoples, Carbon Cowboys and the Governance of REDD in the Amazon' (2017) 44 (1) *Forum for Development Studies* 91.

Albanese, ay S, 'Deciphering the linkages between organized crime and transnational crime' (2012) 66 (1) *Journal of International Affairs* 1.

Allen, Matthew and Rebecca Monson, 'Land and Conflict in Papua New Guinea: The Role of Land Mediation' (2014) 10(2) *Security Challenges* 1.

Alley, Patrick, 'Corruption: A root cause of deforestation and forest degradation' in Gareth Sweeney, Rebecca Dobson, Krina Despota and Dieter Zinnbauer (eds), *Global Corruption Report: Climate Change* (Earthscan Limited, 2011).

Akmeemana, Sakuntala, Reno Diwa, Nicholas Menzies and Laura Bailey, 'Crime and Disputes: Missed Opportunities and Insights from a National Data Collection Effort in Papua New Guinea' (Research and Dialogue Series Note No 3, World Bank, 2014).

Anand, Ruchi, *International Environmental Justice: A North-South Dimension* (Ashgate Publishing Limited, 2004).

Angelsen, Arild, Maria Brockhaus, William Sunderlin and Louis Verchot, 'Analysing REDD+: Challenges and choices' (Report, Center for International Forestry Research, 2012).

Antonopoulos, Georgios, 'The Dragon's shadow: an introduction to the special issue on 'Chinese organized crime' (2013) 16 *Trends in Organized Crime* 1.

Auditor-General's Office of Papua New Guinea, 'Performance Audit on the Effectiveness of the Management of the Log Export Development Levy for the fiscal years 2012-2015' (Report, Auditor-General's Office of Papua New Guinea, 2017).

Australian Crime Commission, 'The Costs of Serious and Organised Crime in Australia 2013-14' (Report, ACC, 2015).

Australian Federal Police, 'Arrests in Queensland and New South Wales over conspiracy to import cocaine' (Media Release, 15 June, 2018)

<https://www.afp.gov.au/news-media/media-releases/arrests-queensland-and-new-south-wales-over-conspiracy-import-cocaine>.

Avalos, Nayda, Veronica Gonzales Stuva, Adam Heal, Kaoru Iida and Naohito Okazoe, 'Papua New Guinea and the Natural Resource Curse' (Working Paper No 128, Asia-Pacific Research and Training Network on Trade, United Nations Economic & Social Commission for Asia and the Pacific, 2013).

Avosa, Michael, 'Forest Governance Integrity Baseline Report Papua New Guinea' (Report, Transparency International Papua New Guinea, 2011).

Bachram, Heidi, 'Climate Fraud and Carbon Colonialism: The New Trade in Greenhouse Gases' (2004).¹⁵ (4) *Capitalism Nature Socialism* 5.

Babon, Andrea and Gae Yanson Gowae, 'The Context of REDD+ in Papua New Guinea: Drivers, agents and institutions' (Occasional Paper No 89, Centre for International Forestry Research, 2013).

Bainton, Nick, 'Customary Dispute Handling Processes at the Lihir Gold Mine, Papua New Guinea' (Paper presented at the Pacific Mining Conference, Noumea, November 2011).

Barberet, Rosemary, 'Measuring and Researching Transnational Crime' in Philip Reichel and Jay Albanese (eds), *Handbook of Transnational Crime and Justice* (Sage Publications Inc, 2014).

Bayne, Peter, 'Village Courts in Papua New Guinea' in Kayleen Hazlehurst (ed), *Justice Programs for Aboriginal and other Indigenous Communities* (Report, Australian Institute of Criminology, 1985).

Bayon, Ricardo, Amanda Hawn and Katherine Hamilton, *Voluntary Carbon Markets An International Business Guide to What They Are and How They Work* (Earthscan, 2007).

Begg, K.G, T. Anderson, S D Parkinson and Y Mulugetta, 'Issues for the Clean Development Mechanism' (CES Working Paper No. 4, University of Surrey, 1999).

Beirne, Piers and Nigel South (eds), *Issues in Green Criminology: Confronting harms against environments, humanity and other animals* (Willan Publishing, 2007).

Bell, Joshua, 'Marijuana, Guns, Crocodiles and Submarines: Economies of Desire in the Purari Delta' (2006) 76 *Oceania* 220.

Berry, LaVerie B, Glenn E. Curtis, Seth L. Elan, Rexford A. Hudson and Nina A. Kollars, 'Transnational Activities of Chinese Crime Organizations' (Report, Federal Research Division, Library of Congress, 2003).

Biles, David (ed), *Crime in Papua New Guinea* (Australian Institute of Criminology, 1976).

Bodenham, Patrick and Ben Cubby, 'Carbon cowboys' *The Sydney Morning Herald* (online), 23 July, 2011 <<https://www.smh.com.au/environment/conservation/carbon-cowboys-20110722-1hssc.html>>.

Boni, Mary, 'Investigation of Police Brutality – West Pomio, ENBP' (Report, PNG Eco-Forestry Forum, 19 February, 2013).

Booth, Martin, *The Dragon Syndicates* (Clays Limited, 1999).

Booth, Meredith, 'Adelaide carbon management company Carbon Planet in administration' *The Advertiser* (online), 7 July, 2010 <<https://www.adelaidenow.com.au/business/sa-business-journal/adelaide-carbon-management-company-carbon-planet-in-administration/news-story/3f22e5491e14e33bf503d19068e8fa41>>.

Bore, Julia, 'Murder attempt', *The National* (online), 4 January, 2010
<<https://www.thenational.com.pg/murder-attempt/>>.

Bore, Julia, 'Kapris names MPs in MRO's guilty plea', *The National* (online), 3 June, 2010 <<https://www.thenational.com.pg/kapris-names-mps-in-mro's-guilty-plea/>>.

Boston, William, 'Germans slap VW with fine of \$1.5bn', *The Australian*, 15 June, 2018.

Brack, Duncan, 'Combating International Environmental Crime' in Nigel South and Piers Beirne (eds), *Green Criminology* (Ashgate Publishing Limited, 2006) 335.

Bricknell, Samantha, 'Environmental Crime in Australia' (Report, Australian Institute of Criminology, 2010).

Bringezu, Stefan and Raimund Bleischwitz, 'Preventing a resource curse fuelled by the green economy' in Gareth Sweeney, Rebecca Dobson, Krina Despota and Dieter Zinnbauer (eds), *Global Corruption Report: Climate Change* (Earthscan Limited, 2011).

Bresler, Fenton, *The Chinese Mafia* (George Weidenfeld & Nicolson Ltd, 1980).

Brewer, Russell, *Policing the Waterfront: Networks, Partnerships, and the Governance of Port Security* (Oxford University Press, 2014).

Briggs, Gavin, 'Organised Crime Groups: A Transnational Security Threat to the Region North of Australia' (Strategic Analysis Paper, Future Directions International, 27 January 2010).

Broadhurst, Roderic, 'Black societies and triad-like organized crime in China' in Felia Allum and Stan Gilmour (eds), *Routledge Handbook of Transnational Organized Crime* (Routledge, 2012).

Broadhurst, Roderic, 'The suppression of black societies in China' (2013) 16 *Trends in Organized Crime* 95.

Broadhurst, Roderic, Mark Lauchs and Sally Lohrisch, 'Organized Crime in Oceania' in Philip Reichel and Jay Albanese (eds), *Transnational Crime and Justice* (Sage Publications, 2014) 501.

Burkins, Donald, *Waiting for "Company:": Development on the Periphery of the Periphery in the Southern Highlands Province, Papua New Guinea* (PhD Thesis, Temple University, 1984).

Cadman, Tim and Inken Reimer, 'Protecting Climate Finance: An Anti-Corruption Assessment of the UN-REDD Programme' (Report, Transparency International, 2014).

Cambridge Business English Dictionary (Cambridge University Press, 2011).

Carey, Nick, 'US judge sentences Volkswagen to three years probation following emissions scandal', *The Sydney Morning Herald* 22 April 2017.

Carpenteria Land Council Aboriginal Corporation, '60 Minutes Carbon Cowboy Documentary' (Press Release, 19 March, 2015) <<http://clcac.com.au/news/stories-country/2015/77>>.

Carus, Felicity, 'Offices raided and 21 held as EU probe into carbon trading fraud intensifies' *The Guardian* (online) 1 May, 2010

<https://www.theguardian.com/environment/2010/may/01/europe-carbon-trading-alleged-fraud>>.

Challinger, Dennis, 'Fraud on Government: A criminological overview' in J Nethercote, Dennis Challinger and H F McKenna, *Fraud in the Public Sector* (Seminar Proceedings No.24, Australian Institute of Criminology, 1988).

Chambers, Geoff, 'Blood on the Carbon Credits', *Archive Today* (online), 8 July, 2016 <<http://archive.is/c2oP9>>.

Chand, Satish and Justin Ondopa, 'Use of Land Lease as Collateral for Accessing Formal Sector Finance in Papua New Guinea' (Issues Paper No 07, The National Research Institute, March 2014).

Charmaz, Kathy, *Constructing Grounded Theory: A Practical Guide Through Qualitative Theory* (Sage Publications Limited, 2006).

Chin, James, 'Contemporary Chinese Community in Papua New Guinea: Old Money versus New Migrants' (2008) 2 *Chinese Southern Diaspora Studies* 117.

Chin, James, 'Papua New Guinea in 2009: Anti-Chinese Rioting and the Liquified Natural Gas Deal' (2010) 50 (1) *Asian Survey* 247.

Clark, Marilyn, 'Exploring the criminal lifestyle: a grounded theory study of Maltese male habitual offenders' (2011) 4 (1) *International Journal of Criminology and Sociology Theory* 563.

Clay, Berle, 'The Persistence of Traditional Settlement Pattern: An Example from Central New Ireland' (1972) 43 (1) *Oceania* 40.

Clay, Berle, 'Archaeological Reconnaissance in Central New Ireland' (1974) 9 (1) *Archaeology & Physical Anthropology in Oceania* 1.

Clay, Brenda Johnson, *Pinikidu: Maternal Nurture, Paternal Substance* (The University of Chicago Press Limited, 1977).

Climate Change and Development Authority, 'National REDD+ Strategy of Papua New Guinea for the period of 2017 – 2027' (Report, Climate Change and Development Authority) 2017.

Cooke, Fadzilah Majid, 'Where do the raw logs go? Contractors, Traders and Landowners in Lak' in Colin Filer (ed), 'The Political Economy of Forest Management in Papua New Guinea' (Monograph No 32, The National Research Institute, 1997) 109.

Cornish, Derek and Roland Clarke (eds), *The Reasoning Criminal* (Springer-Verlag, 1986).

Cornish, Derek, 'The Procedural Analysis of Offending and its relevance for situational prevention' in Roland Clarke (ed), *Crime Prevention Studies, Volume 3* (Criminal Justice Press, 1994).

Costenbader, John (ed), 'Legal Frameworks for REDD: Design and Implementation at the National Level' (Environmental Policy and Law Paper No. 77, IUCN Environmental Law Centre, 2009).

Cubby, Ben and Marian Wilkinson, 'I am a top foreigner in Papua New Guinea, says carbon kingpin', *The Sydney Morning Herald* (online) 4 September, 2009
<<https://www.smh.com.au/environment/i-am-a-top-foreigner-in-papua-new-guinea-says-carbon-kingpin-20090903-fa0m.html>>.

Cubby, Ben, 'Revealed: scandal of carbon credit firm', *The Sydney Morning Herald* (online) 8 April, 2011 <<https://www.smh.com.au/environment/revealed-scandal-of-carbon-credit-firm-20110407-1d6a4.html>>.

Cunningham, A. B, 'Indigenous Knowledge and Biodiversity' in Susan Place (ed), *Tropical Rainforests: Latin America Nature and Society in Transition* (Scholarly Resources Inc, 1993) 176.

Cuthbert, R.J., Bush, G., Chapman, M., Ken, B., Neale, E. and Whitmore, N. 'Analysis of National Circumstances in the Context of REDD+ and Identification of REDD+ Abatement Levers in Papua New Guinea' (Report, Wildlife Conservation Society for Papua New Guinea's UN-REDD National Programme, 2016).

Dalsgaard, Steffen and Marianne Pedersen, 'The portable sawmill and other challenges to REDD+ in Papua New Guinea' (2015) 56 (1) *Asia Pacific Viewpoint* 128.

de Lint, Willem, 'Conclusion: Security and Everyday Life' in Vida Bajc and Willem de Lint (eds), *Security and Everyday Life* (Routledge, 2011) 258.

Den Boer, Monica, 'The European Union and Organized Crime: Fighting a New Enemy with Many Tentacles' in Emilio C. Viano (ed), *Global Organized Crime and International Security* (Ashgate Publishing Limited, 1999) 13.

Department of Foreign Affairs and Trade, 'Aid Investment Plan: Papua New Guinea 2015-2016 to 2017-18 (extended to 2018-19)' (Report, Department of Foreign Affairs and Trade, Australian Government, undated).

Department of National Planning and Rural Development and Department of Environment and Conservation in Association with the National Carbon Trade Task Force (PNG), *National Carbon Trade Policy* (June 2005).

Department of State, United States of America, *Trafficking in Persons Report* (2018) <<https://www.state.gov/documents/organization/282799.pdf>>.

Dinnen, Sinclair, 'Big Men, Small Men & Invisible Women – Urban Crime & Inequality in Papua New Guinea' (1993a) 26 *Australia & New Zealand Journal of Criminology* 19.

Dinnen, Sinclair, 'Community Policing in Papua New Guinea' (1993b) 4 (3) *Criminology Australia* 2.

Dinnen, Sinclair, 'Internal Security in Papua New Guinea' (1993c) 5 (2) *Criminology Australia* 2.

Dinnen, Sinclair, *Law and Order in a Weak State: Crime and Politics in Papua New Guinea* (University of Hawaii Press, 2001).

Dinnen, Sinclair, 'Thirty Years of Law and Order Policy and Practice: Trying To Do 'Too Much, Too Badly, With Too Little'?' in Ronald May (ed) *Policy Making and Implementation: Studies from Papua New Guinea* (ANU Press, 2009) 233.

Dinnen, Sinclair, 'Internal Security in Papua New Guinea: Trends and Prospects' (Report, Lowy Institute, August, 2017) <http://interactives.lowyinstitute.org/publications/PNGin2017/downloads/Dinnen_Security.pdf>.

Dinnen, Sinclair and Grant Walton, 'Politics, Organised Crime and Corruption in the Pacific' (In Brief Paper No 24, Australian National University, 2016).

Dix, Sarah, 'Hypothetical offsets: Carbon trading and land rights in Papua New Guinea' in Gareth Sweeney, Rebecca Dobson, Krina Despota and Dieter Zinnbauer (eds) *Global Corruption Report: Climate Change* (Earthscan Limited, 2011).

Dorney, Sean, *Papua New Guinea: People, Politics and History since 1975* (ABC Books 2000).

Drew, Jacqueline and Michael Drew, 'Establishing additionality: fraud vulnerabilities in the clean development mechanism' (2010) 23 (3) *Accounting Research Journal* 243.

Drug Enforcement Administration, Federal Bureau of Investigation, Royal Canadian Mounted Police, 'Canada / US Organized Crime Threat Assessment' (Report, Drug Enforcement Administration, Federal Bureau of Investigation, Royal Canadian Mounted Police, 2006) <<https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/archive-rgnzd-crm-thrt-ssssmnt/archive-rgnzd-crm-thrt-ssssmnt-eng.pdf>>.

DulaHazra, Nanda, 'Problems of Clean Development Mechanism (CDM) Projects in India' (2018) 5 (2) *International Journal of Management Studies* 84.

Eco-Forestry Forum, 'EFF Calls on Government of PNG, Development Partners and AusAID to Protect PNG from Carbon Scams (Media Release, 2009).

Ekblom, Paul, *Crime Prevention, Security and Community Safety Using the 5Is Framework* (Palgrave Macmillan 2011).

Elliott, Lorraine, 'Transnational environmental crime in the Asia Pacific: an 'un(der)securitized' security problem?' (2007) 20 *The Pacific Review* 499-522.

Equinor, 'Statoil to change name to Equinor' (Press Release, 15 March 2018) <<https://www.equinor.com/en/news/15mar2018-statoil.html>>.

Equinor, 'Equinor is ready to invest in tropical forest protection' (Press Release, 20 November, 2018) <<https://www.equinor.com/en/news/conf.html>>.

Erero, Simon, 'Chinese mafia leader deported', *Post-Courier* (online) 4 April, 2012
<<https://theyegiorafiles.blogspot.com/2012/04/chinese-mafia-leader-deported.html>>.

Europol, 'Carbon Credit Fraud Causes More Than 5 Billion Euros Damage For European Taxpayer' (Press Release, 09 December 2009)
<<https://www.europol.europa.eu/newsroom/news/carbon-credit-fraud-causes-more-5-billion-euros-damage-for-european-taxpayer>>.

Europol, 'Further Investigations into VAT Fraud linked to the Carbon Emissions Trading System' (Press Release, 28 December, 2010)
<<https://www.europol.europa.eu/newsroom/news/further-investigations-vat-fraud-linked-to-carbon-emissions-trading-system>>.

Evans, David and Paul Gruba, *How to Write a Better Thesis* (Melbourne University Press, 2nd ed, 2005).

Evening Standard, 'Cuffed and hauled from plane: the £18 million fraud mastermind', *Evening Standard* (online) 31 July, 2013
<<https://www.standard.co.uk/news/crime/cuffed-and-hauled-from-plane-the-18m-fraud-mastermind-8739108.html>>.

Eves, Richard, 'Masculinity Matters: Men, Gender-Based Violence and the AIDS Epidemic in Papua New Guinea' in Vicki Luker and Sinclair Dinnen (eds) *Civic Insecurity: Law, Order and HIV in Papua New Guinea* (ANU E Press, 2010) 81.

Faeth, Paul, Cheryl Cort and Robert Livernash, 'Evaluating the Carbon Sequestration Benefits of Forestry Projects in Developing Countries' (Report, World Resources Institute, 1994).

Faiparik, Clifford, 'Officer dismissed for alleged assault', *The National* (online), 12 November, 2015 <<https://www.thenational.com.pg/officer-dismissed-for-alleged-assault/>>.

Faiparik, Clifford, 'Cairns court jails PNG man for people smuggling', *The National*, 22 November, 2018.

Falstead, Sydney Theodore, *Shades of Scotland Yard* (The Mayflower Press, 1950).

Fickling, David, 'Raskol gangs rule world's worst city' *The Guardian* (online) 22 September, 2004 <<https://www.theguardian.com/world/2004/sep/22/population.davidfickling>>.

Filer, Colin (ed), 'The Political Economy of Forest Management in Papua New Guinea' (Monograph No 32, The National Research Institute, 1997).

Filer, Colin, Rodney Keenan, Bryant Allen and John McAlpine, 'Deforestation and forest degradation in Papua New Guinea' (2009) 66 *Annals of Forest Science* 813.

Filer, Colin, 'The Formation of a Land Grab Policy Network in Papua New Guinea' in Siobhan McDonnell, Matthew Allen and Colin Filer (eds), *Kastom, Property and Ideology* (ANU Press, 2017) 169.

Filer, Colin, 'How April Salumei Became the REDD Queen' in Joshua Bell, Paige West and Colin Filer (eds), *Tropical Forests of Oceania: Anthropological Perspectives* (ANU Press, 2015) 179.

Filer, Colin, 'REDD-plus at the crossroads in Papua New Guinea' (2011) *East Asia Forum* <<https://www.eastasiaforum.org/2011/07/23/redd-plus-at-the-crossroads-in-papua-new-guinea/>>.

Filer, Colin, 'The New Land Grab in Papua New Guinea: A Case Study from New Ireland Province' (Discussion Paper No 2, Australian National University, 2011).

Filer, Colin and Michael Wood, 'The Creation and Dissolution of Private Property in Forest Carbon: A Case Study from Papua New Guinea' (2012) *Human Ecology* 40 (5) 665.

Fullingim, John Michael, *Unravelling murder and mayhem: An interdisciplinary study of a Wiru divination account, Papua New Guinea* (PhD Thesis, The University of Texas at Arlington, 1987).

Flanagan, Paul and Luke Fletcher, 'Double or Nothing: The Broken Economic Promises of PNG LNG' (Report, Jubilee Australia, April. 2018).

Fogarty, David, 'Australia firm signs forest CO2 deal with Malaysia tribes', *Reuters* (online), 6 August, 2010
<<https://af.reuters.com/article/energyOilNews/idAFSGE67500Q20100806>>.

Forbes, Mark, 'Mafia, corrupt police cripple PNG', *The Age* (online), 19 February, 2005
<<https://www.theage.com.au/news/National/Mafia-corrupt-police-cripple-PNG/2005/02/18/1108709435557.html>>.

Forest Carbon Partnership Facility, 2015 Annual Report (Report, FCPF, 2015).

Forest Carbon Partnership Facility, 2016 Annual Report (Report, FCPF, 2016).

Forest Carbon Partnership Facility, 2017 Annual Report (Report, FCPF, 2017).

Forest Carbon Partnership Facility, 2018 Annual Report (Report, FCPF, 2018).

Foschia, Liz, 'NSW greenhouse gas scheme scrapped', *ABC* (online), 4 April, 2012 <<https://www.abc.net.au/news/2012-04-05/nsw-greenhouse-gas-scheme-scrapped/3934212>>.

Follain, John, *A Dishonoured Society* (Little, Brown and Company, 1995).

Freestone, David (ed), *Sustainable Development and International Environmental Law* (Edward Elgar Publishing, 2018).

Frunza, Marius-Cristian, *Fraud and Carbon Markets: The Carbon Connection* (Routledge, 2013).

Frunza, Marius-Cristian, Dominique Guégan and Antonin Lassoudiere, 'Statistical Evidence of Tax Fraud on the Carbon Allowances Market' (Working Paper, University of Paris, 2010).

Funk, McKenzie, 'The Hack that Warmed the World' (2015) *Foreign Policy* 34.

Gabriel, Jennifer and Michael Wood, 'The Rimbunan Hijau Group in the Forests of Papua New Guinea' (2015) 50 (3) *The Journal of Pacific History* 322.

Gabriel, Jennifer, Paul Nelson, Colin Filer and Michael Wood, 'Oil Palm Development and Large-Scale Land Acquisitions in Papua New Guinea' in Siobhan McDonnell, Matthew Allen and Colin Filer (eds), *Kastom, Property and Ideology* (ANU Press, 2017) 205.

Gapare, Nelson and Patricia Peinado, 'UN-REDD Papua New Guinea National Programme Terminal Evaluation' (Final Report, UN-REDD Programme, August 2017).

Geno, Ila, John Nero and Peter Masi, 'Annual Report 2002: For the period 1 January 2002 to 31 December 2002' (Annual Report, Ombudsman Commission of Papua New Guinea).

Geteng, Benny, 'Police probe K6m heist', *The National* (online), 8 October, 2013
<<https://www.thenational.com.pg/police-probe-k6m-heist/>>.

Gibbs, Carole, Michael Cassidy and Louie Rivers, 'A Routine Activities Analysis of White-Collar Crime in Carbon Markets' (2013) 35 (4) *Law & Policy* 341.

Gibbs, Carole and Michael Cassidy, 'Crimes in the carbon market' in Lorraine Elliott and William H. Schaedla (eds), *Handbook of Transnational Environmental Crime* (Edward Elgar Publishing, 2016).

Gibbs, Carole and Denzel Pugh, 'An ounce of prevention: opportunity structures for white-collar crime in environmental markets' (2017) 67 *Crime Law Social Change* 133.

Glaser, Barney and Anselm Strauss, 'The Social Loss of Dying Patients' (1964) 64 (6) *The American Journal of Nursing* 119.

Glaser, Barney and Anselm Strauss, *The Discovery of Grounded Theory* (Aldine Publishing Company, 1967).

Global Witness, 'Forest Carbon, Cash & Crime: The Risk of Criminal Engagement in REDD+' (Report, September 2011).

Goddard, Michael, 'The Rascal Road: Crime, Prestige, and Development in Papua New Guinea' (1995) 7(1) *The Contemporary Pacific* 55-80.

Goddard, Michael, *Unseen City: Anthropological perspectives on Port Moresby* (Pandanus Books, 2005a).

Goddard, Michael, 'Research and Rhetoric on Women in Papua New Guinea's Village Courts' (2005b) 75 (3) *Oceania* 247.

Gosarevski, Steven, Helen Hughes and Susan Windybank, 'Is Papua New Guinea viable?' (2004) 19(1) *Pacific Economic Bulletin* 134 <<http://peb.anu.edu.au/pdf/PEB19-1Hughes-policy.pdf>>.

Gottfredson, Michael and Travis Hirschi, *A General Theory of Crime* (Stanford University Press, 1990).

Goyes, David Rodriguez and Nigel South, 'Green Criminology Before 'Green Criminology': Amnesia and Absences' (2017) 25 *Critical Criminology* 165-181.

Graycar, Adam and Marcus Felson, 'Situational Prevention of Organized Timber Theft and Related Corruption' in Karen Bullock, Ronald V. Clarke and Nick Tilley (eds), *Situational Prevention of Organised Crime* (Willan Publishing, 2010).

Graycar, Adam and Tim Prenzler, *Understanding and Preventing Corruption* (Palgrave Macmillan, 2013).

Green, Penny, Tony Ward and Kirsten McConnachie, 'Logging and legality: environmental crime, civil society and the State' in Rob White (ed), *Environmental Crime: a reader* (Willan Publishing, 2009) 116.

Greenpeace, 'Papua New Guinea: Not ready for REDD' (Report, Greenpeace, 18 October 2010).

Gridneff, Ilya, 'Cockfighting Carbon Trading Australian Horse Trainer in PNG' on Ilya Gridneff, *Papua News Guinea* (17 July, 2009) <<https://aappng.blogspot.com/2009/07/cockfighting-carbon-trading-australian.html>>.

Gridneff, Ilya, 'm2m takes its chance in the forests of PNG', *The Sydney Morning Herald* (online), 04 March, 2010 <<https://www.smh.com.au/business/m2m-takes-its-chances-in-the-forests-of-png-20100303-piyw.html>>.

Gridneff, Ilya, 'PNG bank robber denies underbelly link', *The Sydney Morning Herald* (online), 05 May, 2010 <<https://www.smh.com.au/world/png-bank-robber-denies-underbelly-link-20100505-u96l.html>>.

Gridneff, Ilya, 'Australian accused of PNG gunrunning', *The Sydney Morning Herald* (online), 23 September, 2012 <<https://www.smh.com.au/national/australian-accused-of-png-gunrunning-20120923-26end.html>>.

Grussu, Giorgio, Fabio Attorre, Danilo Mollicone, Paul Dargusch, A Guillet and Marco Marchetti, 'Implementing REDD+ in Papua New Guinea: Can biodiversity indicators be effectively integrated in PNG's National Forest Inventory?' (2014) 148 (3) *Plant Biosystems* 519.

Gumuno, James Apa, 'Court shuts door after raskols steal vehicle', *The National* (online), 18 November, 2015 <<https://www.thenational.com.pg/court-shuts-door-after-raskols-steal-vehicle/>>.

Haley, Nicole and Ronald May (eds), *Conflict and Resource Development in the Southern Highlands of Papua New Guinea* (ANU E Press, 2007).

Hall, Ronnie, 'The SABL land grab: Papua New Guinea's ongoing human rights scandal' (Report, ACT NOW, October, 2018).

Halsey, Mark and Rob White, 'Crime, ecophilosophy and environmental harm' in Rob White (ed), *Environmental Crime A Reader* (Willan Publishing, 2009) 27.

Halvaksz, Jamon and David Lipset, 'Another Kind of Gold: An Introduction to Marijuana in Papua New Guinea' (2006) 76 (3) *Oceania* 209.

Hamrick, Kelley and Melissa Gallant, 'Unlocking Potential: State of the Voluntary Carbon Markets 2017' (Report, Forest Trends, 2017).

Haque, Shamima and Muhammad Azizul Islam, 'Carbon Emission Accounting Fraud' in Stefan Schaltegger et al (eds), *Corporate Carbon and Climate Accounting* (Springer International Publishing Switzerland, 2015) 243.

Harris, Bruce, 'The Rise of Rascalism: Action and Reaction in the Evolution of Rascal Gangs' (Discussion Paper No 54, The National Research Institute, 1988).

Harris, Bruce, 'The rascal gangs of Port Moresby', (1989) 1 (1) *Criminology Australia* 3-4.

Hatcher, Jeffrey and Luke Bailey, 'Governance in the world's tropical forests: When will REDD+ land?' in Gareth Sweeney, Rebecca Dobson, Krina Despota and Dieter Zinnbauer (eds) *Global Corruption Report: Climate Change* (Earthscan Limited, 2011).

Henshaw, Ciara, 'Strengthening the Rule of Law in the Pacific through International Crime Cooperation' (2008) 15 *Australian International Law Journal* 109.

Herbig, Friedo Johann Willem and Sandra Jeroma Joubert, 'Criminological semantics: conservation criminology – vision or vagary?' in Rob White (ed), *Environmental Crime: a reader* (Willan Publishing, 2009) 50.

Hill, Cindy, 'Measuring Transnational Crime' in Philip Reichel (ed), *Handbook of Transnational Crime & Justice* (SAGE Publications Inc, 2005) 47.

House of Commons, Environmental Audit Committee, 'Environmental crime and the courts' in Rob White (ed), *Environmental Crime: a reader* (Willan Publishing, 2009) 670.

Holmes, Leslie, *Advanced Introduction to Organised Crime* (Edward Elgar Publishing Limited, 2016).

Hübner, Alexander and Jonathan Gould, 'Seven Deutsche Bank staff charged over carbon trading scandal', *Reuters* (online) 13 August, 2015
<<https://uk.reuters.com/article/uk-deutsche-bank-carbon-idUKKCN0QI0M220150813>>.

Hübner, Alexander, 'Former Deutsche banker jailed for carbon trading fraud' *Reuters* (online) 14 June, 2016 <<https://www.reuters.com/article/us-deutschebank-court-idUSKCN0YZ1S6>>.

Huisman, Wim and Judith van Erp, 'Opportunities for Environmental Crime: A Test of Situational Crime Prevention Theory' (2013) 53 *British Journal of Criminology* 1178.

Hunt, Colin, *Carbon Sinks and Climate Change: Forests in the Fight Against Global Warming* (Edward Elgar Publishing Limited, 2009).

Inman, Phillip, 'Three Britons charged over €3m carbon-trading 'carousel fraud'', *The Guardian* (online), 12 January, 2010
<<https://www.theguardian.com/business/2010/jan/11/eu-carbon-trading-carousel-fraud>>.

Intergovernmental Panel on Climate Change, 2018a: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission*

pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty in Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, Maycock, M. Tignor, and T. Waterfield (eds) *World Meteorological Organization, Geneva, Switzerland, 32.*

Intergovernmental Panel on Climate Change, 'Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments' (Press Release, 8 October, 2018b).

International Criminal Police Organisation, 'Assessment of Law Enforcement Capacity Needs to Tackle Forest Crime' (Report, INTERPOL, Environmental Crime Programme, June, 2013a).

International Criminal Police Organisation, 'Guide to Carbon Trading Crime' (Report, INTERPOL, Environmental Crime Programme, June, 2013b).

International Criminal Police Organisation, 'Uncovering the Risks of Corruption in the Forestry Sector' (Report, INTERPOL, 9 December, 2016).

International Tropical Timber Organization, 'Achieving the ITTO Objective 2000 & Sustainable Forest Management in Papua New Guinea' (Report of the Diagnostic Mission, International Tropical Timber Organization, 2007)
<<https://pngforests.files.wordpress.com/2013/05/itto-report-full.pdf>>.

Israel, Mark, 'Ethics and the Governance of Criminological Research in Australia' (Report, NSW Bureau of Crime Statistics & Research, Attorney-General's Department, January, 2004).

Jessep, Owen, *Land Tenure in a New Ireland Village* (PhD Thesis, Australian National University, 1977).

Jiao, Yunbo, 'Greater China and transnational environmental crime: understanding criminal networks and enforcement responses' in Lorraine Elliot and William H. Schaedla (eds), *Handbook of Transnational Environmental Crime* (Edward Elgar Publishing, 2016).

Jong, Wil de, Dennis del Castillo Torres and Ángel Salazar, 'Carbon Cowboys in Peru and the Prospects of Local REDD Governance', (2014) 8 (16) *Portes: Revista mexicana de estudios sobre la Cuenca del Pacífico* 61-83.

Karigawa, Lepani, Jacob Adejare Babarinde and Suman Steven Holis, 'Sustainability of Land Groups in Papua New Guinea' (2016) 5 (2) *Land* <<https://www.mdpi.com/2073-445X/5/2/14>>.

Kama, Luke, 'Climate authority unveils plan', *The National*, 22 November, 2018:7.

Katz, Jack, *Seductions of Crime* (Basic Books Inc. Publishers, 1988).

Kiala, Wallace, 'Kapris accomplice captured', *The National* (online), 28 February, 2010 < <https://www.thenational.com.pg/kapris'-accomplice-captured/>>.

Kim, Sharnie and Renee Cluff, 'Papua New Guinean woman jailed for almost 10 years for importing 4kg of ice', *ABC News* (online) 12 February, 2015 <<https://www.abc.net.au/news/2015-02-12/png-woman-sentenced-cairns-amphetamines-airport-seizure/6089202>>.

Kirkland, David, 'Impressions of Papua New Guinea' (1992) 3 (4) *Criminology Australia* 6.

Kuku, Rebecca, 'People's Party splits from govt, joins rivals', *The National* (online) 07 May, 2019 <<https://www.thenational.com.pg/peoples-party-splits-from-govt-joins-rivals/>>.

Kulick, Don, 'Heroes from Hell: Representations of 'Rascals' in a Papua New Guinean Village' (1993) 9 (3) *Anthropology Today* 9.

Kuusa, Meredith, 'PNG ratifies Paris climate change agreement', *PNG Loop* (online) 17 August, 2016 <<http://www.looppng.com/content/png-ratifies-paris-climate-change-agreement>>.

Labbate, Gabriel, *The carbon market for aviation – issues under discussion and possibilities for REDD+* (19 February 2019) UN-REDD Programme <<https://www.un-redd.org/news-1/author/Gabriel-Labbate>>.

Lahoc, Gabriel, 'Pangia ILGs disagree' *The National* (online) 10 February, 2010 <<https://www.thenational.com.pg/pangia-ilgs-disagree/>>.

Lakhani, Sadaf, 'Trucks Under Siege: Case Study – The Costs of Crime and Insecurity to the Transport Industry in Papua New Guinea' (Research Paper, The World Bank Group, 2014).

Lakhani, Sadaf and Alys Willman, 'Drivers of Crime and Violence in Papua New Guinea' (Research Paper No 2, The World Bank Group, May 2014a).

Lakhani, Sadaf and Alys Willman, 'Gates, Hired Guns and Mistrust: Business Unusual: The Cost of Crime and Violence to Businesses in Papua New Guinea' (Research Paper No 4, The World Bank Group, May 2014b).

Lakhani, Sadaf and Alys Willman, 'The Socio-economic Costs of Crime and Violence in Papua New Guinea: Recommendations for Policy and Programs' (Research Paper No 5, The World Bank Group, May 2014c).

Lang, Chris, 'Carbon Cowboys' (2009) 425 *New Internationalist* 29.

Lang, Chris, 'The strange case of Brett Goldsworthy' on *REDD-Monitor* (29 June 2008) <<https://redd-monitor.org/2012/06/29/the-strange-case-of-brett-goldsworthy/>>.

Larmour, Peter, 'Corruption in REDD+ schemes: a framework for analysis' in Adam Graycar and Russel G. Smith (eds) *Handbook of Global Research and Practice in Corruption* (Edward Elgar Publishing Limited, 2011).

Laurance, William F, Titus Kakul, Memory Tom, Reza Wahya and Susan G. Laurance, 'Defeating the 'resource curse': Key priorities for conserving Papua New Guinea's native forests' (2012) 151 *Biological Conservation* 35.

Lawson, Sam, 'Illegal logging in Papua New Guinea' (Report, Chatham House, April, 2014).

Le, Vy, 'Organised Crime Typologies: Structure, Activities and Conditions', (2012) 1 *International Journal of Criminology and Sociology* 121.

Leclerc, Benoit, 'Script Analysis for Crime Controllers: Extending the Reach of Situational Crime Prevention' in Stefano Caneppele and Francesco Calderoni (eds) *Organized Crime, Corruption and Crime Prevention: Essays in Honour of Ernesto U. Savona* (Cham: Springer, 2013).

Leggett, Matt, 'The Status of REDD+ in Papua New Guinea' (Report, USAID LEAF Programme, June, 2011).

Leggett, Mathew and Heather Lovell, 'Community Perceptions of REDD+: a case study from Papua New Guinea' (2012) 12 *Climate Policy* 115.

Levi, Michael, 'Organized fraud and organizing frauds: Unpacking research on networks and organization', (2008) 8 (4) *Criminology & Criminal Justice* 389.

Lindley, Jade and Laura Beacroft, 'Vulnerabilities to trafficking in persons in the Pacific Islands', (2011) 42a *Trends and Issues in crime and criminal justice* Australian Institute of Criminology.

Lipset, David, 'Place in the Anthropocene: A mangrove lagoon in Papua New Guinea in the time of rising sea-levels', (2014) 4 (3) *HAU: Journal of Ethnographic Theory* 215-243.

Lipset, David and Bridget Henning, 'Customary landowners, logging companies and conservationists in a decentralized State: The Case of REDD+ and PES in Papua New Guinea' in Stephanie Paladino and Shirley Fiske (eds) *The Carbon Fix: Forest Carbon, Social Justice and Environmental Governance* (Routledge, 2016).

Lipset, David, *Yabar: The Alienations of Murik Men in a Papua New Guinea Modernity* (Springer Nature, 2017).

Liria, Stanley Kuli, *A Law Awareness for Papua New Guinea: Our guide to the rule of law* (Niugini CrossRoads Limited, 2004).

Liria, Stanley Kuli, *Inequalities in Developing Rural Communities in Papua New Guinea: A Pangia Perspective* (Niugini CrossRoads Limited, 2009).

Llanos, Roberto Espinazo and Conrad Feather, 'The reality of REDD+ in Peru: Between theory and practice' (Report, Forest People's Programme, 2011).

Lo, Wing T and Sharon Ingrid Kwok, 'Triad Organized Crime in Macau Casinos: Extra-legal Governance and Entrepreneurship', (2017) 57 *British Journal of Criminology* 589.

Lohmann, Larry, 'Regulation as Corruption in the Carbon Offset Markets' in Steffen Bohm and Siddhartha Dabhi (eds) *Upsetting the Offset: The Political Economy of Carbon Markets* (MayFly Books, 2009).

Lohmann, Larry, 'Uncertainty Markets and Carbon Markets: Variations on Polanyian Themes' (2010) 15 (2) *New Political Economy* 225.

Loop PNG, 'Foreigner arrested for allegedly attempting to bribe police', *Loop PNG* (online), 7 May, 2018a <<http://www.looppng.com/png-news/foreigner-arrested-allegedly-attempting-bribe-police-76363>>.

Loop PNG, 'Policeman arrested over bribery claims', *Loop PNG* (online), 28 May, 2018b <<http://www.looppng.com/png-news/policeman-arrested-over-bribery-claims-76889>>.

Luker, Vicki and Michael Monsell-Davis, 'Teasing out the Tangle: *Raskols*, Young Men, Crime and HIV' in Vicki Luker and Sinclair Dinnen (eds) *Civic Insecurity: Law, Order and HIV in Papua New Guinea* (ANU E Press, 2010) 81.

Luma, Dale, '7 deported', *The National* (online), 17 June, 2019 <<https://www.thenational.com.pg/7-deported/>>.

Lynch, Michael and Paul B Stretesky, 'Similarities between green criminology and green science: Toward a typology of green criminology' (2011) 34 (4) *International Journal of Comparative and Applied Criminal Justice* 293.

Lynch, Michael, Paul B. Stretesky and Michael A. Long, 'Situational Crime Prevention and the Ecological Regulation of Green Crime: A Review and Discussion' (2018) 679 (1) *The Annals of the American Academy of Political and Social Science* 178.

Lyons, Kate, 'Briton arrested after fleeing Australia on a jetski, armed with crossbow', *The Guardian* (online) 27 March, 2019 <<https://www.theguardian.com/australia-news/2019/mar/27/briton-arrested-after-fleeing-australia-on-a-jetski-armed-with-crossbow>>.

Maino, Charles, Joe Waugla and Ninchib Tetang, 'Report of an Investigation into the Disciplined Forces Institutional Housing Project' (Report, Ombudsman Commission of Papua New Guinea, June 1994).

Marshall, Steve, 'PNG PM claims ignorance of Taiwanese scandal', *ABC News* (online) 14 May 2008 <<https://www.abc.net.au/news/2008-05-14/png-pm-claims-ignorance-of-taiwanese-scandal/2435796>>.

Martin, Peter and Reece Walters, 'Fraud Risk and the Visibility of Carbon' (2013) 2 *International Journal for Crime, Justice and Social Democracy* 27.

Masi, Peter, 'Fighting Corruption as a Public Sector Ombudsman in Papua New Guinea' (Speech delivered at the First Annual Conference & General Meeting of the International Association of Anti-Corruption Authorities, Grand Epoch City, Beijing, China, 23 October, 2006) <<http://www.paclii.org/pg/ombudsman/speeches/Speech7.html>>.

May, Ronald James, *State and Society in Papua New Guinea: The first twenty-five years* (ANU Press, 2004).

McDougall, Derek, "'Intervening" in the neighbourhood: comparing Australia's role in East Timor and the southwest Pacific' (2007) *International Journal* 867.

McCusker, Rob, 'Transnational crime in the Pacific Islands: real or apparent danger?' (2006) 308 *Trends and Issues in crime and criminal justice*.

McFarlane, John, 'Torres Strait: Policing the Open Border', (1998) 92 *Trend and Issues in crime and criminal justice* Australian Institute of Criminology.

McKie, Ruth, Paul Stretesky and Michael Long, 'Carbon Crime in the Voluntary Market: An Exploration of Modernization Themes Among a Sample of Criminal and Non-criminal Organizations' (2015) 23 *Critical Criminology* 473.

Medcalf, Rory, 'A great game afoot in our region', *The Australian Financial Review* (Sydney) 19 November, 2018, 38.

Melick, David, 'Credibility of REDD and Experiences from Papua New Guinea' (2010) 24 (2) *Conservation Biology* 359.

Mera, Adan, 'Damaru Still Anti-Fraud Squad Boss', *Post-Courier* (online), 20 June, 2016 <<https://postcourier.com.pg/damaru-still-anti-fraud-squad-boss/>>.

Michael, Peter, 'Queensland bikies and Nigerian crime syndicates team up to run drugs out of PNG', *The Courier Mail* (online), 1 May, 2014 <<https://www.couriermail.com.au/news/queensland/queensland-bikies-and-nigerian-crime-syndicates-team-up-to-run-drugs-out-of-png/news-story/37b96409ed770427baa46690d06adf7a>>.

Michael, Peter, 'Cape York Border Force to tackle PNG ice smugglers', *The Courier Mail* (online), 29 June, 2015 <<https://www.couriermail.com.au/news/queensland/crime->

and-justice/cape-york-border-force-to-tackle-png-ice-smugglers/news-story/f7cb5e4f9847706ffde01f845bbaedb2>.

Michaelowa, Axel (ed), *Carbon Markets or Climate Finance? Low carbon and adaption investment choices for the developing world* (Routledge, 2012).

Michalowski, Raymond and Ronald Kramer (eds), *State-Corporate Crime* (Rutgers University Press, 2006).

Miller, Walter B, 'Violent Crimes in City Gangs', (1966) 364 (1) *The Annals of the American Academy of Political and Social Science* 96.

Minkes, John, 'Silent or invisible? Governments and corporate financial crimes' (2010) 9 (3) *Criminology & Public Policy* 467.

Ministry of Environment and Conservation and Climate Change, Office of the Prime Minister, 'Green Climate Fund ready to finance PNG' (Media Release, 25 January, 2017) <<http://www.cdda.gov.pg/images/GREEN%20CLIMATE%20FUND.pdf>>.

Morauta, Mekere, 'Carbon Trading and Office of Climate Change and Environment Sustainability' (Media Release, 16 July, 2009).

Morselli, Carlo (ed), *Crime and Networks* (Routledge, 2014).

Morselli, Carlo and Cynthia Giguere, 'Legitimate strengths in criminal networks' (2006) 45 *Crime, Law & Social Change* 185.

Mousseau, Frédéric, 'The Great Timber Heist: The logging industry in Papua New Guinea' (Report, The Oakland Institute, 2016).

Murray, Joy, Manfred Lenzen and John Murray, 'Forest Carbon – Questions of Indigenous Rights and Market Forces' (2014) 7 *Environmental Justice* 33.

Mutonyi, John, 'Fighting Corruption: Is Kenya on the Right Track?' in Rick Sarre et al (eds), *Policing Corruption* (Lexington Books, 2005) 69.

Nanau, Gordon, 'The Wantok System as a Socio-Economic and Political Network in Melanesia' (2011) 2(1) *The Journal of Multicultural Society*, 31.

National Statistical Office of Papua New Guinea, 'National Population and Housing Census 2011' (Final Report, National Statistical Office, 2013).

National Strategic Plan Taskforce, *Papua New Guinea Vision 2050* (Report, Department of Prime Minister and NEC, November, 2009). Accessed 5 March 2018
<http://www.treasury.gov.pg/html/publications/files/pub_files/2011/2011.png.vision.2050.pdf>.

Nellemann, Christian, 'Green Carbon, Black Trade: Illegal Logging, Tax Fraud and Laundering in the Worlds Tropical Forests' (Report, UNEP-INTERPOL, 2012).

Nellemann, Christian, Rune Henriksen, Arnold Kreilhuber, Davyth Stewart, Maria Kotsovou, Patricia Raxter, Elizabeth Mrema and Sam Barrat, 'The Rise of Environmental Crime' (Report, UNEP-INTERPOL, 2016).

Newell, Richard, William Pizer and Daniel Raimi, 'Carbon Markets 15 Years after Kyoto: Lessons Learned, New Challenges' (2013) 27 *Journal of Economic Perspectives* 123-146.

Nibbrig, Nand E. Hart, 'Rascals in Paradise: Urban Gangs in Papua New Guinea' (1992) 15 (3) *Pacific Studies* 115.

Ogle, Lisa, 'Papua New Guinea: Legal framework for REDD+' (Report, Secretariat of the Pacific Community / Deutsche Gesellschaft für Internationale Zusammenarbeit Regional Project, September 2014).

Ombudsman Commission of Papua New Guinea, *Investigation into the Department of Lands & Physical Planning on Alleged improper licencing of public institutional land (Section 36, Allotment 1-6 & 21-26) under Special Purpose to Solar Industries Limited for a common purpose in Kimbe, West New Britain Province*, (2014).

One PNG, 'Two Chinese nationals arrested for buying stolen forklift', *One PNG* (online) 20 September, 2013

<<https://www.onepng.com/2013/09/two-chinese-nationals-arrested-for.html>>.

Packham, Ben, 'Interpol warns of carbon fraud' *The Advertiser* (online) 12 June, 2009

<<https://www.adelaidenow.com.au/news/interpol-warns-of-carbon-fraud/news-story/9ce2164315147f45898912ee0de6ee34>>.

Pacific Islands Broadcasting Association, 'Crime syndicate threat: Expert', *Asia Pulse*, 11 October 2004 <<http://www.asiapulse.com>>.

Pacific Islands Broadcasting Association, 'Organised Crime rife in PNG', *Asia Pulse*, 27 September, 2007 <<http://www.asiapulse.com>>.

Pacific Islands Report, 'Papua New Guinea Rascals were vying for Millennium Heist' *Pacific Islands Report* (online) 22 December, 1999

<<http://www.pireport.org/articles/1999/12/22/papua-new-guinea-rascals-were-vying-millennium-heist>>.

Pacific Islands Report, 'Chinese arrested for murder attempt on PNG businessman'
Pacific Islands Report (online) 05 January, 2010a
<<http://www.pireport.org/articles/2010/01/05/chinese-arrested-murder-attempt-png-businessman>>.

Pacific Islands Report, 'Chinese Hitmen connected to deported Mob Boss' *Pacific Islands Report* (online) 06 January, 2010b
<<http://www.pireport.org/articles/2010/01/06/chinese-hitmen-connected-deported-mob-boss>>.

Papua New Guinea, Commission of Inquiry into Aspects of the Forest Industry, *Final Report* (1989) vol 1.

Papua New Guinea, Commission of Inquiry into Aspects of the Forest Industry, *Final Report* (1989) vol 2.

Papua New Guinea, Commission of Inquiry into Special Agriculture and Business Lease, *Final Report by Nicholas Mirou* (2013).

Papua New Guinea, Commission of Inquiry into the Special Agriculture and Business Lease, *Final Report by John Numapo* (2013).

Papua New Guinea Today, 'Asian Man Faces Court Charges Over Gun Smuggling'
Papua New Guinea Today (online) 11 August, 2014
<<https://news.pngfacts.com/2014/08/asian-man-faces-court-charges-over-gun.html>>.

Papua New Guinea Immigration and Citizenship Authority, 'Chief Immigration Officer clarifies re-entry of Kevin He Kai, Chinese National' (Media Release, 13 April, 2018)
<<https://www.immigration.gov.pg/news.html>>.

Park, Chris, *Tropical Rainforests* (Routledge, 1992).

Pascoe, Sophie, 'Interrogating scale in the REDD+ assemblage in Papua New Guinea' (2018) 96 *Geoforum* 97.

Pascoe, Sophie, Wolfram Dressler and Monica Minnegal, 'Storytelling climate change – Casualty and temporality in the REDD+ regime in Papua New Guinea' (2019) *Geoforum* (in press).

Pash, Chris, 'Here are the least liveable cities in the world' *Business Insider Australia* (online) 18 August, 2016 <<https://www.businessinsider.com.au/here-are-the-10-least-liveable-cities-in-the-world-2016-8>>.

Pearse, Rebecca, 'Mapping REDD in the Asia-Pacific: Governance, marketisation and contention' (2012) 12 181.

Pearse, Rebecca and Steffen Böhm, 'Ten reasons why carbon markets will not bring about radical emissions reduction' (Research Article, Carbon Management, 2014).

Pham, Huy and Vikash Ramiah, 'The birth of environmental finance' in Sabric Boubaker, Douglas Cumming and Duc Nguyen (eds), *Research Handbook of Finance and Sustainability* (Edward Elgar Publishing Limited, 2018) 141.

Place, Susan E, *Tropical rainforests: Latin American nations and society in transition* (Wilmington Del.: Scholarly Resources, 1993).

PNGi, 'John Pundari: Twenty-five years as an MP and Businessman' on PNGi, (22 February, 2018) <<http://pngicentral.org/reports/john-pundari-twenty-five-years-as-an-mp-and-businessman>>.

Pokiton, Sally, 'Five Chinese arrested for selling fake cigarettes', *Loop PNG* (online), 5 October, 2016a <<http://www.looppng.com/content/five-chinese-arrested-selling-fake-cigarettes>>.

Pokiton, Sally, 'Court rejects Maybank robber's request', *Loop PNG* (online), 15 October, 2016b <<http://www.looppng.com/content/court-rejects-maybank-robbers-request>>.

PNG Today, 'Chinese nationals arrested in PNG for attempted murder', *PNG Today* (online), 13 January, 2015 <<https://news.pngfacts.com/2015/01/chinese-nationals-arrested-in-png-for.html>>.

PNG Today, 'Asian Organised Crime Syndicates in Papua New Guinea', *PNG Today* (online), 02 April, 2018 <<https://news.pngfacts.com/2018/04/asian-organised-crime-syndicates-in.html>>.

Post-Courier, 'Judge Rules In Favour Of Cop, Grants Bail', *Post-Courier* (online), 21 January, 2016 <<https://postcourier.com.pg/judge-rules-in-favour-of-cop-grants-bail/>>.

Post-Courier, 'Study Ranks POM Among Worst Cities', *Post-Courier* (online), 18 August, 2017 <<https://postcourier.com.pg/study-ranks-pom-among-worst-cities/>>.

Post-Courier, 'Turi calls for collective effort', *Post-Courier* (online), 9 March, 2018a <<https://postcourier.com.pg/turi-calls-collective-effort/>>.

Post-Courier, 'Police probe re-entry of deported Chinese national', *Post-Courier* (online), 12 April, 2018b <<https://postcourier.com.pg/police-probe-re-entry-deported-chinese-national/>>.

Post-Courier, 'Court discharges accused in Maybank robbery', *Post-Courier* (online), 27 April, 2018c <<https://postcourier.com.pg/court-discharges-accused-maybank-robbery/>>.

Post-Courier, 'Bilums made in China being addressed: Mori', *Post-Courier* (online), 26 July, 2018 <<https://postcourier.com.pg/bilums-made-china-addressed-mori/>>.

Post-Courier, 'Fake Beer Suspect Arrested', *Post-Courier* (online), 2 January, 2019a <<https://postcourier.com.pg/fake-beer-suspect-arrested/>>.

Post-Courier, 'Coroner Inquiry Recommended for Death of Youth in Namatanai', *Post-Courier* (online) 20 February, 2019b <<https://postcourier.com.pg/coroner-inquiry-recommended-death-youth-namatanai/>>.

Post-Courier, 'Upgraded Boluminski H'way Officially Opened', *Post-Courier* (online) 14 April, 2019c <<https://postcourier.com.pg/upgraded-boluminski-hway-officially-opened/>>.

Post-Courier, 'Landowners Give Land for Development', *Post-Courier* (online) 26 September, 2019d <<https://postcourier.com.pg/landowners-give-land-for-development/>>.

Queensland Police, A Strategic Assessment of Organised Crime in Queensland: Project Krystal <<https://www.parliament.qld.gov.au/Documents/TableOffice/TablePapers/2012/5412T231.pdf>>.

Radio Australia, 'Provincial governor blacklists carbon trader' *Radio Australia* (online) 02 April, 2011 <https://asopa.typepad.com/asopa_people/2011/04/provincial-governor-blacklists-carbon-trader.html>.

Radio New Zealand, 'PNG commissioner hits out at suspended investigators', *Pacific*, 17 April, 2016 <<https://www.radionz.co.nz/international/pacific-news/301728/png-commissioner-hits-out-at-suspended-investigators>>.

Radio New Zealand, 'Fraud case divides PNG police force', *Pacific*, 19 April, 2016 (Johnny Blades) <<https://www.radionz.co.nz/international/pacific-news/301810/fraud-case-divides-png-police-force>>.

Radio New Zealand, 'PNG police commissioner sets up inquiry into fraud squad', *Pacific*, 20 April, 2016 <<https://www.radionz.co.nz/international/pacific-news/301921/png-police-commissioner-sets-up-inquiry-into-fraud-squad>>.

Radio New Zealand, 'PNG fraud squad still locked out despite court ruling', *Pacific*, 25 April, 2016 <<https://www.radionz.co.nz/international/pacific-news/302307/png-fraud-squad-still-locked-out-despite-court-ruling>>.

Radio New Zealand, 'Stalemate over probe into PNG fraud case', *Dateline Pacific*, 26 April, 2016 (Johnny Blades) <<https://www.radionz.co.nz/international/programmes/datelinepacific/audio/201798371/stalemate-over-probe-into-png-fraud-case>>.

Radio New Zealand, 'Contempt proceedings filed against PNG police chief', *Pacific*, 02 May, 2016 <<https://www.radionz.co.nz/international/pacific-news/302816/contempt-proceedings-filed-against-png-police-chief>>.

Radio New Zealand, 'PNG police chief told to reopen fraud squad office', *Pacific*, 03 May, 2016 <<https://www.radionz.co.nz/international/pacific-news/302968/png-police-chief-told-to-reopen-fraud-squad-office>>.

Radio New Zealand, 'PNG police force facing unprecedented threat, says MP', *Pacific*, 03 May, 2016 <<https://www.radionz.co.nz/international/pacific-news/302913/png-police-force-facing-unprecedented-threat,-says-mp>>.

Radio New Zealand, 'PNG police chief facing contempt proceedings', *Dateline Pacific*, 03 May, 2016 (Johnny Blades)
<<https://www.radionz.co.nz/international/programmes/datelinepacific/audio/201799188/png-police-chief-facing-contempt-proceedings>>.

Rasmussen, Gemma, 'The country where rapists are proud and happy to pose for photos', *News.com.au* (online) 1 June, 2015
<<https://www.news.com.au/world/pacific/the-country-where-rapists-are-proud-and-happy-to-pose-for-photos/news-story/98a6111a1a10a445760a91f206afc733>>.

Reed, Adam, 'Number-One Enemy: Police, Violence and the location of Adversaries in a Papua New Guinea Prison' (2011) 81 (1) *Oceania* 22.

Reuters, 'BlueNext says suspended all carbon trading', *Reuters* (online), 20 January, 2011 <<https://www.reuters.com/article/us-blunext-carbon/blunext-says-suspended-all-carbon-trading-idUSTRE70I4NJ20110119>>.

Regan, Anthony, 'Bougainville: Large-scale Mining and Risks of Conflict Recurrence' (2014) 10(2) *Security Challenges* 71.

Rowe, Elizabeth, Tabor Akman, Russell G Smith and Adam M Tomison, 'Organised crime and public sector corruption: A crime scripts analysis of tactical displacement risks' (Trends & Issues in crime and criminal justice series paper No 444, Australian Institute of Criminology, December 2013).

Saffu, Yaw (ed), 'The 1992 Papua New Guinea Election: Change and Continuity in Electoral Politics' (Monograph No 23, Department of Political and Social Change, Research School of Pacific and Asian Studies, Australian National University, 1996).

Salika, Gibbs, Anthony Huai and Daniel Liosi, Papua New Guinea Defence Force Board of Inquiry, *Report*, 13 December 2006 to 16 March 2007.

Sansó-Rubert Pascual, Daniel, 'Measuring Organised Crime: Complexities of the Quantitative and Factorial Analysis', in Henrik Larsen, José Blanco, Raquel Pastor and Ronald Yager (eds), *Using Open Data to Detect Organized Crime Threats: Factors Driving Future Crime* (Springer International Publishing, 2017).

Santos-Reyes, D and Theresa Lawlor-Wright, 'Designing an Ideal Concept of Police for Mexico City' (2011) 1 (1) *International Journal of Safety and Security Engineering* 33.

Sarre, Rick, Dilip Das, Hans-Jorg Albretch (eds), *Policing Corruption: International Perspectives* (Lexington Books, 2005).

Scheyvens, Henry, 'Papua New Guinea REDD+ Readiness – State of Play' (Discussion Paper No. FC-2012-03, Institute for Global Environmental Strategies, 2012).

Schiltz, Marc, 'Rascalism, Tradition and the State in Papua New Guinea' in Susan Toft (ed), 'Domestic Violence in Papua New Guinea' (Monograph No. 3, Law Reform Commission of Papua New Guinea, 1985).

Seager, Ashley, 'Brussels targets carbon trading fraud ahead of Copenhagen summit', *The Guardian* (online) 30 September, 2009

<<https://www.theguardian.com/business/2009/sep/29/carbon-trading-carousel-fraud-eu>>.

Seager, Ashley, 'Copenhagen summit: Denmark rushes in laws to stop carbon trading scam', *The Guardian* (online) 4 December, 2009

<<https://www.theguardian.com/environment/2009/dec/03/copenhagen-summit-carbon-trading-scam>>.

Sebastien, Jodoin, 'The human rights of Indigenous Peoples and forest-dependent communities in the complex legal framework for REDD+', in Christina Voigt (ed), *Research Handbook on REDD-plus and International Law* (Edward Elgar Publishing, 2016).

Schmidt, Charles, 'Environmental crimes: profiting at the earth's expense' in Rob White (ed), *Environmental Crime A Reader* (Willan Publishing, 2009).

Scott, Mike, 'Carbon trading schemes launched in Asia Pacific', *Financial Times* (online), 18 April, 2011 <<https://www.ft.com/content/c3103828-68d6-11e0-9040-00144feab49a>>.

Shearman, Phil and Jane Bryan, 'A bioregional analysis of the distribution of rainforest cover, deforestation and degradation in Papua New Guinea' (2011) 36(1) *Austral Ecology* 9-24.

Shift2Neutral, 'Shift2Neutral signs agreement to certify REDD+ with tribes of Sarawak Malaysia' (Press Release, 4 August, 2010a) <<https://www.prlog.org/10836114-shift2neutral-signs-agreement-to-certify-redd-with-tribes-of-sarawak-malaysia.html>>.

Shift2Neutral, 'Shift2Neutral and the Amazon Reforestation Project sign a unprecedented Memorandum of Agreement' (Press Release, 16 September, 2010b) <<https://www.prlog.org/10936725-shift2neutral-and-the-amazon-reforestation-project-sign-unprecedented-memorandum-of-agreement.html#>>.

Shift2Neutral, 'Shift2Neutral partners with the Solomon Islands Carbon Project by signing a Memorandum of Agreement' (Press Release, 27 September, 2010c) <<https://www.prlog.org/10957338-shift2neutral-partners-with-the-solomon-islands-carbon-project-by-signing-memorandum-of-agreement.html#>>.

Shore, Heather, *London's Criminal Underworlds, c. 1720-c. 1930: A Social and Cultural History* (Palgrave Macmillan 2015).

Sikani, Richard, *Dealing with Deviance in Contemporary Papua New Guinea Societies: The Choice of Sanctions in Village and Local Court Proceedings* (LLM Thesis, The University of Melbourne, 1996).

Smith, Graeme, 'Chinese Reactions to Anti-Asian Riots in the Pacific' (2012) 47 (1) *The Journal of Pacific History* 93.

Smith, Graeme, 'Beijing's Orphans? New Chinese Investors in Papua New Guinea' (2013) 86 (2) *Pacific Affairs* 327.

Smith, Tuhiwai Linda, *Decolonizing Methodologies: Research and Indigenous Peoples* (2nd edition, Zed Books Limited, 2012).

Small, Clive and Tom Gilling, *Smack Express: How Organised Crime got hooked on drugs* (Allen and Unwin, 2009).

Somare, Michael, 'Oslo Forest Climate Conference' (Speech delivered at the Oslo Climate and Forest Conference, Oslo, Norway, 26 May 2010).

South, Nigel and Piers Beirne (eds), *Green Criminology* (Ashgate Publishing Limited, 2006).

Spratt, David and Ian Dunlop, 'Existential climate-related security risk: A scenario approach' (Policy Paper, National Centre for Climate Restoration, 2019).

Standing, André and Davyth Stewart, 'Project Leaf and addressing corruption in REDD+', (2013) 3 *U4 Brief*

<<https://www.cmi.no/publications/4894-project-leaf-and-addressing-corruption-in-redd>>.

Standish, Bill, 'The Big-man Model reconsidered: power and stratification in Chimbu' (Discussion Paper Number 22, Institute of Applied Social and Economic Research, 1978).

Stern, Nicholas, *The Economics of Climate Change* (Cambridge University Press, 2007).

Stewart, Pamela and Andrew Strathern, 'Feasting on My Enemy: Images of Violence and Change in the New Guinea Highlands' (1999a) 46 (4) *Ethnohistory* 645.

Stewart, Pamela and Andrew Strathern, 'Female Spirit Cults as a Window on Gender Relations in the Highlands of Papua New Guinea' (1999b) 5 (3) *The Journal of the Royal Anthropological Institute* 345.

Stewart, Pamela and Andrew Strathern, 'Introduction: Latencies and Realizations in Millennial Practices' (2000) 47 (1) *Ethnohistory* 3.

Stewart, Pamela and Andrew Strathern, 'Power and Placement in Blood Practices' (2002) 41 (4) *Ethnology* 349.

Strathern, Andrew, 'Rape in Hagen' in Susan Toft (ed), 'Domestic Violence in Papua New Guinea (Monograph No. 3, Law Reform Commission of Papua New Guinea, 1985).

Strathern, Andrew and Pamela Stewart, 'Perilous Pearl Shells: The Fabricated Politics of a Longhouse in Pangia, Papua New Guinea' (2000) 5 (1) *Journal of Material Culture* 69.

Sykes, Karen Margaret, 'After the 'Raskol' Feast, Youths' alienation in New Ireland, Papua New Guinea' (1999) 19 (2) *Critique of Anthropology* 157.

Sykes, Karen Margaret, *Raising Lelet: Education, Knowledge and the Crisis of Youth in Central New Ireland, Papua New Guinea* (PhD Thesis, Princeton University, 1995).

Szabo, Michael, 'CO2 exchange Bluenext to resume trading Thursday', *Reuters* (online), 15 October, 2008 <<https://www.reuters.com/article/us-carbon-bluenext/co2-exchange-bluenext-to-resume-trading-thursday-idUSTRE49E4TK20081015>>.

Szabo, Michael, 'Black Dragon: UK hacker comes clean on carbon credit thefts', *Reuters* (online), 20 June, 2014 <<https://uk.reuters.com/article/uk-carbon-hacker-idUKKBN0EV1EE20140620>>.

Szasz, Andrew, 'Corporations, Organized Crime and the Disposal of Hazardous Waste: An Examination of the Making of a Criminogenic Regulatory Structure', in Nigel South and Piers Beirne (eds), *Green Criminology* (Ashgate Publishing Limited, 2006) 341.

Tanda, Paliaina Aiyery, 'An analytical evaluation of the effects of the Wantok System in the South Sea Evangelical Church of Papua New Guinea' (2011) 27 (1) *Melanesian Journal of Theology* 6.

Talley, Ian, 'US Court Orders Records Unsealed In Cap-And-Trade Fraud Case' *Dow Jones International News* (online) 17 December, 2009 <<https://search.proquest.com/docview/2198935964?accountid=10910>>.

The Age, 'The ticking crime bomb on our doorstep', *The Age* (online), 19 February, 2005 <<https://www.theage.com.au/national/the-ticking-crime-bomb-on-our-doorstep-20050219-gdzmn.html>>.

The Australian, 'Triads 'working with PNG pollies'', *The Australian* (online), 24 March, 2010 <<https://www.theaustralian.com.au/news/world/triads-working-with-png-pollies/news-story/c9a48439674c52701eba9ac22cde2d47>>.

The Insolvency Service, Department of Business, Energy & Industrial Strategy (UK), '8 companies involved in multi million pound international carbon credit and wine investment scam ordered to close' (Press Release, 27 November 2015) <<https://www.gov.uk/government/news/8-companies-involved-in-multi-million-pound-international-carbon-credit-and-wine-investment-scam-ordered-to-close>>.

The National, 'Judge notes emergence of organised crime in PNG', *The National* (online), 21 June, 2006 <https://sgoc.blogspot.com/2006_06_01_archive.html>.

The National, 'Carbon trade backed', *The National* (online), 2 February, 2010a <<https://www.thenational.com.pg/carbon-trade-backed/>>.

The National, 'PNG Landowners see red over Polyes carbon cowboys', *The National* (online), 13 October 2010b <<https://www.thenational.com.pg/landowners-see-red-over-polye's-carbon-cowboys/>>.

The National, 'Moresby residents farewell Wong', *The National* (online), 22 June, 2011 <<https://www.thenational.com.pg/moresby-residents-farewell-wong/>>.

The National, 'Businessman arrested for fraud', *The National* (online), 11 March, 2012 <<https://www.thenational.com.pg/businessman-arrested-for-fraud/>>.

The National, 'Chinese arrested in Porgera raid', *The National* (online), 26 December, 2012 <<https://www.thenational.com.pg/chinese-arrested-in-porgera-raid/>>.

The National, 'Police find illegal firearms', *The National* (online), 21 July, 2014a <<https://www.thenational.com.pg/police-find-illegal-firearms/>>.

The National, 'Police clash', *The National* (online), 21 October, 2014b <<https://www.thenational.com.pg/police-clash/>>.

The National, 'Suspects in bank robbery in custody', *The National* (online), 11 November, 2014c <<https://www.thenational.com.pg/suspects-in-bank-robbery-in-custody/>>.

The National, 'Immigration clears air on Kai's visa', *The National* (online), 18 April, 2018 <<https://www.thenational.com.pg/immigration-clears-air-kais-visa/>>.

The National, 'Eight women held captive in Hela', *The National* (Port Moresby), 25 January, 2019a, 6.

The National, 'Officer under investigation', *The National* (Port Moresby), 25 January, 2019b, 6.

The National, 'Police numbers on the rise', *The National* (Port Moresby), 12 March, 2019c, 7.

The National, 'Discussions on climate change held', *The National* (Port Moresby), 13 March, 2019d, 28.

The Sydney Morning Herald, '104 illegal mine workers arrested in PNG', *The Sydney Morning Herald* (online), 6 November, 2008 <<https://www.smh.com.au/world/104-illegal-mine-workers-arrested-in-png-20081106-5iuu.html>>.

The Sydney Morning Herald, 'PNG PM Somare attacks US climate policy', *The Sydney Morning Herald* (online), 29 November, 2009 <<https://www.smh.com.au/world/png-pm-somare-attacks-us-climate-policy-20091129-jyfp.html>>.

Thiong'o, wa Ngũgĩ, 'Decolonising the mind' (1998) 46 (184) *Diogenes* 101.

Thornton, Justine, 'Significant UK Environmental Cases: 2011-2012' (2012) 24 (2) *Journal of Environmental Law* 371.

Tilley, Nick, 'Realism, Situational Rationality and Crime Prevention', in Graeme Newman, Ronald Clarke and Giora Shorman (eds), *Rational Choice and Situational Crime Prevention* (Dartmouth Publishing Company Limited, 1997) 95, 101.

Tomkins, Kevin, 'Police, law enforcement and the environment', in Rob White (ed), *Environmental Crime: a reader* (Willan Publishing, 2009) 515.

Transparency International PNG, 'The Moti Affair' (Report, TI PNG, 7 November, 2013 <<https://www.transparencypng.org.pg/the-moti-affair/>>.

Transparency International Corruption Perception Index 2018 <<https://www.transparency.org/cpi2018>>.

Turgeman-Goldschmidt, Orly, 'Meanings that Hackers Assign to their Being a Hacker' (2008) 2 (2) *International Journal of Cyber Criminology* 382.

Uhr, Grace, 'Push for security boost at Saibai Island to help cut flow of drugs to Cairns', *The Cairns Post* (online), 19 November, 2014
<<http://www.cairnspost.com.au/news/crime-court/push-for-security-boost-at-saibai-island-to-help-cut-flow-of-drugs-to-cairns/news-story/53a6681ffea172779016c23657245119>>.

United Nations Children's Fund, 'A Gathering Storm: Climate Change clouds the future of children in Bangladesh' (Report, UNICEF, March, 2019)
<<https://www.unicef.org/rosa/reports/gathering-storm>>.

United Nations Development Programme, 'US\$15.2 million approved for 5 countries at the UN-REDD Policy Board Meeting' (Press Release, 5 November, 2010).

United Nations Development Programme, 'Public Procurement Capacity Development Guide' (Report, UNDP, October, 2010)
<<https://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/undp-procurement-capacity-assessment-users-guide/Procurement%20Capacity%20Assessment%20Guide.pdf>>.

United Nations Development Programme, 'PNG Forest Authority receive assistance from UN-REDD Programme and EU to develop first National Forest Inventory' (Press Release, 20 May, 2015).

United Nations Environment Programme, 'Building Natural Capital: How REDD+ can support a Green Economy' (Report, UNEP, 2014).

United Nations Office on Drugs and Crime, 'Transnational Organized Crime in East Asia and the Pacific: A Threat Assessment', (Report, United Nations Office on Drugs and Crime, April 2013) <https://www.unodc.org/documents/data-and-analysis/Studies/TOCTA_EAP_web.pdf>.

United Nations Office on Drugs and Crime, 'Transnational Organized Crime in the Pacific: A Threat Assessment', (Report, United Nations Office on Drugs and Crime, September, 2016)

https://www.unodc.org/documents/southeastasiaandpacific/Publications/2016/2016.09.16_TOCTA_Pacific_web.pdf.

Ukaha, Junior, 'Cop: organised crime suspected', *The National* (online), 17 June, 2011a

<https://www.thenational.com.pg/cop-organised-crime-suspected/>.

Ukaha, Junior, 'Cop dies in hospital', *The National* (online), 21 December, 2011b

<https://www.thenational.com.pg/cop-dies-in-hospital/>.

Ukaha, Junior, 'Police remember fallen comrades in ceremony', *The National* (online),

28 October, 2012 <https://www.thenational.com.pg/police-remember-fallen-comrades-in-ceremony/>.

Ure, Carolyn, 'Aid to assess climate change impact', *PNGLoop News* (online), 14

November, 2018 <http://www.looppng.com>.

Vailala Purari Investment Limited, 'Attention: Papua New Guinea, Let Us Put A Stop to Corruption in the Logging Industry in PNG' (Media Release, 2004).

Venuti, Stephanie, 'REDD+ in Papua New Guinea and the Protection of the REDD+ Safeguard to Ensure the Full and Effective Participation of Indigenous Peoples and Local Communities' (2014) 17 *Asia Pacific Journal of Environmental Law* 131.

Vijge, Marjanneke, Maria Brockhaus, Monica Di Gregoria and Efrian Muharrom, 'Framing national REDD+ benefits, monitoring, governance and finance: A comparative analysis of seven countries' (2016) 39 *Global Environmental Change* 57.

Vincent, Salome, 'PM on He Kai deportation', *Loop PNG* (online), 21 July, 2018
<<http://www.looppng.com/tags/kevin-he-kai>>.

von Lampe, Klaus, 'Re-conceptualizing transnational organized crime: offenders as problem solvers', (2011) 2 (1) *International Journal of Security and Terrorism* 1.

von Lampe, Klaus, 'The application of the framework of Situational Crime Prevention to 'organized crime'', (2011) 11 (2) *Criminology & Criminal Justice* 145.

Waeda, Julianna, 'Police warned of illegal activities', *Loop PNG* (online) 25 July, 2018
<www.looppng.com/png-news/police-warned-illegal-activities-78474>.

Walter, Michael, 'Cult movements and community development associations: revolution and evolution in the Papua New Guinea countryside' (Discussion Paper Number 36, Institute of Applied Social and Economic Research, 1981).

Walters, Reece and Peter Martin, 'Cameron's hot air. Pollution, fraud and the politics of carbon emissions' (2012) 90 (1) *Criminal Justice Matters* 6
<<http://www.tandfonline.com/toc/rcjm20/90/1>>.

Walters, Reece and Peter Martin, 'Crime and the Commodification of Carbon' in Reece Walters, Diane Solomon Wester and Tanya Wyatt (eds), *Emerging Issues in Green Criminology* (Palgrave Macmillan, 2013).

Walton, Grant and Sinclair Dinnen, 'The dark side of economic globalisation: politics, organised crime and corruption in the Pacific' (Discussion Paper No. 48, Australian National University, 2016).

Wani, Daphne, 'Illegal group exists', *The National* (online), 12 February, 2018
<<https://www.thenational.com.pg/illegal-group-exists/>>.

White, Rob, 'Environmental crime in global context: exploring the theoretical and empirical complexities' (2005) 16 (3) *Current issues in criminal justice* 271.

White, Rob, 'Environmental harm and crime prevention' (*Trends & issues in crime and criminal justice* Research Paper No. 360, Australian Institute of Criminology, June 2008).

White, Rob, 'Introduction: Environmental crime and eco-global criminology' in Rob White (ed), *Environmental Crime A Reader* (Willan Publishing, 2009) 1.

White, Rob (ed), *Climate Change from a Criminological Perspective* (Springer, 2012).

White, Rob, *Transnational Environmental Crime: Toward an eco-global criminology* (Routledge, 2011).

White, Rob and Mark Halsey, 'Crime, Ecophilosophy and Environmental Harm', in Nigel South and Piers Beirne (eds), *Green Criminology* (Ashgate Publishing Limited, 2006) 195, 196.

Whitehouse, Simon, Peter Lacy, Xavier Veillard, Justin Keeble and Shaun Richardson, 'Carbon Capital: Financing the low carbon economy' (Report, Accenture and Barclays, February, 2011).

Whyte, William Foote, *Street Corner Society: The social structure of an Italian slum* (The University of Chicago Press, 1943).

Wickham, Frank, Jeff Kinch, David Mitchell, Michael Bongro, Rose Alphonse, Gwen Sissiou, Gwen Maru, Gai Kula and Steven Nicholls, 'National Capacity Self Assessment Project: Assessing the Capacity of Papua New Guinea to Implement the United Nations

Convention on Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC)' (Final Report, Papua New Guinea Department of Environment & Conservation, 2010).

Williams, Christopher, 'An Environmental Victimology' in Nigel South and Piers Beirne (eds), *Green Criminology* (Ashgate Publishing Limited, 2006) 309.

Windybank, Susan, 'Will Papua New Guinea become a 'failed state'? A downward spiral', *International Herald Tribune* (online) 8 April, 2003
<<https://www.globalpolicy.org/component/content/article/173-sovereign/30462.html>>.

Windybank, Sue, 'The Illegal Pacific, Part 1: Organised Crime' (2008) 24 (1) *Pacific Policy* 32.

Windybank, Susan and Mike Manning, 'Papua New Guinea On the Brink' (2003) 30 *Issue Analysis* <<http://www.cis.org.au/app/uploads/2015/07/ia30.pdf>>.

Wood, Michael, 'Kamula Accounts of Rambo and the State of Papua New Guinea' (2006) 76 (1) *Oceania* 61.

Wood, Michael, 'Representational Excess in Recent Attempts to Acquire Forest Carbon in the Kamula Doso Area, Western Province, Papua New Guinea' in Joshua Bell, Paige West and Colin Filer (eds), *Tropical Forests of Oceania* (Australian National University Press, 2015) 211.

Wolf, Brian, 'Green-Collar Crime': Environmental Crime and Justice in the Sociological Perspective' (2011) 5 (7) *Sociology Compass* 499.

World Bank Group, 'Papua New Guinea Economic Update: Slower Growth, Better Prospects' (Report, World Bank Group, January, 2019).

Wright, Alan, *Organised Crime: Concepts, Cases Controls* (Willan Publishing, 2005).

Wright, Glen, 'Conceptualising and combating transnational environmental crime' (2011) 14 *Trends of Organised Crime* 332.

Wuebbles, Donald, Aman Chitkara and Clay Matheny, 'Potential effects of climate change on global security' (2014) 34 *Environment Systems and Decisions* 564.

Yagi, 'Sylver, 'Chinese national wanted by NCD Police for fraud allegations' *Loop PNG* (online) 10 February, 2016 <<http://www.looppng.com/content/chinese-national-wanted-ncd-police-fraud-allegations>>.

Yin, Robert, *Case Study Research: Design and Methods* (Sage Publications Inc, 2014).

Zarriga, Miriam, 'Another Asian arrested over the sale of fake beer', *Post-Courier* (online) 7 January, 2019 <<https://postcourier.com.pg/another-asian-arrested-sale-fake-beer/>>.

Zwartz, Barney, 'Rampant logging destroying PNG', *The Sydney Morning Herald* (online) 27 February, 2010 <<https://www.smh.com.au/environment/rampant-logging-destroying-png-20100226-p94l.html>>.

B Cases

Papua New Guinea

Ainbai Elis Holdings Limited v Frontier International Limited & Aaron Peyiyiku: O.S No. 722 of 2014.

Alex Bernard & P'Nyang Resources Association Inc. v Nixon Duban & Others [2016] PGNC 121; N6299.

Andy Asuma trading as Andy Asuma Trading, John Molu, Nick Asuma, Benjamin Mulu, Alo Rex Lano, Lukas Kumui & Mark Tombiago v Mr Tiong Juk Chuong, Mr Wong Keh Yee, Wawoi Guavi Timber Company Limited, Senior Sergeant Jerry Biamaga, First Constable Frank Johe, Gero Billy, Idie Ugu, Idie Wame, Ivan Ibale, Gideon Gaiwai & Ule Baiwaba [2018] PGNC 187; N7275.

Arua Loa, Areni Igo and Lakani Oala v Pepi Kimas, Secretary for Lands and Physical Planning, Benjamin Samson, Deputy Registrar of Titles, Honourable Dr. Puka Temu, Minister for Lands and Physical Planning and The Independent State of Papua New Guinea [2014] PGNC 209; N5849.

Belden Namah v Peter O'Neil [2015] PGSC 77.

Christopher Haiveta v Paias Wingti (No. 2) [1994] PNGLR 189.

Dumal Dibiaso v Kola Kuma [2005] PNGLR 680.

Fugaman Gau, for himself and members of the Songumbe-Marumbe and Boimbe Clans v. G & S Limited [2018] PGNC 119; N7198.

Hiu Teck Lau & Others v Leo Maniwa & Others [2016] PGSC 47; SC1528.

Hiu Teck Lau & Others v Leo Maniwa & Others [2016] PGSC 63; SC1545.

Ina Enei v Rimbunan Hijau Limited (2012) PGNC 392; N4402.

In re Reference to Constitution Section 19(1) [2011] PGSC 41; SC 1154.

In Re Constitution Section 19(1) – Special Reference by Allan Marat; In Re Constitution Section 19(1) and 3(a) – Special Reference by the National Parliament [2012] PGSC 20; SC1187.

In re Bail Application by Hombi [2010] PGNC 84; N4080.

In re Bail Act, Chapter 340, Application by Joyce Maima & Rueben Micah [2008] PGNC 225; N3611.

In re Bail Act, Chapter 340, Application by Paul Tiensten [2014] PGSC 29; SC1343.

Kanga Kawira of the Hewa sub clan of Kutage Tribe v Kepaya Bone & Others [2017] PGNC 164; N6802.

King v Hor Mui [1946] PGSC 1.

Leo Maniwa & Others v Aron Malijiwi & Others [2014] PGNC 25; N5687.

Lin Wan Xin v Wang Yanhong [2001] PGNC 9; N2160.

Manuel Gramgari v. Steve Crawford & PNG Tropical Wood Products [2018] PGNC 118; N7197.

Noah Karo v The State [2009] PGSC 19; SC998.

Paul Tiensten v The State [2014]

Re Gerard Sigulogo [1988-89] PNGLR 384.

Rimbunan Hijau (PNG) Limited v Ina Enei [2017] PGSC 36; SC1605.

The State v Asi Taba [2010] PGNC 70; N4083.

The State v Asi Taba [2010] PGNC178; N393.

The State v Caspar Louis, Paul Steven, Hubert Korede, Steward Korina, Samson Banaso and Gelison William [2017] PGNC 115; N6755.

The State v Chris Chan [2012] PGNC 346; N5534.

The State v Damien Anis [2002] PGLaw Rep 25; PNGLR 614.

The State v Eric Naks Lako and Keith Lasi Aira (2016) PGNC 14; N6182.

The State v Jimmy Naime [2005] PGNC 76; N2873.

The State v Joe Kovea Mailai [1980] PGNC 33; N272.

The State v John Goea Kevandi [1997] PGNC 10; N1531.

The State v Misack Kilik [2004] PGNC 28; N2749.

The State v Paul Tiensten [2013] PGNC 234; N5422.

The State v Paul Tiensten [2014] PGNC 224; N5563.

The State v Philip Saku, James Sanguru, Makuku Rimba & Ginom Kiliwa [2011] PGNC 78; N4355.

The State v Steven Tari Nangimon Garasai [2010] PGNC 145; N4137.

The State v Titus Aiko, Andiki Bus and Nisi Bale [2008] PGNC 71; N3324.

The State v Theo Yasause [2012] PGNC 248; N4871.

The State v Vincent Malara [2002] PGNC 135; N2188.

The State v William Kapris, Jacob Peningi Okimbari, Collin Masilo, Bonny Solomon, Johnny Gumaira, Damien Inanei, Kito Aso, Joyce Maima, Kia Warren, Bobby Selan, Reuben Micah, Isabella Kivare, Elvis Bala Aka & Peter Allan Popo [2011] PGNC 24; N4232.

The State v William Kapris, Jacob Peningi Okimbari, Collin Masilo, Johnny Gumaira, Damien Inanei, Kito Aso, Joyce Maima, Bobby Selan, Reuben Micah, Isabella Kivare, Elvis Bala Aka & Peter Allan Popo [2011] PGNC 51; N4305.

The State v Wingkeoc Pitaneoc & Boiyo Kaninga [2004] PGNC 248; N2514.

The State v Xie Xiao Fang alias Jack Sia [2018] PGNC 326; N7387.

The State v Yuting Shi [2017] PGNC 308; N6983.

The State v Zheng Yuhui [2015] PGNC 184; N6093.

Thomas Karo v Commissioner of Correctional Service [2018] PGNC 587; N7799.

Tunu for Luhalipa Clan v Independent State of Papua New Guinea [2002] PGNC137; N2190.

Wandiago Kau & Others v The State [2016] PGNC 429; N7010.

Woodlark Mining Limited v Vitroplant Limited: O.S No. 321 of 2008.

James Lee v The State [2011] PGNC 331; N4310.

Australia

R v Alexander Stuart McMurray [2011] QCA 319.

R v Jacqueline Obianuju Agboti [2014] QCA 280.

R v John Edward Parsons & Lorna Margaret Sanders [1999] QCA 402.

R v John William Lake; R v Jamie Alan Carstein; R v Glenn James Geerlings [2007] QCA 209.

R v Mary Helen Byast [1997] QCA 276.

Shift2Neutral Pty Ltd v Fairfax Media Publications Pty Ltd [2014] NSWSC 86.

Shift2Neutral Pty Ltd v Fairfax Media Publications Pty Ltd [2015] NSWCA 274.

England

Sandeep Dosanjh, Navdeep Gill and Ranjot Chahal v R [2013] EWCA Crim 2366.

Fiji

The State v Aidan Alec Hurtado [2017] FJHC 446.

The State v Muskan Balaggan & Elton Xhemali [2012] FJHC 1147.

The State v Phanat Laojindamane, Lum Bing, Zhang Yong, Jason Zhong [2012] FJHC 1486.

The State v Wong Kam Hong & Tak Sang Hao [2002] FJHC 273.

The State v Yeung Sze Wai Alice, Fong Pak Hung, Ho Kwok On [1997] FJHC 229.

Zhang Yong v State [2012] FJHC 1368; HAM.166.2012

Singapore

Public Prosecutor v Lim Ai Wah and Thomas Philip Doehrman [2016] SGDC 249.

Vanuatu

Public Prosecutor v Chavdar Koleff [2008] VUSC 5.

Public Prosecutor v Cheung Siu Wah [1989] VUSC 6; Criminal Case 005 of 1989.

C *Legislation*

Papua New Guinea

Climate Change (Management) Act 2015.

Compensation (Prohibition of Foreign Legal Proceedings) Act 1995.

Conservation Area Act 1978.

Constitution of the Independent State of Papua New Guinea.

Criminal Code Act 1974.

Environment (Prescribed Activities) Regulation 2002.

Fairness of Transactions Act 1993.

Forestry Act 1991.

Forestry (Timber Permits Validation) Act 2007.

Frauds and Limitations Act 1988.

Land Act 1996.

Land Disputes Settlement Act 1975.

Land Groups Incorporation Act 1974.

Land Groups Incorporation Regulation 1974.

Organic Law on the Duties and Responsibilities of Leadership.

Public Finances (Management) Act 1995.

United Nations Paris Agreement (Implementation) Act 2016.

Court Rules

Criminal Practice (Fraud & Corruption Related Offences) Rules 2013.

D Treaties

Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on Its Eleventh Session Held in Montreal from 28 November to 10 December, 2005*, UN Doc FCCC/CP/2005/5 (30 March, 2006).

Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on Its Thirteenth Session Held in Bali from 3 to 15 December, 2007*, UN Doc FCCC/CP/2007/6/Add, 1 (14 March, 2008).

Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on Its Sixteenth Session Held in Cancun from 29 November to 10 December, 2010*, UN Doc FCCC/CP/2010/7/Add, 1 (15 March, 2011).

Europol Convention of 26 July 1995.

Kyoto Protocol to the United Nations Framework Convention on Climate Change, UN Doc (1998).

Paris Agreement to the United Nations Framework Convention on Climate Change, UN Doc (2015).

Report of the United Nations Forum on Forests on its 2017 special session, Economic and Social Council Dec E/2017/10, UN Doc E/CN.18/SS/2017/2 (8 February 2017) <<https://www.un.org/g1/search>>.

United Nations Convention against Transnational Organized Crime

United Nations Declaration on the Rights of Indigenous Peoples, GA Res 61/295, UN Doc A/RES/61/295 (2 October 2007, adopted 13 September 2007).

E Other

Reducing emissions from deforestation in developing countries: approaches to stimulate action, 11th sess, Agenda Item 6, Submission, FCCC/CP/2005/MISC.1 (11 November 2005).

Audio-visual

A Bloody Boycott (Foreign Correspondent, ABC TV, 19 July 2016)

<<http://www.abc.net.au/foreign/content/2016/s4503679.htm>>.

Bikpela Bagarap (Directed by David Fedele, 2011) <www.bikpelabagarap.com>.

Carbon Cowboys (A Pear Productions Film, People & Power, Aljazeera, 2009)

<<https://www.aljazeera.com/programmes/peopleandpower/2009/12/20091296040431607.html>>.

Climate Controversy in PNG (World News Australia, SBS Australia, 2009)

<<https://www.youtube.com/watch?v=Hc2YxR3fl6I>>.

Carbon Cowboys (60 Minutes, ABC TV, 2013)

<<https://www.bing.com/videos/search?q=carbon+cowboys+60+minutes&view=detail&mid=D71D9251353B55CF3539D71D9251353B55CF3539&FORM=VIRE>>.

Jungle Justice (Dateline, SBS Australia, 2005)

<<https://www.youtube.com/watch?v=JyomHV8QOrQ>>.

Keep Calm & Drill On (Directed by Marianne Leitch, Foreign Correspondent, ABC TV, 2016) <www.abc.net.au/foreign>.

REDD+ with the Office of Climate Change PNG (EMTV News, 2015)
<<https://www.bing.com/videos/search?q=png+office+of+climate+change&&view=detail&mid=29EB07FA9F9347468FCF29EB07FA9F9347468FCF&&FORM=VRDGAR>>.

Digital Resources

Coalition for Rainforest Nations <<https://www.rainforestcoalition.org/>>.

Forest Carbon Partnership Facility <<https://www.forestcarbonpartnership.org/>>.

Papua New Guinea Conservation & Environment Protection Authority
<<http://www.pngcepa.com/>>.

Papua New Guinea's Forest Reports <<https://pngforests.com/>>.

REDD Monitor <<https://redd-monitor.org/>>.

UN-REDD Programme <<https://www.un-redd.org/>>.