TRANSPARENCY INTERNATIONAL PAPUA NEW GUINEA

CORRUPTION RISKS IN MINING AWARDS

COUNTRY REPORT
Cover image: Programme Lawyer from TIPNG’s Advocacy and Legal Advice Centre (ALAC) speaking to a community in Sinivit LLG of Pomio District in the East New Britain Province of Papua New Guinea in 2015 as part of a lands right awareness outreach programme.
CORRUPTION RISKS IN MINING AWARDS:
PAPUA NEW GUINEA

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30 JUNE 2017

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EXECUTIVE SUMMARY

This report examines risks associated with mining awards in Papua New Guinea, a country with a resource dependent economy. Papua New Guinea’s principal mining products are gold, silver, copper and nickel. In the 2010s the country has averaged around 60 tonnes Au/year, or about 2% of world production.

Many analysts refer to Papua New Guinea having a ‘resource curse’ because the country has found it difficult to translate high mineral incomes into tangible progress with development. International ranking agencies score Papua New Guinea as having a high level of general corruption. In Bohre Dolbear’s ‘Where to invest in mining’ survey, Papua New Guinea was ranked 24th out of 25 countries with large mining sectors in 2015.

- In this report, petty corruption in the regulatory agencies that vet applications for licences and permits is assessed as having a low likelihood.

- A form of administrative laxity amounting to collusive corruption is found in the way award processes frequently act to the advantage of the ensemble of several levels of government, privileged officials in local representative bodies, and the applicants for licences and permits, at the expense of poor rural people on whose land mining takes place, or who suffer preventable environmental impacts, and for whom social development indicators have not improved as they should have.

- There is a danger of regulatory capture by political elites in Papua New Guinea and this has from time to time affected mining projects.

- The symptoms of state capture by ruling parliamentary factions have been much debated during the 2000s, with no firm conclusions to date. A form of state capture may be playing out in the oil and gas sector; its only symptom in the mining sector in manifested in the form of the 2013 nationalisation of the Ok Tedi mine. However, the ramifications of this move are unclear.

The report follows a methodology supplied by Transparency International’s Mining Awards Corruption Risk Assessment (MACRA) tool. Seventeen of 89 ‘common risks’ in the tool have likelihood x impact scores that class them as ‘red’ risks. Ten country-specific ‘additional risks’ are added; five of them are classed as ‘red’ risks.

The conclusions group recurrently high corruption risks into seven thematic areas. They are:

1. Risks concerning cross-institutional capacity
2. Risks concerning the human resources of regulatory agencies
3. Risks concerning the coherence of feasibility studies and MOAs
4. Risks concerning the lack of a national geospatial agency
5. Risks concerning consultation, representative bodies and associated business entities
6. Risks concerning the lack of CSR reporting requirements
7. Risks concerning women, vulnerable persons and marginalised groups

Recommendations are given in the seven thematic areas.
CONTENTS

EXECUTIVE SUMMARY ........................................................................................................ iv

PRINCIPAL TERMS AND ABBREVIATIONS ......................................................................... x

TIMELINE OF PRINCIPAL MINES
BY PHASE OF OPERATION .................................................................................................... xii

RISK MATRIX OF WORKSHEET ASSESSMENTS SCORED ‘RED’ ....................................... xiii

CHAPTER 1 PAPUA NEW GUINEA: DEFINING THE SCOPE .............................................. 1
Introduction .............................................................................................................................. 1
Types of corruption .................................................................................................................... 2
State capture and regulatory capture ....................................................................................... 7
  Regulatory capture .................................................................................................................... 8
  The relationship between regulatory capture and state capture ........................................ 10
Methods used and nature of the evidence ................................................................................. 11
  Translating the literature on mining in PNG into a corruption risk assessment .................. 11
  Links between abuses of entrusted power and private gains ............................................ 12
  Collusion between the holders of public office and mining companies as corruption ....... 13
  Assessing risk likelihood ........................................................................................................ 14
  Risk impacts for whom? .......................................................................................................... 14

CHAPTER 2 MAPPING THE PROCESS AND PRACTICE .................................................. 17
The current award process ......................................................................................................... 17
  Exploration Licence ................................................................................................................ 17
  Mining Lease / Special Mining Lease .................................................................................... 18
Mining awards made before the 1977 Act .............................................................................. 21
  Panguna ................................................................................................................................. 21
  Ok Tedi ................................................................................................................................ 22
  Ok Tedi – the question of whether there was ever a completed ‘mining award’ .......... 24
Mining awards made under the 1977 Mining Act ................................................................ 25
  Misima ................................................................................................................................... 26
  Porgera ................................................................................................................................. 26
Mining awards made under the 1992 Mining Act ................................................................ 30
  Limitations of the Mining Act 1992 ..................................................................................... 30
  Tolukuma ............................................................................................................................... 30
  Kainantu ................................................................................................................................. 31
  Simberi .................................................................................................................................. 32
  Lihir ....................................................................................................................................... 32
  Hidden Valley ....................................................................................................................... 35
  Ramu ..................................................................................................................................... 37
  Solwara1 ............................................................................................................................... 37

CHAPTER 3 THE MACRA COMMON RISKS – LONG-FORMAT DISCUSSION ..................... 39
01-REGULATORY-STATE Corruption risks in administration and legislation ................. 39
   CF01 ....................................................................................................................... 40
   CF03 ....................................................................................................................... 41
   CF07 ....................................................................................................................... 42
   PD01 ....................................................................................................................... 43
   PD20 ....................................................................................................................... 43
   PD21 ....................................................................................................................... 44
   RA01 ....................................................................................................................... 44
02-REGULATORY-FCFS Corruption risks in ‘first-come-first-served’ arrangements .......... 44
   PP12 ....................................................................................................................... 45
   PP13 ....................................................................................................................... 45
03-REGULATORY-TECH Technical capability of the regulatory agencies ....................... 45
   PD05 ....................................................................................................................... 46
   PD05.1 .................................................................................................................... 46
   PD06 ....................................................................................................................... 47
   PD27 ....................................................................................................................... 47
   PP01, PP02, PP03 ................................................................................................. 48
   PP05 ....................................................................................................................... 49
04-REGULATORY-INFO Transparency of regulatory procedures .................................. 49
   PD03, PD04, PD12, PD15 ................................................................. 50
   PD10 ....................................................................................................................... 50
   PD11, PD23, PD24 ............................................................................................... 51
   PD32 ....................................................................................................................... 51
   PD35, PD36 ....................................................................................................... 51
   PD37 ....................................................................................................................... 51
   RA02 ....................................................................................................................... 51
05-REGULATORY-IRREG Irregularities in the award process ...................................... 51
   PD25 ....................................................................................................................... 52
   PD29, PD30, PD31, RL06 ................................................................. 52
   RA15 ....................................................................................................................... 53
06-REGULATORY-ELITES Interferences in the award process by political elites .......... 57
   CF02 ....................................................................................................................... 57
   CF04 ....................................................................................................................... 58
   CF10 ....................................................................................................................... 60
   PD09 ....................................................................................................................... 61
   PD22 ....................................................................................................................... 61
07-EIA-SIA-PFD Risks in the EIA / SIA studies and Proposals for Development ............ 62
   CF08 ....................................................................................................................... 62
   CF09 ....................................................................................................................... 63
   PP-N01 ................................................................................................................ 63
   PP-N02 ................................................................................................................ 66
   PP08 ....................................................................................................................... 67
   PP09 ....................................................................................................................... 67
   PP10 ....................................................................................................................... 68
   PP11 ....................................................................................................................... 69
   RA06 ....................................................................................................................... 71
   RA07 ....................................................................................................................... 71
   RA08 ....................................................................................................................... 71
   RA09 ....................................................................................................................... 71
08-COMMUNITY Risks associated with community consultation ................................ 72
CHAPTER 4 CONCLUSIONS AND RECOMMENDATIONS

Risk Theme 1. Risks concerning cross-institutional capacity ........................................... 90
Risk Theme 2. Risks concerning the human resources of regulatory agencies ................. 91
Risk Theme 3. Risks concerning the coherence of feasibility studies and MOAs ............. 92
Risk Theme 4. Risks concerning the lack of a national geospatial agency ..................... 93
Risk Theme 5. Risks concerning consultation, representative bodies and associated business entities ................................................................. 94
Risk Theme 6. Risks concerning the lack of CSR reporting requirements ......................... 96
Risk Theme 7. Risks concerning women, vulnerable persons and marginalised groups .... 97

BIBLIOGRAPHY .............................................................................................................99
Correspondence ............................................................................................................ 99
Media ............................................................................................................................. 99
Online resources ........................................................................................................... 102
**APPENDIX A  MACRA TOOL WORKSHEET ASSESSMENTS SCORED ‘RED’**  

**Category 1: Contextual Factors (CF – three ‘red’ risks)**
- CF01 .......................................................... 114
- CF03 .......................................................... 115
- CF04 .......................................................... 116

**Category 2: Process Design (PD – four ‘red’ risks)**
- PD05.1 .......................................................... 117
- PD16 .......................................................... 118
- PD20 .......................................................... 119
- PD27 .......................................................... 120

**Category 3: Process Practice (PP – ten ‘red’ risks)**
- PP06 .......................................................... 121
- PP07 .......................................................... 122
- PP08 .......................................................... 123
- PP09 .......................................................... 124
- PP10 .......................................................... 125
- PP11 .......................................................... 126
- PP-N01 ......................................................... 127
- PP-N02 ......................................................... 128
- PP-N03 ......................................................... 129
- PP-N08 ......................................................... 130

**Category 4: Responses-Accountability (RA – four ‘red’ risks)**
- RA07 .......................................................... 131
- RA09 .......................................................... 131
- RA14 .......................................................... 132
- RA15 .......................................................... 133

**Category 5: Responses-Legal (RL – one ‘red’ risk)**
- RL01 .......................................................... 135

**APPENDIX B  CONTRIBUTION OF MINING TO THE PAPUA NEW GUINEA ECONOMY**  


LIST OF BOXES

Box 1. The Placer Share Affair ................................................................. 2
Box 2. The Porgera Coup ................................................................. 5
Box 3. Licensing for the Ramu Nickel project .................................................. 6
Box 4. Plant Site Spoil Disposal at Anawe, Porgera ............................................. 54
Box 5. What Human Rights Watch and other investigators say about local entities ................................................................. 59
Box 6. A ‘recognition shift’ at Hidden Valley ..................................................... 75
Box 7. FPIC – the Kapit community ................................................................ 77

LIST OF FIGURES

Figure 1 Timeline of principal mines by phase of operation................................. 12
Figure 2 Generic mining award flow chart (Chamber of Mines and Petroleum). .................. 19
Figure 3 Mining award flow chart reflecting procedures followed at Ok Tedi. ......................... 23
Figure 4 Mining award flow chart reflecting procedures followed at Porgera ....................... 27
Figure 5 Exploration sample from Porgera Zone 7 showing visible gold. ....................... 29
Figure 6 Mining award flow chart reflecting procedures followed at Lihir. ....................... 33
Figure 7 Mining award flow chart reflecting procedures followed at Hidden Valley. ................. 36
Figure 8 PNG Mining Cadastre Portal ................................................................ 49
Figure 9 Papua New Guinea’s oil and gas registers in 2014 ........................................... 50
Figure 11 Ok Tedi Mining’s map of Western Province ............................................. 64

LIST OF TABLES

Table 1 Simplified Project Development Process as modelled on permitting at Porgera. .... 28
Table 2 Distribution of royalty at Porgera ................................................................ 60
Table 3 Cumulative production statistics for gold, silver and copper ............................ 136
Table 4 Mineral exports as a proportion of total exports, 1973-2013 .......................... 136
## PRINCIPAL TERMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BCL</td>
<td>Bougainville Copper Limited&lt;br&gt;Operator of the Panguna copper mine on the island of Bougainville. The operator and majority shareholder (~55%) at the time the mine opened was Rio Tinto. The Papua New Guinea held ~20% of the shares and private investors the remainder.</td>
</tr>
<tr>
<td>CEPA</td>
<td>Conservation and Environmental Protection Authority&lt;br&gt;Successor to the Department of Environment and Conservation. Enabled by the Conservation and Environment Protection Authority Act 2014.</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility.</td>
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<td>EFIC</td>
<td>Export Finance Insurance Corporation. EFIC support was given to the financing of Lihir gold mine between 1995 and approximately 2003.</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment.</td>
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<td>EITI</td>
<td>Extractive Index Transparency Initiative (<a href="">https://eiti.org/</a>).</td>
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<tr>
<td>GRI</td>
<td>Global Reporting Initiative (<a href="">https://www.globalreporting.org/</a>).</td>
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<tr>
<td>ICMM</td>
<td>International Council on Mining and Metals (<a href="">https://www.icmm.com/</a>). Formed by leading companies involved in the MMSD process. Self-described as ‘an international organisation dedicated to a safe, fair and sustainable mining industry’.</td>
</tr>
<tr>
<td>LMP</td>
<td>Lease for Mining Purposes&lt;br&gt;LMPs are typically used for waste dumps, mining camps, and airstrips.</td>
</tr>
<tr>
<td>MDC</td>
<td>Mining Development Contract&lt;br&gt;An MDC sets out the terms of taxation, duties and production levies that will apply to a mining project. It is not a public document. MEs are typically used for mine access roads.</td>
</tr>
<tr>
<td>MOA</td>
<td>Memorandum of Agreement&lt;br&gt;MOAs are the MRA’s preferred head agreements between stakeholders at a mine, typically the national government, provincial government, local level government, mining company and landowner association. Since the first known MOA dates to 2005 (at Hidden Valley), older operations have had to have their non-standard agreement modernised to MOAs through new negotiations. An MOA is accompanied by many subsidiary agreements.</td>
</tr>
<tr>
<td>ML</td>
<td>Mining Lease&lt;br&gt;An ML differs from an SML in that a Mining Development Contract between the developer and the government is not required. Generally used for small- to mid-sized operations.</td>
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<tr>
<td>Acronym</td>
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<td>NEC</td>
<td>National Executive Council&lt;br&gt;Term used in Papua New Guinea for the Cabinet of senior ministers.</td>
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<tr>
<td>OTML</td>
<td>Ok Tedi Mining Limited.&lt;br&gt;Launched on 27 February 1981, with an initial shareholding of BHP Ltd (30%), Amoco (30%), Kupfer Exploration Gesellschaft (20%), PNG government (20%).</td>
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<tr>
<td>PLA</td>
<td>Porgera Landowners Association.&lt;br&gt;The Enga Provincial Government and PLA each currently hold 2.5% of the equity in the Porgera gold mine</td>
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<tr>
<td>PNG</td>
<td>Papua New Guinea.</td>
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<tr>
<td>PJV</td>
<td>Porgera Joint Venture.&lt;br&gt;Formed in 1979, by the late-1980’s PJV was made up of Placer Pacific Limited (33.3%), Highlands Gold (33.3%), and Renison Goldfields (33.3%). In 1989 the government took up its 10% option; the new holdings were Placer Pacific Limited (30%), Highlands Gold (30%), Renison Goldfields (30%), PNG government (10%). Prime Minister Paias Wingti required the partners to surrender a further 5% each to the government in 1993. Subsequently the government’s share was sold down such that the Enga Provincial Government and Porgera Land Owners Association now hold 2.5% each.</td>
</tr>
<tr>
<td>SML*</td>
<td>Special Mining Lease&lt;br&gt;An SML differs from an ML in that a Mining Development Contract between the developer and the government is a requirement. Generally used for very large mines.</td>
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TIMELINE OF PRINCIPAL MINES
BY PHASE OF OPERATION

Figure 1    Timeline of principal mines by phase of operation
Source: detailed references are given in the text. For smaller mines not shown here, see Appendix B.
RISK MATRIX OF WORKSHEET ASSESSMENTS SCORED ‘RED’

Showing 22 risks classified as likelihood x impact ‘red’ risks.

See Appendix A for individual MACRA tool worksheet assessments.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>5 Almost certain</th>
<th>4 Likely</th>
<th>3 Possible</th>
<th>2 Unlikely</th>
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<td>CF03 PD05.1 PP-N08</td>
<td>PP-N01 PD20 PP-N02 PD27 PP-N03 RA07 PP10 RA09 PP11 RA15 PP06 RA14 PP07 RL01 PP08 PP09 CF01 CF04 PD16</td>
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<th>Impact</th>
<th>1 Insignificant</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
<th>5 Catastrophic</th>
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CHAPTER 1

PAPUA NEW GUINEA: DEFINING THE SCOPE

Introduction

Transparency International’s *Mining for Sustainable Development* programme is conceived of in terms of the UN General Assembly’s 2012 resolution that ‘mining offers the opportunity to catalyse broad-based economic development, reduce poverty and assist countries in meeting internationally agreed development goals’ (TIPNG n.d.). At the same time, United Nations Development Programme (UNDP), was recently engaged with Papua New Guinea (PNG) in an ‘Extractive Industries and Sustainable Human Development’ project as part of its governance assistance to the country; it cautioned that the well-known ‘resource curse’ effect can lead to negative effects, including stunted economic growth, corruption, weak institutions, conflict, human rights abuses, and poor human development outcomes (UNDP 2014: Executive Summary).

Exactly where PNG stands on the spectrum between ‘the opportunity to catalyse broad-based economic development’ and victimhood of the resource curse has been hotly debated for many years. Of the six negative effects of the resource curse just listed, this report focusses on vulnerabilities to corruption using Transparency International’s Mining Awards Corruption Risk Assessment (MACRA) tool. Nonetheless, seen in the risks considered by the MACRA tool, there is considerable crossover among the six areas.

On Transparency’s Corruption Perception Index, Papua New Guinea has consistently placed in the worst performing 20% of countries for corruption during the 2000s. National corruption surveys are carried out only intermittently, and while respondents vary markedly in what they consider to be corruption, it is clear that there is a consensus in PNG that corruption is widespread (TIPNG 2013). Following egregious scandals, ‘Investigation Task Force Sweep’ was established in 2011 at the direction of Prime Minister Peter O’Neill to prepare cases for prosecution. In 2013 ITFS announced that PGK1.4 billion (A$560 million) would be lost to corruption from the national budget during the year (*The National* 2 Aug 2013). O’Neill ordered the ITFS disbanded in 2014; nonetheless, cases uncovered during its life continue to be prosecuted.

In the 2015 edition of Bohre Dolbear’s annual ‘Where to invest in mining’ survey, Papua New Guinea was ranked 24th out of 25, above only the Democratic Republic of Congo (Bohre Dolbear 2015). Earlier editions cited ‘managing social issues’, ‘permitting delays’ and ‘corruption’ as the underlying reasons.

The three times Prime Minister, Sir Julius Chan, no stranger himself to controversy, recently wrote:

> Corruption has become so widespread now and it breeds at the highest level where the Big Men in government make a deal … Unfortunately, now it is entrenched right throughout the system – both in private enterprises and in government services. It has become a question of, ‘How much will I get for doing this?’ It is very, very bad and it costs a lot, not just in monetary terms but also by delaying
the system, holding it back, not allowing projects to take place, and retarding the process of reaching conclusions. It’s the biggest problem we have in Papua New Guinea today (Chan 2016: 201).

Papua New Guinea is taken as a case study in Jason Sharman’s 2017 book *The Despot’s Guide to Wealth Management*. This includes the saga of the PNG lawyer, Paul Paraka, ‘currently charged … with thirty-two corruption and money laundering offenses, and accused … of corruptly obtaining almost $400 million of Papua New Guinea government funds’ (Sharman 2017: Chapter 5). Mr Paraka, a principal beneficiary of the disbanding of Task Force Sweep, has formed a political party and is contesting the 2017 national elections. After the most recent global assessment of corruption (Transparency International 2017), no voices within the country were raised in contradiction of PNG’s poor score. The Director the National Fraud Anti-Corruption Directorate, a police unit, recently claimed that K1.5 billion (US$495 million) went missing from the budget in 2016 (*The National* 8 May 2017).

The first question, then, is not if corruption exists in PNG but what sort of corruption is it?

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**Box 1. The Placer Share Affair**

In 1986, Placer Pacific Limited (PPL) decided to offer 128 million $1 shares on the Australian stock exchange in order to finance its commitment to the Porgera gold mine. Placer was the lead partner in the Porgera Joint Venture (PJV), then close to presenting a Feasibility Study to government. The then Finance Minister of Papua New Guinea, Sir Julius Chan, negotiated with the Australia Foreign Investment Review Board for ten per cent of the shares to be reserved for Port Moresby-based applicants (Jackson and Banks 2002: 126).

Chan then instructed the Bank of Papua New Guinea to raise the limits for foreign currency transactions by individuals to K30,000 (at the time A$45,000) to enable him, and what turned out to be 40 other politicians and prominent business figures, to move the necessary funds from accounts in PNG to Australia to take up the share offer.

On the day of the float, the shares opened at $1.00 and within a few days were trading at $2.50, enabling the lucky applicants to more than double their money. Controversy erupted when the *Sydney Morning Herald* discovered that the PNG Banking Corporation had loaned well-connected clients, including Chan, K1 million (A$1.5 million) while the bank’s chairman, Mekere Morauta (a later prime minister) was away. Chan then used companies he controlled, family members, and officials of his political party to obtain 800,000 PPL shares which he sold shortly afterwards. Morauta sacked the deputy responsible for approving the loans when he found out about it (*SMH* 10 Oct, 15 Oct 1986; Jackson and Banks 2002: 125-132).

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**Types of corruption**

The MACRA tool restates the standard definition of corruption as ‘the abuse of entrusted power for private gain’ (Nest 2016). A fuller list is given in online glossary of terms on Transparency International’s web site, where more than 30 terms are given for different kinds of corrupt actions. Three types of corruption *per se* are distinguished:

---

1 The Grass Roots United Front. At its launch, Mr Paraka declared he was a ‘victim of political madness and insanity’ and had created jobs ‘for over 30,000 young men and women over the years’ (*Post-Courier* 22 Jul 2016).

Grand Corruption. The abuse of high-level power that benefits the few at the expense of the many, and causes serious and widespread harm to individuals and society. It often goes unpunished.

Political corruption. Manipulation of policies, institutions and rules of procedure in the allocation of resources and financing by political decision makers, who abuse their position to sustain their power, status and wealth.

Petty corruption. Everyday abuse of entrusted power by public officials in their interactions with ordinary citizens, who often are trying to access basic goods or services in places like hospitals, schools, police departments and other agencies.

Consider two episodes from previous decades.

The ‘Placer Share Affair’ in 1986 (Box 1) concerned political corruption. Senior figures in government had advance knowledge of and made personal windfall profits from the 1986 Placer Pacific share float. It led to a commission of inquiry which recommended 41 leaders be the subject of further investigation, including Sir Michael Somare (the 1st prime minister), Sir Julius Chan3 (2nd prime minister), Sir Rabbie Namaliu (4th prime minister), and Sir Henry ToRobert (Governor of the Bank of Papua New Guinea). However, no wrongdoing was concluded, essentially because petty corruption – that is bribes or misappropriation – was not proven. A view from Australia was that:

The conclusion that PNG banks financed the larger share purchases and most of the smaller ones on behalf of PNG politicians and others is, in all probability, unavoidable. But what essentially is wrong with this? PNG is a Third World country; what is not permissible in Australia, by way of Cabinet Ministers buying shares, takes on a quite different character in Port Moresby (SMH 15 Oct 1986).

But looking back from 2017 the Placer Share Affair can be seen as the point when a political class discovered the huge prizes on offer in a capitalist economy given a slice of luck. The realisation that luck could be given a helping hand when no-one was watching represented the slippery slope towards the grand corruption alleged today by the likes of Sir Julius Chan was connected to this awakening.

In the Placer Share Affair, the advance information that gold reserves at Porgera were continually being revised upwards was not secret. However, the privileged ability to borrow money for what was considered a speculative stock was clearly a use of ‘entrusted power’. That the Australian brokers undervalued the listing price was an indication that the capital raising was considered high risk. When markets around the world crashed in October 1987 before Placer’s partner, Highlands Gold, could hold its own share float (Aus Fin Rev 28 Oct 1987), this conservatism was proven justified. The slice of luck was that the market held for long enough for the well-connected borrowers to cover their debts.

In the ‘Porgera Coup’ (Box 2), matters become more murky. Analysts differ somewhat on what they have written about it in print (Jackson and Banks 2002: 191-198; BRW 10 Apr 1993), but do privately say that political elites close to the action made their own profits. If this is indeed the case, the nature of the gains is very different from those in the Share Affair. Political muscle was used to menace mining companies into surrendering mine equity. If private profits were made –

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3 Chan’s memory of events 30 years after the event fails to square with the contemporary account of the SMH, which reported under the headline ‘Sir Julius Chan makes a killing’ that Chan made ‘at least $1 million clear profit’ (15 Oct 1986). In his autobiography Chan says ‘I borrowed money and bought about 15,000 shares. I did not make very much money, about 30 toea [46c] a share, because I did not keep them for long’ (Chan 2016: 123).
it is difficult to see how the principals close to the action would not have taken advantage – then it amounts to a classic instance of ‘abuse of entrusted power for private gain’.

Better terms have come into use for what is going on. The Transparency glossary continues:

**Conflict of interest.** Situation where an individual or the entity for which they work, whether a government, business, media outlet or civil society organisation, is confronted with choosing between the duties and demands of their position and their own private interests.

**Nepotism.** Form of favouritism based on acquaintances and familiar relationships whereby someone in an official position exploits his or her power and authority to provide a job or favour to a family member or friend, even though he or she may not be qualified or deserving.

**Politically exposed persons.** Politically Exposed Persons are individuals who hold or held a prominent public function, such as the head of state or government, senior politicians, senior government, judicial or military officials, senior executives of state-owned corporations, or important political party officials. The term often includes their relatives and close associates. Banks and other financial institutions are supposed to treat these clients as high-risk, applying enhanced due diligence at both the start of the relationship and on an ongoing basis, including at the end of a relationship to ensure that the money in their bank account is not the proceeds of crime or corruption.

In the Placer Share Affair, some of the well-connected borrowers clearly had conflicts of interest (notably the Finance Minister and the Chairman of the Bank of Papua New Guinea). Nepotism was involved in that cronies were let in on the deal and/or vouched for when borrowing money. The Papua New Guinea Banking Corporation (retail bank) should have treated the leading borrowers as politically exposed persons and done a risk assessment as to whether they could ethically be lent money. The fact that the bank’s chairman sacked his deputy when he discovered what had happened is an indication that he believed they could not.

The Transparency glossary notes:

**Lobbying.** Any activity carried out to influence a government or institution’s policies and decisions in favour of a specific cause or outcome. Even when allowed by law, these acts can become distortive if disproportionate levels of influence exist – by companies, associations, organisations and individuals.

**State capture.** A situation where powerful individuals, institutions, companies or groups within or outside a country use corruption to influence a nation’s policies, legal environment and economy to benefit their own private interests.

In the Porgera Coup, Prime Minister Wingti admitted into his circle of advisors two known market predators. The first was Bob Needham, managing director of Placer Pacific at the time of the share float (Filer and Imbun 2009: 94) and once called ‘Australia’s King Midas’ (Aus Fin Rev 18 Oct 1993). Shortly after the float, Needham had surprised everyone by quitting Placer and taking several Placer executives with him to form Giant Resources, a short-lived mining start-up with interests in Torres Strait (Aus Fin Rev 9 Mar 1988). The second was Denis Reinhardt.

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4 In 1988, the *Sydney Morning Herald*’s CBD business gossip column placed Wingti at the same table at the Sydney ‘Imperial Peking Harbourside’ restaurant as Rene Rivkin, the 1985 BRW ‘Stockbroker of the Year’ (convicted of insider trading in 2003 after which he suicided and his web of secret offshore accounts was discovered), and ‘former journalist turned mining entrepreneur’ Denis Reinhardt. The *Herald* commented ‘Since his dining companions have substantial business interests in the fiercely independent country, CBD assumes the lunch sprang from fond memories of friendships cemented during Mr Wingti’s three-year stint in government. Unless, of course, Mr Wingti’s local hosts have an insight into developments in PNG’s tumultuous politics which we lack. If so, the table’s collective minds may have dwelt on the possibilities of future happy contacts’ (SMH 18 Aug 1988).
Reinhardt, variously described as a ‘rising Brisbane star’ (*Aus Fin Rev* 7 Dec 1987), a ‘strategist’ (*Aus Fin Rev* 9 Mar 1988) and, after several of his ventures collapsed, a ‘failed Queensland mining entrepreneur’ (*BRW* 25 Sep 1992). Wingti had known Reinhardt for some time.

### Box 2. The Porgera Coup

During the prime ministership of Sir Rabbie Namaliu, the PNG government activated a long-standing agreement with the Porgera Joint Venture partners to take up a 10% stake in the mine. Namaliu lost the July 1992 elections to Paias Wingti. When Wingti announced the government had been misled over the projected profitability* of the mine and asked the partners to surrender an additional 20% of the mine to the government, K450 million was wiped off PNG resource stocks (Filer and Imbun 2009: 94). After 6 months of negotiations the partners entered into a ‘shotgun marriage’ agreement with the government to sell 15% for A$200 million (*SMH* 12 April 1993; *Age* 11 Oct 1993; Banks 1997: 193-195; Jackson and Banks 2002: 191-198). *BRW* called the deal the ‘Porgera Coup’ (*BRW* 10 Apr 1993).

*The mine produced >1 million oz/years in its first four years of production. Whether or not this was expected at the start of negotiations, it was certainly forecast in the mine’s first week of production (*Aus Fin Rev* 31 Aug 1990).*  

Highlands Gold’s share price dropped from A$1.50 in mid-1992 to 87c in November, when it was said to have been in a ‘tailspin’ since Wingti’s attack (*Aus Fin Rev* 9 November 1992). Placer’s share price was affected by ‘severe discounting’ falling from A$2.56 in mid-year to A$1.45 in November 1992 (*SMH* 1 Sep 1992; *Aus Fin Rev* 27 November 1992) and A$1.22 in January 1993.

The impasse was resolved in March 1993 at which point a ‘mini-boom’ in gold stocks took place such that ‘even low-ranked companies such as Highlands Gold and Placer Pacific have risen strongly’ (*BRW* 16 Apr 1993). Placer subsequently outperformed all other miners for the calendar year, rising 152% for the year (*Age* 28 Dec 1993).

As Wingti is known not to have benefitted from the first Placer Share Affair, yet is known for his reputation as a deal-maker and successful investor on share markets, the question arises as to his motivation in demanding an extra 20% of government ownership in the Porgera mine. The renegotiation was the brainchild of a former Placer executive, Bob Needham, appointed by Wingti to head the Mineral Resources Development Corporation, the SOE holding PNG’s mining equity (*Aus Fin Rev* 10 Oct 1993). The government denied that Needham was ‘dictating policy’ (*SMH* 22 Oct 1993), but it stands to reason he had a sophisticated knowledge of the market and, with another Wingti advisor, Denis Reinhardt, would have been able to predict how it would respond to Wingti’s demand. The technique of creating uncertainty about a company to lower its share price, more typically by releasing a negative analysis on its prospects, is considered a standard technique in *short selling* or *shorting* a stock.

While it is a perfectly reasonable ambition for a country own a stake in profitable mines, it was surprising that, after the share affair was over, Wingti’s mining minister suddenly had ‘a very strong view’ that the state should *not* be involved in owning mines (*SMH* 11 Oct 1993).

Suspicion therefore hangs over Wingti’s aggression against the miners. He and his advisor knew very well the share prices were guaranteed to rebound because gold production at Porgera was very strong. A person with this knowledge buying at a low price in late 1992 and selling at a high price after the agreement of March 1993 would be certain of making their fortune.

These two men were *lobbyists* out to advance personal business agendas and the three men, with Wingti willingly playing the political front man, changed government policy to menace the
Porgera joint venture partners for personal benefit. Whether or not personal benefit was proven – in the context of the State not being in a position to buy the extra shares – the episode marked historically the beginning of state capture in Papua New Guinea, a phenomenon which has subsequently spread across many sectors of the economy.

Sir Julius Chan regained the prime ministership from Wingti in August 1994 and Needham and Reinhardt were expelled from the country (Aus Fin Rev 30 Dec 1994). Three years after the ‘Porgera Coup’, Chan’s government had not found the A$200 million needed to take up the extra 25% negotiated by Wingti (Aus Fin Rev 22 Mar 1995).

Box 3. Licensing for the Ramu Nickel project

In July 1999, after a period of chaotic government under Prime Minister Bill Skate, the long-time guardian of the PNG economy, Sir Mekere Morauta, was sworn in as Prime Minister. At the time, the outlook for the extractive industries in PNG was uncertain. In January 2000, the World Bank wrote to Morauta advising that planning for the closure of Ok Tedi should begin because of the environmental damage the mine had caused (K. Rohland to M. Morauta, 20 January 2000). The gold price had been below US$300/oz for several years and hit lows of US$275 for most of 2001 (World Gold Council 2016). In 2001 also, BHP Billiton quit PNG, leaving Ok Tedi as a project in wind-down mode, and mining ceased at the medium-sized Misima gold mine in mid-year (Petueli et al. 2005). In 2002, the Porgera mine presented a mine closure plan and was expected to cease mining in 2006 (PJV 2002: 34).

The 1987 financial crash had soured the Asian market as a destination for gas from the Southern Highlands and by 2002 an alternative plan to sell the gas to Queensland had come to nothing. Production from the Kutubu oil field was declining. PNG’s only operating longer term mining project was the Lihir gold mine but, despite production of 600,000 oz/year, the low gold price meant that dividends were not being paid and company tax only brought US$16 million to the government in 2001 and 2002 (LGL 2003).

Eyes were on Highlands Pacific’s Ramu Nickel project in Madang Province. A feasibility study was completed in 1998 and reports about the project were enthusiastic (Aus Fin Rev 13 Nov 1998). A Special Mining Lease and Mine Development contract with the government were awarded in July 2000 (AAP 26 July 2000). In reality, Highlands Pacific was broke and had laid off half its staff in mid-1999.

What followed was years of in-fighting over investment commitments, first between the majority owner Highlands, with 68.5% (Aus Fin Rev 29 Nov 1999), and its partner, Nord Resources, then between Highlands and the government equity company Orogen Minerals. Orogen said it would buy out Nord’s 35% and would take up another 25% (Courier Mail 5 Nov 1999). But by 2002, Orogen had reneged and Highlands was taking it to court for breach of contract (AAP 8 Mar 2002).

At the 2002 election, Sir Michael Somare was returned to power. His government courted Asian investors and this paid off when the state-owned Metallurgical Construction Company (MCC) of China sought to acquire 85% of Ramu Nickel (AAP 10 Feb 2004). A ‘Project Framework Agreement’ was signed in Beijing in 2004 (Plate 1). Later, a ‘Master Agreement’ was signed by the partners at PNG’s Parliament House in March 2005, witnessed by diplomats (AAP 31 Mar 2005; Highlands Pacific 2005) and a year later the six-year-old Mine Development Contract was amended; new conditions included a 10 year company tax holiday and import duty exemptions and Highlands Pacific dropped to an 8.56% ownership stake (Aus Co News Bites 10 Aug 2006). The tax holiday was unusual and a senior source inside the Mineral Resources Authority added in 2006 that all queries relating to technical standards were referred to the Prime Minister’s office, from which the answer was invariably ‘give them what they want’. In July 2007, the Amended Project Development Proposal was approved by the MRA and in December 2007 the Environmental Permit for construction was approved by the Department of Environment Conservation.

It is worth pointing out that the common risk RA15 ‘When reporting requirements, such as for exploration or production data, have been deliberately breached, e.g., false data have been
published, what is the risk that no action will be taken in response?’ relates to the Porgera Coup because of Prime Minister Wingti’s accusation that the partners had misled the government over the richness of the ore body. The complexities of RA15 are further discussed below (51ff.)

Box 3. Licensing for the Ramu Nickel project (contd)

Construction of the Ramu Nickel project began in 2008 but reports soon emerged of irregularities. An editorial in The National said that the employment of Chinese security guards (an occupation reserved for PNGeans) was one of a number of ‘disturbing signs’ (The National 31 Jan 2008). Raids by the Labour Department and the Trans-National Crime Unit – operating independently of the Minister for Mining – on MCC work sites netted 223 Chinese workers without works permits; curiously, many of their entry visas were issued by the PNG embassy in Belgium (Post-Courier 5 Nov 2008, 10 Nov 2008; The Garamut 16 Nov 2008). Later a senior manager in the Department of Labour and Industrial Relations said that her department had been given ‘government directives’ to issue work permits to MCC workers in breach of departmental rules, specifically those requiring English language skills (The National 20 May 2009).

The period of the Somare administration 2002-2010 was tainted by high level corruption. While Somare ordered a Commission of inquiry into the payment of millions of Kina in bogus claims by officials in the Department of Finance in 2006, he did so unwillingly. He stopped and restarted it in 2007 with the retired judge Maurice Sheehan as the new Commissioner (AAP 17 Sep 2008). But on 18 April 2008, the Commission staff were finally locked out of their office and Sheehan handed a letter of dismissal by an official of the Prime Minister’s Department. The Post-Courier editorialised ‘Waigani smells to high heaven’ (21 April 2008).

The question is unanswered as to which departments other than Labour and Industrial Relations were given ‘government directives’ – i.e. orders from Somare’s office – to break the law in order to assist MCC’s business dealings at Ramu Nickel. Somare’s time in power came to an end in 2011 when he fell ill and was evacuated to a Singapore Hospital. As the incoming Minister for Public Enterprises, Sir Mekere Morauta set out to find the losses from public purse during Somare’s time. Numerous instances of money disappearing came to light amid the near certainty of money changing hands in every deal uncovered; ‘It seems that the [government’s business corporation] were seen as the Somare family ‘honey pot’, with family members and cronies being appointed to [decision-making boards]’ he concluded (ActNow! 25 Oct 2011).

It remains the widespread belief of citizens that this pattern of behaviour extended to dealings that the Somare family had with MCC from the company’s entry into PNG in 2004 until the fall of the Somare government in 2011.

State capture and regulatory capture

The European Bank for Reconstruction and Development initially used the term state capture to describe corruption in post-Soviet (‘transitional’) economies and frames it as follows:

State capture commonly refers to the extent to which government policy-making is unduly influenced by a narrow set of interest groups in the economy who provide private benefits to politicians (EBRD 1999: 117).

Russia and Kazakhstan have been used to exemplify ‘captured’ economies, as well as South Africa under Jacob Zuma (OPP 2016; see also Hellman et al 2003). In the Porgera Coup, the actors shaping the rules of the game were not out specifically to gain lucrative contracts but to do their own deal-making on a tilted table. The political play, however, perfectly clearly
provided the conditions for collusion creating rents that are then shared, which is the hallmark of state-captured economies.

On account of the scale of malfeasance, state capture is a good fit in Papua New Guinea for what is seen in land grabbing (Filer 2011) and logging (e.g. Barnett 1989; Oakland Institute 2016). Firms have so successfully corrupted officials in the relevant ministries that firms have been able to misreport their exports, and engage in transfer pricing and tax evasion with impunity, sharing the spoils with politicians.

While the Porgera Coup marked the beginning of state capture in Papua New Guinea, it is generally not thought to have spread in mining, at least not in a standard way, since 1992, in the way it has spread across other economic sectors. However, whether mining awards processes have been subject to regulatory capture needs to be examined. This is a phenomenon clearly seen in tropical forestry. Repeated inquiries condemn practices in the sector, but letters from ministers to applicants for logging permits of various types still ask openly for irregular payments in the guise of ‘performance bond fees’ or ‘up front landowner assistance’ and they are regularly uncovered by whistle-blowers (e.g. Masalai i Tokaut 1 Feb 2007).

Other regulatory bodies that have been ‘captured’ in this way are, by general consensus, those dealing with land (e.g. LoopPNG 31 Jan 2017), work permits, and the procurement of medical supplies.

**Regulatory capture**

Are the agencies in PNG that deal with mining awards at risk of regulatory capture?

Box 3 gives an outline of the development of the Ramu Nickel project by, initially, Highlands Pacific and later by the Chinese state-owned Metallurgical Construction Company (MCC). It is difficult to see into the mining award process other than through the filter of the available media reports and company releases. Nevertheless, what is very obvious is the prominent role of the Prime Minister in negotiations. Media accounts also mention the Minister for Mining, but there is little mention of the Minister’s department.

In a selection of 25 press reports on Ramu between 1998 and 2002, the Department of Mining is only mentioned once:

> Stretched but not broken, the integrity of the PNG Department of Mining has been a vital glue over the last decade. Even during the current three-year contract of Secretary Kuma Aua, five ministers have filed through the Mining portfolio. Despite the proud economic stature of mining, his department has not been supported and operates on just K7.5 million ($A4 million) a year.

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5 The current biggest top-down play is that by the (pre-2017 elections) Prime Minister, Peter O’Neill, who nationalised the Ok Tedi gold and copper mine as described in Chapter 2 (p. 21). O’Neill has claimed that the government now controls the approximately US$2 billion off-shore trust fund that the mine has been creating for the post-mine financing of development in the mine affected area. This has conclusively happened and a longer analysis would be needed to consider O’Neill’s agenda in doing this whether it constitutes a state capture action.

6 The Barnett Report and many others relating to logging inquiries in PNG are online at [https://pngforests.com/](https://pngforests.com/)

7 The web site [http://www.masalai-i-tokaut.com](http://www.masalai-i-tokaut.com) (‘the ghost who talks’) published 51 bulletins on corruption in the PNG logging industry between 2002 and 2007. The authors were anonymous and substantiated their claims with leaked documents. The site ceased responding in 2012 but Masalai’s bulletins have been archived at [https://pngforests.com/masalai/](https://pngforests.com/masalai/) and [http://www.forestnetwork.net/Masalai/www.masalai-i-tokaut.com/](http://www.forestnetwork.net/Masalai/www.masalai-i-tokaut.com/).
despite application payments being made specifically for the purpose, in the few exploration permits that do trickle in, mining wardens must again ask applicants for airfares and accommodation to attend hearings, seriously compromising their independence, not to mention their dignity (Aus Min Monthly 24 August 2001)

In contrast to the ramshackle condition of the Department of Mining in 2001, a legacy going back years, dealing with China over the Ramu Nickel project became the urgent business of the Prime Minister’s Department under Somare. Delegations visited to Beijing in 2004, 2009 and 2010 for symbolic gestures (Plate 1), while it was left to the World Bank and the European Union to overhaul the Department of Mining, underwriting its transformation into the Mineral Resources Authority in the 2003-2005 period, paying for the construction of its new Port Moresby headquarters, Mining Haus, and making the technical inputs to properly implement the Mining Act 1992.

Signing at left, PNG Minister for Mining, Sir Moi Avei; rear left of centre, PNG Prime Minister Sir Michael Somare; to the right of Somare, Chinese Premier Wen Jiabao.
Somare travelled with an entourage of 80 (The Garamut 9 Apr 2009).

During Somare’s time in office 2002-2010, 14 of 23 press reports containing the word ‘Ramu’ also contain the word ‘Somare’. Just one report mentions the MRA, in the context of the Chief Inspector of Mines ordering a temporary halt to construction because of safety concerns (Kalgoorlie Miner 30 July 2009).

The MRA’s mining award processes are examined in Chapter 2, but we can see here the effect of a dominant Prime Minister concentrating power in his own hands and constantly sidelining the normal regulatory processes. A bullet point in a 2006 presentation by the then President of MCC, Ms Luo Shu, is revealing: the ‘Papua New Guinea government promised to supply most beneficial and most open policy support in its mining history’ (Ms Luo Shu 2006).
The opinion of those with a close knowledge of politics of the period is that there was more than ‘traffic of influence’ during the period when key decisions were made about the Ramu Nickel project: there was actual corruption. As noted in Box 3 the Post-Courier said ‘Waigani’ smells to high heaven’ when the Sheehan inquiry into corruption within the Finance Department was terminated on orders from the Prime Minister’s Department (Post-Courier 21 April 2008).

Visiting China is not a crime and it cannot be demonstrated that the kinds of egregious looting of the state enterprises in the 2007-2011 period contaminated the way Ramu Nickel was licensed. What can be said is that Somare’s manner of facilitating the Ramu mining award was irregular and exposed the process to corruption risks.

Once the award was made, the reported meddling in the work of the competent authorities loosened regulatory control over the project:

- Work permits were ordered to be issued in contravention of employment laws on orders from Somare’s office (on ‘government directives’).
- Business visas were issued in Belgium for construction workers to enter the country and go to work for MCC without work permits.
- Fast tracking the procurement for the construction of the project meant that safety procedures appear to have been evaded such that the Chief Inspector of Mines had to order a temporary construction stoppage.9
- Occupations that are reserved for national workers under Papua New Guinean labour laws were being done by the large Chinese workforce, despite high unemployment in the local area.
- Consultations with local communities over the possible environmental impacts of the project were abbreviated.

These things helped MCC get the project built and, since ‘government directives’ mean that competent regulators were bypassed, this amounted to collusion between two parties for private gain. MCC gained by getting their project built more quickly. The elite in power obtained private gains because (a) cash flow in the economy fed money into the state-owned enterprises which were being abused in other ways and (b) maintaining good relations with the government of China and with Chinese (state-owned) corporations opened up other opportunities.

In short there was regulatory capture.

**The relationship between regulatory capture and state capture**

The Prime Ministership of Peter O’Neill (2 August 2011-) succeeding that of Michael Somare has by many accounts seen the regulatory capture that was previously confined to one of two sectors of the economy deepen significantly and widen to take in most of the economy. The logical conclusion if, say, more than half of viable economic sectors have fallen to regulatory capture is that the state as a whole has been captured.

This is a large subject and many of the controversies are in play at the time of writing.

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8 The government district in Port Moresby.

9 A Chinese worker driving a tractor ran over a PNG worker. The operation was seen as cutting corners where safety was concerned, but a bigger issue at the heart of the absence of enforcement of laws was that driving a tractor was one of many reserved occupations.
Methods used and nature of the evidence

A vast literature covers mining issues in Papua New Guinea from the arrival of the first prospectors from Queensland in the 1870s (e.g. Nelson 1976), through the gold rush to the historical post-WWI goldfields at Wau and Bulolo (e.g. Lowenstein 1982), the rise and descent into civil war of the Bougainville mine (e.g. May and Spriggs 1990; Regan and Griffin 2005), to Papua New Guinea’s seemingly inexorable transformation into a resource-dependent economy in the years after Independence from Australia in 1975 (e.g. Jackson 1982; Pintz 1984; Hyndman 1994; Bainton 2010; Golub 2012; Kirsch 2014), and overviews of mining policy (e.g. Filer and Imbun 2009).

This literature is written from all angles. There has been scrutiny at a forensic level of detail by academic researchers (see preceding references), popular accounts commissioned by the mining companies themselves (e.g. Browne et al. 1983; Jackson and Banks 2002), almost daily coverage in newspapers, a large volume of social impact studies written by consultants to the government or to mining companies (e.g. Jackson, Emerson and Welsch 1980; Pacific Agribusiness 1987; Filer and Jackson 1989; Hampshire, Simpson and Makap 1998; Burton 2001), environmental plans, and internally and externally commissioned monitoring reports written in response to environmental and human rights crises (e.g. SMEC 2010; Johnson 2011; Johnson 2012; Burton et al. 2012). A new addition to the literature since around 2005 is the production of Sustainability Reports by the bigger companies (e.g. OTML 2015; Barrick Gold 2016; Newcrest 2016; Harmony Gold 2016) and resource industry-focussed multilateral agency and civil society reports (e.g. UNDP 2014; PNGEITI 2016, 2017).

The most useful fraction of this literature, written from the 1980s to the present, is distilled from a body of expert practice in the writing of Feasibility Studies, impact assessments and the evaluation of social and economic development. So significant is this body of expert practice and so dominated is the country’s economy by the extractive industries, Papua New Guinea’s most recent Human Development Report (UNDP 2014) was written with a focus on the translation of resource revenues into Sustainable Human Development.

Translating the literature on mining in PNG into a corruption risk assessment

The enormous volume of the material means that we must be selective. A first filter is that previous analysts have not placed much emphasis on corruption risks per se. We may speculate on the reasons; for example, if impact study authors are working as consultants, raising the vulnerability to corruption of the client’s own management practices is a rapid way to see an impact study project terminated prematurely. Similarly, any investigator seeking information from a government agency is likely to be shown the door if raising the question of corruption risks in the agency’s part in mining award processes. For their part, specialist investigators who tackle corruption, failings in corporate governance, and human rights abuses in mining areas are likely to find themselves permanently excluded from mining sites (which are often in remote areas, hence exclusion tends to preclude visiting mining areas in a private capacity) and even have visa bans imposed on them.

Primary author’s own experience of discovering evidence of facilitation payments in a client’s own project documentation.

Two academic colleagues of the primary author have been banned from applying for visas in Papua New Guinea and Indonesia respectively for varying periods after raising human rights issues around the Panguna and Freeport (West Papua) mines.
However, the task of refocussing attention on vulnerabilities to corruption in the terms canvassed in the MACRA tool is not as great as may seem on first sight, since enduring themes in all the literature are ‘good governance’ and ‘best practice’. It is the case, therefore, that many sources can be profitably re-read through an alternative interpretive lens to detect corruption risks in practices held up as ‘bad governance’ and ‘worst practice’ without too much difficulty.

Given the detail in the documentary sources, we were faced with an interesting problem in contemplating interviews with key stakeholders. Those in government with responsibility for mining awards would be likely to vigorously defend the propriety of the existing procedures, hence it would be invidious to ask them to identify corruption risk vulnerabilities. On the other hand, public servants in Papua New Guinea are often frank and quite ready to voice criticisms of other arms of government, so long as this indemnifies their own departments. This is useful for uncovering useful leads on what might be termed ‘sagas’, but it rarely results in quotable evidence. The way around this is to research the ‘sagas’ in media accounts and the broad literature to piece together exactly what happened.

A good example of this is the Ramu project (Box 3). Substantive allegations of corruption in the mining award process are in common circulation in the Madang Province where the project is located. They are attested to by teachers, small business operators, public servants and university staff who were living in the province in the mid-2000s. Almost none of this constitutes solid evidence and we cannot use it. A Port Moresby-based middle-level public servant was a witness to traffic in influence in 2004-05, but has subsequently been promoted to the head of an agency. We cannot use what he said to the primary author in 2006 either.

A strong influence on our approach is the fact that Papua New Guinea has a small economy and only four big mines have been opened under the modern mining awards process (Figure 1). If we had chosen a focus on the generalised process, which is captured in a flow chart in a guide produced collaboratively by the industry and Mineral Resources Authority (see Figure 2), we would miss what has actually happened in real awards, because each has been so different.

The approach taken here, then, has been to use the generalised process to frame discussion, to use the rich documentation available to show how specific awards illustrate particular corruption vulnerabilities, and only then to ground-truth our analysis with knowledgeable informants.

Links between abuses of entrusted power and private gains

In interpreting corruption risks that involve government decisions, it has to be explained that the Papua New Guinea government is typically run by a small ruling clique\(^\text{12}\) for periods of 2-5 years at a time, the upper limit normally set by the fixed five-year term of the parliament. The cliques have frequently taken decisions that have suited them in disregard of correct governance procedures. Parliament seldom plays its intended role of debating and fine-tuning legislation; votes on legislation are often by huge scores for and nil against.\(^\text{13}\) This is typical of the first part of a vulnerability to corruption in many contexts: that procedural decisions are

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\(^{12}\) The term ‘clique’ is used advisedly. Papua New Guinea has a volatile party system with the *Organic Law on the Integrity of Political Parties and Candidates 2003* as only a partially successful attempt to prevent MPs switching parties during their terms.

\(^{13}\) An example discussed in this report is the *Mining (Ok Tedi Mine Continuation (10th Supplemental) Agreement Act 2013* (p. 16), passed 62-0.
made with little or no evidence of the fact-based scrutiny that the designers of the procedures intended should take place.

The second part, the private gain, has not been so easy to capture in terms of judiciable evidence. The Ombudsman Commission, the Office of the Auditor General and special Commissions of Inquiry have routinely failed to conclusively prove private gain to individuals from specific acts. However, the time-honoured way for a clique to retain power is to bend expenditure rules to advance discretionary electorate funds to compliant MPs and to delay the same funds to opposition MPs. Thus, the key to staying in office is money, not the public approval of policy settings that favour the electorate’s particular interests at a given time.

Staying in office and controlling the government’s finances, highly dependent as they are on extractive industry income, is widely seen as enabling more concealable forms of corruption elsewhere in the economy, such as awarding inflated contracts to firms with close connections to key clique members.

**Collusion between the holders of public office and mining companies as corruption**

When holders of public office make decisions, the ‘private gains’ of the classic definition can sometimes be used to identify corruption. If a public official facilitates a World Bank loan for road building and then uses privileged knowledge of the tender process to win contracts for a family company, they are in the wrong.

But in many other cases, cause and effect may not be obvious. For example, if holders of public office succeed in pulling off a mining deal that results in revenue to the government, and they cut corners to do so, is this corruption? It is suggested that it becomes corruption if two criteria are satisfied:

1. If the corners are cut involve the infringing on the rights of others, notably in a mine impact area, and there is a lawful process to safeguard those rights that has been ignored or abbreviated (‘ABUSE’)

2. If the deal results in a generalised ‘package of success’ – revenue to the government, personal rewards in the form of future roles on boards of directors, exchanges of favours, or selection for other lucrative posts for those involved – that is not shared by those impacted by it (‘GAIN’)

Many corruption risks in this report will refer to the principle of collusion rather risks that result in ‘hand in the till’ proofs. We are not alone in this; the MMSD **Breaking New Ground** report repeatedly used the frame of ‘the government operating in collusion with the company’ to examine breaches in the human rights of mine area people, the difficulty of access to fair compensation, and in eviction from land (IIED & WBCSD 2002: xix, 150, 155, 188, 314, 378).

Consideration of collusive behaviour may require the broad consideration of a variety of factors, which may in the first instance provide only circumstantial evidence of prosecutable wrongdoing:

- the granting of long tax holidays and other business-friendly exemptions resulting in little revenue to the government;
- absence of standard accounting practices in the local authorities that are beneficiaries of mining agreements;
• opacity in the financial affairs of the local associations with whom deals have been struck as a part of mining awards;
• local leaders trusted to represent their communities, with no visible means of support, living well-to-do lives when their followers are still living in poverty;

The public in Papua New Guinea are never slow in expressing suspicions of who may receive private gains in any transaction, however above board. Two guidelines of what merits the most attention are:

• the persistence of suspicions when those under suspicions fail to explain themselves properly if they could easily do so;
• reference to whether, on balance, mining operations result in detectable development outcomes in the affected area and beyond (per constitutional preamble, see p. 16; per ICMM Sustainable Development Principles, ICMM 2016).

Assessing risk likelihood

The question arose of how we should assign the likelihood and impact of corruption risks following guidance in the MACRA tool (s5.2 and s5.3). As will be seen, there are many instances where something very similar what is described in the ‘common risks’ has already occurred, if not the exact risk that is described.

In such cases, the likelihood can be assessed in terms of a judgement of whether the conditions still exist for the risk event to recur. This might be compared to judging whether a volcano that has erupted in the past will erupt again in the near future. Regular swarms of tremors in the vicinity of the volcano, such as previously noted before an eruption, will cause experts to raise the likelihood. So too with corruption risks in mining awards: if the preconditions reoccur, the risk event becomes more likely.

Risk impacts for whom?

Before a judgment can be made of the severity of impacts we have to ask the question: severity for which stakeholders?

The MACRA tool (p. 10) considers impact in terms of a negative effect on:

• impartiality in decision-making
• security of property rights
• environmental, labour and social standards
• revenue to the state
• company profits
• competition in the mining sector
• fairness to applicants
• reputation of companies, governments and community leaders
• innovation in the sector
• the quality of applications
• accountability of decision-makers
• transparency over the management of public resources

Further on in the tool, there is a consideration of:
• Whether mining has particular kinds of negative social and environmental impact? For example, in causing community disruption or creating socio-environmental conflicts (MACRA p. 15).

• Whether corruption in even small mining projects can have a significant negative impact on tens of thousands of affected landholders and communities (MACRA Box 1, p. 36).

Impacts such as ‘company profits’ and ‘competition in the mining sector’ are largely not of concern to Papua New Guineans, since a large part of the industry is foreign owned. To clarify, at times huge losses have been borne by mostly foreign shareholders. A recent example was when Newcrest wrote off A$6.2 billion in 2013; it was explained to shareholders that ‘a large part of the write-downs related to “goodwill” recognised on the acquisition of former Lihir Gold Limited assets’ (Newcrest Mining 2013: 6). What exactly this means is less important than the fact that we can deduce two things: (a) that losses, if they occur, are likely to arise from causes other than mining awards or their conditions and (b) that losses like this, even very large ones, probably have a marginal impact on anyone in Papua New Guinea.

In the same vein, ‘impartiality in decision-making’ and ‘fairness to applicants’, although highly desirable for the reputation of the country, may not be ranked at the top of the list of impacts.

On the other hand, corruption occurrences that cause ‘transparency over the management of public resources’, the ‘accountability of decision-makers’, or ‘(proper scrutiny of) the quality of applications’ to fail, or have impacts that cause ‘community disruption or creating socio-environmental conflicts’ are extremely important in Papua New Guinea.

Papua New Guinea has experienced the extreme case of the loss of the Panguna copper mine on the island of Bougainville to a civil war costing thousands of lives (p. 21). We are not using the Panguna case as primary material for this report, because the award was made under a pre-modern system, but it is fairly clear that if the common risks in the MACRA tool were to be tallied up, Panguna would not score well.

The key impacts were, in first place, those that were visited on customary landowners and on communities across Bougainville and, in second place, the national economic crisis that saw social hardships bite everywhere else in Papua New Guinea.

Impacts on the country’s reputation for hosting large-scale mining, on the reputation of Panguna’s operator, BCL, or its majority shareholder, Rio Tinto, or on profits returned to shareholders would not now be considered important, as much as all took a battering at the time.

Looking back at the history of other, large and still-operating mines in Papua New Guinea, it is easy to see that social and environmental issues grow to dominate the ‘story’ of each mine as time goes by. Thus, Ok Tedi is now inseparable from for the saga of its damage to the river system, Porgera for down-river environmental damage, uncontrolled in-migration into the leases and human rights abuses by security guards, Ramu for long-running protests against deep sea tailings placement, and so on.

This leads to the firm conclusion that the key frame for evaluating corruption risk impacts in Papua New Guinea is that of least harm to citizens and their livelihoods, starting from the customary owners of land yielded for mining, the wider circle of others living in the areas of a mine’s impact footprint, to the remainder of citizens who have a constitutionally guaranteed
right that ‘national wealth, won by honest, hard work be equitably shared by all’ (PNG 1975: Preamble).
CHAPTER 2

MAPPING THE PROCESS AND PRACTICE

The process of making mining awards has a history dating back to before WWII. In the former Australian Territory of Papua, the Mining Ordinance 1937-39 and in the League of Nations Mandated Territory of New Guinea the Mining Ordinance 1928-1940, both based on Queensland legislation, set out terms that survive in a modified but familiar form in modern legislation: the duties and powers of Mining Wardens, ‘gold-mining leases’, ‘miners’ rights’ and so on.

The colonial legislation was replaced after Papua New Guinea’s Independence in 1975 by the Mining (Chapter 195) Act 1977. This in turn was replaced by the current Mining Act 1992.

The current award process

The PNG mining award system is the responsibility of the Minerals Resources Authority (MRA), with ancillary permitting done by other agencies operating in their own areas of responsibility (Conservation and Environmental Protection Authority, Labour and Industrial Relations, Immigration etc).

Exploration Licence

To apply for and be granted a mining award, miners require an Exploration Licence (EL) in the first instance. An applicant must accompany an MRA Mining Warden to one or several Warden’s Hearings where the applicant explains their proposed programme of work and ‘persons affected by the applicant’s programme or proposals’ can be given a chance to express their views (Mining Act 1992, s108 ‘Conduct of Warden’s Hearing’). The Warden submits a report to the Mining Advisory Board which is comprised of officers of MRA and ministerial appointees in equal number (Mining Act 1992, s11 ‘Mining Advisory Board’). The Mining Advisory Board considers the Warden’s report and decides whether to grant an EL or not.

Under the legislation, customary landowners do not have the power of veto over the issuing of ELs, nor can they prevent entry onto land once an EL has been granted. In practice, customary landowners have considerable power to dictate the terms of entry onto land and exploration companies fail to respect the views of landowners at their own risk.

For the purposes of issuing Exploration Licences, the land surface of PNG is divided into a grid of blocks with a spacing of 1/3 degree on a side. Exploration Licence areas are made up of collections of adjoining 1/3 degree blocks, are issued for an initial two years after a Warden’s Hearing, and may be renewed for two years at a time on a satisfactory report of activities and a Warden’s Hearing. There are three ways for companies to acquire Exploration Licences:

- By making lodging applications at the Mineral Resources Authority for vacant areas on a first-come-first-served basis.
- By merger with / acquisition of an existing Exploration Licence holder.
- By buying an existing Exploration Licence from its holder.
The primary condition for maintaining an Exploration Licence is to spend a minimum amount on exploration activities within the licence area (*Mining Act 1992* s25).\(^{14}\) However, it is possible for long delays to occur between the proving of a mineral deposit and agreement among the partners of a financing consortium, which may include the PNG government, and/or the successful outcome of public capital raising. In this context, negotiations and capital raising may be considered an extension of ‘exploration activities’ but do give rise to corruption risk vulnerabilities (for example, see Box 3).

Exploration Licences may be given up voluntarily or may be cancelled if a company breaches licence or company registration conditions. Geological data of all kinds, physical drill cores, chemical assays, remote sensing data, and maps that Exploration Licence holders accumulate over time are considered proprietary business knowledge. Typically, this passes through the hands of different owners in mergers and acquisitions. It is a fundamental basis of the system that if a company validly holds one or more Exploration Licences (for historical reasons a mineralised zone may span several Licences), it will not be involuntarily dispossessed of them and will be given the unobstructed opportunity to commence a Feasibility Study and to make a Proposal for Development over a mineral deposit that its Feasibility Study claims is financially viable to turn into an operating mine.

Exploration Licences may be owned for twenty years or more before an application is made for a production lease. The two types of production leases are Mining Leases (medium mine, up to 20 year grant) and Special Mining Leases (large mine, up to 40 year grant in the first instance). All Mining Leases to date have been polygons within previously granted Exploration Licences.

There have been no cases to date of competitive auctions over proven deposits; the invitation of BHP to take over leases vacated by Kennecott at Ok Tedi and the solicitation by the Somare-led government of MCC to invest in the Ramu project (Box 3) are the nearest cases that resemble an open field prior to an award.

The application processes for obtaining the various kinds of exploration and mining leases (‘tenements’ in Australian English) are set out in a booklet commissioned by the PNG Chamber of Mines and Petroleum with input from the Mineral Resource Authority (CM&P 2013). A government guide to the process exists in the form of a draft *Papua New Guinea Mining Policy* but, while this may be found on the MRA’s web site (MRA 2012), it is not referred to in the site menu and has the status of a draft only.

**Mining Lease / Special Mining Lease**

For mechanised mining, there are two forms of mining lease in Papua New Guinea: a Mining Lease (ML) and a Special Mining Lease (SML).

A third type of lease is an Alluvial Mining Lease (AML). The effect of the 1992 Act is to reserve AMLs for customary landowners\(^ {15}\) mining on their own land and this type of lease will not be considered further.

\(^{14}\) For example, US$100,000/year.

\(^{15}\) *Mining Act 1992*, s44, applications may be made by ‘a natural person who is a citizen or ... a land group in respect of land owned by that natural person or land group’.
Figure 2  Generic mining award flow chart (Chamber of Mines and Petroleum).

With references to processes mentioned in current legislation.

While it is clear that MLs are for smaller operations and short mine lives, the precise difference between MLs and SMLs is not entirely clear. Susapu and Crispin (2001: 7) wrote that, according to Department of Mining guidelines, ‘a small-scale mine is an operation with a capital investment of up to $25 million’.

In 2000, Department of Mining advice was that an SML should be applied for when the capital costs of a mine exceeded US$75 million (Project Coordination Division pers. comm. to J. Burton). As will be seen, Hidden Valley operates on an ML when the final capital investment was US$675 million (50ff.). The Chamber of Mines and Petroleum booklet mentions no capital investment criterion and suggests:

> A Mining Lease for medium-scale mineral developments is granted by the Minister for Mining. Whilst not required by law, government policy has usually required that a Development Forum and associated MOA process be implemented for an ML. The MOA and any equity participation by the State in an ML requires the approval of the NEC and the Minister for Mining may, in some cases, elect to have his approval of the Mining Lease also endorsed by the NEC prior to grant ... The maximum term ... is ... 20 years for an ML (CM&P 2013: 4, Figure 1).

On the other hand:

A Special Mining Lease is for large mineral development which have significant capital costs, considerable social and environmental impacts, and an expected substantial impact on the economy of PNG. An SML is granted by the Head of State and requires:

- a Mining Development Contract which is executed by the Head of State and the developer
- a Development Forum which is a consultation process between the stakeholders and culminates in a Memorandum of Agreement ... The maximum term for an SML is 40 years (CM&P 2013: 4-5, Figure 2).

The sequence of processes to be followed are as shown in Figure 2. This is a generic mining award flow chart for a Special Mining Lease commissioned by the PNG Chamber of Mines and Petroleum with input from the Mineral Resource Authority (CM&P 2013), marked up to show:

- Where processes are not specified in exactly the same terms, but form the evolving practice of government; for example, ‘the Head of State, acting on advice, will ...’.
- Where processes are not specified in exactly the same terms, but have existed as normal practice in industry at least since the 1970s; for example, the production of a formal ‘Bankable Feasibility Study’
- Where processes in use today are not covered by the Mining Act 1992; for example, the use of Memorandums of Agreement to define the outcomes of Development Forums

The Chamber’s flowchart for a Mining Lease is essentially the same, but the Mining Development Contract channel omitted.
Variants of the flow chart have also been produced for the four PNG mines in where permitting has been carried out in the most explicit manner: Ok Tedi, Porgera, Lihir and Hidden Valley. Accompanying commentary will be found in the respective sections of this chapter.

Commentary in this report focusses on the legislation currently in force, the *Mining Act 1992* and its modifications (notably the *MRDC Act*). However, as will be seen, ‘awards’ made under earlier legislation for still operating mines have undergone substantial modification – or been completely renegotiated – in every case since the respective Mining Lease / Special Mining Lease was granted.

There is even a case of a mine (Simberi, p. 32) where the original lease expired before the start of production.

An innovation first seen in the Hidden Valley award (State Solicitor 2005) was the ‘Memorandum of Agreement’ (MOA), a document that captures the outcomes of the principal consultation process, the Development Forum (West 1992; Filer 2008), in the form of the responsibilities and commitments of the applicant, various tiers of government, and the local stakeholder groups. It has subsequently become MRA policy to retrofit MOAs to operating mines that do not have them; negotiations for retrospective MOAs are publicly envisaged as simple affairs to capture existing commitments in a single document, but in some cases they have dragged for several years without conclusion.

A process omitted from the Chamber flow chart to the right of ‘Mining project commences construction’ is the universal requirement that MOAs be reviewed after a specified period. The Hidden Valley MOA specified a review ‘3 years from the date of commencement of production as verified in writing by the Department of Mining and every two years thereafter’ (State Solicitor 2005: para 44.2). The earlier, non-MOA ‘Integrated Benefits Package’ (IBP) at Lihir provided for five-yearly reviews (discussed p. 34) but has been described by an MRA source as a ‘private arrangement’ between the mine and local stakeholders. An MOA has to be retro-fitted here as well.

The following sections offer commentary on mining awards that (a) are historical but relevant to current practice and (b) relate to mines currently in operation and that have undergone considerable modification in the period of operation of the current regulatory framework.

**Mining awards made before the 1977 Act**

**Panguna**

At the time Independence, only one large mine was in operation: the Panguna copper mine on the island of Bougainville. The vehicle for the mining award was a *sui generis* act of parliament, the *Mining (Bougainville Copper Agreement) Act 1967*.

As is well known, community grievances against Bougainville Copper Limited (BCL), made worse by the failure to hold mandated agreement reviews, led to a demand by landowners for US$10 billion in compensation from BCL in 1988. A civil war between the Bougainville Revolutionary Army, a number of splinter factions, and the PNG Defence Force, ensued between 1990 and 1998. This ended in defeat for the PNGDF and with the loss at least 4,000 and possibly as many as 10,000 lives.
The circumstances of the mining award to BCL are too far in the past (Figure 1) to be primary material for this report, but what happened Panguna is very much a live issue when landowners, companies and government officials enter into negotiations today. The widespread recognition of policy failure in respect of Bougainville has informed all subsequent mine award processes in PNG, notably in three areas: in ensuring that local voices are properly heard in mine award negotiations, in the construction of equitable benefit sharing arrangements, and in the building into agreements of periodic agreement reviews.

**Ok Tedi**

As with Panguna, the circumstances of the mining award at Ok Tedi are too far in the past (Figure 3) to be primary material for this report but its history is pertinent to many of the MACRA common risks. The most recent change to its award was made in 2013.

Ok Tedi is a large copper and gold mine in the Western Province of Papua New Guinea. In 1968, the US mining company Kennecott Mining obtained a Prospecting Authority (former designation of an Exploration Lease) and by 1972 had completed its assessment of the gold and copper reserves. Kennecott entered into negotiations with the pre-Independence self-government led by the then Chief Minister Michael Somare. The modern system of permitting, and indeed post-colonial mining legislation, had yet to be brought into existence and the gap between the tax concessions wanted by the mining company and the aspirations of the young government – which ran the gamut from minimal involvement in mining to full nationalisation – proved an unbridgeable gulf. Kennecott relinquished its exploration permits.

In 1976, BHP was invited to take over the licence areas culminating in the Ok Tedi Agreement, formalised as the *Mining (Ok Tedi Agreement) Act 1976*. The mine operator, Ok Tedi Mining Ltd, was not finally formed until 1981 after several more years of assembling a final consortium of shareholders, which included the PNG government with a 20% holding.

The Ok Tedi mine opened with great fanfare as a project of nation-building scale (e.g. Browne et al. 1983) but is best known for the environmental damage done to the eponymous river and the much bigger Fly River that it flows into (e.g. Kay 1995; IIED & WBCSD 2002; Banks and Ballard 1997; Marychurch and Stoiano 2006; Campbell 2011).

Like Panguna, Ok Tedi also hangs over contemporary awards because of the constant revisions of the terms of the award in the form of amendments to the 1976 Act in 1980, 1981, 1983, 1985 (twice), 1986 (three times), 1995, 2001, 2013, 2014. Important ‘supplemental agreements’ were:

1. *Mining (Ok Tedi Sixth Supplemental Agreement) Act 1986* – set conditions for the discharge of tailings and waste rock into the Ok Tedi River, and a program of environmental monitoring, given that seismic activity put a stop to the construction of a tailings dam in 1984 (Burton 1997: 36).
Figure 3  Mining award flow chart reflecting procedures followed at Ok Tedi.
2. **Mining (Ok Tedi Mine Continuation 9th Supplement) Agreement Act 2001** – following negotiations with the Mekere Morauta government, the Act allowed BHP Billiton to hand over its 52% shareholding to a not-for-profit company, PNGSDP,\(^{16}\) with future income to be spent on development projects in the impact area, in return for indemnity against future environmental litigation. Community Mine Continuation Agreements (CMCAs) were negotiated with impact area village communities to give force to the supplemental agreement and to allow the mine to continue in operation.

3. **Mining (Ok Tedi 10th Supplemental) Agreement Act 2013** – passed by the Peter O’Neill government to repeal the 9th Supplemental Agreement and cancel the PNGSDP shares and reissue them to the State.

An attempt to compare the modern process and that followed at Ok Tedi is given in Figure 3. The key differences lie in:

- The central role played by the State in the form of the Prime Minister himself and a handful of senior ministers, reflecting the ‘nation-building’ status of the project
- The central planning approach to project impacts and benefits (Jackson 1977; Jackson, Emerson and Welsch 1980).
- The almost non-existent level of local consultation and no Development Forum
- The exclusion of Ok Tedi from the subsequent *Environmental Planning Act 1978* and its later replacement, the *Environment Act 2000*.
- Compensation was not paid for land clearance within the leases, therefore no Compensation Agreement

The absence of local consultation may be judged by the fact that when the consortium partners arranged a ceremony to launch Ok Tedi Mining Limited at a Port Moresby hotel in 1981, members of the government attended, Prime Minister Julius Chan suggesting that the mine would become Papua New Guinea’s ‘pot of gold’, but landowner representatives were not invited (Jackson 1982; see also Burton 1997).

**Ok Tedi – the question of whether there was ever a completed ‘mining award’**

The number of revised agreements brings into question whether Ok Tedi ever had a finite ‘mine award’ and, if it did, which one was it? Compounding this, political positions taken by party leaders and influential MPS can take 180 degree turns over a period of time such that policy announcements can be diametrically opposed to positions previously adopted after long consultation. In the case of Ok Tedi, this has at different times resulted in (a) calls to nationalise the entire operation or (b) years of neglect in which government functions are surrendered to the company.

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\(^{16}\) Specified in the Act as the Ok Tedi Development Foundation (OTDF) but when implemented a switch was made to the trustee company PNG Sustainable Development Program Ltd registered in Singapore to manage a long term investment fund not to be drawn on until after mine closure. OTDF was used as a vehicle for the mining company itself to implement development projects.
In short, if we decide that the ‘right to mine’ was definitively awarded to an OTML, we are still left with the question of which OTML this was. Was it:

- The commercial joint venture, OTML, 1981-2001?
- The not-for-profit OTML, 2001-2013, that has built up a long-term fund for post-closure local development?
- The for-profit State-Owned Enterprise OTML, 2013-

In 1974, the case for full nationalisation was unsuccessfully made by John Momis and John Kaputin (Jackson 1982: 59-60). From the late 1990s, entities associated with Ok Tedi have regularly implemented development projects using the Infrastructure Tax Credit Scheme or spend other grants given by government. An increasingly important component has been the delivery of health services, which has always been a chronic failing of the government in Western Province (Thomason and Hancock 2011). Ok Tedi Mining Limited recently said it has implemented Tax Credit projects to the value of K270m since 1997 (Post-Courier 30 April 2015).

However, in 2013 the Peter O’Neill government passed the 10th Supplemental Agreement Act on the grounds that the same entities were not effective bringers of development, and Ok Tedi was nationalised (The National 21 Mar 2013; The National 8 Sep 2013). After the nationalisation, the Ok Tedi Development Foundation delivered thirteen development projects in the Western and West Sepik Provinces in 2015 with the approval of the Department of National Planning and Monitoring (OTDF 2015: 7).

This represents the simultaneous assertion by the State that it wants to take charge of Ok Tedi to remedy the excesses of foreign control of resources, and concession that it lacks the competency to implement local development projects that a ‘foreign entity’ has long experience in.

As already stated, the Ok Tedi award process itself cannot be of primary interest to this report, because it did not go through what is conceived of as the modern award process. However, as will be seen, many of the MACRA tool ‘common risks’ ask questions that apply to processes that are still continuing, such as those relating to FPIC, the verification of social and environmental impact assessment reports, and the continuing exclusion of this project from ‘authorisation from other departments’ – this case exemption from the Environment Act 2000.

Another factor is that, by awarding Ok Tedi to itself in 2013, the 2012-17 O’Neill government has actually created the most recent mining award in Papua New Guinea.

**Mining awards made under the 1977 Mining Act**

The post-Independence government of Michael Somare consolidated the colonial mining legislation, pending the drafting of a modern Act, in the form of the Mining (Chapter 195) Act 1977, and added to it the Environmental Planning Act 1978. Two mines underwent permitting

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17 In 2017 the President of the Autonomous Bougainville Government.

18 A PNG Foreign Minister in the 1990s and Secretary-General of the African, Caribbean, and Pacific Group of States for a period in the 2000s.

19 Qualified by continuing litigation / commercial arbitration contesting the unjust deprivation of property rights.
under this legislation: the Misima and Porgera gold mines, both operated by Placer Pacific, in 1987 and 1988-89.

**Misima**

A mining award was made to Placer Pacific Ltd for the small Misima gold mine in 1987. Because of the small size of the mine and its short mine life, 1989-2001, with closure activities completed in 2005 (Petueli et al. 2005), this mine will not be considered further.

**Porgera**

The Porgera gold mine in the Enga Province, also initially operated by Placer Pacific Ltd, is a very large mine opened in 1990 (Figure 1) that produced over 1 million oz gold/year in each of its first four full years of production. A comparison between the modern award process and that followed at Porgera is given in Figure 4.

The mine award process was notable for:

- The innovation of the pre-award Development Forum (West 1992; Filer 2008) which became an integral part of the *Mining Act 1992*, passed just after Porgera entered production.

- The first time locally applicable agreements had been seen at a mine in PNG – the ‘Porgera Agreements’ (Derkley 1989).

- The first time for resettlement to be seen at a mine in PNG (Robinson 1988).

- The enormously expanded role of Land Investigation Reports, reflecting the fact that the Special Mining Lease area was home to several thousand people and who continued to live within it after the mine entered production, compared to the situation at Ok Tedi where the SML was granted over uncut forest some distance from villages.

- The emergence of compensation payments to individual house and garden owners as a significant source of cash flows to the community, some K25 million (about A$32.5 million) being paid between 1988 and 1991, the peak years for construction and mine commissioning.

- After a change of government, the later demand for the joint venture partners to yield 20% of the mine to the State (the ‘Porgera Coup’, Box 2).

The start of negotiations at Porgera in late 1988 came just as the National Premiers Council conference, spurred on by the premier of Enga, had demanded a role in how the benefits from mining should be divided up. The government of Prime Minister Rabbie Namaliu responded by agreeing to the idea of a Forum of stakeholders, intended to obtain better bureaucratic and political support across the multi-level system of government then in place (Filer 2008: 122). Only ‘one landowner representative’ was expected to become involved in this kind of Forum.

At this point, hostilities commenced around the Panguna mine in Bougainville. Porgerans already had a reputation for volatility and the high stakes in negotiating a durable set of agreements were not lost on company and government officials, now nervous of a repetition of the Bougainville rebellion.
Figure 4: Mining award flow chart reflecting procedures followed at Porgera.
One landowner representative became 24 representatives, one for each of 24 branches of the seven landowning descent lines in the proposed mine lease area at Porgera (PJV 1987: Appendix 2). The 24 representatives formed the Porgera Landowners Associations (PLA) at around this time.

West presents a schema of the sequence of permitting procedures as then understood and including the Development Forum (Table 1).

<table>
<thead>
<tr>
<th>Stage</th>
<th>What</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration</td>
<td>Initial discovery</td>
</tr>
<tr>
<td>Feasibility</td>
<td>Draft feasibility and environmental studies submitted to State</td>
</tr>
<tr>
<td></td>
<td>Government review</td>
</tr>
<tr>
<td></td>
<td>Developer finalises plans</td>
</tr>
<tr>
<td>Application</td>
<td>Submit application for appropriate licence</td>
</tr>
<tr>
<td></td>
<td>Application accompanied by complete Proposal for Development</td>
</tr>
<tr>
<td>Review</td>
<td>Government departments review technical/financial aspects</td>
</tr>
<tr>
<td></td>
<td>Development forum convened for landowner/provincial government input</td>
</tr>
<tr>
<td>Approval</td>
<td>Technical/financial review, combined with input from development forum results in final approved Proposal for Development</td>
</tr>
<tr>
<td></td>
<td>Appropriate licences granted</td>
</tr>
<tr>
<td></td>
<td>Development Forum results in agreement on benefits to landowners/provincial government and answers their concerns</td>
</tr>
<tr>
<td></td>
<td>Memorandum of Agreement signed</td>
</tr>
<tr>
<td>Construction</td>
<td>Begin construction</td>
</tr>
</tbody>
</table>

Table 1  Simplified Project Development Process as modelled on permitting at Porgera.

Even though deliberately simplified, the schema is still lacking because essential realities of the Porgera Agreements that had already shaped the way the mine was permitted to be operated by the populous local community were not captured:

- the pre-mine genealogy studies (e.g. Gibbs 1981)
- the pre-mine Lands Alienation Report
- the pre-mine Lands Investigation Report(s)
- the process of identifying landowners
- the Resettlement Agreement (Robinson 1988)\(^\text{20}\)
- the Compensation Agreement
- the Socio-economic Impact Study (Pacific Agribusiness 1987)

Each of these things has proven to be critical to the *social licence to operate* at Porgera, whatever the terms of the written agreements, as work by Porgera researchers has repeatedly emphasised (Banks 1997; Banks 2006; Johnson 2012; Golub 2014; Burton 2014)

\(^\text{20}\) At Porgera what is conventionally known as ‘resettlement’ was originally termed ‘relocation’. The semantic difference was that at the time the mine was built, the families that were resettled were moved to what was thought to have been other parts of their customary land away from mining activities. By 2005, the resettlement locations were becoming affected by mining and a switch was made to the term ‘resettlement’.
A lack of formal integrating structure to the documents has led to dysfunction and significant impacts over the life of the mine. The Land Alienation Report said:

The basic genealogical origins of the clan and sub-clan descent groups are being reconciled, recorded and stored in a data bank to which is cross-referenced the details of the customary landowners. In turn, this will be referenced to traditionally recognised and identified landholdings (Placer PNG 1987: 12).

In reality, detailed investigation in subsequent years has shown that, whatever was imagined by the ‘data bank’, it was never brought into existence and fresh attempts to identify landowners and their entitlement were made every 5-7 years from 1981 to 2007, none being pursued to completion (e.g. Burton 1991, 2014). On at least two occasions, c1982 and c1999, significant losses of data were experienced due to a lack of technical oversight.

In the schema, there is vagueness on which government departments were to be tasked with technical reviews, nor is the position of the decentralised parts of government at all clear. In point of fact, the then Department of Minerals and Energy had no standardised award process because no previous large mine had undergone permitting other than by Act of Parliament.

Porgera is also known for two scandals that related to the mining award (Box 1, Box 2). The ‘Porgera Coup’ had political dimensions but was also related to the fact that between the time the government opted to finance 10% of the mine (1979) and the time of the mining award (1989) new, extremely rich discoveries had been made, notably in an area known as Zone 7 (Figure 5).

![Figure 5. Exploration sample from Porgera Zone 7 showing visible gold. Source: Corbett (2014).](image)

Porgera is an essential case for this report because of its large size and important place in award innovations that created the system in place today. In its turn, it was affected by the 1995 award made for the Lihir gold mine.
Mining awards made under the 1992 Mining Act

By the end of the 1980s the resources sector was in rapid expansion in PNG and the mining and petroleum portfolios were separated into the Department of Mineral Resources and the Department of Petroleum and Energy around 1990 and, in a consolidation of the permitting practices seen at Porgera, the Mining Act 1992 was brought into being.21

Limitations of the Mining Act 1992

A complication of the new Act was that the system of provincial and local level governments existing in 1992 was reformed by the Organic Law on Provincial Governments and Local-level Governments 1998. Where the Mining Act 1992 (s3) envisaged that provincial governments would play a key role in Development Forums, these were abolished in 1998 and the focus of decentralisation now lay with District Administrations. The next pre-mine Forum was held for the Hidden Valley mine in 2004 and a short-coming of this mine’s agreements is that while local councils, with weak capacities and only subsidiaries powers, were involved in consultations and earmarked for mine benefits, the District Administration and the most important post-reform decision-making body, the Joint District Planning and Budget Priorities Committee, were not.

A second omission was the option for the State to become involved in mining, should it wish to exercise it, through its system of SOEs. This was corrected by the passage of the Mineral Resources Development Company Pty Limited (Privatisation) Act 1996.

The Act still failed to specify which government departments other than the then Department of Mineral Resources should be involved in technical reviews. The Environmental Planning Act 1978 was vague on the process of evaluation, saying no more than that the Minister for Environment would cause guidelines to be issued and would forward such Environmental Plans as would be required under the guidelines to the National Executive Council (the Cabinet) for a decision.

The Environment Act 2000 introduced the concept of Level 1, 2 and 3 activities; under the guidelines, applications for both Mining Leases and Special Mining Leases would be considered ‘Level 3’ activities and require Environmental Impact Assessments (see Mowbray and Duguman 2009). EIAs were to be passed to an Environment Consultative Group for evaluation. On receipt of its advice, the Director of Environment was to make a recommendation to the higher level Environment Council, which in turn was to make a recommendation to the Minister for Environment.

All mines from 1992 on have been given awards under the Mining Act 1992.

Tolukuma

Tolukuma is a small gold mine near the historic mission station of Fane in the Goilala District the Central Province, about 100km north of Port Moresby, that operates on a Mining Lease. No roads service the mine; access for all logistical requirements is by helicopter only. Exploration began at Tolukuma under Newmont Mining in 1986. Construction of the mine began in 1994

21 For sequence of earlier designations for the Mineral Resources Authority, see under MRA in ‘Terms and abbreviations’, p. vi.
under Dome Resources NL (*Aus Fin Rev* 14 Oct 1993). The mine, incorporated as Tolukuma Gold Mines Limited (TGM), was opened in 1995.

Both the award process and subsequent history of this mine is obscured by the ownership of TGM by, for the most part, very small operators who published very little during their tenures, by the difficulty of access for journalists and other observers, and by the frequent changes of ownership being accompanied only by optimistic-sounding media releases.

After Dome Resources, TGM was owned by DRD Gold (2000-2006), then Emperor Mining (2006-2008), then by the SOE Petromin Holdings Ltd (2008-2015). Petromin suspended operations, which are believed to have been loss-making throughout its tenure in April 2015 (Petromin 2015a: 85). In October 2015 Petromin sold the now-closed mine to Asidokona Mining Resources of Singapore.

Of the operators, only DRD Gold published an account of its activities for general consumption (DRD 2004). Petromin, for its part, failed to declare how much gold the mine produced for any years it owned the mine. In 2010, the Managing Director of Petromin apparently claimed the mine made a profit of K68 million (*Post-Courier* 21 Jun 2010); immediately a letter writer pointed out that this was impossible given the approximately US$1000/oz cost of production and annual sales of perhaps no more than 40,000 oz/year (*Post-Courier* 22 Jun 2010). In the following year Petromin said in its Annual Report that the mine employed 600 staff (2011: 24) but not what the income of the mine was or how much gold it produced. This pattern of behaviour merely illustrated the continuing lack of transparency over the mine’s operations. In 2013, Petromin said that ‘our current and only mining operation continues to be the challenging Tolukuma’ (Petromin 2013: Letter to Trustee Shareholder).

Dolly Guise, Manager of Tolukuma’s Community Relations Office, made reference to the Mining Lease, Memorandum of Agreement, Compensation Agreement, and the Localisation and Training Programme under which the mine operated, in a short account of relationships among the stakeholders during the period of tenure of DRD Gold (2006: 1).

In 2009, villagers from an area 20km south of the mine claimed damages of K565 million ($A280 million) for general damages and the alleged death of two people (*The National* 18 Mar 2009) when, in 2000, two 1 tonne canisters of cyanide had fallen 3,500 feet from a contractor’s helicopter into their forest. After the mine was bought by Petromin, landowners indicated they would settle out of court for K300 million (*Post-Courier* 6 Dec 2010). It is unclear what, if any, satisfaction the complainants received.

*Kainantu*

Kainantu was a small gold mine that operated on a Mining Lease, ML150, in the Eastern Highlands Province. The mine was owned initially by Highlands Pacific and opened in 2006. It was sold to Barrick Gold for US$134 million in December 2007 (*The National* 21 Jan 2008). Barrick found the mine failed to produce more than a fraction of the expected 100,000 oz gold/year and announced its closure after a year of operation (*Post-Courier* 30 Jan 2009).

Company reporting at Kainantu was extremely weak and as a consequence very little detail is accessible from public sources. In Barrick Gold’s 2008 *Responsibility Report*, which covers its year of operations at Kainantu, the sole mention of the mine was to say that in December 2008, extreme rainfall had triggered a mudslide at an exploration camp near the mine and ten local people had died, five of whom were on the company payroll; ‘support and counselling were provided to relatives’ said Barrick (Barrick 2010: Social Performance).
Compliance with international reporting standards was obligatory for Barrick in 2008, a member of the ICMM. In its answer for the Global Reporting Initiative indicator LA07 ‘Rates of injury, occupational diseases, lost days, and absenteeism, and number of work related fatalities by region’ Barrick repeated its safety motto ‘Every person going home safe and healthy every day’ then declared contractor deaths only at sites in the USA and the Dominican Republic (Barrick 2009: Safety and Occupational Health). The Papua New Guinea deaths were declared under the GRI indicator MM10 ‘Significant incidents affecting communities’, but were not included in the global reckoning of work-related fatalities. It is difficult to see how Barrick could classify the deaths as non work-related if its five workers were on duty at the camp; a government task force investigated and the local MP declared the camp a ‘death trap’ (Post-Courier 11 Dec 2008).

Simberi

Simberi is a mid-sized gold mine operating in the New Ireland Province. The Mining Lease, ML136, was granted in December 1996 for a period of 12 years, but mine failed to open. The Mining Lease was extended in 2007 and produced started in 2008 under the then owner Allied Gold. St Barbara Limited acquired Allied Gold in 2012.

The Mineral Resources Authority, the New Ireland Provincial Government and landowners have been in negotiations for an MOA governing mine benefit distribution since 2013. Recently the Provincial Government rejected the latest draft, saying its provincial policy was for a 10% gold royalty, not the 2% offered by the national government (Post-Courier 18 May 2017).

Lihir

The mining award for the Lihir gold mine in 1995, in the Lihir group of islands in the New Ireland Province, was the first to be made under the Mining Act 1992. In keeping with a popular saying that Papua New Guinea is ‘The Land of the Unexpected’ (e.g. Anere 2002), the way the process unfolded was like nothing encountered previously. A substantial investigative literature covers this mine (e.g. Filer 1995; Macintyre and Foale 2004; Macintyre et al. 2008; Filer and Imbun 2009; Bainton 2010) while the landowners recently commissioned a book of their own (Sinclair et al. 2014). Differences from the schematic award process are as shown in Figure 6.

Gold was discovered on Lihir in 1983 by an exploration partnership between Kennecott Explorations (Australia) and Niugini Mining Ltd. During the exploration period, Rio Tinto acquired Kennecott Explorations and became the majority owner. When the mining award was made in 1995, shares in a new company, Lihir Gold Limited (LGL), were offered to the public on the Australian Stock Exchange, and over time Rio Tinto reduced its ownership, concluding its management role in 2005. LGL was acquired by Newcrest Mining in 2010.

A Draft Environmental Plan was submitted to the Department of Environment and Conservation (DEC) in December 1989, by which time the Socioeconomic Impact Study was in its second edition (Filer and Jackson 1989). The completed Feasibility Study was submitted to the Department of Mines and Energy in March 1992. Three years of negotiations then ensued with the local landowner association until an ‘Integrated Benefits Package’ (IBP) was signed on 26 April 1995, permitting the developer to formally submit a Proposal for Development on 1 March 1995. The Minister for Mining and Petroleum approved this on 10 March 1995 and a Mining Development Contract was issued on 17 March 1995 (Attorney-General 1995).
Figure 6 Mining award flow chart reflecting procedures followed at Lihir.
The mining award included a Mining Development Contract, a Special Mining Lease, a Relocation Agreement for approximately 70 landowner households and – never previously seen in such detail – an ‘Integrated Benefits Package’ (IBP) for local communities.

The surprise in the Lihir award process was the length of time required to negotiate the IBP. While various parts of the Proposal for Development were available to the government in 1992, few changes to the technical design of the mine were requested. The IBP, on the other hand, took six years of at times daily negotiations. The first phase, to obtain agreement for use of village land for mining, commenced in 1988 and was completed in 1992, the availability of customary land being a primary determinant of the eventual configuration of mine infrastructure. The subsequent negotiations of the IBP itself took from March 1992 to April 1995 and may have been facilitated by, but was not controlled by, the government.

A last minute bid to help bring the negotiations to a close by Prime Minister Julius Chan was to raise the rate of royalty from 1.25% of export value (Mining Act 1977 s105) to 2% and to raise the proportion of royalty distributed in the immediate area of the mine to 50% (Local Level Government and various landowner funds).

The change in the royalty rate meant more to pay for other mining companies, but it was offset by a lowering of company tax from 30% to 25% (Aus Fin Rev 21 Mar 1995); the main negative repercussions concerned the opportunities that a bigger cake of royalty presented for local forms of political contestation at some mines.

The degree of difficulty of finalising the parallel tasks of following the official awards process and negotiating the Integrated Benefits Package may be judged by the fact that the Mining Development Contract runs to 80 pages, while the IBP runs to 419 pages. It contained various supplements and a draft Environmental Monitoring and Management Plan not needed in the MDC, but even so the complexity of the IBP was of a degree not previously seen in a mining agreement.

A clause in the IBP mandated a review five years from the date of issuing of the Special Mining Lease; the first review was due on 26 April 2000. A Joint Negotiating Committee was formed and began meeting on 20 June 2001. Agreement on a Lihir Sustainable Development Plan (LSDP) was reached in 2005 but a revised document was not signed until 3 April 2007. It ran to 542 pages and contained new funding for K100 million (US$33 million) to implement LSDP projects (U.S. Securities and Exchange Commission n.d.: 5). A second review became due after a further five years, on 3 April 2012. As of mid-2016, the second IBP review was in progress.

As at Ok Tedi, it is never 100% certain at any point in time that the Lihir ‘mining award’ has been fully completed. Should the mining award be considered to be confined to the 1995 issuing MDC and SML? But this is to take a very narrow view of the award process; the fact is, without the IBP mining would not be able to proceed.

The project timeline in Figure 1 shows that the mine was in an exploration phase for the nine years 1983-1992, in construction for two years 1995-1997, and has been operating now for the twenty years 1997-2017. In terms of the formal dealings with the various branches of the national government, it seems likely that a mining award could have been made three months, say, after the Feasibility Study was given to the government in March 1992, were it not for the IBP negotiations. When these were concluded in 1995, it took only four weeks for the MDC and Special Mining Lease to be issued. But the timeline masks the fact that negotiations between the operator and local stakeholders – the landowner association, the local and provincial
governments – have been going on for a total of nineteen years 1988-1995, 2000-2007, 2012-present.

In State law, local communities do not own the resource (Mining Act 1992, s5) and do not have the power of veto over mining. But certainly during the original approval period 1992-1995, the landowner association managed to slow down the whole process of approvals and continues to have the power to stall decisions over what would normally be considered minor variations in the mine plan. A recent media release announcing a planned extension to the current footprint of the open pit within the Special Mining Lease, for example, is quite likely to trigger landowner discontent because it will destroy land previously expected to be returned to its customary owners intact at the end of the mine life (Newcrest Mining 2016; see also discussion of geothermal energy plants, p. 66).

The high operational costs of mines mean that delays and stalling tactics make mining operations vulnerable to the risks of corruption; this is not to say that secret payments are expected to be made, they are not. Rather, extra packages of ‘clean money’ in the form of new project funding are a typical outcome.

The question of ‘private gain’ arises here. As with other types of irregular dealings outside formal award processes (p. 10, 12ff.), it is only sometimes the case that a private gain is made directly. In the context of a poor island community, having ‘clean’ project money and a Lihir Sustainable Development Plan is laudable; the problem is that once funds pass beyond the mining company, it is easy enough for what is clean to become dirty, as the regular laying of charges for misappropriation of funds attests (Post-Courier 5 Nov 2012; The National 4 Sep 2013).

An unusual feature of grievance handling at Lihir is the tagging, by Lihirians, of plant and equipment in the lease or outside it with the gorgor plant, a native species of the ginger family. When tied on to a machine or site entrance, a gorgor signals a conflict with the mining company and that talks, and probably money, are needed to resolve the problem (cf. Newcrest Mining 2012: 64; Bainton 2011).

In 2010, the ICCM used Lihir as one of the case studies for its Good Practice Guide for mining on the land of indigenous peoples (ICMM 2010; see, however, Box 7).

Hidden Valley

Hidden Valley, and its subsidiary deposit Hamata, are nearby gold deposits discovered by CRA Minerals and Renison Goldfields in Morobe Province in the 1980s. Like Ok Tedi, but unlike Porgera and Lihir, the deposits were found in uncut forest at a distance from the villages of the customary landowners. Hidden Valley was the subject of a dispute between village of two ethnic groups, the Watut and Biangai, resolved when a Provincial Land Court magistrate declared that 50% of an ‘area of common interest’ in 1987 belonged to each group. In consequence, individual land parcels were not distinguished in the eventual Mining Lease.

Ownership passed through a sequence of companies from the late 1990s before a mining award was made. Australian Gold Fields (1997-1999) bought both prospects and joined them as its ‘Morobe Project’. After this company ran into financial difficulties, ownership passed to Aurora Gold (1999-2002), Abelle (2002-2003), Harmony Gold (2003-mining award). From Harmony’s time, the name ‘Hidden Valley’ has been used to refer to the project and the Mining Lease, ML151 awarded on 4 April 2005, covers the two deposits.
Figure 7  Mining award flow chart reflecting procedures followed at Hidden Valley.

Ore from the Hamata pit is transported by a 7km conveyor to a plant site adjacent to the Hidden Valley pit. Tailings from both deposits are stored behind a dam adjacent to the Hamata pit.

A comparison between the schematic award process and the actual award process for Hidden Valley are as shown in Figure 7.

The circumstances of the award highlighted a number of weaknesses in PNG’s technocratic capacity. Two fundamental assumptions are that technical information provided by companies to the various arms of government is accurate and that officials are competently able to review it and make appropriate decisions. But if technical information provided is inaccurate and/or officials are not competently able to review it, the process is corrupted (see discussion under common risks PP08, PP09, RA15).

In the first place, the SIA that Harmony Gold submitted to government in 2004 (Jackson 2004) evaluated the project on the basis of the incorrect information about the mine life (2005-2012) and the 400-500 workers which projected it as a small to medium scale operation. In fact, the workforce rose to 2390 in 2011 (Harmony 2011: 70) on a par with Ok Tedi, Porgera or Lihir. Construction took far longer than anticipated (2006-2009) and full operation did not commence until September 2010.

Among the risks discussed in relation to Hidden Valley are those concerning due diligence on applicants’ claims regarding their capacity and financial resources (p. 68) and in relation to a ‘recognition shift’ in the representation of community interests (p. 74, Box 6).

Ramu

The Ramu mining project has facilities split between an inland nickel mine in the Madang highlands at Kurumbukari and a coastal processing plant and export wharf at Basamuk in the Rai Coast District of Madang Province. The mine and processing plant are linked by a 135km slurry pipeline.

See Box 3 for discussion of this project.

Solwara1

Nautilus Minerals was granted an Environmental Permit in December 2009 and a Mining Lease in 2011 for the Solwara 1 deep-sea mining project between New Ireland and East New Britain Provinces (cf. Post-Courier 5 Aug 2010).

Having said this, the ‘mine’ is known for its financing problems (e.g. The National 11 Mar 2009) and has not commenced production. The source of Nautilus’s problems is the State itself. In an agreement signed in 2011, the State opted to take a 30% share in the project, but failed to produce the funds.

In commercial arbitration in 2013 the State was ordered to pay Nautilus US$118 million (The National 7 Oct 2013) but up until now has not complied. Nautilus terminated the agreement in
2014 (Post-Courier 17 Feb 2014). At present Nautilus is designing undersea mining equipment and raising finance.\textsuperscript{22}

As Filer and Gabriel relate (2016), a national policy framework in the form of an Offshore Mining Policy has been under discussion since 1998, but remains a work in progress.

\textsuperscript{22} http://www.nautilusminerals.com
CHAPTER 3
THE MACRA COMMON RISKS – LONG-FORMAT DISCUSSION

This chapter assesses the ‘common risks’ identified in the MACRA tool, Annex 1, in the form of long-format discussion. Additional risks are coded as recommended in the MACRA tool, s4.3.

Few of the risks can be properly evaluated in a yes/no format or in one or two sentences stripped of context.

As throughout the report, we are guided by the inescapable fact PNG’s mineral exports have dominated the economy during the 2000s (Appendix B) but little progress in development was made during the Millennium Development Goals period, according to the government’s own assessment (DNPM 2016). Like everyone else who has looked at the conundrum (e.g. UNDP 2014), we want to know why. The MACRA corruption risk tool gives an opportunity to apply a standardised methodology from the point of view of corruption risks.

For Papua New Guinea, the classification of risks into the five categories given in the MACRA tool, namely (1) Contextual Factors, (2) Process Design, (3) Process Practice, (4) Accountability, and (5) Legal Mechanisms, sits a little awkwardly with the manner in which formal procedures, politically altered practices, agreement-making that is often strongly driven by local factors, and limits set by the capabilities of the technocratic system are in constant interaction.

In this chapter, the common and additional risks are grouped together under eleven headings for the purposes of long-format discussion, meant to reflect similar sources of risk. In some cases, additional background information is needed to explain the context of a risk and/or the consequences of an occurrence of the risk event and this is given in inset boxes.

Twenty-two ‘red’ risks (highlighted below in red font) are given more attention and are summarised according to the MACRA ‘Worksheet C’ format in Appendix A.

01-REGULATORY-STATE Corruption risks in administration and legislation

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
<th>L-hood</th>
<th>Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF01</td>
<td>What is the risk that mining laws have been, or will be if reform is planned, written to favour private interests before the public interest?</td>
<td>4</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>CF03</td>
<td>What is the risk that surface rights in areas being opened for mining are not clear in law?</td>
<td>5</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>CF06</td>
<td>What is the risk that domestic SOEs will receive preferential legal treatment compared to other mining companies?</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CF07</td>
<td>What is the risk that SOEs with interests in mining do not have to publish information about their mining-related activities and investments?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PO01</td>
<td>What is the risk that the awards process itself has been, or will be if reform is planned, structured to favour mining interests above the public interest?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>
What is the risk that a SOE with mining interests will be directly involved in awards, e.g., because of the structure of the government’s mining portfolio and organisations?

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
<th>L-hood</th>
<th>Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD14</td>
<td>What is the risk that a SOE with mining interests will be directly involved in awards, e.g., because of the structure of the government’s mining portfolio and organisations?</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PD20</td>
<td>When foreign companies are legally required to partner with local companies, including a local SOE, for mining activities, what is the risk that the laws and rules governing local partnerships will not be clear?</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>PD21</td>
<td>When foreign companies are legally required to partner with local companies or a local SOE for mining activities, what is the risk that details of these partnerships will not be publicly knowable?</td>
<td>4</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>RA01</td>
<td>What is the risk that barter deals or infrastructure swaps will not be audited after they have been awarded and completed?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

**CF01**

‘What is the risk that mining laws have been, or will be if reform is planned, written to favour private interests before the public interest?’ is assessed as ‘likely’ and of ‘catastrophic’ impact.

The risk concerns what constitutes placing ‘private interests before the public interest’. The key problem in current and contemplated legislation, and the awards process, is the danger of collusion between government and mining companies to fast-track procedures such that mining projects are inadequately scrutinised before being allowed to proceed (p. 13).

The questions of the poor outcomes of mining for local communities, and for vulnerable people within communities, has been an area of concern since 2000 when the World Bank’s ‘Mining Sector Institutional Strengthening Project’ for the then Department of Mining commenced (Mathrani 2003). The key problem is that excellent policy reforms are identified, well aligned with national plans and the Constitution’s aspiration for equitable development, but are followed by a failing to create the legislation to implement them. Early casualties were:

- the 2003 ‘Green Paper’ intended to create a Sustainability Planning Framework for the mining sector (DoM 2003)
- the Women in Mining Action Plan (DoM 2007).

A National Steering Committee was established to steer the production of the Green Paper, public consultations were held, and working papers produced in key areas, including many issues of concern to mine area communities: benefit stream analysis; business development, training and employment; public infrastructure; landowner equity case studies. The Women in Mining Action Plan came into existence after two international conference were held in Madang (Strongman 2003, 2005) and a Women in Mining Steering Committee was established with NEC (cabinet) endorsement. The Women in Mining Action Plan was intended to run for five years, 2007-2012, with an NEC-approved budget of K15 million. By 2013 when World Bank Technical Assistance was used for a round of training for public servants intended to implement it, only K300,000 had been allocated and no projects had yet been started.

The Hidden Valley Royalty Agreements signed in 2009 and 2010, after the formulation of the Women in Mining Action Plan (DoM 2007), but were not forwarded to the MRA Gender Desk or WIMSC for scrutiny. Subsequent social impact work 2010-2012 commissioned by the mining company found extreme gender bias in royalty payments: married brothers in the same family
were receiving up to six times as much as married sisters (see Burton et al. 2012: paras 583-598 ‘Gender safeguards in royalty distribution’).

Copies of a draft revised *Mining Act* have been circulating since 2005 showing a streamlining of procedures and new sections, for example covering Memorandums of Agreement, which are seen in the current awards diagram (Figure 2) but not in the *Mining Act 1992*, and for Offshore Mining. The sustainability Green Paper and the Women in Mining Action Plan were intended to address policy gaps arising from public complaints and obvious development failures in mining areas but few if any of the issues are evident in drafts seen to date. In other words, redrafting of the *Mining Act 1992* commenced with strong emphasis on public interests, but the fear is that this emphasis will not survive to an eventual tabling of a new Act in parliament.

These problems justify a ‘major’ impact factor.

What justifies a ‘catastrophic’ impact factor is the expropriation of property without the constitutional guaranteed ‘just compensation’ in the case of the nationalisation of Ok Tedi through the *Mining (Ok Tedi 10th Supplemental Agreement) Act 2013* (p. 24). This may well lie behind the recent 24th out of 25 countries ranking accorded to PNG by the mining investment risk assessor Bohre Dolbear (2015).

**CF03**

**CF03** ‘What is the risk that surface rights in areas being opened for mining are not clear in law?’ is assessed as ‘almost certain’ and of ‘major’ impact.

What these are is clarified in one of the examples in Annex 7 of the MACRA tool where it is suggested that pasture and water, for instance, could create ‘incentives and opportunities for corruption around which rights have precedence over other rights’.

The key problem in Papua New Guinea is that there are no known cases of mining on land on registered land with guaranteed security of title. All leases issued in the past half century have been over land under customary ownership. This raises the extremely difficult problem of achieving any certainty at all, at the start of negotiations for the release of tribal land needing for mining, that the community representatives selected to talk with government and developers are the true owners and have been correctly authorised under custom to perform this role. Numerous examples show that this has not been the case – discussion is continued under ‘Corruption risks in consultations with communities’ (p. 72).

Failure to respect the rights and entitlements that are owed when mining on customary land underlay the Bougainville civil war (p. 21; e.g. May and Spriggs 1990; Regan and Griffin 2007).

Failure to maintain to pay attention that mining activities and impacts are confined to leased areas that are ‘clear in law’, and that instead spill out onto waterways, flood plains and river banks that have other owners has led to repeated cases environmental damage.

- Examples at Ok Tedi include IIED & WBCSD 2002; Banks and Ballard 1997; Marychurch and Stoiano 2006; Campbell 2011.
- Examples at Tolukuma include Oxfam 2004.
- Examples at Hidden Valley include SMEC 2010; Ketan and Geita 2011.
Failure to maintain to know the locations of Wildlife Management / Protected Areas, and/or ambiguity in the specification of their boundaries, results in leases issued across environmental reserves (cf. Chatterton, Yamuna, Higgins-Zogib et al. 2006).

CF06, PD14

CF06 and PD14 are risks relating to interference by SOEs in awards. These are scored as having little likelihood or impact as SOEs are not autonomous enough to throw their weight around. See other risks concerning the State sector that involve political elites ordering the involvement of State entities, up to the full expropriation of the major shareholder in the Ok Tedi mine.

CF07

CF07 ‘What is the risk that SOEs with interests in mining do not have to publish information about their mining-related activities and investments?’ is scored ‘possible’ for likelihood and ‘major’ for impact.

The case in point is the small Tolukuma mine which was opened in 1995 by Dome Resources before being acquired by DRD of South Africa. The mine was investigated by the Oxfam Mining Ombudsman on the basis of local complaints lodged in 2001 over river pollution, a lack of informed consent for entry onto land for exploration, and the presence of mine having done little to improve infrastructure in the mine impact area (Oxfam 2004). DRD produced a single Responsibility Report (DRD 2004) then passed the operations to Emperor Mines in 2005, which sold it in 2008 to the SOE Petromin PNG Holdings for a price believed to have been around K20 million. DRD / Emperor thus became indemnified against further claims for damages (as was Dome Resources). Subsequently, Petromin published only the vaguest information on the status of the mine in its annual reports23 and this does not include production data between 2008 and 2015. The mine ceased operations in 2015 and was sold to Asidokona Mining Resources (Petromin 2015b).

As a corruption risk, the lack of information published about Tolukuma by any of its owners is likely to have meant that the local community was presented with a limited set of facts about what mining would entail upon which to give informed consent for mining and exploration activities. However, the impact on the wider society is not likely to have been great.

The real risk with SOEs in Papua New Guinea is that they fail to publish critical financial and stakeholder-relevant information while being subjected to demands for cash from the government. In 2014, Petromin made a loss of K15 million (Petromin 2015a: 4), but at the same time one of its media releases carried a picture of a prominent government minister receiving a Petromin cheque for K1 million for the 2015 Pacific Games, held in Port Moresby nine months later (Petromin 2014).

All eyes are now on the recently nationalised Ok Tedi to see that its much larger operating accounts are not plundered by a cash-strapped government. Obviously, it is a breach of the fiduciary duty of directors of any company to allow funds to be expended outside the core business of the enterprise. SOEs in PNG are believed nonetheless to be especially vulnerable to demands of this nature.

**PD01**

**PD01** ‘What is the risk that the awards process itself has been, or will be if reform is planned, structured to favour mining interests above the public interest?’ is scored ‘possible’ for likelihood and ‘moderate’ for impact.

This risk has a strong overlap with CF01 above (p. 40) for the non-revision of current legislation, despite repeated Technical Assistance rounds and production of perfectly good policy documents, notably on sustainability and gender (Strongman 2003, 2005; DoM 2003, 2007).

However, PD01 is assessed as being of a lesser impact because, that part of the practice of the awards process under the control of the MRA is deemed to have run and to be currently running quite well. Reform to the part under the control of the MRA that would favour mining interests is possible following updated legislation, but even if this did happen, the impact is deemed moderate because of the restricted range of outcomes that the MRA can directly influence.

It should be noted that if the part of the award process under the control of the MRA was made technically more complex, the MRA would struggle to carry out its functions given present resourcing, staffing, and staff competences.

See CF01 for a longer discussion.

**PD20**

**PD20** ‘When foreign companies are legally required to partner with local companies, including a local SOE, for mining activities, what is the risk that the laws and rules governing local partnerships will not be clear?’ is assessed as ‘likely’ and of ‘major’ impact.

The main concern here is that it has become policy for the State to take the option of up to 30% of all new mining operations (see *MDC Act 1996*). The policy began with the 20% of Ok Tedi Mining Limited owned by the State from the company launch in 1981, with consortium partners BHP Ltd (30%), Amoco (30%), Kupfer Exploration Gesellschaft (20%).

At Porgera the State initially opted to own 10% of the Porgera Joint Venture with partners Placer Pacific (33.3%), Highlands Gold (33.3%) and Renison Goldfields (33.3%). As discussed above in the ‘Porgera Coup’ (Box 2), shortly after gaining office in 1992, Prime Minister Paias Wingti demanded the major partners surrender 20% and after six months of bargaining they agreed to surrender 5% each.

The State’s corporate entities were relatively unsophisticated in the 1990s but a much more complex SOE landscape has evolved since. The Ok Tedi nationalisation fits into this picture as a variation on the ‘laws and rules governing local partnerships with SOEs’ as the original 20% became approximately 35% after various voluntary changes in OTML shareholding, but then the law was changed for the remaining 65% to be expropriated without recompense (18ff.).

An even more recent example of uncertainty concerns the seabed mining company Nautilus Minerals. The State opted to take up 30% of the Nautilus’s Solwara1 project in an agreement signed in 2011 but failed to produce any money causing the project to stall for several years. In commercial arbitration in 2013 the State was ordered to pay Nautilus US$118 million (see p. 30).

The business uncertainty justifies the impact score of ‘major’ for this risk because of the disruptive effect on the ability of the non-SOE partner(s) to conduct business.
**PD21**

**PD21** ‘When foreign companies are legally required to partner with local companies or a local SOE for mining activities, what is the risk that details of these partnerships will not be publicly knowable? is assessed as ‘likely’ and of ‘moderate’ impact.

The risk is related to PD20, hence the retention of a ‘moderate’ impact, but in practice the partnerships are publicly knowable at any given point in time.

**RA01**

**RA01** ‘What is the risk that barter deals or infrastructure swaps will not be audited after they have been awarded and completed?’ is scored as ‘possible’ and of ‘moderate’ impact.

Papua New Guinea does not specifically have ‘barter deals or infrastructure swaps’ at award time, but included in a Mine Development Contract there may well be provision for a mine developer to build roads and facilities in lieu of paying tax, under the Infrastructure Tax Credit Scheme introduced in 1995. This is only possible when a mine is in profit and has a tax liability that it can offset. The risk is stated in terms of auditing not being done and it is indeed likely that, depending on what accounting practice a company uses, the cost of the infrastructure put in place could be overstated. There is very little chance of a government audit. Of higher impacts value is the political messaging around the ITFC. In 2015, Ok Tedi Mining Limited said it had implemented ITCS projects to the value of K270m since 1997 (Post-Courier 30 April 2015), while Prime Minister Peter O’Neill has constantly said the mine was being run by ‘secret interests’ and this justified nationalising it (p. 24).

### 02-REGULATORY-FCFS Corruption risks in ‘first-come-first-served’ arrangements

Papua New Guinea issues licences on a ‘first-come-first-served’ basis. Up to the present, no competitive auctions are known to us, although the possibility that this may happen in the future cannot be discounted, e.g. for seabed mining concessions.

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
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<tbody>
<tr>
<td>PD13</td>
<td>When tender assessment panels are used in the awards process, what is the risk that people appointed to the panel are not independent, e.g., because they have been carefully chosen by the government to create a specific desired outcome?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PD17</td>
<td>What is the risk of bias in the distribution and sharing of information about forthcoming awards, such as coordinates and ore body characteristics?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PP12</td>
<td>What is the risk that the holder of an exploration licence will not, in practice, have first right of refusal or another form of certainty regarding their obtaining of the related production licence?</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>PP13</td>
<td>If a ‘first come, first served’ system is in place, what is the risk that the first applicant will not be awarded the licence or permit?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PP15</td>
<td>What is the risk that collusion or bid-rigging will occur in auctions for licences etc.?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PP16</td>
<td>In the case of a single bidder for a licence or permit, what is the risk that auctions for licences and permits will yield a below-market price to government?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PP17</td>
<td>What is the risk that confidential information in applications for licences etc will be leaked?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>MACRA</td>
<td>What</td>
<td>L-hood</td>
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<tr>
<td>RA03</td>
<td>What is the risk that the criteria for selecting a specific process for awarding a licence etc will not be publicly knowable?</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>RA04</td>
<td>When several types of awards processes are possible, what is the risk that the specific process selected will not be publicly knowable?</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>RA05</td>
<td>What is the risk there will be no independent external review of the award method chosen – e.g., auction, limited expression of interest, or other competitive process - and the final result?</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Only one risk in this collection can be scored for Papua New Guinea

**PP12**

‘What is the risk that the holder of an exploration licence will not, in practice, have first right of refusal or another form of certainty regarding their obtaining of the related production licence?’ is scored as ‘unlikely’ but of ‘catastrophic’ impact if the risk event occurred.

The ‘first-come-first-served’ principle extends to the expectation that a company has the right to (a) renew its exploration licences every two years for a further two years, on demonstration of a satisfactory level of activity and the consent of customary and other landowners, and (b) to make a Proposal for Development at the end of reasonable period.

This risk is scored as ‘unlikely’ but with a ‘catastrophic’ impact (i.e. forfeit of rights) if the risk event happened.

We do not know of past cases and cannot envisage future circumstances where this would happen. A possible case comprises the dormant BCL leases on Bougainville. Ex-combatant groups around the former mine are adamant that they will not allow BCL to restart the mine and, while stakeholders are tight-lipped, the very slight possibility that the mine would re-open could be under circumstances where the current lease holder is obliged to forfeit its entitlements. At any rate, since the circumstances are covered by Bougainville’s own mining legislation, we will not consider this further (ABG 2015)

**PP13**

‘If a ‘first come, first served’ system is in place, what is the risk that the first applicant will not be awarded the licence or permit?’ cannot be scored because in order to make an application, i.e. a Proposal for Development, a second applicant would have to have somehow come into possession of the first applicant’s data room and confidential business knowledge in order to write a detailed Feasibility Study. The circumstances in which this could occur are beyond the scope of a corruption risk assessment.

**03-REGULATORY-TECH Technical capability of the regulatory agencies**

This set of risks concerns the ability of regulatory staff to exercise their licencing functions impartially and without susceptibility to external pressure.
PD05

**PD05** ‘What is the risk that salaries of cadastre (or equivalent) agency staff are less than a living wage?’ is assessed as ‘likely’ but only of ‘moderate’ impact.

It concerns whether regulatory agency staff are adequately paid so as not to be vulnerable to corruption. Junior staff are certainly well below the poverty line in Port Moresby, ironically because of the vast inflation in real estate prices caused by the influx of contractors into the city during the construction of the ExxonMobil-led PNG LNG project, 2010-2014.24

However, the corruption impact caused by a PD05 event would only have a moderate impact because – on present information – there is a limit to what ‘cadastre staff’ or others can do in relation to corruptly biasing licence applications.

PD05.1

**PD05.1** ‘What is the risk that salaries of project coordination staff are insufficient to attract adequately qualified professionals?’ is assessed as ‘almost certain’ and of ‘major’ impact.

This is an additional risk of far greater significance. Each mine is allocated a Project Coordinator by MRA to act as the link between mining company and government, with a wide range of functions ranging from understanding clan systems and social impacts to complex issues in environmental science. All staff, except for possibly those nearing retirement, are now degree qualified, but even so there is an insufficient level of expertise to properly regulate even medium sized mining operations. As of 2013, no Project Coordinators had masters level

Graduate officers are still being paid the colonial era K3.50/week housing allowance on entry (A$1.40/week) when the indicative rent on a two room duplex is K950/week ($380/week).
qualifications (hence the likelihood of ‘almost certain’) and this exposes the public, the government, and even the operator, to an impact level rated as ‘catastrophic’.

A high level of risk impact is awarded because as mine after mine is opened, project-threatening mistakes are repeatedly made in mine planning which could be avoided if Project Coordinators had more expertise, better conditions to work in, and were better able to assess project documents early on and to the level to be able to recommend specialist reviews be commissioned by their management.

This applies to irreversible damage to rivers (Jaba, Ok Tedi, Porgera, Angabanga, Watut), poorly worded agreement documents, the absence of women in informed consent meetings at community level, and to easily corrupted and unfair benefit-sharing agreements. All of these things are covered by long-standing government policies. There are excellent Project Coordinators, but there are too few to go around. In Chapter 4, recommendations concerning the need for upskilling of human resources are set out under Risk Theme 2.

PD06

PD06, the risk of side employment by regulatory agency staff is seen as unlikely and only of small potential impact. As with PD05, it is difficult to see what staff could do that would expedite progress towards a favourable award.

PD27

PD27 ‘What is the risk of awards decisions being based on cadastre maps that are not coordinated or not geodetically compatible with other land management organisations, such as agriculture and forestry?’ is assessed as ‘likely’ and of ‘major’ impact.

Mines and their facilities are often on or surrounded by land with existing uses. Curious examples have come to light:

- Lihir Island was gazetted down to the high-water mark as a Wildlife Management Area in 1991 (under the Fauna (Protection & Control) Act 1966) to protect endemic Melanesian Scrub Fowl nesting sites around the island’s hot springs. The mine’s Environmental Plan included an appendix on the likely impact on Scrub Fowl habitat (Burrows 1989), and was passed. In 1995 A Special Mining Lease was issued that included a key Scrub Fowl nesting area, the Kapit hot springs.

A WWF team visited Lihir in 2006 and were unable to find any local stakeholders who were aware of the protected status of the island; they included the WMA as one of five protected areas experiencing ‘a very high degree of pressures and threats’ (Chatterton, Yamuna, Higgins-Zogib et al. 2006).25

In recent sustainability reporting the operator has incorrectly answered the GRI Indicator question EN012 ‘Number of operations with activities or resettlements occurring in or adjacent to protected areas … having significant impacts on biodiversity’ with ‘nil’ for this mine (Newcrest Mining 2014: 2).

25 Chatterton, Yamuna, Higgins-Zogib et al. 2006 say the Lihir reserve is a ‘Protected Area’. A CEPA spreadsheet says it is a Wildlife Management Area per National Gazette G52 6 June 1991.
(This issue also relates to bad data being supplied by applicants, RA15, p. 53.)

• The 2005 Hidden Valley MOA commits the Morobe Provincial Government to ‘provide annual funding for road and bridge maintenance within the Impacted Area’ (State Solicitor 2005: 17.1; see also Sanida et al. 2015: Appendix 2).

The problem is that one of the roads passing through the mine impact area is a National Road, while others are either council roads or private roads constructed by a forestry company. In these cases, and the roads do not come under the jurisdiction of the Provincial Government.

• The Ramu plant site was constructed on a former plantation known as Basamuk. The land was acquired from its customary owners by the Lutheran Mission in the late 1930s and briefly worked by a lay brother called Jack Lindner between 1939 and 1942 (Burton 1999b). Many records were destroyed in WWII and despite the best attempts, definitive land records have never been found. The plant construction went ahead anyway, leaving a collection of unsatisfied stakeholders to wonder who authorised its conversion to a new use. In the UK, the ‘Crichel Downs Rules’ govern the restitution of lands previously acquired under eminent domain or similar and have been through various revisions over the years, the last issued by that country’s government in 2015. Not so in Papua New Guinea where residents near the plant site have even been told in all sincerity by members of the largely Chinese workforce that the land ‘belonged to Michael Somare’ before the mine was built (see Box 3).

This risk has been scored ‘likely’ and of possible ‘major impact’. The corruption aspect is one of government-company collusion (p. 13) to disregard of existing usages in order to expedite a mine. The ‘private gain’ is that of the mine operator and government (in terms of economic activity) and the impact is that felt by prior users and the public enjoyment of common resources, in the case of a Wildlife Management Area.

In Chapter 4, recommendations concerning the need for a national geospatial agency are set out under Risk Theme 4.

PP01, PP02, PP03

PP01, PP02 and PP03 are similar risks to PD05 about the workload and capabilities of technical staff working in a ‘cadastre agency’. As with PD05 there is a limit to what ‘cadastre staff’ or others could do in relation to corruptly biasing licence applications. The potential impact is given the same score as PD05, but their likelihood of occurring is lower because the cadastre functions mentioned are performed by the service provider Spatial Dimension in Johannesburg through a portal on the MRA website (Figure 8).
Figure 8. PNG Mining Cadastre Portal
Showing leases and applications in the Morobe Province / Owen Stanley Range area.
URL: http://portal.mra.gov.pg/Map/

PP05

PP05 ‘What is the risk that upgrades to the cadastre data system will not capture and resolve overlaps, inaccuracies or other conflicts?’ is scored as ‘unlikely’ and with only a ‘minor’ impact it the risk event occurred. Again, this is because Spatial Dimension is responsible for data integrity. However, in relation to clashes with spatial data that is the responsibility of agencies other than the MRA, see risk PD27 (p. 47) and recommendations in Chapter 4, Risk Theme 4, concerning the need for a national geospatial agency.

04-REGULATORY-INFO Transparency of regulatory procedures

This set of risks concerns the disclosure of regulatory information including application procedures to the public. Most of the risks are considered of low or moderate significance.

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<th>MACRA</th>
<th>What</th>
<th>L-hood</th>
<th>Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD03</td>
<td>What is the risk that the steps of an awards process will not be publicly knowable?</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PD04</td>
<td>What is the risk that criteria for awarding licences etc will not be publicly knowable?</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PD10</td>
<td>What is the risk that cadastral information about licence areas will not be publicly knowable? Publicly available information allows stakeholders to verify compliance with licence areas, deterring corruption.</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PD11</td>
<td>What is the risk that geological data about specific licence areas will not be publicly knowable?</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>MACRA</td>
<td>What</td>
<td>L-hood</td>
<td>Impact</td>
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<td>-------</td>
</tr>
<tr>
<td>PD12</td>
<td>What is the risk that information about application fees and other charges is not publicly knowable?</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PD15</td>
<td>What is the risk that mining companies will not know the governance requirements around the process for awarding licences etc?</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PD23</td>
<td>What is the risk that all firms competing for a licence etc will not be publicly knowable?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PD24</td>
<td>What is the risk that all firms or partners awarded a licence etc will not be publicly knowable?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PD32</td>
<td>What is the risk that companies will be confused or misled about the stage their application is at in the awards process?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>PD35</td>
<td>What is the risk that the applicant awarded a licence etc will not be publicly announced?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PD36</td>
<td>What is the risk that the details of licences etc that have been awarded will not be publicly known?</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>PD37</td>
<td>What is the risk that non-trivial deviations from the applicable legal and regulatory framework will not be publicly knowable?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>RA02</td>
<td>What is the risk that information about a particular licence etc that has been awarded is not legally available?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

**PD03, PD04, PD12, PD15**

**PD03, PD04, PD12** and **PD15** concerning the steps, criteria of award processes, and fees are unlikely to eventuate, as information is freely available from both the MRA and the Chamber of Mining and Petroleum.

**PD10**

**PD10** ‘What is the risk that cadastral information about licence areas will not be publicly knowable?’ is extremely unlikely under present circumstances, because the Mining Tenements portal is run remotely by Spatial Dimension. However, it is well to be aware of the oil and gas licence register at the Department of Petroleum and Energy, which is an example of extreme corruption vulnerability (Figure 9).

**Figure 9.** Papua New Guinea’s oil and gas registers in 2014.
Source: PNGEITI (2014: Figure 27).
**PD11, PD23, PD24**

**PD11** does not apply in Papua New Guinea because companies create their own geological data beyond what is available in the open literature.

**PD23** and **PD24** do not apply because of the ‘first-come-first-served’ system. However, they may be risks in the oil and gas sector.

**PD32**

**PD32** ‘What is the risk that companies will be confused or misled about the stage their application is at in the awards process?’ is a possible risk and could have significant impact if it occurred. The likelihood is not high in terms of the standard application procedures, but the Nautilus Mining case of having a government SOE committed to invest and then not investing would partially cover possible circumstances (p. 37).

**PD35, PD36**

**PD35** and **PD36** do not apply because of the ‘first-come-first-served’ system. However, they may be risks in the oil and gas sector.

**PD37**

**PD37** ‘What is the risk that non-trivial deviations from the applicable legal and regulatory framework will not be publicly knowable?’ is a moderate risk both in terms of likelihood and impact. An example is the rate of royalty payable for gold mines. Historically, the rate was set at 1.25% of export value, but at the last minute in the Lihir negotiations Prime Minister Julius Chan raised the rate to 2% (see p. 34); the new rate was then applied to existing mines (Prime Minister to Chairman, Nimamar Development Authority etc, 28 March 1995).

**RA02**

**RA02** ‘What is the risk that information about a particular licence etc that has been awarded is not legally available?’ is a moderate risk. The terms of Mining Development Contracts rarely become available and this creates a risk of new applicants being uncertain of what to expect. The extreme case is that of the Ramu mine where many of the terms of the award were one-off deals and favours to the investor. Media reports make it clear that the Department of Prime Minister dominated the negotiations and that the main regulator, the Department of Mining/Mineral Resources Authority, was in the dark when some decisions were taken, and that various of the secondary regulators that should have been involved, like the Department of Labour and Industrial Relations and the Department of Immigration, were essentially excluded and were forced to raid the company on their own initiative (Box 3).

**05-REGULATORY-IRREG** Irregularities in the award process

This set of risks gathers together possible irregularities in the award process.
**PD25**

What is the risk that awards decisions cannot be appealed if a company’s application is rejected? It is considered unlikely and with a moderate impact only. The reason for this is that no company with a good reputation and a demonstrably sound financial status is known to have been refused an award with no possibility of reapplication.

It is well known that CRA Minerals submitted a Proposal for Development over Hidden Valley, near Wau, in late 1988 but was refused an award at that time. The context was that CRA, in the form of its subsidiary BCL, was in trouble at Panguna mine at the time the decision was made and later company managers conceded that the proposal had been rushed and that the company had few staff on the ground, having managed the exploration programme remotely from Port Moresby. A full-time project manager was moved to Wau and the company embarked on a renewed drilling programme for the next eight years.

The rejection of an award by the then Department of Minerals and Energy, therefore, had no impact because it was a correct decision. In the unlikely event that an award might be rejected without justification, it is unlikely that there would be more than moderate impact because there is no evidence of any ‘black list’ and the first-come-first-served system is a good defence against rival proposals.

**PD29, PD30, PD31, RL06**

What is the risk of theft of application fees or other charges? What is the risk that some applications for licences etc will not be registered? What is the risk that lodged applications will be deliberately mishandled? When reporting requirements, such as for exploration or production data, have been deliberately breached, e.g., false data have been published, what is the risk that no action will be taken in response? What is the risk that people with knowledge of corruption in the awards process will not make a report?

The first three are each considered ‘almost impossible’ and of ‘minor impact’ if they did occur, because (a) the first-come-first-served system does not provide an incentive for mishandling and (b) the relatively strong position of the Chamber of Mines and Petroleum in relation to mining means that possible malfeasance would be quickly objected to. The last is evaluated as ‘unlikely’ but of ‘moderate impact’ if it eventuated.
‘When reporting requirements, such as for exploration or production data, have been deliberately breached, e.g., false data have been published, what is the risk that no action will be taken in response?’ is seen as a ‘likely’ risk event and or ‘major’ impact when the risk event occurs.

Our answer here must be very carefully worded. First, there is no evidence for misreporting of ore grades in Proposals for Development.

There have been accusations of this. A case in point is the allegation by Paias Wingti in 1992 that the PNG government had been misled by the joint venture partners at Porgera into believing the ore body was subeconomic when it was extremely rich (Box 2). The counter argument was that it was believed to have low grades in 1979 when the PNG government opted to own 10% of the project, but that further drilling between 1979 and 1989 when the mining award was made had resulted in much better grades (Aus Fin Rev 27 November 1992; see Figure 5). Wingti’s question was worth asking, but the information was widely available to all.

The question arises of when inadequate data can be considered to have been deliberately presented to the State in breach of the Mining Act. It is unlikely – but not impossible – that false data is concocted and presented. This is known to have happened internationally, for example in the Bre-X scandal in East Kalimantan in 1997 (Strathcona Mineral Services 1997).

What we do see is the veiling over of inadequate data, which should have been acquired during exploration periods, on bedrock stability, tonnage of material required to be stripped from ore bodies prior to and during mining operations, and in the kinds of predictable chemical reactions that will occur in process plant designs. The Mining Act 1992 s43 says that ‘proposals’ must ‘provide for the development of the mineral deposits … in accordance with good mining industry practice’ and ‘provide adequately for the protection of the environment’.
It is worth mentioning that there is a Papua New Guinean link to Bre-X. This is that, while the perpetrator of the scandal was never definitively identified, of the two geologists who talked up the deposit, Jeff Felderhof was the co-discoverer of Ok Tedi. In other words, just because an exploration geologist reports a genuine discovery on one occasion it does not mean that on the next occasion the claim does not need to be verified.26

Box 4. Plant Site Spoil Disposal at Anawe, Porgera

EIA documents for the Porgera mine included a land use study. A section on ‘Land and other requirements for the project’ said the plant site for the mine would be split between two locations covering 39 hectares in total. The locations would have to be levelled and ‘Plant Sites Spoil Disposal’ required an additional 53 hectares of land, all within the proposed Special Mining Lease (Placer PNG 1987: table on page 8). There was no detailed description of the Spoil Disposal other than as an area of land; there was no suggestion that material dumped here was likely to impact the environment.

In the event, the plant site spoil was unstable and, under steep slope conditions and high rainfall, formed what became known as the ‘Maiapam Creek mud glacier’ and descended 4.5 km down the Maiapam/Porgera/Pongema River between 1989 and 1992, destroying gardens as it advanced and preventing the recovery of alluvial gold by local panners, an occupation practiced since the 1950s.

The miscalculation had many repercussions. New environmental work had to be commissioned by the company, from several consulting firms, and the Department of Minerals and Energy undertook its own investigations. In a 1992 report, the Anawe dumping was described thus: ‘during the construction period, incompetent plant site spoil was handled by a failing dump at Anawe ... the Anawe operations were controlled by a Water Use Permit (WUP) ... under the Water Resources Act’ (J. Burton notes, 2005). This may have been so, but the words ‘failing dump’ were not seen in project documentation at the time of the mining award. Later, the term ‘erodible dump’ came into use and is now widely seen in project documentation (e.g. PJV 2002: Plate 2.22; U.S. Securities and Exchange Commission 2012: 1.18; PJV 2010: Plate 3).

The issue was separate to the mine’s main waste rock and tailings disposal proposals, on which subject the Minister of Environment, Jim Yer Waim, had written to Placer in 1988 to say: ‘I hereby reject the company’s preferred option disposal of treated tailings direct in the river and will require the construction of an impoundment dam’ (J. Burton notes, 2005). The negotiations with the government a period of years eventually led to a dam option being discarded, but since Mr Waim was the Minister at the time of the mining award negotiations (the Porgera Development Forum), we can see that the attitude of the government was hostile to any kind of ‘failing dump’ or ‘erodible dump’ after its experience at the Ok Tedi mine. That the area of the Maiapam Creek mud glacier was not included in the Special Mining Lease granted in 1989 indicates that the concept and the expectation that a larger area would be impacted was not entertained. The area shown in Figure 9 would later have to be the subject of a separate grant as a ‘Lease for Mining Purposes’ (LMP).

Box 4 illustrates a case where inadequate data was presented to the State before the Porgera mining award in relation to an area of spoil disposal.

26 Felderhof retreated to a residence in the Cayman Islands. The second geologist, Michael de Guzman, fell to his death from a helicopter.
Box 4. Plant Site Spoil Disposal at Anawe (contd)

The wider ramifications of the weak disclosure of the full impact of tailing and waste rock disposal across all Porgera’s dumps has been playing out for 27 years.

In 1992, the Chairman of the Porgera River Alluvial Miners Association (PRAMA) was elected as the MP for Lagaip-Porgera and backed litigation against the company. In 1995 PRAMA asked a new Minister for Environment to refer the matter to arbitration. This led to substantial compensation being paid to downstream landowners. The company also commissioned the CSIRO to undertake an independent investigation and this led to reforms of the way environmental investigations were carried out (CSIRO 1996) and the formation of an oversight body the Porgera Environmental Awareness Committee (PEAK) to monitor progress.

Figure 10. Extent of the ‘mud glacier’ at Porgera.

Showing portion included in the Special Mining Lease
Source: Google Earth. Calculated area, ~1.8 sq. km.

A list of technical environmental studies for the Porgera mine carried out between 1991 and 2008 is given in a recent public report (PJV 2010: Box B).

For its part, PEAK’s first Chair was Dame Meg Taylor, appointed in 1998, who left to head the Office of the Compliance Advisor Ombudsman at the IFC in 1999. PEAK had a first web site, www.peak-pjv.com, from 1998 to early 2007 which carried minutes of meetings and a range of environmental reports. Committee members, however, complained of long delays in obtaining reports from the company. PEAK was reincorporated under the Associations Incorporation Act 1966 and given annual funding in 2008. It had a second web site, www.peakpng.org.pg, from 2008 to 2013, which extended the range of reports available to the public. The web site disappeared in 2013 and the committee is not thought to have met since.
The choice of the Anawe example, rather than the extremely involved history of waste rock and tailings disposal issues at the Panguna, Ok Tedi, Porgera, Tolukuma or Hidden Valley mines, where in each case a complex mix of faulty environmental work or cost-cutting or government complacency led to damage to the local river system, is done advisedly.

It is an example of a simple issue that could easily have been explained properly in the Proposal for Development and, if further studies had been needed in the case of remaining uncertainties, they could easily have been carried out. The fact is that this did not happen.

RA15 requires two questions to be answered. The first is whether the muted information in the land requirement study, possibly restricted to a single line in a table, amounts to a deliberate breach of ‘reporting requirements, such as for exploration ... data’.

As an isolated instance, one might say not. But since the broader context is of repeated underestimates of likely environmental damage at PNG mining sites, it is not unreasonable to say that this did not accord with ‘good mining industry practice’. Mining executives are famous for regretting the way corners were cut after they have retired from active involvement in the industry (e.g. Davis 1995) and it would be hard to find an industry spokesperson in 2017 who would defend the inadequacy of the information presented about Anawe in 1988-89.

It is indefensible, then it cannot have been ‘good mining industry practice’. If it was not ‘good mining industry practice’, then a decision was made to cut a corner and present bad data. This brings into play the ‘collusion’ corruption criteria previously discussed (p. 13).

The second question is ‘what is the risk that no action will be taken in response?’. Action was taken, in the form of a long political process involving the citizens of the Porgera constituency having to elect a new MP, launch a court case, etc. Eventually, satisfaction was achieved in the form of compensation payments but, from the regulatory standpoint, the initial response, in the form of the State Solicitor’s opinion, was that the Mining Act 1992 prohibited the payment of compensation to the landowners for loss of access to alluvial gold (State Solicitor to Secretary for Mining and Petroleum, 13 December 1998). The fact that a major licensing crisis was playing out seemed not to be taken into account.

The government came under considerable pressure from the MP and from angry landowners. A crowd of youths attacked the Porgera airport in July 1995 thinking government officials were arriving by plane and, the next day, threw to the ground and punched company officials at an attempted consultative meeting. Further meetings were abandoned. In January 1996, a new Minister of Environment, Paul Mambei, made a ‘ministerial determination’ for compensation worth K15.2 million over all sections of damaged river; the company made a counter offer. By now it is likely that more has been paid because river damage issues have now become entangled in other long-running sagas at Porgera.

For example, the latest complaints from landowners specifically on river dumping at Porgera concerned drownings in pools and eddies that form below the waste disposal areas, alleged to have totalled 21 by 2011 (Porgera Alliance 2011).

Was action taken in the sense expected by the risk question?

27 ‘... no compensation shall be payable and no claim for compensation shall lie ... in respect of the value of any mineral which is or may be on the land’ Mining Act 1992 s154(4b).

28 The Porgera Alliance lists a range of other grievances on its web site http://www.porgeraalliance.net.
Essentially the answer must be ‘no’, because action was neither taken by the regulator in relation to the terms of the mining award nor as a regulatory response based on a mine inspection undertaken in a timely manner. The ministerial determination was an ancillary decision that came about as the result of legal and physical threats against the mine and government.

Trying to answer RA15 is no simple matter, and this discussion – which it must be emphasised just treats one of many equally complex cases – is aimed at widening awareness of what should be treated as ‘false data’ in mining proposals. In the first instance, ‘data’ is about far more than ore grades, and in the second instance proponents of mining operations are obliged on a number of levels to give the most accurate presentation they can of what they propose to do.

Even if social and environmental considerations are more developed in the 2010s than they were in the 1980s, the fiduciary duty of mining executives to their shareholders has not changed. It was, and still remains the case, that proposals should have their costings based on data that are as accurately and diligently presented as humanly possible.

06-REGULATORY-ELITES Interferences in the award process by political elites

The previous sets of risks concern technocratic irregularities. This set of risk concerns interference in the technocratic process by political elites.

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<tr>
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<td>CF10</td>
<td>What is the risk that senior public officials or politicians will not declare assets, shares or income related to mining interests</td>
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<tr>
<td>PD09</td>
<td>What is the risk that applicants for licences etc will be controlled by undeclared beneficial owners?</td>
<td>3</td>
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<tr>
<td>PD22</td>
<td>What is the risk of external interference in the cadastre agency’s awarding of licences etc?</td>
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<td>3</td>
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</table>

*CF02*

*CF02* ‘What is the risk of mining rights being expropriated’ is evaluated as ‘unlikely’ but by its nature must be ranked ‘catastrophic’, i.e. award-terminating, if the risk event did occur.

As discussed above (24ff.), the Ok Tedi mine was nationalised in 2013 by Act of parliament. It amounted to part-expropriation because the effect of the Act was to confiscate the 65% shareholding of one of the owners of Ok Tedi Mining Ltd and to parcel them out among various SOEs. On the other hand, the legislation had not rescind the mining rights awarded to Ok Tedi Mining Ltd.

Because the operation continues as before, and because the circumstances are unusual, the risk cannot be raised above ‘unlikely’ for a normal commercial investor.

Having said this, it is a known habit of the State to press its notionally independently-run SOEs into yielding forced dividends. If this interferes with the ability of Ok Tedi Mining Ltd to conduct...
business normally, then the nationalisation will begin to impact on the right of the company exercise its mining rights on a normal commercial basis.

The suspicion lingers that when El Nino weather conditions caused OTML to suspend operations in 2015 and lay off staff, a contributing factor was its low reserve of operating funds after having paid dividends to the government. It was noted that when BHP Billiton was majority shareholder and operator during the 1997 El Nino, it had sufficient reserves to survive months of low river levels when copper exports were suspended, and used the time on maintenance tasks.

For its part, company has recently said that it used the El Nino down time to restructure the business and for an ‘investment phase required to fund mine life continuation’ (2017: 15).

Whatever the case, company reporting has changed somewhat. OTML published an Annual Review for the year ending 2014, i.e. first year under full nationalisation, reporting that a USD50,000,000 (K124,069,000) dividend was paid to government compared to nil the year before (OTML 2015: 86). The dividend was paid before the El Nino weather pattern became evident.

The report for the year ending 2016 became available on 5 May 2017. The report declared an improvement in cash reserves to USD 56 million (K179 million) and the payment of a dividend of K150 million in December 2016 (OTML 2017: 20). It will be noted that no report appeared for the El Nino-affected year ending 2015; the 2016 report says, unsurprisingly, no dividend was paid in that year.

**CF04**

*What is the risk that there will be corrupt speculation around land subject to a mining permit application, such as by officials working with collaborators to change the status of the land to extract payments out of the licence-holder?’ is evaluated as being ‘likely’ and also having a ‘catastrophic’ impact if the risk event were to occur.

The nature of ‘corrupt speculation around land subject to a mining permit application’ needs explanation for the PNG context here. *There are no known cases of officials such as mine inspectors or local mayors speculating on land prior to a mining award.*

However, since it has become apparent that 12% of PNG’s land surface was land-grabbed in the 2000s (Filer 2011), it stands to reason that *all land* in the country is vulnerable to local forms of ‘corrupt speculation’ to ‘extract payments’.

In mining areas, ‘corrupt speculation around land’ can be interpreted in terms of local competition to represent land interests and consequently to receive rental payments. Much of this has to be seen through the lens of the micro-politics of landowner associations. In comparison to other forms of democratic representation in the country, landowner associations leave much to be desired. For example, since the early 1970s national elections have been held every five years without fail. By contrast, landowner associations are renowned for almost never holding elections for the office bearers and, when they do, for the rival candidates for office bearer positions to injunction one another, paralysing any beneficial functions that their organisations might serve for years on end. This affects income streams because mine agreements often build in access to at least some rental income for the local associations.

It should also be noted that land acquisition at three mines in PNG – Panguna, Misima and Lihir – was carried out on the land of indigenous people with matrilineal systems of inheritance. The
grievances of women over lack of representation were a factor in the breakout of civil conflict at Panguna. On Lihir, the weak position of women’s representation is egregious.

Box 5. What Human Rights Watch and other investigators say about local entities

The landowners in Porgera have long had a reputation for irregular financial management and others practices which have seldom attracted the attention of law enforcement. The landowner equity holding entity, Kupiane Yuu Anduane, holds 2.5% of the equity of the mine. In 2001, Kupiane paid a dividend of K1.2 million, as it does from time to time. However, when it was distributed it was split in two halves; K600,000 was shared among the perhaps 6,000 SML landowners at the time and K600,000 paid to Kupiane’s directors (Banks 2002: 4).

The Director of the government’s National Research Institute sent a researcher to Porgera in 2011 to find out where the money was being spent. The researcher could not locate a PLA official during his stay. However, company records showed that K30.6 million had been paid to the association between 1995 and 2011 (Johnson 2012: 46). Human Rights Watch also paid a visit; their researcher concluded that in 2009 approximately K4.2 million was paid in royalties to the PLA officials compared with K5.2 million paid to the approximately 10,000 ordinary landowners who made up the membership (HRW 2010: 35). In 2015 an MRA source confirmed the quantum of royalty payments and added that the PLA’s share was spent by ‘four men’. This was a reference to the fact that associations typically have a Chairman, a Vice Chairman, a Secretary and a Treasurer. The NRI researcher found that:

No document of incorporation could be found. There is no record of the objectives of the association or how they intend to spend the money. The author was also unable to contact the organisation either in person, when travelling to Porgera, or through email (Johnson 2012: 47).

A writer for the industry sponsored PNG Report managed to gain an interview with the Chairman of the PLA. While being driven around the mine he spotted a revolver in his belt:

‘What's the gun for,’ I asked. ‘For self-defence,’ he replied. I asked if he’d ever shot someone. ‘No,’ was the answer as we drove on in silence. It wasn't until later that night that I found that wasn’t true. In 1996, after [he] was elected chairman of the PLA, [he] shot his father point blank in the head in a very public argument that was said to be about mine compensation money (Butler 2012).

National Research Institute researchers also visited Hidden Valley. Here the landowner business company, NKW Holdings, incorporated in 2004, was granted at least K1 million in one-off start-up capital at the time of the signing of the MOA, had business contracts with the mine worth K421 million (A$168 million) between 2009 and 2012, but apparently had no company constitution, did not keep records pertaining to the methods of appointment of directors, and appeared not to have submitted company returns between 2004 and the time of data collection in 2014. The principal finding of the NRI report was that financial flows of around K500 million (A$200 million) entered in the mining area between 2005 and 2013, a substantial part of which came directly or indirectly under the control of Nakuwi and NKW Holdings but ‘the development impact of these funds is minimal’ (Sanida et al. 2015: 61, Table 5.1).

The 1989 Porgera Agreements provided for a royalty worth 1.25% of export sales to be collected by the national government and 23% of the amount collected to be allocated for local distribution (Derkley 1989: National and Provincial Government s10, s21). In 1995, in line with arrangements made during the licensing of the Lihir mine, including a national rate change to 2% of export sales, the breakdown changed. This time, notably, the Landowners Association received 12% of royalties in their own right (Table 2).
Tab
Table 2. Distribution of royalty at Porgera.
(a) at the time of the mining award and (b) after renegotiation
Source: Johnson (2012: Table 3).

The corruption, then, is not so much ‘corrupt speculation’ around land but the leveraging of a status connected with land to exercise political power and, with that, access to funds. The non-transparency of finances is ubiquitous, and the fact that the same individuals retain controlling positions for decades in landowner organisation stands in stark opposition to what happens in national and local level government elections: single terms and double terms occur in roughly equal frequency, but achieving more than two terms is extremely difficult to achieve.

The second part of the question in CF04, namely to ‘change the status of the land to extract payments out of the licence holder’, is seen in the continued leverage of a status connected with land as an award is made and after it has been made. Thus, when Prime Minister Julius Chan raised the national royalty rate to 2% to clinch the Lihir agreements in 1995, the Porgera representatives had two weapons at their disposal: (a) the extraordinary level of gold production seen at Porgera 1990-95 (unleashing similar politics at a local level as Prime Minister Wingti used in 1992 to renegotiate the national government’s deal) and (b) the relativity of their status as landowners to landowners elsewhere. In other words, a ‘fixed agreement’ was forced to be varied using a status connected with land.

Recently, the New Ireland Provincial Government rejected a draft MOA for the Simberi mine, on the grounds that they opposed the national royalty rate of 2% and that the provincial policy was for a 10% gold royalty (p. 32; Post-Courier 18 May 2017).

CF10

CF10 ‘What is the risk that senior public officials or politicians will not declare assets, shares or income related to mining interests’ is evaluated as ‘unlikely’ but having a ‘catastrophic’ impact if the risk event were to occur.

In respect of undeclared assets and shares, there is certainly a risk of general businesses funnelling cash into, for example, political parties. However, few orthodox businesses in PNG become ‘rivers of gold’ for public officials or politicians. If politicians derive cash from businesses it is, at this stage of the nation’s development, more likely to be from the likes of inflated contracts in the public sector. Since it is orthodox businesses that mining operations seek to engage with, and contemporary mining companies exhibit relatively strong governance, the risks in the mining sector are considered lower than in the rest of the economy.

However, if the current picture were to change, a future risk assessment might change the likelihood.
PD09

PD09 ‘What is the risk that applicants for licences etc will be controlled by undeclared beneficial owners?’ is evaluated as ‘possible’ and having a ‘moderate’ impact if the risk event were to occur.

Frankly, the beneficial ownership of many mining companies operating in PNG is not as well-known as it should be. We may know the local names of companies but not who the shareholders are. An example is Nautilus Minerals; according to its web site it only knows the names of two shareholders who have 5% or more of Nautilus stock: MB Holding Company LLC with 27% and Metalloinvest Holding (Cyprus) Limited with 15%. In turn, Mr Mohammed Al Barwani of Oman owns MB Holding Company LLC, and Mr Alisher Usmanov, described as a Russian business magnate, owns approximately 48% of Metalloinvest.

As far as is known, the only Papua New Guinean individuals who have large parcels of shares in mining companies are confined to geologists who run small exploration companies with small investor partners. An example is Pacific Niugini Minerals (PNG) Ltd of Lae. Companies like this mirror hundreds of small companies found across Australasia.

In respect of the less well known (in PNG) backers of companies like Nautilus, does the lack of knowledge constitute a corruption risk?

It does not intrinsically; however, the stakes are raised considerably when well-resourced investors are behind an income generating operation and employ complex legal structures to shift profits to other jurisdictions. Large countries like Australia are having considerable difficulty in getting transnational corporations to pay ‘normal’ rates of tax; tiny countries like Papua New Guinea will find themselves exceedingly vulnerable to essentially concealed investors with aggressive tax strategies.

A further aspect of impact is that the main mining investors seen to date have at least some link to national or international industry associations and through them to Corporate Social Responsibility commitments. In the last resort, their behaviour may be constrained by legal obligations in their home countries. With less well known owners in countries not traditionally linked commercially or diplomatically with PNG, the potential for loss of sovereignty over resources is somewhat heightened.

PD22

PD22 ‘What is the risk of external interference in the cadastre agency’s awarding of licences etc?’ is evaluated as ‘almost impossible’ and having a ‘moderate’ impact if the risk event were to occur.

Cadastre agency issues were largely covered in the previous section; the question of ‘external interference’, that is to say manipulation of the boundaries of leases etc, by officials or politicians would be difficult under the PNG system. See answers given in respect of PD29, PD30, PD31 and RL06 above (p. 52).

30 http://mininghive.com/companies/4285/pacific-niugini-ltd
07-EIA-SIA-PFD Risks in the EIA / SIA studies and Proposals for Development

This collection groups together risks relevant to Proposals for Development and the EIA / SIA studies that are included with them. The latter are taken together for Papua New Guinea because both come within the ambit of one piece of legislation, the Environment Act 2000.

The choice of risks to group together here is taken with some care and is loaded, in respect of EIA / SIA studies, towards the history of the bigger Papua New Guinea projects. The likelihood of the risk events occurring in the future is especially matched against actual events that have taken place in the past; the basis of prediction is that if conditions for guarding against the risks have not changed, then the likelihood of future events will reflect the frequency of occurrence and impact in the past.

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<tr>
<td>CF09</td>
<td>What is the risk that investors will disguise bribes as facilitation payments?</td>
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<td>6</td>
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<td>PP-N01</td>
<td>What is the risk that the commissioning process for SIA / EIA will compromise the impartiality and scientific quality of SIA / EIA reports and their ability to anticipate key impact issues?</td>
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<td>PP-N02</td>
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<td>5</td>
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</tr>
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<td>PP10</td>
<td>What is the risk that in practice there is no due diligence on applicants’ claims regarding their capacity and financial resources?</td>
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<td>PP11</td>
<td>What is the risk that there is no due diligence on applicants’ integrity, such as past lawful conduct and compliance?</td>
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<td>RA06</td>
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<td>RA07</td>
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<td>RA08</td>
<td>Assuming SIAs are required, what is the risk that criteria for SIAs will not be publicly knowable?</td>
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<tr>
<td>RA09</td>
<td>Assuming SIAs are required, what is the risk that SIA reports will not be publicly available once finalised?</td>
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<td>4</td>
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**CF08**

*CF08* ‘What is the risk that a proposed project is critical for the survival of the applicant?’ is assessed as ‘likely’ but of ‘minor’ impact.

Examples of projects proposed in PNG when the applicant has exhausted much of its start-up capital and cash reserves used for exploration are almost too numerous to mention. Given the security of tenure on exploration leases, it is a simple matter for a new company with cash in reserve to make a partnership offer, or just take over the cash-short company, finesse the Feasibility Study, and resubmit it. Two examples are:
- Highlands Pacific, originally with 68.5% of the Ramu project, was successful in being granted an SML in 2000. However, short of cash to build the mine, it had little choice but to agree to a partnership deal with MCC in 2006. After the deal, Highlands owned 8.56% of the project. The survival of the original applicant was not critical to the project (Box 3).
- Hidden Valley passed through the hands of a sequence of owners from the time of its discovery in the 1980s (p. 35) and had Feasibility Studies completed on at least one occasion (p. 52) prior to the eventually successful one. The survival of the original applicant(s) was not critical to the project.

CF09

CF09 ‘What is the risk that investors will disguise bribes as facilitation payments?’ is assessed as ‘unlikely’ but of ‘moderate’ impact. Classic facilitation payments may occur but are not attested for Papua New Guinea (hence ‘unlikely’).

However, facilitation payments were discovered at the Gold Ridge mine in the Solomons Islands in 2008. This mine was formerly owned by a company now operating in Papua New Guinea.

The facilitation payments were sign-on bonuses for members of three landowner associations totalling S$72,500 detailed in an appendix to the then operator’s Resettlement Action Plan (Australian Solomons Gold 2008: Appendix 17. Payments made to the GRCLA, MDA and KTDA).

The case was examined by the Australian Federal Police after a request from the Australian Department of Foreign Affairs, since this potentially involved a breach of the OECD Convention of Combating Bribery of Foreign Public Officials, to which Australia is a signatory. Although it was not in dispute that the particular ‘person of interest’, who chaired landowner meetings with the company, had received one of the payments, the AFP concluded that while the recipient had initially done so as a Member of Parliament, by the time the payments were made he no longer was one and further investigation was dropped (Manager, Economic and Special Operations, Australian Federal Police to Senior Legal Advisor, International Organisation and Legal Division, Australian Department of Foreign Affairs and Trade, 26 August 2009).

It is emphasised that the company now operating in Papua New Guinea was a successor company to the operator at the time of the payments and was not part of the AFP investigation. The relevance is that the episode shows a plausible scenario in which facilitation payments (or bribes) could be paid by an inexperienced small company in Papua New Guinea. The ‘moderate’ impact came from the reactions of other members of the landowner groups, notably women in the matrilineal society of Guadalcanal, who were not being represented with the official council/associations.

PP-N01

PP-N01 ‘What is the risk that the commissioning process for SIA / EIA will compromise the impartiality and scientific quality of SIA / EIA reports and their ability to anticipate key impact issues?’ (additional risk) is assessed as ‘likely’ and of ‘major’ impact.

These risks are well illustrated in relation to Ok Tedi. This was PNG’s first mine where formal studies were commissioned and carried out at some length. The critical problem is not that the original studies were inadequate (Jackson 1977; Jackson et al. 1980; Maunsell 1982) but that after they were completed the configuration of the project was changed. The studies focussed
on a small impact area around the mine on the assumption that a tailings dam would be built and that river impact would be slight (Figure 11).

Figure 11. Ok Tedi Mining’s map of Western Province. 
Showing OTML Trust / CMCA regions

When an earthquake irreparably damaged the dam footings in 1984, legislation was passed to allow the impact footprint of the mine to be widened (p. 22). Environmental monitoring was
expanded but no new SIA studies were commissioned for the new, greatly enlarged impact footprint

Because of a change in the assumptions, which are critical to the ‘commissioning process’ of SIA / EIA studies, the reports as submitted were no longer able to anticipate key impact issues.

Ten years later SIA studies were re-started in the shape of the Ok-Fly Social Monitoring Project carried out by the University of Papua New Guinea for OTML’s Environmental Department from 1991 to 1995 (e.g. Filer, Hassall and Kandason 1991; Burton 1993a/b; Kirsch 1993; Lawrence 1995).

The reports were well received by OTML’s Environmental Department, which in parallel was doing its own internal environmental studies. But they were resisted by its Corporate Affairs section, led by different managers, and certainly not released to the public. This was a major factor to OTML’s initial non-response to consistent reports of environmental damage, and the bungled attempts by its Corporate Affairs section to manage company messaging to shareholders, the PNG government, and affected communities. The result was an extremely costly class action against the parent company, BHP, in its home jurisdiction (Banks and Ballard 1997), ultimately resulting in the withdrawal of what was now BHP Billiton from Papua New Guinea and the passing of the Mining (Ok Tedi Mine Continuation (9th Supplement) Agreement Act 2001 (22ff.).

Full attention to broader impact areas only came about 20 years after the impacts began (OTML 2006a/b; Boeha and Kawi 2007; see Figure 11).

At Lihir, the Lihir Liaison Committee was a governance structure convening a range of national, provincial and local stakeholders to oversee EIA and SIA studies (Filer and Jackson 1989). Work began ten years before the mining award but ceased three years before the Feasibility Study determined the mine design. The Lihir Liaison Committee set the study authors tasks to accomplish that the mining company appeared not to wish to pay for, a clear flaw in the ‘commissioning process’:

A second limitation, also noted in our previous report, has not been so completely overcome. This is the limitation imposed upon the value of a study which is based on very short periods of fieldwork in the impact area. The 1986 study was very largely based on visits to Kavieng, Namatanai and Lihir over a period of 2-3 weeks in November and December 1985. Although the greater part of our time was spent in Lihir itself, there are many aspects of social and economic life in these islands which cannot possibly be comprehended on the basis of a fortnight’s fieldwork. This limitation was, and still is, compounded by the absence of any substantial documentation of Lihir society by anthropologists or other writers who have spent long periods of time there (Filer and Jackson 1989: 2).

Similar remarks could be made about the Land and Resource Use Study (Sullivan and Hughes 1989), carried out in 1987 long before the land requirements for the mine were certain and well before resettlement planning had begun.

The eventual Proposal for Development submitted to government in 1992 included a list of main environmental studies that had been carried out (Attorney-General 1995: Schedule 1), but did not highlight the existence of the social and economic impact study, which had by then passed through two editions (Filer and Jackson 1989).

Noki Makap, a former Secretary for Environment and Conservation, died between the ownership of Hidden Valley by Aurora Gold and its acquisition by Harmony Gold. He conducted
two downstream water and aquatic resource use studies for earlier owners, the second being for Aurora (Makap 2000). Aurora’s intention, conveyed to Makap, was for ‘the possible construction of a tailing storage facility near Wau (2000: 17). Harmony discarded this option. It included various aquatic resource and down river water use studies, but it was Makap’s work that summarised by the SIA author for the purpose of determining whether the possible impact of the mine would affect village drinking water supplies (Jackson 2004: 51-52).

Makap had been given a scope of work (in the ‘commissioning process’) to investigate as far down the river as the lower part of the Bulolo Valley at Waing Camp and Sambio villages. In his report for Aurora, Makap showed that villagers here had very clear views:

Past the township of Bulolo, the settlements at Bayliss, Anamapi and No.8 Ship ... were totally opposed to any plans to dump overburden or tailing into Bulolo River, claiming they have serious water problems and that the Bulolo should not be further polluted (Makap 2000: 29)

The strength of these views was not highlighted in the SIA / EIA reports submitted by Harmony. If other relevant down river water use studies were conducted after Makap’s death, they were not released to the SIA author. At some point during construction waste rock was discharged without permission into the Watut River (‘side-casting’, p. 69) invalidating the project assumptions given to Makap.

PP-N02

PP-N02 ‘What is the risk that SIA / EIA reports will be concealed from government and the public under commercial-in-confidence conditions when a mining company does not like their impacts forecasts and new, more favourable reports commissioned?’ (additional risk) is assessed as ‘likely’ and of ‘major’ impact.

Many cases exist of lengthy impact studies being redacted. A team assembled by the University of New South Wales, comprising a current professor and two associate professors with many years of experience in the extractive industries (Banks et al 2010; Banks 2013), wrote a 200 page SIA for Lihir Gold’s Million Ounce Plant Upgrade (MOPU). For reasons best known to the company, the report was shelved and a 14-page summary was prepared by a consulting firm not involved in their work and not properly reflecting the content. As a result, serious impact issues and a detailed information on context were reduced to a few sentences or not mentioned at all. This can certainly be viewed as the production of a ‘more favourable report’ because veiling over serious considerations of impact and primary data can only be viewed as an effort to smooth over complications and expedite an award decision (in this case a new environmental permit).

One missing impact consideration concerns the geothermal energy plants proposed in conjunction with the plant expansions. The UNSW team had flagged a political question about landowners receiving benefits from geothermal energy generation.

While the signatories to the IBP apparently acknowledged State sovereignty over minerals, the vast majority of Lihirians continue to believe that they have sovereignty over all resources above and below the ground. This has particular consequences in the current context over discussions (both within and external to the upgrade proposal) regarding the geothermal resource (Banks et al. 2010: 44).

Discussions may also yield a royalty agreement relating to the extraction of the geothermal resource (Banks et al. 2010: 105).
They called for further investigation of where geothermal plants would be located and how much they would yield. The answer to that was provided when Newcrest recently announced plans to extend the pit over the already troubled Kapit area:

Under the project’s new mine plan the Kapit orebody will not be accessed until the geothermal wells are naturally exhausted, which has saved approximately USD 218m (Newcrest Mining 2016).

The eventual discovery by landowners that the geothermal energy used by the mine was worth US$218 (K650 million), for which as far as is known they have not shared in, between 2010 and 2016 stands to cause an explosion of political action at the mine.

Staff of Australian universities are bound by the Australian Code for the Responsible Conduct of Research. When undertaking sponsored research, ‘researchers have a responsibility to their colleagues and the wider community to disseminate a full account of their research as broadly as possible … [taking] account of any restrictions relating to intellectual property or culturally sensitive data.’ (Universities Australia 2007: Section 4). In this context, intellectual property refers to business know-how and culturally sensitive data refers to things like secret cultural sites; neither was contained in the UNSW report.

The Code was in force at the time the UNSW SIA report was produced; this code defends against the concealing of (university produced) reports, but it is not widely known in PNG. More recently, the PNG Science and Technology Secretariat has issued a National Research Code of Conduct; it echoes the Australian version, but applies to all research carried out in PNG: ‘researchers have a responsibility to their colleagues and the wider community to disseminate a full account of their research as broadly as possible’ (PNGSTS 2015: s4.4).

Burton (2001) produced three volumes of SIA data and analysis for Aurora Gold at the same time as Makap’s work (p. 66) was done. In appears, however, that a single volume of appendices was provided to Harmony’s SIA author for review (Jackson 2004: References). Landowner identification work in the earlier study was mentioned, but it appears that the hard copies of genealogical charts (stored safely in the Community Affairs department from 2001 to at least 2012) were not passed on.

The result was a valid SIA report but, in a similar way to the UNSW report redacted at Lihir, some impact issues were not covered and detailed information on context was missing.

**PP08**

**PP08** ‘What is the risk there is no verification of the accuracy or truthfulness of social impact assessment (SIA) reports?’ is assessed as ‘almost certain’ and of ‘catastrophic’ impact.

There is a constant danger of a long gap between the preparation of rushed SIA reports, and the imbalance in budget for SIA work in comparison to engineering design work, and the submission of a Feasibility Study, resulting in an SIA which is not properly integrated with the engineering, infrastructure, workforce and environmental studies (Filer and Jackson 1989: 2; this report, p. 57).

**PP09**

**PP09** ‘What is the risk there is no verification of the accuracy or truthfulness of environmental impact assessment (EIA) reports?’ is assessed as ‘almost certain’ and of ‘catastrophic’ impact.
There is a constant danger of a long gap between the preparation of specialist components of EIAs and the submission of a Feasibility Study, resulting in an EIA which is not properly integrated with final engineering and infrastructure designs. Examples include the Ok Tedi environmental studies, prepared for what was essentially a different mine than the one that went into operation (see discussion under PP-N01, 63ff.), critical environmental reports at Lihir, such as the Land and Resource Use study, that were finalised prior to (a) discussions with landowners over the land requirements of the project and (b) engineering designs for the project were known, resulting in a poor resettlement planning for Kapit village (Box 7), and environmental studies at Hidden Valley that failed to give an indication of the downstream river damage caused by what would later be called 'side-casting' (p. 69).

Aspects of this risk are discussed at greater length under PP-N01, 63ff., and PP-N02, 66ff.

**PP10**

**PP10** ‘What is the risk that in practice there is no due diligence on applicants’ claims regarding their capacity and financial resources?’ is assessed as ‘almost certain’ to occur and of ‘major’ impact if it does occur.

This high likelihood is largely due to the weak performance of the public service since Independence (Turner and Kavanamur 2009).

An example concerns Harmony Gold’s statements in saying when it would start building Hidden Valley, how long this would take, and how much it would cost. The estimated cost was important because in 2000 it was understood that there was a guideline investment ceiling US$75 million for Mining Leases; greater capital costs were understood to trigger the more complex Special Mining Lease (J. Burton notes, February 2000).

When a Mining Lease – not a Special Mining Lease – was granted over Hidden Valley in 2005, Harmony forecast construction costs at US$205 million (Harmony 2005: 37). This was somewhat more than the guideline but it was within a margin of error.

The problem is that construction costs were restated as US$278 in 2006 (Harmony 2006: 12), US$365 million in 2007 (Harmony 2006: 21), US$542 million in 2007 (Harmony 2008: 43), and US$675 million in 2009 (Harmony 2008: 87), an eventual threefold increase over the terms that formed the basis of the mining award. Had the PNG government understood that the mine would cost this much it seems certain it would have insisted on a Special Mining Lease, with its Mining Development Contract and the government’s ability to set taxes rates etc.

The poor quality of the construction cost estimates raises the question of whether the company misled regulators to gain an advantage. In this case, advantage would be gained by persuading government to allow a simpler award than was merited in order to (a) shorten the permitting period, (b) bring forward the start of gold production, and (c) enjoy the lower regulatory compliance costs of a Mining Lease.

If department officials come under pressure to expedite an award without proper scrutiny, perhaps by receiving frequent visits from company executives – quite possibly with the collusion of the heads of economic ministries wanting production levees start to flow into government coffers – this constitutes a corruption risk. The beneficiaries, when an award is successfully expedited, stand to be (a) the private interests represented by the mining company and (b) the quasi-public interests of the senior echelons of the civil service and the ministers they answer to.
Supplying incorrect information to a regulator relates to CF8, just discussed in this section. A full evaluation of Harmony’s financial health, therefore fitness to try and build Hidden Valley, would have involved considering the previous years of gold prices below US$300/oz and Harmony’s liabilities in respect of the historical burden of occupation disease in its South African mines. What is a fact is that Harmony ran out of money to construct Hidden Valley in 2007, the year it originally said the mine would enter production.

A repercussion of Harmony’s cash shortage was seen after waste rock was discharged without permission into the Watut River during construction. Called ‘side-casting’ in environmental reports, this is believed to have started when as-yet unidentified Harmony executives ordered the pre-stripping of the orebody in a bid to gain access to gold-bearing layers as soon as possible in order to save the company from financial ruin.

In the event, Newcrest Mining saved the project in August 2008 by agreeing to become a partner and pay the further US$300 million need to finish construction (Harmony 2008: 13; Newcrest 2010: 4). The mine was officially opened in September 2010.

LandSat images show that a sediment pulse had already reached the floodplain shortly before the new partnership came into effect and had scoured away areas of lowland rainforest. The practice was stopped in September 2009 after the first gold pour and possibly as a result of Newcrest’s concerns over reputational damage (Newcrest 2010: 42).

As a result, the company was belatedly audited by the Department of the Environment, obliged to pay over K2 million\(^{31}\) in compensation claims to 2000 garden owners with land next to the river, and to instigate a Watut River Impact Management Plan (SMEC 2010; Ketan and Geita 2011). No full account of the side-casting episode was ever published; compensation recipients were not provided with independent legal advice prior to agreeing to the payments; and no independent audit determined whether the compensation payments were correctly valued or assessed over the full areas of forest and garden damage.

**PP11**

‘What is the risk that there is no due diligence on applicants’ integrity, such as past lawful conduct and compliance?’ is assessed as ‘almost certain’ to occur and of ‘major’ impact if it does occur.

It is ‘almost certain’ because Papua New Guinea lacks the capacity to undertake its own no due diligence assessments of the on the integrity of applicants. Some applicants are definitely not trustworthy.

A now-delisted Western Australian company called Australian Gold Fields NL bought mining assets in Morobe Province from Renison Goldfields Consolidated and CRA Minerals in 1996 (SMH 12 Nov 1996), and took over their Exploration Licences, EL497 and EL677, respectively. The addition of the initials ‘NL’ – No Liability – might well have indicated to government that the new license holder might not have had the resources of a genuine mining company, but it was allowed to proceed. It is not beyond the realms of possibility that the government’s guard was lowered by glowing media reports:

\(^{31}\) Approximately A$0.8 million. Exchange rate of K1.00 = A$0.40 during 2010.
Australian Gold Fields is a tiny company. It was floated only last April, had net assets of $16 million at June 30 and one operating project, a relatively small and once-flooded gold mine in Western Australia. But AGF is a company with impeccable connections, especially for doing business in PNG ...

Any doubts about the ability of AGF to handle a difficult mining development are dispelled by the company's remarkable performance at the Bannockburn mine in outback Western Australia. AGF acquired the mine, flooded in 1995 by Cyclone Bobby, for $6 million from Dominion Mining. No one else was interested. In a few months, and at a fraction of the estimated cost, Bannockburn was pumped out and brought back to life ... It is now in full production and recently reported significant new ore discoveries and possible plans for expansion. Several members of the Bannockburn team will swing across to the PNG project. (BRW 2 Dec 1996).

Closer inspection – and less media hype – might have brought to light irregularities in the way this ‘tiny company’ was managed, not least that an executive disbarred from being a director after becoming implicated in the ‘WA Inc’ scandal earlier in the 1990s still had a role in running the company.

In March 1998, it was announced that a Feasibility Study would be ready ‘soon’ then just eight days later that an administrator had been appointed (Aus Min Monthly 1 Mar 1998; ASX 9 Mar 1998). Work came to a stop with the revelation that staff superannuation, local fuel and other logistical suppliers had not been paid for months, and the company was put up for sale.

The impact was primarily the sudden redundancy of the entire workforce. Logistical suppliers were lucky to be paid some months later when a buyer for the Morobe assets was found by the administrators, and the workforce was re-engaged.

New Guinea Gold was a company that operated a small mine in East New Britain for a number of years under a 1996 MOA with landowners (Sinivit: little is known of the award). Dissatisfaction with MOA compliance led to periodic landowner claims against the company (The National 30 Mar 2009) while technical failings led to sudden closure in 2014; the minister said the company had ‘fled the country’ (The National 5 Oct 2015; Post-Courier 4 Nov 2015). There was both a major impact on employees and the environment due to no proper decommissioning and rehabilitation of the site.

Between 30-40 mining companies of the size of Australian Gold Fields NL or New Guinea Gold operate in Papua New Guinea in any given year, mostly with Exploration Licences only. None are properly scrutinised for competence and Papua New Guinea has a limited ability to pursue absconders when things go wrong.

While Papua New Guinea joined Interpol in 1976,32 and has a declared interest in corruption whose impact ‘is greatest in developing countries’,33 a search of media reports shows that Interpol is involved, as elsewhere in the Pacific, mainly in tackling passport scams, drug smuggling and transnational sex crimes, but not often in business crimes. The closest has perhaps been an interest in fraudulent REDD schemes (e.g. Aus Fin Rev 15 Dec 2009).

The World Bank maintains a list of contractors barred from World Bank projects for malpractice. In 2011, the China First Metallurgical Construction Corporation, an entity associated with the parent company of MCC (‘Metallurgical Construction Corporation’) the operator of the Ramu project, was barred for a period of three years for ‘fraudulent misconduct’ on a transport

32 https://www.interpol.int/Member-countries/Asia-South-Pacific/Papua-New-Guinea
33 https://www.interpol.int/Crime-areas/Corruption/Corruption
project in Bangladesh (*World Bank Press Release* 28 Sep 2011). It is not known whether authorities in PNG consult the World Bank’s and other lists when scrutinising business entities new to the country.

**RA06**

*RA06* ‘What is the risk that the criteria for EIAs will not be publicly knowable?’ is assessed as ‘possible’ and of ‘moderate’ impact if the risk event does occur.

However, in most cases the criteria are well known and published guidelines govern what should be included (DEC 2004).

**RA07**

*RA07* ‘What is the risk that EIA reports will not be publicly available once finalised?’ is assessed as ‘likely’ and of ‘major’ impact if the risk event occurs.

See Worksheet for RA07 (p. 131) and discussion following RA09.

**RA08**

*RA08* ‘Assuming SIAs are required, what is the risk that for SIAs will not be publicly knowable?’ is assessed as ‘possible’ and of ‘moderate’ impact if the risk event does occur.

There are believed to be criteria in DEC-issued draft guidelines dating to 1998; if so, they are now missing from the Conservation and Environment Protection Authority web site ([http://pngcepa.com](http://pngcepa.com)).

In practice, the criteria for impact studies are sometimes quite well known. At Lihir, the Lihir Liaison Committee set criteria for and oversaw EIA and SIA studies (Filer and Jackson 1989).

In other cases, nothing similar exists. At Hidden Valley, the SIA author says that Harmony Gold proposed ‘to operate a Community Consultation Committee throughout the life of the project; the Committee, composed of District, Provincial, LLG, landowner and company representatives augmented by representation from women’s organisations and at least one Morobe-based NGO, will meet every two months’ (Jackson 2004: 95). If ever convened, by 2010 the Community Consultation Committee was not functioning and the company, in the form of the Morobe Mining Joint Venture from 2008, had ceased to meet with officials in the District Administration, and Provincial and Local Level Governments, except for one-off projects. Of the six local stakeholder groups identified in the SIA (Jackson 2004: 24-32), three of six villages in the first group, ‘Project Landowners’, had not been visited since 2005 (Burton et al. 2012: 70).

**RA09**

*RA09* ‘Assuming SIAs are required, what is the risk that SIA reports will not be publicly available once finalised?’ is assessed as ‘likely’ and of ‘major’ impact if the risk event occurs.

The fact is that impact study documentation *for every mine in Papua New Guinea* has an extremely poor distribution for which there is no genuine excuse. Mining companies were initially slow to embrace the internet, possibly on the grounds that Papua New Guineans had
poor access until the late 2000s, and have been even slower to undertake standard GRI reporting to the required standard.

See Worksheet for RA09 (p. 132).

There are two partial exceptions.

The February 2006-July 2007 rounds of Community Mine Continuation Agreement (CMCA) negotiations in the impacted areas downstream of the Ok Tedi mine (Figure 11) were facilitated by specialist mediators from the Keystone Centre of Colorado, USA. All meetings were minuted during the 19 month programme and all relevant explanations and documentation were posted on the web site www.wanbelistap.com.

After the downstream problems at the Porgera mine and the publishing of the independent CSIRO environmental study (CSIRO 1996), the Porgera Environmental Awareness Committee (PEAK) was set up and two web sites in succession, www.peak-pjv.com (1998-2007) and www.peakpng.org.pg (2008-2013), made some SIA and EIA reports available to the public. It should be added that the paper copies of the independent CSIRO environmental study that caused PEAK and its web site to be set up in the first place (CSIRO 1996), were available briefly but copies have not been seen for many years.

In both cases, the web sites have now disappeared.

The impact of the non-dissemination of EIA and SIA studies is substantial. Mining companies grasp that Papua New Guinea political processes are fuelled by misinformation, but not that they are contributing to this in the long run by keeping impact studies confidential while they are being discussed and making them hard to find once they have become non-current. For their part, the various arms of government are notoriously at maintaining complete sets of documentation and have almost no interaction with the National Archives service which is mandated to be the long-term custodian of government documents.

08-COMMUNITY Risks associated with community consultation

This heading groups together risks associated with the way community consultation is corrupted, typically by being abbreviated or handled by ‘representatives’ who have not been elected in a transparent way, who do not refer critical decisions back to the community – especially those who stand to be most heavily impacted by those decisions – for endorsement, and who may be ‘carried forward’ into future consultations held after impact areas have changed configuration.

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<td>PD08</td>
<td>Assuming consultation with communities or landholders is required, what is the risk that the legal framework for consultation is not publicly knowable?</td>
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<td>PD16</td>
<td>Assuming consultation with communities or landholders is required, what is the risk that negotiations for landholder or community agreements can be manipulated?</td>
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<td>PD28</td>
<td>What is the risk that the duration and timing of each step of the awards process can be manipulated?</td>
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<td>PP06</td>
<td>Assuming consultation with affected communities is required, what is the risk that their free, prior, informed consent will be ignored as a result of corrupt practices?</td>
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What is the risk that community leaders negotiating with a mining company will not represent community members’ interests?

RA10 What is the risk that community leaders negotiating with a mining company can remain anonymous?

RA11 What is the risk that compensation packages for communities and their leaders will be kept secret?

RA12 What is the risk that the content of final agreements between mining companies and communities or landholders will not be publicly knowable?

RA14 What is the risk that there will be inadequate monitoring of licence-and permit-holders and their obligations?

RL01 Assuming consultation with affected communities is required, what is the risk that breaches of consultation laws or regulations governing free, prior, informed, consent will not be prosecuted?

RL02 What is the risk that decentralisation of law enforcement agencies will negatively affect investigation and prosecution of alleged corruption in the awards process?

PD08 ‘Assuming consultation with communities or landholders is required, what is the risk that the legal framework for consultation is not publicly knowable?’ is assessed as ‘possible’ to occur and of ‘moderate’ impact if the risk event does occur.

Consultation with communities or landholders is always required in Papua New Guinea. The problem for this risk is that the legal framework is more a question of practice that of written law or formally published policy. Partly this has to do with the fact that the last major change to the legislation, to create the Mining Act 1992, failed to completely capture the new processes that emerged in the Porgera mining award.

One issue is that of who should be invited to a Development Forum. The legislation says:

‘The Minister shall invite to a development forum such persons as he considers will fairly represent the views of:

- the applicant for the special mining lease
- the landholders of the land the subject of the application for the special mining lease and other tenements to which the applicant’s proposals relate
- the National Government
- the Provincial Government, if any, in whose province the land the subject of the application for the special mining lease is situated (Mining Act 1992 s3 ‘Consultation).

This did represent the tiers of government as they existed in 1992, but the Organic Law on Provincial Governments and Local-level Governments 1998 greatly reduced the role of Provincial Governments and created a new level of District Administration, not represented here. Most importantly, national MPs are elected from Districts and control the grants that are intended for all forms of District development.

The situation when Mr Sam Basil was elected as MP for Bulolo in 2007 was that he found he no position in the Hidden Valley MOA, signed without the participation of the District in 2005. In 2015, he commissioned the National Research Institute to look into the fairness of benefit sharing arrangements from the Hidden Valley mine (Sanida et al. 2015).
The researchers described the representative body of the of the Hidden Valley landowners, the Nakuwi Association, as ‘a defective association with poor governance and accountability mechanisms’ (Sanida et al. 2015: 48)

**PD16, PP07**

The following two risks are similar and are both assessed as ‘almost certain’ to occur and of ‘catastrophic’ impact if the risk event does occur:

- **PD16** ‘Assuming consultation with communities or landholders is required, what is the risk that negotiations for landholder or community agreements can be manipulated?’.

- **PP07** ‘What is the risk that community leaders negotiating with a mining company will not represent community members’ interests?’.

The NRI researchers requested a membership list of the Nakuwi Association but none was shown to them (Sanida et al. 2015: 45). The problem of who is a landowner, and whose interests are represented by landowner associations, lies at the heart of how agreements can be manipulated and whether community members’ interests are represented.

At Hidden Valley, the definition of who is a landowner underwent a ‘recognition shift’ (Box 6) over six steps from the time of the first village meetings, through a court case, an agreement brokered by the government Project Coordinator, to the negotiation of the MOA in 2005, to an official list, an ‘accurate and complete record of all landowners’ who would be candidates for employment, overseen by the General Manager of the mine.

In the last case, the General Manager ignored (a) the SIA his company had submitted to government, (b) a full set of village genealogies kept in a map cabinet in the office of his Community Affairs Department, (c) a new village census carried by Community Affairs staff in 2005, and (d) second new village survey carried out by Richard Jackson in 2006 (Jackson 2006).

In reality, what happened was that the ‘accurate and complete’ list of landowner candidates for employment was typed up by the mining company on the information provided by four Nakuwi office bearers and signed at the bottom of each of its 37 pages by each of them, along with the signature of the General Manager. Unknown to the latter, the office bearers had each handed in his own private lists made up to include favourites, possibly acquaintances who paid to be put on their lists (L. Giam pers. comm. to J. Burton 2011), with little regard for the rights of association members. Nearly 40% of a sample of 200 names were those of ineligible people, and more than 10% were duplicates or the names of people who had died.

The office bearers had corruptly manipulated the list.

A second, rather more serious consequence of the ‘recognition shift’ concerns health services. Harmony states:

> In Papua New Guinea, the provision of full-time primary healthcare and occupational health surveillance to employees, dependants and the local community is provided by medical centres at Hidden Valley, Wafi and Wau (Harmony 2016: 43, authors’ emphasis; see also 2009: 42, 2011: 9)

In fact, Minava, Akikanda, Yokua and Kaumanga ceased to be visited by health patrols in 2005 and in an SIA update in 2012, using accurate genealogies to re-identify family members it was
found that 91 people had died out of a total of 327 people counted at Akikanda and Yokua in 2000.

**Box 6. A ‘recognition shift’ at Hidden Valley**

The rights claimed by a landowner association are meant to be validated by a Land Investigation Report (LIR) carried out by a government Lands Officer. The official seconded to the Hidden Valley project by the Morobe Provincial Government in 1999 wrote an incomplete draft report and then had his laptop stolen (W. Belapuna pers. comm. to J. Burton 2005; Burton et al. 2012: 27). No LIR validated the Proposal for Development or was referred to in the project SIA (Jackson 2004).

There are two sets of landowners at Hidden Valley: Watut and Biangai. Over the course of initial SIA work 1995-2001 and SIA update studies 2010-2012, it became evident that a ‘recognition shift’ had taken place in a series of steps among both groups, throwing the intended conditions of the mining award into question. In the Watut case, the steps were as follows:

- **March 1987** – A pact among the five principal Watut clans, witnessed by tribal elders, at the village of Tontomea to the effect that Hidden Valley, being at high altitude, was the common property of all Watut people, and future decision-making and benefits should be shared accordingly.

- **May 1987** – A decision in the Provincial Land Court in that the ‘Nauti village’, or possibly ‘Nauti clan’, was the owner of 50% of Hidden Valley (and the other 50% was owned by two Biangai villages). The problem was that people of ‘Nauti clan’ lived in several other villages, not at ‘Nauti village’, which was for historical reasons inhabited by members of different clans.

- **1992** – After six years of disagreement, an agreement brokered by the government Project Coordinator determined that the ‘Nauti’ meant members of the Yatavo, Yandiyamango and Qavaingo descent lines living at Nauti, Minava, Akikanda, Yokua and Kaumanga villages.


- **2005** – In the Hidden Valley MOA the ‘Hidden Valley Project Landowners’ were now defined as the ‘Nakui Landowners’ plus the ‘Subsidiary Landowners’, the second group being people with rights to the land required for the access road. The ‘Subsidiary Landowners’ were not invited to the Development Forum because the road easement had not yet been surveyed. The ‘Nakui Landowners’ were defined as ‘People from Nauti, Kuembu and Winima villages owning land within ML 151 and LMP 80 as per the PLC decision of 1987 (State Solicitor 2005: 4). This reverted back to the ambiguity of 1987 and omitted people living at Minava, Akikanda, Yokua and Kaumanga villages. The Nakui landowners were referred to as being in the ‘Tier 1’ catchment for employment.

- **2007-2009** – The General Manager of Hidden Valley set up Consultative Forum and asked the Nakui executives to draw up a ‘an accurate and complete record of all landowner Tier 1 … candidates to be considered for employment at Hidden Valley in accordance with the MOA’. Inspection of the employment roll, however, showed that out of 200 supposed Tier 1 Nakui employees, only 99 (49.5%) were genuinely Tier 1 people under the MOA definition; 77 (38.5%) were people from other places in the Watut area, and therefore should have been classed as Tier 2; the remainder (11.5%) were underage, dead, or duplicates of people already listed (Burton et al. 2012: 37).

Given some uncertainties of the expected rate of growth of the two villages, this represented the deaths of at least 20% of the population. It meant that the people of Yokua and
Akikanda had mortality about 18 times that of modern New Zealanders, 5 times that of Northern Territory Aborigines from ABS data, and roughly at the rate of the worst known historical data, a life table calculated for Chileans in 1909 (Burton et al. 2012: 115-120). The causes of death are unknown but are likely to have included deaths of pregnancy-related causes, malaria, pneumonia, tuberculosis, and sepsis.

This is probably the worst meaning of ‘catastrophic’ impact under a risk factor in this report.

**PD28**

‘What is the risk that the duration and timing of each step of the awards process can be manipulated?’ is assessed as ‘possible’ to occur and of ‘moderate’ impact if the risk event does occur.

As with PD05 (p. 46), there is a limit to which any of the technical steps can be manipulated.

**PP06**

‘Assuming consultation with affected communities is required, what is the risk that their free, prior, informed consent will be ignored as a result of corrupt practices?’ is assessed as ‘almost certain’ to occur and of ‘catastrophic’ impact if the risk event does occur.

The risk is ‘likely’ because on a recurrent basis we see that representative structures do not, indeed often cannot, represent affected communities properly and, if not, FPIC cannot be achieved. The impact is deemed ‘catastrophic’ because the affected communities who have not given consent can be shown to end up in extreme poverty (below, p. 75).

The following point needs to be emphasized. *Mines are operated successfully in several locations in PNG and yield measurable benefits to communities in their vicinity.* However, at the same mines it can be the case that stakeholder groups identified at the SIA stage become excluded from consultations for various reasons, and it is these groups that the score of ‘catastrophic’ refers to.

The long consultations for the Lihir mine are held up as, if not a model for community consultations, at least an example of – apparently – leaving no stone unturned to ensure that the mine area landowners gave their free, prior, and informed consent for mining operations (cf. Filer and Jackson 1989; Macintyre and Foale 2004; Macintyre et al. 2010; Bainton 2010).

However, things are not quite so simple when we examine the case of Kapit village, whose land was required for stockpile areas at the Lihir mine (Box 7).

While the village did eventually agree to be resettled – five months after the mining award was made – it is hard to see how what they signed could be understood as an example of free, prior, and informed consent.
Box 7. FPIC – the Kapit community

The principal mine landowners at the Lihir are from two villages, Putput and Kapit, the mutual boundary of whose traditional land more or less accurately bisects the Lihir ore body. Engineers working in Utah for the majority owner of the project during exploration, Kennecott, proposed several configurations of mine design in 1988-89, fixing its town site on plantation land previously acquired and considering alternative placements of the plant site and stockpiles. A consultant, Mr Ray Weber, and a Lihirian assistant, Mr Luke Kabariu, were engaged in 1988 to progress negotiations for Putput as the preferred plant site location.

Kapit village elders were consistent in refusing consent to lease their land. In April 1989, three elders, Aisaiah Zikmet, Paul Pesas, and Otto Ambis, and Zikmet’s son Penias all clearly said ‘no’. Respecting this, Kennecott removed the Kapit stockpile option from the mine plans and directed Weber and Kabariu to concentrate on negotiations for a plant site at Putput (L. Kabariu and Penias Tadak Zikmet pers. comm. to J. Burton 2016). Two weeks later, on 3 May 1989, the Lihir Mine Area Landowners Association (LMALA) held its inaugural meeting, records showing that the Kapit elder Zikmet (a principal landowner of the ore body area) and one other Kapit villager were founding members of the twelve-strong executive committee.

Pertinently, a Relocation Committee was established within LMALA to negotiate the terms on which five hamlets at Putput would agree to yield land for the plant site. Negotiations were pursued for three years, 1989-92, until the affected villagers were satisfied with the outcome. When the mine construction began in 1995, modern houses were built for the five affected hamlets in new locations on the far side of the village and in 2017 all enjoy an advanced standard of living.

The fate of the Kapit people was very different. They were not represented on the Relocation Committee because of the instruction sent from Utah to Lihir to drop plans for the use of Kapit land. However, some time in 1990 the American engineering team started modelling mine operations based on a Kapit stockpile, without informing the Lihir-based community relations team on the need to check whether consent would be given for a lease over the land.

Meanwhile, Weber and Kabariu worked on the Lihir Land Use Study. In their first draft, completed in January 1992, Kapit land was deemed non-essential although it was suggested that access could be negotiated for at some time in the future should this be necessary (L. Kabariu pers. comm. to J. Burton 2016). Immediately an instruction came from Utah to the effect that the Kapit land was critical to the design of mine that had been worked on for two years; Weber and Kabariu had therefore the rapidly inform the Kapit elders and revise the Land Use Study in time for the submission of the Feasibility Study to government in March 1992 (Attorney-General 1995: Schedule 1).

The Kapit elders were still not inclined to consent to give up village land. When the award of a Special Mining Lease was made in March 1995, no agreement had been reached with them. This is understandable given that it took three years of practically daily negotiations to reach agreement for the use of the Putput land. In the Putput case, the villages representatives had been inclined at the start to entertain the possibility of leasing their land, whereas the Kapit elders had consistently said ‘no’ from 1988.

When a Kapit Relocation Agreement was finally signed some five months after the mining award, it is generally agreed that it was not an agreement suited to the situation of the Kapit people (Hemer 2015; Penias Tadak Zikmet pers. comm. to J. Burton 2016). The costs of remediation, as yet of indeterminate success, have run to tens of millions of dollars 1995-2017.
Their resettlement outcomes were poor because, unlike their neighbours the Putput people whose land had a different topography, it was the entirety of their village that was needed and, in consequence, they had to find new land elsewhere where they had few ties. Even though the land payments were made on their behalf, they found themselves without access to the kinds of ecosystem services they had previously enjoyed (gardens, forests, reef, hot springs) at home.

The resettlement failed and many Kapit people returned to their land, now heavily impacted by mining operations. When, during a series of disputes 2011-2014, the aggrieved Kapits blocked access to parts of the mine, the PNG media proved incapable of elucidating the situation.

Worse, the Kapits were referred to as a ‘rebel group’, the ultimate insult when they had simply not agreed to losing their land to mining (*The National* 17 Oct 2014). Most now live in new resettlement homes in different areas but still do not have access to sufficient gardening land (Hemer 2015).

Can this episode be counted as corruption? FPIC was ignored – or not taken seriously by modern standards – but was this as a result of an instance of corruption? Given the consistency with which the senior men who spoke for the land at Kapit said ‘no’, and the length of time over which they said ‘no’ and continue to this day to say it, it is difficult to say FPIC was ignored by accidental oversight. This leaves the collusion of company and government to advance the mine (p. 13), despite knowing that the consent of an affected village was not forthcoming.

Danger that representative bodies will be incorporated without the full set of local stakeholders needed to provide FPIC.

Danger of a ‘recognition shift’ (*Box 6*) in definition of who is a project area landowner with rights defined in landholder or community agreements unless social mapping data is (a) commissioned properly (b) signed off by local communities (c) adhered to in implementing agreements (subrisk duplicated from PD06).

*RA10*

**RA10** ‘What is the risk that community leaders negotiating with a mining company can remain anonymous?’ is assessed as ‘unlikely’ to occur and of ‘moderate’ impact if the risk event does occur.

All known leaders are famous in their communities. What they negotiate about might be concealed but not their identities.

*RA11*

**RA11** ‘What is the risk that compensation packages for communities and their leaders will be kept secret?’ is assessed as ‘possible’ and of ‘major’ impact if the risk event does occur.

In general, the terms of ‘compensation packages’ – understood as a range of rental incomes, not just compensation for clearance of improvements – are publicly known, if not details of what individuals may receive.
RA12

‘What is the risk that the content of final agreements between mining companies and communities or landholders will not be publicly knowable?’ is assessed as ‘possible’ and of ‘major’ impact if the risk event does occur.

The details of agreements are publicly known, even if community members may not have personal copies of agreements. However, the spread of laptops, smart phones and memory sticks and rapidly changing this.

RA14

‘What is the risk that there will be inadequate monitoring of licence- and permit-holders and their obligations? is assessed as ‘almost certain’ to occur and of ‘catastrophic’ impact if the risk event does occur.

This is guaranteed in the case of Ok Tedi because government exempted the company from compliance with environmental legislation and, even though the Mining (Ok Tedi Sixth Supplemental Agreement) Act 1986 placed compliance requirements on the company, the reporting is on narrow criteria and not to the specialist department with carriage of environmental matters.

Later, the government passed a law against suing for environmental damage from outside the country (Compensation (Prohibition of Foreign Legal Proceedings) Act 1995). These two circumstances are not optimal conditions for adequate monitoring.

At other mines, ‘licence’ and ‘permit’ conditions have additionally to be translated into compliance with agreements and MOAs. While landowners can be militant about compliance with certain agreement conditions, the technical nature of agreement clauses means that they are ill-equipped to monitor compliance with all of them.

Similarly, the complexity of multivolume EIA / SIA studies and the ever evolving complexity of MOAs and other kinds of agreement, such as the more than 500 pages of the Lihir Sustainable Development Plan, guarantee that no regulator has staff with the disciplinary background or expertise to minutely comb through all licence and permit conditions, and agreement clauses, to verify compliance.

In SIA update work 2010-2012, Burton et al. found a log of general compliance problems among the project SIA, MOA, Compensation Agreement, and three Royalty Agreements at Hidden Valley. Regardless of the details, it was enough to demonstrate that normal monitoring was wanting (Burton et al. 2012).

RL01

‘Assuming consultation with affected communities is required, what is the risk that breaches of consultation laws or regulations governing free, prior, informed, consent will not be prosecuted?’ is assessed as ‘almost certain’ to occur and of ‘catastrophic’ impact if the risk event does occur.

See discussion under PP06 and the data sheet for this RL01, p. 135.
**RL02**

What is the risk that decentralisation of law enforcement agencies will negatively affect investigation and prosecution of alleged corruption in the awards process? is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

Police have a minimal role in the awards process. However, a risk is that crimes committed by wealthy or powerful landowner representatives will not be pursued and they continue their activities as representatives when unfit to hold office.

Box 5 illustrates some alleged crimes uncovered by other investigators.

**09-CSR Risks associated with CSR and safeguard standards**

Most mining in PNG is carried out by large operators who adhere to, or claim to adhere to, on their own account or through national and international industry associations. Compulsory adherence to additional safeguard standards also comes into play when mine financing or loan guarantees are sought from the Equator banks, Australia’s Export Finance Insurance Corporation (EFIC), or World Bank institutions such the Multilateral Investment Guarantee Agency (MIGA).

CSR practices and the safeguard standards offer a defence against malpractice and have the potential to lessen vulnerabilities to corruption. The MACRA tool covers some aspects, but in insufficient detail for its importance in Papua New Guinea.

Only two of these risks is scored as a ‘red’ risk, so there may be a question as to why the other risks are included if they only given moderate likelihood $\times$ impact assessments. The reason is the future importance of these risk areas. The orange-rated risks are therefore ‘benefit of the doubt’ assessments.

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
<th>L-hood</th>
<th>Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP-N03</td>
<td>What is the risk that indigenous peoples will not be recognised in the project area?</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>PP-N04</td>
<td>What is the risk that, if recognised, dealings with indigenous peoples will not follow international safeguard standards and protocols for dealings with indigenous peoples, such as those promoted by the World Bank and International Council on Mining and Metals?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PP-N05</td>
<td>What is the risk that compliance with the World Bank’s safeguard standards, when required for mine financing and loan guarantees, will be dropped when World Bank entities cease to be involved?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PP-N06</td>
<td>What is the risk that cultural heritage in the mine impact area will not be managed in accordance with international safeguards and protocols?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PP-N07</td>
<td>What is the risk that government agencies dealing with mining, the land environment, waterways, and mining revenues will not hold companies to modern Corporate Social Responsibility norms, such as reporting to Global Reporting Initiative standards and compliance with the Extractive Industries Transparency Initiative?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PP-N08</td>
<td>What is the risk that companies will not report their adherence to Corporate Social Responsibility norms, such as reporting to Global Reporting Initiative standards?</td>
<td>5</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>
‘What is the risk that indigenous peoples will not be recognised in the project area?’ is assessed as ‘likely’ to occur and of ‘major’ impact if the risk event does occur.

Newcrest (2013: 62) and Harmony (2014: 186) are rare examples of companies who acknowledge the presence of indigenous peoples at their PNG operations. Barrick Gold, Ok Tedi Mining and Ramu Nico, and the PNG government do not.

The PNG government and the Pacific Island states of Fiji, Kiribati, Marshall Islands, Nauru, Palau, Solomon Islands, Tonga, Tuvalu and Vanuatu are not signatories to the UN Declaration on the Rights of Indigenous Peoples.

A short version of the criteria used by the UN to determine who indigenous peoples are (Martínez Cobo 1987) is that they:

- Occupy ancestral lands
- Are descended from the original occupants of these lands and acquire rights to land in custom, not using the law of the State
- Follow distinctive customs which they use for ceremonies like marriage, that are distinct from the law of the State
- Habitually use their own language at home, which is not an official national language
- Reside in certain parts of the country, i.e. on tribal lands

If a company needs to seek consent from the customary owners of land to undertake mining activities, the above criteria means that these are indigenous people.

The World Bank requires all projects in PNG to have Indigenous Peoples Plans (e.g. World Bank 2013).

The impact of non-recognition is to fail to adhere to FPIC procedures properly with the widely-known social problems that this can provoke. Guidance documents are widely available (e.g. ICMM 2010; FAO 2016).

‘What is the risk that, if recognised, dealings with indigenous peoples will not follow international safeguard standards and protocols for dealings with indigenous peoples, such as those promoted by the World Bank and International Council on Mining and Metals?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

The impact score would be as great as for PP-N03, but if indigenous peoples are already recognised in the project area, the chances of the safeguard standards being followed are much better. There the likelihood of this risk is lower.

‘What is the risk that compliance with the World Bank’s safeguard standards, when required for mine financing and loan guarantees, will be dropped when World Bank entities cease to be involved?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.
A case of what looks like the dropping of compliance with standards appears to have occurred at Lihir. The financing of the Lihir project required political risk insurance from MIGA for a US$51 million loan from the Union Bank of Switzerland (MIGA 2000). It required due diligence to be done annually and in turn a program of annual social monitoring (e.g. Macintyre and Foale 2001). The loan was repaid in 2001; annual social monitoring ceased in 2004. Consistent new reporting did not occur again until 2010 (e.g. Banks et al. 2010).

**PP-N06**

**PP-N06** ‘What is the risk that cultural heritage in the mine impact area will not be managed in accordance with international safeguards and protocols?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

It is undoubtedly the case that standards of managing cultural heritage were low in the past and that Feasibility Studies included cursory archaeological studies, but this may not be a good guide to current and future practice, hence the likelihood is assessed as ‘possible’ rather than ‘likely’. This is a ‘benefit of the doubt’ assessment.

**PN-N07**

**PN-N07** ‘What is the risk that government agencies dealing with mining, the land environment, waterways, and mining revenues will not hold companies to modern Corporate Social Responsibility norms, such as reporting to Global Reporting Initiative standards and compliance with the Extractive Industries Transparency Initiative?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

No known government agencies show evidence of having heard of modern Corporate Social Responsibility norms, except for the Extractive Industries Transparency Initiative. The first two country EITI reports for PNG have been published, and leave much room for improvement (PNGEITI 2016, 2017), but this may not be a good guide to current and future practice, hence the likelihood is assessed as ‘possible’ rather than ‘likely’. This is a ‘benefit of the doubt’ assessment.

**PP-N08**

**PP-N08** ‘What is the risk that companies will not report their adherence to Corporate Social Responsibility norms, such as reporting to Global Reporting Initiative standards?’ is assessed as ‘almost certain’ to occur and of ‘major’ impact if the risk event does occur.

Corporate Social Responsibility (CSR) frameworks include:

- ICMM Sustainable Development Principles (ICMM 2016)
- Global Reporting Initiative (GRI 2013), including the GRI Mining and Metals Sector Supplement
- UN Global Compact
- Voluntary Principles on Security and Human Rights (VPSHR 2013)
- OECD anti-bribery conventions and guidelines
It is easier to show examples of mining companies that fail to adhere to these standards, that those that do. In respect of Ok Tedi, Howes and Kwa – invited by the company to do a review – noted that ‘OTML has been promising to use the internationally recognized Global Reporting Initiative (GRI) standards for some time, but has failed to do so’ (Howes and Kwa 2011: 39). Its next two Annual Reviews were claimed to be ‘prepared in accordance with the Global Reporting Initiative’ (OTML 2012: 3; OTML 2013a: ii), but neither carried a Content Index – a mandatory part of GRI compliance – nor reported any indicators. No environment report to date (most recent: OTML 2013b) has mentioned the GRI at all or reported against the over 30 required environmental indicators.

A similar story is repeated across the industry in Papua New Guinea. Out of 33 mining companies with interests in PNG in 2013-14, 27 did not use the word ‘sustainability’ anywhere on their web sites or publish a sustainability report on their PNG operations. Of the four that did, and used the GRI framework, all left out data, were inconsistent between reports and web site announcements, or said they were not yet able to collect the data (Burton and Onguglo 2017).

In respect of the Voluntary Principles, companies frequently ‘hire’ police around their operations – an expense allowance K100/day was typical in 2012 – and then get caught up in events where police launch raids on villages from a departure point inside a mining lease. A case in point is that Wangima village burnt down twice at Porgera (Post-Courier 30 Apr 2009; Martyn Namorong 28 Mar 2017). Barrick Gold issued disclaimers of involvement but later conceded its security guards had been involved in abuses of women (Barrick Gold 2014).

This additional risk is assessed as having a major impact because of the extreme difficulty for the public to obtain frank and accurate data from mining companies about their activities and the impacts they are having.

10-AGREEMENTS Risks associated with the terms of agreements

This collection of common risks groups together matters to do with the technocratic processes involved in agreement making.

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
<th>L-hood</th>
<th>Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF05</td>
<td>What is the risk that decentralisation of government decision-making (such as to agencies at the provincial or local-government level) will create uncertainty in the awards process?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PD07</td>
<td>What is the risk that terms and conditions for upfront bonus or ‘signature’ payments (i.e., to pay for resources that may otherwise take several years to generate income via royalties or other forms of taxation) will not be publicly knowable?</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PD18</td>
<td>Assuming contract negotiations are required, what is the risk that the roles and responsibilities of the government negotiating team will not be clear prior to negotiation?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PD19</td>
<td>What is the risk that the terms for contract negotiation, including what is negotiable and what is not-negotiable, will not be publicly knowable prior to negotiations?</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>PD33</td>
<td>If awards processes involve barter deals or infrastructure swaps, what is the risk that the value and terms of these deals will not be publicly knowable?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>PD34</td>
<td>What is the risk that anti-corruption and anti-bribery clauses will not be included in mining contracts?</td>
<td>5</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>MACRA</td>
<td>What</td>
<td>L-hood</td>
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<tr>
<td>PD38</td>
<td>What is the risk that a licence, permit or contract will be transferred to another owner without this being publicly knowable?</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>PD39</td>
<td>What is the risk that a licence, permit or contract will be terminated without being publicly explained or justified?</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>PD40</td>
<td>What is the risk that a licence, permit or contract will be renewed without being publicly explained or justified?</td>
<td>4</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>PP04</td>
<td>What is the risk that mining companies can stockpile licences or permits, without actually doing any work?</td>
<td>4</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>PP14</td>
<td>What is the risk that permits or licences will be awarded without required authorisation from other departments (e.g. Indigenous Affairs, Social Affairs, Environment, Water) or levels of government (e.g., local government)?</td>
<td>3</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>RA13</td>
<td>What is the risk that details of contracts (and annexes) will not be publicly knowable?</td>
<td>5</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

**CF05**

**CF05** ‘What is the risk that decentralisation of government decision-making (such as to agencies at the provincial or local-government level) will create uncertainty in the awards process?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

The ‘major’ impact assessment relates to the lack of coherence between EIA / SIA studies and MOAs. See discussion under other risks.

**PD07**

**PD07** ‘What is the risk that terms and conditions for upfront bonus or ‘signature’ payments (i.e., to pay for resources that may otherwise take several years to generate income via royalties or other forms of taxation) will not be publicly knowable?’ is assessed as ‘unlikely’ and of ‘moderate’ impact if the risk event does occur.

See CF09 for a discussion of sign-on payments (p. 63).

**PD18**

**PD18** ‘Assuming contract negotiations are required, what is the risk that the roles and responsibilities of the government negotiating team will not be clear prior to negotiation?’ is assessed as ‘possible’ to occur and of ‘major’ impact if the risk event does occur.

The roles and responsibilities of the technical members the government negotiating team are as publicly disseminated (see discussion of processes in Chapter 2), so it is ‘unlikely’ that they would not be clear. There is more risk that the agendas of political stakeholders present at Development Forums will not be clear, hence an overall risk likelihood of ‘possible’.

**PD19**

**PD19** ‘What is the risk that the terms for contract negotiation, including what is negotiable and what is not-negotiable, will not be publicly knowable prior to negotiations?’ is assessed as ‘possible’ and of ‘major’ impact if the risk event does occur.
In most circumstances, the risk is in fact unlikely because the mining award process is well set out. What is possible, is that the State’s uptake of a stake in a project is either not claimed and the demanded after the fact, as in the Porgera Coup (Box 2), or is claimed then reneged on, as with Nautilus case (p. 37).

PD33

PD33 ‘If awards processes involve barter deals or infrastructure swaps, what is the risk that the value and terms of these deals will not be publicly knowable?’ is assessed as ‘possible’ to occur and of ‘moderate’ impact if the risk event does occur.

See discussion under RA01 (p. 44).

PD34

PD34 ‘What is the risk that anti-corruption and anti-bribery clauses will not be included in mining contracts?’ is assessed as ‘almost certain’ to occur and of ‘moderate’ impact if the risk event does occur.

No MOA or MDC yet sighted has an anti-bribery clause. However, since almost all mining companies operating in PNG have overseas owners of part-owners, domestic legislation in their home countries makes bribery a crime.

PD38

PD38 ‘What is the risk that a licence, permit or contract will be transferred to another owner without this being publicly knowable?’ is assessed as ‘possible’ and of ‘moderate’ impact if the risk event does occur.

The MRA Mining Cadastre Portal is updated regularly, therefore entities associated with licences are known. However, the beneficial owners may not be known. The EITI Multi-Stakeholder Group now has a ‘Beneficial Ownership Roadmap’ which it says will be implemented from 2017 to 2020 (PNGEITI 2017: iii).

PD39

PD39 ‘What is the risk that a licence, permit or contract will be terminated without being publicly explained or justified?’ is assessed as ‘unlikely’ and of ‘moderate’ impact if the risk event does occur.

This is not known to have happened in the past at the cadastre level. However, the nationalisation of the Ok Tedi mine (p. 24) is a near equivalent at a higher level; it does not constitute a licence cancellation since mining operations by OTML were not affected.

PD40

PD40 ‘What is the risk that a licence, permit or contract will be renewed without being publicly explained or justified?’ is assessed as ‘likely’ and of ‘moderate’ impact if the risk event does occur.
See previous explanation.

**PP04**

‘What is the risk that mining companies can stockpile licences or permits, without actually doing any work?’ is assessed as ‘likely’ and of ‘moderate’ impact if the risk event does occur.

**PP14**

‘What is the risk that permits or licences will be awarded without required authorisation from other departments (e.g. Indigenous Affairs, Social Affairs, Environment, Water) or levels of government (e.g., local government)?’ is assessed as ‘possible’ and of ‘major’ impact if the risk event does occur.

The discussion of the award process for the Ramu Nickel project (Box 3) is taken as an egregious case of permitting by-passing key departments, such as the Department of Labour and Industrial Relations (work permits), and the Department of Immigration (visas).

However, the risk is not that great in normal circumstances.

**RA13**

‘What is the risk that details of contracts (and annexes) will not be publicly knowable?’ is assessed as ‘almost certain’ and of ‘moderate’ impact if the risk event does occur.

The ‘almost certain’ likelihood is because MDCs are not normally published. (A copy of the 1995 Lihir MDC is available in two libraries in Australia, however.)

**11-RECOVERSES Risks in legal recourses**

<table>
<thead>
<tr>
<th>MACRA</th>
<th>What</th>
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<th>Impact</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>RL03</td>
<td>If a licence, permit or contract is improperly cancelled or changed, what is the risk that there will be no legal process to settle the grievance?</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>RL04</td>
<td>If there is corrupt speculation around land subject to a mining permit application (such as by officials working with collaborators to change the status of the land to extract payments out of the licence-holder), what is the risk that there will be no legal process to settle the grievance?</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>RL05</td>
<td>What is the risk that licence- and permit-holders who breach their conditions and contracts can escape prosecution or other sanctions by engaging in corrupt behaviour?</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>RL07</td>
<td>What is the risk that whistleblowers will not be legally protected?</td>
<td>5</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>
If a licence, permit or contract is improperly cancelled or changed, what is the risk that there will be no legal process to settle the grievance? is assessed as ‘unlikely’ to occur and of ‘catastrophic’ impact if the risk event does occur.

This is considered unlikely and as far as is known has never occurred. Environmental permits have come close to being revoked due to breaches of the permit conditions, but companies have always been given remedial measures to implement instead (e.g. SMEC 2010).

The impact of the risk event would be ‘catastrophic’, i.e. the mining activities of a licence holder would cease.

If there is corrupt speculation around land subject to a mining permit application (such as by officials working with collaborators to change the status of the land to extract payments out of the licence-holder), what is the risk that there will be no legal process to settle the grievance? is assessed as ‘possible’ and of ‘moderate’ impact if the risk event does occur.

The term ‘corrupt speculation’ has been interpreted differently in the common risk CF04 (p. 58), with that risk being construed in terms of the corrupt behaviour of local rent seekers contesting among themselves. The ‘red’ level of likelihood x impact given to CF04 relates to impact on the community.

Here, the risk is construed in terms of a grievance between a licence holder and corrupt local officials, and the licence holder seeking redress. This is possible, but licence holders initiate legal action against local officials very sparingly in PNG. Local stakeholders, on the other hand, are well known for initiating proceedings.

The impact is ranked as ‘moderate’ because seeking redress through legal processes is unusual because there are invariably alternate means of dispute resolution.

What is the risk that licence- and permit-holders who breach their conditions and contracts can escape prosecution or other sanctions by engaging in corrupt behaviour? is assessed as ‘unlikely’ to occur and of ‘catastrophic’ impact if the risk event does occur.

The risk event is deemed ‘unlikely’ in present circumstances because of the low likelihood of prosecution in the first place. This may not reflect the true level of opportunity for corrupt behaviour.

The nearest to this risk event is breaching licence and permit conditions and fleeing the country to escape sanctions (see p. 69).

What is the risk that whistleblowers will not be legally protected? is assessed as ‘almost certain’ to occur and of ‘moderate’ impact if the risk event does occur.
The level of certainty reflects the absence of legal protections for whistleblowers. However, the term ‘whistleblower’ is legally very specific. Public life in PNG is characterised by constant gossip and leaking, and few systems are secure enough to warrant the use of ‘whistleblower’, i.e. someone who reveals secured information.

Action against leakers in the form of termination of employment is quite plausible, however.

The impact ranking of ‘moderate’ reflects the fact that even if a leaker / whistleblower does employment, further pursuit is not thought likely.
CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

The introduction to this report discussed the issues of grand corruption, and the idea was entertained that the regulatory capture that analysts had previously reported for one or two sectors of the PNG economy deepened significantly in the 2010s to take in most of the economy in a PNG form of state capture.

Whether or not future analysis will conclude that full state capture was underway, ruling cliques certainly found it difficult to escape a three-stage cycle of decrying the effects of corruption on the economy, setting up Commissions of Inquiry and Task Forces to root out the perpetrators, and then dismantling them when it seems that the commissioners are getting very close to the holders of high office who appointed them, or the supporters needed to help them stay where they are.

Papua New Guinea’s economy is dominated by the extractive industry sector, with mineral exports consistently accounting for between 70% and 80% of total exports during the 2000s (Appendix B) and since 2014 with LNG exports adding to this. Despite this outpouring of national wealth, few measurable advances have been made on development indicators with little progress made during the Millennium Development Goals period, according to the government’s own assessment (DNPM 2016).

Economic and development analysts frequently discuss the term ‘resource curse’ and the ‘paradox of plenty’ in relation to Papua New Guinea’s poor showing. For its part, UNDP responded to this with an ‘Extractive Industries and Sustainable Human Development’ project in 2013-14, as part of its Democratic Governance assistance programme to PNG. This resulted in a modest level of assistance to compiling a country Human Development Report in 2014 themed around the extractive industries:

The term ‘resource curse’ captures the international view that growth based on a dominant extractives sector can, if not managed well, lead to a range of negative effects, including stunted economic growth, corruption, weak institutions, conflict, human rights abuses, and poor human development outcomes. There is also, however, experience that suggests the ‘resource curse’ is not inevitable: that there are particular political, institutional and economic mechanisms that can be used to better connect resource wealth with sustainable human development. Papua New Guinea is on the frontline of innovation in some of these areas, and valuable lessons can inform international best practice and decision-making (UNDP 2014: Executive Summary, authors’ emphasis).

As may be seen, corruption is included as a contributing factor but it is extremely difficult for multilateral agencies like UNDP to say a lot more than this (or to do more than refer to Bohre Dolbear’s annual ‘Where to invest in mining’ – UNDP 2014: 10), because their in-country activities depend on the exercise of diplomacy.

After a first draft of this report was written, the Natural Resource Governance Institute published its 2017 Resource Governance Index. Papua New Guinea scored 47/100 classing it as ‘A country has a mix of strong and problematic areas of governance. Results indicate that resource extraction can help society, but it is likely that the eventual benefits are weak’ (NGRI 2017: 5). Papua New Guinea had the lowest score in the Asia-Pacific region.
On average, countries in the Asia-Pacific region perform poorly in licensing; Papua New Guinea’s lowest score comes in this category due to its poor implementation of licensing rules. According to the country’s mining law, licenses are granted on a first-come, first-served basis, but in practice tax and other non-trivial contract terms have been negotiated by investors and the government. Contracts and tax terms of the resulting development agreements are confidential, making the licensing process opaque. Papua New Guinea has a good cadaster and performs well in post-licensing activities, but its disclosure of contracts, reserves and financial interests is insufficient. Addressing this transparency deficit would enable Papua New Guinea to further improve its natural resource governance.34

This broadly concurs with what was found here.

A way ahead can be found in summarising the risk themes that the MACRA common risks fall into. Which ones are serious? Which can be tackled with conventional initiatives like Democratic Governance programmes? Which can be remediated in the short or medium term, or need longer term systemic change to be effected?

Given PNG’s current budgetary crisis, which will take some years to recover from, some of the recommendations are necessarily pitched at the bilateral and multilateral aid programs, of which Australia’s contribution remains around two thirds of the total (DFAT 2016); others need to be things tackled with local resources.

Seven themes that appear to underlie the corruption risks examined in this report are identified, with corresponding recommendations.

**Risk Theme 1. Risks concerning cross-institutional capacity**

Subheading: Risks concerning cross-institutional capacity to develop policies and a legislative framework that are internally consistent and reflect current best practice.

Common risks: CF03 (p.41), PD01 (p. 43)

Systemic remediation: **Difficult**

Remediate in steps: **Feasible**

In the discussions on common risks, gaps between MRA’s areas of responsibility and those of other agencies are frequently evident. An irony in the overall picture of government is the trend to bring all national agencies into line with national plans and vision statements (e.g. PNG 2009; DNPM 2010, 2015), at the same time as departments with planning and implementation responsibilities, notably The Department of Lands and Physical Planning (DLPP), the Department of National Planning and Monitoring (DNPM) and the Department of Works, have had almost no role in mine developments since before the start of the Ok Tedi Project (viz. Jackson 1977).

The reasons for this are not easy to elucidate, but would seem to lie in the provincial ‘task force’ mentality that grips mining project planning.35 Papua New Guinea is a big country and the purpose of assembling smaller committees of provincial stakeholders does enable agenda items 34 [http://www.resourcegovernanceindex.org/country-profiles/PNG/mining](http://www.resourcegovernanceindex.org/country-profiles/PNG/mining)  
35 e.g. the Lihir Liaison Committee, the Hidden Valley Consultative Committee and so on.
to be progressed from meeting to meeting. However, it leads to the exclusion of agencies that do have expertise and responsibility, such as the Physical Planning part of DLPP, who could be giving a better level of scrutiny to Applications for Development.

It is conceivable that a government-wide initiative to repair such gaps could make headway, and this should be encouraged, but this would require exceptional public service leadership so is ranked difficult.

An alternative way ahead is to advocate for remediation in small steps. The first strategic objective of Australia’s aid program is ‘promoting effective governance’ in which the UPNG-based Pacific Leadership and Governance Precinct plays a central role (DFAT 2016), currently focussed on the delivery of short training courses. What is required, however, is an emphasis on systems review; this may be beyond the capabilities of this sort of programme. On public service reform issues, leading experts caution that:

> Conventional explanations blame inadequate bureaucratic capacity or inappropriate donor solutions. Such accounts have validity at one level of analysis, but as one digs deeper another explanation of policy failure is uncovered (Turner and Kavanamur 2009: 9).

Change can be advocated from within Papua New Guinea, however, and the first step is to promote a better awareness of the technocratic detail in deficiencies at the mid-level of public administration, for which there is a vast literature, to develop a demand for change from within. Progress in this area is considered feasible.

Risk Theme 2. Risks concerning the human resources of regulatory agencies

Subheading: Risks concerning the human resources of regulatory agencies, the ability of regulatory agencies to recruit staff in the numbers appropriate to the size of the industry, with the qualifications that are desirable, and with opportunities for the regular upgrading of skills.

Where discussed: PD05.1 (p. 46), RA15 (p. 53), PP08 & PP09 (p. 66), RA07 & RA09 (p. 71), PP10 (p. 68), PP11 (p. 69)

Systemic remediation: Possible over time

Remediate in steps: Recommended

Burton’s contacts with regulatory agencies, principally MRA, CEPA and their predecessors, and experience in the higher education sector over three decades, plus experience in running training workshops for public servants dealing with mining projects (Burton et al. 2013), give us confidence to say that little can be done in the other six thematic areas without improving the quality of human resources in all sectors in PNG. Having better trained officials is the best defence against the corruption risks examined in this report.

The principal area of improvement should be in the number of staff in the Development Coordination Division of MRA and the Policy Coordination and Evaluation and Environment Protection Divisions of CEPA, holding masters degrees in appropriate disciplines.

There have been excellent and well-qualified staff in the equivalent of these divisions over the course of the last few decades, but they have been too few in number to make a difference
across the span of all projects they have had to deal with, and the best have rapidly won promotion out of the critical mid-level functions where they are desperately needed.

The pipeline of masters candidates in PNG universities, alas, cannot be relied on a promising source of expertise for these agencies. The best way forward is for the relevant agencies to step up efforts to place candidates for staff development at universities overseas with relevant programmes. Full service scholarships are available in many countries.

‘Step up efforts’ largely means to take staff development seriously and make it a condition of recruitment that new graduate officer is mentored in a plan to prepare for masters study within two years of recruitment, and that when the time comes they are released from normal duties for the period of study.

Burton has followed the careers of three graduate officers recruited at one of the agencies in 2009; by 2017 none had progressed to further studies.

Risk Theme 3. Risks concerning the coherence of feasibility studies and MOAs

Subheading: Risks concerning the coherence of feasibility studies, MOAs and agreement implementation.

Where discussed: PD05.1 (p. 46), RA15 (p. 53), PP08 & PP09 (p. 66), RA07 & RA09 (p. 71), PP10 (p. 68), PP11 (p. 69)

Systemic remediation: Feasible

Remediate in steps: Feasible

At present MOAs are treated like sacred texts by the three levels of government, by companies and landowners alike, off-limits to technical reviewers bar government and company lawyers. This leads to MOAs and ancillary agreements (Compensation, Business Development, Employment and Training …) that are internally inconsistent, inconsistent with local administrative realities, and inconsistent with company commitments in SIAs and landowner identification studies.

A recurrent contributor to this is the commissioning of Feasibility Study reports, including EIAs and SIAs, from large engineering and development firms. This is fine logistically but it detaches specialist study authors from likely involvement in ensuring MOAs do reflect what an applicant has said it will do and what undesirable impacts it will endeavour to minimise.

For example, if an SIA – and the landowner identification studies it references – carefully identifies stakeholder groups in each zone of impact and underline departure from this as a critical risk to the project, and the MOA and its Employment and Training Plan heads off in another direction, the seeds of corrupted processes are sown (e.g. Box 6).

As mentioned in the text, the PNG Science and Technology Secretariat has issued a National Research Code of Conduct, binding on anyone who does research in PNG, and this covers the authors of EIA and SIA reports: ‘researchers have a responsibility to their colleagues and the wider community to disseminate a full account of their research as broadly as possible’ (PNGSTS 2015: s4.4). The Environment Act 2000, obliges the Ministers to make environmental proposals, which contain EIA and SIA reports, available for public review; the new National Research Code
of Conduct carries the implication that the primary reports must be made permanently available. This should preferably be done online.

A system wide overhaul of the technical aspects of agreement-making and agreement governance – not touching the political aspects which currently dominate arriving at MOAs – and a project to collect all agreements in a publicly accessible online database are feasible.

The template for the online database is the Agreements, Treaties and Negotiated Settlements database (ATNS) covering all known agreements with indigenous people in Australia (http://www.atns.net.au). Past and present sponsors for this project include resource companies with interests in PNG, the Australian Research Council, the Minerals Council of Australia, government agencies in Australian, and a consortium of universities.


Smaller steps towards achieving the above objectives are also feasible and can commence at any time.

**Risk Theme 4. Risks concerning the lack of a national geospatial agency**

**Subheading:**

Risks concerning the lack of a functioning national geospatial agency, able to capture the interests and responsibilities of all State agencies in land use, protected areas, waterways, infrastructure, and cultural sites.

**Where discussed:**

CF03 (p. 41), PD27 (p. 47), CF04 (p. 58)

**Systemic remediation:** Achievable

**Remediate in steps:** Stop-gap

Papua New Guinea has had a National Mapping Bureau since Independence and is one of the best-mapped developing countries. Unfortunately, the NMB was left to languish for four decades with little investment in physical or human capital and is not thought to have produced a new map in this time.

Because of this we see individual departments starting their own systems such as CEPA’s GIS-based Environment Information Management System ‘for use in reporting for Sustainable Development Goals (SDG) and Medium Term Development Plan, and to support ... environment regulation’ (http://pngcepa.com/cepa-about-us/cepa-divisions/#ffs-tabbed-14). This may achieve CEPA’s own objectives but not the co-ordination of different cadastres and land interests with geospatial data on mining areas.
The MRA’s laudable Mining Cadastre Portal (http://portal.mra.gov.pg/Map/) likewise serves its purpose, and being hosted offshore is well-defended against tampering, but at the moment is not set up to export data to other systems.

Indonesia launched its National Geospatial Agency (Badan Informasi Geospasial, BIG) in 2010, with a strong statement from President Yudhoyono that Indonesia should have a single service agency for mapping to better coordinate the country’s development. A civil society organisation, the One Map Group, is lending support, which includes a participatory mapping portal, and some development assistance has been given by USAID and the International Programs division of the US Forest Service (https://sig-gis.com/projects/one-map-indonesia/).

Similarly, New Caledonia has a single online point of entry for cadastral, topographic and environmental map layers, Géorep (http://georep.nc), part of a larger agency the Directorate for Infrastructure, Mapping and Land Transport, the equivalent of PNG’s Department of Lands and Physical Planning.

The transformation of NMB into a full-service National Geospatial Agency is achievable.

Piecemeal assistance to department for mapping projects are considered stop-gap measures only.

**Risk Theme 5. Risks concerning consultation, representative bodies and associated business entities**

Subheading: Risks concerning the consultation with project area communities falling short of international standards of dealing with Indigenous Peoples, and risks associated with the accountability of landowner representative bodies and Special Purpose Authorities set up in mining areas.

Where discussed: CF04 (p. 58), PD16 (p. 74), PP07 (p. 74)

Systemic remediation: Achievable in the medium term

Remediate in steps: Worthwhile

When due diligence on local representative structures reveals the kind of irregularities that internationally and nationally commissioned research routinely uncovers (e.g. Box 5), far more attention should be paid to agreement governance and capacity building for consultative and representative bodies than is seen at present.

All landowner associations and business entities are registered with the Investment Promotion Authority (IPA), whose searchable online database (https://www.ipa.gov.pg/) is a rare example of PNG’s Open Government policy. However, breaches of IPA reporting conditions do not seem to be routinely sanctioned and landowner business entities – often with the reluctance of mining companies it should be said – continue to hold logistical and supply contracts at many mines.

There is a political dimension to this, as compliance with MOAs often means undertaking to use landowner suppliers where possible. But this only points to deficiencies in MOA construction (cf. Risk Theme 3); there is nothing to prevent the insertion of conditions such as ‘local suppliers ... when annually audited and in compliance with the terms of IPA registration’.
A further step that is implicit in compliance with CSR reporting requirements (Risk Theme 6) is to take seriously the following GRI indicators (GRI 2013):

- **G4-LA15** Significant actual and potential negative impacts for labour practices in the supply chain and actions taken
- **G4-HR11** Significant actual and potential negative human rights impacts in the supply chain and actions taken
  a. Report the number of suppliers subject to human rights impact assessments.
  b. Report the number of suppliers identified as having significant actual and potential negative human rights impacts.
  c. Report the significant actual and potential negative human rights impacts identified in the supply chain.
  d. Report the percentage of suppliers identified as having significant actual and potential negative human rights impacts with which improvements were agreed upon as a result of assessment.
  e. Report the percentage of suppliers identified as having significant actual and potential negative human rights impacts with which relationships were terminated as a result of assessment, and why.
- **G4-SO10** Significant actual and potential negative impacts on society in the supply chain and actions taken
  a. Report the number of suppliers subject to assessments for impacts on society.
  b. Report the number of suppliers identified as having significant actual and potential negative impacts on society.
  c. Report the significant actual and potential negative impacts on society identified in the supply chain.
  d. Report the percentage of suppliers identified as having significant actual and potential negative impacts on society with which improvements were agreed upon as a result of assessment.
  e. Report the percentage of suppliers identified as having significant actual and potential negative impact on society with which relationships were terminated as a result of assessment, and why.

As of 2015, no mining companies operating in PNG and claiming to do GRI reporting had completed a human rights assessment of their supply chains.

Since 2010 Burton has reported instances of child labour in workforce hiring practices to Australian owned companies on three occasions. On each occasion the reports, and accompanying documentation, went unanswered.\(^{36}\)

Poor practices like this, pertinent to the above GRI indicators, are allowed to continue because of the poor resourcing and weak coordination among the agencies (IPA, Office of the Registrar-General, Department of Labour and Industrial Relations, Department of Commerce, etc) responsible for compliance.

Reform is considered **achievable in the medium term**.

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\(^{36}\) Citation to reports and company disclosures redacted for reasonably-founded fear of retaliation.
Individual actions by companies and government agencies immediately is considered **worthwhile**.

Referral to law enforcement agencies in cases of breaches of PNG law is considered **essential**.

**Risk Theme 6. Risks concerning the lack of CSR reporting requirements**

Subheading: Risks concerning the lack of CSR reporting requirements, including compliance with obligations under the Extractive Index Transparency Initiative and international standards for dealing with Indigenous Peoples, but more broadly with the compliances expected by the International Council on Mining and Metals.

Where discussed: RA15 (p. 53), CF04 (p. 58), PP-N01 & PP-N02 (p. 63), RA08 & RA09 (p. 71), PPN03, PPN04, PPN05, PPN06, PPN07, PPN08 (pp. 81-82)

Systemic remediation: **Achievable in 2-3 years**

Remediate in steps: **Stop-gap**

Mining companies that are preparing to apply for or have been granted MLs and SMLs as majority owners, or in joint ventures, should be held to undertake sustainability reporting without exception. The PNG Chamber of Mines and Petroleum should be encouraged to take a lead on this, in consultation with regional sources of social responsibility expertise, such as that of the University of Queensland’s Centre for Social Responsibility in Mining ([https://www.csrm.uq.edu.au](https://www.csrm.uq.edu.au)).

Attention should especially be given to mines operated in joint ventures, where one partner may have lesser CSR commitments. The highest level of CSR commitment among joint venture partners should be held to apply to the joint venture as a whole.

Corporate Social Responsibility frameworks include:

- ICMM Sustainable Development Principles (ICMM 2016)
- Global Reporting Initiative (GRI 2013), including the GRI Mining and Metals Sector Supplement
- UN Global Compact
- Voluntary Principles on Security and Human Rights (VPSHR 2013)
- OECD anti-bribery conventions and guidelines

ICMM guidance documents should be consulted for further details ([https://www.icmm.com](https://www.icmm.com)). Compliance – without missing data – is considered **achievable in 2-3 years**.

Mining companies that are preparing to apply for or have been granted ELs should be **encouraged** to undertake sustainability reporting, in the knowledge that applications for MLs and SMLs will require this. Compliance with a lesser level of reporting is acceptable for small companies not operating mines internationally and is considered **achievable in 2-3 years**.

The PNG government, starting with its participation in the Extractive Industry Transparency Initiative Multi-Stakeholder Group, should be encouraged to develop national policies for
adherence with CSR norms. A Mining Sustainability Policy is believed to be under development; it is essential that guidance on CSR compliance be integral to the final policy.

Remediation in steps would be considered stop-gap measures only.

Risk Theme 7. Risks concerning women, vulnerable persons and marginalised groups

Subheading: Risks concerning the poor representation of women, vulnerable persons and marginalised groups in negotiations over land and property, in the terms of agreements over them, and the unequal distribution of mining rental incomes

Where discussed: CF01, p. 40, CF04 (p. 58), PD16 (p. 74), PP07 (p. 74), PP06 (p. 76).

Systemic remediation: Achievable in the medium term

Remediate in steps: Worthwhile

The MACRA tool recognises the need to consider women and vulnerable persons in the PEST analysis section S3 ‘Are there marginalised groups vulnerable to mining’, however the issue is not well reflected in the ‘common risks’ indicators.

As discussed in the discussion of the common risk CF01, Papua New Guinea has a Women in Mining Action Plan 2007-2012 (DoM 2007), allocated K15 million in funding for its five-year life span, and in theory a Women in Mining Steering Committee drawn from public service departments to implement it as a cross-sector activity.

Unfortunately, only K300,000 of the K15 million was forthcoming by the end of the life of the plan and the committee had not met for some years. The lasting outcome of World Bank-supported workshop to rebuild the capacity of the committee (Burton et al. 2013) is not known.

Papua New Guinea also has a new GESI, or Gender and Social Inclusion Policy, (DPM 2015) aligned with further directives in Vision 2050 (PNG 2009) and the National Strategy for Responsible Sustainable Development for Papua New Guinea: StaRS (DNPM 2015) among other policy documents.

They envisage the mainstreaming of policies of equality and inclusion across all parts of national life. As such, the abuses by local and, almost needless to say, male-dominated local associations (Box 5) and repeated FPIC failings (Box 6, Box 7), insofar as public entities and legal officials ultimately disperse mining rentals and sign off on agreements dominated by male interests, surely lie within the remit of their intentions.

Reform is needed to:

- Ensure that applicants for mining awards show they will mainstream social inclusion policies across their operations as part of CSR reporting obligations, or in addition to it where factors of local importance are not covered

- Ensure that applications for mining awards are passed to the Women in Mining Steering Committee for vetting and that external civil society organisations are invited to comment
• Ensure that proposed agreements, such as Royalty and Compensation Agreements, Resettlement Action Plans, Employment and Training, and Business Development Plans, and are passed to the Women in Mining Steering Committee for vetting and that external civil society organisations are invited to comment

Systemic reform is considered **achievable in the medium term**.

Individual actions by companies and government agencies immediately is considered **worthwhile**.
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United Nations Development Programme and PNG Department of National Planning and Monitoring


APPENDIX A

MACRA TOOL WORKSHEET ASSESSMENTS SCORED ‘RED’

Category 1: Contextual Factors (CF – three ‘red’ risks)

**CF01**

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
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2. By not revising the Mining Act 1992, after the endorsement at Cabinet level of the Women in Mining Action Plan, following World Bank support for the process and two international conferences on Women in Mining in PNG, the known deficiencies of gender impacts are allowed to persist with an occurrence rated as ‘likely’. See full discussion on p. 40.
Source: Strongman 2003, 2005; DoM 2007; The National 6 Dec 2013

Source: Mining (Ok Tedi 10th Supplemental Agreement) Act 2013.

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<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
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<tr>
<td>5 / 5</td>
<td>1. Extremely severe sustainability impacts persist around mines; sanctions against damage to land and water remain weak; there is no requirement to adhere to CSR commitments such as those set out at length by the ICMM. Source: UNDP 2014 for general discussion; for specific impacts see e.g. Box 4, Box 5, Box 6, Box 7; Banks and Ballard 1997; Campbell 2011; CSIRO 1996; IIED &amp; WBCSD 2002; Johnson 2012; Ketan and Geita 2011; Marychurch and Stoiano 2006; Oxfam 2004; PJV 2010; SMEC 2010.</td>
</tr>
</tbody>
</table>

2. Example of extreme gender bias in royalty payments at Hidden Valley 2010-2012 (p. 40). Other gender impacts favouring an unfair status quo supporting the interests of male-dominated national and local governance structures not been repaired.

3. Nationalisation of the Ok Tedi mine, which was already owned by and creating income for local interests, has impacted on local project delivery such as rural health systems, and stands to destabilise provincial politics in the Western Province of PNG.
Source: e.g. Malum Nalu 18 Sep 2013; PNG Blogs 19 Apr 2017.

Description of impact: Of all impacts of mining awards in PNG, the failure to modernise the legislation is a strong contributor to the varied and severe impacts enumerated in the key sources, many of monograph length. Note that the regulator wanted the 1st two legislative changes, but was denied by the executive branch of government, and had the 3rd imposed on it.

<table>
<thead>
<tr>
<th>Likelihood x Impact =</th>
<th>Total score:</th>
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<tbody>
<tr>
<td>4 x 5</td>
<td>20</td>
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**Colour:** Red

**Risk level:** Very high
### CF03

**What is the risk that surface rights in areas being opened for mining are not clear in law?**

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<tr>
<th>Code CF03</th>
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<table>
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<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
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</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. All Mining Leases issued in the past half century have been on land under customary ownership, which comprises 97% of all land in Papua New Guinea. No current Mining Leases are over registered land with guaranteed security of title. <strong>Source</strong>: PNG Constitution.</td>
</tr>
<tr>
<td></td>
<td>2. Lack of a national geospatial agency leads to danger EIA / SIA reports will not capture impacts on land use, protected areas, waterways, etc, due to lack of clarity in data provided. <strong>Source</strong>: No accessible data at <a href="http://lands.gov.pg/Services/NMB/index.html">http://lands.gov.pg/Services/NMB/index.html</a></td>
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<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 / 5</td>
<td>1. Failure to respect the rights and entitlements that are owed when mining takes place on customary land underlay the Bougainville civil war (p. 21). <strong>Source</strong>: e.g. May and Spriggs 1990; Regan and Griffin 2007.</td>
</tr>
<tr>
<td></td>
<td>2. Failure to maintain to pay attention that mining activities and impacts are confined to leased areas that are ‘clear in law’, and that instead spill out onto waterways, flood plains and river banks that have other owners, has led to repeated cases of environmental damage. <strong>Source</strong>: Ok Tedi: e.g. IIED &amp; WBCSD 2002; Banks and Ballard 1997; Marychurch and Stoiano 2006; Campbell 2011. Porgera: e.g. CSIRO 1996; PJV 2002, 2010. Tolukuma: Oxfam 2004. Hidden Valley: SMEC 2010; Ketan and Geita 2011.</td>
</tr>
<tr>
<td></td>
<td>3. Failure to maintain to know the locations of Wildlife Management / Protected Areas, and/or ambiguity in the specification of their boundaries, results in leases issued across environmental reserves. <strong>Source</strong>: Chatterton, Yamuna, Higgins-Zogib et al. 2006</td>
</tr>
</tbody>
</table>

**Description of impact**: The impact is ‘major’ but not ‘catastrophic’ on the grounds that through PNG’s system of Mining Development Forums, Compensation Agreements and MOAs, local communities can find a vehicle for local and regional development (e.g. U.S. Securities and Exchange Commission n.d. [2007]) and also to defend areas of public interest. However, careful attention to the social licence to operate (Owen and Kemp 2012) has to be maintained by operators and surveilled by regulators over the life of every mine. A final point is that companies have a poor record in maintaining land files in good order over the life of a mine and through changes in technology (e.g. paper to early digital, early digital to full GIS systems) and this adds to impacts (N. Bainton pers. comm.; Burton and Onguglo 2011).

$\text{Likelihood} \times \text{Impact} = 5 \times 4$  
$\text{Total score: } 20$

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<tr>
<th>Colour:</th>
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<tbody>
<tr>
<td><strong>Risk level:</strong></td>
<td>Very high</td>
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</tbody>
</table>
What is the risk that there will be corrupt speculation around land subject to a mining permit application, such as by officials working with collaborators to change the status of the land to extract payments out of the licence-holder?

Context is that 12% of PNG's land surface was land-grabbed between in the 2000s (Filer 2011); all land in PNG is vulnerable to local forms of misrepresentation and micro-political contestation. Some but not all involves extracting additional payments from the licence-holder. Focus here is on (a) forced changes to agreements caused by political processes that cannot be contained by legal processes (b) ‘corrupt speculation around land’ as interpreted in terms of local competition to represent land interests and receive rental payments at a mine. Some outcomes may be beneficial, but become impacts if handling of payments become corrupted or violence becomes an entrenched outcome.

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
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<tbody>
<tr>
<td>4 / 5</td>
<td>1. State demands more equity in a mine; landowners seize opportunity to try and secure better terms from the State for themselves.</td>
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<td></td>
<td>2. Changes in agreement terms at a mine – notably when the PNG government raised the royalty rate from 1.25 to 2% in 1995 – in the process of an award causes local re-negotiations elsewhere which become a platform for airing of local grievances and micro-political contestation.</td>
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<td></td>
<td><strong>Source:</strong> Derkley 1989; Aus Fin Rev 21 Mar 1995; Johnson 2012.</td>
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<td></td>
<td>3. Intra-community conflicts were a component of the Bougainville civil war; intra-community conflicts led to the deployment of troops in Operation Ipili at Porgera in 2009.</td>
</tr>
<tr>
<td></td>
<td><strong>Source:</strong> May and Spriggs 1990; Regan and Griffin 2007; The National 6 April 2009; Post-Courier 30 April 2009.</td>
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<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. After Lihir landowners won a raise in the royalty rate to 2% in 1995, Porgeran landowners forced a renegotiation of their benefit sharing agreement with government to gain extra income.</td>
</tr>
<tr>
<td></td>
<td>2. 1995 renegotiation led to Porgera Landowner Association receiving royalty directly for the first time; K30.6 million paid to PLA between 1995 and 2011 with no audit.</td>
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<td><strong>Source:</strong> HRW 2010: 35; Johnson 2012: 46.</td>
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<td>3. A landowner official is alleged to have murdered his father, a agreement signatory, in a ‘public argument that was said to be about mine compensation money’.</td>
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<td><strong>Source:</strong> Box 5; Butler 2012.</td>
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</table>

**Description of impact:** NRI, Human Rights Watch and MRA sources describe Porgera as being a place where a very small group of men have carved up between themselves hundreds of millions of Kina in mining rental payments received since 1990 at the expense of approximately 10,000 ordinary landowners. This is an outcome of ‘local competition to represent land interests’ around a mine. Accounts of other mines show pathologies of like nature to a lesser or greater extent (see longer explanations, e.g. Box 5).

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<th>Likelihood x Impact =</th>
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**Colour:** Red

**Risk level:** Very high
Category 2: Process Design (PD – four ‘red’ risks)

PD05.1

What is the risk that salaries of project coordination staff are insufficient to attract adequately qualified professionals?

This is an ADDITIONAL RISK. The focus of this risk concerns whether the MRA can attract sufficiently well-qualified Project Coordination staff and hire enough of them to accomplish the regulatory tasks they are charged with.

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
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</thead>
</table>
| 5 / 5            | 1. MRA unable to recruit sufficient Project Coordinators with masters level qualifications; cannot offer adequate salary and housing entitlements.  

2. MRA cannot recruit Project Coordination staff in sufficient numbers of adequately perform regulatory liaison tasks across all projects, with several staff at larger and more complex projects needing a division of expertise.  

3. MRA does not have the means to secure adequate premises at large mines and to do modern office fit-outs to maintain an effective and permanent Project Coordination presence on large mines.  

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<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
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</thead>
</table>
| 4 / 5        | 1. Project Coordinators known to Dec 2013 not masters qualified.  
Source: J. Burton, personal observations during MRA training workshops, 2013. |

2. Project Coordination historically hampered at the Hidden Valley and Lihir mines because of Project Coordination split between the Province and the MRA; periods of no allocated Coordinator; some functions not carried out.  

3. Project Coordination historically hampered at the Porgera, Hidden Valley and Lihir mines because of cramped office space; archaic filing systems; necessary use of personal laptops etc.  

Description of impact: A high level of risk impact is awarded because as mine after mine is opened, project-threatening mistakes are repeatedly made in mine planning which could be avoided if Project Coordinators had more expertise, better conditions to work in, and were better able to assess project documents early on and to the level to be able to recommend specialist reviews be commissioned by their own managers, or by the heads of other government departments.

Likelihood x Impact = 5 x 4  
Total score: 20

Colour: Red  
Risk level: Very high
Assuming consultation with communities or landholders is required, what is the risk that negotiations for landholder or community agreements can be manipulated?

The ‘landholder or community agreements’ in question are MOAs defining benefit sharing at provincial and local level. The risk lies in who has the greatest input in how the MOAs are drawn up and then interpreted after signing.

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<tr>
<th>Code</th>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
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<tbody>
<tr>
<td>PD16</td>
<td>4 / 5</td>
<td>1. Danger of a ‘recognition shift’ in definition of who is a project area landowner with rights defined in landholder or community agreements unless social mapping data is (a) commissioned properly (b) signed off by local communities (c) adhered to in implementing agreements.</td>
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<td>Source: Box 6; Burton 1991.</td>
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<td></td>
<td>2. Danger of landowner associations and their wholly-owned businesses exhibiting weak governance, e.g. opacity in electing officials and directors, not having clear constitutions, not submitting annual returns when awarded one-off start-up grants in MOAs.</td>
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<tr>
<td></td>
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<td>Source: Sanida et al. 2015.</td>
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<td>3. Danger of Special Purpose Authorities exhibiting weak governance, e.g. not submitting annual returns, not having forward looking budgets and development plans, unable to document lists of projects commenced, and completion status.</td>
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<tr>
<td></td>
<td></td>
<td>Source: Johnson 2012.</td>
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<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Gross manipulation of candidates for employment list by Nakuwi Association office bearers at Hidden Valley; bore no relation to the SIA version of who would be proposed as first in line for mine employment.</td>
</tr>
<tr>
<td></td>
<td>2. NKW Holdings, owned by the Nakuwi landowners at Hidden Valley, was granted priority for business contracts in the Hidden Valley MOA; had business contracts with the mine worth K421 million (A$168 million) over 4 yrs, but no company constitution, did not submit company returns 2004-2014; ‘the development impact of these funds is minimal’.</td>
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<tr>
<td></td>
<td>Source: Sanida et al. 2015: 61, Table 5.1.</td>
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<td></td>
<td>3. NRI researcher estimated that the Porgera Development Authority received K240 million (A$96 million) 1990-2012, but could not produce information on the expenditure of funds.</td>
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<td>Source: Johnson 2012: 76</td>
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</tbody>
</table>

Description of impact: MOAs (‘landholder or community agreements’) bring large resource rental incomes to association-owned businesses and to Special Purpose Authorities (with locally-recruited staff); what they negotiate fails to bring about perceptible development for the local communities who are their members and who they are meant to serve. MOAs also place associations in the position being gatekeepers for would-be mine workers.

Likelihood x Impact = 4 x 5
Total score: 20

Colour: Red
Risk level: Very high
When foreign companies are legally required to partner with local companies, including a local SOE, for mining activities, what is the risk that the laws and rules governing local partnerships will not be clear?

Although not in the Mining Act 1992, it is a long-standing policy for the State to take the option of up to 30% of all new mining operations, plus modern agreements are expected to specify preference for locally-owned businesses and local hire for employment.

<table>
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<tr>
<th>Likelihood Score</th>
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<tbody>
<tr>
<td>4 / 5</td>
<td>1. Incoming challenges decision of previous government and demands change to equity arrangements.</td>
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<tr>
<td></td>
<td><strong>Source:</strong> Box 2; ‘Porgera Coup’ discussion, p. 4; restoration of investor confidence <em>Aus Fin Rev</em> 30 Dec 1994.</td>
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</table>

2. State signs agreement to invest in a project, then fails to find the money or next government does not want to find the money.

**Source:** *The National* 7 Oct 2013; *Post-Courier* 17 Feb 2014.

3. MOA or other agreement mandates all subcontracting business in mine area to be joint ventures with locally-owned companies – danger of lack of monitoring allowing foreign companies to sign contracts at mines without joint ventures or clearance from appropriate government agencies (Investment Promotion Authority; Department of Commerce and Industry).

**Source:** N. Bainton pers. comm.

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<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 / 5</td>
<td>1. ‘Porgera Coup’ 1992-93: loss of investor confidence, price crash on the Sydney stock exchange, slow recovery of share prices to previous levels.</td>
</tr>
<tr>
<td></td>
<td><strong>Source:</strong> <em>SMH</em> 1 Sep 1992; <em>Aus Fin Rev</em> 27 November 1992; <em>BRW</em> 16 Apr 1993; <em>Age</em> 28 Dec 1993.</td>
</tr>
</tbody>
</table>

2. State opted to take up 30% of Solwara1 project in agreement signed with Nautilus Mining in 2011. State ordered to pay Nautilus US$118 million in 2013 after commercial arbitration. Agreement terminated by Nautilus in 2014.

**Source:**

3. PNG Department of Commerce and Industry audit recently found significant non-compliance at several mines.

**Source:** N. Bainton pers. comm. (no Department of Commerce and Industry web site in 2017 to check for confirmation or current activities).

**Description of impact:** Impact is (a) on PNG’s reputation as an investment-friendly jurisdiction and (b) on an applicant’s ability to finance a project if the State promises, though an SOE, to become a partner and then fails to go through with the deal.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score:</th>
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<tbody>
<tr>
<td>4 x 4</td>
<td>16</td>
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</table>

**Colour:** Red

**Risk level:** Very high
What is the risk of awards decisions being based on cadastre maps that are not coordinated or not geodetically compatible with other land management organisations, such as agriculture and forestry?

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
</table>
| 4 / 5            | 1. Conservation and Environment Protection Authority is underfunded, is slowly inventorying its ~55 protected areas, but has no proper cadastre of protected areas – risk of mining awards being made over them.  
**Source:** Chatterton, Yamuna, Higgins-Zogib et al. 2006. |
|                  | 2. Provincial Works Departments do not have detailed, up-to-date inventories of their road networks – danger of MOAs committing wrong parties to infrastructure commitments, including road building, and therefore risking agreement failure.  
|                  | 3. National and Provincial Lands Departments have pre-modern cadastres of alienated land, lacking in proper title documentation – risk of leases being awarded over land that was de-alienated after Independence, but treated as if still alienated.  
**Source:** e.g. Filer 2011. |

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
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</thead>
</table>
| 4 / 5        | 1. Lihir Island gazetted as Wildlife Management Area in 1991. Mining Award 1995 over the WMA. WWF assessment in 2006 as experiencing ‘a very high degree of pressures and threats’. Operator continues to incorrectly answer the GRI indicator EN012 ‘Number of operations with activities or resettlements occurring in or adjacent to protected areas ... having significant impacts on biodiversity’ with ‘nil’.  
**Source:** Fauna (Protection & Control) Act 1966; Chatterton, Yamuna, Higgins-Zogib et al. 2006; Newcrest Mining 2014: 2. |
|              | 2. Hidden Valley MOA commits the Morobe Provincial Government to ‘provide annual funding for road and bridge maintenance within the Impacted Area’. Roads passing through mine impact area are mix of National Roads, council roads, private roads. Jurisdictional problems impact on maintenance responsibilities resulting in agreement failure.  
**Source:** State Solicitor 2005: 17.1; see also Sanida et al. 2015: Appendix 2 |
|              | 3. The Ramu plant site constructed on disused plantation, acquired from its customary owners by Lutheran Mission in 1930s, but returned later for community use. Award of Lease for Mining Purposes anyway despite definitive land records not found, leading to unresolved land dispute between/among community members and Lease for Mining Purposes (LMP) holder.  
**Source:** Burton 1999b; long-format discussion in Box 3 (see also p. 47). |

**Description of impact:** There are constant imprecisions and uncertainties in all aspects of PNG’s land management systems. Impact is carried over into mining – see 47ff. for longer discussion.

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<tr>
<th>Likelihood x Impact =</th>
<th>4 x 4</th>
<th>Total score: 16</th>
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<tr>
<td>Colour:</td>
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<td><strong>Red</strong></td>
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<tr>
<td><strong>Risk level:</strong></td>
<td></td>
<td><strong>Very high</strong></td>
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</tbody>
</table>
Category 3: Process Practice (PP – ten ‘red’ risks)

PP06

Assuming consultation with affected communities is required, what is the risk that their free, prior, and informed consent will be ignored as a result of corrupt practices?

Note: similar assessment to PP07, RL01

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Danger that representative bodies will be incorporated without the full set of local stakeholders needed to provide FPIC. <strong>Source:</strong> (risk stems from international FPIC discussions and definitions)</td>
</tr>
<tr>
<td></td>
<td>2. Danger of a ‘recognition shift’ in definition of who is a project area landowner with rights defined in landholder or community agreements unless social mapping data is (a) commissioned properly (b) signed off by local communities (c) adhered to in implementing agreements (subrisk duplicated from PD06) <strong>Source:</strong> Box 6; Burton 1991a; Burton et al. 2012: Chapter 2.</td>
</tr>
<tr>
<td></td>
<td>3. Danger of land agreements made with ‘agents’ under the Land Act who then, though incumbency, become front men to make decisions about the land of other families. <strong>Source:</strong> PJV 1987; Gibbs 1981.</td>
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<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
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<tbody>
<tr>
<td>5 / 5</td>
<td>1. Case of Kapit village where Lihir mine design included the need for Kapit land without notifying the owners; consent for resettlement not given at the time the mining award was made. <strong>Source:</strong> Box 7; Hemer 2015; L. Kabariu pers. comm. to J. Burton 1992-94, 2016; Penias Tadak Zikmet pers. comm. to J. Burton 2016.</td>
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<tr>
<td></td>
<td>2. ‘Recognition shift’ occurs in landowner definition from SIA submitted with the Proposal for Development to the interpretation given in the MOA at Hidden Valley. Minava, Akikanda, Yokua and Kaumanga villages lose their recognition as landowners, not miss out on employment, and cease to receive primary health care while experiencing extremely high levels of mortality. <strong>Source:</strong> Box 6; Jackson 2004: 26-27; Burton et al. 2012: Chapter 2, 115-120.</td>
</tr>
<tr>
<td></td>
<td>3. At Porgera, land agreements made with each of 300 ‘agents’ under the Land Act; only 24 ‘superagents’ invited into final stages of the Development Forum, representing branches of the seven landowning descent lines, but without the right in custom speak for the land of other families. Impact seen in poor outcomes for Porgerans and the control in rental incomes by very few men, perhaps as few as 20 in a population of about 10,000. <strong>Source:</strong> Golub 2010; Johnson 2012; Burton in press.</td>
</tr>
</tbody>
</table>

**Description of impact:** This is another example of collusive corruption of process between government and company. It may well be that those involved have the impression that they were respecting local forms of leadership but collusive corruption arises when FPIC processes are not properly validated. The specific impact from not obtaining FPIC are that this risks losing the social licence to operate resulting in costly ‘landowner strikes’ and, in the extreme case, forced mine closure (Owen and Kemp 2012).

Likelihood x Impact = 5 x 5  
Total score: 25

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<th>Colour:</th>
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<tbody>
<tr>
<td>Risk level:</td>
<td>Very high</td>
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</table>
What is the risk that community leaders negotiating with a mining company will not represent community members’ interests?

Note: similar assessment to PP06, RL01

<table>
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<tr>
<th>Code</th>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
</table>
| PP07 | 5 / 5            | 1. Danger in a society with rights to land held at no level higher than the extended family, that representatives will represent only their own families’ interests and not the interests of all families.  
Source: General principle to include stakeholders in negotiations appropriately to an indigenous system of rights, e.g. World Bank 2014. |

2. Danger that during preparations for negotiations, mine design is incomplete and representative bodies are formed around an early configuration of stakeholders, not representative of the full set of stakeholders of the final mine area impact footprint, and by the time negotiations begin have become the incumbents in the key office bearing positions.  
Source: General principle to include the correct stakeholders in negotiations, e.g. World Bank 2014.

3. Danger that at the time of negotiations, mine area representative bodies will lead negotiations and stakeholders with port, access road, quarry site, etc interests will not be represented.  
Source: General principle to include all stakeholders in negotiations, e.g. World Bank 2014.

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
</table>
| 5 / 5        | 1. At Porgera, land agreements were made with each of 300 ‘agents’ under the Land Act. Only 24 ‘superagents’ invited into the final stages of Development Forum. Agreement outcomes, such as consultations on broader mine rental benefits became fixed on the ‘24’ instead of reverting back to the 300 agents per Land Act.  

2. Case of Kapit village where Lihir mine design dropped the need for Kapit land two weeks before the landowner association was formed, then re-included it without notifying the owners. Too late by the time of the negotiations for Kapit leaders to exert much, if any, influence over the lead negotiators.  

3. Hidden Valley SIA as submitted to government listed six sets of stakeholders, A-F. Not reflected in the Development Forum, which were led by Group A only (mine area landowners). Land required for parts of the project not yet identified at the time of negotiations. Groups B-F not invited to Development Forum, and excluded from the committee monitoring the agreement.  

Description of impact: As detailed above, impacts seen at many projects often arise from the failure to verify whether community leaders have been selected in a way that they represent community members’ interests, to make sure that representative selected for close consultation are drawn from the impact areas of the final mine plan, and to validate FPIC processes (see also Macintyre 2007). The specific impact from not obtaining FPIC by dealing with the ‘wrong’ community leaders are that this risks losing the social licence to operate resulting in costly ‘landowner strikes’ and, in the extreme case, forced mine closure (Owen and Kemp 2012).

Likelihood x Impact = 5 x 5  
Total score: 25

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<th>Colour:</th>
<th>Risk level:</th>
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<tbody>
<tr>
<td>Red</td>
<td>Very high</td>
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</table>
What is the risk there is no verification of the accuracy or truthfulness of social impact assessment (SIA) reports?

Note: PP08 and PP09 very similar as Environment Act 2000 treats ‘physical and social environmental impacts’ together (numerous sections).

### Likelihood

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<tr>
<th>Score</th>
<th>Evidence to support assessed likelihood</th>
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<tbody>
<tr>
<td>5 / 5</td>
<td>1. Several projects have in the past been planned on one mine configuration, then operated on another without further studies. Example of Ok Tedi where a narrow impact footprint was envisaged and narrowly focussed SIA reports were not reassessed for their fitness for purpose when the impact footprint expanded. &lt;br&gt;Source: Jackson 1977; Jackson et al. 1980; Maunsell 1982.</td>
</tr>
<tr>
<td></td>
<td>2. Danger of a long gap between the preparation of rushed SIA reports, and the imbalance in budget for SIA work in comparison to engineering design work, and the submission of a Feasibility Study, resulting in an SIA which is not properly integrated with the engineering, infrastructure, workforce and environmental studies. &lt;br&gt;Source: Foreseen by Filer and Jackson 1989: 2.</td>
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<tr>
<td></td>
<td>3. Danger of non-disclosure of mining/engineering challenges to SIA author(s) at Hidden Valley, notably as the full details of tailing and waste disposal options, resulting in inaccurate data. Not challenged by regulator or peer-reviewed. &lt;br&gt;Source: Jackson 2004: 20 (seven lines describing tailing and waste disposal options).</td>
</tr>
</tbody>
</table>

### Impact

<table>
<thead>
<tr>
<th>Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Accuracy of original SIA reports not re-evaluated when the Ok Tedi mine began to impact downstream areas. New SIA work 1991-94 found serious unforeseen social impacts, too late to head off mine-threatening litigation. &lt;br&gt;Source: Burton 1993a/b; Kirsch 1993; Lawrence 1995; cf. Burton, Wiyawa and Foneng 2014.</td>
</tr>
<tr>
<td></td>
<td>2. Numerous social impact problems have arisen at Lihir that could have been anticipated better if the SIA work had been better evaluated and better funded (per complaint of SIA authors). The probable A$20,000 initial SIA budget dwarfed by comparison to the A$20 million committed to the Lihir Sustainable Development Programme in 2007 (and many other mitigation measures). &lt;br&gt;Source: e.g. Filer 1995; Filer and Imbun 2009; Filer and Macintyre 2006; Bainton 2010.</td>
</tr>
</tbody>
</table>

**Description of impact:** Near loss of mine (Ok Tedi). Large overruns on impact mitigation (Lihir). Near loss of environmental permit (Hidden Valley). It should be clarified that it is often the case that companies have a weak internal ability to use SIA reports to inform high-level decision-making, contributing to the risk.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>25</td>
</tr>
</tbody>
</table>

**Colour:** Red  
**Risk level:** Very high
What is the risk there is no verification of the accuracy or truthfulness of environmental impact assessment (EIA) reports?

Note: PP08 and PP09 very similar as Environment Act 2000 treats ‘physical and social environmental impacts’ together (numerous sections).

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
<th>Code PP09</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Several projects have in the past been planned on one mine configuration, then operated on another without further studies. Example of Ok Tedi where a narrow impact footprint was envisaged and narrowly focussed EIA reports were only slowly reassessed for their fitness for purpose when the impact footprint expanded. Source: Maunsell 1982.</td>
<td></td>
</tr>
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<td></td>
<td>2. Danger of a long gap between the preparation of the parts of the EIA reporting that relate to land and resource use, and the imbalance in budget for ancillary EIA work in comparison to engineering design work, and the submission of a Feasibility Study, resulting in an EIA which is not properly integrated with the resettlement, infrastructure, workforce and environmental studies. Source: Sullivan and Hughes 1989; this report, p. 65.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Danger of non-disclosure of mining/engineering challenges to EIA author(s), notably as the full details of tailing and waste disposal options, resulting in inaccurate data. Not challenged by regulator or peer-reviewed. Source: Jackson 2004: 20 (seven lines describing tailing and waste disposal options).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Accuracy of original EIA reports only slowly re-evaluated when the mine began to impact downstream areas. Denial of major environmental impacts, too late to head off mine-threatening litigation. Source: IIED &amp; WBCSD 2002; Banks and Ballard 1997; Marychurch and Stoiano 2006; Campbell 2011.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Case of poor resettlement planning for Kapit village where insufficient information was known relating to land and resource use, e.g. land requirements per person/year, resulting in a failed resettlement program. Source: Box 7; Hemer 2015; L. Kabariu pers. comm. to J. Burton 1992-94, 2016; Penias Tadak Zikmet pers. comm. to J. Burton 2016.</td>
<td></td>
</tr>
</tbody>
</table>

**Description of impact:** Near loss of mine and environmental impacts that will last for centuries (Ok Tedi). Large overruns on impact mitigation (Lihir). Near loss of environmental permit (Hidden Valley). It should be clarified that companies may use external consultant for specialist EIA reports but may do regular monitoring in-house, and that if the two forms of EIA are not integrated well, this contributes to the risk.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score: 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td></td>
</tr>
</tbody>
</table>

**Colour:** Red  
**Risk level:** Very high
**What is the risk that in practice there is no due diligence on applicants’ claims regarding their capacity and financial resources?**

<table>
<thead>
<tr>
<th><strong>Likelihood Score</strong></th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
</table>
| 4 / 5                | 1. Weak capacity in government generally to assessment financial competence of incoming business of all kinds. Strong risk of applicants proposing grossly undercosted mine plans, thus triggering Mining Lease (lower compliance cost) rather than Special Mining Lease awards.  
**Source:** e.g. Turner and Kavanamur 2009. |
|                      | 2. If an applicant lacks technical capacity or in-country experience this will heighten the risk of a compromised ability to comply with environment permitting conditions. All applicants proposing mines after BHP’s legal troubles in 1996 and in the post-MMSD period should know what happens with inadequate attention to foreseeable risks.  
**Source:** e.g. Banks and Ballard 1997; IED & WBCSD 2002: xix, 150, 155, 188, 314, 378. |
|                      | 3. Weak capacity in MRA to assess sustainability performance of incoming mining companies due to stalled implementation of sustainability and women-in-mining initiatives. Strong risk of harm to communities and reputational damage to partners in joint ventures.  
**Source:** e.g. Turner and Kavanamur 2009; Dom 2003, 2007; ICMM 2014. |

<table>
<thead>
<tr>
<th><strong>Impact Score</strong></th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
</table>
| 4 / 5            | 1. Hidden Valley awarded a Mining Lease on forecast construction costs of US$205 million when final cost would be US$675 million. A Special Mining Lease should have been awarded.  
**Source:** Harmony 2005: 37; Harmony 2008: 87. |
|                  | 2. Waste rock discharged into the Watut River at Hidden Valley without permission during construction at Hidden Valley. So-called ‘side-casting’ believed to have started as a result of pre-stripping of the orebody to access gold-bearing layers in a hurry / company under financial pressure to start production. Government later ordered an independent review and (some) remediation.  
**Source:** SMEC 2010; Ketan and Geita 2011. |
|                  | 3. Hidden Valley project ultimately saved by joint venture with Newcrest Mining. Attempts to lift sustainability performance probably prompted by Newcrest rather than mine inspectors or MRA project coordination because of fears of reputational damage. No full account of the side-casting episode published for the public.  
**Source:** Newcrest 2010: 42; Ketan and Geita 2011. |

**Description of impact:** The impacts of a lack of due diligence on applicants’ claims about their capacity and financial resources, and their likely sustainability performance, typically fall on communities in the form of environmental and local development failures. This is an especially egregious materialised risk given the supposed major progress in social responsibility areas in recent years.

**Likelihood x Impact =** 4 x 4  
**Total score:** 16  
**Colour:** Red  
**Risk level:** Very high
**What is the risk that there is no due diligence on applicants’ integrity, such as past lawful conduct and compliance?**
Papua New Guinea a member of Interpol but Interpol rarely active in business-related crimes in the country, REDD scams being an exception.

<table>
<thead>
<tr>
<th>Code</th>
<th>PP11</th>
</tr>
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</table>

**Likelihood Score**  
4 / 5

**Evidence to support assessed likelihood**
1. Weak capacity in government generally to assess past lawful conduct of incoming business of all kinds; risk of failing to determine whether entities have been sanctioned by, for example, the World Bank for misconduct.  
**Source:** Sharman 2017; see 1ff. for discussion of corruption inquiries.

2. Under-capitalised ‘tiny company’ cleared to acquire Hidden Valley prospect in 1996 (not the eventual developer). Hype in the business media may plausibly distract regulators from looking more deeply at the records of incoming companies.  
**Source:** e.g. BRW 2 Dec 1996.

3. Risk that companies may have done, or may do while in PNG, deals in other jurisdictions that give rise to suspicion of absconding from Papua New Guinea with unpaid liabilities.  
**Source:** Australian Solomons Gold 2008: Appendix 17; *The National* 21 April 2015.

**Impact Score**  
4 / 5

**Evidence to support assessed impact**
1. Sanctioning of a MCC-related entity by the World Bank discussed on p. 70. This is cited here as an instance of risk-taking behaviour by PNG authorities. No direct impact because no close link has been established to the MCC entity in PNG and misconduct has not been suggested. However, indirect impact in that failure to do due diligence when there are plausible reasons to do so demoralises staff the regulatory authorities.  
**Source:** Box 3; *World Bank Press Release* 28 Sep 2011; ‘government directives’ to Labour Department, p. 10.

2. Australian Gold Fields placed into administration in March 1998, staff thrown out of work, local logistical suppliers faced months of delay in having their invoices settled.  
**Source:** ASX 9 Mar 1998; see longer discussion, p. 69.

3. New Guinea Gold operated the small Sinivit mine. Technical failings led to sudden closure in 2014; the minister said the company had ‘fled the country’. Major impact on employees and the environment; no proper decommissioning and rehabilitation of the site. Unclear whether NGG had a clear record elsewhere before acquiring the project.  
**Source:** *The National* 5 Oct 2015; *Post-Courier* 4 Nov 2015

**Description of impact:** Impacts, which stand to damage the livelihoods of local stakeholders, go to (a) the reputation of PNG as an investment destination, (b) the reputation of the home countries of law breakers for effectively policing business practices originating in their jurisdictions, and (c) the effectiveness of international enforcement organisations.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>4 x 4</th>
<th>Total score: 16</th>
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</table>

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<tr>
<th>Colour:</th>
<th>Red</th>
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</table>

<table>
<thead>
<tr>
<th>Risk level:</th>
<th>Very high</th>
</tr>
</thead>
</table>
**What is the risk that the commissioning process for SIA / EIA will compromise the impartiality and scientific quality of SIA / EIA reports and their ability to anticipate key impact issues?**

Frequent risk on all projects.

### Likelihood of Risk

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>4 / 5</th>
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<tbody>
<tr>
<td>Evidence to support assessed likelihood</td>
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</table>

1. Impact studies start too far in advance of mine construction, creating the danger that, however well done, they cannot reflect the final configurations of the project and therefore are unable to anticipate key impact issues.

**Source:** e.g. Jackson 1977; Jackson et al. 1980; Maunsell 1982.

2. Risk that if SIA studies are terminated by the applicant before the Feasibility Study has determined the mine design, and were not given adequate time to understand the impact area properly, scientific quality of SIA reports will be compromised.

**Source:**

3. Danger of a long gap between the preparation of the parts of the EIA reporting that relate to land and resource use before the Feasibility Study has determined the mine design, resulting in an EIA which is not properly integrated with the resettlement, infrastructure, workforce and environmental studies.

**Source:** Sullivan and Hughes 1989 based on 1987 fieldwork.

### Impact of Risk

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>4 / 5</th>
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<tr>
<td>Evidence to support assessed impact</td>
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</table>

1. Mine planning and SIA studies started at Ok Tedi in 1977 but the mine plan was changed before operation started in 1984. SIA update studies re-started ten years later found severe impacts in the river communities downstream of the Ok Tedi mine.

**Source:** Jackson 1977; Jackson et al. 1980; Maunsell 1982; Filer, Hassall and Kandason 1991; Burton 1993a/b; Kirsch 1993; Lawrence 1995

2. This very risk was predicted by Lihir SIA authors in their introduction to the 2nd edition of the report; report completed two months before formation of landowner association; report completed before requirement for land at the now severely impacted Kapit village was known.

**Source:** Filer and Jackson 1989: 2; Box 7.

3. Lihir land and resource use study undertaken in 1987 before community relations effort started to request land for project use, in 1988. The highly compromised scientific quality of the parts of the EIA relating to land and resource use fed into poor resettlement planning.

**Source:** Box 5; Hemer 2015; L. Kabariu pers. comm. to J. Burton 1992-94, 2016; Penias Tadak Zikmet pers. comm. to J. Burton 2016.

**Description of Impact:** The impact of poor integration between parts of SIA / EIA reports and mine designs plagues all projects. Some experts work together; secrecy can deny others of access to the critical data of their colleagues. The timeliness of field studies affects scientific quality. Overall, poor record in SIA / EIA reports of anticipating critical project impacts.

| Likelihood x Impact = | 4 x 4 | Total score: | 16 |
|------------------------|-------|--------------|
| Colour:                |       | **Red**      |
| Risk level:            |       | **Very high**|
What is the risk that SIA / EIA reports will be concealed from government and the public under commercial-in-confidence conditions when a mining company does not like their impacts forecasts and new, more favourable reports commissioned? Plausible risk on all projects, but difficult to quantify.

| Code  | PP-N02 |

### Likelihood

**Score**

| 4 / 5 |

**Evidence to support assessed likelihood**

1. Strong unforeseen risk impacts likely when EIA work, perhaps commissioned by an earlier owner, is not released for various reasons or not fully summarised by an award applicant.

**Source:** Water and Resources Use Survey for Aurora Gold by Makap 2000.

2. Strong unforeseen risk impacts likely when completed SIA and landowner identification work, perhaps commissioned by an earlier owner, is not released for various reasons or not fully summarised by an award applicant.

**Source:** SIA for Aurora Gold by Burton (2001).


**Source:** Banks et al 2010.

### Impact

**Score**

| 4 / 5 |

**Evidence to support assessed impact**

1. Makap died between ownership of Hidden Valley by Aurora Gold and its acquisition by the eventually award applicant Harmony Gold. Report supplied to new SIA consultant was not updated to match new assumptions; the effects of side-casting on communities living along the Watut River was not taken into account.

**Source:** Jackson 2004; SMEC 2010; Ketan and Geita 2011.

2. Limited earlier information provided to Harmony’s final SIA author for review. Original landowner identification work not passed on. Impact contributed to ‘recognition shift’ at Hidden Valley depriving villages of health services and entitlements to employment.

**Source:** Box 6; Burton 2001; Jackson 2004; Box 6.

3. A brief ‘Socio-economic Environment’ subsection of the MOPU environmental report was prepared by a consulting firm not involved in the UNSW work to replace the UNSW’s lengthy study. Very strong impacts of MOPU seen across Lihir simply not reflected in the redacted version.

**Source:** Banks et al 2010; Banks 2013; discussion with authors.

**Description of impact:** The impact of concealing, redacting, or simply re-writing impact reports plagues all projects and is assisted by frequent changes of ownership and a culture of ‘the latest owner knows best’. It contributes to (a) the poor record in SIA / EIA reports of anticipating critical project impacts and (b) inconsistency between MOAs and factual information about project areas.

| Likelihood x Impact = | 4 x 4 | Total score: | 16 |

**Colour:** Red

**Risk level:** Very high
What is the risk that indigenous peoples will not be recognised in the project area?  

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
</table>
| 4 / 5            | 1. Strong likelihood that that indigenous peoples will not be recognised in the project area by regulatory officials.  
  Source: PNG not among signatories of UNDRIP and has not acceded since. |
|                  | 2. Strong likelihood of multinational mining companies failing to recognise indigenous peoples in entire jurisdictions, based on faulty advice. In PNG, only Newcrest and Harmony acknowledge the presence of indigenous peoples in their project areas.  
|                  | 3. Mining companies likely to proceed with operations, or acquire them from other companies, without due diligence of whether they have full consent, because advised by government officials following national policy.  
  Source: All mining companies except Newcrest and Harmony. |

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
</table>
| 4 / 5        | 1. People who belong to any of PNG 800+ language groups are indigenous peoples according to UN criteria; failing to acknowledge this is to rely on faulty advice.  
  Source: Martínez Cobo 1987 |
|              | 2. Companies denying indigenous peoples status insufficiently equipped to recognise, for example, causes of local conflicts, and slow to remediate relationships with communities.  
  Source: Numerous: e.g. May and Spriggs 1990; Kirsch 2014; Burton 2014. |
|              | 3. Case of Kapit village – FPIC not achieved, resettlement agreement signed after State had accepted the proposal for the development and issued an SML; severe impacts on the village community (primary impacts created 1995-2010).  
  Source: Discussion in Box 7; Hemer 2015. |

Description of impact: This is a fundamental impact. Examples provided in the body of the report demonstrated the repeated cutting of corners due imperfectly obtained FPIC and poor management of culturally important sites. A counter example is the manner in which the Community Mining Continuation Agreement have been negotiated in the 156 villages downstream of Ok Tedi (e.g. CMCA Parties 2007).

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 4</td>
<td>16</td>
</tr>
</tbody>
</table>

Colour: | Red
Risk level: | Very high
What is the risk that companies will not report their adherence to Corporate Social Responsibility norms, such as reporting to Global Reporting Initiative standards?  

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
<th>Code PP-N08</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. The GRI framework, used in a sustainability reporting, and other CSR norms were introduced to help make the operations of businesses of all kinds more transparent; but only 4 of 33 companies with activities in PNG surveyed in 2013 undertook sustainability reporting.</td>
<td>PP-N08</td>
</tr>
<tr>
<td></td>
<td>2. Almost certain that companies will not know of, or will fail to abide by, the Voluntary Principles on Security and Human Rights.</td>
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<td></td>
<td>3. Plausible risk that, while companies may have Business Codes of Conduct, officials may still not understand obligations imposed by the treaties of their home countries, e.g. OECD Convention of Combating Bribery of Foreign Public Officials</td>
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</tr>
<tr>
<td>Impact Score</td>
<td>Evidence to support assessed impact</td>
<td></td>
</tr>
<tr>
<td>4 / 5</td>
<td>1. Out of the 33 mining companies surveyed with interests in PNG in 2013-14, 27 did not use the word ‘sustainability’ anywhere. Of 4 that used the GRI, all left out data; none were fully compliant. The impact is to make information on mining activities extreme hard for the public to access.</td>
<td></td>
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<td></td>
<td>2. Companies frequently caught up in events where police launch raids on villages from a departure point inside a mining lease, e.g. Wangima village burnt down twice at Porgera.</td>
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<tr>
<td></td>
<td>3. Now de-registered Australian company caught paying sign-on ‘facilitation payments’ in Solomon Island believing it a normal business practice: suggests similar behaviour in PNG is plausible.</td>
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</table>

**Description of impact:** Taking sustainability reporting seriously is to do no more than the ICMM, whose members include the world’s largest miners, advocates. The purpose is both for companies to acquire the habit of transparency and to bring about change in the way they think about impacts of people and environments around them. In doing this, the chances of petty corruption and the collusive corruption described in many of the common risks are likely to be lowered.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score:</th>
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<tbody>
<tr>
<td>5 x 4</td>
<td>20</td>
</tr>
</tbody>
</table>

**Colour:** Red

**Risk level:** Very high
**Category 4: Responses-Accountability (RA – four ‘red’ risks)**

**RA07**

**What is the risk that EIA reports will not be publicly available once finalised?**

‘Publicly available’ concerns not only in-principle availability; web sites with stable URLs that carry EIA (and SIA) reports in PDF format are the best standard. RA07 and RA09 very similar as *Environment Act 2000* treats ‘physical and social environmental impacts’ together (numerous sections).

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 / 5</td>
<td>1. Unlikely to access full EIAs as member of public; <em>Environment Act 2000</em> says Minister to provide EIAs for public review, but it is typical for reports only to be available only at CEPA premises in Port Moresby; no information or project documents for review on web site.</td>
</tr>
</tbody>
</table>

2. Some projects place EIA copies online, but keep deregistering and reregistering their web sites, even when the project has an oversight body with a written constitution to provide information transparently. Examples: PEAK (for Porgera); ESAP (for Hidden Valley).  
*Source*: Try internet archive:  

3. High risk, once passed, of copies of EIAs becoming lost; needed for length of project, but no repository maintained at DEC / CEPA, or copies forwarded to university libraries; nothing online.  
*Source*: [http://pngcepa.com](http://pngcepa.com)

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 / 5</td>
<td>1. Repeated passing of EIAs with limited opportunity for public scrutiny. CEPA is incentivised, because now operating on a cost-recovery basis, to rush approvals; ‘Key Deliverable’ for 2016 on web site is ‘Environment impact assessment approval processes completed on time and within budget’</td>
</tr>
<tr>
<td></td>
<td><em>Source</em>: <a href="http://pngcepa.com">http://pngcepa.com</a></td>
</tr>
</tbody>
</table>

2. Porgera’s oversight body PEAK was set up after CSIRO review (N.B. review document unavailable) and intended to make Porgera’s environmental performance transparent, but now seems not to have met for 1-2 years and web site has disappeared with all its reports.  

3. Modern EIAs can have 20-30 appendices of specialist studies – seldom available on request; have to know the author and ask for a copy; not transparent.  
*Source*: e.g. Araho 2004.

**Description of impact**: This is collusive corruption because both government and companies (many others than those above could be cited) collude not to inform the public in detail about environment assessments. This enables both to get what they want (EIA ‘approval processes completed on time’ [http://pngcepa.com](http://pngcepa.com)) rather than fulfil their joint obligation to protect the environment during mining activities.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>Total score: 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 4</td>
<td></td>
</tr>
</tbody>
</table>

**Colour**: Red  
**Risk level**: Very high
Assuming SIAs are required, what is the risk that SIA reports will not be publicly available once finalised?

‘Publicly available’ concerns not only in-principle availability; web sites with stable URLs that carry EIA (and SIA) reports in PDF format are the best standard. RA07 and RA09 very similar as Environment Act 2000 treats ‘physical and social environmental impacts’ together (numerous sections).

<table>
<thead>
<tr>
<th>Code</th>
<th>RA09</th>
</tr>
</thead>
</table>

### Likelihood Score

4 / 5

#### Evidence to support assessed likelihood

1. Unlikely to able to access SIA components of EIAs as member of public; Environment Act 2000 says Minister to provide EIAs for public review, but it is typical for report only to be available only at CEPA premises in Port Moresby; no information or project documents for review on web site.

**Source:** [Environment Act 2000 s55 Public Review and Submissions](http://pngcepa.com)

2. Some projects place SIA copies online, but keep deregistering and reregistering their web sites, even when the project has an oversight body with a written constitution to provide information transparently.

**Source:** On the internet archive only:

3. High risk, once passed, of copies of SIAs becoming lost; needed for length of project, but no repository maintained at DEC / CEPA, or copies forwarded to university libraries; nothing online.

**Source:** [http://pngcepa.com](http://pngcepa.com)

### Impact Score

4 / 5

#### Evidence to support assessed impact

1. Repeated passing of SIA components of EIAs with limited opportunity for public scrutiny. CEPA is incentivised, because now operating on a cost-recovery basis, to rush approvals; ‘Key Deliverable’ for 2016 on web site is ‘Environment impact assessment approval processes completed on time and within budget’

**Source:** [http://pngcepa.com](http://pngcepa.com)

2. Porgera’s oversight body PEAK was set up after CSIRO review (N.B. review document unavailable) and intended to make Porgera’s social performance transparent, but now seems not to have met for 1-2 years and web site has disappeared with all its reports.

**Source:** CSIRO 1996; [www.peak-pjv.com](http://www.peak-pjv.com) (defunct); [www.peakpng.org.pg](http://www.peakpng.org.pg) (defunct).

3. Modern EIAs can have 20-30 appendices of specialist studies including SIAs – seldom available on request; have to know the author and ask for a copy; not transparent.

**Source:** Jackson 2004.

**Description of impact:** The non-availability of SIAs has a particularly high impact for community members trying to see how MOA commitments relate to forecast social impacts and other parts of SIAs like the identification of stakeholder groups. It is collusive corruption between government and companies to lose or carelessly discard SIAs. It enables both to get what they want (EIA ‘approval processes completed on time’) rather than fulfil the obligation to guard against ‘agreement failure’.

<table>
<thead>
<tr>
<th>Likelihood x Impact</th>
<th>4 x 4</th>
<th>Total score:</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td></td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>Risk level:</td>
<td></td>
<td>Very high</td>
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</tbody>
</table>

- 132 -
What is the risk that there will be inadequate monitoring of licence- and permit-holders and their obligations?

<table>
<thead>
<tr>
<th>Likelihood Score</th>
<th>Evidence to support assessed likelihood</th>
<th>Code RA14</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 5</td>
<td>1. Almost certain to be no in-depth environmental monitoring of projects by regulators. MRA, CEPA, DNPM, DLPP etc do not have budget for detailed investigations and rely on complaints + funding to be allocated. MRA, CEPA rely on reviewing quarterly / annual reports from operators. No independent monitor for MOA / agreement compliance other than local committees. Source: <a href="http://pngcepa.com">http://pngcepa.com</a></td>
<td></td>
</tr>
</tbody>
</table>

2. Guaranteed in the case of Ok Tedi because government exempted the company from compliance with environmental legislation and passed a law against suing for environmental damage from outside the country. Source: Mining (Ok Tedi Sixth Supplemental Agreement) Act 1986; Compensation (Prohibition of Foreign Legal Proceedings) Act 1995.

3. Large gap evident between EIA / SIA studies and MOAs or other kinds of agreement; it is certain that none of the regulators has sufficient staff with the disciplinary background or expertise to minutely comb through permits and agreements to verify compliance. Source: J. Burton, personal observations 1990-93, 1995-2001, 2005-2013, 2016.

<table>
<thead>
<tr>
<th>Impact Score</th>
<th>Evidence to support assessed impact</th>
<th></th>
</tr>
</thead>
</table>

2. Ok Tedi river impacts are severe and continuing. Source: Kay 1995; IIED & WBCSD 2002; Banks and Ballard 1997; Marychurch and Stoiano 2006; Campbell 2011.

3. Case of Hidden Valley MOA where a ‘recognition shift’ has downgraded three landowner villages from their proper status, per SIA, depriving them of entitlements to health services and employment. Note: this is just a single instance of ‘agreement failure’ among many others. Source: Box 6; Jackson 2004: 26-27; L. Giam pers. comm. to J. Burton 2011; Burton et al. 2012: 37.

Description of impact: The various scenarios shown above, and others, are a major contributor to the unsatisfactory social and economic development outcomes of mining in PNG (cf. UNDP 2014) and can be defended against by improving capacity in regulatory agencies. Recommendations are made under Risk Theme 2 ‘Risks concerning the human resources of regulatory agencies’ in Chapter 4 (p. 91).

\[
\text{Likelihood x Impact} = \ 5 \times 5 \\
\text{Total score:} \ 25
\]

Colour: Red  
Risk level: Very high
When reporting requirements, such as for exploration or production data, have been deliberately breached, e.g., false data have been published, what is the risk that no action will be taken in response?

**Evidence to support assessed likelihood**

1. Frequent evidence of the veiling over of inadequate data, on bedrock stability, ‘spoil disposal’ during construction etc – this counts as ‘false’ data if it downplays the likely impacts of a mine to make an award proposal more attractive – but likely not to be picked up by government reviewers.  
**Source:** Anawe Plant Site case, see Box 4.

2. Cases of a mining awards being made over a protected area, or in areas of high biodiversity adjacent to protected areas.  
**Source:** DEC 1993.

3. When detailed studies are redacted or concealed, there is an extremely high risk of false data being presented by an applicant. UNSW team wrote a 200 page SIA for Lihir Gold’s Million Ounce Plant Upgrade (MOPU). Report was shelved and 14 page subsection of environmental proposal written by consulting firm: veiling over detailed data and analysis constitutes presenting ‘false data’ in an effort to smooth over complications and expedite an award decision (new environmental permit).  
**Source:** Banks et al 2010

**Evidence to support assessed impact**

1. Anawe spoil disposal area failed; Maiapam Creek ‘mud glacier’ descended 4.5 km down river system between 1989 and 1992, destroying gardens, covering alluvial gold area; caused political crisis and, with other river damage issues led to litigation against company and a Ministerial decision.  
**Source:** Box 4; CSIRO 1996. PEAK foundation documents (on Internet Archive).

2. Special Mining Lease issued on Lihir taking in the Scrub Fowl nesting area around the Kapit hot springs. Applicant commissioned Melanesian Scrub Fowl study in the Kapit hot springs area as part of 1989 Environmental Plan, but did not update after Lihir gazetted as Wildlife Management Area in 1991 and Feasibility Study, including the EP, presented to government without an update in 1992 (partial liability rests with government in not highlighting the inconsistency). General loss of ecosystem services to Kapit community as mine design initially avoided the sensitive area, then re-included it for a low grade ore stockpile.  

3. Very strong impacts of MOPU seen across Lihir simply not reflected in the subsection. Specifically on ‘false data’, failing to disclose landowner expectations about sharing in the benefits of geothermal power generation had stands to create a future impact as applicant recently disclosed that geothermal power worth US$218 million (K650 million) had been generated since the plants were introduced with no payment to landowners (there is no national geothermal policy).  
**Source:** Banks et al 2010; 44, 105; Banks 2013; Newcrest 2016.

**Description of impact:** The various scenarios shown above, and others, are a major contributor to the unsatisfactory social and economic development outcomes of mining in PNG (cf. UNDP 2014) and can be defended against by improving capacity in regulatory agencies. Recommendations are made under Risk Theme 2 ‘Risks concerning the human resources of regulatory agencies’ in Chapter 4 (p. 91).

<table>
<thead>
<tr>
<th>Likelihood Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4 / 5</td>
<td>1. Frequent evidence of the veiling over of inadequate data, on bedrock stability, ‘spoil disposal’ during construction etc – this counts as ‘false’ data if it downplays the likely impacts of a mine to make an award proposal more attractive – but likely not to be picked up by government reviewers.</td>
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\[
\text{Likelihood x Impact} = 4 \times 4 \\
\text{Total score: 16}
\]

**Colour:** Red  
**Risk level:** Very high
Category 5: Responses-Legal (RL – one ‘red’ risk)

RL01

Assuming consultation with affected communities is required, what is the risk that their free, prior, and informed consent will be ignored as a result of corrupt practices?

Note: similar assessment to PP06 and PP07.

<table>
<thead>
<tr>
<th>Code</th>
<th>RL01</th>
</tr>
</thead>
</table>

**Likelihood**

<table>
<thead>
<tr>
<th>Score</th>
<th>Evidence to support assessed likelihood</th>
</tr>
</thead>
</table>
| 5 / 5 | 1. Danger that representative bodies will be incorporated without the full set of local stakeholders needed to provide FPIC.  
Source: (risk stems from international FPIC discussions and definitions) |
|       | 2. Danger of a ‘recognition shift’ in definition of who is a project area landowner with rights defined in landholder or community agreements unless social mapping data is (a) commissioned properly (b) signed off by local communities (c) adhered to in implementing agreements (subrisk duplicated from PD06)  
Source: Box 6; Burton 1991a. |
|       | 3. Danger of land agreements were made with ‘agents’ under the Land Act who then, though incumbency, become front men in negotiations that will make decisions about the land of other families.  
Source: PJV 1987; Gibbs 1981. |

<table>
<thead>
<tr>
<th>Impact</th>
<th>Evidence to support assessed impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>5 / 5</td>
</tr>
</tbody>
</table>
|        | 1. Case of Kapit village where Lihir mine design included the need for Kapit land without notifying the owners; consent for resettlement not given at the time the mining award was made by the State.  
|        | 2. ‘Recognition shift’ occurs in landowner definition from SIA submitted with the Proposal for Development to the interpretation given in the MOA. Minava, Akikanda, Yokua and Kaumanga villages lose their recognition as landowners, not miss out on employment, and cease to receive primary health care while living in an area of extreme mortality. State was involved in the earlier recognition exercises (Land Court, 1992 mediation), infrequent visits from Project Coordinator means State is now unaware of severity of the shift.  
|        | 3. At Porgera, land agreements were made with each of about 300 ‘agents’ under the Land Act. However, only 24 ‘superagents’ were invited into the final stages of the Development Forum, representing branches of the seven landowning descent lines, but without the right in custom speak for the land of other families. State endorsed the process and participated in it. Impact seen in poor outcomes for Porgerans and the control in rental incomes by very few men, perhaps as few as 20 in a population of about 10,000.  
Source: Golub 2010; Johnson 2012; Burton in press. |

Description of impact: As detailed above, impacts seen at many projects often arise from the failure to verify whether community leaders have been selected in a way that they represent community members’ interests and to validate FPIC processes.

\[
\text{Likelihood x Impact} = 5 \times 5 \quad \text{Total score:} \quad 25
\]

**Colour:** Red  
**Risk level:** Very high
APPENDIX B

CONTRIBUTION OF MINING TO THE PAPUA NEW GUINEA ECONOMY

### Table 3
Cumulative production statistics for gold, silver and copper.
Medium and large mines in Papua New Guinea, 1972-2013
Source: Mudd and Roche (2014: Table 1).

<table>
<thead>
<tr>
<th>Mine</th>
<th>Period</th>
<th>Ore (Mt)</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Copper (% Cu)</th>
<th>Gold (kg)</th>
<th>Silver (kg)</th>
<th>Copper (t)</th>
<th>Waste Rock (Mt)</th>
<th>Companies[^1^[c]]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ok Tedi</td>
<td>1984–2012[^2]</td>
<td>~668</td>
<td>~0.9</td>
<td>-</td>
<td>~0.8</td>
<td>~416 514</td>
<td>~836 000</td>
<td>~4 343 500</td>
<td>~998</td>
<td>Ok Tedi Mining Joint Venture</td>
</tr>
<tr>
<td>Mt Victor</td>
<td>1987–1990</td>
<td>0.199</td>
<td>~3.2</td>
<td>~1.8</td>
<td>-</td>
<td>636</td>
<td>360</td>
<td>-</td>
<td>0.19</td>
<td>Niugini Mining[^32] 100%, c</td>
</tr>
</tbody>
</table>

Note: Mt = million tonnes, g/t = grams per tonne.

[^1]: Still operating in 2013.
[^2]: Place Dome was taken over by Barrick Gold in early 2006.
[^3]: Tolukuma was bought by the PNG Government in February 2008 (through state company Petromin PNG) but does not report production statistics; data shown is approximate only.
[^4]: Some production statistics not reported, approximate values assumed.

### Table 4
Source: UNDP (2014: Figure 4.9) based of Bank of Papua New Guinea statistics.
Transparency International’s Mining for Sustainable Development Programme

Transparency International Papua New Guinea (TIPNG) is one of 20 national chapters participating in Transparency International’s global Mining for Sustainable Development (M4SD) Programme. The Programme is coordinated by TI Australia. The M4SD Programme complements existing efforts to improve transparency and accountability in extractive industries by focussing specifically on the start of the mining decision chain: the point at which governments grant and award mining permits and licences, negotiate contracts and make agreements.

The Programme has been about understanding the problem by identifying and assessing the corruption risks in the process and practice of awarding mining licences, permits and contracts. This report presents the main findings from the corruption risk assessment in Papua New Guinea.

TIPNG will work with key stakeholders from government, the mining industry, civil society and affected communities to improve transparency, accountability and integrity in the decisions about approving mining projects.

The participation of TIPNG in the Programme is supported by the BHP Billiton Foundation. Globally, the M4SD Programme is also funded by the Australian Department of Foreign Affairs and Trade.