POVERTY OF WEALTH

WHY MINERALS NEED TO BE PART OF THE RURAL ECONOMY

JASON KRUPP

THE
NEW ZEALAND
INITIATIVE

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2014

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Our mission is to help build a better, stronger New Zealand. We are taking the initiative to promote a prosperous, free and fair society with a competitive, open and dynamic economy. We develop and contribute bold ideas that will have a profound, positive, long-term impact.

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EXECUTIVE SUMMARY

This report has sought to answer a conundrum: why are the resource-rich rural regions of New Zealand not tapping into the wealth beneath their feet, even as these communities experience ongoing declines amid a dwindling economic opportunity set?

The facts speak for themselves. The rural regions are facing a significant challenge:

- Economic growth is concentrated in urban areas, particularly Auckland, Wellington and Christchurch, whereas half of the rural economies shrunk in the year ending June 2013, and a further three recorded no material growth.
- Only four of the country's regional councils saw job numbers increase between 2008 and 2013.
- 86% of all New Zealanders live in urban areas, up from about 45% a century ago, with urbanisation concentrating ageing in rural areas.
- On an operating basis, 68 out of 78 regional, district, city and unitary councils will be running budget deficits by 2022.

Yet this divided picture stands in stark contrast to the untapped mineral wealth under the country's feet. New Zealand already mines gold and silver, coal, and extracts large amounts of oil and gas from the Taranaki field, which contributes up to 5% of GDP per year. What's more, this sector is under-exploited and could potentially expand significantly, depending on prospecting results. It is also a productive sector, with employees earning twice the New Zealand average ($105,645 versus $50,262 in 2011 terms).

One potential answer to the puzzle is that these resources have not been tapped in order to avoid the so-called resource curse – the phenomena in which mineral-rich countries experience lower economic development than their less well-endowed peers. But as this report shows, this is incorrect:

- The negative effects of high mineral endowment, such as declining terms of trade, currency fluctuations, and the Dutch Disease, can largely be mitigated by strong institutions.
- New Zealand is rated 3rd on the Fraser Institute's Economic Freedom of the World Index, a measure of institutional quality.
- Mining projects have a long-term contribution to make to local economies, and are more resistant to pressures from globalisation.
- Changing business practices among mining companies place greater focus on economic sustainability of communities once mineral bodies are exhausted, avoiding the boom-and-bust pitfalls.

The real answer to the puzzle lies in the unintended consequences of central government regulation. The Resource Management Act, a hybrid of planning and environmental protection legislation, in particular:

- Underweights economic sustainability of local communities versus ill-defined environmental factors such as outstanding natural features and landscapes.
- Is overly complex and open to highly varied interpretation, adding to consenting costs while decreasing the predictability of outcome.
- Allows consents to be open-endedly appealed, creating an opportunity for highly motivated fringe groups to wage a legal war of attrition against developments to which they are ideologically opposed.

It is not just the applicants who struggle with the complexity of the legislation; a lack of guidance from central government leaves local councils little choice but to interpret the legislation on a case-by-case basis. Since all royalties and taxes from mineral projects accrue to central government, there is little means for local government to

defray locally borne costs – hardly an incentive to embrace mining development.

This report shows that while rural New Zealand faces significant headwinds, encouraging responsible mining is one possible means of reversing this economic decline. Mineral extraction is capital intensive and pays off over the long-term, and in some cases represents decades of production.

Although specific policy recommendations will only be made in the second report of this series, it is clear that greater recognition of community sustainability is needed if New Zealand is to unpick its rural conundrum, and positive incentives are required to do this.

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INTRODUCTION

To the economic observer taking more than just a headline view of New Zealand, it would appear to be a country of two parts: one thriving and vibrant, the other moribund and shrinking. On one side of the divide is a relatively young urban population, equipped with marketable skills that earn high wages, and whose numbers swell every day as people from the regions come to seek their fortunes in the city. On the other side is heartland New Zealand, with a population that is both ageing and shrinking in relative terms due to declining economic opportunities and other change forces such as urbanisation.

Yet this divided picture stands in stark contrast to the untapped mineral wealth under the country's feet. New Zealand has an abundance of precious and industrial metals, as well as significant hydrocarbon energy resources in the form of coal, oil and gas, not to mention aggregates and non-metallic minerals such as limestone, various clays and silica materials. What is more, much of the onshore mineral wealth lies in rural New Zealand. In the North Island, gold can be found in and around the Coromandel Peninsula, while the West Coast of the South Island is rich in high grade coal exported for steel making. Goldfields in the South Island were a source of wealth 160 years ago and still hold significant potential, and platinum group metals are an enticing export possibility. Offshore, the country's large exclusive economic zone could deliver billions in export dollars if a large oil and gas reserve the size of the existing Taranaki Basin is discovered. Undersea iron and phosphate mining could also substantially boost the bounty that New Zealand harvests from the ocean.

This first report in a series of two examines the regulatory impediments that prevent rural New Zealand from accessing the mineral riches that lie beneath the surface. The second will table a series of policy recommendations aimed at freeing up the untapped mineral estate.

Mining is not the cure for all that ails rural New Zealand, particularly in the face of macro-trends such as an ageing population, globalisation, automation and the higher wages paid to urban workers in the service sector. However, harvesting New Zealand's mineral estate is a vital part of the essential reforms aimed at reviving the regions. A major mining project such as the Waihi gold mine at the base of the the Coromandel Peninsula represents decades of employment and a significant boost to the local and national economy.

Importantly, New Zealand is an appealing place to live because of our reverence for the environment. Mining may seem at odds with this ideal, but it is possible to harness more of the available mineral estate responsibly concomitant with high levels of environmental protection. Regulatory tools and institutions are already in place but require adjustments so that the sound objective of conserving the ecosystem does not come at the cost of choking the economic well-being of the countryside.

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CHAPTER 1
PROVINCIAL POVERTY

On the surface, New Zealand's economy appears to be in good health. As one of the first developed countries in the world to go into recession ahead of global financial crisis, the economy quickly returned to growth despite the tailwinds of an international credit crisis; the collapse of the domestic non-bank finance sector; and the two major earthquakes that struck Christchurch, one of the country's biggest cities, in 2010 and 2011. Buoyed by a run of strong commodity prices and the Canterbury earthquake rebuild activity, the employment rate recently reached its highest level (65%) since early 2009;[1] the inflation outlook remains modest; and gross domestic product (GDP) for the year ending June 2014 grew by an annualised rate of 3.5% – among the highest in the developed world.[2]

TWO-SPEED ECONOMY

A deeper look reveals a schism in the economy, with urban regions outperforming their rural counterparts. It is to be expected that the regions hosting the four big cities of Auckland, Christchurch, Hamilton and Wellington account for over 70% of GDP, given the size of their respective populations. However, a breakdown by region shows how disparate the performance is. The most recent Statistics New Zealand data on regional nominal GDP (for the year ending March 2013) shows half the regional economies contracting in 2012–13, and three regions recording near flat to slow growth (Table 1.1).[3] The regions with the two largest urban centres fared far better, with Auckland recording over 3% GDP growth and Wellington 1.5%. (Canterbury saw the highest growth, at 6%, due to earthquake rebuild activity. Waikato's weak performance was due to the region's high exposure to agriculture, which suffered as a result of a severe drought in 2013).

Table 1.1: Nominal GDP by region, 2012–13

	2012		2013	Change
Region	**$ (million)**			**YoY (%)**
Northland	5,541		5,562	0.38
Auckland	72,374		74,746	3.28
Waikato	18,106		17,935	-0.94
Bay of Plenty	11,054		11,174	1.09
Gisborne	1,635		1,613	-1.35
Hawke's Bay	6,149		6,050	-1.61
Taranaki	8,282		8,200	-0.99
Manawatu-Wanganui	8,618		8,534	-0.97
Wellington	28,052		28,472	1.50
Tasman/Nelson	3,764	P	3,795	0.82
Marlborough	2,035	P	2,032	-0.15
West Coast	1,637	P	1,535	-6.23
Canterbury	26,261	P	27,843	6.02
Otago	9,013	P	9,147	1.49
Southland	5,056	P	5,001	-1.09

Source: Statistics New Zealand

1 Statistics New Zealand, "Household Labour Force Survey: June 2014 quarter" (Wellington: Statistics New Zealand, 6 August 2014).

2 Statistics New Zealand, "Services Lead to Growth in GDP – Gross Domestic Product: June 2014 Quarter", media release (Wellington: Statistics New Zealand, 18 September 2014).

3 Statistics New Zealand, "Regional Gross Domestic Product: Year Ended March 2013" (Wellington: Statistics New Zealand, 28 March 2014).

The data clearly shows that New Zealand's high rate of economic growth compared to its developed world peers is a two-speed economy in action: one half is urban and thriving, the other is rural and stagnant. Job growth reflects the same picture. In the five years to 2013, most regions experienced a decline in job numbers across all employment sectors (Table 1.2). However, four regions (Auckland, Taranaki, Tasman and the West Coast) bucked the trend with growing job numbers.

Table 1.2: Employment growth by regional council, 2008–13

Region	Employment growth (%)	Population (%)
Northland	-5.50	3.57
Auckland	**0.70**	**34.00**
Waikato	-2.60	9.39
Bay of Plenty	-4.00	6.26
Gisborne	-5.10	1.06
Hawke's Bay	-6.10	3.50
Taranaki	**0.20**	**2.48**
Manawatu-Wanganui	-6.50	5.24
Wellington	-3.00	11.06
Tasman	**2.30**	**1.09**
Nelson	-1.90	1.05
Marlborough	-11.30	1.03
West Coast	**2.50**	**0.74**
Canterbury	-0.60	12.61
Otago	-3.00	4.76
Southland	-3.60	2.14

Source: *Growing Apart: Regional Prosperity in New Zealand*

URBAN MAGNETS

Economic disparity between rural and urban regions helps lure people to the city. Bright Lights is not a unique phenomenon, with many developed countries experiencing the same shift in population. This phenomenon is driven by many factors, not least of which is the desire for higher wages. It is well established in economic literature that workers earn higher returns on their human capital – and indeed improve the quality of their human capital – in the big, highly mobile labour markets that can only be found in cities. Shamubeel Eaqub explored this gap in urban and rural wages in New Zealand in his book *Growing Apart: Regional Prosperity in New Zealand*. Using census data, he showed that upper middle-class families in Auckland and Wellington earn a gross salary of $75,000 to $130,000 a year, while their equivalent in the rest of the country earn between $47,000 and $80,000.[4] This is partly due to the higher costs of living and higher returns on human capital in the city.

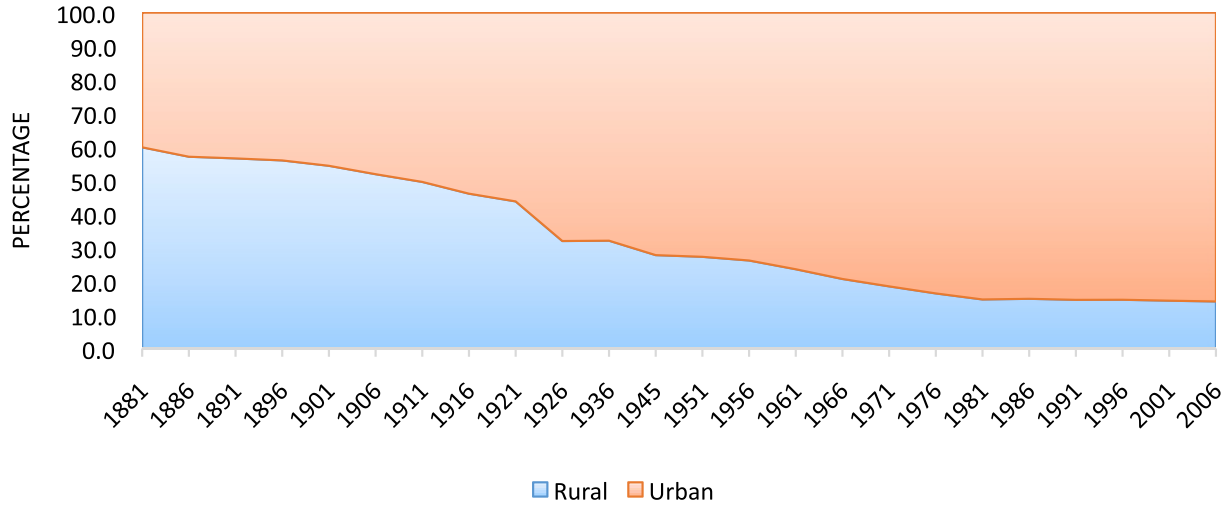
Indeed, the effect of the Bright Lights phenomenon can be seen in population statistics. Between 2007 and 2013, when the total population of New Zealand rose by 243,300 to 4.45 million (+5.5%), the population of rural New Zealand rose by 46,300 people (+3%).[5] However, the overall population growth in the same period disguises the steady decline in the rural population over more than a century. The total share of rural population has fallen from a peak of 59.9% in 1881 to a historic low of 14% as of 2006 – a level that can be reasonably assumed to have fallen further by 2014 based on other associated trends.[6]

4 Shamubeel Eaqub, *Growing Apart: Regional Prosperity in New Zealand* (Wellington: Bridget Williams Books, 2014), p. 10.

5 Statistics New Zealand, "Regional Gross Domestic Product: Year Ended March 2013", op. cit.

6 Statistics New Zealand, "2012 Yearbook Tables By Topic" (Wellington: Statistics New Zealand).

Chart 1.1: Urban versus rural population (as a percentage of total population), 1881–2006



Source: Statistics New Zealand

Eaqub attributes this decline to a combination of secular forces such as technological advances, globalisation, urbanisation and ageing, as well as factors specific to particular regions.[7] The effects of globalisation and technological advances can be readily seen in the employment figures by industry sector. In 1963, industries producing goods accounted for 37% of total full-time employment, but declined to 20% by 2013.[8] This is characteristic of many developed countries, with workers moving into higher paid service industry jobs as returns to labour in manufacturing declined. Rural areas in New Zealand are disproportionately affected by this phenomenon as many towns are, or were, reliant on a single industry such as timber milling or meat processing. Many labour intensive jobs have either been mechanised or moved to China and other emerging Asian economies with lower labour costs. Worse, rural centres have not been able to replace these jobs with higher paying service sector jobs as has happened in cities. Either due to the lure of Bright Lights or lack of economic opportunity, economically active people are moving away from the regions to urban areas.

This deleterious effect is likely to continue, concentrating ageing in the regions. Statistics New Zealand estimates suggest that by 2031, the median age of rural regions will range from 40 years (Otago) to 50.6 years (Marlborough). Meanwhile, regions with major urban centres will have significantly lower median age profiles, ranging from 37.5 years (Auckland) to 42.9 years (Canterbury).[9] Since the median age is the point that divides the population into two halves, one older and one younger, the higher the median age the smaller the economic base of a region will be.

COUNCIL CONUNDRUM

Urbanisation is shrinking the ratepayer base that rural councils use to fund the infrastructure and amenities (such as roading and water) required by communities and businesses. Councils could raise the rates on property owners to cover the falling number of ratepayers. However, since

7 Shamubeel Eaqub, *Growing Apart: Regional Prosperity in New Zealand*, op. cit. p. 29.

8 Statistics New Zealand, "Infoshare: Average Weekly Earnings (Employees) by Industry (ANZSIC06) and Sex (Qrtly-Mar/Jun/Sep/Dec)", Web (accessed 22 September 2014).

9 Statistics New Zealand, "National Population Projections: 2011 (Base) to 2061" (Wellington: Statistics New Zealand).

rural communities are ageing faster than urban centres, and have a greater proportion of their population reliant on fixed pension incomes, local councils struggle to pass on these costs to their older population. Politicians who try to raise rates struggle to get voted in, or are soon voted out.

The effects of ageing are reflected in the local government finances based on the fiscal projections that district, regional and unitary councils must submit as part of their 10-year plans (starting 2012).[10] On an operating basis, factoring in operating income against operating expenses, the country's 78 local government bodies are expected to run a $7.8 billion deficit by 2022. Indeed, only 10 of the country's 78 councils expect to achieve an operating surplus in this timeframe. These are Buller District, Central Hawke's Bay District, Kaikoura District, Kawerau District, Southland District, Upper Hutt City, Waimate District, Whakatane District, Bay of Plenty Regional Council, and Wellington Regional Council, with a net surplus of $151.5 million. On the red ink side of the ledger, the regions with major urban centres contribute to about half of this projected operating deficit (Auckland: -$3.4 billion; Canterbury: -$55 million; Waikato: -$48.6 million), but these regions and their urban cores are expected to see their economies and populations grow and the median age concentrate close to the 40-year mark. For the regions with older, shrinking populations, and whose economic pace is expected to wane further in the coming years, this debt represents a significant and growing burden.

VICIOUS CIRCLE

Rural New Zealand is indeed trapped in a vicious circle. Subject to secular changes in the global economy and higher returns to human capital in the city, rural residents are increasingly choosing to give into the allure of the city and relocate to urban areas. This trend is further shrinking economic opportunities in rural areas and the capacity of local government to provide the amenities and infrastructure needed to retain local residents and businesses, enticing even more people and businesses to move away from the countryside.

Without regulatory changes, this vicious circle of economic and population movement will deepen to the detriment of the country. New Zealand earns its wealth from primary products produced in rural areas, which will look increasingly empty and bleak if nothing is done to arrest this downward spiral.

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10 Local Government in New Zealand, "Local authority long-term plans", *Local Government in New Zealand – Local Councils*.

CHAPTER 2
LAND OF RICHES

The economic crisis facing rural areas in New Zealand stands in strong contrast to its onshore and offshore mineral wealth potential. These resources have been exploited for centuries, initially by Māori looking for greenstone and later by European settlers, which led to the Otago gold rush in the 1860s. Mineral extraction has continued to make a consistent contribution to the country, even as the economy modernised and the relative contribution from other primary sector sources increased. According to the latest figures, the mining sector contributed $1.2 billion to GDP (year ending June 2014), or about 1% of total.[11] Gold exports alone were worth almost $500 million in the year ending June 2014, and the precious metal is the second biggest export item to Australia after petroleum.

Meanwhile, the oil and gas sector ranked among the country's highest income earners, drawing in $1.4 billion over the same period.[12] These hard commodities are successfully being harvested by private companies such as Newmont Waihi Gold at the base of the Coromandel Peninsula, New Zealand Oil & Gas off the Taranaki shore, OceanaGold near the South Island town of Reefton, and the Macraes and Fraser mines in East Otago. Taxes on these and other minerals contribute significantly to government revenue in the form of royalties and energy resource levies (ERLs), worth $2.4 billion in the six years ending June 2013 (Table 2.1).[13]

Table 2.1: Government revenue from petroleum and mineral royalties and ERLs, 2008–13

	2007–08 $	2008–09 $	2009–10 $	2010–11 $	2011–12 $	2012–13 $
Energy Resource Levy – coal	8,198,386	7,144,633	6,494,095	8,257,339	9,510,421	8,490,144
Energy Resources Levy – gas	38,056,798	31,378,469	32,697,508	27,451,449	26,852,346	25,995,674
Total ERLs	46,255,183	38,523,102	39,191,603	35,708,787	36,362,767	34,485,818
Royalties – minerals (excluding coal)	3,614,108	6,543,107	11,345,526	9,284,529	10,789,115	7,741,151
Royalties – coal	1,304,758	1,034,875	918,339	2,258,972	2,756,508	1,250,300
Total royalties – minerals	4,918,866	7,577,982	12,263,865	11,543,501	13,545,623	8,991,450
Total royalties – petroleum	86,093,975	511,580,791	399,194,757	357,058,364	333,760,254	381,322,224
Total royalties	91,012,840	519,158,773	411,458,621	368,601,865	347,305,877	390,313,674
Total ERL and royalties – minerals, including coal	13,117,252	14,722,615	18,757,960	19,800,840	23,056,044	17,481,594
Total ERL and royalties – petroleum	124,150,773	542,959,260	431,892,265	384,509,812	360,612,600	407,317,898
Total revenue (NZ$)	**137,268,023**	**557,681,875**	**450,650,223**	**404,310,652**	**383,668,644**	**424,799,492**

Source: New Zealand Petroleum and Minerals

11 Statistics New Zealand, "Gross Domestic Product: June 2014 Quarter" (Wellington: Statistics New Zealand, 18 September 2014).

12 Statistics New Zealand, "Balance of Payments and International Investment Position: June 2014 quarter" (Wellington: Statistics New Zealand, 17 September 2014).

13 New Zealand Petroleum and Minerals, "Government Revenue From Royalties and ERLs" (Wellington: Ministry of Business, Innovation and Employment).

However, the landscape described above only covers the current value of New Zealand's mineral estate. There is significant onshore and offshore mineral potential that remains under-developed and untapped.

MINERAL ESTATE

The full extent of New Zealand's onshore mineral wealth, mainly gold, silver, iron ore, limestone and coal, as well as other industrial minerals, is largely underexplored (excluding coal) but is believed to be substantial. A government stocktake of the country's onshore minerals put the estimated total value of the untapped mineral estate at $194 billion in 2010 dollars.[14] This is based on the $140 billion estimate of the country's onshore metallic mineral potential, $47 billion for Northland's mineral reserves, and $7 billion for metallic reserves on Stewart Island. However, this $194 billion estimate is crude and must be treated with caution as it covers estimated total value at a specific point in time, not economic value. For example, prices at any given time will determine when it is economical to harvest an ore body, based on the costs of production. This requires significant knowledge of the resources and reserves, which do not sufficiently exist to put an accurate value on metallic mineral estates. Furthermore, this estimate includes resources found on Schedule 4 conservation land, which carries the highest level of environmental protection under law, and as such is unlikely to ever be exploited. Nevertheless, the industry regards the country's prospects as more than enticing enough to attract international miners to New Zealand.

The country's coal reserves are also substantial. Extensive surveys conducted in the 1970s and 1980s put coal reserves at more than 15 billion tonnes, more than half of which is recoverable. These deposits are concentrated in the Waikato and Taranaki regions of the North Island, and on the West Coast, Otago and Southland regions of the South Island. Of the recoverable reserves, lignite deposits account for 6.2 billion tonnes. Reserves of sub-bituminous and bituminous coal, used for thermal and steel making applications, respectively, are estimated at 3.5 billion tonnes, although it is uncertain how much of that is recoverable due to technical difficulties in accessing the reserves.[15]

As discussed earlier, New Zealand has a well-established history as a gold producer, producing about 12,000 kg a year, predominantly from the Macraes Flat and Waihi mines.[16] Silver is found alongside gold in these locations, with almost 6,000 kg of the metal mined in 2012, worth $6.6 million.[17]

Other metallic mineral occurrences include bauxite, antimony, beryllium, chromium, copper, gallium, lead, lithium, manganese, mercury, molybdenum, magnesium, nickel, platinum group metals, rare-earth metals, tin, titanium, tungsten, uranium, zinc and zirconium.

In addition, the aggregates and quarrying sector falls into the mineral estate, with almost 30 million tonnes produced in 2013, predominantly for use in roading and construction. New Zealand also has significant deposits of ironsand, with 3.2 million tonnes mined in 2013.[18]

14 Ministry of Economic Development, "Maximising Our Mineral Potential: Stocktake of Schedule 4 of the Crown Minerals Act and Beyond", Discussion Paper by Department of Conservation (Wellington: Ministry of Economic Development, March 2010).

15 New Zealand Petroleum and Minerals, "Introduction to New Zealand's Coal Resources" (Wellington: Ministry of Business, Innovation and Employment, August 2010).

16 New Zealand Petroleum and Minerals, "Gold Production (kg) 1993–2013" (Wellington: Ministry of Business, Innovation and Employment).

17 Ministry of Business, Innovation and Employment, "New Zealand's Economy: Sectors Reports Series: Petroleum and Minerals Report" (Wellington: Ministry of Business, Innovation and Employment).

18 New Zealand Petroleum and Minerals, "NZP&M Facts and Figures" (Wellington: Ministry of Business, Innovation and Employment).

New Zealand's mineral estate includes non-metallic minerals and clays such as bentonite, as well as diatomite, perlite, pounamu, pumice, serpentine, silica and zeolite. These are used to make bricks, tiles, pottery, paint and pharmaceuticals. Pumice deposits are also used to make wallboard, plaster and lightweight concrete, while high grade silica sands are used to manufacture glass.[19]

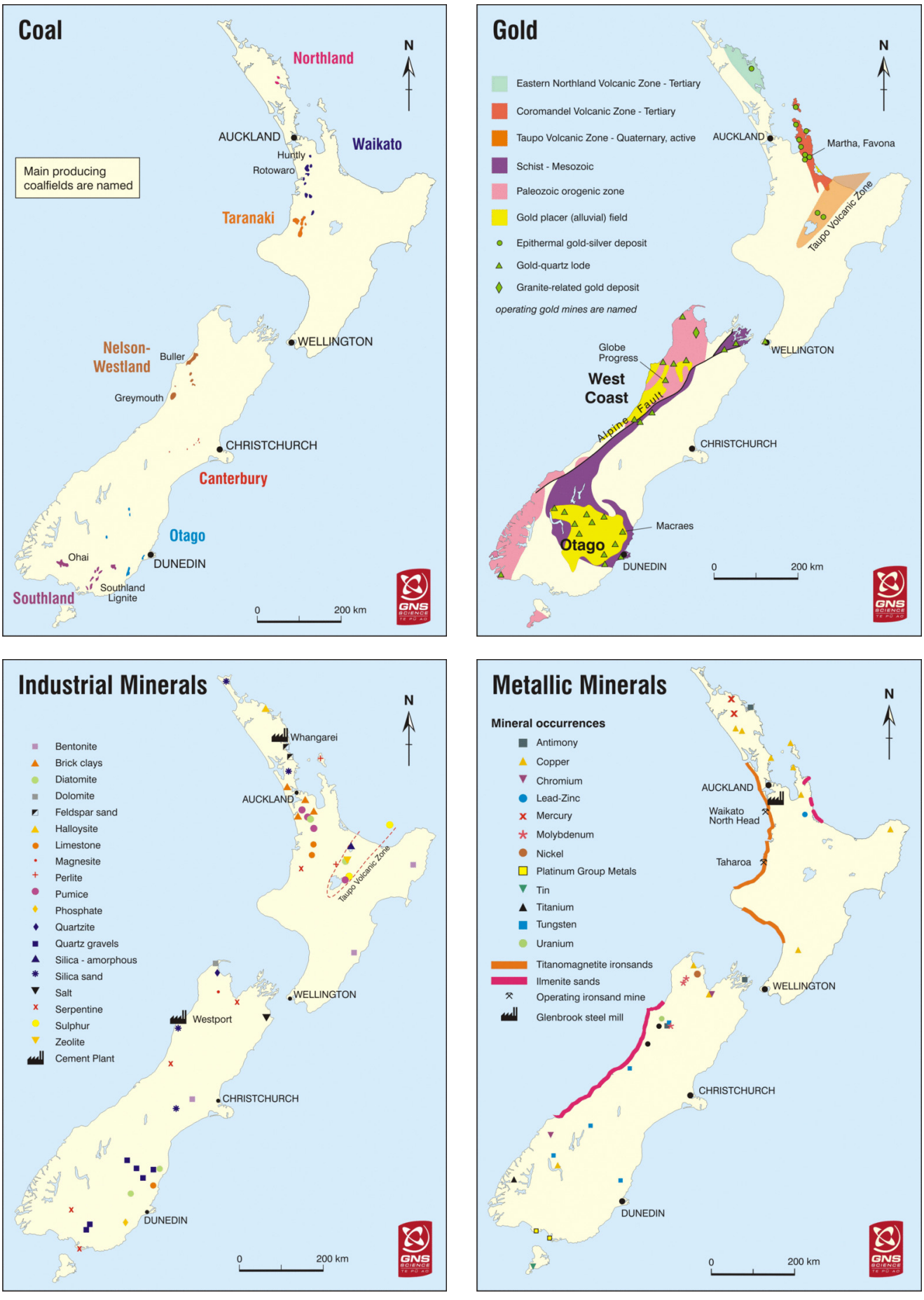
The extent of New Zealand's offshore mineral estate is less certain but the opportunity set is bigger than that of onshore deposits. New Zealand has one of the largest exclusive economic zones in the world, about 5.6 million km^2, including 17 frontier and deep water basins.

The Taranaki Basin, covering an area of about 330,000 km^2, is currently the only producing basin in New Zealand. The crude oil extracted from this basin is exported to Australia, while the natural gas is primarily sold to domestic residential and commercial markets. Even though the Taranaki Basin is considered mature, a study conducted by the US Geological Survey in 2000 estimated that the basin contains mean volumes of 487 million barrels of oil, 9.2 trillion cubic metres of gas, and 408 million barrels of natural gas liquids.[20] The remainder of the country's frontier and deep water basins remain underexplored, and their resource potential is unknown at this stage. However, any of these basins has the potential to become as productive as Taranaki.

19 New Zealand Petroleum and Minerals, "An Overview of New Zealand's Minerals Sector" (Wellington: Ministry of Business, Innovation and Employment).

20 US Geological Survey, "Assessment of Undiscovered Oil and Gas Resources of the Cretaceous-Tertiary Composite Total Petroleum System, Taranaki Basin Assessment Unit, New Zealand", World Petroleum Resources Project (January 2013).

Figure 1.1: Location of New Zealand's Mineral Wealth



Source: GNS Science

MULTIPLIER

The minerals sector is regarded as a growing part of the economy, according to the government's petroleum and minerals sector report. The number of firms in the sector increased by almost 70% between 2002 and 2012 to 644. Most of this was in exploration and support services, and also in non-metal mining and quarrying.[21] The number of workers employed by these firms doubled over the same period to 6,410, with the bulk of this growth occurring in large firms (government figures suggest that the perception of extractive sector jobs being low skilled is wrong, with 52% of all workers equipped with at least a post-school qualification). Wages in the sector are also more than twice the New Zealand average, as calculated by total salaries and wages paid divided by number of employees ($105,645 versus $50,262 in 2011 terms).[22]

WEALTH UNDERFOOT

From a fiscal and economic perspective, it is clear why the minerals sector is so attractive. Even a very conservative estimate of what is accessible and harvestable at current prices indicates that New Zealand's onshore and offshore mineral resources have the potential to make a significant contribution to the country's economy and government revenues. That much of this mineral wealth also appears to be concentrated in the regions is potentially fortuitous, given the discussion on the growing economic divide between urban and rural New Zealand.

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21 New Zealand Petroleum and Minerals, "An Overview of New Zealand's Minerals Sector", op. cit. p. 32.

22 Ibid. p. 38.

CHAPTER 3
MINING FOR PROSPERITY

Rural New Zealand is in decline, a trend accelerated by a lack of economic opportunities available to the people living in the provinces. Yet this stands at odds with the mineral wealth available in various parts of the country. An obvious policy solution is to lower the regulatory barriers to resource extraction in these areas to stem the flow of people, and ultimately, revitalise local economies. So why isn't this happening in New Zealand? The answer is twofold: the regulatory regime and incentives on one hand, and the view that mineral wealth does not lead to economic growth on the other. This chapter focuses on perceptions about the mineral estate, while Chapter 4 addresses the practical regulatory and incentive issues.

POVERTY OF WEALTH

Economists have noted that countries reliant on mineral wealth, or who experience mineral booms, tend to produce lower economic growth compared to less well-endowed nations. This 'resource curse' has been observed as far back as the 17th century, when the economic performance of the resource-poor Netherlands outpaced that of Spain despite the vast amounts of gold and silver flowing into the Spanish coffers from the New World colonies. Indeed, the Spanish government, under Philip II, was bankrupted four times in the 17th century.

The concept of the resource curse still appears to hold today. Despite vast hydrocarbon reserves at its disposal, the Arab world, for example, had a gross per capita national income of US$7,167 in 2012, almost five times lower than that of its Eurozone counterparts.[23] This stands at odds with common sense thinking, namely that great mineral wealth should boost economic growth, not stunt it. However, economists have quantifiably shown that the curse does exist. One of the better known works in this area was conducted in the mid-1990s by Jeffrey Sachs and Andrew Warner, who showed that economic growth among countries with a high ratio of resource exports to GDP lagged the global average between 1970 and 1990.[24] Subsequent work sought to explain why this is the case, which Graham A. Davis and John E. Tilton summarised into five factors.[25]

- Declining terms of trade: Countries that are highly dependent on mineral resource exports are likely to experience declining terms of trade. This is due to the highly competitive nature of commodity markets, which lowers the price of primary goods over time relative to manufactured imports. Resource dependent countries have to export a greater number of primary products to acquire a fixed basket of manufactured goods.
- Commodity volatility: Commodity markets are highly volatile, fluctuating according to end market demand. This can cause government revenues and exchange rates to vary unpredictably, making planning difficult and potentially harming economic development.
- Dutch Disease: Coined by *The Economist* magazine to describe the expansion of the oil and gas sector in the Netherlands in the

23 World Bank, "World Development Indicators".

24 Jeffrey Sachs and Andrew Warner, "Natural Resource Abundance and Economic Growth" (Cambridge, Massachusetts: Center for International Development and Harvard Institute for International Development, Harvard University, November 1997).

25 Graham A. Davis and John E. Titon, "Should Developing Countries Renounce Mining? A Perspective on the Debate", Working Paper, unpublished manuscript (Colorado School of Mines, 2002).

1970s, the Dutch Disease refers to the effect that a mineral boom has on an economy. The disease steers labour and capital away from other productive sectors such as agriculture and manufacturing. The inflow of foreign currency into the economy raises the value of the domestic currency, creating further headwinds for the manufacturing sector. Once the boom ends, it may also be difficult for firms to regain their competitiveness in traditional export sectors.

- Mining invites rent seeking: The profits from mining activities could encourage rent seeking behaviour by individuals or organisations, which may ultimately be detrimental to other productive sectors in the economy. Conflicts over the distribution of mineral profits may also promote corruption, civil unrest, and wars.
- Mining is an enclave industry: Some mining projects can have fewer forward and backward linkages to the economy than manufacturing, thus contributing little to overall, long-term economic development other than through tax contributions. Modern mining is also seen to impose costs on a region without passing on additional benefits to the community due to falling labour requirements.

In addition to these factors, Stratford Douglas and Anne Walker also found that in US counties with rich coal reserves, expected economic growth slowed by 0.5% to 1% compared to counties that did not have the same mineral endowment.[26] They dubbed this 'Jed Clampett's Curse' after a character in *The Beverly Hillbillies*, a US sitcom. The disparity was attributed to educational attainment, with working-age residents in coal-rich counties of the Appalachians opting to work in the mines instead of pursuing further education.

By this reckoning, great mineral wealth, as is reasonably believed to be found in New Zealand, should remain untapped for fear of inviting the resource curse. Indeed, environmentally concerned political groups have slammed a bid by the New Zealand Government to expand the level of prospecting, arguing that mining leaves communities economically worse off in the long run due to the boom-and-bust nature of the sector.[27]

DISPELLING THE CURSE

However, further scrutiny of the research shows that while the resource curse is evident in some jurisdictions, it does not apply to all mineral rich countries. Australia, Canada, Finland and Norway are resource-rich countries with well-developed economies, fairly stable currencies, and low levels of corruption, consistent over many decades. The track record of these countries runs counter to the thesis that great mineral wealth leads to economic decline, not prosperity. This disparity has prompted empirical research into how these countries have sidestepped the resource curse that has ensnared the likes of Venezuela, Iran, Libya and Nigeria.

This research is seated in the discipline of institutional economics, which explores the correlation between economic growth and the strength of institutions: the stronger a country's institutions, the more developed the economy is likely to be regardless of resource endowment. To support this argument, measures of institutional quality are needed. Peter Kaznacheev says the best measure of institutional quality is the degree to which institutions enable and promote economic freedom, and he uses the Fraser Institute's Economic Freedom of the World Index as a barometer.[28] The institute broadly groups the 42 government policies it measures into five main

26 Stratford Douglas and Anne Walker, "Coal Mining and the Resource Curse in the Eastern United States", SSRN Working Paper (29 December 2013).

27 Lindy Laird, "Exploratory mining 'tramples on rights'", *The Northern Advocate* (15 June 2013).

28 Peter Kaznacheev, "Resource Rents and Economic Growth" (The Russian Presidential Academy of National Economy and Public Administration, December 2013).

categories, which are then used to develop the annual economic freedom rankings.[29]

1. Size of government;
2. Legal system and property rights;
3. Sound money;
4. Freedom to trade internationally; and
5. Regulation

Kaznacheev also recommends other international measures of institutional strength, including the World Bank's Doing Business Index[30] and the World Economic Forum's Global Competitiveness Index.[31] If the institutional thesis holds, then mineral rich countries with strong institutions should rank highly on all three indices. A country's strong institutions, however, count for little if they do not translate into improved well-being for the people, so in this report the institutional rankings have been cross-referenced against the Human Development Index, a composite of life expectancy, education and income, as a measure of economic and social development.[32] Table 3.1 contains a matrix of all four indices over a cross-section of countries with high mineral endowments.

Table 3.1: Institution and development rankings for mineral rich countries, 2014

	Economic Freedom Index 2014	Doing Business 2014	Global Competitiveness Index 2014	Human Development Index 2014
Canada	8	19	14	8
Australia	10	11	21	2
Chile	11	34	34	41
Malaysia	68	6	24	62
Norway	31	9	11	1
Venezuela	152	181	134	67
Myanmar	151	182	139	150
Republic of the Congo	150	185	n/a	140
Zimbabwe	149	170	131	156
Chad	148	189	148	184
Angola	147	179	142	149
Central African Republic	145	188	n/a	185
Burundi	145	140	146	180
Democratic Republic of the Congo	144	183	n/a	186
Nigeria	124	147	120	152

1st quartile | 2nd quartile | 3rd quartile | 4th quartile

Sources: Fraser Institute, World Bank, World Economic Forum, United Nations.

29 James Gwartney, Robert Lawson and Joshua Hall, "Economic Freedom of the World: 2013 Annual Report" (Vancouver: Fraser Institute, 2013), p. v.

30 World Bank, "Doing Business 2014: Economy Rankings".

31 World Economic Forum, "The Global Competitiveness Report 2013–14".

32 United Nations Development Programme, "Table 1: Human Development Index and its Components", Human Development Reports.

Several observations can be made from this matrix:

- There is a strong link between institutional quality and social and economic development.
- Significant resource endowment has no observable connection to human development.
- The resource curse appears to only apply to countries with poor institutional quality.

This is supported by econometric analysis conducted by Louis-Philippe Béland and Raaj Tiagi, who found that countries with low institutional quality incurred the resource curse, while the opposite was true for countries with high economic freedom.[33] Indeed, many countries with high economic freedom and a large resource endowment outperformed many of their resource-poor peers with similar institutional rankings. Kaznacheev's own regression analyses found strong positive correlations between economic freedom in resource-rich economies to a high level of GDP per capita and other economic and social indicators.[34]

This supports the institutional view that it is not resource endowment but the poor quality of institutions that hampers economic development. One might even call it the institutional curse: countries with weak institutions are cursed with poor economic development, regardless of their resource endowment. This holds up under scrutiny for several reasons.

The effects of the Dutch Disease may be limited by strong institutions, which would seek to encourage as efficient a reallocation of resources as possible as inputs into the economy change. Furthermore, economic shifts happen all the time in open economies, and are not limited to those with high resource endowments. Technological advances can have the same effect as a resource boom, as in the case of the dotcom companies in the late 1990s. Indeed, more recently, Finnish Prime Minister Alexander Stubb blamed consumer technology maker Apple for the demise of phone maker Nokia and a decline in his country's paper exports.[35] Yet it would be ludicrous to suggest that Finland is facing a technology curse or that it should never have allowed Nokia or paper firms to start in the first place for fear of facing a decline in the future. To quote Kaznacheev:

> At the end of the day, from a macroeconomic point of view, an increase in income through the sale of natural resources accounts for a proportionate increase in GDP. Although it may, potentially, be accompanied by a contraction in non-resource manufacturing, that does not mean that GDP growth should suffer due to this reallocation of sources of income. It is, in fact, much more likely to increase.[36]

Commodity price fluctuations have a similar effect to technological advances. While the debate on whether commodity price fluctuations are more severe than other forms of price volatility (and indeed whether this negatively affects economic growth) is waged in the economic community, Kaznacheev mentions mechanisms such as hedging contracts and insurance instruments that firms can use to smooth out rapid price changes.[37] For example, oil companies, which are 100% exposed to commodity price fluctuations, would not exist at all, let alone be profitable, if volatility harmed economic development. Several countries use stabilisation funds to level out the peaks and troughs in their currency caused by commodity volatility to much the same effect as at the firm level. Furthermore, it is well established that the stronger and more transparent the institutional arrangements are within a country, the lower the level of overall corruption and rent seeking.

33 Louis-Philippe Béland and Raaj Tiagi, *Economic Freedom and the "Resource Curse": An Empirical Analysis* (Vancouver: Fraser Institute, 2009).

34 Peter Kaznacheev, "Resource Rents and Economic Growth", op. cit. p. 31.

35 Ingrid Lunden, "Finnish prime minister can't stop blaming Apple for Finland's economic woes", TechCrunch.com (13 October 2014).

36 Peter Kaznacheev, "Resource Rents and Economic Growth", op. cit. p. 12.

37 Ibid. p. 15.

LOCAL ECONOMIC DEVELOPMENT

If there is any substance to the resource curse hypothesis in countries with strong institutions, it has to do with the enclave nature of mining. Nicolas Di Boscio, in his 2010 PhD thesis at the London School of Economics, says mines during the Industrial Revolution were not capital intensive industries, instead relying heavily on labour to extract ores. High transport costs also meant ore was processed onsite. These mining operations were highly integrated with the local economy for labour and the supply of equipment.[38] However, as transport costs fell in the early 1970s and resources near major urban centres and markets became depleted, mining firms were forced to look further afield for mineral deposits and pursue a global model of business. Mining became a capital intensive industry built around large, specialised economies of scale. Labour requirements decreased, with fewer backward and forward links to the local economy due to the sophisticated nature of the operations. The main economic benefit, other than profit, was now captured by the central government in the form of taxes. As such, local communities often had to directly bear the costs of mining while indirectly receiving the benefits other than in the form of employment, which was declining in any event.

However, Di Boscio notes that this too is changing. In the late 1990s, mining companies became increasingly aware of the need to obtain a social contract from local communities to mine, and began to change their business model to re-establish linkages to the local economy. The shift is called sustainable mining development. This may appear contradictory, since mineral resources are finite. But Di Boscio states this sustainability is built on the premise that "the depletion of a mineral deposit can be legitimately sustainable if this natural capital is properly transformed into other forms of capital that can generate long term sources of wealth".[39] In other words, the measure of success for sustainable mining development is if proper investments in wealth creating activities allow the local community to be economically sustainable long after the resource has been depleted. This runs counter to the boom-and-bust arguments put forward by opponents to mining. Table 3.2 lists the major differences between soft sustainable mining development and the global model.

Table 3.2: Comparison of global and sustainable development mining models

Global model	Sustainable development model
1. Regional policy determined by central government	1. Decentralisation of political power. Devolution
2. Starting to acknowledge environmental imperatives	2. Integrate environmental concerns in decision making
3. Benign neglect regarding social impacts	3. Awakening/learning regarding social impact
4. Communities largely ignored	4. Increasing pressure for consultation
5. Bottom line dictated by cost competitiveness	5. Pressure to respond to environmental & social issues too
6. Revenue generation	6. Distribution
7. Legalistic	7. Collaborative
8. Competition is the dominant economic model	8. Development of public/private partnerships
9. Project-based development	9. Integrated regional development
10. Special skills dominated by engineers and geologists	10. Multidisciplinary approach

Source: London School of Economics and Political Science.

38 Nicolas Di Boscio, "Mining Enterprises and Regional Economic development: An Exploratory Analysis of the Sustainable Development Model", PhD thesis (London: London School of Economics and Political Science, 2010), pp. 68–72.

39 Ibid. p. 57.

Di Boscio's thesis examined how Rio Tinto put sustainable mining development into practice across three mines in different life stages. Rio Tinto introduced sustainable mining at the Rössing Uranium Mine (in Namibia), which was faced with closure and the firm was assessing sustainable development measures to support adjacent towns economically dependent on the mine; implemented sustainable development in its ongoing operation in the Pilbara in Western Australia; and incorporated sustainable development at a large ilmenite project in Madagascar (QIT Madagascar Minerals) from inception.

While conceding that the soft sustainable business model is still in its fledgling stage and the results depend heavily on the individual project and the expectations of local economic development, Di Boscio concluded:

> While mining has long been ignored as a possible trigger of endogenous growth, this research showed that its potential has been notoriously understated. On the one hand, mining contributed distinctly to local capital accumulation in the cases analysed. More critically, on the other hand, large mining enterprises can help sustain increases in total factor productivity in the local economy... this work showed that mining enterprises can make a remarkable contribution to local governance and play a critical part in economic planning and the building up of innovative institutional frameworks, which could, in turn, help increase the prevailing stock of technological and human capital locally.[40]

For all Di Boscio' research into the soft sustainability of mining operations, there will be cases where the economy of a mining town cannot be sustained once the resource is exhausted. Yet the local economic effects of this process are known, and can be built into the mine's business plan when the project is proposed. In effect, this could mean not building isolated mining towns solely reliant on one extractive industry for their lifeblood. In New Zealand, there are very few such towns as most workers commute from existing population centres. Even where building isolated mining towns is necessary, the overall economic contribution of these projects far exceeds the local costs of closure due to the longevity of these projects. The first phase of production at the Waihi gold mine started in 1880 and ended in 1952. At the time of its closure, the mine had produced 174,160 kg of gold and 1.1 million kg of silver.[41] The mine was reopened in the 1970s, and current reserves are expected to be exhausted by 2021. Few industries besides mining have made such sustained contributions to the economy in one place with the possible exception of farming, which is far more land intensive.

The implications for New Zealand bear careful consideration. First, exports of minerals and hydrocarbons only account for a small percentage of New Zealand's GDP and exports. This means there is considerable room to expand the contribution from these sectors before encountering the negative macroeconomic effects of the resource curse. The definition of a resource dependent economy is one that relies on the mineral estate to produce 25% or more of GDP.

Second, New Zealand's high institutional quality suggests the economy is well placed to cope with the effects of an expanding resource estate. New Zealand is jointly ranked 3rd on the Fraser Institute's Economic Freedom of the World Index and the World Bank's Doing Business Index; 17th on the World Economic Forum's Global Competitiveness Index; and 7th on the Human Development Index. On a microeconomic level, encouraging signs suggest that mining companies can have a positive impact on the long-term sustainability of the economies in which they operate. Yet, mining can still make a significant economic contribution over the long term even where the sustainability of local community is not possible after the ore bodies have been exhausted.

40 Ibid. pp. 314–315.

41 Newmont Waihi Gold, "The original Martha Mine", *Newmont*.

CHAPTER 4
REGULATORY ROADBLOCKS

In this report we have so far established that rural New Zealand, much like many other countries, is facing a population crisis due to urbanisation. Yet this cycle of rural decline and depopulation stands at odds with New Zealand's rich mineral resources. Although the extent of New Zealand's existing resource endowment is underexplored, prospectivity is considered to be high enough to attract international investment. Offshore, the value of an oil and gas discovery similar to the Taranaki Basin could be worth tens, if not hundreds, of billions to the economy over the life of the asset. Thus, incentives should be created to encourage resource extraction projects, particularly because of their micro and macroeconomic benefits and when accompanied by strong institutions to fend a resource curse (Chapter 3). So why hasn't this happened in New Zealand? The practical answer is complicated but can be narrowed to two broad categories: regulatory impediments and lack of incentives for local communities.

REGULATORY IMPEDIMENT

New Zealand's *Resource Management Act 1991* (*RMA*) is noteworthy in the developed world for combining environmental and planning regulation into one piece of legislation. When it was introduced, the *RMA* was intended to simplify and streamline existing legislation, which consisted of more than 20 major statutes and 50 other laws related to the environment.[42] The purpose of the Act was to promote the sustainable use of the country's resources, defined as:

> … sustainable management means managing the use, development, and protection of natural resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –
>
> **a.** Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
>
> **b.** Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
>
> **c.** Avoiding, remedying, or mitigating any adverse effects of activities on the environment.[43]

Section 6 of the Act gives special consideration to matters of national importance. These include preserving fresh and marine waterways; outstanding national features and landscapes; indigenous vegetation; and Māori culture, heritage and customary rights.[44]

Section 7 of the Act stipulates other matters that also need to be considered. These include guardianship and conservation of the land, ethnic stewardship, efficient development and use of natural and physical resources, energy use, amenity values, intrinsic value of ecosystems, maintenance and enhancement of the environment, finite natural and physical resources, protection of trout and salmon, climate change, and benefits of renewable energy.[45] The matters

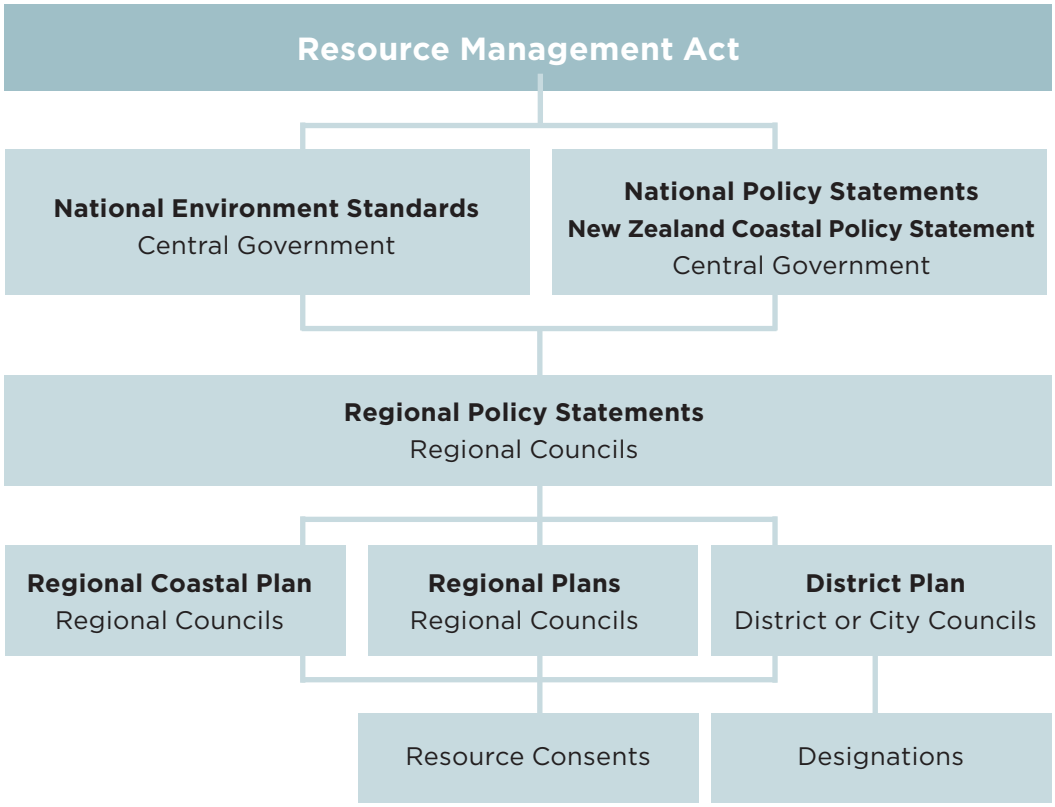
42 Ministry for the Environment, *Improving Our Resource Management System: A Discussion Document* (Wellington: New Zealand Government, February 2013), p. 12.

43 *Resource Management Act 1991*, section 5.

44 Ibid. section 6.

45 Ibid. section 7.

Figure 4.1: Key elements of the RMA



Source: Ministry for the Environment

listed in section 7 are considered subordinate to those in section 6 in practice.

An interlinked framework helps implement the *RMA*. National environmental standards and national policy statements are developed by the central government. These provide national direction across all regions and districts. Each of the 16 regions in New Zealand develops its own 10-year regional policy statement, covering regional issues pertinent to the *RMA*. Regional councils also prepare coastal and regional plans. Finally, each of the districts or city councils within the region prepares plans that comply with the plan immediately above in the hierarchy (Figure 4.1).[46] Based on these 10-year plans, councils determine whether activities are to be permitted, controlled, require consent, or are non-compliant or prohibited. Where an activity is not in a plan, an explicit application must be made to include the activity in the plan for it to be allowed to proceed. The Environmental Protection Authority (EPA) assesses nationally significant proposals on behalf of councils, while the Ministry for the Environment develops national guidance, processes for the *RMA*, and provides ministerial advice. The Environment Court safeguards the quality of process and decisions; appeals on points of law can be made to the High Court, the Court of Appeal and the Supreme Court.

While this process sounds straightforward, it is anything but so in practice. For example, under the *RMA*, councils are required to protect indigenous vegetation and landscapes by determining which activities are discretionary, prohibited, or require consent. But New Zealand's local government structure of 7 unitary councils, 11 regional councils, 50 district councils, and 10 city councils (78 in total) results in wide variation of the law in practice. This poses significant regulatory risks for businesses such as mining and farming

46 *Improving Our Resource Management System*. op. cit. p. 3.

that need to make long-term investments. These risks are compounded where businesses straddle local boundaries or operate in multiple regions. Plan changes can have a significant impact on private property rights, as it can prohibit a once permissible activity. Where this happens in a plan, and the property rights of a private landowner are confiscated, the *RMA* stipulates that this is deemed not to be injuriously taken and no compensation is payable (although this can be appealed on grounds that it has made land incapable of reasonable use).[47] Indeed, changes to regional plans can restrict the activities of an entire industry, such as gold mining, due to lobbying by interest groups even when the environmental impact is no greater than other consented activities such as logging (see Case Study 1).

More than 17 attempts have been undertaken in the 23-year history of the *RMA* to untangle the complexity of the legislation, such that the Act now runs over 800 pages in length. These amendments have not helped clarify the legislation, though. A 2013 discussion paper, commissioned by Minister for the Environment Amy Adams, found five unaddressed problems with the *RMA*.[48]

1. **High complexity, variability and cost**: New Zealand produces 170 resource management planning documents covering 2,272 zones, management areas, or policy overlays across various planning timeframes. A highly devolved decision-making system has led to tension between national and local objectives, and the development of inconsistent approaches to these matters across the country. On average, the cost of producing the first *RMA* plan for local councils alone was $1.9 million per plan, with higher costs for larger councils. These first generation plans took on average eight years to be finalised and become operative, almost six years to move from the notification to the fully operative stage, and nearly four years to complete changes to plans.
2. **Out-of-date and unbalanced RMA values**: The *RMA*, as it is written, is ambiguously weighted in favour of environmental matters of national significance and gives greater importance to those listed in section 6 compared to those in section 7. Sections 6 and 7 exclude matters such as natural hazards and major infrastructure investments.
3. **Lack of proactive planning**: Councils are over-reliant on consents and appeals to the Environment Court to resolve tensions over resource use and values that should be addressed at the plan stage. A survey revealed 90% of first generation plans were appealed to the Environment Court.[49]
4. **Plans reactive and poorly positioned for future growth**: The *RMA* focuses on managing the negative effects of resource use, without encouraging the positive effects of resource use such as economic growth.
5. **Lack of service culture**: A lack, or poor understanding, of service benchmarks in the *RMA* adds to the unpredictability of consent application outcomes. Wide variations in conditions and processes add to the uncertainty and cost for applicants.

The problems with the *RMA* are summed up in the report *Improving Our Resource Management System*:

> While the RMA often gets to the right outcome in terms of environmental protection, its processes can be long, cumbersome and inefficient… It is of particular concern that the RMA has failed to provide the kind of clarity or predictability that is necessary to foster investment certainty, and appears to be discouraging both strategic planning and innovation.[50]

47 *Resource Management Act 1991*, section 85.

48 *Improving Our Resource Management System*. op. cit. pp. 17–27.

49 *Improving Our Resource Management System*. op. cit. p. 9.

50 Ibid.

Although the unintended spill-over effects of the *RMA* listed above affect all businesses, the legislation has a particular impact on the mining industry. According to industry body Straterra, this is due to the high level of prospecting, exploration, investment and development needed to prove the existence and viability of a resource in order to bring it to production.[51] Prospecting encompasses low-impact work that looks for minerals over large areas, while exploration involves systematically sizing up mineral bodies, usually through drilling. Both activities have minimal to no environmental impact, yet inconsistent and over-cautionary application of the *RMA* means that, in practice, many districts and regions require a consent to perform parts of this work. This adds to the cost and complexity of the process for little environmental benefit. The development phase, where significant investment is required, is also affected by current *RMA* arrangements, particularly due to unpredictable outcomes and an open-ended appeals process. This onerous regulatory framework has the potential to impose significant costs on mining companies when developing a mine; destroy shareholder capital; and damage New Zealand's reputation as an attractive foreign investment destination (see Case Study 2). Miners can skip the council consenting process and proceed directly to the EPA, but the industry does not always see this as an ideal route for at least two reasons. First, it is a costly option only open to firms with deep pockets. Second, EPA rulings can only be appealed on points of law, creating a binary outcome where companies risk their investments on a single substantive decision. Trans-Tasman Resources, for example, looks likely to lose total development costs of $60 million (this includes the mining permit and value of intellectual property, which the firm retains) it invested in developing an offshore ironsand project off the Patea coast because the EPA declined the consent application.[52] At the time of writing, the decision was under appeal to the High Court. Meanwhile, the council consenting process, biased in some parts as it is against development, allows firms to amend rejected proposals.

NO CARROT, ALL STICK

The frustration with the *RMA* is not just felt by the business sector. The Productivity Commission polled councils in New Zealand as part of its inquiry into local regulation (with a 94% response rate), and found that local government bodies were struggling to cope with the cost and complexity of legislation at the national level.[53] The *RMA* is a prime case in point, mandating that local government be responsible for planning, land use, water consents, and building and construction.

These regulatory tasks take up a significant part of councils' time. According to the Productivity Commission survey, consents for building and construction, planning, land use, or water use take up most of staff time and resources regardless of council size.[54] Almost all councils (95%) said their key regulatory function was planning, land use or water consents – and one of the top five functions when it comes to staff time and resources.[55]

Performing regulatory functions, such as those required by the *RMA*, imposes an extra cost on councils as there is no funding stream from the central government for this. These costs are supposed to be clawed back through user-pay fees, but many councils found the process difficult. Just over 80% of councils said their inability to recover the costs of regulatory functions was a barrier, while more than half saw it as a significant

51 Straterra, "Mineral Briefing Paper 2014: Policies for Increasing New Zealand's Attractiveness for Investment in Responsible Minerals Exploration and Mining" (Wellington: Straterra, 2014).

52 Pattrick Smellie, "Rejection for ocean floor ironsands mining bid", *BusinessDesk*, scoop.co.nz (18 June 2014).

53 Productivity Commission, "Towards Better Local Regulation: Data Compendium", p. 6.

54 Productivity Commission, "Towards Better Local Regulation: Data Compendium", Inquiry report (17 December 2012), p. 6.

55 Ibid. p. 7.

barrier.[56] Resourcing these functions was also a challenge, with 62% of councils saying the financial cost of finding qualified and experienced staff was a barrier to some degree, and 15% said it was a significant barrier. Just over half the respondents identified attracting qualified staff as a barrier.[57] In a submission to the Productivity Commission's local regulation inquiry, the Rangitikei District Council said:

> Capability is a critical issue, particularly for small councils where expertise typically lies in a small number of staff. This can easily lead to dependency on external advisers, resulting in higher costs and no development of internal capacity.[58]

As a result, 86% of councils said meeting central government regulatory standards was a barrier, with 42% saying it as a significant barrier.[59] Councils themselves are frustrated with the ambiguity of legislation, with just over two-thirds seeing it as a barrier to some degree, and 37% calling it a significant barrier. That was coupled with 70% of councils citing a lack of direction from the central government as a barrier to some degree, and 36% seeing it as a significant barrier.

Furthermore, regions also have to directly bear the negative spill-over effects of mineral extraction, such as increased road maintenance due to heavy truck usage, but without access to any additional resources to compensate those communities affected because all royalties and tax are paid directly to the central government. Both the Coromandel and the Bathurst Resources case studies below suggest that communities may be overly willing to listen to small anti-mining groups because communities directly bear the cost of mineral development but only indirectly receive the benefits.

Under these circumstances, it is clear why centrally imposed legislation on local government, particularly the *RMA*, has created the adverse outcomes noted by the Ministry for the Environment earlier in this chapter. Faced with increasing regulatory complexity, stronger censure for not meeting tighter guidelines, rising compliance costs, and an inability to clawback expenses, it is not surprising that councils are opting to be overly cautious about the *RMA*. This do-as-little-as-possible approach produces the "right outcome in terms of environmental protection",[60] but it does not provide incentives to councils to pursue greater economic benefits for their regions or districts.

56 Ibid. p. 14.

57 Ibid. p. 12.

58 Ibid. p. 80.

59 Ibid. p. 14.

60 *Improving Our Resource Management System*. op. cit. p. 9.

CASE STUDY 1
PROHIBITION ON THE COROMANDEL

In 1998, after lobbying from anti-mining group Coromandel Watchdog, the Thames-Coromandel District Council (TCDC) banned all forms of mining (but not quarrying) near the coastal and conservation zones and in all recreational and open space policy areas in the Coromandel Peninsula, declaring mining a prohibited activity under powers granted to the district council under the *RMA*.[61] The move made almost 70% of the Coromandel Peninsula off limits to miners, an area believed to be rich in gold and silver deposits and widely considered to be the most prospective in the country.

The New Zealand Minerals Industry Association and the Ministry of Economic Development (now Ministry of Business, Innovation and Employment) appealed the change, instead wanting mining to be declared a discretionary activity. This would require potential mining projects in the Coromandel to undergo the consent process, putting mining on equal footing with other forms of land use such as forestry and quarrying.

The Environment Court found against the TCDC's district plan, and ordered it to be amended so that underground mining be considered a discretionary activity in all zones. Surface mining was made either a discretionary or a non-complying activity, other than in recreation and open space policy areas in the coastal, industrial, housing and town centre zones, where surface mining is prohibited.

That was a substantially more liberal regime than the modified position taken by the TCDC in the Environment Court, which still classified mining as a prohibited activity in many areas and zones.

The TCDC and Coromandel Watchdog appealed to the High Court but lost. They made a further challenge to the Court of Appeal, joined by the Auckland Regional Council, which wanted to uphold councils' ability to declare certain activities as prohibited under the *RMA*.[62]

In 2007, the Court of Appeal ruled the High Court had erred in finding that a prohibited status can only be used when a planning authority is satisfied that mining should in no circumstance be allowed in an area, and sent the matter back to the Environment Court for mediation.

In 2009, after extended mediation, the New Zealand Minerals Industry Association and the Ministry of Economic Development, TCDC, and four environment groups signed a memorandum of understanding on new mining rules, ending a protracted 11-year legal battle.[63] Under this agreement, all mining is prohibited near the northern tip of the Coromandel Peninsula; surface mining is prohibited in coastal areas and near areas classified as outstanding landscapes, and in urban and industrial areas. Surface and underground mining is zoned discretionary or non-conforming on the rest of the peninsula, and companies need to apply for consents to operate in those areas. The parties need to seek consent from the Environment Court.

The issue, though, is still unresolved, with recent proposed changes to the TCDC's district plan aiming to prohibit certain types of mining on land not covered by the highest conservation protection status (Schedule 4).

61 Coromandel Watchdog, "Environmentalists Appeal for Urban Support", press release (14 September 2004).

62 "ARC wades into goldmining battle", *TVNZ* (29 September 2005).

63 "Parties end mining battle", *Waikato Times* (18 August 2009).

CASE STUDY 2

A WAR OF ENVIRONMENTAL ATTRITION

In 2010, when Australian mining start-up Bathurst Resources listed on the NZX at 92 cents a share, the company's future looked bright. The dual-listed firm planned to start mining operations on the West Coast of the South Island, harvesting high grade coking coal for use in steel making.

In April 2011, the company submitted 24 resource consent applications covering 200 hectares on the Denniston Plateau, an area that had been extensively mined in the 1800s. The initial open cast Escarpment Mine Project was expected to create 225 jobs and generate $1 billion in export revenue annually.

In August 2011, the Buller District Council and the West Coast Regional Council issued the consents, and Bathurst's share price rose to $1.20. All that remained was for the Department of Conservation to grant access to the land, which was held in general stewardship (the lowest protected status, although this still offers high levels of environmental protection), before the firm expected to start production.

Less than a month later, three appeals were filed in the Environment Court by conservation groups Royal Forest and Bird Protection Society of New Zealand (Forest & Bird), the West Coast Environment Network, and the Fairdown Residents Association.

The appeals were made on the grounds that the proposed coal washing plant was to be located on ecologically sensitive land, the mine would harm local biodiversity, and coal burning contributed to global climate change.

An appeals hearing was scheduled for late October 2012, delaying the project by at least a year.

Ahead of the hearing, the Fairdown Residents Association withdrew its challenge after Bathurst dropped plans to carry the coal from the Escarpment Mine Project to Westport by pipeline, instead agreeing to install an aerial transport system. By August 2012, the firm's shares had slumped to 51 cents on the NZX.

Almost five months since the appeals were launched, the Environment Court gave a preliminary indication that Bathurst's consents would be upheld. This was in response to the firm agreeing to remove significant sections of land from the consent application and raise the already high standard of rehabilitation on the land once the coal had been exhausted.

In April 2013, Forest & Bird filed a further appeal related to technical aspects of the consents, particularly for a mined-out area previously worked by Solid Energy New Zealand, a state-owned coal miner. Bathurst shares plunged to 26 cents apiece.

In May, the Department of Conservation granted Bathurst access rights after the firm committed to spend $22 million on pest and predator control on 25,000 hectares of the nearby Heaphy River catchment.

In mid-2013, three of the appeals to Bathurst consents were dismissed. A month later, the side-appeal was also dismissed, with the High Court finding no merits in Forest & Bird's appeal. Yet within two weeks, Forest & Bird filed another appeal over possible expansions Bathurst might undertake. Bathurst was forced to raise $19 million from institutional shareholders to fund its operations.

On 24 October 2013, Bathurst Resources was granted the all clear, after subsequent appeals to the Supreme Court by Forest & Bird failed, ending a protracted legal battle. Bathurst's shares traded at 17.4 cents apiece at the time. Work plans were signed off in June 2014 and Bathurst started site works on the Denniston Plateau in July.

Source: BusinessDesk

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CONCLUSION

As this report has shown, rural New Zealand faces significant headwinds. The influx of workers into the global economy from countries like China has drawn many of the cornerstone businesses overseas. Technological advances have further reduced the need for labour in the heartland sectors of agriculture and manufacturing. This decline has made it even harder for economically active people in the regions to resist the lure of higher paying jobs in the city. Their departure in turn further deteriorates the rural regions until only 'zombie towns' remain.[64]

Mining is one possible means of reversing this economic decline. By definition, mining is an industry that must come to ore, which is predominantly found in rural regions, and so to some degree is immune from the pressures faced by manufacturers. Mineral extraction is capital intensive and pays off over the long term, and in some cases, represents decades of production. Mining has the potential to make a meaningful and long-lasting contribution to local economies.

At the same time, changing technologies, operating practices, and business models can mitigate many of the negative effects of mineral extraction. Where this is not possible, existing regulatory barriers are sufficient to prevent harmful projects from starting.

Yet for all the wealth and sorely needed economic benefits within reach, two major impediments severely limit the ability to mine New Zealand's resource estate. The first is the *RMA*, a hybrid piece of environmental and planning legislation that imposes high costs and long timelines on applicants. The preference given to environmental matters of national importance in section 6 over the broader aspects in section 7 (such as the efficient use of natural and physical resources) has created a significant and permanent bias against development in favour of preserving the environment.

This imbalance is further tilted against development by the hierarchical structure of the *RMA* and its intersecting district and regional plans, which make the consent process more complex and expensive for applicants and councils alike. Furthermore, the *RMA* enshrines certain regulatory risks that bias investors against mineral extraction projects. These include councils' ability under the structure of a district or regional plan to confiscate property rights without paying compensation, and an open-ended appeals process that opens firms to costly wars of attrition in courts.

An unintended consequence of anti-development bias, and the costly and complex nature of the *RMA*, is that councils are likely to err on the side of doing nothing to the detriment of the economic development of their communities. Similarly, the more this perception becomes enshrined, the less likely investors are to risk their capital on extraction projects in New Zealand.

Lack of incentives is the second factor impeding mineral resource development. The structure of the royalty and tax regime is such that most of the direct value from extraction projects go to the central government, with local communities only benefitting indirectly through general state expenditure. Meanwhile, local communities must bear the costs of extraction projects directly through increased traffic, dust, and wear-and-tear on the roads. Given this, local politicians prefer not to spend their limited political capital on championing unpopular mining projects, particularly in the face of well-organised resistance from environment groups.

Should the regulatory structure be rebalanced, incentives re-aligned, and a mining boom ensue, there is very little evidence to suggest that New Zealand would struggle to cope with the economic

64 The term was coined by Shamubeel Eaqub to describe rural communities whose economic lifeblood has all but dried up.

side-effects these developments generate. Economic research shows that the quality of institutions directly determines a country's ability to sidestep the resource curse. New Zealand is very well positioned on measures of institutional quality, rated 3rd in the world by the Fraser Institute and the World Bank, and 17th in the world for competitiveness by the World Economic Forum.

Although policy recommendations will be made in the second report in this series, an obvious and necessary shift can start happening now – an attitude change among central and local government politicians as well as communities. If managed correctly, minerals extraction can make significant and meaningful contributions to the local and national economy over the long term.

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If New Zealand is a country gifted with a rich mineral endowment, why are the rural economies, where these resources are found, caught in a spiral of decline?

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