

ROUTLEDGE STUDIES OF THE EXTRACTIVE INDUSTRIES AND  
SUSTAINABLE DEVELOPMENT

# Mountain Movers

Mining, sustainability and the agents of  
change

Daniel M. Franks

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# Mountain Movers

The products of mining are everywhere – if it wasn't grown, it was mined or drilled. But the mining industry has a chequered past. Pollution, human rights abuses and corruption have tarnished the reputation of the industry across the globe. Over a decade ago the major mining companies embraced the concept of sustainable and equitable development and embarked on an explicit process of reform – but has the industry actually changed?

This book explores the dynamics of change-making for sustainable development in the resources sector, specifically the mining of mineral and energy resources. The author recounts the stories and insights of over 40 change-makers both inside and outside the industry, from anti-mining activists to the professionals charged with the task of reform, introducing the people who are moving an industry that moves mountains. The book takes stock of what has worked and what has not, analysing the relative influence and dynamics of the key corporate, civil society and government actors with a view to developing new approaches for improving environmental and social outcomes from mineral and energy development.

Illustrated with case studies from Angola, Australia, Brazil, Canada, Chile, Colombia, El Salvador, Guinea, Peru, the Philippines, Romania, Sierra Leone, South Africa, and the United States of America, and brimming with the backstories to the major sustainability initiatives, *Mountain Movers* reveals where progress has been made and where reform is still needed towards a more sustainable and equitable mining industry.

**Daniel M. Franks** is Deputy Director at the Centre for Social Responsibility of Mining at the University of Queensland's Sustainable Minerals Institute, Australia, and serves as Co-Chair for Social Impact Assessment at the International Association for Impact Assessment.

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Mining, sustainability and the agents of change

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# Preface

## If it wasn't grown

The stark reality of modern society is, that of all of the material we use in our daily lives, if it wasn't grown, it was mined or drilled. We are all incredibly reliant on the mining industry. Much of this reliance is hidden. Packaged into products or embedded within the value chain. But for an industry that is so fundamental to most of our lives, it certainly has a bad reputation. With every transaction society affirms its reliance (its lust) for the products of the mineral sector, but with every word it restates its displeasure at the way that these products were produced. There are few professions in the world as maligned as a politician, but being a mining executive may just be one of them. At the same time, there are few easier things to do than to abdicate our own responsibility and blame others for the consequences of our own consumption.

I was made to confront the paradox of a 'resented provider' early in my life. My father spent his career in the gas industry, and while I cheered on the Greenpeace activists who buzzed around the tankers that had fouled the oceans with spilt oil, he was quick to point out the composition of the activists' petroleum-derived wetsuits and inflatable dinghies. At university, while studying geology I was active in Friends of the Earth. I never viewed this as a contradiction. My grandfather was a fossicker, my father a petroleum engineer, and my mother imparted to me a progressive consciousness. I felt entirely comfortable inhabiting both worlds. But to the students of the engineering society, who wore on their shirt: 'Ban mining. Let the bastards freeze in the dark', my position was too contingent. I would ask to blank stares, 'Surely there are circumstances whereby mining should, and should not, exist?'

Navigating the paradox of our reliance on an industry in need of dramatic reform is a complex and delicate task. There are indeed executives in the mining industry who fit the caricature. There are also those who take their responsibilities very seriously. What looks like a monolith from afar, up close is a contest of ideas and visions of the future as reformers and activists are now counted among the industry's ranks.

In the late 1990s the global mining industry chose, under pressure from civil society, to embrace the concept of sustainable and equitable development and



embark on an explicit process of change. In this book I ask: How far has the industry come? Has the process of change been authentic? Where has change occurred? And what were the key drivers? I chose to answer these questions by meeting the people, both inside and outside of the industry, who have demanded or delivered on change. Have they found success? Where? How did they do it? Formally I have interviewed more than 40 people. Over the past 15 years, in my research and practice on sustainable development in the extractive industries, I have learnt from hundreds more. Importantly, I have tried to capture a diversity of voices, from anti-mining activists to industry professionals. People who are moving an industry that moves the mountains.

### Addressing the ‘oxymoron’

In the same way that I never thought it a contradiction to be interested in rocks *and* the fate of the planet I have never thought of mining as inherently unsustainable. Where many insist *sustainable mining* to be an oxymoron, to my mind sustainable development was always about the integrity of earth’s ecosystems and the human development of its people. That minerals are replenished so slowly seemed to me to be largely irrelevant. It is the ecosystems and social systems on the surface of the earth that needed sustaining, not the rocks deep below it. Before they are unearthed, ore bodies are mostly divorced from the surface environment, encapsulated by the impermeability of layers of rock. What to me mattered was not whether minerals were renewable, but whether they could be extracted in a way that did not disturb or degrade the environments and societies above them, and whether we had developed the economic and social systems to equitably distribute those resources, recycle them, and adapt to new resources as stocks waxed and waned. As my geology professor would often state, every sample of rock will have 92 elements within it, it is just a matter of their proportion. Minerals will never run out – they just become increasingly expensive (in environmental as well as economic terms) to extract as lower ore grades are pursued. As society changes, so too will our patterns of resource consumption. With new technologies, a green economy will demand its fair share of unique minerals and metals.

This is not to say that the current practices of mineral extraction are compatible with sustainable development or that the depletion of ore is not of immense economic importance at local, national or even international scales. It is just to say that the debate about sustainability and mining being an oxymoron tends to prematurely shut down discussion of what is a rather complex topic.

### The mines are they a-changin’?

The commodities unearthed at mine sites are transported, processed, manufactured and consumed by society; they are recycled and they are disposed. Each of these stages in the lifecycle of metals and minerals has important implications for sustainability, but in this book I focus on the people and the initiatives that are influencing sustainability outcomes at the locality of the mine.

Similarly, no one book could profile all of the different companies that make up the mining industry. In fact, the 'mining industry' is somewhat of a misnomer – it is actually made up of a number of sub-industries with a variety of different types of company. There are service companies, construction companies, exploration companies, mineral processing, mineral extraction and refining companies. There are juniors, mid-sized and major mining companies that operate industrial mines. And there are artisanal and small-scale miners who often operate informally. Some mining companies are diversified. Some are focused on a single commodity. Most mining companies are publicly listed, or privately owned. Only a handful mining companies are owned by a state. All of these different organisations respond to slightly different drivers, with different cultures and histories and slightly different operating contexts. In this book I predominantly focus on the large-scale, multi-national mining companies that dominate production in the sector.

The stories written in this book are not definitive histories. They were not written to capture all of the events, or all of the people involved. In telling these stories my motivation was to understand the dynamics of change. Inevitably key individuals or important events may have been omitted or obscured from view, and many of people I spoke with were quick to point out the contributions of others. Any errors in facts or emphasis are entirely my own.

We start the book by seeking to understand the imperative of change and the events that led the mining industry to embark on explicit process of reform through the Global Mining Initiative (GMI), and a public dialogue called the Mining, Minerals and Sustainable Development Project (MMSD). In Chapters 2 through 6 we look at markers of change across five key areas: rights, environment, development, conflict and transparency. Key initiatives are profiled, including: the Voluntary Principles on Security and Human Rights; the International Finance Corporation's Performance Standards on Environmental and Social Sustainability; The International Cyanide Management Code; The Africa Mining Vision; the Fatal Transactions campaign; the Kimberley Process Certification Scheme; the Publish What You Pay coalition; The Extractive Industries Transparency Initiative; and The Natural Resource Charter. In the final chapter (Chapter 7) we look at the agents of change and the interactions between them, before finally, we look back on the MMSD to see how far the industry has come, and what the future might hold for the sustainable development agenda.

### **A little help from my friends**

I am incredibly indebted to David Brereton, Deanna Kemp, Chris Moran, Peter Erskine, Saleem Ali, Mansour Edraki, Warwick Browne and Julia Keenan; and many other colleagues, past and present, from the Sustainable Minerals Institute at the University of Queensland. If there is originality in the pages to follow, it is likely that the idea was sparked from being around one of them. Their knowledge of the sector is amazing and I have benefited greatly from their advice. I am thankful to the staff and students at the Centre for Social Responsibility in

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## **Credits**

Lyrics of 'Beds Are Burning' published with permission, written and composed by James Moginie, Martin Rotsey, Peter Garrett, Peter Gifford and Robert Hirst, published by Sony/ATV Music Publishing Australia.

# Abbreviations

AfDB	African Development Bank
AMD	acid and metaliferous drainage
AMV	Africa Mining Vision
ANC	African National Congress
AO	Officer of the Order of Australia
ASM	artisanal and small-scale mining
ASMP	Advanced Social Management Program
ASX200	Australian Stock Exchange – 200 largest companies
AUD	Australian dollar
BHP	Broken Hill Proprietary Company Limited
BP	British Petroleum
BSGR	Beny Steinmetz Group Resources
CAN	Canadian dollar
CAO	Office of the Compliance Advisor Ombudsman
CEO	chief executive officer
CODELCO	<i>Corporación Nacional del Cobre de Chile</i>
Comalco	Commonwealth Aluminium Corporation
CRA	Conzinc Rio Tinto of Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSRM	Centre for Social Responsibility in Mining
DfID	Department for International Development, United Kingdom
ECA	United Nations Economic Commission for Africa
EITI	Extractive Industries Transparency Initiative
EO	Executive Outcomes
ERM	Environmental Resources Management
ESG	Environmental, Social & Governance
EU	European Union
FPIC	free, prior and informed consent
G8	Group of Eight
GABB	<i>Grupo de Accion por el Bío-Bío</i>
GAO	General Accounting Office, United States
GDP	gross domestic product
GFN	good faith negotiation

GMI	Global Mining Initiative
GPs	Guiding Principles on Business and Human Rights
HIV	Human Immunodeficiency Virus
ICME	International Council on Metals and the Environment
ICMI	International Cyanide Management Institute
ICMM	International Council on Mining and Metals
ICP	informed consultation and participation
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
ILO	International Labour Organization
IMF	International Monetary Fund
IPIECA	International Petroleum Industry Environmental Conservation Association
IRMA	Initiative for Responsible Mining Assurance
ISG	International Study Group on Africa's Mineral Regimes
ISO	International Standards Organization
IUCN	International Union for Conservation of Nature
JATAM	<i>Jaringan Advokasi Tambang</i>
km	kilometres
KP	Kimberley Process Certification Scheme
MAC	Mines and Communities network
MCEP	Mining Certification Evaluation Project
MDGs	millennium development goals
MMSD	Mining, Minerals and Sustainable Development Project
MPLA	Popular Movement for the Liberation of Angola
Nabalco	North Australian Bauxite and Alumina Company
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organisation
NPRC	National Provisional Ruling Council
NPV	net present value
NRC	Natural Resource Charter
NRGI	Natural Resource Governance Institute
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
PGMs	Platinum Group Metals
PNG	Papua New Guinea
PS	Environmental and Social Performance Standards
PS7	Performance Standard on Indigenous Peoples
PWYP	Publish What You Pay
QRC	Queensland Resources Council
Rio +10	World Summit on Sustainable Development
Rio +20	United Nations Conference on Sustainable Development
RJC	Responsible Jewellery Council
RTZ	Rio Tinto-Zinc Corporation
RUF	Revolutionary United Front

RWI	Revenue Watch Institute
SDGs	sustainable development goals
SEAT	Socio-Economic Assessment Toolbox
SEC	Securities and Exchange Commission, United States
SIMP	Social Impact Management Plan
SIMS	State Intervention in the Minerals Sector
SL-EPA	Sierra Leone Environmental Protection Agency
SLST	De Beers Sierra Leone Selection Trust
SLTRC	Sierra Leone Truth and Reconciliation Commission
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Commission on Trade and Development
UNDP	United Nations Development Programme
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNEP	United Nations Environment Programme
UNITA	National Union for the Total Independence of Angola
UNSC	United Nations Security Council
UNSDSN	United Nations Sustainable Development Solutions Network
US	United States
USGS	United States Geological Survey
VPs	Voluntary Principles on Security and Human Rights
WACAM	The Wassa Association of Communities Affected by Mining
WALHI	<i>Wahana Lingkungan Hidup Indonesia</i>
WB	The World Bank
WBCSD	World Business Council on Sustainable Development
WCCCA	Western Cape Communities Co-Existence Agreement
WCED	World Commission on Environment and Development
WCMC	World Conservation Monitoring Centre
WH	World Heritage
WMC	Western Mining Corporation
WWF	World Wide Fund for Nature / World Wildlife Fund

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# 1 Breaking new ground

## The 'long petal of sea, wine and snow'

The story that I will tell across the pages to follow begins in Chile on the Western flank of the South American Andes. This 'long petal of sea, wine and snow', as Chilean poet Pablo Neruda famously described his homeland, is also the world's principal source of copper. Chile accounts for around 32% of world copper production and 27% of world copper reserves.<sup>1</sup> Copper is a commodity central to our daily lives. It carries energy to our homes, and our voices across the telephone. Copper is used in our coins, our plumbing, the wiring of our electronics and even as building product in our hospitals to prevent infection. The copper deposits of the Chilean Andes have been mined for millennia, but industrial mining found its way to the continent in 1915, with breakthroughs in low-grade oxide mineral processing and the opening of the Chuquibambilla mine.

I have chosen to start the story here for two reasons. The first is a personal one. Chile is the place where my own involvement with mining industry reform began. I arrived in Chile, an aspiring geologist in the late 1990s. I visited the copper mines of northern Chile and the tin and silver mines of Potosí in neighbouring Bolivia and I was confronted with the striking disparities that seem to typify many parts of Latin America, and indeed the world. In Potosí, the mines, and the forced labourers that once worked them, contributed thousands of tonnes of silver to the Spanish Monarchy during colonialism and are still worked today using the backbreaking methods of centuries past. Potosí is a marvel of inequity. It is the ordinariness of the town that is so striking given the riches that have been unearthed. In Antofagasta, Chile's mining capital, I stayed with an acquaintance who was an expatriate mining professional. We were stationed in a separate luxury suburb, an enclave of the developed world far removed from the circumstances of ordinary Chileans. While I lugged my baggage toward the enclave, which at the time was not connected by the normal public transport system, I wondered whether the disparities of the present were the children of historic injustices in Chile as they had been in Bolivia. I have since returned many times to the region and witnessed the transformations that have accompanied mining development over the past decade and a half. I have worked with communities, companies and governments globally in the pursuit of better environmental and social outcomes from mining and I will share some of these experiences in this book.