



The mining-conservation nexus

*Rio Tinto, development 'gifts' and contested compensation in
Madagascar*

Caroline Seagle

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The Land Deal Politics Initiative

www.iss.nl/ldpi

landpolitics@gmail.com

in collaboration with:

Institute for Development Studies (IDS)

University of Sussex

Library Road

Brighton, BN1 9RE

United Kingdom

Tel: +44 1273 606261

Fax: +44 1273 621202

E-mail: ids@ids.ac.uk

Website: www.ids.ac.uk

Initiatives in Critical Agrarian Studies (ICAS)

International Institute of Social Studies (ISS)

P.O. Box 29776

2502 LT The Hague

The Netherlands

Tel: +31 70 426 0664

Fax: +31 70 426 0799

E-mail: iss.icas@gmail.com

Website: www.iss.nl/icas

The Institute for Poverty, Land and Agrarian Studies (PLAAS)

School of Government, Faculty of Economic and Management Sciences

University of the Western Cape, Private Bag X17

Bellville 7535, Cape Town

South Africa

Tel: +27 21 959 3733

Fax: +27 21 959 3732

E-mail: plaas@uwc.ac.za

Website: www.plaas.org.za

The Polson Institute for Global Development

Department of Development Sociology

Cornell University

133 Warren Hall

Ithaca NY 14853

United States of America

Tel: +1 607 255-3163

Fax: +1 607 254-2896

E-mail: ta12@cornell.edu

Website: polson.cals.cornell.edu

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International Institute of Social Studies

P.O. Box 29776

2502 LT The Hague

The Netherlands

Tel: +31 70 426 0460

Fax: +31 70 426 0799

E-mail: information@iss.nl

Website: www.iss.nl

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School of Government, Faculty of Economic and Management Sciences

University of the Western Cape, Private Bag X17

Bellville 7535, Cape Town

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United States of America

Tel: +1 607 255-3163

Fax: +1 607 254-2896

E-mail: ta12@cornell.edu

Website: polson.cals.cornell.edu

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Abstract

This paper traces a genealogy of land access and legitimisation strategies culminating in the recent convergence of multinational mining and conservation in southeast Madagascar. Drawing on empirical research carried out on the Rio Tinto/QMM ilmenite mine in Fort Dauphin, it focuses on how local Malagasy land users are incorporated into new forms of inclusion (into the neoliberal capitalist economy) and exclusion (from land-based, subsistence activities) resulting from private sector engagement in conservation. Various material impacts of the mine were inverted and remediated to global audiences as necessary to sustainable development and biodiversity conservation. By financing, partnering with and participating in the same land access markets as international conservation NGOs, and setting aside small 'conservation enclaves' in each mining site, Rio Tinto/QMM legitimise mining in situ despite the negative socio-environmental consequences for the Malagasy. Mining-conservation partnerships may fail to adequately address — and ultimately exclude — the needs of people affected by the mines.

About the author

Caroline Seagle is a PhD candidate in anthropology at the VU University Amsterdam. She holds a BA (hons) in anthropology from McGill University and completed her MA (cum laude) at the VU University. Her current research examines the political ecology of large-scale mining, conservation and sustainable development in Madagascar. Her research interests include the politics of human-environment interactions, "green" neoliberalism, embodiment and environmental perception. She works as part of an NWO/WOTRO (Science for Global Development) funded Integrated Programme coordinated by Sandra Evers (VU University Amsterdam) entitled, *Development as a Trojan Horse? Foreign Large-scale Land Acquisitions in Ethiopia, Madagascar and Uganda*.

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¹ A variant of this paper was previously published as Seagle C (2012) 'Inverting the impacts: Mining, conservation and sustainability claims near the Rio Tinto/QMM ilmenite mine in Southeast Madagascar', *Journal of Peasant Studies* 39(2): 447–477.

Acronyms

ABCG	Africa Biodiversity Collaborative Group
ALT	Andrew Lees Trust
Ar	Malagasy Ariary
BASD	Business Action for Sustainable Development
BBOP	Business and Biodiversity Offset Program
CCD	Climate Change and Development
CEO	Chief Executive Officer
CI	Conservation International
CSR	Corporate Social Responsibility
EGC	Economic growth corridors
FDI	Foreign Direct Investment
FOE	Friends of the Earth
FFI	Flora and Fauna International
GIS	Geographic Information System
GMI	Global Mining Initiative
ICE	Institut de Ciències de l'Espai
IEN	Indigenous Environmental Network
IIED	International Institute of Environment and Development
IISD	International Institute for Sustainable Development
IUCN	International Union for the Conservation of Nature
Kew	Kew Royal Botanical Gardens
LDPI	Land Deal Politics Initiative
MDG	Millennium Development Goal
MEF	Ministry of Water and Forests
MMSD	Mining Minerals and Sustainable Development
MSB	Millennium Seed Bank
NLL	no net loss
NGO	non-governmental organisation
NPI	net positive impact
PBZT	Parc Botanique et Zoologique de Tsimbazaza
PES	payments for environmental services
PLAAS	Institute for Poverty, Land and Agrarian Studies
PRSP	Poverty Reduction Strategy Paper
QHSE	Quality, Health, Safety and Environment
QIT	Québec Fer et Titane
QMM	Quebec Madagascar Minerals
REDD	reduced emissions from deforestation and degradation of forests
RRAFA	Rural Reconstruction and Friends Association
SEIA	Social and Environmental Impact assessment
SIRSA	Système d'Information Rurale et de Sécurité Alimentaire
SOAS	School of Oriental and African Studies
TEEB	The Economics of Ecosystems and Biodiversity
WBCSD	World Business Council on sustainable Development
WWF	World Wildlife Fund

Glossary

Bageta:	<i>Sweet potatoes.</i>
Belahazo:	<i>Manioc.</i>
Bio-prospecting:	<i>A term describing the process of discovery and commercialisation of new products based in biological resources, typically in less-developed countries.</i>
Bûcherons:	<i>People who work in the forest and cut down trees for construction of wooden planks or production of charcoal.</i>
Donneur de vie:	<i>Giver of life.</i>
Drazana:	<i>Ancestors.</i>
Ethisphere Council:	<i>The Ethisphere Council helps both individuals and their organizations apply compliance, ethics, and social responsibility programs to enhance their business and career prospects.</i>
Fokontany:	<i>Sub-districts</i>
Fomba:	<i>Customs.</i>
Ilmenite:	<i>(FeTiO₃) is a mineral found in coastal sand deposits; it is processed into titanium dioxide (TiO₂), a pigment used to render products white in colour and often found in paints, papers, plastics, toothpaste, and cosmetic products. In Madagascar, ilmenite is extracted through a process of dredge mining.</i>
Lateritic:	<i>A red residual soil formed by the leaching of silica and by enrichment with aluminium and iron oxides, especially in humid climates.</i>
Mahampy:	<i>Reeds that grow in wetland areas and used by women to weave baskets, hats and mats.</i>
Mivarotra tanindrazana	<i>Selling off the land of the ancestors.</i>
Port d'Eloaha:	<i>Port constructed by Rio Tinto/QMM for mineral shipment in Fort Dauphin.</i>
Rizières:	<i>Rice fields.</i>
Seuil déversoir:	<i>Dam.</i>
Tanindrazana:	<i>Land of the ancestors.</i>
Tavy:	<i>Shifting cultivation, or colloquially referred to as 'slash and burn'.</i>
Tontolo iainana:	<i>The world (in which) we live.</i>
Zebu:	<i>Malagasy cattle.</i>
Zone protégée:	<i>Protected area.</i>

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1 Introduction

Current debates about the so-called global ‘land grab’ frequently label the production of food crops, biofuels development and large scale mineral extraction as the main drivers of foreign interest in Africa’s supposedly ‘un(der)-used’ lands (Cotula et al. 2009; Zoomers 2010; World Bank 2010; FOE 2010). More recently, widespread concerns over the impacts of biodiversity protection schemes on forest-dependant peoples (Harper 2002; Luke 1997, 1995; Walsh 2005; Keller 2008; Pollini 2007; Brockington, Duffy and Igoe 2008; Corson 2011) — sometimes resulting in mass evictions, environmental injustices and livelihood shifts — have led scholars to draw parallels between both conservation and ‘land grabbing’ (Vidal 2008; PLAAS 2009 and ILC 2011; Indigenous Environmental Network 2010), or what has been coined ‘green grabbing’ (Journal of Peasant Studies). Olivier de Schutter (2009: 4) recently linked the expansion of carbon markets for Reducing Emissions from Deforestation and Degradation of Forests (REDD) to ‘the development of large-scale leases or acquisitions’, so clearly linking processes of acquiring land to global conservation aims.

Land claims and acquisitions in the global south are often analysed discretely, thereby failing to capture the complex relationships between different types of land acquisitions, despite common (neoliberal) ideology, discursive frame, market logic, and ultimately local impacts. This paper builds on important recent scholarship examining the typologies, links and interdependencies between various types of acquisitions (Hall 2011; Borrás et al. 2011; Peluso & Lund 2011). Relating the results of ethnographic fieldwork carried out near the Rio Tinto/QMM² ilmenite³ mine in Fort Dauphin, Southeast Madagascar, the paper critically examines the emerging nexus of multinational mining and biodiversity conservation in Madagascar, arguing that the extractive industry’s necessary engagement with conservation may encompass a dual and interdependent mode of accessing and acquiring land. Through neoliberal capitalist circuits, corporate engagement in ‘sustainability’ discourses and remediation techniques — such as ‘biodiversity offsetting’ (Anstee 2007; Ten Kate *et al* 2004) — a new political economy of mineral extraction is emerging, wherein mining and conservation may encompass two sides of the same coin — and overlapping landscapes of protected areas and zones of extraction, reminiscent of the French colonial period (Sodikoff 2005), increasingly impact upon local land use strategies and access regimes (Peluso & Ribot 2003). Discourses and practices of ‘sustainable development’ and biodiversity conservation have become crucial to the extractive industry’s land access strategy in the past 10–15 years, an engagement which has been critically analyzed by scholars — particularly with regard impacts on local communities (see Kirsch 2010; Newell 2007; West 2006; Himley 2010). Within this framework, this paper argues that a powerful, dual narrative is advanced: through the paradoxical process of creating biodiversity *scarcity*, Rio Tinto/QMM actively claim to *save* biodiversity.

Drawing upon Tsing (2000: 118) who argues that corporate appeals to capital investment are embedded in an ‘economy of appearances’ involving both dramatic ‘spectacle’ (Igoe 2010) and an exaggeration of profit potential, we argue that multinational ‘performances of sustainability’ involve a play of both media and discourse which greatly facilitates land access and legitimacy. These performances are built on a process of mimesis (of conservation discourse/media) and alterity (‘othering’ local people impacted by the mines) (Taussig 1993). In mimicking conservationist media — websites, images, scientific reports — and discourses of degradation, Rio Tinto/QMM re-position local land users as the ‘environmental Other’ — ecologically destructive, trapped in the past, isolated from markets, and in need of being trained (through Rio Tinto/QMM’s development apparatus) to be more sustainable. In substantiating this argument, Rio Tinto/QMM suggest that — despite the deforestation of 6 000ha of bio-diverse littoral rainforest targeted for strip-mining (see *Figure 1*), the forest ‘would have gone anyway’ over the next 20 years due to local disturbances. This paper will unpack and critically examine this argument, and the various contradictions in the company’s manifesto. Rio Tinto/QMM, by re-focusing international attention on the environmentally

² Rio Tinto is operating through its Québec subsidiary, QIT, and QMM (QIT Madagascar Minerals). Local inhabitants often refer to the mining company as QMM; herein the ‘mining company’ is referred to as Rio Tinto/QMM.

³ Ilmenite (FeTiO₃) is found in coastal sand deposits and is processed into titanium dioxide (TiO₂) — a pigment used to render products white in colour, and often found in paints, papers, plastics, toothpaste, and cosmetic products. In Madagascar, ilmenite is extracted by dredge mining.

‘irrational’ practices of local people, invert the impacts of mining on individuals most reliant on land by blurring boundaries between compensation (to people affected), ‘gifts’ of sustainable development and the company’s broader commitments to offset (global) biodiversity loss by financing conservation.

Less about achieving capital investment, global ‘performances of sustainability’ have become an inextricable part of market capitalist competition and expansion. Mining companies convincingly branding themselves as leaders in sustainability, effectively beat out less ‘sustainable’ counterparts. In this framework, land is accessed for mining through biodiversity offsets, sustainability discourses and deals brokered by mining–conservation partnerships; compensation from such deals may be viewed as development ‘gifts’ which contain an ideology of (market) offsetting or remediation. This paper explains how the ‘offset ideology’ manifests locally (by inverting the impacts of the mine as veritable ‘sustainable development’) and globally (by preserving biodiversity in other parts of Madagascar as a means of achieving a Net Positive Impact (NPI)). While there seemed to be widespread denial of local valuations, uses of and access to biodiversity, Rio Tinto/QMM’s actions to conserve biodiversity despite destroying it (e.g. seed storage, ‘conservation enclaves’ in mining perimeters, or biodiversity offsets), appears to re-distribute access to biodiversity and conservation enclosures to economically privileged stakeholders — (eco)tourists, research institutes, conservation sector, scientists and researchers. Through these processes, it is argued that Rio Tinto/QMM effectively produces a new type of global heritage (biodiversity) in the forests targeted for strip mining.

This paper describes the research settings and land access issues in Madagascar, and provides an overview of the Rio Tinto/QMM project history. Its purpose is to put various social-environmental impacts observed in 2009 (Jan-Mar) in dialogue with Rio Tinto/QMM’s discursive strategies and media used to legitimise the project, access land and generate profits. Rio Tinto’s necessary adoption of key sustainability discourses will be situated in a historical context of mounting land access barriers encountered by the corporate sector and Madagascar’s environmental governance sphere. The paper will relate empirical material to consider how — through a broader ‘offset ideology’ premised on the monetisation of nature and market rationality — Rio Tinto/QMM ‘invert’ the impacts of the mine locally and globally as veritable ‘sustainable development’. We also problematise local compensation by analysing various impacts on people living near the mine. Dam construction, land dispossession, lost access to littoral forest resources, resettlement, enforced conservation, removal of tombs, and decimation of wetland reeds were seen to impart varied economic, social and ontological impacts on people living near the mines, often the poorest of the poor and most dependent on natural resources for their livelihoods. Environmental and land access changes were found to represent more than just economic costs: intervening in land–labour relations, food security and embodied ways of being in the world (ontologies of land use). The paper analyses global modes of compensation, specifically elaborating on mining–conservation partnerships, biodiversity offsetting and discourses of degradation and biodiversity conservation (mimesis/alterity).

2 Methodology

Research was carried out between January and March 2009 primarily in the rural commune of Ampasy Nahampohana, southeast Madagascar, about 10–12km from the urban district of Fort Dauphin (Tolagnaro) (see *Figure 1*) and neighbouring the Mandena ilmenite deposit (2 000ha). The commune is situated in the foothills of the Anosy mountain range, adjacent to the littoral forest being exploited by Rio Tinto/QMM. Interviews were also held in the *fokontany* (sub-districts) of Ambinanibe (population: 3 000, Panos/ALT 2009) and Ilafitsinanana, (population: 1 500, Panos/ALT 2009) located in the vicinity of a major port built by Rio Tinto/QMM called Ehoala and designed to ship minerals to a processing plant in Sorel-Tracey, Québec (Canada). Ampasy Nahampohana has a population of 7 200 inhabitants, with a population density of 79 persons per km² and total surface area of 91km² (SIRSA 2006: 40). Most people in the commune work as farmers and cultivate rice (vary), manioc (*belahazo*) or sweet potatoes (*bageta*) for (semi-)subsistence. Occasionally farmers sell a portion of the year’s harvest to pay for school fees, clothes, petrol, sugar, or beef. A small percentage of the population work in the forest as *bûcherons* — constructing wooden planks

or charcoal for sale; many of these *bûcherons* work on privatised concessions (monocultures), rather than public lands. Charcoal is sold in Fort Dauphin as it is too expensive for local use, and most people use dry wood collected from the forest floor for fuel. Ampasy Nahampohana is comprised of three *fokontany* (sub-districts): Mangaiky, Ambaniala and Ampasy. At the time of research, Rio Tinto/QMM's first exploitation zone, Mandena, had been closed off to locals for a number of years. Locals are heavily restricted from entering Mandena and are charged fees for trespassing in, or collecting goods from, the forest.

Figure 1: Overview of three mining sites: Petriky, Mandena, and St Luce*



* Mining areas highlighted with orange shading.

Source: Martin Théberg (2007) of QIT. Satellite imagery by Google Earth (copyright 2009), image date: 2004–2005.

Interviews were also carried out in the commune of Amparihy, where most villagers rely on fishing for their livelihoods. Here Rio Tinto/QMM's construction of a dam (*seuil déversoir*) to supply freshwater for dredge mining led to the collapse of an estuarine ecosystem, eliminating the supply of fish (discussed in sections below). Residents of Amparihy staged protests against Rio Tinto/QMM in January 2009, blockading the road leading to the Mandena processing plant. Primary grievances related to the loss of fishing grounds and the flooding of farmers' *rizières* (rice fields) (L'Express de Madagascar 2009). Rio Tinto/QMM⁴ referred to the protests as 'illegal' and threatened to take those participating to court (*ibid*).

3 Background and context

Rio Tinto, a UK-Australian conglomerate, is one of the largest multinational mining companies in the world. The company embarked on a billion-dollar mining project in southeast Anosy, Madagascar in 2005 after exploration spanning most of the 1980s and successfully completing a Social and Environmental Impact Assessment (SEIA) in 2001. While North America and Europe are the foremost consumers of ilmenite, growing Chinese demand is creating new markets (Harbinson 2007). Three zones encompassing 6 000ha of a rare littoral forest were stripped and exploited through dredge mining (see Figure 1). The three mining sites are referred to as Mandena (already in operation), Petriky and St Luce (see Figure 1). The project, reportedly negotiated under the former socialist government of President Didier Ratsiraka and later materialised with (now ousted) President Marc Ravalomanana⁵, will be underway for 60–100 years.

⁴ Interviews were carried out primarily among rural populations most affected by the environmental and land access changes brought about by the mining project (men, women and children engaged in fishing, farming, collection of non-timber forest products, tree felling, weaving, or charcoal production) and to a lesser extent among NGO workers, commune officers, shop owners, government officials, and respondents in Fort Dauphin (urban centre). Interviews were not carried out with members or representatives of Rio Tinto/QMM.

⁵ The much publicised Daewoo (South Korean) land deal would have devoted most of Madagascar's West coast to large-scale palm oil cultivation (for biodiesel); it spurred massive protests against the Malagasy government under Ravalomanana, leading eventually to a military-led coup in 2009 which resulted in the installation of Andry Rajoelina as president.

Exploitation of ilmenite through dredge mining takes place by creating artificial freshwater lakes and using a wet dredge to separate the desired mineral from other trace minerals (Harbinson 2007: 7). Monazite, a radioactive trace mineral, will be returned to the soil after exploitation at a rate of 7.5 tonnes/year, according to a CCD Ampasy representative⁶. At the time of research, many respondents expressed concern over the health impacts of monazite, suggesting that radioactivity might lead to difficulties in pregnancy, increases in miscarriage, impotence, and child illness.

The Rio Tinto/QMM ilmenite project is 80% owned by Rio Tinto and 20% by the Malagasy government, with profits reflecting this agreement; much of the national earnings go towards paying off loan debt (Harbinson 2007). Rio Tinto/QMM purchased land at comparatively low price of \$1.7/m² — markedly less than the average price of \$10/m² in the Malagasy highlands (for land with no mineral contact or biodiversity value) (Parker 2004: 7). About Ar100–400/m² compensation⁷ was paid by Rio Tinto/QMM to Malagasy residents dispossessed of land ranged (Panos/ALT 2009: 10) — much lower than World Bank regulations stipulating compensation of at least Ar2 000/m² (ibid: 14). In Madagascar all non-privatised land is officially owned by the state, though customary and collective land entitlements preside in most areas. Access to land — rather than individual ownership — is a crucial aspect of rural livelihood security (Peluso & Ribot 2003).

Within each mining perimeter, Rio Tinto/QMM has set aside small protected areas to preserve the incredible biodiversity inherent to the forests. The conservation zones or 'enclaves' total 620ha (of 6 000ha being mined) and are widely referred to as 'ecotourism' destinations. In cooperation with Rio Tinto/QMM, BirdLife International (a corporate partner of Rio Tinto)⁸ holds annual bird watching events in the Mandena conservation zone (230ha of 2 000ha being mined). Rio Tinto/QMM financed extensive scientific research into and inventories of the littoral forests; several conservation non-governmental organisations (NGOs) and biologists were commissioned to contribute to a major Rio Tinto/QMM publication on littoral forest biodiversity (see *Figure 2*). Informants made little distinction between the exploitation zone and the protected area, referring to the entire forest as inaccessible '*zone protégée*', e.g. the term 'Mandena' (exploitation zone 1) was used to refer to both the protected area and the exploitation zone. Rio Tinto/QMM pledged to 'reforest' the area with eucalyptus plantations, an act mediated as 'integrated compensation' to local communities⁹.

Figure 2: The Biodiversity book



Source: Ganzhorn et al 2007

6 Over the past ten years, large-scale mining has steadily increased in Madagascar, partly due to the adoption of the *Large Mining Investment Act* (Sarrasin 2006). The gargantuan *Ambatovy* nickel mine (near Moramanga) led by the Canadian company, Sherritt International, is referred to as the world's largest lateritic nickel mine, US\$4.5 billion investment (L'Express de Madagascar 2009).

7 Ar100=±UK3p

8 In the past decade, Rio Tinto has partnered with Conservation International (CI), Flora and Fauna International (FFI), Kew Botanical Gardens, BirdLife International, WWF Australia, Earthwatch Institute, and International Union for Conservation of Nature (IUCN).

9 Rio Tinto write: '(e)stablished in 2001, the programme goal is to plant 100 ha per year of fast-growing trees to supply communities with wood for fuel and charcoal around the mine sites' (Rio Tinto Madagascar website, 'Biodiversity: Positive Impacts of the Programme', 2001-2009).

The mine falls into the World Bank's Integrated Growth Poles Project, designed to

... support private sector-led growth through the provisioning of a conducive legal, physical and business environment in selected regions (called "growth poles") [...] centred on tourism, mining and industrial parks ...

Gankhuyag & Babadjide 2006: 6; World Bank 2005.

Projected benefits are purely economic: 'increased household incomes leading to poverty reduction' (ibid). The Dow Jones World Sustainability Index hails Rio Tinto as a leader in 'sustainability' in the mining sector. In 2008, Rio Tinto was appointed one of the most 'ethical' companies in the world by the Ethisphere Council, a United States-based 'think tank' on global corporate ethics; it was considered that Rio Tinto went above and beyond the legal requirements necessary to reduce its own carbon footprint and impact on the environment. The project is equally lauded by conservationists. While local respondents mentioned that CI and WWF members (in the Fort Dauphin region) had been heavily critical of the mine in its early stages, both NGOs appear to have changed their tone over the past several years (e.g. CI is now a partner of Rio Tinto). An interview with a WWF representative in Fort Dauphin revealed that the regional offices were in fact supportive of the mine, particularly Rio Tinto/QMM's efforts at 'reforestation' trials (with eucalyptus).

In this context, it is crucial to consider that the 'the mining company' is not a monolithic and homogeneous group; internal social and political complexity in mining operations is characterised by a diverse set of actors who often deliberately shield themselves from 'ethnographic scrutiny' (Banks & Ballard 2003: 290). Similarly, as the stakeholders involved in the project represent an incredibly diverse group, mining impacts on 'local' people cannot be said to have equal weight or distribution in the Fort Dauphin region — particularly with regard to urban/rural divides.

3.1 Mediating sustainability: Unpacking the Global Mining Initiative

The age of mining giants ripping up land, coercively displacing local inhabitants and reaping ecological havoc, is over — at least discursively. In response to growing land access barriers, and in the context of global concerns for biodiversity conservation and poverty alleviation, CEOs of nine leading multinational mining companies came together in 1999 to forge the Global Mining Initiative (GMI), a campaign revolving around the catchphrase 'sustainable development' (McNeilly 2000). The GMI marked an historic shift in how mining companies brand themselves (through media and discourse), access land, legitimise their projects, and ensure the continued flow of profits. As Littlewood & Wells (2000) pointed out, during their Melbourne address on the future of large-scale mining:

Many critics see the (extractive) industry as having a declining role in sustainability [...] it has slipped behind. There are measurable consequences of this. It has literally lost ground for exploration or has found that the conditions for entry have become too onerous [...] market access for some minerals has been under pressure.

Importantly, the GMI was designed not only to render multinational mining projects more 'sustainable', but also to position companies on the frontline of a putative 'global transition to sustainability' — thereby institutionalising the extractive industry's involvement in major global debates (e.g. biodiversity conservation, poverty alleviation and economic growth) (Rio Tinto 2007; WBCSD 1997–2012). In short, corporate engagement with sustainability, similar to Corporate Social Responsibility (CSR), was widely seen as key to achieving a 'social license to operate' (Newell 2007).

Access to land connects the seemingly disparate realms of conservation and mining. Increasingly, the health of markets and the health of ecosystems are seen as interdependent. The GMI coincided with 'mainstreaming of sustainability into the marketplace' (Adams & Jeanrenaud 2008: 32) and the embedding of biodiversity and forests into global market chains (e.g. debt-for-nature swaps, REDD, REDD+, and biodiversity/carbon offsets) (Castree 2008; Igoe & Brockington 2007; Büscher 2010; Sullivan 2010; 2009). As

nature became an arena for increased profit-making, biodiversity loss was frequently approached by the corporate sector as both a risk and opportunity (TEEB 2010). Conservation NGOs occupying important positions of political power in Madagascar (Duffy 2006; Horning 2006) and elsewhere began to ‘partner’ with multinational mining companies to negotiate biodiversity, capital (both financial and discursive) and land ‘swapping’ in the early 2000s. For example, Shell, a leading oil company, formed a corporate partnership with the Smithsonian Institute, a top scientific organisation; Smithsonian helped Shell locate a natural gas plant and pipeline in Peru, and Shell financed a biodiversity conservation project in Gabon in return (ABCG 2004: 6). Justifying these partnerships, Rio Tinto Chairman David Richards (2007) stated that ‘(s)eeing access to land puts mining in the same “market” as other land uses, including conservation’.

With the IUCN recently including the private sector as one of three ‘pillars’ in the growing ‘sustainability industry’ (Adams & Jeanrenaud 2008: 30-33), reports from various GMI initiatives (e.g. such as the Economics of Ecosystems and Biodiversity (TEEB), Mining, Minerals and Sustainable Development (MMSD), Business and Biodiversity Offset Programme (BBOP), and World Business Council on Sustainable Development (WBCSD)) suggest that corporate actors — particularly mining companies — play a crucial role in sustainability and biodiversity conservation.

Mining–conservation partnerships must be seen in the context of Madagascar’s status as a richly bio-diverse (Dewar & Wright 1993; Myers 1988) yet economically impoverished country (World Bank 2009), with two thirds of the Malagasy population living below the poverty line and in rural areas (Sarrasin 2006: 389). Following various neoliberal reforms in the 1990s, development projects in Madagascar have two main goals: to alleviate poverty through economic development and to protect and sustainably manage the environment (*ibid*). As its largest financial lender, the World Bank has encouraged Madagascar to accept Foreign Direct Investment (FDI) as a primary way to promote economic growth and relieve debt (Sarrasin 2009). A new 1999 mining policy (Law No. 99-022), which aimed to enlarge the mining industry’s role in economic growth whilst ‘withdrawing state involvement in operations’, increased the degree to which the corporate sector could intervene in regional development (*ibid*: 391-2). Such reforms echo broader ‘land grabbing’ debates which suggest that foreign investments are crucial to economic growth, environmental protection and poverty alleviation (World Bank 2010). This ‘win–win’ view has been critiqued by various scholars of foreign large-scale land acquisitions (De Schutter 2009; 2011: 13; Cotula *et al* 2009: 9; Hamann 2010; Borrás *et al* 2011; Anseeuw *et al* 2012; Hall 2011).

3.2 Land use, ownership and tenure in Madagascar

While all land in Madagascar is officially owned by the state, customary entitlements to land preside in many rural areas. Claims to land are often mediated through the practice of *tavy* (shifting cultivation, or more colloquially referred to as ‘slash and burn’) or having ancestral tombs on the territory. *Tavy* is a practice wherein small (1.2ha) plots of land are burned of their vegetation and staple crops (notably rice and manioc) are planted in the nutrient-rich ash. Practicing *tavy* for fifteen or more years or having ancestral tombs on the land entitle people to claim the land. Very few people have official title to the land they use; of ‘90% of Malagasy farmers who own land, only about 8% have formal land titles’ (Panos/ALT 2009: 8). In this context, the notion of ‘ownership’ is problematic as much land (and forest/ water resources) is communally accessed and ‘owned’ by the ancestors (Evers 2006). Land is often referred to as the *tanindrazana* – ‘land of the ancestors’.

Malagasy people eking out a living from *tavy* are often viewed as the main destroyers of forests and biodiversity in global conservation and state discourses of degradation (Gezon 1997: 463; Jarosz 1993; Kull 2000). Many scholars have shown how degradation narratives are embedded in ideological biases associating Malagasy people with ‘irrational’ or ‘inefficient’ resource use, a myth tracing back to colonial times (Fairhead & Leach 1996; Kaufmann 2000; Kull 2000; Simsik 2002; Klein 2004). Such assumptions do not consider the complex factors leading to forest loss (Lambin *et al* 2001; Angelsen & Kaimowitz 1999; Kull 2000) nor do they include the history French colonial mass logging, which led to a net loss of forests (Jarosz 1993; Sodikoff 2005). During colonialism, subsistence practices were heavily restricted due to *tavy* being

vilified, state-led logging campaigns, cash-cropping and related attempts to push Malagasy people into forced wage labour on concessions (Jarosz 1993). Ultimately, farmers responded to a 1913 nationwide ban on *tavy* by using fire as a form of protest (ibid.). During this ban, colonial ‘conservation’ zones were founded next to massive hardwood logging projects, which Sodikoff (2005, 2007) suggests sent contradictory messages to the Malagasy, as colonial forest clearing was called ‘rational’ while the Malagasy were encouraged to ‘protect’ forests and denied land access for subsistence agriculture (Sodikoff 2005). Some Malagasy refer to the Rio Tinto mine as *mivarotra tanindrazana* – ‘selling off the land of the ancestors’ — a proverb which emerged during the French colonial era and is linked to historical experiences of dispossession. In Madagascar, land cannot be viewed solely as an economic asset; it is also an existential anchor to past, present and future generations: connecting to the ancestors (*drazana*), upholding customary knowledge (*fomba*) and carrying out labour activities are all tied to everyday land use practices.

Land is inheritance; it is the donneur de vie¹⁰. The question is: what will they do afterwards, when their land is gone? Cultivating the land is their heritage it is a symbol of family value. The ancestral ties between parents and children are not just economic.

Interview respondent, Madame Angeline, 2009 (translated from French by author).

Land is value as (local) heritage in Madagascar, crucial to securing family ties, notions of wealth and inheritance, and everyday subsistence activities (Evers & Seagle *f.c.*). Descendants give value to land through long-term cultivation and pass it on to future generations as inheritance (a process through which these descendants become ancestors themselves). This process is crucial to Malagasy ontologies of growth, kinship, memory, death, and burials — which are all intricately connected to land use and providing sustainability to future generations (Evers 2006; Keller 2008).

4 Offsetting local impacts: ‘Integrated compensation’ or ‘gifts’ of sustainable development?¹¹

The following sections analyse empirical data gathered in the field to critically discuss the impacts of the mining project on land-reliant stakeholders. Rio Tinto/QMM’s ‘integrated compensation programme’, the company’s remediation scheme, is shown to be problematic because:

1. It does not adequately compensate for the value of land and biodiversity lost; and
2. It is embedded in global commitments to ‘sustainable development’ rather than addressing real, material impacts of mining on local residents.

The compensation package, according to the QIT Community Relations Strategy and Plan (2007), includes:

- ecotourism
- improved agricultural productivity
- improved fishing practices
- plantations
- restoration
- conservation area management.

Rio Tinto’s paradoxical strategy of enforcing conservation on those coping with the social and environmental impacts of the mine has led to a process of inversion, wherein local people are mediated as the primary agents of environmental degradation and livelihood shifts are branded as necessary to sustainable development.

¹⁰ Giver of life.

¹¹ Names of villages and informants are fictitious in order to protect anonymity.

4.1 Land access and food security in Ampasy Nahampohana

The loss of access to the Mandena forest (2 000ha), rises in the price of land and related inflation¹², and growing numbers of private land enclosures (concessions) in Ampasy Nahampohana has led to substantially less space available to cultivate crops and graze cattle (*zebu*). Farmers are increasingly forced to migrate into the mountains to cultivate the land. As HJ, a former chief *fokontany*, said:

In the town, there are more options to change work; in the rural areas, land is everything! So if land is taken away, all social and family life is disrupted.

Since the onset of mining operations, respondents noted an increase in the price of land; many land owners were selling territory to foreigners (*vahaza*) or extra-locals (*piavy*). This was perceived to be a land access problem, as farmers who often freely cultivated on the land of local owners (facilitated through social ties and the *fihavanana* (social bonds)) were excluded from land bought as concessions by extra-locals. Also, under Malagasy law, a *vazaha* can legally buy land if he marries a Malagasy woman; this occurred in one instance where a white foreigner purporting to work with Rio Tinto/QMM acquired several hectares of land to grow cash crops (as opposed to staple crops). These new enclosures have led farmers to migrate to the mountains to cultivate and graze cattle — even though the mountainous terrain is ill-suited for farming rice. In Mangaiky, situated at the base of the mountains, farmers told us that the Ministry of Water and Forests (MEF) often threatened to fine villagers for deforesting in the mountains. Farmers insisted they were well aware of the impacts of hill-top deforestation on waterways, but that the MEF offered no alternatives. Farmers perpetually pointed to the lack of rain and *chauffage de climat* (climate change). One farmer suggested that Rio Tinto/QMM ‘*retient la pluie... la pluie est mauvaise pour le travail a cause de QMM*’ (blocks the rain; the rain is bad because of QMM).

As cultivating staple crops seemed to be a priority for the people of Ampasy Nahampohana, Rio Tinto/QMM’s proposal to increase farmers’ profitability by hiring a multinational outsourcing company, Sodexo, to help implement a gardening project, was found to be problematic. The premise was that, by turning locals into gardeners and diversifying their production (for local or regional markets), dependency on natural resources and growing rice would decrease. Committed to contributing ‘a better diet for local communities’ (Sodexo Madagascar 2007: 12), Sodexo engages in educating locals about the importance of ‘food diversification’ in their diets through the introduction of garden vegetables (carrots and tomatoes) (ibid: 24). This initiative is consistent within CSR discourse:

Changing unsustainable patterns of consumption is widely seen as an important driver to achieving sustainable development. Companies have a key role to play in facilitating sustainable consumption patterns and lifestyles through the goods and services they provide and the way they provide them.

International Institute for Sustainable Development 2007: 12.

However, this view may conflict with local conceptions of health and nutrition which privileges staple foods, mainly rice — which is important because it is the main food source and an ancestral labour practice; cultivating rice features prominently in several Malagasy proverbs. Sodexo’s work in the Fort Dauphin region is aimed mostly at integrating local farmers into the market, and thus can be considered a form of inclusion; however, this is also based on the assumption that farmers would not need to clear land for *tavy* if they did produce vegetables (and earned a profit), and thus points to exclusion from subsistence activities. Integrating local people into markets and dissuading them from subsistence activities heavily influences Rio Tinto’s approach to sustainable development:

These are rural people engaged in subsistence production, which provides limited opportunities for development or economic growth.

Vincelette et al 2007: 4.

¹² Informants noted that the price of a bushel of bananas and a *zebu* (cow) had doubled between 2000 and 2009, and that the price of rice and beef had risen by a third; they mentioned that such inflation was not normal for the region.

While this inclusion/exclusion process is also a very real outcome of the various mine impacts (such as environmental degradation, land loss and land access shifts), ‘sustainable development’ which points to ‘improving’ agricultural productivity and integrating farmers into the market — fails to address the impacts of territorial enclosure:

The main problem is that farmers cannot just plant carrots and tomatoes; they eat what they produce, so it must coincide with cultivation of manioc or rice. They are not used to eating these new vegetables (carrots, tomatoes and potatoes) [...] If the vegetables are not bought on the market, or if they rot, they lose money, food and labour time, so there are many risks involved.

Care International Official, March 2009 (translated from French by author).

Moreover, profit earning did not necessarily appear to be a goal in the area; a former chief *fokontany* mentioned that farmers only sell a portion of their production, and only if it is absolutely necessary. Similarly, Scott (1976) argues that, in the ‘moral economy of the peasant’ people consciously choose *not* to risk maximising profits as starvation is an everyday concern, thus maintaining food security often takes priority. In the context of very low agricultural productivity (with many families eating manioc instead of rice), decreased access to land and heightened risk of food insecurity, farmers did not have plans to expand, nor did they have the luxury to experiment: they were thinking about minimising imminent risks. As one farmer told us in Ambaniala: ‘*Il faut mourir demain et pas aujourd’hui*’ (it is better to die tomorrow rather than today). However, while people (necessarily) live day-to-day, it is important to remember that local investments in land are all about sustaining future generations.

4.3 Relocation, compensation and the unequal value of land

JP, a man in his late thirties with family ties to Ampasy Nahampohana, said ‘QMM gave money to people, and now they are poor’. Another respondent, a middle-aged Malagasy NGO worker said:

QMM only gives ‘gifts’ – they don’t teach people how to improve their living situation [...] For the farmer, if he receives Ar50 000¹³ from QMM, what will he do with it? He doesn’t have land! Some people buy telephones, credit, and cars — even if they don’t have a licence.

NGO Official, 2009 (translated from French by author).

In Befasoka, located near a new port (Ehoala) built by the company to ship minerals, it was found that Rio Tinto/QMM asked villagers to stop fishing for three years in order to replenish existing stocks in the coastal inlet (purportedly as a conservation measure). A Rio Tinto/QMM-built ‘workers village’ — rows of green and white coloured houses constructed for workers employed by the company — was found within eye-sight of Befasoka. Rio Tinto/QMM purportedly offered the village monetary compensation for the losses that would occur; however, an elderly man and his wife explained that the village refused the money — choosing instead to continue fishing. For them fishing ensured both food security and income for future generations. It also provided labour activities for the entire family: while young boys tend to go with fathers to learn how to fish and weave nets, young girls accompany mothers to sell fish at the town market. However, Rio Tinto/QMM continued to encourage the village to accept the money, leaving locals wondering what choice they had and whether the ‘gift’ of compensation was being forced on them.

Moreover, Rio Tinto/QMM heavily restricted access to fishing and docking grounds in Somatraha, a highly productive fishing area important to Befasoka. Depending on seasonal conditions, villagers regularly migrated between Somatraha and Bevava in order to fish; now only Bevava is accessible. Rio Tinto paid compensation to affected families, but as one informant affected by these restrictions noted, many people ended up going into debt:

¹³ This amount does not reflect actual compensation paid; it was used simply to make a point about the value of money vs. land.

Most of the money was used to pay back our debts [...] My income decreased enormously [with the loss of fishing grounds]. Therefore, I had to take out loans to avoid famine for my family. I had no choice.

ALT 2009: 49.

When I asked the older man and his wife what they would do if unable to fish for three years, a heavy, awkward silence filled the room; the man half-smiled and looked vacantly to the floor. His wife, who was the more out-spoken of the two, replied: 'Nothing! What will we do if we are unable to fish?' Her husband nodded in agreement. She continued: 'Maybe we will sell things, like coffee or *mofo* (bread) on the street; that is what some people are doing now.'

These examples suggest that monetary compensation may not replace the value of labour and food to people living in the village. In another case, an entire mountain was acquired by Rio Tinto/QMM to construct a rock quarry which would supply stones to a breakwater for Port Ehoala. The mountain, considered the ancestral land of the people of Ravitany, was blown up with dynamite. Up to 500 people were displaced from their homes and hundreds more lost access to land used for cultivation (ALT/Panos 2009). The people in the village considered the mountain to be the 'land of the twelve ancestors' and insisted that Rio Tinto/QMM had destroyed sacred stones called *anorombato*. One woman remarked: 'The money given to us was not the same value as the land that was taken from us. *Tsy mitovy!* (not the same!)'. She noted that replacement land lacked the quality of the land taken, as it was infertile and sandy ('*c'est pas cultivable!*' (It is not cultivable)). Still others complained of the poor resettlement houses, which purportedly leaked during rain storms and had cracks in the ground. At the time of research, the village was still trying to negotiate compensation with Rio Tinto/QMM. Villagers maintained that negotiations dwindled down, with the company offering first Ar13 million as compensation, Ar10 million and finally only Ar4 million per family (worth US\$2 047 in 2009; US\$ 1 844 in 2012).



Ancestral mountain/rock quarry acquired by Rio Tinto/QMM, near Port Ehoala.

Resettlement houses for families displaced by the rock quarry.

Photos taken in Ravitany by Caroline Seagle, March 2009.

While 'gift giving' (*donner les cadeaux*) has been a key way for Rio Tinto/QMM to negotiate immediate compensation, 'gifts' of money may be valued differently by different actors. By focusing on the (true) assumption that many Malagasy people are economically poor, compensation is transformed into a 'development gift' — but financial capital may not equal other forms of capital (land, water, forests, social bonds) valued by many people as wealth. These complex realities render the very notion of monetary compensation problematic.

4.4 'Handicrafts training' with *mahampy*

As part of their compensation package, Rio Tinto/QMM (2007a:2) mention that women will be trained how to fashion 'baskets and mats produced by weaving *mahampy*'. However, the language used by Rio Tinto/QMM of training and educating local women how to do things they are experts of — but can no longer carry out due to the impacts of the mine — is paternalistic in the sense that *mahampy* is mediated

as a 'gift' or sustainable development to local communities. In Ampasy Nahampohana, and along much of the littoral coastline, women have historically accessed *mahampy*, a reed that grows in the littoral forest. Informants in a focus group interview in 2009 insisted that most reserves of *mahampy* in Mandena had been destroyed by Rio Tinto/QMM or replaced with eucalyptus. One man called the decimation of *mahampy* in Mandena 'sabotage', and one woman added:

We showed them how we used the forest, we showed them we have a dependence on it, and they [QMM] cut it down!

Weaving *mahampy* is deeply embedded within Antanosy customs — having secured the provision of income in times of food scarcity, when the production of rice or manioc is low. It is the primary activity and specialisation of women, and is a type of knowledge passed down by the ancestors. During interviews in or out of homes, mats made from *mahampy* were commonly brought out to sit on. *Ampy* means 'complete' and is a symbol of solidarity and togetherness. From a broader point of view, the metaphor the 'mat' appears in some Malagasy proverbs. For example, *tsihibelambana ny olona*, which literally means, 'people constitute a great, broad mat,' refers to the interconnectedness of all humanity, including people living in the present and in the past (ancestors) (Fox 1990: 24). Similarly, Ingold (2000: 338–339) suggests that the 'life-activity' of weaving also involves a wider process by which the 'world' is 'made' — specifically through the embodied activity (labour), the end product (e.g. a mat or basket) is imbued with social significance.

The connection between past and present is upheld by the fact that *mahampy* is also the *only* reed species used by the Antanosy to wrap deceased ancestors before they are placed in the tomb. While another species, *vakoa* — found in the mountains — can be woven and thus bears resemblance to *mahampy*, women vehemently insisted that 'only *mahampy*' can be used to wrap the dead. Through this process, the temporal connection (dialectic) between ancestors and descendants is established.

Remaining *mahampy* in Mandena is accessible only by paying fees (*congé*) to the forest guards. At the time of research, most women were afraid of entering Mandena to collect *mahampy*. In 2009, Rio Tinto/QMM was experimenting with *mahampy* plantations completely outside the mining site, though early reports from informants suggested that the reed dimensions were smaller than wild reeds; also dependency on plantations grown by Rio Tinto/QMM may be potentially problematic. Antonie Kraemer (SOAS), a PhD researcher working in the field at the time of this study, mentioned that some women do not consider the plantation species to come from the *zanahary* (the Creator) and thus cannot use it. Rumours that the plantation reeds were yellow and of poor quality deterred women from use, and many complained that Rio Tinto/QMM did not produce enough reeds for everyone; women now have to buy *mahampy* from collectors who gather the product from outside of the region (Kraemer, *pers. comm.*). However, the refusal of women to use Rio Tinto/QMM *mahampy* may reflect an act of 'everyday resistance'.

4.5 Teaching 'improved fishing methods'

In Afiavianala village, many informants pointed to a drop in food security due to Rio Tinto/QMM's construction of a dam (weir, or *seuil déversoir*) which changed a brackish estuary to freshwater and led to the collapse of otherwise highly productive fishing grounds. The dam, constructed at the mouth of a river leading from Lake Ambavarano to the coast, was designed to supply freshwater for dredge mining. Rio Tinto/QMM maintains that, prior to the mine:

[...] the principal lakes have become silted and polluted, no longer capable of serving the population either as sources of potable water, nor as a source of revenue from fishing.

QIT Community Relations Strategy and Plan 2007: 5.

Local people were claimed to have been 'overfishing' anyway (Vincelette *et al* 2007: 5), and as part of the 'integrated' compensation package, offered 'improved fishing practices and 'training' in sustainable fishing (QIT Community Relations Strategy and Plan 2007). But a local fisherman and his wife who supported a

family of ten, explained how nearly all the fish disappeared after the dam construction and that villagers were struggling to survive. Fishing provided food for subsistence, an additional income and labour activities. While the man insisted that fishermen could previously make Ar100 000/day (a great deal more than the incomes of cultivators), Rio Tinto/QMM purportedly offered Ar130 000 Ariary/month compensation, to be distributed every six months.

Here, the people are poor and just accepted the 130 000 immediately. Before, we could fish three vaha¹⁴ per day; now, we are lucky to catch three fish per day due to the seuil déversoir. Fish from the sea used to come in here, but are now stopped by the barrage (dam)... Fia tsy misy [no more fish]! [...] Here the land is not cultivable; we can only exploit the water. Now people eat the river plant, Via [points to bowl of food with via mixed with manioc]. Because there are no more fish, we don't know what will happen in the future — perhaps we will move elsewhere.

Man in Afiafianala, March 2009.

While fish appeared to be lacking in the estuary altogether, Rio Tinto/QMM introduced conservation measures to ensure that local people are not 'overfishing'. Now villagers must use sustainable nets introduced by Rio Tinto/QMM referred to as *harato telo tondro* (nets with 'three fingers'), or nets with larger holes — thus eliminating the possibility of juvenile by-catch. Villagers caught using local nets (with smaller holes) risk being fined. Respondents expressed dismay over this requirement as large fish were no longer present in the waters due to the dam anyway. While some smaller fish could still enter the estuary (through crevices in the dam) they would simply swim through the holes of the new nets¹⁵.

Here we see another process of inversion, where a mining impact (dam leading to ecosystem shift) is taken by the company and re-mediated as 'sustainable development' (improved fishing methods). This is hinged on Rio Tinto/QMM's portrayal, in various documents and the SEIA, that local people were overfishing, isolated from markets and using unsustainable methods prior to the company's arrival. While fishermen were well acquainted with selling fish at the market prior to the dam (a primary activity of women), Rio Tinto/QMM claim to have introduced villagers to the concept of markets, writing that

Training was undertaken [...] on improving fishing techniques. For the first time the fishermen were assisted in marketing their catch. This is an on-going project in an attempt to move them from subsistence fishing to a commercial catch.

Rio Tinto/QMM 2008: 18.

This quote again reproduces the notion that, prior to Rio Tinto/QMM's arrival, local Malagasy people were helpless, living in the past and isolated from or unaware of markets. In short, the assumption that people need 'training' for both fishing and weaving *mahampy* suggests that, prior to Rio Tinto/QMM's arrival, local people were unable to manage natural resources sustainably. While this is far from the case, such a narrative builds legitimacy for Rio Tinto/QMM's project, and authorises Rio Tinto's engagement in the regional 'development' sphere.

5 Offsetting the 'global body': Biodiversity, environmental mimesis and discourses of degradation

Locally, 'integrated compensation' appears to reflect Rio Tinto/QMM's broader sustainable development strategy and global biodiversity commitments. This section details the company's approach to compensate *globally* for the environmental impacts of the project. It will be shown that global remediation schemes also resemble a process of inversion; through a process of mimesis (of conservation discourse and media) and alterity (of local Malagasy resource-users), Rio Tinto/QMM invert the impacts of the mine and purport to be 'saving' — rather than creating scarcity of — biodiversity.

¹⁴ Vaha are baskets woven out of *mahampy*.

¹⁵ Small fish were purportedly able to get through the dam by means of a 'key' in the weir.

Narratives of Madagascar's degradation emanating from conservation NGOs, state entities and international speculation often position local Malagasy people as the main perpetrators of deforestation (Kull 2000); these narratives pervade much of Rio Tinto/QMM's sustainability discourse and reflect clear neo-Malthusian influences:

High population growth rates and overwhelming poverty have contributed to serious environmental degradation in the region. Of 11 watersheds identified, seven are highly degraded thanks to slash and burn agricultural practices [...] The physical, social and administrative infrastructure of the town of Fort Dauphin, on which a population of 50 000 depend, is equally if not more seriously degraded [...] Both public and private investment is required to achieve the economic growth necessary to reverse this situation.

QIT Community Relations Strategy and Plan 2007: 5.

Comparing its own environmental degradation with that of the town, Rio Tinto/QMM implies that its presence is urgently needed. Hajer (1995: 60–61) has defined this sort of language as 'discursive domination' and hegemonic (in Adger *et al* 2001: 685).

The mimesis of conservation may adapt certain assumptions about what constitutes 'right' and 'wrong' natural resource use (Luke 1997). As former forest engineer for Conservation International and now head of the biodiversity programme at Rio Tinto/QMM Manon Vincelette (2009) stated:

We are proud that QMM has been recognized as ... building capacity for better use of the natural resources in Madagascar.

Prinsloo 2009.

While some uses of the forest are warranted (mining, protected areas), other activities (tree felling, subsistence agriculture, use of non-timber forest products) are mediated as the 'wrong use' of the environment. As the company states in *A Mine at the Rescue of the Unique Biodiversity of the Littoral Zone of Fort Dauphin*:

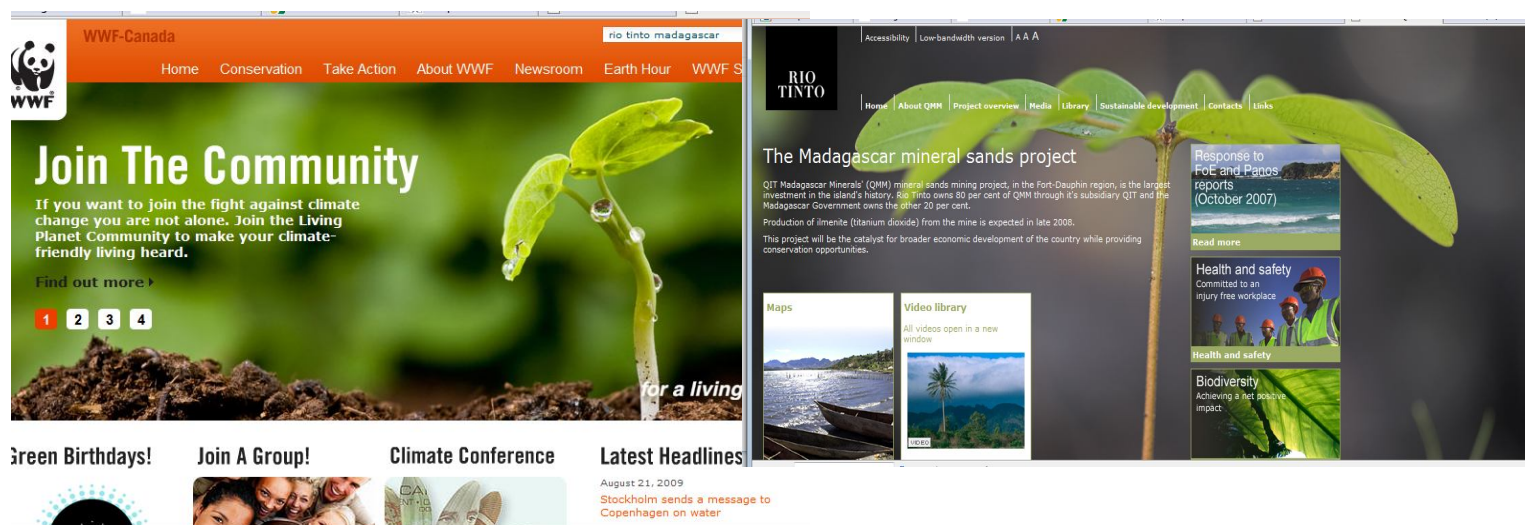
Since the arrival in Madagascar about twenty years ago, Rio Tinto QMM was immediately conscient [sic] of the existence of the forests' [sic] deterioration in the littoral zone of Fort-Dauphin due to the irrational pressure exercised by the local population who is very dependent on natural resources.

QMM 2009: 2

By focusing on 'rational' resource use, sustainability discourses presuppose that customary (or more commonly referred to as 'archaic' or traditional) approaches to environmental management are 'irrational', despite having secured the provision of food, medicine, income, and livelihood activities for centuries (Luke 1995). While environmental discourses are certainly mirrored by the company, Rio Tinto/QMM also uses the same forms of media/mediation as international conservation NGOs; as shown in *Figure 3*, the websites of WWF and Rio Tinto/QMM are very similar (see *Figure 3*).

Virah-Sawmy (2009) has demonstrated that Rio Tinto/QMM's discourse linking local people to littoral forest degradation are based on false presumptions about how the forest has changed over time. She draws on paleo-ecological evidence to show that the uneven distribution of the forest is a cause of complex climatic shifts as opposed to a history of human impacts. Day (1950) and de Gouvenain & Silander (2003) support this statement, noting that 'shallow root systems, sandy soils, and extreme winds make the littoral forests exceptionally vulnerable to uprooting because of cyclonic activity' (in Ingram *et al* 2005: 781). Similarly, in a study focussed on the extent of ecosystem damage on Madagascar's east coast due to cyclones, Birkinshaw & Randrianjanahary (2007: 18) note that the 'most severely damaged' was the littoral forest. Virah-Sawmy (2009) proves that most deforestation occurred in the twenty years coinciding with Rio Tinto/QMM mine exploration and infrastructural development.

Figure 3: 'Mimicking conservation groups': Rio Tinto/QMM Madagascar web page look like WWF



Source: WWF and Rio Tinto/QMM Madagascar webpages, accessed in 2009.

Thus Rio Tinto's calculations, of 'near-total forest loss on its mining sites in the absence of mining activities', are potentially unreliable (Virah-Sawmy & Ebeling 2010: 1). Moreover, while Vincelette *et al* (2007: 5) state that the '2 000ha of the Mandena are now 75% open lands, 10% highly degraded forest, and 15% wetlands', Ingram *et al* (2005: 781) showed that the way Rio Tinto/QMM identified littoral remnants with GIS maps (Vincelette *et al* 2007: 49) 'failed to capture the full range of structural heterogeneity and variability in human impact across each fragment'. They further state that the 'semi-qualitative' way Rio Tinto/QMM classified the forests 'cannot be replicated because of biases associated with observer's judgements' and the company's tendency to measure littoral forests according to canopy cover alone (Ingram *et al* 2005: 781). These examples challenge the assumption that littoral forests are being rapidly destroyed by people; nevertheless, with regard to the three 'conservation enclaves' set aside by Rio Tinto/QMM in each mining perimeter, totalling 620ha out of 6 000ha of littoral forest, Manon Vincelette of QMM exclaimed, 'We are now saving forest that would otherwise go through slash and burn' (Frienkel 2005).

5.1 Mandena forest and biodiversity uses

With regard to Mandena, Rio Tinto/QMM elaborate a dual and conflicting narrative to global audiences: on the one hand, the littoral forest is exotic, rich, and teeming with biodiversity — worthy of being protected, and on the other, the forest is described as barren, unused, heavily degraded by local people, and threatened. Prior to Rio Tinto/QMM's acquisition, Mandena was used extensively by locals for cultivation, accessing wood (for the house) and medicinal plants, and grazing cattle. The forest also housed the ancestral tombs of a migrant group, the Antesaka, who had been living in the area for generations. These tombs were reportedly displaced by Rio Tinto — an act considered a serious *fady* (taboo) in most Malagasy customs (*fomba*). Mandena also contains hundreds of medicinal plants that were widely used by locals; many people encountered in the field had a remarkable awareness of medicinal plants. Food, such as *via* (estuarine plant eaten in times of scarcity), guavas (in season during fieldwork, and often gathered by children), fruit trees (papaya, bananas, pineapples, *coeur de boeuf*), and *boreko* are found in the forest. At least eight species were found to be used in the construction of one Malagasy house, such as *raty* (traveller's palm) which is used for roofing. The Malagasy house itself could be seen as a chronotope of biodiversity, as each species used in its construction has a certain quality: such as the width, strength or length of wood. Some plants are used for building traps for fish or lobsters, while others are used for bedding. Some cultivators grew rice on the outskirts of Mandena; one patch that had been cleared for *tavy* a few years prior had been abandoned as it was considered to be too close to the protected area.

Nevertheless, Rio Tinto/QMM perpetually refers to ‘charcoal burning’ as the main cause of deforestation in — and use of — the Mandena forest, ignoring the fact that residents of Ampasy Nahampohana are primarily (semi-)subsistence farmers. Referring to the Mandena conservation zone, situated in the mining perimeter, Rio Tinto/QMM (2009) write:

In an area surrounded by deforestation for charcoal burning, the conservation zone will provide a buffer zone for the preservation of animal and plant species. They [conservation zones] are also a tourist attraction.

Rio Tinto/QMM, *A Promise Fulfilled* (March 2009): 10.

The fallacy implied by this statement is that the conservation zones will provide a ‘buffer’ from charcoal burning rather than dredge mining. Importantly, while ecotourism being promoted in the conservation zone is mediated as ‘integrated compensation’ to local communities, it is unclear how and whether local people view ecotourism as adequate compensation. Again, the discourse points to a process of inversion, wherein actual mining impacts (deforestation) are abstracted from the narrative line and re-mediated as a seemingly endemic — and speculative — ‘local’ problem (charcoal burning).

Similarly, Rio Tinto/QMM state that the eucalyptus plantations — also mediated as compensation — will satisfy local needs for ‘wood and other forest products’ (Ganzhorn *et al* 2007: 323). However, in light of the above-mentioned uses of biodiversity, it is unclear how ‘other forest products’ will be made available in a post-mining scenario with eucalyptus. One informant stated that ‘before, people didn’t use *kininy* [eucalyptus]; now they have to. It is not as strong as the trees in the mountains’. Harbinson (2007: 48), quoting an informant in the region, adds, ‘the eucalyptus tree rots; it’s not durable compared to the local trees species like *harajado*’. Used as a colonial plantation species, eucalyptus has been linked to forced labour regimes; it is also highly water intensive and flammable (Harbinson 2007: 48). In Thailand, a state-run eucalyptus campaign reportedly caused decreased water resources, lowered soil fertility, increased soil salinity, and drought, mobilising Thai peasants to protest against the government as eucalyptus was equated with livelihood loss (Kittisiri 1996). Similar occurrences in Brazil, where women indicated that eucalyptus plantations led to the loss of subsistence farming activities, water shortages, lack of arable land access, and the destruction of medicinal plants, show that eucalyptus can be a problematic species for people reliant on land and natural resources (Lang 2009). In 2006, Brazilian women joined together to protest against eucalyptus plantations by destroying thousands of eucalyptus seedlings (*ibid*).

5.2 Global ‘gifts’: Biodiversity offsets

Rio Tinto/QMM devotes approximately three million dollars per year to ‘preserve biodiversity’ (Vincelette in Creamer 2008). Rio Tinto/QMM’s global ‘performances of sustainability’ heavily rely on making the claim that, despite the adverse impacts of mining, the company is accruing a ‘net positive impact’ (NPI) on, and ‘no net loss’ (NNL) of, biodiversity (Rio Tinto, Biodiversity offset design 2008). This has manifested in a corporate policy designed and administered by Rio Tinto/QMM called ‘biodiversity offsetting’: the financing of — or provision of land for — biodiversity conservation completely outside the mining zones (Rio Tinto 2008a; Anstee 2007). Through this policy, which is readily being adopted by other mining companies in Madagascar (e.g. see Sherritt website 2012), Rio Tinto claim to set a ‘benchmark’ for green mining (Prinsloo 2009). Rio Tinto defines biodiversity offsets as:

*[...] conservation actions designed to compensate for the unavailable residual impacts on biodiversity caused by mining and processing’ [...] an offset] takes place away from the impact site and normally takes the form of **averted disturbance** or ecological restoration*

Anstee 2007: 1 (emphasis added).

Corporate land access and legitimisation strategies are increasingly embedded in an ‘offset ideology’ premised upon swapping payments for environmental services (PES) for land access. Through the paradigm of conservation finance and PES, the ‘offset ideology’ is less mitigatory and more compensatory — making up for local damage through land allocation or financial support of nature conservation.

Richards suggests that biodiversity offsets transcend traditional 'trade-offs' (such as employment¹⁶ as a 'trade-off' for land loss) by offering a 'like-for-like' exchange with regard to the environment (Ten Kate *et al* 2004: 53). However, offsets appear to reflect more of a global form of compensation which upholds a division between 'nature' and 'culture', as Malagasy people are disembedded from the environment in both contexts of conservation and mining. This process of disembedding is at once exclusion (from land) and inclusion, as 'direct' (cash) payments for environmental services (PES), and immediately integrates people restricted of land access into global or domestic food markets instead of self-sufficiency.

Some of the language embedded in the biodiversity offset discourse continues to imply that offsets are being set aside as a remedy to the Malagasy people's environmental impacts, rather than those of Rio Tinto/QMM. For instance, Rio Tinto/QMM's 'averted disturbance' strategy is telling in this regard; to Rio Tinto (2008b:1):

[a]verted disturbance involves reducing existing external impacts such as land clearing by other forest users, lessees or owners.

Thus while Rio Tinto's own clearing of land and biodiversity is authorised (by Rio Tinto), the 'existing external impacts' of other land users (namely, Malagasy people) is vilified.

Rio Tinto/QMM mention that '35 000km² of land is held as part of mining tenements' with only 10% "needed" for mineral exploitation; these land tenements are currently being set aside as offsets (Anstee 2007: 4). NGO partners involved in offset implementation include BirdLife International, World Conservation Society, Conservation International, and USAID. Rio Tinto/QMM note that '31 275ha of biodiversity offsets' will be managed outside of the mining zone completely (Rio Tinto/QMM 2008a: 2; QMM 2007a: 1) in Tsitongambarika and Ambatotsirongorongo (*ibid*).

Recent developments suggest that biodiversity offsetting and carbon storage potential are coupled into the same compensatory finance mechanism (PES); i.e. companies can use the monetary valuation of carbon potential to finance biodiversity protection schemes. Tsitongambarika, a proposed Rio Tinto biodiversity offset site, has been speculated as a potential Reducing Emissions from Deforestation and Degradation of Forests (REDD) project by the IUCN, a corporate partner of Rio Tinto. Commissioned by Rio Tinto to economically value the environmental services of the forest, the IUCN states that REDD has been identified:

as a potential new financial mechanism to provide a new income stream for both Rio Tinto as a large landholder to help finance its biodiversity conservation activities

Olsen *et al* 2011: 35.

Rio Tinto can use the estimated US\$26.8 million economic value of carbon storage in Tsitongambarika (*ibid*: executive summary) to finance and implement its biodiversity offsetting scheme. While IUCN (*ibid*) concedes that the 'costs of conservation are mainly borne by local communities, whose access to forest resources would be restricted under a conservation regime' no clear guidelines are provided as to how best avoid such costs.

BirdLife International (2012), a corporate partner of Rio Tinto and key player in the design and implementation of Tsitongambarika, uses the same Rio Tinto/QMM terminology in declaring the mining-conservation partnership a step forward in the 'global transition to sustainable development'. Importantly, BirdLife states that the biodiversity offset will 'enhance water security for QMM's mining operations,' making it unclear as to how water resources in Tsitongambarika will be used (or transported) by the mining company following the enclosure (*ibid*). This points potentially to yet more resource 'grabs' at the

¹⁶ While some local people were hired to work for Rio Tinto/QMM during the construction phase of the project, at the time of research, most people were being laid off (following a three year contract).

biodiversity offset sites themselves. Ilmenite mining requires enormous quantities of fresh water — $\pm 72\,000$ metres³/day (Réville *et al* 2007: 281), or the equivalent of 28.8 Olympic swimming pools per day.

5.3 Kew Royal Botanical Gardens: Preserving global ‘heritage’ in genetic material

While the United Nations Convention of Biological Diversity (1992) has labelled the ‘conservation of biodiversity, sustainable use of its components and fair and equitable sharing of the benefits from the use of genetic resources’ a key aspect of biodiversity protection, especially within the context of ‘poor but biodiversity-rich countries in the South’ (Adger *et al* 2001: 694) such as Madagascar, ‘sustainability’ discourses may conceal a broader interest in increased commodification and ignore crucial issues of equitability and power. As Luke (2005: 233) states, ‘(i)n many ways, sustainable development is a social movement for greater commodification, working both from above and below’. The UN goals appear closely linked to ‘bio-prospecting’ discourse, which emphasises the innate and commercial value of biodiversity (Adger *et al* 2001). As biological diversity dwindles in the North, conservation groups, pharmaceutical companies and wealthy nations have looked to the South as a global gene bank. However, boundaries sometimes become blurred between seemingly ‘global’ needs for bio-prospecting and ‘bio-piracy’ — the unlawful elite capture of indigenous environmental knowledge or endemic species for foreign profit (Adger *et al* 2001: 695–696).

As part of their NPI commitment, Rio Tinto/QMM regularly ship endemic seeds found in the littoral forest to Kew Royal Botanical Gardens (Kew) in the United Kingdom: an environmental research institute also involved in research undertaken for Rio Tinto/QMM’s ‘biodiversity book’ (see *Figure 2*). Seeds will be stored in Kew’s ‘Millennium Seed Bank,’ a storage-house for millions of varieties of plant genes and veritable Noah’s Ark of biodiversity. Rio Tinto writes: ‘Seed lots sent regularly to the Millennium Seed Bank (MSB) at Kew Gardens for long term storage and conservation’ (Rio Tinto/QMM 2007a: 1; Kew and Rio Tinto/QMM 2009c).

Now officially partners, Rio Tinto and Kew intend to create ‘a domestication programme of forest species for the house plant market’:

Our partner QMM hopes to raise local incomes and reduce exploitation of the few remaining patches of forest, which it is actively conserving. The Threatened Plants Project focused on propagating and marketing threatened orchid species through PBZT¹⁷ to take pressure off wild populations.

Kew 2009b.

The Kew–Rio Tinto partnership points to an underlying interest in the commodification and profit-making potential of nature, both in ‘marketing threatened orchid species’ and the fact that one of the top funders of the Millennium Seed Bank is the Wellcome Trust, an organisation that also finances biomedical research and has specific interests in the ‘medicinal qualities’ of Kew’s seed reserves (Wellcome Trust 2009). An advertisement on Kew’s website notes that, for just £25 one can ‘adopt a seed,’ and for £1000 one can *save* the seed from extinction¹⁸ Kew writes (2010): ‘We will recognise your support with an adoption pack containing a certificate and a picture of the plant species you’re supporting’.

On Kew’s website, as in the ‘biodiversity book’ (*Figure 2*), no mention is made of the various environmental impacts arising from the ilmenite mine, which necessarily involves biodiversity loss. Conversely, the company is praised for ‘actively conserving’ remaining fragments of littoral forest and indeed *saving* species. Implicitly, the focus on raising ‘local incomes’ and reducing ‘exploitation’ of the ‘few remaining patches’ of forest implies that Rio Tinto is protecting the forest from local ‘pressure’:

¹⁷ PBZT = Parc Botanique et Zoologique de Tsimbazaza

¹⁸ The promise that funders can ‘save’ seeds is misleading; as stated on the website, Kew concedes that many of the seeds have ‘already been saved’ and that the £1000 goes towards keeping the organisation running.

Independent studies have demonstrated that these forests are rapidly deteriorating due to pressure from the local people [...] It is generally accepted that the remaining littoral forest fragments will be essentially destroyed within the next 2 or 3 decades unless an effective protection strategy is defined and the resources of the mining company properly harnessed to promote biodiversity conservation.

Kew 2009a.

The official slogan of the Millennium Seed Bank is: 'Saving plants for our future'. Rio Tinto is, in many ways, producing new types of 'world heritage' within these conservation zones lying adjacent to vast dredge mining operations; ironically, by *creating* scarcity of biodiversity, Rio Tinto is paradoxically *saving* biodiversity. Global heritage becomes innate to genetic material sent to a high-profile research institute for (foreign) protection.

6 Discussion

The above examples show how the Rio Tinto/QMM ilmenite mine encompasses a growing nexus of neoliberalism and conservation in Madagascar, involving new relations between media, power and discourse. Tsing (2000: 120) suggests neoliberalism contains 'a set of scale-making projects' within a performative 'economy of appearances'. In the case of Rio Tinto/QMM, this economy of appearances involves reproducing the local in global imaginaries through media outlets. Rio Tinto/QMM effectively link local processes of biodiversity loss (purported to be caused by local Malagasy people) to the global health of all ecosystems. By drawing upon this broader meta-narrative, the actual impact of the mine is not only abstracted but inverted and absorbed into the company's wider sustainable development rhetoric. Rio Tinto/QMM's mimesis of environmental discourses and media, combined with its own identification as a corporate leader in sustainability, promotes a view of Madagascar's ecosystems as part of a larger, 'global body' — wherein damage to one part can be remediated by 'healing' (protecting/conserving) another. Through such compensatory techniques such as biodiversity offsetting (extra-local conservation making up for *in situ* biodiversity loss), Rio Tinto/QMM appeal to global, not local, concerns for biodiversity loss.

'Performances of sustainability' have become an inextricable part of market capitalist competition and expansion within the extractive industry. While performing sustainability evokes important issues of scale, it also relates to Foucault's notion of the 'politics of truth' in corporate media (McMullan and McClung 2006) which suggests that the production of truth emerges within certain political, historical and discursive contexts, and as such, within certain power-knowledge formations (Foucault 1980). Lemke (2000: 8) suggests that the 'politics of truth' could be aptly applied to the discourse on sustainable development, wherein '(n)ature and life itself are being drawn into the economic discourse of efficient resource management'. Luke (2005: 230) goes on to suggest that sustainability rhetoric contains underlying valorisations of what constitutes 'right' or 'wrong' natural resource use, which is often embedded in Post-Enlightenment notions of technological 'efficiency' and 'rationalism'.

While it is important to view Rio Tinto's legitimising strategies within the context of new power formations underpinning mimesis, media and discourse, it is crucial to go beyond discourse to consider how local land users experience and perceive the mine. Corporate power and engagement in 'sustainable development' not only involves discursive representations but also real, physical interventions in human bodies — in this case, the bodies of cultivators, fishermen/women, women who weave *mahampy*, and the ancestors themselves. As Foucault (1976: 93) suggests:

Power is not an institution; and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategical situation in a particular society.

In turn, 'biopower' — as a productive technique (as opposed to negating, in the vein of 'sovereign power') has an alternate role of 'assuring, supporting, reinforcing' and 'multiplying life and putting life in order' (Foucault 1976: 94-95, 178). With regard to the various impacts arising from the Rio Tinto ilmenite mine,

biopower allows *access* to bodies (both ecosystems and humans), but also *produces* new types of bodies reliant on capitalism (not semi-subsistence). Therefore, the impacts of the project cannot be seen in purely economic terms, but rather as embedded within a wider context of real, material interventions in human bodies and cosmologies — which are on the one hand disengaged from point-resource-use (subsistence), and on the other, absorbed into new relations of production/consumption, based on capitalism and the market. In the field site, environmental changes had an immediate, direct impact on human health, eating habits and existential securities embedded in land use.

In the vein of biopower, these changes are often mediated by Rio Tinto under the banner of ‘sustainable development’ and as such, ‘for the good’ of Malagasy people. These claims must be seen in the context of Rio Tinto's simultaneous need to legitimise itself by positioning local resource users as the main culprits of degradation, isolated from markets and ‘rational’ resource use, and as such, anathema to sustainable development. Taussig (1993: 68) holds that, in contrast to mimicry, mimesis is ‘both the faculty of imitation and the deployment of that faculty in sensuous knowing’. In this context, any process of mimesis conceals a ‘compulsion to become the “Other”’ (*ibid*: 13), but more so, mimesis allows for a copy or replication to take on the power of the represented (*ibid*: 16). Herein we can see similarities to Rio Tinto/QMM's mimesis of conservationist discourse and media; it is only through mimicking conservationist narratives of degradation that Rio Tinto can take on the power of the ‘Other’ — namely an NGO engaged in biodiversity conservation and sustainable natural resource management. Taussig (1993: 250) goes on to state that the phenomenon of the ‘mimetic faculty’ lies in ‘the power of the copy to influence what it is a copy of’. In this sense, it is interesting to consider how media and discourse may be involved in making what is being copied (conservation) influenced by, complicit in or convinced of the copy itself (Rio Tinto/QMM).

Conversely, the company's positioning of Malagasy people as fundamentally alteritous supports its ‘green renaissance’ as a sustainable mining company. As Judith Butler (2000: 31) has argued, processes of exclusion (‘Othering’) are responsible for the constitution of identity:

... no particular identity can emerge without presuming and enacting the exclusion of others, and this constitutive exclusion or antagonism is the shared and equal condition of all identity-constitution.

Similarly, Edward Said (1979), in his seminal work, *Orientalism*, posited that ‘Othering’ was not just about objectifying, categorising and isolating alterity in time and place, but also involved a process of self-identification; the ‘Other’ could thus be seen as a ‘mirror’ for the self.

Several examples have shown how ‘development gifts’ offered by Rio Tinto/QMM invert various socio-environmental impacts of the mine and enforce market rationalities of sustainable development on affected stakeholders. Similar to biopower's aim to ‘maximise’ life through efficiency, Rio Tinto/QMM legitimise their promotion of sustainable development (as a power/knowledge system (Luke 1995), as beneficial to individuals, regardless of the social and environmental impacts arising from the mine. Biopower then not only acts upon bodies, but also legitimises itself in the process. That sustainable development is being advanced in the context of vast socio-environmental changes to landscapes and livelihoods is problematic in that local conceptions of wealth, food security, livelihoods, well-being, and sustainability do not appear to be adequately considered. In this sense, it may be useful to think more in terms of ‘sustainabilities of scale’ — or what Luke (1995) queries, ‘sustainability for whom?’ At the core of this disconnect is the neglect of local links between human and ecological life. The broader project of ‘development’ — which, as advanced by Rio Tinto/QMM, draws upon select discourses (knowledge regimes) of (neoliberal) conservation, market rationality and economic growth, and specifies how life (human and ecological) should be sustained, managed and protected — appears to be driving these complex changes.

7 Conclusions

This paper contributes to recent scholarship seeking to analyse the interdependencies between seemingly discrete types of land acquisitions, focusing specifically on how the emerging nexus of multinational mining and conservation in Madagascar may constitute a form of ‘green grabbing’. Premised upon a broader ‘offset ideology’, mining–conservation partnerships seem to involve swapping media, sustainability discourses, land, and financial resources. As such, in terms of land access and legitimisation, current trends suggest that mining and conservation have much more in common with one another than previously thought. The corporate sector plays an increasingly important role in negotiating regional and global sustainability aims, though it must be remembered that the Chief Executive Officers (CEOs) of major multinational mining companies consciously adopted ‘sustainability’ as a means to address business risks during the Global Mining Initiative (GMI) in 1999.

Rio Tinto's global ‘performances of sustainability’, which hinge on the company's ability to convincingly mimic conservationist media, discourse and narratives of degradation (mimesis), and ‘Other’ local Malagasy people affected by the mines (alterity), has inverted and overshadowed various social, cultural and environmental impacts arising from the project. This problematises compensation offered by the company, which is targeted both globally (facilitated through biodiversity offsets and mining–conservation partnerships) and locally (collectivised in an ‘integrated compensation programme’, development ‘gifts’ such as health centres and schools, or cash). Boundaries between compensation and sustainable development are blurred so severely that not only a process of diversion (away from actual impacts of the mine) occurs but also a process of inversion — as the impacts are remediated as necessary for sustainable development and thus for Malagasy people's ‘own good’. The loss of 6 000ha of highly biodiverse littoral forest is made by the company to be a phenomenon that ‘would have happened anyway’ due to local pressures, though recent scholarship (Virah-Sawmy 2009; Virah-Sawmy and Ebeling 2010) challenges this assumption. Monetary compensation was in many contexts not found to have the same value as the land or natural resources lost; the forest was seen to be important locally in terms of food, land access, medicine, building material, and ancestral tombs.

Using ‘biodiversity offsets’ as a remediation strategy within Rio Tinto's project design creates new forms of inclusion and exclusion from land: while ‘local’ human bodies are severed from the environment (defined in terms of the Malagasy concept, *tontolo iainana* – ‘the world (in which) we live’) and excluded from land-based activities, ‘extra-local’ (foreign) bodies are brought into aesthetic–capitalist relations with pristine ‘nature’ as commodity through ecotourism initiatives, elite scientific publications, bird watching events, and seed conservation initiatives. Biodiversity offsets must be seen in the context of the broader mining–conservation nexus, as Malagasy people in other parts of the country — unrelated to the mine — will possibly feel similar impacts by being denied access to forests, land and biodiversity — notably through ‘averted disturbance’ mechanisms embedded in biodiversity offset design. While there appears to be a denial of local valuations, uses of and needs for species diversity, through a paradoxical process of creating scarcity of biodiversity, Rio Tinto is producing new types of global heritage which it claims to be ‘saving’ biodiversity from destructive local land use practices.

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LDPI Convenors

Saturnino M Borras Jr is Associate Professor of Rural Development Studies at the International Institute of Social Studies (ISS), The Hague. He helps coordinate the work of the Initiatives in Critical Agrarian Studies (ICAS) hosted by the Resources, Livelihoods and Environment (RELIVE) Research Cluster at ISS. He was the Canada Research Chair in International Development Studies at Saint Mary's University in Halifax, Nova Scotia in 2007–2010 and an Adjunct Professor in the College of Humanities and Development Studies (COHD) of the China Agricultural University in Beijing. As a Fellow of the Transnational Institute (TNI) in Amsterdam, he is actively involved in its 'Agrarian Justice' Program. He is also a Fellow of Food First/Institute for Food and Development Policy in Oakland, California. Publications include: *Pro-Poor Land Reform: A Critique* (2007) and *Transnational Agrarian Movements Confronting Globalization* (2008, co-edited with M. Edelman and C. Kay). He has ongoing research projects on global land grabbing, biofuels and the politics of transnational agrarian movements. Email: borras@iss.nl

Ruth Hall is an Associate Professor at the Institute for Poverty, Land and Agrarian Studies (PLAAS) at the University of the Western Cape in South Africa. Her research interests include land and agrarian reforms, rural labour markets and farm worker rights, agricultural commodity chains, and the politics of rural development. She holds a DPhil in Politics from the University of Oxford. Publications include an edited volume entitled *Another Countryside? Policy Options for Land and Agrarian Reform in South Africa*; with Lungisile Ntsebeza, eds.; *The Land Question in South Africa: The Challenge of Transformation and Redistribution*; and with Cherryl Walker, Anna Bohlin and Thembele Kepe, eds., *Land, Memory, Reconstruction, and Justice: Perspectives on Land Claims in South Africa*. She is Book Reviews Section Co-Editor of the *Journal of Peasant Studies*. Email: rhall@plaas.org.za

Ian Scoones is a Professorial Fellow at the Institute of Development Studies (IDS), University of Sussex, UK. He has a background in agricultural ecology and his interdisciplinary research links the natural and social sciences and focuses on the relationships between science and technology, local knowledge and livelihoods and the politics of policy processes. He has worked on issues such as pastoralism and rangeland management, soil and water conservation, biodiversity and environmental change, land and agrarian reform, dry land agricultural systems, crop biotechnology and animal health science policy, mostly in Africa. He is currently co-director of the ESRC Social, Technological and Environmental Pathways to Sustainability (STEPS) Centre at Sussex and Joint Convenor of the Future Agricultures Consortium. Key publications include: *Science, Agriculture and the Politics of Policy: The Case of Biotechnology in India* (Orient Longman, 2006) and *Land Reform in Zimbabwe: Myths and Realities* (James Currey, 2010). He is a member of the Editorial Collective of the *Journal of Peasant Studies*. Email: I.Scoones@ids.ac.uk

Ben White is Professor of Rural Sociology at the International Institute of Social Studies (ISS) and Professor of Social Sciences at the University of Amsterdam in the Netherlands. He is part of the Resources, Environment and Livelihoods (RELIVE) Research Cluster at ISS. He has carried out research on the themes of agrarian change, social differentiation of the peasantry, contract farming, rural labour, land policies, among others, mainly in Indonesia. He has published extensively on these themes. For seventeen years, he was co-editor of *Development and Change*, until mid-2009. Email: white@iss.nl

Wendy Wolford is the Polson Professor of Development Sociology at Cornell University. Her research interests include the political economy of development, social movements, land distribution and agrarian societies. Key publications include *To Inherit the Earth: The Landless Movement and the Struggle for a New Brazil* (co-authored with Angus Wright, Food First Books, 2003) and *This Land is Ours Now: Social Mobilization and the Meaning(s) of Land in Brazil* (2010, Duke University Press). She is a member of the Editorial Collective of the *Journal of Peasant Studies*. Email: www43@cornell.edu

LDPI Working Paper Series

A convergence of factors has been driving a revaluation of land by powerful economic and political actors. This is occurring across the world, but especially in the global South. As a result, we see unfolding worldwide a dramatic rise in the extent of cross-border, transnational corporation-driven and, in some cases, foreign government-driven, large-scale land deals. The phrase 'global land grab' has become a catch-all phrase to describe this explosion of (trans)national commercial land transactions revolving around the production and sale of food and biofuels, conservation and mining activities.

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The mining-conservation nexus Rio Tinto, development 'gifts' and contested compensation in Madagascar

This paper traces a genealogy of land access and legitimisation strategies culminating in the recent convergence of multinational mining and conservation in southeast Madagascar. Drawing on empirical research carried out on the Rio Tinto/QMM ilmenite mine in Fort Dauphin, it focuses on how local Malagasy land users are incorporated into new forms of inclusion (into the neoliberal capitalist economy) and exclusion (from land-based, subsistence activities) resulting from private sector engagement in conservation. Various material impacts of the mine were inverted and remediated to global audiences as necessary to sustainable development and biodiversity conservation. By financing, partnering with and participating in the same land access markets as international conservation NGOs, and setting aside small 'conservation enclaves' in each mining site, Rio Tinto/QMM legitimise mining in situ despite the negative socio-environmental consequences for the Malagasy. Mining-conservation partnerships may fail to adequately address – and ultimately exclude – the needs of people affected by the mines.



landpolitics@gmail.com

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