

Rio Tinto: are they telling us the whole truth?

Rio Tinto is the third largest publicly traded mining company in the world, after BHP Billiton and Vale. As the fourth biggest uranium producer in the world, Rio Tinto produced around 17 million pounds in 2009 from mines in Australia, Namibia and the USA¹. The company also produces and markets aluminium, coking and thermal coal, copper, diamonds, gold, iron ore, nickel, silver, titanium, and other minerals. Record underlying earnings of US\$14.0 billion in 2010 were 122 per cent higher than 2009.

British insurance company Legal and General is the third largest investor in Rio Tinto plc, owning 5.02% of its shares. Prudential plc held shares valued at £84,227,000 in August 2010. Barclays owns 3.32% of shares. Other major UK investors include NR Investments Ltd, Aberdeen Asset Management, Dunedin Growth Investment plc, Murray Income Trust plc, Shires Income plc and BlackRock World Mining Trust plc.²

The company says of itself:

Our Group wide values of accountability, respect, teamwork and integrity guide our approach. We are recognised for building mutually beneficial relationships with our stakeholders based on active partnership and long term commitment. We are also regarded as a company that brings long term benefits to our local communities and host countries. ... Key to successful mineral development is a culture of trust, transparency and mutual benefit to all parties. This is established through honest engagement with all stakeholders, including governments and local communities. Equally important is our determination to minimise the Group's environmental footprint, particularly when it comes to carbon, water and biodiversity.³

But the company admits that it has not always told the whole truth in the past.

Following discussions with the UK Financial Reporting Review Panel (FRRP), Rio Tinto has agreed to include certain additional information in the 2010 Annual report at the FRRP's request.

This information includes, on page 32, additional details of the potential health risks posed by exposure to workers and communities surrounding uranium mines; on page 34, details of the sensitivities the Group faces in dealing with local communities, such as at the La Granja copper development in Peru and the Eagle project in Michigan in the United States; on page 37, an example of the potential for the Group's projects to impact on biodiversity, with information relating to biodiversity projects associated with the Group's activities in Madagascar; on page 38, additional details of the nature of the Group's interests in the non-managed Grasberg mine in Indonesia, the nature of the environmental risks and social issues relating to that mine; and reference to the sale of shares by the Norwegian Government Pension Fund in 2008 as an example of the possible impact of the reputational risks faced by the Group in relation to its non-managed operations.⁴

Let's look at some of the things the company is willing to tell us and a few that it prefers not to tell us.

¹ <http://www.reuters.com/article/2011/03/14/japan-quake-uranium-idUSN1418047020110314>

² <http://moneytometal.org/index.php?title=Special%3ASearch&search=Rio&go=Go>

³ Rio Tinto 2010 Annual Report, p. 19.

⁴ Rio Tinto 2010 Annual Report, p. 113.

Mining operations can never be failsafe

Rio Tinto itself reports the following damaging environmental incidents during 2010.⁵

- Exceeding water discharge standards and leachate landfill overflow to a water course at Alucam, Cameroon.
- Petrol leakage from a storage tank at Gove, Australia.
- Loading dock spills of alumina and coke waste at the port for Alucam, Cameroon.
- Exceeding permitted levels of dust and tar air emissions at Rotterdam, Holland.
- Storm flooding overflow from the red mud retention dam at Gardanne, France.
- High rainfall overflow from a retention pond into local waterways at Kitimat, Canada.
- Heavy rainfall flooding of sediment-laden water onto nearby land and creeks at Northparkes, Australia.
- Storm-related pump failure at a weir resulting in mine water overflow into the local river at Palabora, South Africa.
- SO₂ air emissions above permitted levels on several of occasions at Palabora, South Africa.

Trade union rights

Last year the company locked out workers at its Borax operations in the US. In May 2010, Rio Tinto's Zimbabwean subsidiary, RioZim), operator of the Renco Gold Mine, was accused of maliciously taking revenge on members of the Associated Mine Workers' of Zimbabwe (AMWZ) who went on a five-day strike against working conditions. The company sacked 70 miners and suspended 370 others – although all had returned to work within the mandatory 24-hour period after Zimbabwe's Labour Ministry stopped the strike.⁶ Now unions in Australia are in dispute with the company over the treatment of unionised workers at Rio Tinto Alcan's operations in Tasmania.⁷

The company's operations, past and present: some concerns

Energy

The company is a leading supplier of thermal and coking coal to the Asian seaborne market and is one of the world's largest uranium producers, serving electric power utilities worldwide. Its Energy portfolio includes: Rio Tinto Coal Australia; a coal mine at Colowyo in Colorado, US; Energy Resources of Australia, which produces uranium oxide from its Ranger operation; and Rössing, a Namibian uranium oxide producer.

The company accepts that greenhouse gas emissions are a major problem requiring a response. It says that it accepts the need for a price on carbon.⁸ But it is determined to expand its coal production because 'coal will remain a significant source of energy for the foreseeable future.'⁹ It puts its faith in carbon capture and storage technology, which is unlikely to be effective and even if it were would not be commercially viable for many years to come.¹⁰ Climate change events have

⁵ Rio Tinto 2010 Annual Report, p.112.

⁶ <http://www.icem.org/en/78-ICEM-InBrief/3808-Rio-Tinto-Sacks-70-Suspends-370-Following-Zimbabwe-Mine-Strike>

⁷ <http://www.miningaustralia.com.au/news/rio-union-battle-to-go-global--2>

⁸ Rio Tinto 2010 Annual Report p. 34.

⁹ Rio Tinto 2010 Annual Report, p. 35.

¹⁰ See <http://www.minesandcommunities.org/article.php?a=9961> and <http://thetyee.ca/Opinion/2011/01/12/PromiseOfPumpingCO2/>

already begun to damage Rio Tinto's production – particularly its production of coal.¹¹ A well-planned move away from coal mining and coal use is urgent.¹²

Meanwhile, recent terrible events in Japan have starkly exposed the dangers of relying on uranium-fuelled energy. Rio Tinto is the fourth biggest uranium producer in the world, delivering around 17 million pounds in 2009 from mines in Australia, Namibia and the USA.¹³ Uranium mining poses grave dangers to human health for many generations to come.¹⁴ Rio Tinto claims that the Kakadu area around its subsidiary ERA's Ranger mine in Australia 'has remained protected'¹⁵ but Aboriginal people are still concerned about radioactive water pollution in the area.¹⁶ Tourist operators are worried that uranium mining expansion in Namibia could damage livelihoods.¹⁷

Kelian Gold Mine, Indonesia

Kelian Equatorial Mining (PT KEM), which closed in 2005, was a gold mining company jointly owned and operated by Rio Tinto (90%) and PT Harita Jayaraya Inc. (10%), an Indonesian company in Indonesia's East Kalimantan province.¹⁸ Local opposition to the mine and the human rights violations and environmental degradation associated with it was very strong.

There is nothing about the Kelian gold mine in Rio Tinto's 2010 Report. The mine was officially closed in 2004. But it has left a legacy of human rights violations and ominous environmental threats.

Many of the human rights violations were acknowledged by the company itself. A report was commissioned by PT KEM/Rio Tinto and the communities around the mine in 2000, as a result of negotiations. It was entitled *Laporan Investigasi Tim Pencari Fakta Masalah HAM di sekitar wilayah PT. KEM, Kutai Barat, Kalimantan Timur, 2000*.¹⁹ The tim setup by KEM/Rio Tinto and Community us a result of negotiation process at that time. The head of the reporting team was Benjamin Mangkoedilaga, a commissioner from the national human right commission. Human rights violations began with the forced expulsion of villagers working as artisanal miners. People's houses were burnt, artisanal mining equipment destroyed. Intimidation, arrests and arbitrary detentions were frequent, involving military, police and the civil bureaucracy from local to provincial level. As a result of the expulsions, and the co-operation between the company and the military, police and civil bureaucracy, 8,471 people filed claims against Rio Tinto for human rights violations, loss of houses, loss of access to employment, violence against women, sexual harassment and rape. A demonstration in 1992 led to the arrest of fifteen leaders, one of whom – Edward Tarung – died in prison. Between 1988 and 1997, there were at least 16 incidents of arrest or mistreatment of Kelian residents. Most of these involved people panning for gold in areas controlled by Rio Tinto. Company security personnel beat people and confiscated or destroyed their equipment without due process of law. Local residents Amat and Idrus Rusli were tortured by being tied to a flag pole

¹¹ <http://www.minesandcommunities.org/article.php?a=10629>

¹² For more information on the damage caused by coal mining and coal use, see <http://londonminingnetwork.org/2010/09/an-introduction-to-coal-mining/> and <http://www.minesandcommunities.org/article.php?a=10299>

¹³ <http://www.reuters.com/article/2011/03/14/japan-quake-uranium-idUSN1418047020110314>

¹⁴ <http://londonminingnetwork.org/2010/05/briefing-on-the-health-and-environmental-hazards-of-uranium-mining/>

¹⁵ Rio Tinto 2010 Annual Report p. 56.

¹⁶ <http://www.minesandcommunities.org/article.php?a=10711>

¹⁷ <http://www.miningne.ws/pg/file/Steven/read/51612/namibian-mining-sparks-environmental-concerns>

¹⁸ Nyompe, Pius Erick, Executive Secretary, LKMTL, April 15, 2003. Indonesia Case Study, The Closure of the Kelian Gold Mine and the Role of the Business Partnership for Development/World Bank. *Presentation to the EIR's Eminent Person and participants at the meeting on Indigenous Peoples, Extractive Industries and the World Bank* Oxford, England; <http://dte.gn.apc.org/CkI03.htm>

¹⁹ Investigation Report on Human Rights Issues Fact Finding Team in the vicinity of PT KEM, West Kutai, East Kalimantan in 2000

for hours; Baharudin was shot in the legs; Abdul Hasan stated that his ribs were broken, that he lost a number of teeth and suffered hearing loss as a result of torture by company security guards in Gah Ekong.

Human rights violations continued to occur even after mine closure. A letter from 43-year-old resident M Sofyan to JATAM, Indonesia's mining advocacy network, in October 2008, stated that he had been shot by the Police Mobile Brigade, who helped company security, when he was found carrying a small sack of rocks that potentially contained gold.

Violence against women, sexual harassment, and rape occurred 21 times against 21 women in the period 1987 to 2007. Violators ranged from the General Manager of Rio Tinto's PT KEM subsidiary, to mine security personnel. Victims still carry the burden of trauma and mental harm. The compensation that they have received does not eliminate the legal responsibility of the violators or of Rio Tinto, because it failed to prevent the criminal deeds.

Now that the Kelian mine has closed, many problems remain. One is poverty. The mine did not lead to growing prosperity. Eviction of small-scale miners in fact gave rise to poverty. Poverty has increased since mine closure. In 2005, only a year after closure, the poverty rate in West Kutai District stood at 39% according to data produced by the receiver of government subsidies (BLT) – namely data on the poor who are entitled to cash assistance from the state as compensation for reduction in oil and gas subsidies. The village of Tutung, which was closest to the mine site, is now almost dead. Many of the houses have been abandoned by residents because of economic hardship. Many shops are closed.

In addition to economic difficulties, conflicts occur between communities relocated by PT KEM and families who claim have rights to the land to which they have been relocated. The head of Tutung, H Mochammad Ali, in a letter to Rio Tinto Chairman Jan du Plessis in November 2009, mentioned that the heirs of the Sengkono family declared Rio Tinto had not provided compensation for land already given to the community by the company in the beginning. Therefore they intended to take back the land. The people had difficulty in maintaining the land, because Rio Tinto / KEM had never given them the necessary legal documents. He insisted that Rio Tinto immediately resolve the issue and present certificates to the families that occupy the land.

Another problem is the tailings dams. Rio Tinto left Kelian with a "time bomb" in that the dam could overflow or burst at any time. Rio Tinto left Kelian with several dams: Namuq Dam, Upper and Lower Nakan Dam, Ex Pit Dam, and Polishing Pond. These Dams are at higher elevations than the surrounding villages. Some villages are potential victims if the dams were to overflow or burst, among others: Kelian Dalam, Lakan Bilem, Kampung Sembuan, Jontai, Sentalar, Tokong, Lumpat Dahu, Sempan, Damai, Mentika, Bangris, Muara Lawa, Dingin, Peninggir, Jerang, Jerang Melayu, Mendung, Dasaq, Muara Pahu. Currently more than 10,000 people live in these villages. Community members do not know what to do in the event of an overflow or dam burst. They do not even know how to save themselves if it happens. In 2009 when high rainfall occurred at Kelian, the Nakan Dam overflowed into the Lakan River. In 2010 a landslide occurred on Mt Sopan, allegedly as a result of water spilling over the dam to the mountain. Although there were no casualties, both incidents can be seen as early indications that the promise of PT KEM that they left behind the dam in a safe condition is uncertain. There is no guarantee that the dams will not cause problems

Oyu Tolgoi Project, Mongolia

The Oyu Tolgoi copper-gold-silver project is 34% owned by the Mongolian Government and 66 per cent owned by Canadian company Ivanhoe Mines. Rio Tinto owns 42.1 per cent of Ivanhoe and has the right to increase that to 49 per cent.

Mine construction has begun, even though Mongolian-based environmental organisations called for a delay in the implementation of the Project on a number of grounds. The Investment Agreement for the Project was signed on October 6, 2009, before a technical and economic feasibility study was accepted by government, as prescribed by law. On March 26, 2010, the Minerals Expert Council granted conditional acceptance of the technical and economic feasibility study regardless of the fact that Ivanhoe Mines had failed to demonstrate availability of, and

access to, the water resources necessary for production, infrastructure and social needs of the project. The Oyu Tolgoi deposit lies in the Gobi Desert in close proximity to the Gobi Small and Galbyn Gobi Strictly Protected Area (SPA) zones, overlapping Important Bird Area and Critical Natural Habitats. This fragile arid ecosystem does not have enough water to carry this huge mine. There are a number of other mines in the area and scarcity of water is a problem for all of them. Trucking of minerals from these mines is already causing significant dust pollution, affecting human health and the environment. Opening the Oyu Tolgoi mine will worsen this.

Mongolian organisation, Oyu Tolgoi Watch, maintains that neither Ivanhoe Mines nor Rio Tinto has been able to demonstrate the availability and access to water resources to support this mega-project. The mine has an expected life cycle of 30-60 years. It is being developed even though there is only 25 years of water resource available for production. Ivanhoe Mines' own Technical and Economic Feasibility Study (TEFS) concedes that there are no proven water resources in the South Gobi Desert able to carry forward this project as currently planned. The Project's total production related requirement, which does not include infrastructure and social needs, is 3,801 litres per second. Mine construction will involve diversion of the Umdai River, the most significant hydrological feature of the Oyu Tolgoi project area. The river must be diverted to prevent the mining hazard represented by water inflows to the pit and to ensure continued supply to downstream users.

There is no discussion of toxic emissions, chemical exposure and human health risks in any of the Oyu Tolgoi project impact assessments. The Health Impact Assessment presented in December 2010 does not contain such information. Local communities and especially nomadic herders are not aware of the chemical exposure and health risks that this mine will have for them and their livestock. They can only guess that their own insides look the same as the black spotted insides of animals they slaughter for food. But they do not know the components of toxic particles in the air or the impact of contaminated water and air on their health. They guess that the meat of animals they consume may also be contaminated but have no information and no choice.

The nomadic herders in the South Gobi region are carriers of an ancient culture known to the world as Mongolian nomadism. However, Rio Tinto and its investors are not recognising them as people indigenous to this area and carriers of a traditional culture and lifestyle that is under threat of extinction.

Rio Tinto's stake in Ivanhoe has grown markedly from the initial 9.95% it secured under the companies' agreement of early 2007. As a key condition of forging the joint venture with Ivanhoe Rio Tinto (rightly) insisted that the Canadian company sell out its major Monywa copper project in Burma, then being operated with the assistance of the country's bloody ruling junta. To this end, a supposedly independent third party trust was set up, envisaging a quick sale of the 50% equity held by the latter in its Burmese enterprise.

In fact, right up until last year, Ivanhoe – and therefore Rio Tinto as the main shareholder in the company – continued benefiting from profits made by this mine, thus flagrantly breaching Rio Tinto's undertaking to its shareholders and to human rights campaigners.

Has this third party trust now sold this criminal stake? According to an Ivanhoe spokesman last year, the answer was no. Then the NGO, Canadian Friends of Burma (CFoB), published evidence suggesting the stake was sold – but to "Burmese cronies" of the generals.

*Rio Tinto claims to "support and respect human rights consistent with the United Nations Universal Declaration of Human Rights" and "actively seek to ensure that we are not complicit in abuses committed by others."*²⁰

Unquestionably it was complicit in egregious human rights abuses in Burma, when it joined hands with Ivanhoe in 2006. Does it continue doing so even now?

Kennecott Eagle Mine, Upper Peninsula, Michigan, USA

²⁰ Rio Tinto 2010 Annual Report, p. 39.

Rio Tinto subsidiary Kennecott Eagle Minerals Co. is developing a nickel and copper mine in Michigan's Upper Peninsula. The mine is expected to yield 250 to 300 million pounds of nickel and about 200 million pounds of copper.²¹

In addition to concerns about damage to water courses flowing into Lake Superior, local residents note that Eagle Rock, a traditional site of worship for the indigenous Anishinabe (Ojibwe) people, will be surrounded by mine workings. In 2009 a judge recommended that Eagle Rock be protected as a place of worship. However, the director of the DEQ ignored this recommendation and approved Kennecott's mining permit alleging that Eagle Rock is not legally a place of worship because it does not consist of any built structures.²² Failure of Michigan government officials to recognize the sacred value of Eagle Rock and the rights of the Anishinabe has allowed for Kennecott Eagle Minerals to surround the area with a chain-link fence, preventing tribal and public access.²³ Currently there is 20 foot high earthen berm behind another chain link fence that surrounds the entire Eagle Mine property, blocking all mine activity from the public eye.²⁴

In April 2010, Kennecott began Eagle Mine preparation work on the mine site although it still did not have the necessary federal Underground Injection Permit from the EPA for wastewater disposal.²⁵ Numerous last-minute changes to the mining plan have been consistently unopposed by the Michigan DNRE. "It looks like we're going to end up with a site plan 90 percent different than what we started with, Michelle Halley said, "that the public has never seen or had a chance to comment on."²⁶

Currently there are two law suits pending that could stop the mine.

Flambeau Mine, Ladysmith, Wisconsin, USA

The Flambeau copper mine, operated by Rio Tinto's wholly-owned subsidiary, Kennecott, has been hailed by the company as a leading example of how metallic sulphide mining can be done without harming the environment.

But, two months ago (January 2011) compelling evidence was provided to a federal court in Wisconsin that the company has been violating the US Clean Water Act on numerous occasions since 1998, when the mine's on-site wastewater treatment plant was decommissioned. A suit has been filed by plaintiffs who include the Wisconsin Resources Protection Council²⁷ and the Center for Biological Diversity^{28,29}

²¹ Flesher, John, March 15, 2010. Opponents Ask Court to Overturn U.P. Mining Permit, Salon.com; http://www.salon.com/wires/allwires/2010/03/15/D9EFC6500_mi_kennecott_mine/index.html

²² Koski, Jessica L., April 11, 2020. UP mine threatens sacred tribal rights, *Detroit Free Press* (opinion); <http://www.freep.com/article/20100411/OPINION05/4110426/1322/UP-mine-threatens-sacred-tribal-rights>

²³ http://www.huffingtonpost.com/cynthia-pryor/a-sacred-fire-is-burning_b_567652.html

²⁴ Currently there is 20' earthen berm behind another chain link fence that surrounds the entire Eagle Mine property, blocking all mine activity from the public eye.

²⁵ http://www.miningjournal.net/page/content_detail/id/543148.html

²⁶ <http://www.savethewildup.org/blog/kennecottsconstruction-destruction/>

²⁷ <http://www.wrpc.net>

²⁸ <http://biologicaldiversity.org>

²⁹ Complaint filed by WRPC, the Center for Biological Diversity, and Laura Gauger in the United States District Court for the Western District of Wisconsin against Kennecott for violations of the Federal Clean Water Act, January 2011. See <http://www.wrpc.net/wp-content/uploads/2011/01/Complaint-Final-as-filed-2011-01-18.pdf>.

When the Flambeau Mine ceased operations in 1997, the pit was 32 acres in size, 220 feet deep and half a mile long. It also produced an estimated 4.5 million tons of “high sulphur” waste rock, which was pushed, along with sludge, into the unlined mine pit at the end of operations.

To this day, groundwater has been leaking from this sub-surface waste dump, through fractured bedrock into the once-pristine waters of the Flambeau River.

In May 2007, Rio Tinto-Kennecott petitioned the Wisconsin Department of Natural Resources (DNR) for a Certificate of Completion for mine reclamation (COC). Many citizens rallied in opposition to the certification because of concerns over deteriorations in water quality. As a result the DNR was forced to conduct a contested case hearing of the matter, and Kennecott was denied a full certification for reclamation of the Flambeau mine site. Instead it was granted only a partial COC – the terms of which were negotiated between the opposing parties at the hearing.

Unfortunately, groundwater contamination within the mine’s backfilled pit, exceedances of applicable groundwater standards at the mine’s legally-established intervention boundary (between the backfilled pit and the Flambeau River), and data on potential impacts of the mine on macroinvertebrates, sediment, crayfish, and walleye in the Flambeau River were not assessed as part of the COC process in 2007.

In 2008 the Wisconsin Resources Protection Council solicited the help of three scientists to review the historic, current and ongoing environmental monitoring data submitted by Kennecott to the Wisconsin DNR. The scientific team, comprised of Dr. David Chambers and Dr. Kendra Zamzow (Center for Science in Public Participation, Bozeman, Montana³⁰) and Dr. Ken Parejko (Professor Emeritus, University of Wisconsin-Stout) concluded that:

1. Runoff from the southeast quadrant of the Flambeau Mine site significantly exceeds Wisconsin surface water quality standards and is polluting a nearby stream that flows into the Flambeau River.
2. Groundwater flowing from the mine site toward the Flambeau River does not meet Wisconsin groundwater quality standards, or even the more lenient mining permit standards.
3. Statistical analyses of Flambeau River walleye, crayfish and sediment data collected by Kennecott raise significant doubts about the company’s claim of “no impact” of the Flambeau Mine on the Flambeau River. In particular, statistically significant increased copper concentrations in crayfish (whole-body specimens), walleye (liver tissue) and sediment have been observed downstream from the mine, raising the possibility of a causal relationship.

It is clear that ground and surface water quality at the Flambeau Mine site is impaired significantly, as shown by RioTinto-Kennecott’s own monitoring data.

When confronted with this evidence, Kennecott’s response was that the Flambeau Mine “has adhered to every regulation and Wisconsin’s stringent mining laws” (Jana Murphy, Kennecott Press Release, June 18, 2009).

But this doesn’t mean that the discharged water is clean. It’s only that the company figured out a way to legalise the pollution.

With scientific data, obtained from its own monitoring, Rio Tinto is now accused of violating federal law by discharging pollutants, including potentially toxic metals like copper, iron and zinc, into the Flambeau River and a tributary known as Stream C that flows across the company’s property.

Laboratory results since 1998 show that copper levels in the discharge from an on-site detention basin that collects contaminated runoff from the mine site have significantly and consistently exceeded Wisconsin’s chronic toxicity standard for copper, set to protect fish and other forms of

³⁰ See <http://www.csp2.org>

aquatic life. Copper levels in the discharge have fluctuated between 5 and 91 parts per billion (ppb), whereas the chronic toxicity standard for copper is 2.7 ppb. Elevated zinc and iron levels have also been reported by Kennecott.

The federal Clean Water Act makes it unlawful to discharge pollutants from a point source to waters of the United States without a permit issued under the National Pollutant Discharge Elimination System ("NPDES"). The most important function of an NPDES permit is to ensure that all applicable water quality standards are maintained. Kennecott does not presently have, nor has it ever had, an NPDES permit authorising the discharge of copper, zinc, iron, and other pollutants to Stream C or the Flambeau River.

The plaintiffs are seeking civil penalties of up to \$37,500 per day of violation, and an order requiring Kennecott to comply with the Clean Water Act by ceasing its illegal discharge, or obtaining the appropriate NPDES permit that protects the water quality of Stream C and the Flambeau River.

Kennecott Copper Utah, USA³¹

Many Utah residents are concerned about the impact of the proposed expansion of Rio Tinto subsidiary Kennecott Copper Utah's Bingham Canyon operations near Salt Lake City.

The Rio Tinto Bingham Canyon mine is the single largest open pit mining operation and the deepest excavation of its kind in the world. There is no other mining operation in the world this large, this close, to this many people – 1.8 million – possibly making the direct adverse impacts on public health unique.

In February 2011, a Forbes Magazine article³² listed Salt Lake City as the 9th most toxic major metropolitan area in the USA. In calculating Salt Lake City's ranking, Forbes pointed out that the city ranked worst in the country for a database tracked by the Environmental Protection Agency entitled Toxics Release Inventory. The Rio Tinto/Kennecott Bingham Canyon copper mining and processing complex is the largest single source of the 650 toxic compounds tracked in this database. For example, its smelter emissions of lead alone are 6,235 lbs per year. The waste rock piles, fugitive dust and tailings emissions further increase the community's overall exposure to toxic heavy metals, and an increase in mining activity will certainly increase their heavy metal releases. In fact, the coal power plants currently operated by Rio Tinto continuously emit mercury and radioactive elements like uranium and thorium into the air. None of these toxic and radioactive metals breaks down over time. Local children's exposure to them steadily increases year after year.

The Forbes ranking also considered air pollution in general. Rio Tinto is responsible for about one third of the air pollution in the Salt Lake Valley. The increased mining activity the company is asking for will increase their overall NOx (nitrogen oxide emissions) 54% and their PM10 (particles up to ten micrometers across) emissions 66%. Overall NOx emissions in Salt Lake County are expected to increase by 14% and PM 10 by 12%. Data on the change in other pollutants is not yet available.

No data has been released yet on the impact of Rio Tinto's proposal to offset some of this pollution increase by changing three coal burning power plants to natural gas. Rio Tinto's claim that this will reduce emissions equal to one in ten cars being taken off the road in Utah and Salt lake Counties is likely exaggerated and even then would not offset the increased emissions from the mine.

Right now Rio Tinto is not allowed to run any of its coal plants in the winter. However, the company is asking to run these new natural gas plants during the winter. Therefore, even Rio Tinto's proposal to partially switch from coal combustion to natural gas will add new emissions into the Salt Lake County airshed, and increase pollution from both increased mining activity and the new natural gas power plants during the worst inversion/pollution season.

³¹ From a paper by Dr Brian Moench, Utah Physicians for a Healthy Environment

³² <http://www.forbes.com/2011/02/28/most-toxic-cities-personal-finance.html>

According to the Utah Department of Workforce Services, as of 2009 Rio Tinto did not rank in the top 44 employers in the state, which would indicate that they have less than 2,000 employees. Rio Tinto emits about 14,500 lbs of air pollutants per employee, far more than any other business. Currently Rio Tinto provides less than one quarter of 1% of the jobs in Salt Lake and Utah Counties, but about 30% of the pollution. Allowing Rio Tinto to control an even greater percentage of the air pollution emitted in Salt Lake County puts other businesses at a disadvantage.

Giving preferential treatment to a business that entails that much pollution solidifies and perpetuates an economic dependency on heavy industry for employment. The Rio Tinto expansion would provide jobs for only a few hundred employees at best. Meanwhile the air pollution impacts would be felt by about 1.8 million people and would curtail other economic and business activity, costing "cleaner" jobs with other potential employers. That is a grossly distorted risk/benefit ratio. Economically it acts just like a tax levied by Rio Tinto upon the rest of the community.

It should also be noted that numerous studies have been done throughout the country that demonstrate pollution control typically provides an economic pay off far in excess of the costs of the controls. The latest study by the Environmental Protection Agency estimated that the economic benefit averaged 30 times the cost invested. The corollary to that has also been demonstrated repeatedly, i.e. pollution is an economic liability. A Utah specific study released a year ago calculated that the pollution just from Utah coal power plants carried an economic liability of between 1.7 and 2.0 billion dollars. Even this study however is likely a significant underestimation of the true cost of pollution.

When Rio Tinto offers its assessment of the economic benefit it provides to the community, it never includes the economic liability of the air and water pollution for which it is responsible. The company can well afford to make its entire operations much cleaner and live within its current pollution limits.

Resolution Copper, Arizona, USA

Rio Tinto is involved in a Joint Venture with BHP Billiton to mine copper in a protected area of Arizona. It proposes to 'swap' land as a way of compensating for the destruction of an area valued by Apache people and many other local residents. The project is opposed by local Native Americans but the company is doing deals with conservation organisations to quieten criticism.³³

Pebble Mine, Alaska, USA

In the Bristol Bay area of Alaska, there is heavy opposition to the development of the Pebble Open Pit Gold and Copper Mine in which Rio Tinto is a minority partner. The project would include what would reportedly be the largest dam in the world, which would be used to contain toxic waste produced in the mining operation. Native groups, commercial and sport fishermen and environmental groups are concerned about the threats the mine poses to salmon fisheries, moose, bear, caribou and other animals, and to the ecosystem as a whole.³⁴

QMM Mine, Fort-Dauphin, Madagascar

The island of Madagascar in the Indian Ocean provides yet another example of Rio Tinto's apparent disregard for the communities and environment in which it operates.

Rio Tinto operates an ilmenite³⁵ mine on the east coast of the island. The entity on the ground, QIT Madagascar Minerals S.A. (QMM), is a joint venture between Rio Tinto's wholly owned

³³ <http://www.minesandcommunities.org/article.php?a=10628>

³⁴ Renewable Resources Coalition, http://www.renewableresourcescoalition.org/pebble_mine.htm.

³⁵ Ilmenite is used in the manufacture of titanium dioxide, a whitener used in a range of products.

Canadian subsidiary QIT Fer et Titane (80%) and the government of Madagascar (20%). The project, which began construction in 2006, has received funding from the World Bank and infrastructure support from the government, including a new port. (The World Bank contributed \$35 million to the port and QMM \$110 million).^{36,37} The mine reportedly contains at least 75 million tons of ilmenite deposits, which are found in mineral sands, and could be operational for up to 40 years.³⁸

Thousands of people have already been affected by the mining operation through displacement, loss of lands, disruption to fishing, flooding to agricultural areas and dust pollution over food growing and pasture areas, affecting livelihoods and food production. Those who have already been displaced have received inadequate compensation, in most cases just one tenth of the World Bank recommended levels. Local people have also lost free access to their forest resources, - such as medicines and honey, which act as a survival mechanism when crops fail. Many more communities and hundreds of villagers are destined to be affected as the mine expands its operations into sites along the southern coastline over the coming years, with the threat to local customs, culture and livelihoods. These are some of the poorest people on the island, being subsistence farmers dependent on the land, and earning less than a dollar a day. The influx of workers from elsewhere has increased demand for food and housing, driving prices up beyond what local residents can afford.³⁹

The mine has attracted opposition from conservationists since its inception because the mine site is located within the last remaining fragments of coastal forest in Madagascar; since this forest type is unique to the country – for example, QMM has reported 64 species of endemic flora found nowhere else – its fate is considered of global importance.⁴⁰

Rio Tinto reportedly plans to restore the natural environment once the dredging of the sand is complete and has established conservation areas to protect forest biodiversity; however, experts have said these areas are too small to sustain the numbers of species currently found in the forest, which will result in a reduction of species diversity.^{41,42} Most of the mined areas will be replanted with a fast growing monoculture of hardwood species.

Panguna Mine, Bougainville, Papua New Guinea

On the island of Bougainville, Papua New Guinea, the people fought and won a 10-year war against Rio Tinto and its Panguna copper and gold mine between 1988 and 1997. Resistance to the mine was so intense, the company was forced to close it in 1989 and, since that time, the mine has not been operational. It is estimated that 20,000 people were killed in the conflict.

³⁶ Friends of the Earth, October 2007. Mining Madagascar – Forests, Communities and Rio Tinto's White Wash, p. 2; http://www.foe.co.uk/resource/media_briefing/mining_madagascar.pdf

³⁷Bannister, David, March 2009. A Promise Fulfilled, Review, p. 9; http://www.riotinto.com/documents/Library/Review89_March09_A_promise_fulfilled.pdf

³⁸ Harbison, Rod, 2007. Development Recast? A Review of the Impact of the Rio Tinto Ilmenite Mine in Southern Madagascar, Panos London report for Friends of the Earth, p. 6; http://www.foe.co.uk/resource/reports/development_recast.pdf.

³⁹ Friends of the Earth, October 2007. Mining Madagascar – Forests, Communities and Rio Tinto's White Wash, p.5; http://www.foe.co.uk/resource/media_briefing/mining_madagascar.pdf

⁴⁰ Harbison, Rod, 2007. Development Recast? A Review of the Impact of the Rio Tinto Ilmenite Mine in Southern Madagascar, Panos London report for Friends of the Earth, p. 45; http://www.foe.co.uk/resource/reports/development_recast.pdf.

⁴¹ Friends of the Earth, October 2007. Mining Madagascar – Forests, Communities and Rio Tinto's White Wash, p. 2,5; http://www.foe.co.uk/resource/media_briefing/mining_madagascar.pdf

⁴² Harbison, Rod, 2007. Development Recast? A Review of the Impact of the Rio Tinto Ilmenite Mine in Southern Madagascar, Panos London report for Friends of the Earth, p. 50; http://www.foe.co.uk/resource/reports/development_recast.pdf.

A class action complaint on behalf of the people of Bougainville brought in a U.S. federal court alleges that Rio Tinto committed crimes against humanity, war crimes and racial discrimination, as well as violations of international environmental rights, among other atrocities, in its efforts to establish and operate the Panguna mine. Specifically, the complaint alleges that:

In constructing its huge copper mine in Bougainville, Rio Tinto used chemical defoliants and bulldozers to destroy the rainforest that had been a key source of subsistence to local residents; the company then, allegedly, sluiced off the hillside.⁴³

During the years of the mine's operations, billions of tons of toxic mine waste was generated and dumped onto the land and into pristine waters, filling major rivers with tailings, polluting a major bay dozens of miles away, and the Pacific Ocean as well." The pollution reportedly was so extensive residents of the island were exposed to toxic chemicals that have caused death and/or illness.⁴⁴

Air and water pollution has caused serious health problems among the villagers, including upper respiratory infections, TB and asthma. In addition, because they could no longer farm, fish or hunt, villagers' traditional diet was replaced with processed foods, leading to an increase in the incidence of obesity.⁴⁵

Rio Tinto "viewed the people of Bougainville as inferior due to their colour and culture and, therefore, intentionally violated their rights."⁴⁶ As part of its discriminatory treatment of the local people, the company allegedly paid "slave wages" to black workers.⁴⁷

The company's behaviour sparked an uprising among the Bougainvillian people that resulted in the closing of the mine. In response, the Papua New Guinea government brought in troops to reopen it. Rio Tinto allegedly provided vehicles and helicopters to transport troops and played a role in instituting a military blockade that lasted for almost 10 years, causing the deaths of 10,000 people between 1990 and 1997.

Rio Tinto has been fighting the class action for a decade, seeking to have the complaint dismissed. The Obama Administration's Department of Justice refused to side with the company in its legal argument, thereby paving the way for the suit, which could cost Rio Tinto hundreds of millions of dollars in reparations, to proceed in the U.S. court system. A decision is currently awaited from the Court of Appeals.

In recent months there has been renewed discussion, within the Bougainville Autonomous Government and among tradition landowners, about a possible re-opening of the mine. Opponents of the mine state that the great majority of the population continue to oppose re-opening of the mine.⁴⁸

Grasberg Mine, West Papua (Indonesia)

The Grasberg mine in West Papua is another example of a Rio Tinto mining project gone terribly wrong. A joint venture between Rio Tinto (40% of joint venture production⁴⁹) and Freeport-McMoRan, a U.S. corporation headquartered in Phoenix, Arizona, the Grasberg Mine is one of the

⁴³ Sarei. v. Rio Tinto, p. 31.

⁴⁴ Sarei et. al. v. Rio Tinto, p. 3.

⁴⁵ Sarei et. al. v. Rio Tinto, p.35.

⁴⁶ Sarei et. al. v. Rio Tinto, p.54.

⁴⁷ Sarei et. al. v. Rio Tinto, p.40.

⁴⁸ <https://mekamui.wordpress.com/>

⁴⁹ Rio Tinto, 2009 Annual Report, p. 40.

world's largest single producers of both copper and gold, and contains the largest recoverable reserves of copper and the largest single gold reserve in the world, according to Freeport McMoRan.⁵⁰

The mine reportedly has caused “massive environmental destruction” in West Papua due to the dumping of waste, including toxic metals, into Indonesia’s river system.⁵¹ According to WALHI, a leading Indonesian environmental group, the mine has already disposed of one billion tons of tailings into the local river system, resulting in copper concentrations in local rivers that are double the Indonesian legal fresh water limit. Over the life of the project, the mine reportedly will dump up to 3.5 billion tonnes of waste. WALHI says that riverine disposal is expressly prohibited under Indonesia’s water quality control regulation.⁵²

The company disagrees:

*This programme was approved by the government of Indonesia following numerous technical studies to identify the appropriate tailings management plan for the site. The practice of riverine tailings disposal has been subject to scrutiny for many years by a range of stakeholders, including certain Indonesian governmental authorities and some NGOs. We recognise that riverine tailings disposal has been criticised and that the World Bank does not consider it as good industry practice, in accordance with the International Finance Corporation’s (IFC) 2007 Environmental, Health, and Safety Guidelines for mining. However, we continue to believe that the use of riverine tailings disposal at the Grasberg operation is appropriate given the extremely rugged topography, high rainfall and high seismic risk that makes construction of more conventional tailings management facilities technically challenging.*⁵³

The obvious solution is to avoid mining in such areas altogether.

In 1996, local people rioted, destroying \$3 million in equipment and shutting the facility down for three days. Shortly thereafter, Freeport-McMoRan, Rio Tinto’s partner, reportedly started providing significant support to the Indonesian government and military to ensure the protection of the mine.⁵⁴ It is alleged that the company made an initial investment of \$35 million in military infrastructure and vehicles and paid at least \$20 million to military and police in Papua between 1998 and 2004.⁵⁵

Serious human rights violations have occurred near the Grasberg Mine and Rio Tinto and Freeport-McMoRan have been accused of complicity due to their reliance on the military and police for security at the mine. According to Indonesia’s National Commission on Human Rights, “in the mid-1990s the Indonesian security forces indulged in indiscriminate killings, torture and disappearances of local people in their safeguarding of the mine operations and their campaigns against West Papuan secessionists.”⁵⁶

In its 2010 Annual Report Rio Tinto claims that it does not have management control over Freeport’s operations in West Papua; this argument – clearly belied in practice (if only because Rio

⁵⁰Freeport McMoRan company website, <http://www.fcx.com/operations/asia.htm>

⁵¹ Curtis, Mark, November 2007. Fanning the Flames: The Role of British Mining Companies in Conflict and the Violation of Human Rights, War on Want, p. 25.

⁵² Curtis, Mark, November 2007. Fanning the Flames: The Role of British Mining Companies in Conflict and the Violation of Human Rights, War on Want, p. 25, citing The environmental impacts of Freeport-Rio Tinto’s copper and gold mining operation in Papua, WALHI, Jakarta, 2006.

⁵³ Rio Tinto 2010 Annual Report, p. 38.

⁵⁴ Perlez, Jane and Raymond Bonner, December 28, 2005. Freeport-Rio Tinto: Gold’s Other Price, *The New York Times*.

⁵⁵ Perlez, Jane and Raymond Bonner, December 28, 2005. Freeport-Rio Tinto: Gold’s Other Price, *The New York Times*.

⁵⁶ Curtis, Mark. *Fanning the Flames: The Role of the British Mining Companies in Conflict and the Violation of Human Rights*, War on Want, p. 25.

Tinto argues in the same breath that it has contributed to the improvement of Grasberg practices) was not accepted by the Norwegian sovereign wealth (Pension) Fund. In 2008 it eliminated Rio Tinto from the Fund due to concerns about the way the Grasberg mine was being operated. The holdings the Fund divested itself were valued at \$850 million.⁵⁷

Diamond polishing in India

Rio Tinto diamonds, through its "Select Diamantaire" mark of stones, supplies diamonds to Tiffany's through Tiffany's wholly-owned sourcing subsidiary, Laurelton, among 18 such customers.⁵⁸ These stones are sourced from the company's three major mines: Argyle in Western Australia; Diavik in the Canadian Northwest Territories; and Murowa in south central Zimbabwe. The majority of Rio Tinto's "roughs" are cut and polished in India, where conditions in the shops vary from intolerable (with child labour still commonplace) to vaguely acceptable. Accusations that Rio Tinto employed child labour were successfully scotched by the company several years ago. The Argyle gems – whose "pinks" are claimed to be the most valuable in the world – are said to be cut and polished only in Australia (doubtless partly as a result of demands by unions in Australia that this potentially lucrative business not be "outsourced").

Recent research in India identified diamond and gold importers into the country as benefiting from the most egregious level of tax exemption provided by the country's Customs and Excise department - Rio Tinto would appear to rank as the second biggest beneficiary in this respect. Such tax exemptions minimize the benefit of the company's activity to the people of India.⁵⁹ Rio Tinto's diamond project in Madhya Pradesh is at Bunder, in Bundelkhand.

The company is also pursuing the possibility of iron ore mining in Orissa, a state convulsed by conflict between the authorities and adivasis resisting land takeovers by multinational corporations.⁶⁰

Mande Norte project, Colombia

Rio Tinto has an agreement with US-Colombian junior company Muriel Mining over the Mande Norte copper-gold-molybdenum project in north western Colombia.⁶¹ Exploration has been halted by vociferous local opposition and a court judgement that consultation with Indigenous Peoples and communities of African descent had not been carried out according to Colombian law. In March 2010, the Colombian Constitutional Court ordered a halt to the country's largest copper mining project, Muriel Mining's Mandé Norte project, citing lack of proper consultation with local Indigenous and Afrocolombian communities over the mine's potential environmental and cultural impact. "Adequate action was not taken to ensure the communities were aware of the nature of the Mandé Norte project and subsequently able to make a decision with full awareness and understanding," the court said in a ruling. Because Muriel's project will inevitably alter the area's ecological balance, the company must comply with its obligation to consult with the communities that inhabit that region and that will be affected by the mining activity, the judges said.⁶² Rio Tinto

⁵⁷ Acher, John, September 9, 2008. Norway fund drops Rio Tinto on ethical grounds, *Reuters*; <http://www.reuters.com/assets/print?aid=USL872852220080909>

⁵⁸ A full list of these customers is at: <http://www.selectdiamantaire.com/>

⁵⁹ See <http://www.minesandcommunities.org/article.php?a=10770>.

⁶⁰ http://articles.economictimes.indiatimes.com/2010-12-15/news/27630010_1_iron-ore-mining-mining-industry-joint-venture

⁶¹ Business & Human Rights Resource Centre: <http://www.business-humanrights.org/Documents/MandeNorte>

⁶² Mines and Communities, March 31, 2010. Muriel Up Against the Wall in Colombia, Court Rules Company Failed to Consult Local People; <http://www.minesandcommunities.org/article.php?a=10008>

has now outwardly distanced itself from the controversial project while retaining an option to profit from it in the future.⁶³

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⁶³ <http://londonminingnetwork.org/2011/01/rio-tinto-plays-musical-chairs-at-mande-norte/> and http://www.aida-americas.org/sites/default/files/2011_02_0.html