



Whose development is it?

Investigating the Mozal aluminium smelter in Mozambique



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About the publishers:

Justica Ambiental (Friends of the Earth Mozambique) view environmental justice as the act of using the environment as a vehicle for ensuring equity and equality across society. Our mission is to engender a culture of civil action in Mozambique both through actions to protect the environment and by actively engaging in developmental decisions relating to issues of environmental justice in Mozambique and throughout the world.

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Jubilee Debt Campaign UK is part of a global movement demanding freedom from the slavery of unjust debts and a new financial system which puts people first.

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Summary

“Mozal is a shining symbol for the future of one of the poorest countries in the world.”¹

German government’s Deutsche Investitions- und Entwicklungsgesellschaft (DEG)

“Mozal is the single biggest, private sector project investment ever made in Mozambique and is expected to provide major socio-economic benefits to a country emerging from a 15-year civil war and on its way towards recovery. It will also encourage Mozambique to further its huge effort to achieve sustainable development and reduce poverty levels.”²

Mozfund group of private investors in Mozal

Since 1999 foreign governments have given large financial and political support to the building of the Mozal aluminium smelter in Mozambique. **Half the costs of building Mozal came directly from publicly owned institutions, or were guaranteed by them.** In return, they and the private investors have received large returns in profit and interest. But the Mozambique government has been left with very little. **For every \$1 from the smelter being paid to the Mozambique government, we estimate that \$21 has left the country in profit or interest to foreign governments and investors.**

Mozambique’s economy is booming, doubling in per person terms between 1998 and 2010. Yet the number of people living on less than \$2 a day actually *increased* from 15.2 million in 1996 to 18.3 million in 2008 (the latest year for which there are figures). Mozal is one example why; growth which primarily benefits foreign companies and governments, and local elites. Moreover, the smelter may also have had damaging impacts through distorting the economy, using up valuable electricity and impacting on the local environment.

As part of a genuine development strategy, the Mozambique government should ensure the people receive a much better deal from the smelter by:

1. **Renegotiating** the terms on which Mozal is allowed to operate, to ensure Mozal pays a fair rate of tax, levied on the value of aluminium produced
2. **Allocating** increased revenue from Mozal for expenditure which cuts poverty and inequality, and builds infrastructure which is genuinely useful to the people of Mozambique
3. **Revealing** the terms on which all mega-projects are operating in Mozambique, and the amount of tax paid by each one
4. **Holding** a transparent, participatory and independent monitoring process into the cumulative impact to date of Mozal on social outcomes and the environment which would recommend improvements for future operations

Lenders such as the UK government and World Bank should:

1. Hand the excessive profit they have made out of Mozal back to the Mozambique people
2. Support a renegotiating of the terms of the smelter to ensure Mozal pays a fair rate of tax
3. Only support projects in the future which promote genuinely equitable development, have the prior informed consent of affected peoples, and have been debated openly in the Mozambique parliament and media, with involvement of civil society

1. Building an aluminium smelter

In the early 1990s the civil war in Mozambique ended. As the country became more stable, foreign lenders began discussing with the Mozambique government how to 'develop' the economy. In the late 1990s, work began on the country's flagship industrial project; the Mozal aluminium smelter. This large scale factory would take the country's electricity resources and combine them with imported alumina,³ to supply aluminium. At the time, planners foresaw a shortage of global aluminium supplies.⁴ Mozal would help plug the gap in Europe, Japan and South Africa.⁵

A whole host of governments, organisations and businesses were involved in building and operating the smelter. The Mozambique government decided that to attract them, it should exempt Mozal from taxes on profit and VAT, levying just a 1% turnover tax, whilst allowing all profit from the smelter to be taken offshore.⁶ This special treatment was argued to be needed to attract international investors; BHP Billiton who own 47 per cent of Mozal, and Mitsubishi, who own 25 per cent. The other two equity investors are the Industrial Development Corporation of South Africa (24 per cent of shares) and the government of Mozambique (3.9 per cent).⁷ The smelter was built in two stages. Mozal I began operating in September 2000, followed by Mozal II in 2004.

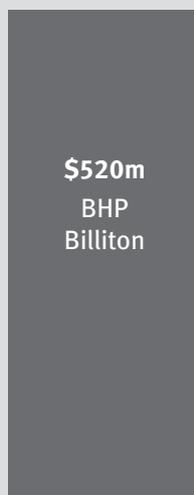
But as well the tax exemptions, Mozal received hundreds of millions of dollars in loans from government owned development organisations to help fund the building of the smelter, including the World Bank's International Finance Corporation, the EU's European Investment Bank, South Africa's Industrial Development Corporation and Development Bank of South Africa, Japan's Bank for International Cooperation, the UK's CDC, Germany's DEG, France's PROPARGO and Canada's EDC.⁸ South African, Japanese and British government export credit agencies also guaranteed loans by private banks.ⁱⁱ

In total, \$2.2 billion was invested to build Mozal, half from equity investors (the owners of the company), and half from loans.⁹ The Mozambique government's equity share of 3.9 per cent was paid for by a \$43 million loan from the EU's publicly owned European Investment Bank (EIB).¹⁰ In return, the EIB receives half of the Mozambique government's share of Mozal's profit.¹¹

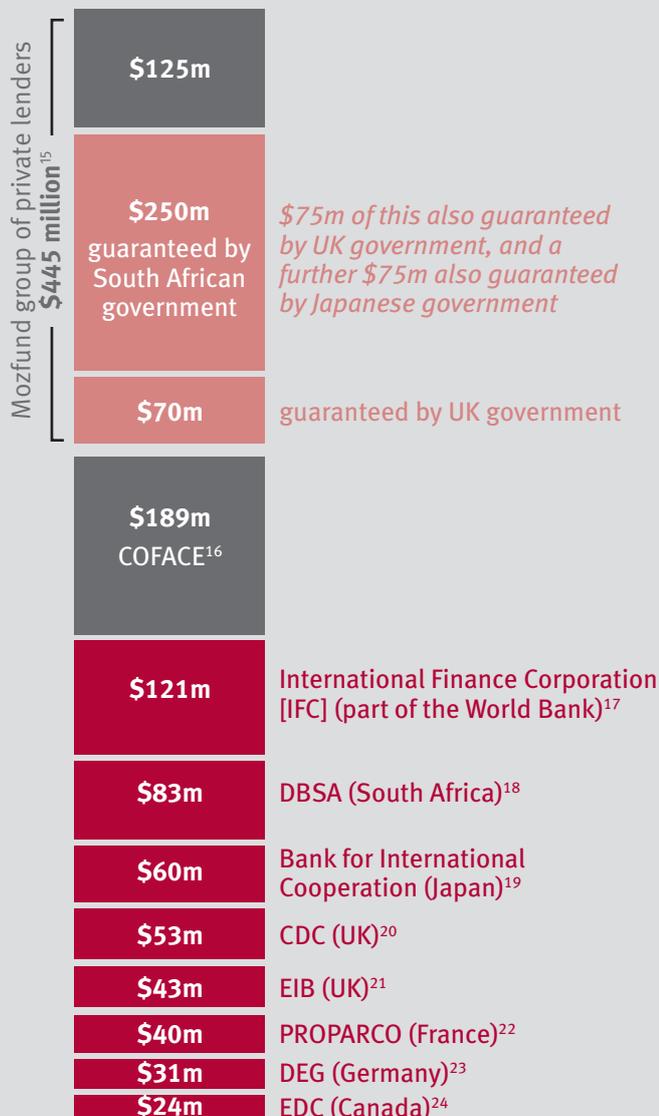
- i. Publicly owned development finance organisations such as these provide debt or equity investments in companies in developing countries. They seek a financial return, but also claim to be supporting development and cutting poverty through their actions.
- ii. Export credit agencies give or guarantee loans to foreign companies and countries. Usually they are for purchase of that country's exports. However, in this case the capital imports used to build Mozal came primarily from South Africa. Japanese and British government export credit agency involvement in Mozal was to support multinational companies registered in Japan and the UK.

Graph 1. Where's the money coming from? Investment into the Mozal smelter

Equity investors: \$1.1 billion¹²



Debt lenders: \$1.1 billion¹⁴



Private funds
 Public funds
 Publicly guaranteed funds

In total half the costs of building Mozal – \$1.1 billion – came directly from publicly owned institutions, or were private loans guaranteed by them. Most of these bodies have a mandate to use their money to create development and reduce poverty. Around \$800 million came through equity from Mozal’s private owners, BHP Billiton and Mitsubishi, around 35 per cent. The remaining \$300 million, 15 per cent, came from private lenders not guaranteed by any public institution.

2. Revenues from the smelter

Despite all this public money and development focus, very little revenue from the smelter ends up with the Mozambique government. We estimate the Mozambique government has received an average of just \$15 million a year in tax and share of the profits (for this and other estimates mentioned in this briefing, see detailed calculations in the Appendix). In contrast:

- the UK government alone has made on average \$6 million a year in interest payments. It may also be receiving tax on BHP Billiton’s profit being repatriated to the UK, something UK Export Finance gave as a condition of its loan guarantees.

We estimate that:

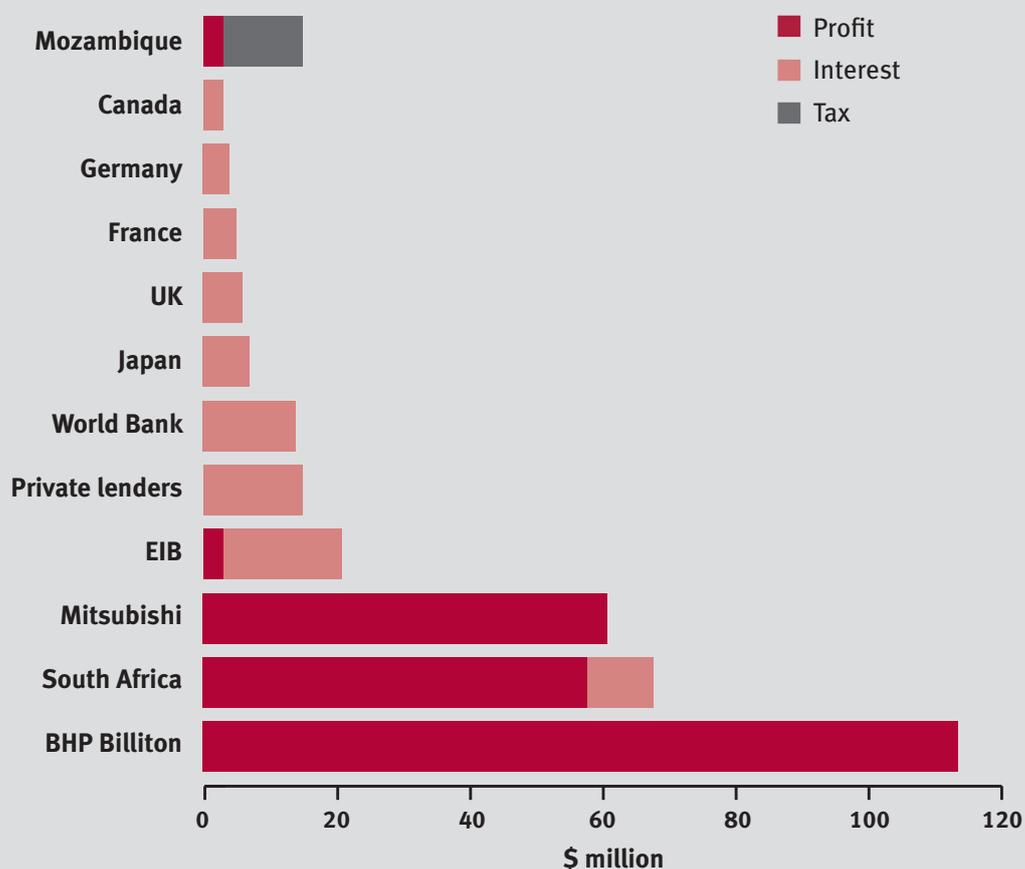
- the South African government has made on average \$68 million a year in interest payments and profit
- the World Bank’s IFC has made \$14 million a year in interest payments

BHP Billiton report that they have:

- made a profit of \$800 million between 2005/06 and 2011/12, an average of \$114 million a year. If Mitsubishi have made profit at the same rate, the two private owners of Mozal would have collectively made over \$175 million (before possible tax in the UK, Australia and Japan) a year in profit from the smelter. Such a rate of profit would be more than eleven times the revenue for the Mozambique government.

We estimate BHP Billiton invested \$520 million in Mozal. Between 2005/06 and 2011/12, BHP Billiton’s financial statements say they have received an average of \$114 million a year profit from the smelter.²⁵ The annual rate of return on equity invested has therefore averaged 22 per cent.

Graph 2. Estimate of annual money made from Mozal by various parties



In 2001 BHP Billiton told the UK government they expected an internal rate of return on their investment of 18 per cent.²⁶ The high profits for investors were predicted in advance. In 2001, Mozfund said *“Mozal will add value for shareholders in BHP Billiton. It comfortably exceeds BHP Billiton’s hurdle rates of return.”*²⁷

Collectively, we estimate foreign investors, governments and public development banks have received an average of \$320 million a year from the smelter, in contrast to the Mozambique government’s \$15 million. For every \$1 from the smelter being paid to the Mozambique government, \$21 leaves the country in profit or interest to the foreign governments and investors.

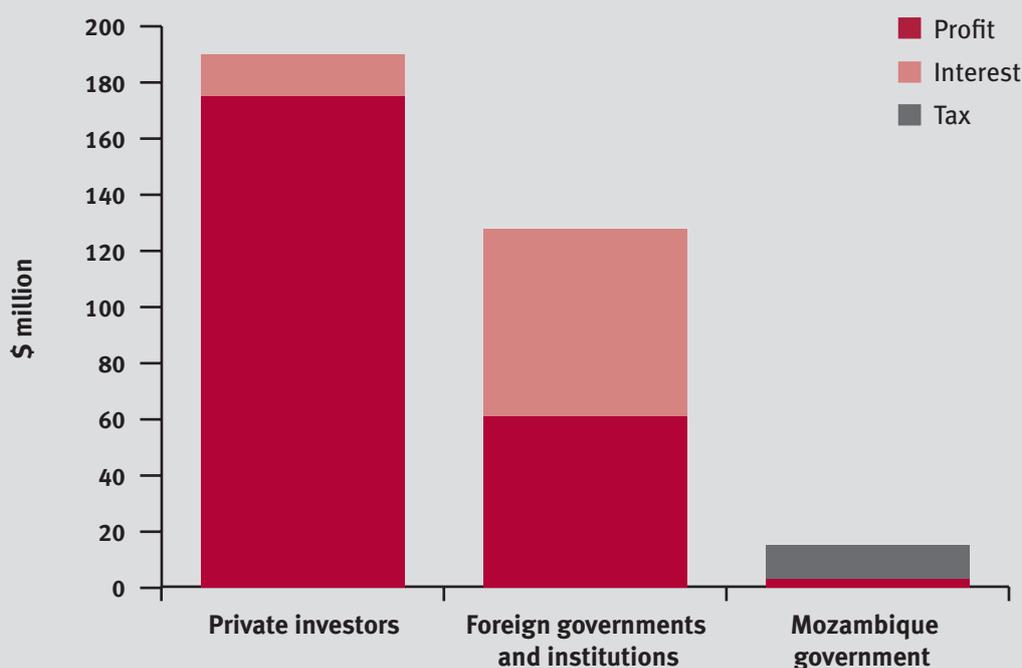
Most of the development banks which supported the project have refused to release any figure to us on the interest rates they charged on loans, or amount of money they have been repaid. However, the UK’s CDC has disclosed that it lent Mozal \$52.8 million, but has been repaid \$140.9 million (\$88.1 million in interest).²⁸ These loans were fully repaid in 2012.

If this loan structure is replicated by other development banks, Mozal’s profit should increase over coming years because of the ending of debt payments.

The UK government’s export credit agency, UK Export Finance, normally guarantees loans for foreign companies and countries to buy British exports. However, that was not the case with Mozal; it was BHP Billiton’s profits which were being supported, not British exports. The capital equipment to build the smelter came primarily from South Africa. When guaranteeing private loans to Mozal, UK Export Finance, said *“The major return to the UK for our support for the Mozal 2 project will be the dividends to Billiton, the UK sponsor.”*²⁹ UK Export Finance requested some conditions for guaranteeing the loans to Mozal.

Firstly, they wanted to be assured that BHP Billiton would remain the lead partner in Mozal, so that profit would continue to accrue to a British registered company. Secondly, they insisted that profits would be *“repatriated to the UK where they will be taxed”*.³⁰ Nowhere in their assessments of the project do they consider how much tax the Mozambique government and people would receive.

Graph 3. Estimate of annual money made from Mozal by various parties



BHP Billiton have refused to disclose the amount of tax they pay in the UK on profit from Mozal, saying “BHP Billiton has to be mindful of not breaching the disclosure obligations of the applicable corporations and securities laws by making a *selective* disclosure about Mozal (or indeed any other matter regarding BHP Billiton) to the Jubilee Debt Campaign.”³¹

If they have repatriated all their Mozal profit to the UK as envisaged by UK Export Finance, and paid UK Corporation Tax on it, this will have amounted to an average of \$35 million a year between 2004/05 and 2011/12.

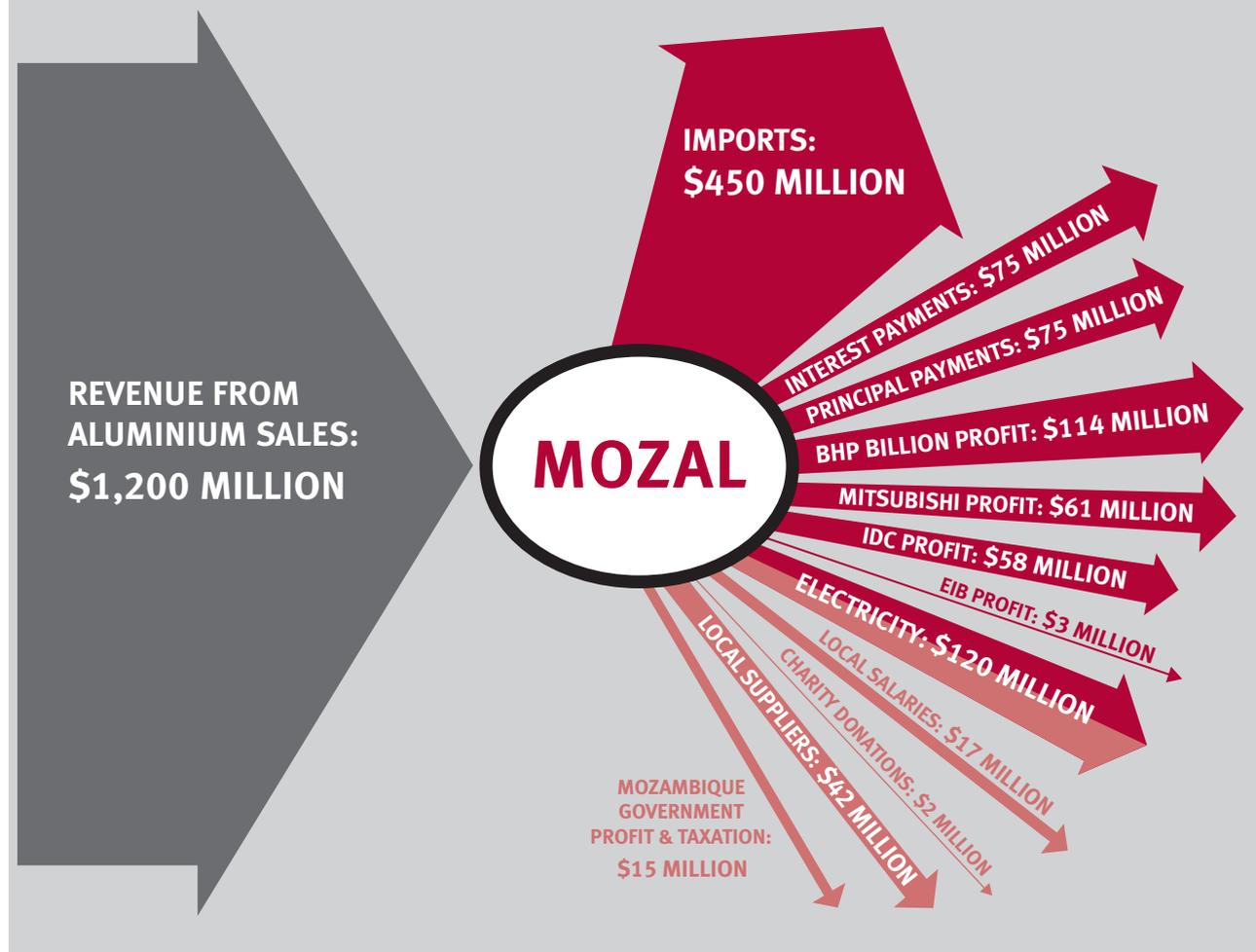
UK Export Finance did say, in their 2001 underwriting minute on the Mozal project, that guaranteeing investment loans such as for Mozal “are not trade promotion but are intended for projects which have a developmental effect on the host country’s economy”.³² However, neither in this or other

documents released to Jubilee Debt Campaign under the terms of the Freedom of Information Act, did they detail what these development effects would be, or how the wider Mozambique public could benefit from a capital intensive project with huge tax exemptions.

The smelter has little interaction with the Mozambique economy. Two economists from the University of Copenhagen, and one from the University of Akron in Ohio, state “The mega-projects [such as Mozal] are foreign owned, capital intensive projects that rely heavily on imported intermediaries and export 100% of production. Under these circumstances, linkages to the domestic economy will be small.”³³

We estimate that just \$200 million of Mozal’s average \$1.2 billion revenue enters the Mozambique economy at all. The rest pays for imports, is spent on the company’s debt payments, or leaves as profit.

Graph 4. Estimates of money in and out of Mozal, mid-2000s-2011³⁴
(Detailed calculations for these estimates are in the Appendix).



3. The development impact of Mozal

3.1 Electricity

One key Mozambique resource Mozal does use is electricity. BHP Billiton says that Mozal sources its electricity from Mozambique's Cahora Bassa dam, via a joint venture with South Africa's electricity utility Eskom.³⁵ We estimate Mozal uses around 45 per cent of electricity produced in Mozambique, and is responsible for 65 per cent of electricity consumption.³⁶ This is a huge use of Mozambique's resources on a factory which provides relatively little to the domestic economy. In contrast, only 12 per cent of the population of Mozambique have access to electricity.³⁷

One of the reasons for the large profits generated from Mozal is the extremely generous electricity rates charged. Mozal negotiated a fixed electricity price of 1.1 cents/kWh until the end of 2006, then 1.6 cents/kWh until 31 December 2012.³⁸ In contrast, in 2008 average electricity tariffs in Mozambique were 4.5-6 cents/kWh for industrial users, 9 cents/kWh for residential users and 12 cents/kWh for commercial users.³⁹ Those Mozambique citizens who do receive electricity have been paying over five times more than Mozal does.

3.2 Economic growth and exports

Since 1998, Mozambique has had high economic growth, averaging almost 8 per cent a year, one of the highest rates in Africa.⁴⁰ The size of the economy per person doubled between 1998 and 2010.⁴¹ However, this economic growth has not resulted in cuts in poverty. According to the World Bank, the number of people living on less than \$2 a day actually *increased* from 15.2 million in 1996 to 18.3 million in 2008, the latest year with figures available.⁴² Given the rate of per person economic growth, it would not be unreasonable to expect the number of people living on less than \$2 a day to have halved, if genuine pro-poor economic growth were taking place.

Mozal shows one of the reasons for this. The large export revenues – Mozal accounts for 30 per cent of Mozambique's official exports – and economic activity Mozal generates boosts overall figures for growth and exports. But these are not entering the Mozambique economy. This leads to dangerous misperceptions. For example, in order to pay foreign debts, exports are needed to generate foreign revenue.

Therefore, the IMF and World Bank advise the Mozambique government on how much debt it should take on, based on the level of exports. Yet the true export revenues entering Mozambique are a lot lower than presented in these analyses, potentially leading to a dangerous increase in government foreign-owed debt.

The IMF says Mozambique's exports in 2012 will have been \$3.8 billion.⁴³ Of this, at least \$1.2 billion – 30 per cent – will be from Mozal. But of the revenue from Mozal's exports, only \$200 million enters the country. Mozambique's 'real' exports, taking into account the real figures for Mozal money which enters the country, are just \$2.8 billion. This recalculation only takes into account Mozal, not the impact of other mega-projects where export revenues in reality also never enter the country.

The IMF says the Mozambique government will spend 3.8 per cent of the country's export revenues on foreign debt payments in 2012, \$145 million. But once the Mozal revenues which don't enter the country are excluded, this rises to 5 per cent.

Of course, nowhere near all the export revenues which do enter Mozambique end up with the government. We have estimated only \$15 million does through direct taxation and profit, although more than this may indirectly. To make payments on foreign owed debt, the Mozambique government has to use the foreign currency gained from exports.

The Mozal revenue which does enter the country makes up 6 per cent of Mozambique's exports of \$2.8 billion. Therefore, it is reasonable to say that the revenues from Mozal need to contribute to 6 per cent of the Mozambique government's debt payments; \$9 million. Of the \$15 million the Mozambique government does receive from Mozal, around \$9 million is needed to cover debt payments.

By 2017 the IMF estimates that Mozambique's export revenues will have increased by 70 per cent to \$6.5 billion, but that debt payments will have more than trebled to \$500 million.⁴⁴ Therefore, whilst Mozal will generate a smaller share of the country's export revenues, the contribution it will need to make to government debt payments will have increased to around \$15 million. Unless government revenue from Mozal increases, by 2015, almost all the money it makes from the smelter will need to be spent on debt payments.

3.3 Environment

Mozal has also impacted on the environment and pollution. In 2010 and 2011, exhaust fumes from the factory were released directly to the atmosphere without being treated, including hydrogen fluoride, sulphur dioxide, nitrogen dioxide and ozone.⁴⁵

The fumes were released because Mozal shut down the smoke and gas treatment centres at the smelter, in order to deal with corrosion. Treating fluoride pollutants and sulphur dioxide was a requirement of the 1998 environmental impact assessment.⁴⁶ Mozal claimed that the release of pollutants would be below established limits and present no risk to human health and/or the environment.⁴⁷ This plan was agreed in June 2010. The work was undertaken between November 2010 and March 2011.⁴⁸

Six Mozambique NGOs, including Justica Ambiental, created a coalition against the planned release of untreated pollutants, submitting complaints to the Compliance Advisor Ombudsman of the World Bank (because of the IFC and MIGA's involvement), the European Investment Bank's Complaint Mechanism, and the UK and Australian national contact points for the OECD (because BHP Billiton is registered in both the UK and Australia). They stated that hydrogen fluoride, sulphur dioxide, nitrogen dioxide and ozone are all regulated by law as being a danger to human health and the environment.⁴⁹

The Mozambique NGO's pointed out that:⁵⁰

- It is incomprehensible that Mozal would have made the original investment in the gas treatment centres, and was now spending \$10 million to refurbish them, if there is no need for gas treatment
- Mozal had given different reasons for the corrosion: poor quality of steel used in construction, and/or the treatment centres only had a lifetime of 10 years. The group of NGOs claim: *"Either they used inappropriate material, or failed in their initial Environmental Impact Assessment."*
- In 2004, BHP Billiton had shut down gas treatment at an aluminium smelter in South Africa for 72 hours, and released a health warning for *"people with asthma and others with respiratory problems, or who have low tolerance for smoke and dust, to remain indoors"*.⁵¹
- Mozal refused to release the two studies which predicted releasing the untreated gases would not be a health or environmental risk, or release annual reports on Mozal's past environmental performance

Mozal says technical analyses determined that air concentrations of pollutants would be below established limits and would present no risk to human health and/or the environment.⁵²

The coalition gathered around 15,000 signatures calling on the Mozambique parliament to cancel the authorisation until all options are fully analysed and discussed in public.

Through 2011 the Compliance Advisor Ombudsman of the World Bank led a 'mediation' process between Mozal and the NGOs and local community. This finished in December 2011, when the NGOs were then allowed to submit the case to the 'Compliance team'. In August 2012 the Compliance Advisor Ombudsman wrote to the complainants, saying *"CAO concludes that a number of issues raised merit further enquiry. Thus, in accordance with its Operational Guidelines, CAO will develop Terms of Reference for an audit of IFC's social and environmental performance in relation to this investment."*⁵³ However, the actual complaint is now 18 months old, and the gases were released over a year ago.

4. Conclusion

Mozal was the first of several mega-projects in Mozambique over recent years. Other large foreign-owned capital intensive projects in the country include:

- Sasol natural gas extraction plant
- Kenmare heavy sands project
- Vale coal mine
- Rio-Tinto coal mine

As with Mozal, these could create high economic growth, high profits and opportunity for high incomes for elites in Mozambique. But if they replicate Mozal, they will also fail to cut poverty, and direct attention away from genuine pro-poor development which is needed.

In February 2011, the head of Mozambique's largest bank, Millennium Bim, argued *"the mega projects have to be revised for the (benefit of the) people of this country"*.⁵⁴ Economist Jeffrey Sachs has also recently said the contracts should be renegotiated on the mega-projects because the tax exemptions are too great.⁵⁵ When asked in parliament how much the mega-projects are paying in tax, Minister of Planning and Development Aiuba Cuereneia failed to answer.⁵⁶

It is incredible that a project with so much international development funding has yielded large profits for foreign governments and multinational companies, but very little for the people of Mozambique. Moreover, the smelter may also have had damaging impacts through distorting the economy, using up valuable electricity and impacting on the local environment.

The Mozambique government continues, in alliance with international donors, to pursue a development plan based on mega-projects. Gas extraction, coal mines and heavy sands projects have all followed. This development strategy locks Mozambique even more into being simply a source of raw commodities and simple goods. It reaps huge rewards for foreign investors and local elites. But for most people in Mozambique, economic justice looks ever further away.

The Mozambique government should change its economic strategy to developing productive industries which create jobs, whilst ensuring revenues that are generated from the country's resources are divided equitably between the Mozambique people.

Recommendations for Mozambique government

As part of a genuine development strategy, the Mozambique government should ensure the people receive a much better deal from the smelter by:

1. Renegotiating the terms on which Mozal is allowed to operate, to ensure Mozal pays a fair rate of tax, levied on the value of aluminium produced

The Mozambique people should have received many times more revenue from Mozal. The current tax on turnover is far too small, but it is a tax on production. Unlike taxes on profit, these are harder for companies to avoid, because there is a definite amount of production which takes place in a country. The Mozambique government should increase the turnover tax several-fold.

A turnover tax could also be levied on the amount of aluminium produced multiplied by the London Metal Exchange cash price for aluminium, rather than revenue, to ensure it cannot be avoided in the future by revenue being moved offshore.

Most of Mozal's debt investments have now been paid off, so Mozal's profits could well be higher over coming years. Now is an opportune time

for the Mozambique government to demand the Mozambique people receive a greater share of those profits. On the averages for years since 2005, a turnover tax rate of 5 per cent would have increased the government's annual tax revenue from Mozal to \$60 million, whilst still leaving \$180 million to share between BHP Billiton, Mitsubishi and the Industrial Development Corporation of South Africa, a rate of return on their investments of 17 per cent.

2. Allocating increased revenue from Mozal for expenditure which cuts poverty and inequality, and builds infrastructure which is genuinely useful to the people of Mozambique

Increased government revenue should be used to cut poverty and inequality, and invested in infrastructure and skills which develop industries which create jobs and genuinely contribute to reducing poverty and increasing equality. The government should beware taking on large amounts of foreign owed debt, which can lead to any revenue gained from projects like Mozal leaving the country in repayments and interest.

3. Revealing the terms on which all mega-projects are operating in Mozambique, and the amount of tax paid by each one

Mozal is only one of several mega-projects now operating in Mozambique. The Mozambique government should reveal the terms on which all these projects are operating, and if applicable, renegotiate these terms so all mega projects are paying a fair rate of tax.

4. Hold a transparent, participatory and independent monitoring process into the cumulative impact to date of Mozal on social outcomes and the environment which would recommend improvements for future operations

Such a process should be available to the public in a fair, orderly, easily accessible and timely manner. A full independent audit should have a strong environmental and social component, and follow a transparent and participatory process throughout, including the development of the terms of reference. This process would allow for a better understanding of the cumulative impact to date and recommend improvements for future operations.

Recommendations for foreign governments

Foreign governments and public development banks have made large amounts of money out of Mozal in comparison to the amount they have invested. Furthermore, many of these institutions said they were supporting Mozal as a development project, yet did nothing to ensure the Mozambique government and people received a fairer share of the revenues. Lenders such as the UK government and World Bank should:

1. Hand the excessive profit they have made out of Mozal back to the Mozambique people

As well as having the loan fully repaid, the UK government's CDC has received \$88 million in interest from Mozal, on a 'development' loan of \$53 million, with an average interest rate of 15.6%. At a still high interest rate of 8%, CDC would still have received around \$45 million in interest. CDC should pay at least the difference – \$43 million – out of its huge profit from Mozal to the Mozambique people.

Other development lenders should return money in the same way. Whilst we do not know the terms on which loans were given, if they were the same as the CDC loans, at least the following amounts listed in Table 1 below should be returned to Mozambique, over \$350 million in total.

2. Support a renegotiating of the terms of the smelter to ensure Mozal pays a fair rate of tax

The foreign governments who supported the Mozal scheme should admit to their gross negligence in allowing so little tax to be paid on the project, and thereby such little benefit for most people in Mozambique. The governments should publicly support a renegotiating of the terms on which the smelter operates, along the lines of the above.

3. Only support projects in the future which promote genuinely equitable development, have the prior informed consent of affected peoples, and have been debated openly in the Mozambique parliament and media, with involvement of civil society

Foreign governments could be supporting economic democracy in Mozambique. This means only engaging in projects where affected peoples have granted their prior informed consent, and where the projects has been debated openly in the media and with civil society, and received the consent from the Mozambique parliament.

Table 1. Estimate of exorbitant profit made by 'development' lenders from Mozal which should be returned to Mozambique

Lender	Amount lent	Interest received (if on same terms as CDC loans)	Theoretical interest received on reduced interest rate	Amount to be returned to Mozambique
IFC, World Bank	\$121 million	\$200 million	\$103 million	\$97 million
DBSA (South Africa)	\$83 million	\$138 million	\$71 million	\$67 million
Bank for International Cooperation (Japan)	\$60 million	\$100 million	\$51 million	\$49 million
CDC (UK)	\$53 million	\$88 million	\$48 million	\$43 million
EIB (EU)	\$43 million	\$71 million	\$37 million	\$34 million
PROPARCO (France)	\$40 million	\$66 million	\$34 million	\$32 million
DEG (Germany)	\$31 million	\$51 million	\$26 million	\$25 million
EDC (Canada)	\$24 million	\$40 million	\$20 million	\$20 million
Total				\$367 million

Appendix: Estimating Mozal's finances

A. Revenue

The smelter produces upto 563,000 tonnes of aluminium a year,⁵⁷ all of which is exported. At a price of \$2,000 per tonne, this would mean a revenue of \$1.1 billion a year. Statistics from the UN show that the value of aluminium exported from Mozambique has been between \$900 million and \$1.6 billion a year from 2004 to 2011⁵⁸ – the only source for which can be the smelter. Average revenue per year based on the UN aluminium export figures is \$1.2 billion.⁵⁹

This revenue has to cover all the costs of Mozal including labour, electricity, raw materials and payments on debt interest and principal. The left over revenue of course is profit. Below we look into what is known about this profit and costs.

B. Profit

The Mozambique government's holding company, IGEPE, has reported on the dividends it has received from Mozal from 2005 to 2009 (see Table 2 below). In August 2011 it was reported that Mozal has not provided any dividends to the Mozambique government since 2009.⁶⁰

Table 2. Mozambique government dividends from Mozal, calendar year⁶¹

Year	Dividend
2005	\$7 million
2006	\$12 million
2007	\$15.4 million
2008	\$8.6 million
2009	0
2010	0
2011	0

Extrapolating out these figures gives the dividends below for all the shareholders (assuming the Mozambique government keeps half of the above, and the EIB gets the other half, as stated in its agreement on paying for the Mozambique government's equity share).

Table 3. Estimated dividend revenues from Mozal based on government dividends, 2005-2011

Date	BHP Billiton	Mitsubishi	IDC of SA	Mozambique government	EIB	Total
2005	\$84.4 million	\$44.8 million	\$43 million	\$3.5 million	\$3.5 million	\$179.2 million
2006	\$144.8 million	\$77 million	\$74.9 million	\$6 million	\$6 million	\$308.7 million
2007	\$185.7 million	\$98.8 million	\$94.8 million	\$7.7 million	\$7.7 million	\$394.7 million
2008	\$103.9 million	\$55.3 million	\$53 million	\$4.3 million	\$4.3 million	\$247.8 million
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
Total	\$518.8 million	\$275.9 million	\$265.7 million	\$21.5 million	\$21.5 million	
Average per year	\$74.1 million	\$39.4 million	\$38 million	\$3.1 million	\$3.1 million	

However, BHP Billiton also reports on its profit received after tax from Mozal.⁶² Since 2005/06, this has averaged \$114 million a year, more than the \$74.1 million extrapolated above, though this has fluctuated wildly (see Table 4. below). Moreover, profit was made in each of the financial years 2008/09, 2009/10 and 2010/11, when no dividend was paid to the Mozambique government. This suggests BHP Billiton has made profit from Mozal separate from dividends.

BHP Billiton's other possible source of profit from Mozal is the difference between the price it pays for Mozal's aluminium, and the price it sells it at. Under contractual agreements between BHP Billiton, Mitsubishi and the IDC of South Africa, each buys a certain percentage of the aluminium produced at 99% of the London Metal Exchange cash or 3-month price.⁶³ These three in turn presumably then

take control of selling it in different markets. The percentage share of aluminium between the three investors was redacted in the documents obtained by Jubilee Debt Campaign from UK Export Finance.⁶⁴

The 1% price difference cannot account for the large extra profits made by BHP Billiton on top of the dividend. But higher profits may have been achieved through buying aluminium from Mozal when market prices were lower, and selling at higher prices. BHP's figures are for financial years, so do not match exactly those of IGEPE, the Mozambique government's holding company.

In 2011/12, BHP Billiton reports a loss from Mozal. It may be that this represents a loss on its aluminium transactions, rather than indicating a particular loss made by Mozal.

Table 4. BHP Billiton's profit from Mozal

	BHP Billiton's stated profit ⁶⁵ (Financial year)	Estimated dividend from Table 3 (Calendar year)	Estimated profit from other sources*
2005/06	\$185 million	\$84.4 million	
2006/07	\$259 million	\$144.8 million	
2007/08	\$207 million	\$185.7 million	
2008/09	\$84 million	\$103.9 million	
2009/10	\$4 million	0	
2010/11	\$66 million	0	
2011/12	-\$5 million	0	
Total	\$800 million	\$518.8 million	\$281.2 million
Average per year	\$114 million	\$74.1 million	\$39.9 million

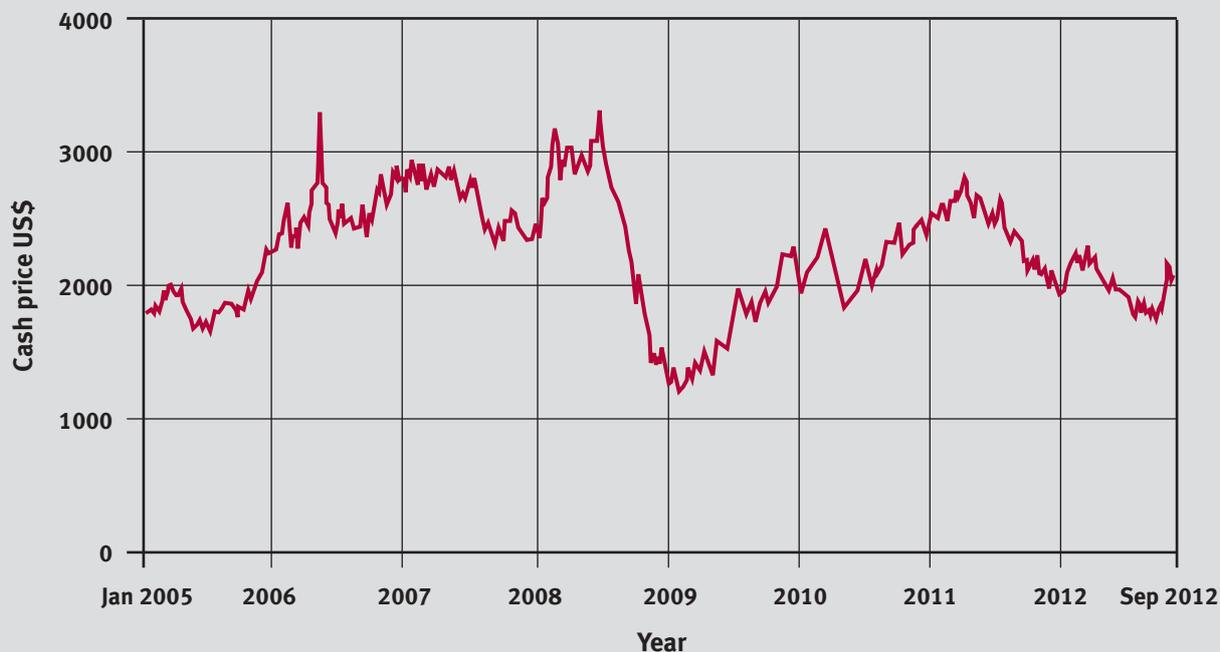
*Only calculated for total due to difference between calendar and financial year

If Mitsubishi and IDC of South Africa make the same overall profit as BHP Billiton, in proportion to their relative shareholdings, the two would have averaged a total yearly profit from 2005/06-2011/12 of \$61 million and \$58 million respectively.

The profit made by Mozal and its shareholders roughly follows changes in aluminium price, though it is odd that Mozal did not pay any dividends in 2010/11. In 2011, a record of \$1,626 million worth of aluminium was exported from Mozambique. In the later part of 2011, the aluminium price fell substantially, possibly accounting for BHP Billiton's loss in 2011/12, either through losses on individual trades, or withholding aluminium from sale at the lower price.

Table 5. Value of aluminium exported and average price of aluminium

Date	Value of aluminium exports ⁶⁶	Rough average cash price of aluminium ⁶⁷
2005	\$1,022 million	\$1,900 per tonne
2006	\$1,403 million	\$2,500 per tonne
2007	\$1,517 million	\$2,600 per tonne
2008	\$1,453 million	\$2,600 per tonne
2009	\$0	\$1,500 per tonne
2010	\$1,160 million	\$2,200 per tonne
2011	\$1,626 million	\$2,300 per tonne
Average	\$1,169 million	

Graph 5. Cash price for one-tonne of aluminium, January 2005 to September 2012, \$⁶⁸

UK Export Finance set as a condition for their support for Mozal that BHP Billiton's profit would be repatriated to the UK where it would be taxed.⁶⁹ The lack of transparency in UK tax rules means we do not know whether BHP Billiton has been repatriating all, or any, of its profit from Mozal to the UK, and if so whether it has all been taxed.

UK tax on corporate profits was 30 per cent until 2007/08. It was then cut to 28 per cent until 2010/11, and has now been cut again to 26 per cent. This means, of BHP Billiton's profit from Mozal, up to \$278 million since 2004 (29 per cent) *may* have been paid to the UK government in tax. This averages \$35 million a year.

Table 6. Possible tax on BHP Billiton profit in the UK

Date	BHP Billiton profit from Mozal ⁷⁰	UK corporate tax rate	Possible UK tax take from Mozal
2004/2005	\$130 million	30%	\$39 million
2005/2006	\$185 million	30%	\$56 million
2006/2007	\$259 million	30%	\$78 million
2007/2008	\$207 million	30%	\$62 million
2008/2009	\$84 million	28%	\$24 million
2009/2010	\$4 million	28%	\$1 million
2010/2011	\$66 million	28%	\$18 million
2011/2012	-\$5 million	26%	\$0 million
Total	\$935 million		\$278 million

C. Costs

C.1. Imports

In 2003 a report for Mozal by Professor Carlos Nuno Castel-Branco and Nicole Goldin estimated import costs would equal \$450 million by 2008.⁷¹ According to Mozfund, alumina (aluminium oxide) accounts for between a third and a half of the operating costs of western smelters.⁷² Mozal’s alumina is supplied by its largest shareholder, BHP Billiton, from bauxite mines and accompanying refinery in Western Australia.⁷³ 250,000 tonnes per annum is provided each for Mozal I and Mozal II – 500,000 tonnes per annum. Until the end of 2012, the price of the alumina has been fixed at 12.5% of the LME 3-month aluminium price for Mozal I, and 13.1% of the LME 3-month price for Mozal II.⁷⁴

Assuming an average aluminium price of \$2,200 a tonne, this means Mozal has been paying an average of around \$280 a tonne for alumina; \$140 million a year for 500,000 tonnes. Mozfund said in 2001 that the prices are “competitive”.⁷⁵ In October 2011, spot prices for alumina were \$350 a tonne, significantly above the fixed price being paid by Mozal.⁷⁶

The 2003 report for Mozal says BHP Billiton is a “vertically integrated” aluminium producer which means it can “decide about transfer and allocation of its own profits”.⁷⁷ Vertically integrated companies can do this by changing the amount paid in internal trade of goods and services, so that more profit is made in lower tax jurisdictions.

One of the largest costs of aluminium production is electricity, usually thought to account for around one-third of costs.⁷⁸ Electrolysis is used to separate aluminium from oxygen, requiring a lot of electricity to do so.

BHP Billiton says the smelter’s electricity is sourced from Mozambique’s Cahora Bassa dam. It is purchased from Motraco, a joint venture electricity company between South African electricity giant Eskom, and the electricity utilities of Mozambique and Swaziland, which was setup in the 1990s solely to supply Mozal with electricity.⁷⁹ The Cahora Bassa dam has an installed capacity of 2GW (the same as one standard

coal power station in the UK). According to WWF, Cahora Bassa sells nearly all of its electricity to Eskom, some of which is sold back into Mozambique for use in Mozal.⁸⁰ Effectively, the electricity from Mozal comes from the Mozambique Cahora Bassa dam, but is transmitted financially and physically via South Africa.

Between 2006 and 2012 Mozal has been paying 1.6 cents/kWh for electricity.⁸¹ We have estimated that Mozal uses 7,700 GWh of electricity a year.⁸² At this rate, total electricity costs would be around \$120 million a year.⁸³

C.2. Local worker salaries

The 2003 report estimated wages for Mozambican salaries would be \$17 million by 2008 for the 1000 local workers; which works out as \$17,000 per worker.⁸⁴ In 2001 Mozfund estimated that of 1,030 workers employed on Mozal I and II, 930 would be from Mozambique.⁸⁵

C.3. Debt payments

We have requested of all the public institutions which have lent money to Mozal figures on debt payments. However, only the UK CDC has provided any.

UK CDC provided three loans, of \$4.5 million, \$45 million (both in 1998) and \$3.3 million (in 2001).⁸⁶ The “combined effective interest rate” on these loans was 15.6%.⁸⁷ For the two smaller loans, the interest rate was floating with a fixed-margin above LIBOR. For the \$45 million loan, there was a fixed interest rate of 7.96% plus an additional interest amount calculated on the basis of Mozal’s aluminium production and price.⁸⁸ In total virtually all of the \$52.8 million of loans has now been repaid, and in addition, \$88 million has been repaid in interest (see Table 7 below).

Principal and interest payments to CDC have varied each year, but in total they have averaged \$10 million a year between 1999 and 2012, and have effectively now ended. Interest payments by themselves have averaged \$6.3 million a year.

Table 7. CDC loans and repayment

Loan	Amount	Principal repaid	Interest paid	Additional interest paid
1st 1998	\$4.5 million	\$4.5 million	\$2.4 million	
2nd 1998	\$45 million	\$45 million	\$38.8 million	\$45.6 million
3rd 2001	\$3.3 million	\$2.7 million	\$1.3 million	

If all the other loans to Mozal averaged the same level of interest and payments, average interest and principal payments would have been \$200 million a year,⁸⁹ with virtually all the debt now being paid off. Of this, around \$125 million would be interest and \$75 million principal payments.⁹⁰ For our estimates in Graphs 1 and 2, we assume that other development finance institutions, such as the World Bank's IFC, have received interest at the same rate. Indeed, whilst the IFC has not released its figures, in documentation it states that it has a \$110 million quasi-equity position and loan and a \$25 million loan. 'Quasi-equity' is a similar description to that used about CDC's \$45 million on which additional interest was paid in relation to aluminium production and price.⁹¹

However, interest rates on some of the private loans have probably not been as high, at least where they have been guaranteed by government export credit agencies. Documents from UK Export Finance suggest that of \$80 million of loans it was guaranteeing to Mozfund for Mozal II managed by Deutschebank, \$110 million would be repaid in principal and interest.⁹² If this rate applied across all the loans, across the life of repayment, for every \$75 million of principal payments, there would be \$25 million of interest.

Whilst we do not know the exact amount, average annual payments of principal and interest on all loans to Mozal are likely to have been well over \$100 million a year, but less than \$200 million.

C.4. Local taxes

Mozal was given extremely generous tax exemptions. The smelter pays no tax on profit, or any sales, customs or circulation taxes. The only tax paid is a 1 per cent tax on gross revenue from aluminium sales.⁹³ In contrast, the standard Mozambique tax on income and profits is 32 per cent. With an average revenue of \$1.2 billion, on average the 1% tax would raise \$12 million in tax a year. This amount may be an overestimate. Other tax breaks include the cost of staff training being able to be offset against the 1 per cent tax.⁹⁴

Mozal was also given a liberal foreign exchange regime. All profit and loan repayments can be repatriated, and Mozal can hold foreign exchange offshore, rather than in Mozambique.⁹⁵

The 1998 impact assessment for Mozal says that these tax and foreign exchange incentives were "needed to produce reasonable returns for the proposed smelter".⁹⁶ When marketing the smelter for loans, Mozfund described the tax and investment provisions as "advantageous".⁹⁷

C.5. Charity

The Mozal Community Development Trust was setup to fund projects such as health and education in the surrounding area. In an undated document BHP Billiton says \$10 million has been spent on development projects such as secondary schools over the lifetime of the project.⁹⁸ In 2006 Mitsubishi said \$13 million had been spent on development projects by the Mozal Community Development Trust.⁹⁹ This would work out as \$2 million a year. The IFC says "with an expected annual spending of the order of US\$2 million on social and community initiatives, the Mozal Trust will work to ensure the sustainability of the project's impact on the local people".¹⁰⁰

C.6. Local suppliers

BHP Billiton say \$180 million is spent in the local economy as a result of the smelter.¹⁰¹ Taking away \$36 million spent on tax, profit to the government, local salaries and charity, leaves \$144 million to be spent on local suppliers. However, this figure seems very high. The 2003 report for Mozal said spending on local suppliers was more than 50% more than spending on tax and local wages¹⁰² (which average \$28 million), which would make spending on local suppliers more than \$42 million. This makes total spending in the local economy around \$70 million, still well short of the \$180 million stated by BHP Billiton.

The difference could be caused by BHP Billiton including the cost of electricity within the amount spent in the local economy. Above we have estimated that Mozal's electricity bill is around \$120 million. Adding this to the \$70 million figure makes \$190 million, similar to BHP Billiton's \$180 million figure.

C.7. Final estimate

On page 8 we produce an estimate of where the revenue from Mozal has been going. These figures are all backward looking. In the future, as well as variations in aluminium price and input costs, the debt interest and principal payments are likely to be much lower, if anything at all. This could lead to higher profits.

In 2001, Mozfund said Mozal's operating cash cost was \$916 per ton of aluminium produced;¹⁰³ \$500 million. This covers all imports, salaries, electricity and local suppliers, but not the debt and interest payments. The total of the figures above are higher than this (\$600 million) but this could reflect inflation, particularly input prices and the increase in electricity costs in 2006.

In 2001, Mozfund said these costs were well below the average world wide cost for producing aluminium – \$1,223 per ton – because "of the competitive costs of the electric power and alumina and the high productivity of the Aluminium Pechiney technology."¹⁰⁴

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Whose development is it?

Investigating the Mozal aluminium smelter in Mozambique

Since 1999 foreign governments have given significant financial and political support to the building of the Mozal aluminium smelter in Mozambique, billing it as a shining example of sustainable development that will boost the economy and reduce poverty. In return they and the private investors have seen large returns in profit and interest, but what of the Mozambique government? This report investigates who is really profiting from the Mozal millions.



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