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# BANKING ON COAL

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Published by urgewald, BankTrack, CEE Bankwatch Network and Polska Zielona Sieć

In cooperation with:  
Rainforest Action Network  
World Development Movement  
PowerShift

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Design: Neue Reklame

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We would like to thank the following foundations for their support:

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# BANKING ON COAL

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**BANKTRACK**







# I. Introduction

News on the climate front is invariably bad. Even the current “modest” temperature rise of 0.8°Celsius (C) is translating into a rapid meltdown of the Arctic, rising sea levels, more super-storms, floods and extreme heat waves. But what is even worse is that in retrospect these will seem like the “good old times,” as we are currently doing our best to overshoot the threshold of 2°C and trigger really catastrophic climate change.

The single greatest source of the carbon dioxide (CO<sub>2</sub>) emissions heating up our planet is coal. Yet perversely, it seems the more we hear, talk and negotiate about climate change, the more we mine and burn coal. Global coal production grew over 69% between 2000 and 2012, and has now reached the record level of 7.9 billion metric tons<sup>1</sup> annually. Never before has so much coal been mined and burnt on the planet as today.

This study takes a look at the “hot spots” of global coal production and identifies the most aggressive companies that are driving the expansion of the sector. More importantly, this study asks the question: Who is bankrolling these operations?

Until recently, little was known about banks’ responsibility for the climate crisis. While most large commercial banks provide annual figures of their investments into renewable energy, they neither track nor publish their investments in the coal industry. This report presents new research on the portfolios of over 100 banks and their responsibility for the suicidal growth rates of the coal sector. It provides a Who’s Who list of the financial institutions undermining the Earth’s climate system and our common future.

<sup>1</sup> In this study, “tons” is always used to mean metric tons.



# On the Highway to Hell

In 2010, almost 200 nations came to the agreement that global warming must be limited to 2°C in order to avoid worse case scenario increases in droughts, famines, extreme weather events, storms, floods and sea level rise. 80 of the Least Developed Countries and the Island Nations, however, called for a threshold of 1.5°C, warning that even a rise of 2°C poses a serious threat to their development and in some cases to their very survival.<sup>2</sup>

On May 9th 2013, the Mauna Loa Observatory - the world's leading atmospheric research facility - reported that the global concentration of carbon dioxide (CO<sub>2</sub>) in the atmosphere has now reached 400 parts per million (ppm), an increase of about 24% since the Observatory began its measurements in 1958.<sup>3</sup> The number 400 ppm is scary as it means we are likely to overshoot an atmospheric CO<sub>2</sub> concentration of 450 ppm, the level at which the UN Panel on Climate Change expects a global average temperature rise of 2°C.<sup>4</sup>

As if this wasn't bad enough, recent reports tell us that we are, in fact, heading towards a global temperature rise of more than double the 2°C limit, unless urgent measures are taken. "The path we are currently on is more likely to result in a temperature increase between 3.6° and 5.3°C," says Maria van der Hoeven, Chief of the International Energy Agency (IEA).<sup>5</sup> In its report "Turn Down the Heat", the World Bank warns that if current emission trends continue, we could be living in a 4°C World as early as the 2060s. Some of the predicted impacts are a 50% drop in water availability in many regions, sea-level rises of 100 cm, large-scale displacement of populations, an increase in epidemic diseases, drought and extreme heat waves "expected to potentially exceed the adaptive capacities of many societies and natural systems." In short, a world the report calls "unmanageable." The report also estimates that this would by no means be the endpoint and states "a further warming to levels over 6°C would likely occur over the following centuries."<sup>6</sup>

## I. Introduction

# The More We Talk, The More We Mine and Burn

The major culprit in the unfolding climate drama is coal. The energy sector accounts for around two thirds of global greenhouse gas emissions. And 41% of the world's electricity is generated by burning coal.<sup>7</sup> Each ton of coal burned produces around 2.4 tons of CO<sub>2</sub> and each molecule of CO<sub>2</sub> stays in the atmosphere for hundreds and sometimes even thousands of years.<sup>8</sup> We are effectively using up the "carbon budget" of many generations to come.

To a naive observer (say from another planet), it would seem that the more we talk about climate change, the more we mine and burn coal. Since the year 2000, global coal production has grown by over 69% and now amounts to a staggering 7.9 billion tons annually.<sup>9</sup> Since 2005 - the year the Kyoto Protocol came into force - the installed capacity of coal-fired power plants increased worldwide by 35%.<sup>10</sup> Coal has been the fastest growing energy source for every year of the last decade.

And if unchecked, the coal industry will continue to turn the heat up. According to the World Coal Association (WCA), 1,199 new coal-fired power plants are on the drawing board and global coal demand is expected to increase by 50% by 2035.<sup>11</sup> Major new coal mine developments are underway in many places throughout the world and global coal reserves are still growing, due to the industry's aggressive exploration activities.

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The frightening fact of the matter is that we have very little time left to change course. In its new report "Redrawing the Energy-Climate Map," the International Energy Agency (IEA) estimates that "we have already locked in 80% of the emissions that allow us to stay on a 2 degrees C trajectory." In numerous interviews, the IEA's Chief Economist, Fatih Birol, warns that "we need to change our way of consuming energy within the next three or four years" because otherwise "in 2017, all of the emissions that allow us to stay under 2°C will be locked in."<sup>12</sup>

As public policy responses to climate change are woefully slow, and even optimists expect that an international climate agreement will not come into force before 2020, the development of the coal sector over the next crucial years will - to a large degree - be determined by the financial decisions of investors and banks.

2 "Press Release: Small Islands and Least Developed Countries Join Forces on Climate Change," 2009  
3 "Carbon Dioxide at Mauna Loa Observatory reaches new milestone," Scripps News, May 10, 2013  
4 "Climate Change 2007 - Synthesis Report," IPCC, 2007  
5 "Global Warming to be double the 2 degree target: IEA," AFP, June 10, 2013  
6 "Turn Down the Heat - Why a 4°C World Must be Avoided," World Bank 2012

7 "Redrawing the Energy-Climate Map," International Energy Agency, 2013  
8 "Nasa Scientists on 400 ppm CO<sub>2</sub>," Countercurrents.org, May 22, 2013  
9 The World Coal Association (WCA) provides an estimate of 7.831 billion tons global production for 2012. Its estimate for China is, however, 111 million tons lower than the data provided by the China National Coal Association. Data for Australia also seems too low by 39 million tons, based on the statistics of the Australian Bureau of Resources and Agricultural Economics. When taking these figures into account, the corrected total is 7.981 billion tons.  
10 "International Energy Statistics Database," U.S. Energy Information Administration  
11 "The Public Image of Coal: inconvenient facts and political correctness," Milton Catelin, World Coal Association, 2013  
12 "Fatih Birol: Our Global Energy Future," Forbes, August 3, 2013

# The Power of the Finance Sector

New coal investments require huge amounts of capital. The construction of a 600 megawatt coal-fired power plant can cost up to US \$2 billion. Cost estimates for developing new mines vary from location to location, but can also be substantial.

The costs for developing the Alpha coal mine in Australia's Galilee Basin are, for example, estimated at US \$4 billion, while the construction costs for the associated rail and port infrastructure to transport the coal are expected to top US \$6 billion.<sup>13</sup>

Banks play a key role in enabling these developments by providing loans or underwriting bond and share issues to mobilize financial resources for the coal sector. Even the largest mining companies or utilities typically rely on banks to provide or mobilize the lion's share of capital for their investments. By the same token, banks, of course, also play a key role in mobilizing financial resources for the renewable sector. Through their allocation of financial resources, banks are therefore in a unique position to either help or hurt our climate.

In contrast to many big players in the coal industry (who are still in a state of climate change denial), banks do generally recognize that climate change is happening. In fact, when surfing the webpages of the world's largest commercial banks, one finds an abundance of green statements about "combatting climate change."

When a bank, however, says, it is committed to "reducing its carbon footprint," it is not talking about its portfolio, but about "operational emissions" resulting from lighting, heating and air-conditioning its offices or from the car and air travel of its employees. With few exceptions, these are the only emissions that banks report on and take responsibility for.

A 2013 study by the World Development Movement on the Royal Bank of Scotland (RBS) puts this into perspective. For 2012, RBS reported operational emissions of 735,000 tons of CO<sub>2</sub> equivalent. The World Development Movement study analyzed the fossil fuel deals in the bank's lending portfolio and concluded that the bank's true carbon footprint is up to 1,200 times as high. RBS' financed emissions were in fact possibly 1.6 times as high as the entire CO<sub>2</sub> emissions of the United Kingdom in 2012.<sup>14</sup>

While most large commercial banks provide figures on their annual investments into renewable energy, they neither track nor publish their support for dirty fossil fuel investments. When it comes to their climate responsibility, banks are still in a state of denial.

## I. Introduction

Banks are in a unique position to either help or hurt our climate.

The IEA warns that if we want to meet the 2° limit, 80% of coal reserves must stay in the ground.

# Unburnable Carbon

Through new exploration - especially in Australia, India and Indonesia - hard coal reserves grew by 26 billion tons (3.6%) in 2011. According to Germany's Federal Institute for Geosciences and Natural Resources, global coal reserves have reached a total of 1,038 billion tons.<sup>15</sup> This is equivalent to 132 years of the world's coal output in 2012 and enough to fry our climate several times over.

The IEA warns that if we want to have even a 50% chance of meeting the 2 degree limit, 80% of these coal reserves must stay in the ground.<sup>16</sup> Unsurprisingly, the coal industry refuses to heed such warnings and still invests billions of dollars each year to find and develop even more reserves. No one has addressed this disconnect as thoroughly as the Carbon Tracker Initiative, which coined the phrase "unburnable carbon" for the mountains of coal (and other fossil fuels) which will end up as "stranded assets" if and when governments get serious about reducing greenhouse gas emissions.

In its 2013 report "Unburnable Carbon," the Carbon Tracker Initiative and the London School of Economics' Grantham Research Institute argue that there is a growing "carbon bubble" as financial markets value companies' fossil fuel reserves as if they will all be burned. The report states: "Nowhere across the financial chain do players in the capital markets recognize, and much less quantify, the possibility that governments will do what they say they intend to do on emissions, or some fraction of it."<sup>17</sup> Even the Bank of England has recognized this as a potential systemic risk to the economy, with the London Stock Exchange being particularly at risk due to its huge listings of coal.<sup>18</sup>

Interestingly, analysts from some of the world's largest commercial banks such as Citibank, Deutsche Bank, HSBC and Goldman Sachs are also beginning to question the economic rationale for further bets on coal. A recent Citibank report, for example, states that half of the value ascribed to the thermal coal assets of huge mining companies like BHP Billiton and Rio Tinto could be lost if the world took decisive action on climate change by 2020.<sup>19</sup> Analysts from Goldman Sachs warn equity investors that "an ice-free summer at the North Pole" or a single extreme weather event could swing public opinion and force governments "to respond with drastically tighter environmental regulations that would further erode the long-term demand for coal."<sup>20</sup> The reports also mention other threats to coal investments such as clean air regulation, conflicts around water availability and increased competition by renewables and shale gas, to mention just a few. The reports all concur that investments in so-called "pure" coal companies are most at risk.

13 "Stranded - A Financial Analysis of GVK's proposed Alpha Coal Project in Australia's Galilee Basin," Institute for Energy Economics and Financial Analysis, 2013

14 "RBS's true carbon emissions 2012: An estimate of emissions resulting from energy loans made during that year, and the shortcomings of the existing reporting framework," World Development Movement, 2012

15 "Energiestudie 2012," Deutsche Rohstoffagentur, Bundesanstalt für Geowissenschaften und Rohstoffe

16 "Redrawing the Energy-Climate Map," International Energy Agency, 2013

17 "Unburnable Carbon 2013: Wasted capital and stranded assets," Carbon Tracker Initiative in collaboration with Grantham Research Institute on Climate Change and the Environment, 2013

18 "Carbon bubble will plunge the world into another financial crisis," The Guardian, April 19, 2013

19 "Unburnable Carbon - A Catalyst for Debate," Citi, April 2013

20 "The window for thermal coal investment is closing," Goldman Sachs, July 2013



# Deep into Coal

When it comes to business, banks, however, don't listen to their own research analysts. In its May 2013 research report, Deutsche Bank writes: "most thermal coal growth projects will struggle to earn a positive return for their owners." Only four months later, in September 2013, Deutsche Bank successfully placed a bid to underwrite a share offering for Coal India, the world's largest 'pure' coal company. Other participating banks are Goldman Sachs, Bank of America, Credit Suisse and three Indian investment banks. Together, these banks aim to raise 1 billion euros for Coal India and help the company turn some of the country's most valuable forests and few remaining tiger habitats into open-cast coal mines.<sup>21</sup> Among the banks, which also (albeit unsuccessfully) bid on the Coal India deal were Citibank and HSBC - banks, whose research departments have been especially outspoken about the risks of investing in coal.

If we have learned anything from the sub-prime mortgage crash that triggered the current global recession, it is that banks are not good learners. Even if some bank analysts are starting to read the writing on the wall regarding sub-prime carbon, this isn't stopping decision-makers in the banks' business departments and board-rooms from jumping on to the next coal deal.

Banks don't just lend money to the coal industry – in some cases they are the coal industry. A case in point is Goldman Sachs. Through its subsidiary, Colombian Natural Resources, the U.S. investment bank owns two coal mines and a coal port in Colombia. The La Francia and El Hatillo coal mines jointly produced over 5.5 million tons of coal in 2012 and are highly controversial because of their extreme water and air pollution impacts. The inhabitants of El Hatillo have appealed to the UN Special Representative for the Right to Food as the mine has completely destroyed their livelihoods.<sup>22</sup> No wonder, this year's "Public Eye Award" for the world's worst corporate offender went to Goldman Sachs.

Several of the biggest banks are also involved in trading coal, both physically and on paper through derivatives. This includes proprietary trading (from the bank's own capital), as well as trading on behalf of clients. Banks involved in trading coal include Morgan Stanley, Goldman Sachs, Credit Suisse, Deutsche Bank, Société Générale, Barclays, Standard Chartered, Macquarie Group and Bank of America (via Merrill Lynch Commodities).<sup>23</sup> In practice, this means that Merrill Lynch Commodities transports coal around the world on vessels chartered by its own in-house shipping brokerage, while Standard Chartered sells coal it bought in Indonesia via an off-take loan agreement<sup>24</sup> and Deutsche Bank agrees to buy a fixed amount of coal from Latin American suppliers each month in order to help mining companies realize their growth plans.<sup>25</sup>

It's bizarre to see how the very same banks that are wheelers and dealers in the coal trade pride themselves on their climate commitments. Deutsche Bank offers a typical example of this schizophrenia: It calls itself a "climate ambassador"<sup>26</sup> on its webpage, but is also proud to have been designated "Coal House of the Year" in 2013.

## I. Introduction

Banks don't just lend money to the coal industry – in some cases they are the coal industry.

21 "Goldman and Deutsche Bank back Coal India despite their environmental standards," The Guardian, sustainable business, October 1, 2013

22 Open letter from FIAN International to Colombian president Juan Manuel Santos and to Olivier de Schutter, UN Special Rapporteur for the Right to Food, February 13, 2013

23 "Fact box: The world's top coal trading companies," Reuters, May 19, 2009 and "JP Morgan Looks to trade Physical Iron Ore and Coal," Money news, June 15, 2012

24 "Commodity Derivatives House of the Year – Standard Chartered," Risknet, October 18, 2012

25 "Leading the Pack: Deutsche Bank wins a hat-trick of prizes at the Energy Risk Awards," Energy Risk, June 2013

26 <https://www.db.com/cr/en/concrete-energy-and-climate-strategy.htm>







## II. Our Research

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This study is a sequel to the 2011 “Bankrolling Climate Change” report, which presented the first international climate ranking of commercial banks, based on their financing of the coal industry between 2005 and 2010.

The analysis for “Bankrolling Climate Change” covered 71 companies and included both major coal producers as well as operators of coal-fired power plants. This time around, we wanted to “dig deeper” and therefore decided to focus only on the coal mining industry. Our goal is to better understand which financial institutions are responsible for bankrolling the enormous production increases of the world’s dirtiest fossil fuel.

To this end, we selected 70 companies which are active in the coal mining sector and collectively represent 52% of global coal production. In order to reflect the dynamics of the sector, we based our choices not only on companies’ recent production numbers, but also on a geographical spread and an assessment of new mine developments in the pipeline.

We researched the financial relationships between these companies and some 100 banks between 2011 and August 2013. As 36 of the 70 companies were already covered in our previous study, we went back and reworked our data from 2005 to 2010 to determine which portion of bank finance was actually invested in coal mining. The combination of the data sets from both studies allows us to trace how banks’ financial contributions to the coal mining sector have evolved since 2005, and to identify the world’s top “coal mining banks.” A full account of the applied methodology can be found in the appendix of this report.



# General Findings

When reading this section, it is important to bear in mind that our study covers only a portion of the coal mining industry (36 companies from 2005 – 2010 and 70 companies from 2011 – mid-2013) and not the entire sector. A second caveat is that our study does not cover many of the huge infrastructure projects for coal transportation.

As the construction of new coal ports and railways are extremely capital-intensive, this is another area where banks play a crucial role in supporting the expansion of coal mining. This means that banks' contribution to the entire coal mining sector could easily be two times as high as the figures we present.

That being said, this study is the most comprehensive analysis to date on commercial banks' contributions to the coal mining sector. Our financial research shows that since 2005 – the year the Kyoto Protocol came into force – commercial banks have channeled almost 165 billion euros to the world's top coal mining companies.<sup>27</sup>

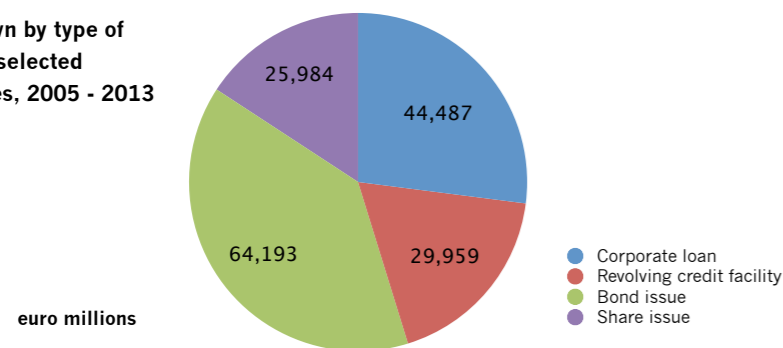
Out of this total, 74.4 billion euros were provided through direct lending (corporate loans or revolving credit facilities) and 90.2 billion euros were provided through investment banking.

Investment banking refers to the process by which banks raise investment capital for companies by issuing bonds or shares on their behalf. The usual procedure is that when a bank underwrites these transactions, it purchases the newly issued shares or bonds from the company and then resells these to other investors such as pension funds, insurance companies, mutual-fund managers, etc. at a profit. In some cases, the investment bank simply markets a new issue, but instead of underwriting it, receives a commission on the shares or bonds sold. In either case, the bank ultimately passes the financial risks of these investments on to the investors who buy said shares or bonds. This is the main difference to direct lending, where banks potentially risk their own capital if a company should fail.

Whether providing investment banking services or direct lending, banks are the key players mobilizing the huge amounts of capital that are fuelling the coal mining boom.

For most of the rankings in this study, we provide combined figures for loans (revolving credit facilities and corporate loans) and underwriting (issuances of bonds and shares).

Breakdown by type of Finance, selected companies, 2005 - 2013



<sup>27</sup> The exact figure is 164,623 billion euros. It covers financing for 36 top coal mining companies from 2005 – 2010 and 70 coal mining companies from 2011 – mid-2013.

## II. Our Research

Banks' contribution to the entire coal mining sector could easily be two times as high.

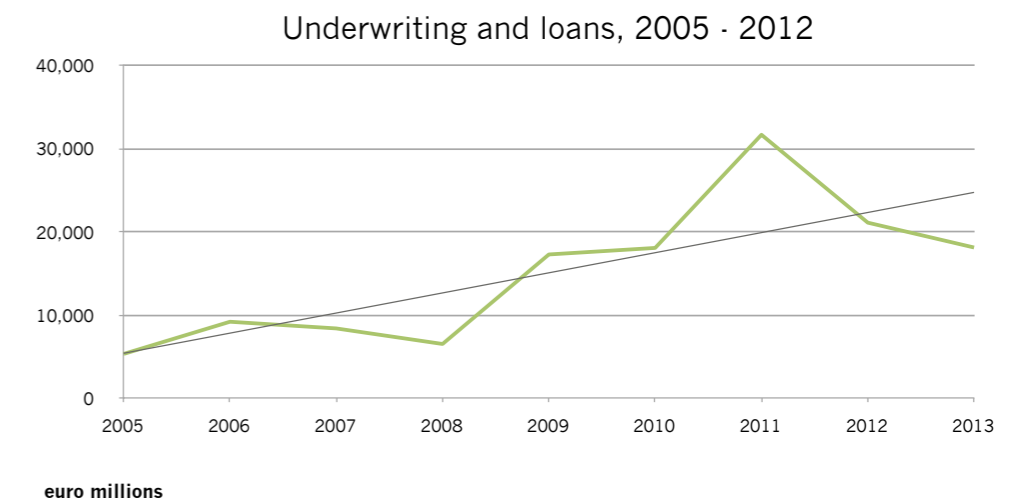
In 2012, banks' financial contributions to the coal mining industry were 397% higher than in 2005, the year the Kyoto Protocol came into force.

# Coal Finance: An Incredible Growth Curve

In order to understand how bank financing for the coal mining sector has developed over time, we mapped out banks' annual contributions to the 36 companies for which we have data going back to 2005.

The biggest "jumps" in this graph are from 2008 to 2009, where financing for the coal mining sector almost triples, and from 2010 to 2011, where financing again increases by 75%. There are probably a multitude of reasons for this, including an economic come-back after the 2008 recession, a peak in the coal price in mid-2008 and the alarming share of coal-fired generation in new electricity projects coming on line.

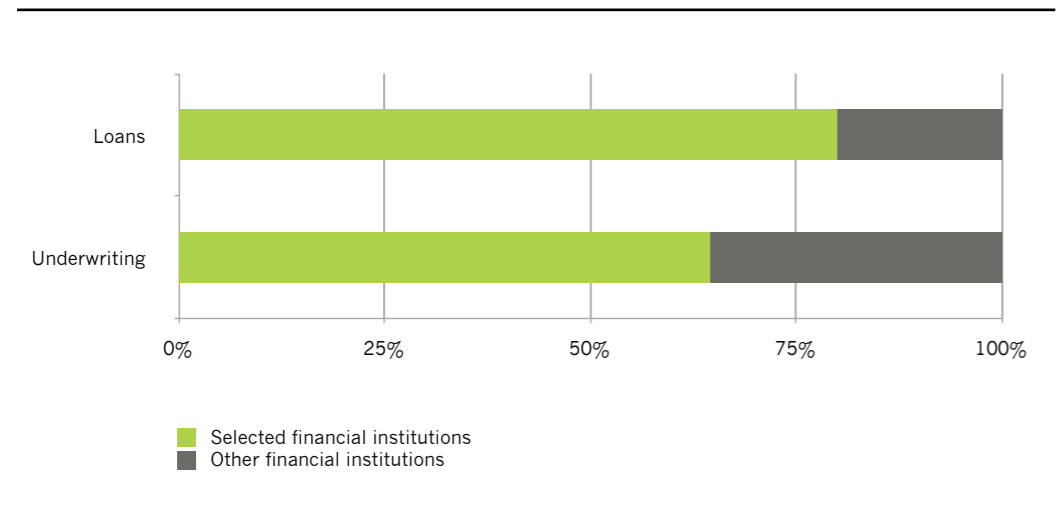
While the graph shows that financing for the sector is extremely variable from one year to the next, the overall trend is clearly one of enormous growth. In 2012, banks' financial contributions to the coal mining industry were 397% higher than in 2005, the year the Kyoto Protocol came into force. This is in stark contrast to the "climate speak" found in banks' corporate social responsibility (CSR) reports and on their webpages.





# The Scope of this Report

As our report does not cover all of the world's banks, but instead focuses on the portfolios of some 100 financial institutions, we were not able to attribute the full sum of 164.6 billion euros to the banks in our sample. The following chart shows that our research, nonetheless, captures a significant portion of coal mining finance provided to the companies in question, namely 80% of all reported loans and 64.5% of finance raised through investment banking.



The total sum of “coal finance” that we were able to attribute to the individual banks covered in this report equals 117.9 billion euros for the time period between 2005 and August 2013. Roughly half of this was provided through direct lending: corporate loans and revolving credit facilities amounting to 60.1 billion euros. A further 57.8 billion euros were provided through underwriting bond and share issues.

# The Top Twenty Coal Mining Banks

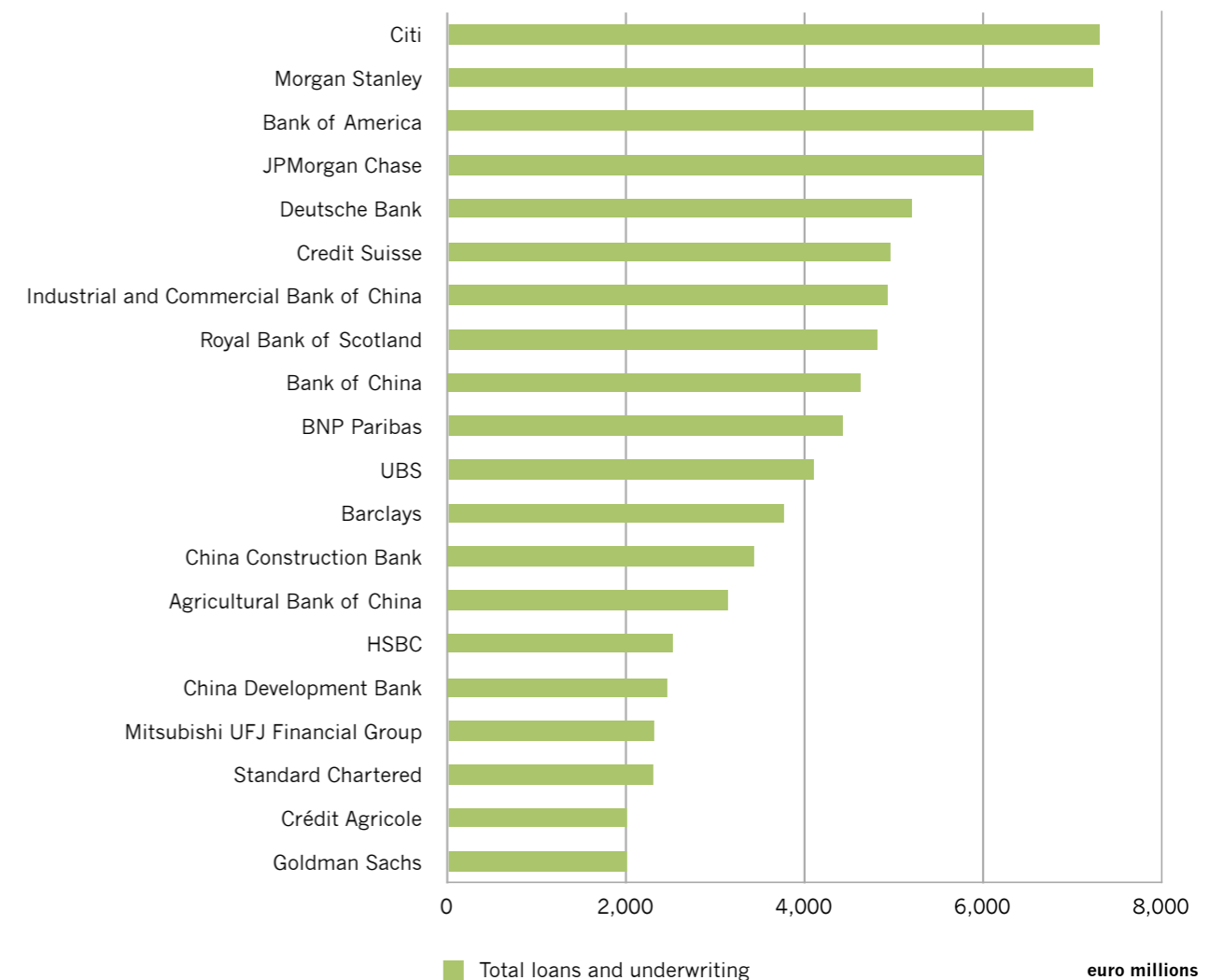
In total, we identified 1,032 transactions involving 89 of the banks covered in this research. Between 2005 and August 2013, these banks channeled almost 117.9 billion euros into the coffers of the coal mining industry, thus enabling the industry's dramatic expansion.

The following chart shows the top 20 commercial banks that have bankrolled the coal mining boom since 2005. At the top of the list are four U.S. banks, followed by banks from Germany, the United Kingdom, France, Switzerland, China and Japan. Collectively, these 20 banks represent 71% of the coal financing identified in this study. A full ranking of all banks can be found in the appendix.

## II. Our Research

# The Top Twenty Coal Mining Banks

**Top 20 Coal Mining Banks 2005 – mid-2013**





## Banks' Climate Speak:<sup>28</sup>

Almost all of these banks have expressed their concern about global warming and have made far-reaching statements regarding their commitment to a “low-carbon economy.” They are obviously not putting their money where their mouth is.

**Citi:** “Most innovative investment bank for climate change and sustainability”

**Morgan Stanley:** “(...) make your life greener and help tackle climate change.”

**Bank of America:** “Financing a low carbon economy.”

**JP Morgan Chase:** “Climate change is an issue of growing importance to our clients and stakeholders around the world.”

**Deutsche Bank:** “Operating on a climate-neutral basis since 2013.”

**Credit Suisse:** “Credit Suisse cares for climate.”

**Industrial and Commercial Bank of China:** “Low Carbon Trendsetting Bank.”

**RBS:** “Delivering a low-carbon economy.”

**Bank of China:** “Promote the development of a low carbon economy.”

**BNP Paribas:** “Combatting climate change.”

**UBS:** “Climate change is one of the most significant challenges of our time.”

**Barclays:** “We measure and manage our environmental impacts, and believe banks can play a part in helping address climate change.”

**China Construction Bank:** “CCB’s strategic objective is to become a low carbon bank.”

**Agricultural Bank of China:** “Provide green finance for environmental protection.”

**HSBC:** “We learned a number of lessons from Hurricane Sandy. One of our data centres is prone to flooding, and we are now looking to move either it or our systems to a lower risk area.”

**Mitsubishi UFJ Financial Group:** “MUFG aims to help realize a sustainable society in which future generations can live with peace of mind.”

**Standard Chartered:** “A Force for Good.”

**Crédit Agricole:** “The fight against global warming is a major challenge for society and one of the axis of the corporate social responsibility practices of Crédit Agricole.”

**Goldman Sachs:** “Goldman Sachs is very concerned by the threat to our natural environment, to humans and to the economy presented by climate change.”

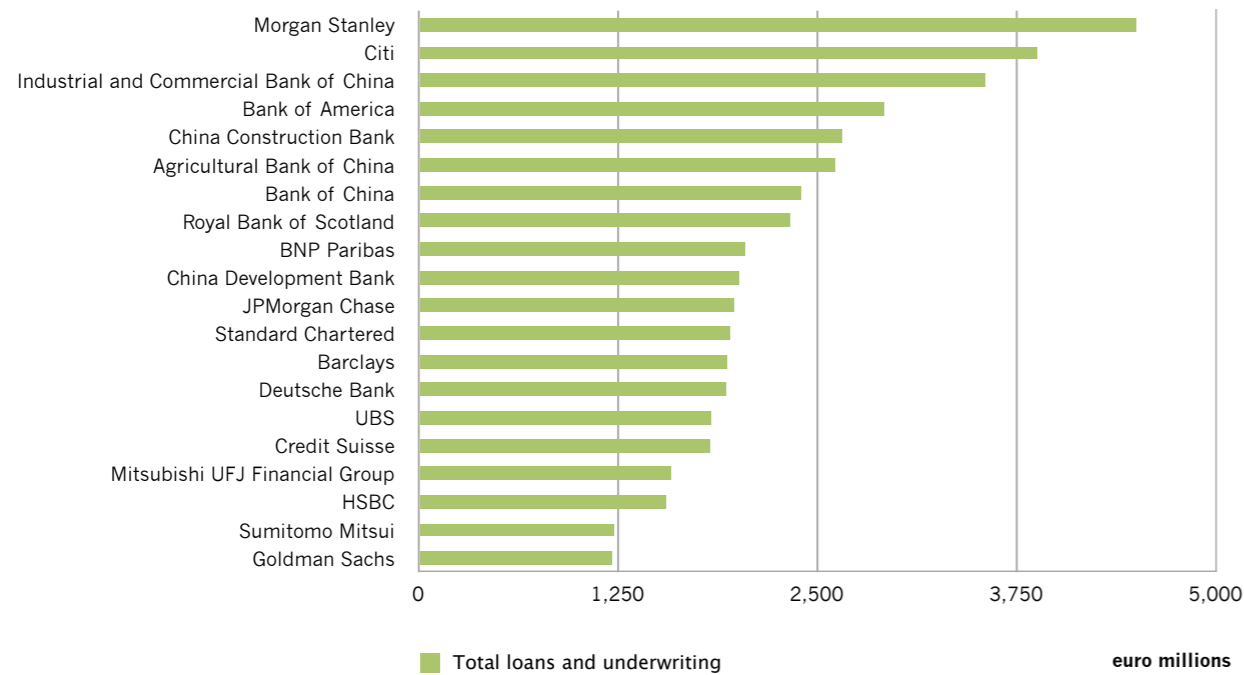


# Top 20 Coal Mining Banks 2011 – mid-2013

II. Our Research

In order to better reflect more recent developments in coal financing, we also prepared a second ranking based only on financing from 2011 onwards. This second ranking essentially shows the same players, with a notable shift, however, regarding the relative positions of Chinese banks on the list.

**Top 20 Coal Mining Banks 2011 – mid-2013**

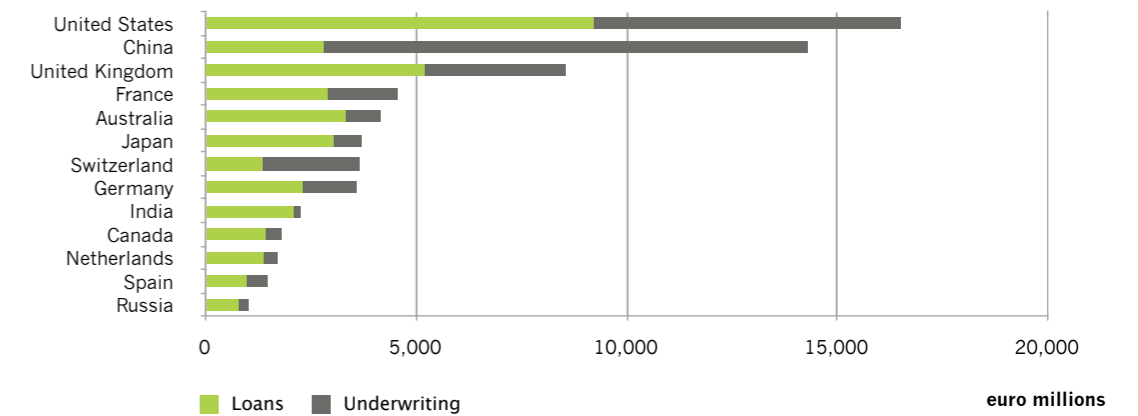


While the two U.S. banks Morgan Stanley and Citi still top the list, the Industrial and Commercial Bank of China is now number 3 in coal financing worldwide. The other four Chinese banks have also all risen in rank. In comparison to the overall ranking from 2005 onwards, one of the French banks (Crédit Agricole) has dropped off the top twenty list and been replaced by the Japanese bank Sumitomo Mitsui.

# Financing according to banks' country of origin 2011 – mid-2013

In order to better assess the relative roles of banks from different countries in financing the coal sector, we also compared national totals of bank financing from each country from 2011 onwards. The results are compiled in the following chart.

**Financing according to banks' country of origin\***



\*Only results over €1 billion are portrayed.

2 dozen banks from a handful of countries are undermining all efforts to preserve our climate.

Since 2011, US banks have provided 24%, Chinese banks 21% and UK banks 12% of the coal mining finance identified in our study. Banks from these three countries collectively provide 57% of financing for the world's top coal mining companies. While the Obama administration is rolling back the support of U.S. public money for coal financing abroad, the portfolios of U.S. private banks are spilling over with coal dust. And while climate change is an issue of major public concern in the UK, this obviously doesn't extend to the country's banking sector. A further notable result is Australia's position on this chart. Although no Australian bank is included in our top twenty rankings, collectively, banks from "down under" nevertheless account for 6% of global finance for the coal mining sector.

What the financial data presented in this chapter tells us is really quite simple: 2 dozen banks from a handful of countries are undermining all efforts to preserve our climate.





The farmer Wuzhu Yunle is praying for water. His crops are dying since Shenhua's coal-to-liquid project destroyed most water resources in the region.

### III. The Price of Coal

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Never before has so much coal been mined and burned on the planet as today. Between 2000 and 2012, hard coal production doubled from 3.6 to 7.2 billion tons and is still on the rise.<sup>29</sup> Even lignite, the dirtiest form of coal with the highest CO<sub>2</sub> emissions, continues to be ripped from the earth in huge open cast mines, displacing entire towns and villages in the process.

In the following chapter, we look at where this enormous increase in coal production is taking place and how its impacts are destroying much more than our climate.

At every stage of its life, coal does serious damage. Coal-fired power plants emit more than 60 different hazardous air pollutants, including toxics such as mercury, dioxin, arsenic, cadmium and lead.<sup>30</sup> The consequences for human health are staggering, especially with regard to particle pollution. A recent study, published in *Scientific American*, estimates that the burning of coal is responsible for 115,000 premature deaths annually in India.<sup>31</sup> According to a study co-published by China's National Academy of Sciences, coal pollution is shortening people's lives by 5.5 years in northern China.<sup>32</sup>

But before coal can be burned, it must be mined, washed and processed, putting an enormous strain on water supplies, especially in regions where water is scarce to begin with. Large open cast mines can cover an area of over 100 square kilometers – so large they can be seen from outer space. Massive excavations strip the land of forests and other vegetation, generate mountains of waste and cover surrounding communities with dust particles and debris. Underground mining leaves empty spaces behind, which can collapse and cause the land above to sink, resulting in structural damage to buildings, roads and other infrastructure. Coal mining scars local communities and their environment in untold ways.

29 Jahresbericht 2013, Verein der Kohlenimporteure (Annual Report of the Association of Coal Importers)

30 "Cradle to Grave: The Environmental Impacts from Coal," Clean Air Task Force, 2001

31 "Coal-Fired Power in India May Cause More Than 100,000 Premature Deaths Annually," *Scientific American*, March 11, 2013

32 "Data from China shows that large amounts of coal emissions shorten lives," MIT News Office, July 8, 2013



# Where is this Happening?

Although coal is mined in over 70 countries, most of the world's coal production takes place in nine regions or countries: China, India, Indonesia, Australia, Southern Africa, Russia/Kazakhstan, Central Europe (Germany, Poland and Czech Republic), Colombia and the United States. Collectively, these “hot spots” account for 92% of global coal production. These are the main regions where banks have financed the rapid expansion of an industry that puts an enormous toll on ecosystems and communities. The next chapter takes you on a journey to these hot spots and examines which financial institutions have been at the forefront of bankrolling coal mine developments in each region.

## Which Companies are Responsible?

The 70 companies featured in this study collectively account for 52% of global coal production. 48 of these companies are privately owned and 22 are state-owned. Five companies are diversified multinational mining corporations, such as BHP Billiton and Anglo American. About half of the companies in our sample are so-called “pure” coal miners, meaning they have no other significant business. Sixteen companies are utilities that both mine and burn coal, and three either use coal for steelmaking or convert it to chemicals or fuel. Thirty companies have production volumes of 50 million tons of coal and more annually. Our sample, however, also includes some companies - who have no coal production as of yet, but are aggressively pursuing the development of new mines. Our aim is to – at least partially – capture the cutting edge of planned expansions in the sector. A full list of the selected companies and their annual production levels can be found in the appendix.

Next to the multinationals, which usually operate on several continents, our study shows a growing trend towards transnational operations by coal mining companies from emerging economies. We find Chinese companies developing coal mines in Australia, Indian companies operating in Mozambique and a Thai company developing coal mines in Indonesia, to name just a few. In order to better capture the relative responsibility of companies operating in more than one hot spot, we used regional percentages, to calculate which portion of bank finance was likely to have been expended for operations in each region.<sup>33</sup>

## III. The Price of Coal

Collectively, these “hot spots” account for 92% of global coal production.



33 Wherever possible, regional percentages were calculated on the basis of a company's coal mining assets in a given hot spot. If companies did not list their assets by region, we based the regional percentages on the company's coal production numbers in the different hot spots.



# Coal Facts

Coal is a combustible sedimentary rock formed when organic material decays under pressure and heat. Its formation requires millions of years. Coal is also the world's dirtiest fossil fuel. When burned, it emits not only CO<sub>2</sub>, but mercury compounds, sulfur dioxide, nitrogen oxides and heavy metals like lead and arsenic. Coal currently accounts for 43% of global greenhouse gas emissions.



There are two basic types of coal:

### Lignite or Brown Coal

Because of its low energy density, it's usually not profitable to transport lignite over long distances. Most lignite is recovered through open cast mining and burned in power stations close by. From a climate perspective, lignite is the absolute worst fuel with the highest CO<sub>2</sub> emissions per unit of electricity generated.

### Hard Coal

Geologically, hard coal is much older than lignite and has a higher energy density. Depending on the location of the deposits, it is excavated through open cast or underground mining. Most of the coal traded internationally is hard coal.

# Industrial Uses of Coal

### Electricity Generation

Thermal or steam coal refers to the 80% of global coal production used for electricity generation.

### Steel Production

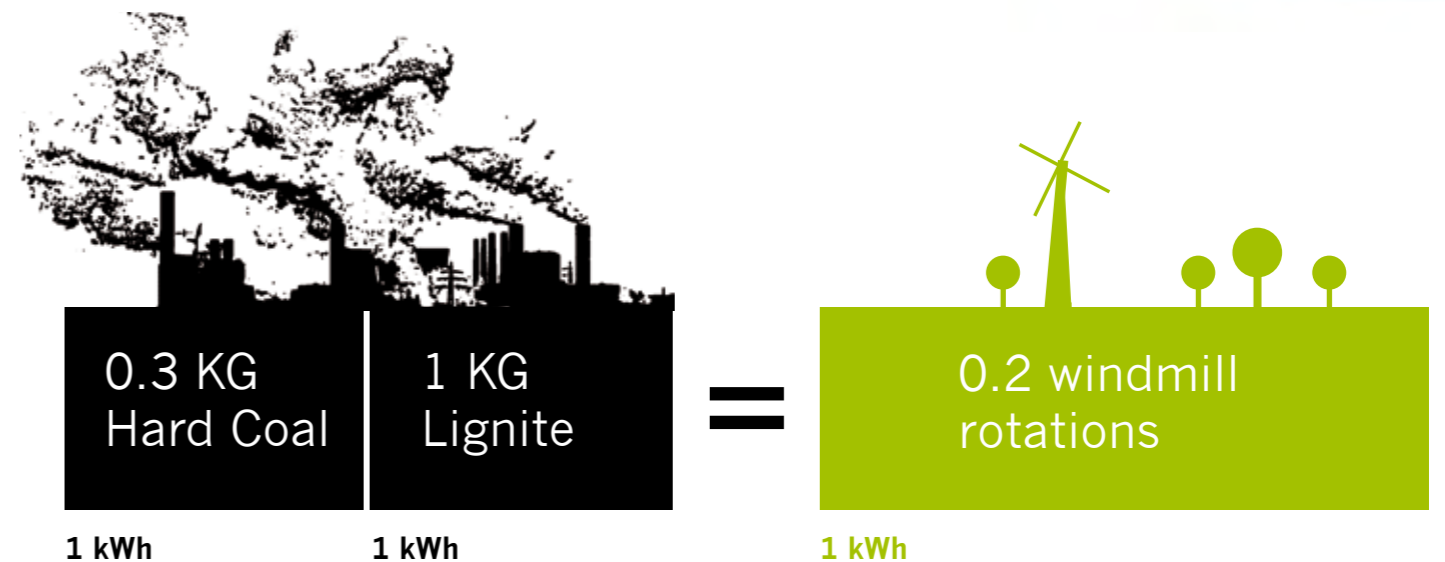
Metallurgical or coking coal has the highest energy density. 13% of the world's coal production is used to produce coke for the steel industry.

### Coal to Liquids and Coal to Chemicals

Liquefaction is a process whereby coal is converted to a gas and then liquefied to be used as transport fuel or as a replacement for oil in the chemicals industry. The process is, however, hugely inefficient and extremely dirty. Liquid coal produces almost double the global warming emissions as gasoline.

### Cement Manufacturing

Coal is also used as an energy source for the kilns of the cement industry, whereby some manufacturers have begun switching to residue-based fuels such as waste wood, used tires or sorted municipal waste.





# Different Dynamics at Work

When trying to understand the dynamics at work in the sector, it's important to bear in mind that the rise or fall of coal prices in the international market does not impact these companies in the same way.

When international coal prices drop below a certain level, the diversified multinational mining companies are likely to – at least temporarily – postpone new coal investments and instead focus on more profitable parts of their business. We see this happening with Glencore Xstrata or BHP Billiton, who have put some (but not all) new coal mine developments on the backburner. For utilities engaged in coal mining, the situation is very different: Their product is not coal, it's electricity and their main concern is securing the supply of coal to the power plants in which they have invested their capital. For them, low coal prices can, in fact, be an incentive to build new coal-fired power plants or to generate more power from existing coal plants. This is what we see happening in the United Kingdom and Germany, where big utilities are currently letting their modern gas-fired power stations stand idle, while running coal-fired power stations at full capacity. As the UK's shadow energy minister, Lady Worthington, points out: "Low coal prices and high gas prices have caused coal stations now to be operating at higher levels than ever before, and as a result, we have seen UK emissions going up and not down last year."<sup>34</sup>

The "old energy" paradigm is also a factor. Many utilities, be they state-owned or private, simply do coal because that's what they've always done. Expecting them to enthusiastically move into renewables is a bit like asking a carpenter to become an electrician. A case in point is the German private utility RWE. In spite of the fact that the German Government has been actively subsidizing renewable energy investments since 2000, the share of renewables in RWE's German operations is still only around 1% – a figure that is ridiculously low, when taking into account that renewables now account for over 22% of Germany's total electricity production. It's taken 13 years and a massive market loss for RWE to realize that it has to change its strategy.<sup>35</sup>

We should also not forget that the international coal trade only accounts for about 1/6 of the world's coal consumption. Most coal is used domestically and never enters the international market. And when coal producers –as is often the case – manage to acquire long-term supply contracts with buyers offering fixed prices, these producers are to some degree insulated from the volatility of coal prices on the international market.

## III. The Price of Coal

Many utilities simply do coal because that's what they've always done.

The international coal trade only accounts for about 1/6 of the world's coal consumption.

So what about the "pure" coal companies? Well, if they are producing for the international market (or for domestic markets with weak demand like the U.S.), they are probably in deep trouble as coal prices have reached a very low point.<sup>36</sup> Accordingly, shares of the largest U.S. coal miner, Peabody, and of many other coal companies have lost 50% and more of their value in the past two years. While some of these companies are having to cut back production, many are simply shifting production volumes to lower-cost mines. Many pure coal companies are, in fact, still acquiring or developing new reserves to position themselves for a recovery of the coal market. The U.S. company Arch Coal offers a typical example of this mindset. In its 2012 annual report, it asks the question: "What if global demand for coal grows more slowly this decade?" In an amazing show of confidence for a company, whose stock lost 75% of its value in the past two years, Arch Coal answers: "That's all right. We expect coal's growth rate to slow after climbing 50% in the last decade. But volume growth still will be dramatic."

While in the case of Arch Coal, we can, at least, optimistically hope that they go bankrupt, many of the companies in our study are state-owned and therefore not really subject to market forces. Instead, they are driven by the political agendas of governments who often see coal as a cheap and abundant national resource. "Crucial to our energy security" is the favored phrase. Then there is also what the OECD General Secretary, Angel Gurría, calls "carbon entanglement."<sup>37</sup> If a government (or at least individuals in government) receive royalties for every ton of coal exported – in Indonesia and elsewhere that's a strong incentive to approve the next coal mining license.

The fact of the matter is that in many countries, coal is a long entrenched and well-connected interest. If you are a thermal coal producer – say in South Africa – you can ignore rational economic facts like the cost-effectiveness of renewables and energy efficiency. The energy and mining ministers are probably friends of yours, and you can rely on them to pass new coal supply contracts your way. Or if you're operating in Russia, you can be fairly certain Putin will jump in and help out with the costs for those big infrastructure improvements you need to move your coal to market. "Vested interests" is the word and it's something we find a lot of in the coal industry. It's not the topic of this study, but coal is heavily subsidized in all kinds of ways by governments.

<sup>34</sup> "House of Lords votes to bring old coal power stations under new regulations," The Guardian, November 4, 2013

<sup>35</sup> "Under threat, Germany's Second-biggest Utility says it will create a new "Prosumer" Business Model," greentech media, October 23, 2013

<sup>36</sup> From their high of US \$133 per ton in 2011, coal prices have in the meantime fallen to around US \$77, a decrease of more than 40%.

<sup>37</sup> "The climate challenge: Achieving zero emissions," Lecture by OECD General Secretary Angel Gurría, October 9, 2013



# Peaks, Plateaus and Crossroads

We've read through volumes and volumes of analysts' reports - many of them from banks - trying to predict the future of coal. Though there are huge differences in their predictions, they also agree on many things:

- There are dramatic changes in the energy landscape, where coal increasingly has to compete with renewables, energy efficiency and natural gas.
- Improved environmental regulation regarding air or water quality is a big problem for coal.
- Investments in coal are uncertain and will run into real trouble if and when governments actually begin taking steps to limit climate change.
- Coal production is getting more expensive as the easily recoverable reserves have often already been picked off and the costs of steel, diesel and other inputs for mine development are rising.
- China is a big, big factor.

Here, the opinions, however, diverge. Some analysts are certain that "peak coal" will soon be reached in China. Others think China's consumption will continue to grow, albeit slower than in the past, and no one is really clear on what comes after the peak. Due to China's huge share in global coal consumption, even a long-term plateau is not a pleasant prospect for our climate....

Another reason to worry is the second tier of big coal consumers coming up, with countries like Vietnam, the Philippines, Thailand, Turkey, etc. all planning loads of new coal-fired power stations. And then there is, of course, India, with its suicide-by-climate-death coal generation plans.

## III. The Price of Coal

In the financial crisis, we saw how banks' "short-termism" wreaked havoc on the real economy.

Now, it's our climate that is being risked for sub-prime coal investments.

# How Much Coal will Stay in the Hole?

If we look into the crystal ball of the International Energy Agency (IEA) or to be more precise, into the IEA's last medium-term coal market report 2012, compared to today, the world will burn 1.2 billion tons more coal per year by 2017. Coal already contributes to over 40% of global greenhouse gas emissions, and the IEA expects this figure to grow to 50% over the next 25 years.<sup>38</sup>

As troubling as these projections are – they are not a given. Around the world, new coal developments, whether power plants or mines, are being effectively challenged by citizens' movements. As the renewable revolution makes its way, more and more policy-makers are seeing that we can indeed energize the world without interfering in the carbon cycle. New clean-air regulations and carbon taxes are squeezing in on coal in many places, and there are first signs of an important shift in China. As the impacts of climate change become more tangible, worldwide concern is growing and with it the pressure on governments to change course. The fight is on about how much coal will stay in the hole.

If we want to keep 80% of coal reserves in the ground – as the IEA says we must in order to avoid run-away climate change - banks must stop pretending that their investments have nothing to do with the climate crisis. In spite of all their green rhetoric, banks generally don't care whether they finance renewables or coal, and as a matter of fact, their financing for both sectors has increased rapidly over the past years. They are deals driven, and even the price of coal or the prospects for coal seem to have little influence on their business decisions. They see themselves as passive actors, and their only criteria is whether they can expect to get their money back (or sell on the risks to other investors).

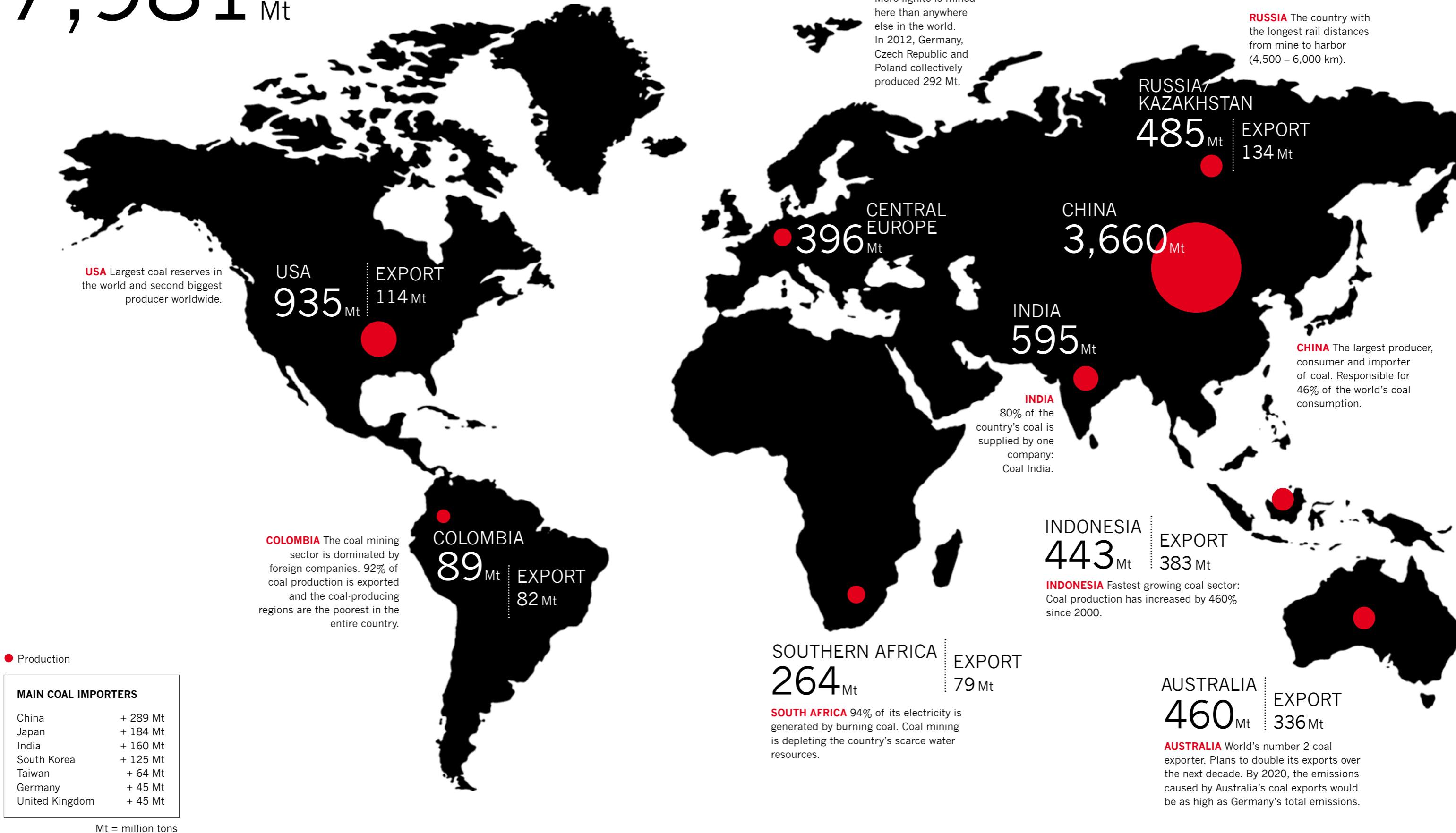
In the financial crisis, we saw how banks "short-termism" wreaked havoc on the real economy and millions of lives. Now, it's our climate that is being risked for sub-prime coal investments.



# Global Coal Production 2012

## IV. The "Hot Spots"

# 7,981 Mt





## IV. The “Hot Spots”

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### China A Dragon Fuelled by Coal

When it comes to coal, China is the dragon in the room. In 2012, China mined 3,660 million tons of coal, equal to 46% of the world's total coal production.<sup>39</sup> While China's net coal imports of 289 million tons seem small in comparison, they nonetheless make the People's Republic the largest coal importer worldwide. 81% of China's electricity is generated by burning coal, and the power sector accounts for half of the country's coal consumption. Other significant consumers are the steel, chemical and cement industries, in part reflecting China's status as a kind of “factory floor” for the world. Due to the massive increase of its coal consumption (300% since 2000), China surpassed the U.S. in 2007 and is now the world's largest carbon emitter.

#### Dirty Air

In October 2013, the city of Harbin in northeastern China essentially closed down as it was enveloped by choking smog, leading to closure of schools and a suspension of public buses.<sup>40</sup> Many citizens wore face masks to avoid inhaling what is known as PM 2.5 – tiny airborne particles measuring 2.5 microns or less in diameter that penetrate deeply into the lungs and are a leading cause of cancer and heart disease.<sup>41</sup> PM 2.5 is a major component of the fly ash and dust expelled from coal-fired power plants. In what was termed an “airpocalypse”, fine particle readings in Harbin reached 1,000 micrograms per cubic meter, 40 times higher than the level set by the World Health Organization (WHO). This kind of pollution has become commonplace in China's large industry centers. Under pressure from the public, Beijing in 2012 became the first Chinese city to publicly announce levels of fine particle pollution. Since then, 113 cities have followed suit.

Protests against rampant air pollution have begun to prompt government action. In his first public speech after taking office, the country's new Premier, Li Keqiang, said China's smog gave him a “heavy heart,” and in September 2013, China's cabinet announced a national action plan, including a ban on the construction of new coal-fired power plants in the regions surrounding Beijing, Shanghai and Guangzhou. Ambitious targets were also set for cutting coal consumption in the provinces of Shandong, Hebei and Beijing, which consume one third of all coal in China. The provinces have seen coal consumption grow at 6% a year, so the absolute reduction targets require a rapid and dramatic reversal of the coal consumption trend. More coastal provinces are expected to make announcements.<sup>42</sup>

In what was termed an “airpocalypse”, fine particle readings in Harbin reached 1,000 micrograms per cubic meter, 40 times higher than the level set by the World Health Organization (WHO).

Photo: Cheng Qiang/Imaginechina

39 “Is China Slowly Giving Up on Coal?,” Forbes, October 2, 2013

40 “China Smog Emergency Shuts Down City of Harbin,” International Business Times, October 21, 2013

41 <http://www.pnas.org/content/110/22/8756.full>

42 “China clean air plan to slow coal consumption,” Greenpeace East Asia, September 2013



## Moving West

In other parts of the country, the coal industry is, however, still expanding. Although China's current Five-Year Plan (2011 – 2015) states that the country's coal consumption should not exceed 3.9 billion tons, it also foresees the construction of 14 enormous coal mining bases in Inner Mongolia, Shanxi, Shaanxi, Ningxia, Yunnan and Xinjiang. The coal coming out of these 14 bases will then fuel coal-fired power stations with a total expected capacity exceeding 600,000 megawatts. What's more, it is not only coal extraction and coal-fired power generation that is projected to soar, but also the development of coal chemical industries. Coal liquefaction, however, puts a heavy toll on the environment. For every ton of oil produced, 3-4 tons of coal and 10 tons of water are required. And as a by-product, 9 tons of CO<sub>2</sub> and 4.8 tons of waste water are emitted.<sup>43</sup>

## Coal versus Water

A report published by the Chinese Ministry for Water Resources in March 2013 shows that since 1990 the country has lost roughly half of its rivers and streams. And according to China's National Bureau of Statistics, the country's total water resources have dropped by 13% since the start of this century. At the same time, coal production has tripled and the water needed for mining, processing, and consuming this coal now accounts for more than a sixth of the nation's water withdrawals. As the British bank HSBC writes in a report on the water-related challenges of China's coal industry: "This level of water use is not sustainable: water tables are declining, and in some areas, coal mining is already being constrained."<sup>44</sup>

Around 95% of China's coal mines are underground and require drainage of the water table. Water is also needed to cool mining equipment, reduce dust levels and to wash tunnels. A recent study estimated that 2.3 cubic meters of water are withdrawn for every ton of coal mined, both in direct mining operations and for pit drainage.<sup>45</sup> Most of the nation's new coal mines are, however, located in water-scarce regions.

Shanxi, which accounts for about 28% of China's coal production has per capita water resources of only 347 cubic meters, less than a middle Eastern country like Oman. Inner Mongolia and Shaanxi, which together contribute 40% of coal output, have less than 1,700 cubic meters per person, the level the United Nations deems as water-stressed.<sup>46</sup>

It is predicted that by the end of the current Five-Year-Plan, the annual water consumption of the coal bases in Inner Mongolia, Shaanxi, Shanxi and Ningxia will either challenge or exceed the entire area's current total industrial water supply capacity (94.1% to 140.8%). This means these coal bases, if fully developed, will consume a significant amount of water currently allocated to different uses such as farming, urban residential use or environment conservation. In turn, the fierce competition for water resources between industrial and non-industrial sectors will very likely cause conflict and unrest in the affected regions.<sup>47</sup>

43 "Coal-to-Chemicals: Shenhua's Water Grab," Calvin Quek, Greenpeace, August 7, 2013

44 "Chinese Coal and Power: The water-related challenges of China's coal and power industries," HSBC, June 2013

45 "A supply chain based assessment of water issues in the coal industry in China," Pan et al., Energy Policy 48, 2012

46 "China Coal-Fired Economy Dying of Thirst as Mines Lack Water," Bloomberg, July 24, 2013

47 "Thirsty Coal: A Water Crisis Exacerbated by China's New Mega Coal Power Bases," Greenpeace East Asia, 2012

## IV. The "Hot Spots"

Coal now  
accounts for  
more than  
1/6 of the  
nation's water  
withdrawals.

"All the trees  
have died, and  
the grasslands  
have turned into  
deserts."  
Farmer, affected  
by Shenhua's  
operations

## Shenhua's Water Grab

A case in point is Shenhua's coal to liquid project in the Ordos Basin in Inner Mongolia, a region that harbors 26% of China's coal reserves, but only has 1.6% of the country's water resources. In August 2004, Shenhua began construction of its coal-to-liquid project on the banks of the Ulan Moron River. Due to decades of coal mining operations, the river was already seriously depleted and several of its tributaries had completely dried up. To secure the water needed for its liquefaction project, Shenhua therefore began extracting water from Haolebaoji, a grasslands region 100 kilometers away in the heart of the Mu Us desert. The extraction of Haolebaoji's precious water resources, is, however, spelling doom for thousands of farmers and herders and their traditional lifestyle.<sup>48</sup>

When Greenpeace East Asia visited Haolebaoji in 2012, every artesian well in the region had run dry and groundwater had dropped by as much as 100 meters. Over 80,000 hectares of land are now affected by severe water scarcity, and even drinking water is hard to come by. A local says: "In the past, anything you planted would grow. But now, there is no water. All the trees have already died, and the grasslands have turned into deserts."<sup>49</sup>

Over the past years, villagers have sent countless appeals to the company and also petitioned the authorities in Beijing. They are demanding that Shenhua stop its water grab as "it is threatening our survival and the survival of our children's generation."

## China Goes Global

Although China meets 92% of its coal demand through its own mines, the 289 million tons it imported in 2012 make up almost a quarter of the world's international coal trade. China's appetite for coal is therefore a driving force for many expansion projects in other countries. Nowhere is this more evident than in Australia, where huge coal developments are being pushed ahead in the Galilee Basin with the aim of supplying the Chinese market. One has to almost appreciate the honesty of companies like Australia's Waratah Coal, which has christened its largest new mine development (1.1 billion tons of proven coal reserves): "China First."<sup>50</sup>

The means by which Chinese companies are securing future coal supplies abroad range from strategic partnerships, long-term supply contracts and off-take loan agreements to direct investments in coal infrastructure projects and joint mining ventures. Such arrangements are being made from Mongolia to South Africa. Increasingly, Chinese companies are, however, simply opening up their own coal mining subsidiaries in countries like Canada, Tanzania, Zambia or Australia.<sup>51</sup>

## At a Crossroads

While huge investments were made in the coal mining sector in China from 2009 – 2011, the country is now in the midst of a rebalancing effort as the heavy environmental and health costs of its coal dependence can no longer be ignored. As the renewables sector has also begun to boom, the country is clearly at a crossroads. Whatever route China takes will have immense effects for its own people and its own environment, for the environment in other countries, where coal mines supply the Chinese market, and last, but not least, for the Earth's climate. We're all watching what the dragon will do.

48 "Thirsty Coal 2: Shenhua's Water Grab," Greenpeace East Asia, 2013

49 <http://www.greenpeace.org/eastasia/specials/gpm03/hope-grasslands-become-green/>

50 <http://waratahcoal.com/china-first-coal-project>

51 [http://www.sourcewatch.org/index.php?title=International\\_Chinese\\_coal\\_projects](http://www.sourcewatch.org/index.php?title=International_Chinese_coal_projects)

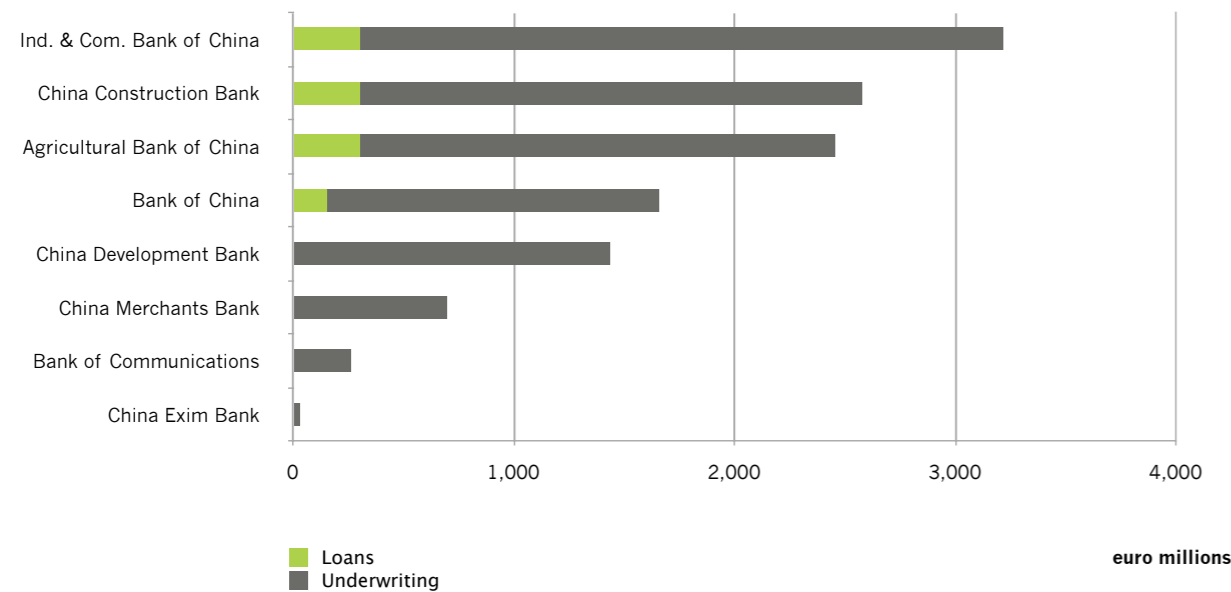


## Top Coal Mining Banks for China

The following chart shows the 8 biggest financiers of the Chinese coal mining sector since 2011. With over 3 billion euros, the Industrial and Commercial Bank of China is a clear number 1. What is also notable is that there was relatively little direct lending. Instead, banks raised most of the capital for mining companies by underwriting bond issues. In 2012, there was, however, one huge loan to Shenhua of over 3.15 billion euros, which was collectively provided by the top 4 banks in the chart. Foreign banks play only a very small role in the sector. Among these, Citi, Deutsche Bank and Barclays hold the top position through their participation in a bond issue for Vale's China operation.

## IV. The "Hot Spots"

Banking on Chinese Coal, 2011 - mid-2013



Indonesia is experiencing an unparalleled coal mining boom.

## Indonesia Forests to Coal

With over 17,000 islands, Indonesia is the world's largest archipelago and a major center of biological diversity, harboring between 10 and 15% of all known plant, mammal and bird species.<sup>52</sup> The incredible abundance of fauna and flora in its great rainforests on the islands of Borneo, Sumatra and New Guinea is unparalleled. Indonesia is, however, also experiencing an unparalleled coal mining boom. Since 2000, the country's coal production has risen by 460% - totaling 443 million tons in 2012. 86% of the country's coal is exported, mainly to the powerhouse economies of Asia. Indonesia is currently the world's largest coal exporter.<sup>53</sup>

The Indonesian coal industry is concentrated in two parts of the archipelago: Kalimantan (Indonesian Borneo) and Sumatra, both home to the endangered orangutan, whose population fell by 50% in the last decade.<sup>54</sup> Although Kalimantan accounts for about 70% of the country's coal production, Sumatra may have even larger coal reserves. A report by Greenpeace Southeast Asia estimates that 1.1 million hectares of rainforest are under immediate threat from coal mining concessions, of which 85% are located in Kalimantan.<sup>55</sup>

## Consumed by Coal

East and South Kalimantan are where the lion's share of the province's coal mining takes place. East Kalimantan alone produced 205 million tons of coal in 2011,<sup>56</sup> more than 13 times the amount of coal consumed by France that year.<sup>57</sup>

Nowhere are the impacts of coal mining more palpable than in Samarinda, the capital of East Kalimantan. Every few minutes, enormous barges, each carrying up to 8,000 tons of coal, pass down the river Mahakam taking coal to China, India, Japan and South Korea. The forests that used to surround Samarinda have been razed, and the city is now surrounded by opencast mines. While East Kalimantan's population bears the enormous social and environmental costs of the coal boom, it doesn't share in the benefits. Even in Samarinda, 39% of households have no electricity access. The city itself threatens to be consumed by coal as 70% of Samarinda's land area is designated for new mining concessions.<sup>58</sup>

Most coal mines in Kalimantan are open-pit and cover vast areas, leading to large-scale deforestation. The mining land grab is a major threat to peoples such as the indigenous Dayak, whose livelihoods and cultures are dependent on intact forests. Many Dayak have been forcibly displaced to make way for coal mining and they are now among the poorest communities in the country. According to the Dayak lawyer, Itan Kussaritano: "Although Indonesia's Constitution recognizes the rights of indigenous peoples to their lands, in practice, our rights are ignored. When we protest against companies like Adaro Energy, Bumi Resources and BHP Billiton, the government simply sends police to arrest us. We are neither able to protect the lands of our ancestors nor ourselves against the greed of the mining industry and the government's corruption."<sup>59</sup>

52 "Tropical Rainforest Heritage of Sumatra, Indonesia," The Encyclopedia of Earth, 2010

53 "Coal Statistics," World Coal Association, 2013

54 <http://www.orangutan.org/orangutan-facts/why-is-the-orangutan-in-danger-2>

55 "The high price of cheap coal - How Indonesians are paying the price for the world's dirtiest fuel," Greenpeace Southeast Asia. October 2010

56 "Escaping the resource curse: East Kalimantan at the tipping point," The Jakarta Post, January 17, 2013

57 France's coal consumption in 2012 was 16.8 million metric tons.

58 "Banking while Borneo burns," World Development Movement, 2013

59 Speech at shareholder meeting of Allianz, Itan Kussaritano, May, 2012





Central Kalimantan, Indonesia

Photo: World Development Movement



Most of East Kalimantan has, in fact, already been “sold off.” According to Kahar Al Bahri, coordinator of the Indonesian NGO Jatam, East Kalimantan only has 19.8 million hectares of land, but local governments have granted licenses to mining and plantation companies for an area of 21.7 million hectares.<sup>60</sup>

## Coal Rush in Central Kalimantan

The coal boom has now begun to move inland to the forests of Central Kalimantan and the Mueller mountains, where many of Borneo’s rivers have their source. One of the companies leading the rush is Borneo Lumbung. It recently received a US \$1 billion loan from the UK bank Standard Chartered - the biggest international loan deal for Indonesian coal in recent history.

Villagers affected by Borneo Lumbung’s Asmin Koalindo Tuhup project in Central Kalimantan have resorted to blocking access roads to the mine to protest against the environmental damages caused by its operations. Pollution from Borneo Lumbung’s mine has seeped into the local rivers and reports confirm illegal practices, such as the dumping of mine waste on riverbanks.<sup>61</sup> Yesmaida, from the village of Maruwei, describes the impacts:

“The water is dark and dirty and makes your skin itch. We can’t drink it. The new mine is not operating yet, but the company already has our land. We feel afraid and worried. We don’t want mining companies to come to our village anymore. We have had enough.”<sup>62</sup>

Borneo Lumbung is not the only mining operation confronting Yesmaida’s village. Maruwei is close to the site of the planned Haju Mine, the first part of the huge IndoMet Coal project. Although the village itself will not be displaced, the villagers have lost large areas of customary forest to the project. IndoMet has given the traditional owners payments of just 100 rupiah (€ 0.006) per square meter.

IndoMet is the largest planned coal project in Central Kalimantan and is owned by the mining multinational BHP Billiton (75%) and the Indonesian company Adaro Energy (25%). Its concession covers 355,000 hectares and overlaps with the “Heart of Borneo” conservation area, described by the Asian Development Bank as “the lungs of Southeast Asia.”<sup>63</sup> According to press reports, IndoMet will cost US \$1.34 billion and is expected to start commercial production in 2014.<sup>64</sup>

## A Changing Climate

Mature forests store enormous quantities of carbon, both in trees, vegetation and within the soil in the form of decaying plant matter. Indonesia’s forests represent some of the world’s largest carbon stores on land, but are quickly being converted to plantations and mines, thus releasing huge amounts of carbon into the atmosphere. Deforestation has, in fact, made Indonesia the world’s third largest emitter of greenhouse gases.

Ironically, the very people losing their lands to coal mines are the first victims of climate change. As Itan Kussaritano says: “We know about climate change. It is already changing the weather systems in Kalimantan. Farmers can no longer predict the timing or intensity of the monsoon rains. Floods can occur at any time of year.

60 “Coal exports risk biodiversity, say activists,” The Jakarta Post, February 5, 2013

61 “Coal Mining Study in Kalimantan,” Kussaritano, Mariaty Niun, Alma Adventa, 2013

62 “Banking while Borneo burns,” World Development Movement, 2013

63 “BHP Billiton to be slammed for Borneo coal mining,” London Mining Network, October 22, 2013

64 “BHP go-ahead for IndoMet mine,” The Australian, November 4, 2011

## IV. The “Hot Spots”

Standard Chartered made a US \$1 billion loan to Borneo Lumbung.

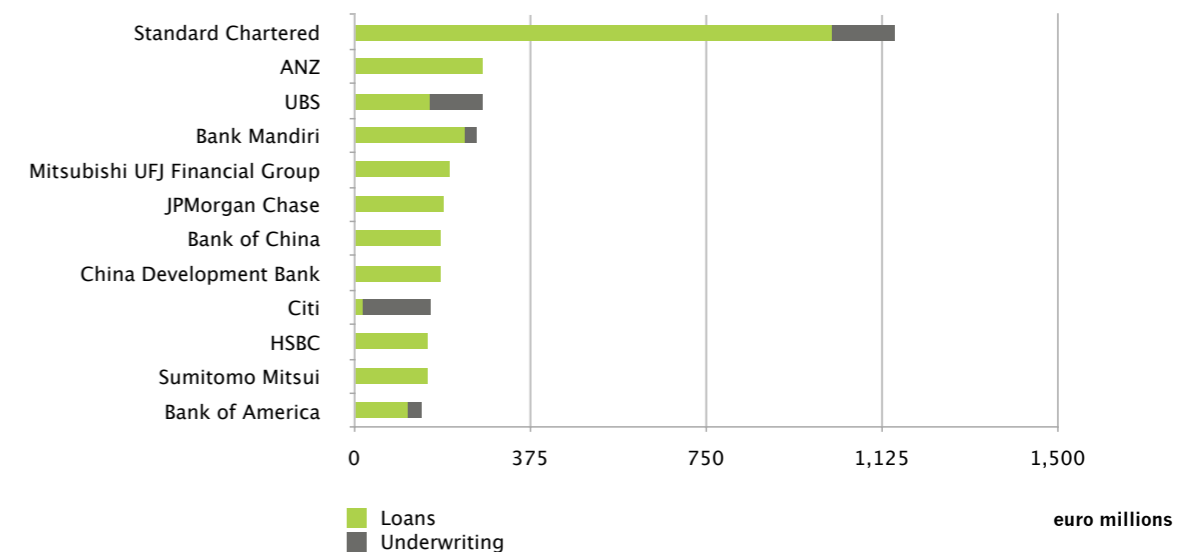
Fires and droughts now take place where there was always water in the streams and lush forests.”<sup>65</sup>

NGOs and peoples’ organizations from throughout Indonesia have joined in calling for a moratorium on coal mining. They say: “We are otherwise digging our own grave.”<sup>66</sup>

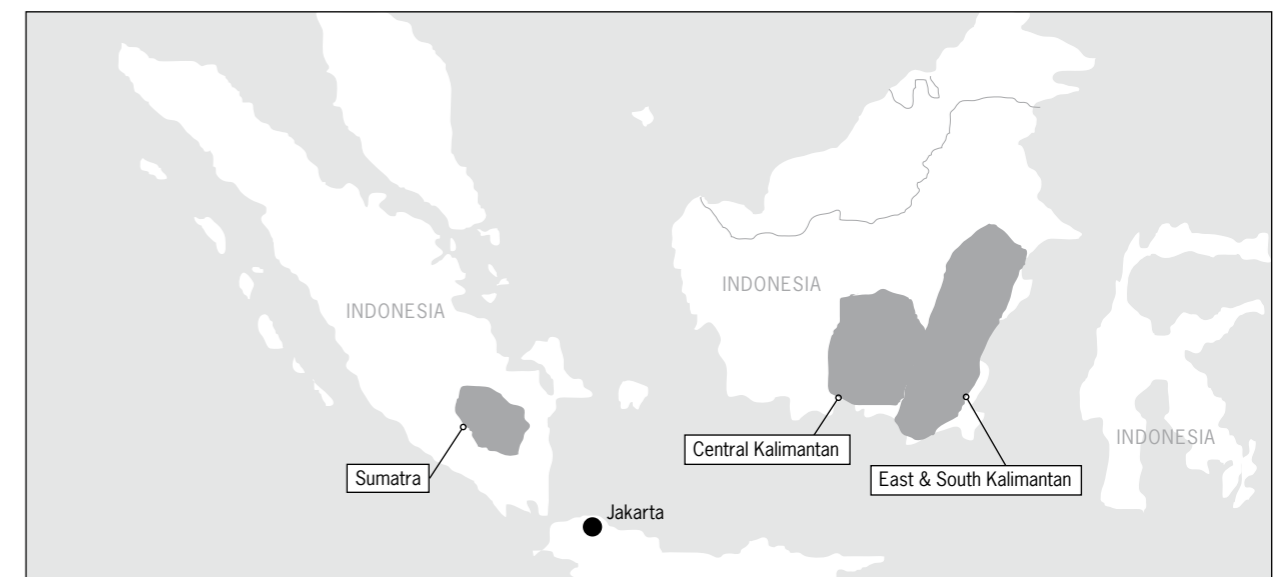
## Top Coal Mining Banks for Indonesia

The following chart shows the top 12 financial institutions, which have – over the past two and a half years - played the lead role in bankrolling the devastation of Indonesia’s forests for coal mining. With an exposure of 1.15 billion euros, Standard Chartered is by far the bank with the most involvement in the sector. 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> place are held by Australia’s ANZ, the Swiss bank UBS and Indonesia’s largest bank, Bank Mandiri.

Banking on Indonesian Coal, 2011 – mid-2013



Coal Deposits



65 Speech at shareholder meeting of Allianz, Itan Kussaritano, May, 2012

66 “The Point of No Return: How Indonesia’s coal mining expansion is accelerating climate change,” Redd Monitor, January 25, 2013



# Australia A tale of two industries

It's a jaw-dropping paradox. While desperately cutting costs, shedding jobs and shelving projects left, right and center, Australian coal mining is simultaneously embarking on an expansion effort that would cost tens of billions of dollars and double the annual rate of coal extracted in the country.

How can this occur? It's largely a tale of two coal industries. On the one hand, there are the long-established mining companies which are suffering the consequences of sustained low international coal prices. Major miners are turning away from new projects. Glencore Xstrata, for instance, announced in September 2013 that it was shelving its massive AU\$7 billion Wandoan coal mine, and BHP Billiton announced earlier that it had no plans to build new coal projects in Australia.

Then there are the "newcomers." Characterized by a lack of experience, a gung-ho attitude and balance sheets far short of what it would take to build their gargantuan projects, a host of new entrant companies have emerged, accounting for the bulk of Australia's expansion plans.

With analysts predicting bleak prospects for coal, and a growing community of Australians mobilizing to protect their health, environment, water, land and climate from the threats of new mining, it will take a brave investor to back the industry now. In fact, banks are already risking losses on Australian coal export projects that may become stranded.<sup>67</sup> Either the new entrants know something everyone else doesn't or have bitten off substantially more than they can chew. Either way, banks and other investors are exposing themselves to huge risks if they continue betting on this industry.

## Politics and Coal

"Get out of our way," Queensland Premier Campbell Newman advised new Prime Minister Tony Abbott when they met in September 2013 to discuss Queensland's plans to open up a new series of mega-coal mines.<sup>68</sup> Coming from a man who had previously clarified that "we [Queensland] are in the coal business," it left no doubt about the relationship between the coal industry and politics. Not that the Federal Government needs a lot of telling. Historically, the fossil fuel industry has always enjoyed a close and beneficial relationship with Australian State and Federal Governments. It had, at one point, even reached the level where senior lobbyists were allowed to write energy policy.<sup>69</sup>

Concerns have been raised from many sides regarding the standards applied to coal projects that are moving through the environmental approvals process. Former Federal Environment Minister, Tony Burke, rightly described the Queensland Government's Alpha coal mine environmental assessment as a "shambolic joke."<sup>70</sup> And new coal mining and infrastructure projects are being rushed through the approvals process even when vital environmental information is not supplied.

In the 2013 Federal Election, the relationship between coal and politics took a more overt turn, as billionaire businessman Clive Palmer won a seat in Australia's lower house, while 3 members of his Palmer United Party were elected to the Senate. Palmer is the owner of several mining companies including Waratah Coal, which is proposing the massive "China First" (aka Galilee Basin Coal) project. In view of the fact that Australia's new coalition Government may well need votes from Palmer's

## IV. The "Hot Spots"

A growing community of Australians are fighting to protect their environment, land and water from coal mining.

The proposed expansion of coal mining is nothing short of astronomical.

United Party to pass legislation in the Senate, it's hard to imagine that the very same government will withhold Environmental Approval when reviewing the impact statement for the China First mine.<sup>71</sup>

## Big Production, Big Expansion

Australia is one of the world's biggest producers of coal and the second largest exporter, right after Indonesia. Approximately 460 million tons of saleable coal is produced in Australia per year. In 2012, about 125 million tons were used for domestic power stations and in local steel production, while 336 million tons of coal were exported. Of Australia's coal exports, 55% is thermal coal and 45% is metallurgical coal.<sup>72</sup>

The country's largest coal-producing regions are the Hunter Valley in New South Wales and Bowen Basin in Queensland, both of which produce black coal, and Victoria's Latrobe Valley, which contains brown coal (or lignite). While there are a number of other smaller producing regions in every state, these main regions account for about 80% of the coal extracted in Australia.

With a coal mining industry heavily geared towards exports, it's no surprise that Australia's East Coast is dotted with coal export terminals. The largest is Newcastle, which exported 142.6 million tons of coal in 2012-2013 and has an annual capacity of about 210 million tons.<sup>73</sup> Several of the other major export terminals sit along the Queensland Coastline and inside the Great Barrier Reef World Heritage Area.

The proposed expansion of coal mining in Australia is nothing short of astronomical. The government expects coal exports to reach 455 million tons by 2017. Beyond that, the Bureau of Resources and Energy Economics<sup>74</sup> has identified 93 coal mining projects between the stages of public announcement and completion. Over AU\$100 billion would be required to enable all of these projects to go ahead.

Most Australian states have plans at varying scales and stages of development, to start or expand coal exports. Western Australia has been attempting to find viable options for a coal export industry for several years, while in South Australia, proposals to mine the vast Arckaringa Basin and parts of the South East hope to find options for brown coal export. In Victoria, the State Government is considering the allocation of an additional 13 billion tons of lignite reserves to develop exports, despite the fact that Victoria currently has no coal export infrastructure.

The largest export plans are, however, in the traditional coal mining states of Queensland and New South Wales. The proposed new mines in these states would be enough to more than double Australia's production of black coal. And, with almost all of the new projects intended to supply the export market, a flood of new and expanded coal export terminals are proposed along Australia's Eastern seaboard.

New coal projects are being met with increasing resistance as awareness grows over the many environmental impacts posed by current and proposed coal mining. In Queensland, GVK's proposed Alpha Coal project has been taken to court by concerned community members and affected landholders. In New South Wales, the Maules Creek mine, proposed by Whitehaven coal, is facing a court challenge from indigenous groups as well as a community blockade that has been in place over a year. Communities along the coastline adjacent to the Great Barrier Reef are also speaking out against new coal infrastructure and its impacts on the tourism and fishing industries.

67 "Coal Slump Leaves Australia Port Half-Used, Lenders at Risk," Bloomberg Businessweek, October 14, 2013

68 "Get out of our way on huge mines, Abbott told," The Sydney Morning Herald, September 12, 2013

69 <http://www.abc.net.au/4corners/content/2006/s1566257.htm>

70 "Queensland Alpha project assessment 'shambolic joke': Burke," The World Today, June 5, 2012

71 "Clive Palmer's \$6 billion China First coal mine faces last two hurdles," The Guardian, October 25, 2013

72 See Australian Government Bureau of Resources and Energy Economics, Resources and Energy Quarterly, September 2013

73 "Australia's Newcastle port sees record high coal exports in 2012-13," Platts, August 9, 2013

74 <http://bree.gov.au/documents/publications/rempp/REMP-List-2013-04.xlsx>







## The Epicenter: the Galilee Basin

Advanced plans are in place to build 9 mega mines in Queensland's Galilee Basin, a region hundreds of kilometers inland, and as yet, undisturbed through coal mining. 5 of these projects would each be larger than any coal mine currently operating in the country and would produce enough coal to increase exports by 220 million tons annually. With tens of thousands of hectares earmarked for coal mines, the habitats of hundreds of species would be permanently wiped out and unique natural areas, such as the Bimblebox Nature Refuge would be destroyed. The refuge, located in the Deserts Uplands bioregion, is a remnant woodland and harbors over 220 plants and 150 bird species. In 2003, the owners of the refuge signed an agreement with the Queensland Government to permanently protect the property.<sup>75</sup> This has not, however, stopped the Queensland government from approving Waratah Coal's plan to use half of the reserve for open-pit coal mining as part of its "China First" project.

Coal and water don't mix, especially not in Australia where water, already a precious resource, is set to become all the more scarce and erratic as climate change takes hold. In the Galilee Basin, as in other parts of Australia, coal is directly competing with agriculture for both land and water, with coal often coming out ahead. As coal mining threatens the Galilee, the risk of water losses to local landholders is eminent.

A recent study into the impacts of the Galilee Basin coal mines found that the equivalent of two and a half Sydney Harbors' worth of water – 1,343 billion liters – would be dewatered from the Basin if the mining goes ahead as proposed. The report found that the Galilee coal mining proposals have "the potential to cause permanent and unacceptable impacts on regional groundwater and surface water resources," creating risks for local ecosystems and landholders dependant on groundwater.<sup>76</sup>

The Galilee Basin is also a make or break region when it comes to climate change. According to Greenpeace Australia, the CO<sub>2</sub> that is likely to be produced each year from burning the coal mined in the Basin would release 705 million tons of CO<sub>2</sub> to the atmosphere each year. If the Galilee Basin were a country, this would make it the 7th largest emitter on the planet.<sup>77</sup>

## Wrecking the Reef

The Great Barrier Reef is described by UNESCO (United Nations Educational, Scientific and Cultural Organization) as "one of the richest and most complex natural ecosystems on earth" and "one of the jewels in the world heritage crown."<sup>78</sup> Stretching for 2,000 kilometers along the Queensland coastline, it is the world's most extensive coral reef system and a site of incredible natural beauty. It is also worth upwards of AU\$5 billion per year to the Queensland economy.

The Reef, however, stands between the Queensland coal rush and the power plants in Asia, for which the coal is destined. The huge volume of planned exports will require extensive new infrastructure to be built in the Great Barrier Reef World Heritage Area. These coal export ports will have disastrous impacts on sensitive coastal environments and marine species. One area particularly targeted for coal port development is Abbot Point, where 4 new coal terminals are proposed, one just meters away from a turtle hatching ground. For coal ships to be able to access these new coal terminals, 3 million cubic meters of sea floor would have to be dredged, severely impacting a much wider area and destroying the feeding grounds of dugongs and green turtles.

75 "Cooking the Climate, Wrecking the Reef," Greenpeace Australia, September 2012

76 "Draining the life-blood: Groundwater Impacts of Coal Mining in the Galilee Basin," Hydrology Environmental consulting, September 2013

77 "Cooking the Climate, Wrecking the Reef," Greenpeace Australia, September 2012

78 <http://whc.unesco.org/en/news/606/>

## IV. The "Hot Spots"

Coal and water don't mix.

If all proposed projects go ahead, around 11,000 ships would cut through the Great Barrier Reef every year.

Government and industry forecasts estimate that the number of coal ships moving through the Great Barrier Reef will increase 4-fold between 2012 and 2032.<sup>79</sup> If all proposed new ports and terminals were to go ahead, around 11,000 ships a year would cut through the Great Barrier Reef. Causing an incredible rise in pollution, and greatly increasing the risk of shipping accidents resulting in oil spills and groundings. Australians were given a reminder of the dangers of shipping accidents to the reef in 2009 when a Chinese coal freighter ran aground on the Douglas Shoal. In the following weeks it was dragged over 300,000 square meters of coral.<sup>80</sup>

The environmental impacts of coastal coal infrastructure have not been lost on UNESCO and the World Heritage Committee. Both called upon the Australian Government in 2012 to not permit any more coastal development that would impact negatively on the Outstanding Universal Value of the Great Barrier Reef. The World Heritage Committee is now considering placing the Great Barrier Reef on the "World Heritage in Danger" list in 2014 if sufficient action is not taken.<sup>81</sup>

## Who is Bankrolling this Coal Infrastructure?

The Australian NGO "Market Forces" recently undertook extensive research to determine which banks have been financing coal and gas export terminals along Australia's East Coast since 2008.<sup>82</sup> As coal infrastructure projects are the "door-opener" for new mine expansions, we thought it important to present the portion of Market Forces' data that refers to coal infrastructure.<sup>83</sup> The following chart shows the top 10 lenders to coal ports in Australia.

**Top 10 Lenders to Australian Coal Ports 2008-2012**

Bank	Amount loaned (in million euros)
ANZ	1,120.4
Commonwealth Bank	770.1
National Australia Bank	755.4
Standard Chartered	734.7
State Bank of India	667.9
Westpac	573.1
Sumitomo Mitsui Banking Corp.	419.4
Bank of Tokyo-Mitsubishi	348.0
Crédit Agricole	274.5
DBS Bank	212.4
exchange rate: 1,4972 AU\$ Dollars for 1 Euro	

79 Great Barrier Reef Shipping: Review of Environmental Implications. Prepared by PGM Environment for the Abbot Point Working Group.

80 "Marine Shipping Incident Great Barrier Reef Marine Park – Douglas Shoal," Great Barrier Reef Marine Park Authority, 2010

81 The World Heritage Committee, 37<sup>th</sup> Session, June 2013

82 "Financing Reef Destruction," Market Forces, 2013

83 Market Forces' data was sourced from company filings and finance industry databases including Project Finance International and Reuters Project Finance.

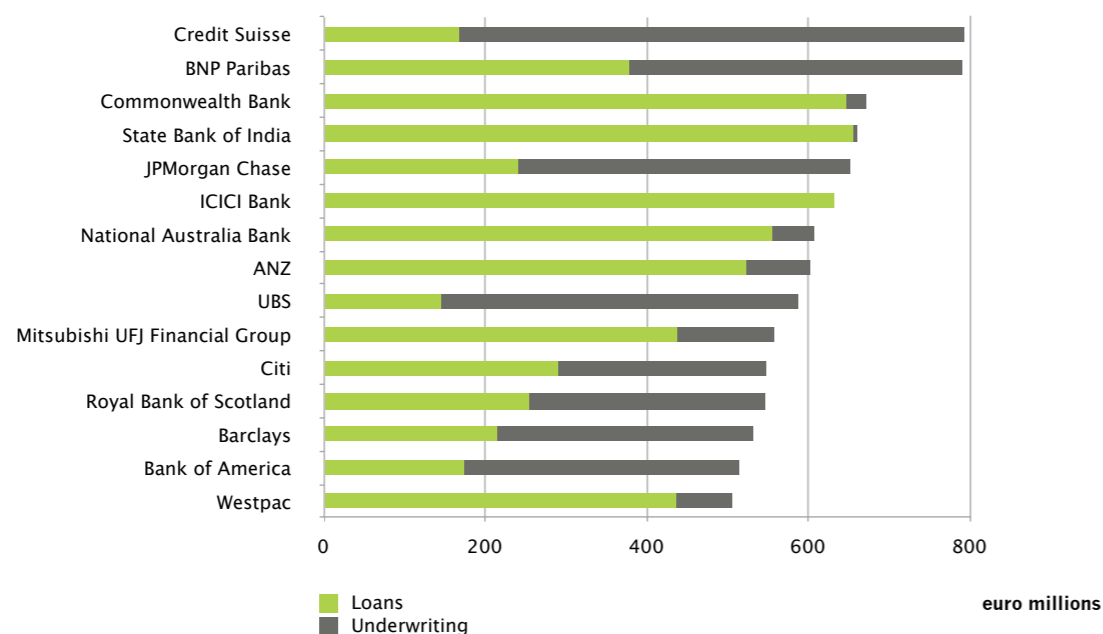


## Top Coal Mining Banks for Australia

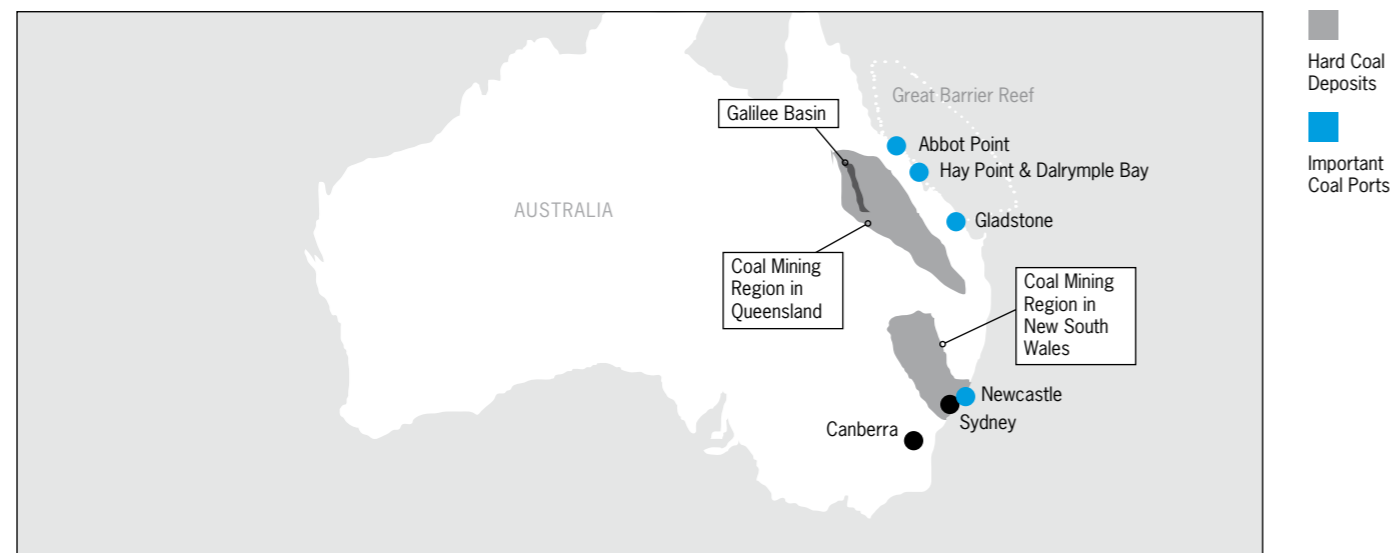
Our own chart shows the top 15 banks which financed the operations of 15 coal mining companies and one coal infrastructure company active in the Australian hot spot. When comparing our ranking with the research undertaken by Market Forces, it is evident that Australian banks clearly play the lead role in coal infrastructure finance, while the top 2 positions for overall mining investments are held by international banks.

When looking at investment banking and loans combined, Credit Suisse and BNP top the list in our ranking. Each of these two banks provided a total of over 790 million euros to the companies in our sample. A significant part of this finance was, however, raised through bond or share issues. Credit Suisse, for example, underwrote a share issue of 290 million euro for Whitehaven Coal in 2011. When considering only direct lending, it is notable that 2 Indian banks (State Bank of India and ICICI Bank) and 3 Australian banks hold the top 5 positions.

**Banking on Australian Coal, 2011 – mid-2013**



## IV. The “Hot Spots”



## India Tigers versus Coal

India is the world’s 3rd largest coal producer and the world’s 3rd largest coal importer. In 2012, it produced 595 million tons of coal, and imported a further 160 million tons.<sup>84</sup> Even these mountains of coal are, however, not enough to keep pace with rising demand. Many power plants built after 2009 do not have sufficient coal supplies to run at full capacity, leading to huge pressure to quickly increase mining or subsidize imported coal.

Most Indian coal is mined in the central and eastern parts of the country in the states of Jharkhand, Odisha and Chhattisgarh. While coal is also produced in other parts of the country, the major coal mining expansion plans focus on these 3 states. Over 90% of India’s coal comes from open pit mines, with severe impacts in terms of displacement, loss of livelihoods, destroyed forest, polluted water bodies and air pollution.

India’s Auditor General found that Coal India was running 2/3 of its mines without environment permits.

Just one company - Coal India Limited - accounts for over 80% of the country’s coal production. With 452 million tons annual production, Coal India is the world’s number 2 coal producer, right after China’s Shenhua. Coal India is 90% government-owned, with the remaining 10% held by international investors following an initial public offering (IPO) in 2010. The government plans to sell a further 5% share before the end of 2013.

Coal mining has always been a dirty business in India, with a poor safety record, rampant illegalities and massive collateral damage due to unregulated mining. In the 1970s, coal mining was nationalized and Coal India was set up with the aim of addressing these problems. Yet today, we find Coal India itself committing serious environmental violations and human rights abuses.

### The Repeat Offender

In September 2011, an investigation by India’s Comptroller and Auditor General found that Coal India was running 2/3 of its mines without environment permits.<sup>85</sup> In May 2012, 43 mines operated by Coal India’s subsidiary Bharat Coking Coal were served closure notices by the State Pollution Control Board. Also in the same month, Coal India’s subsidiary Mahanandi Coalfields was fined US\$ 237 million for illegal coal extraction.<sup>86</sup>

In 2010, an investigation by the Haq Centre for Child Rights found children working in Coal India’s mining pits in Hazaribagh.<sup>87</sup> In the North Karanpura coalfield, Coal India is currently evicting indigenous tribal communities and riding roughshod over their concerns, while conveniently ignoring the national laws that accord these communities special protection. As villagers fight attempts to deprive them of their land, in July 2013, police opened fire on protestors, killing one.<sup>88</sup>

When it comes to Coal India, it’s hard to identify laws that the company hasn’t broken. This, however, does not seem to deter banks – whether national or international – from doing business with the company. When the Indian government decided to float another 5% of the company on the stock market in 2013, it had no problem convincing Bank of America, Deutsche Bank, Credit Suisse, Goldman Sachs, Kotak Mahindra Capital, JM Financial and SBI Capital markets to underwrite the offering, which is due to come out in December.

<sup>84</sup> “Coal Statistics,” World Coal Association

<sup>85</sup> “Coal India operating 239 mines without environmental clearance,” Economic Times, September 9, 2011

<sup>86</sup> “High risk, low return,” Greenpeace investor briefing on Coal India, 2013

<sup>87</sup> “2010. India’s Childhood in the “Pits” – A Report on the Impacts of Mining on Children in India,” Haq Centre for Child Rights & Dhatri Resource Centre for Women & Children, 2010

<sup>88</sup> “Jharkhand police opens fire on people protesting NTPC project; one killed,” DownToEarth, July 24 2013





Photo: D Mukherjee/Greenpeace



Though Coal India is the dominant coal producer, there is an increasing shift towards privatization of coal mining. Private Indian companies like Adani, Tata, Jindal, Reliance, Essar and Lanco are already mining coal for their own power projects or acting as mine operators on behalf of state-owned entities. Over half of India's planned coal-fired generation capacity will come from the private sector and pressure is growing to open up more space in the coal mining sector for private companies.

If government-controlled Coal India is guilty of terrible violations, the private sector is just as bad or perhaps even worse. In Madhya Pradesh, Essar Power, Hindalco and Reliance are attempting to mine coal in Mahan and Chatrasal, tribal areas with dense forests and unique biodiversity. Thousands of villagers depend on these forests for daily sustenance. They gather firewood, fruits, tubers, honey, seeds and a variety of other products that they either use themselves or sell in nearby markets. As Chote Singh from the Gond tribe says, "Our life begins and ends with the forests." Apart from being a lifeline for local communities, Mahan and Chatrasal are a catchment for the Mahan river, and an important corridor for wildlife. They link the Sanjay Dubri Tiger Reserve with forests to the north, including the Bagdara Sanctuary.

## Trashing Tigerland

Indian planners are now grappling with the mistakes of the past five years. An unprecedented boom in the construction of coal power plants was encouraged, with no thought as to where the coal to feed these plants would come from. Indonesia's international price benchmarking of its coal exports made this source too expensive for most Indian plants. As a result, the pressure to expand domestic mining is immense and new areas are being designated for coal mining, irrespective of the social and environmental impacts. According to an GIS analysis by Greenpeace, over a million hectares of forest are at risk in central India alone. The attempts of India's Ministry of Environment and Forests to keep at least some of the densest forest areas off limits for mining, were defeated in 2010, and companies are now scrambling for new coal blocks.

Greenpeace India's analysis shows that over 350,000 hectares of tiger habitat is threatened across 13 of India's major coalfields. Many other corridors connecting tiger reserves and protected areas also stand to be lost to advancing coal mines and infrastructure. A major portion of the Singrauli and Wardha coalfields lies adjacent to the Sanjay Dubri and Tadoba-Andhari Tiger Reserves, which are also crucial for other wildlife such as leopards and elephants.<sup>89</sup>

The population of the Bengal tiger, India's national symbol, has reached a critical level, with only about 1,700 individuals left in the wild - of which 35% live in central India's forests. Biodiversity and endangered species, however, mean nothing to Coal India. A common refrain heard by anyone questioning the company's operations is: "Choose whether you want tigers or electricity - you cannot have both!"

## IV. The "Hot Spots"

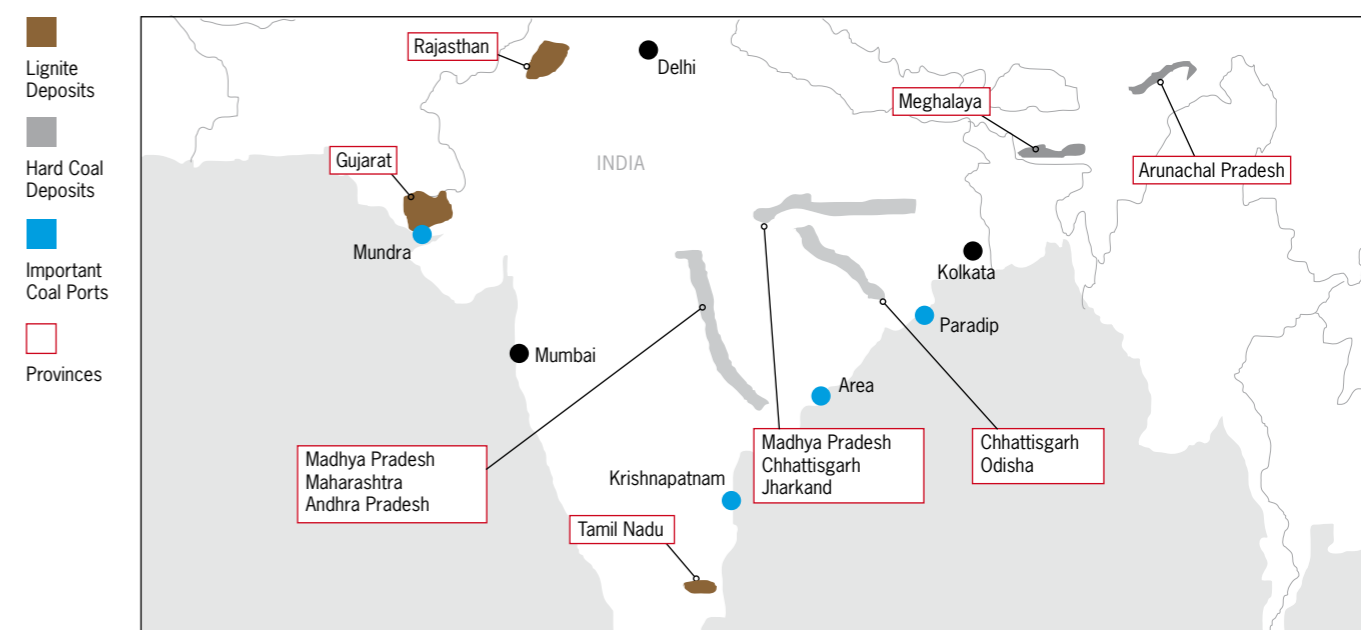
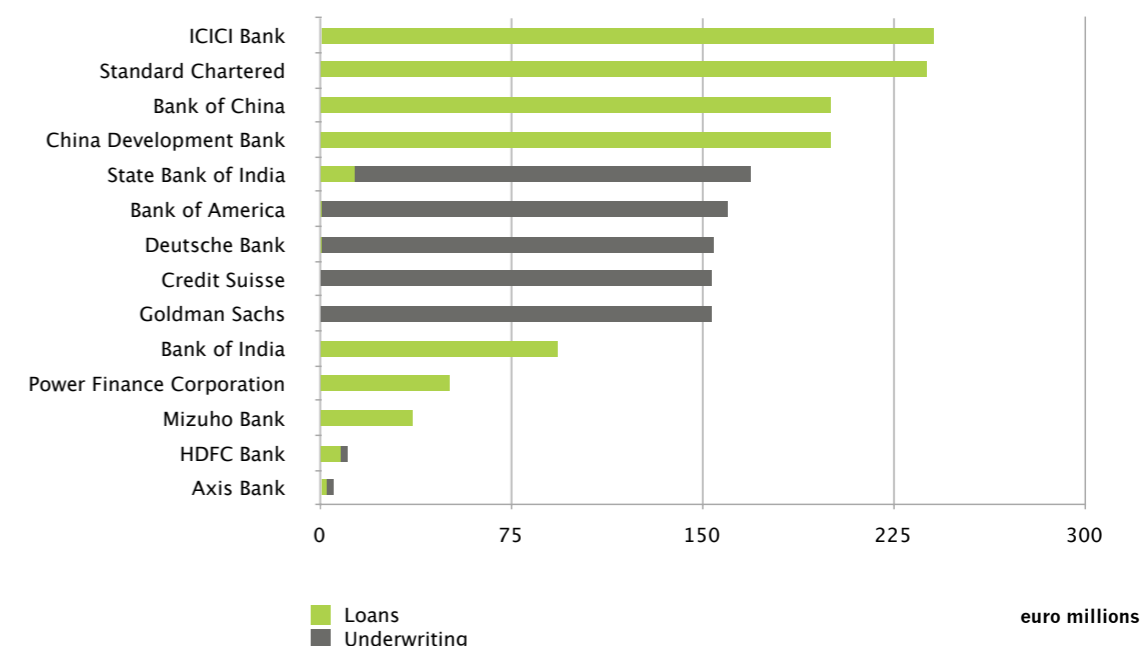
Over 1 million hectares of forest are at risk in central India alone.

## Top Coal Mining Banks for India

The following 14 banks were the biggest financiers of the Indian coal mining sector since 2011. With total loans of 240 million euros, India's ICICI Bank is at the top of the list, closely followed by the UK bank Standard Chartered with 238 million euro. Then, interestingly, two Chinese banks follow, each providing loans of 200 million euro.

Two of the biggest deals that turned up in our data are the 2013 share offering of Coal India (hence the large amounts of investment banking in the chart for Bank of America, Deutsche Bank, Credit Suisse and Goldman Sachs). Another notable deal was made with the company Reliance, which received an 800 million euro loan, split up among Standard Chartered, Bank of China and the China Development Bank.

Banking on Indian Coal, 2011 - mid-2013





# Russia Putin's New Coal Age

With proven reserves over 190 billion tons, Russia harbors the world's second largest coal reserves. It is the sixth largest coal producer and the world's number three coal exporter, right after Indonesia and Australia.

Since 2000, Russia's annual coal production has grown by 48% and is now estimated at 359 million tons annually.<sup>90</sup> The country's most important production region is the Kuznetsky Basin (Kuzbass) in Siberia, where over 200 million of tons of coal were produced in 2012.<sup>91</sup> Most of Russia's coal exports originate here and supply either the European or the Asian market. Due to the long distances involved, transport is one of the industry's major constraints and accounts for nearly 60% of the cost of Russia's export coal.<sup>92</sup>

Gas has long been the dominant fossil fuel in Russia's electricity generation, while coal accounts for less than one fifth of the country's power generation.<sup>93</sup> Under Vladimir Putin, the government, however, has big plans to increase both coal production and consumption. According to Russia's 2012 "Coal Industry Development Program," coal production will rise to 380 million tons in 2020 and 430 million tons in 2030. The Program envisages 26 gigawatt of additional coal-fired power capacity in order to free up more natural gas for exports. In response, the state-owned companies Inter RAO and Rosneft recently announced plans to build new coal plants in the Far East of Russia and in Russia's western exclave, Kaliningrad. Putin's plans also foresee an increase of coal exports. Accordingly, the capacity of the country's coal terminal ports is to be expanded by 300%.<sup>94</sup> In order to better take advantage of the Asian coal markets, major new centers of coal production are planned both in Russia's Far East and in Eastern Siberia, regions whose climate and ecosystems are especially vulnerable to environmental damage. These plans are, however, meeting resistance. In July 2013, people in the city of Khabarovsk held a protest rally against the construction of a new coal terminal by SUEK, the country's largest coal producer. And in Primorye territory in Russia's Far East, the region's governor recently suspended construction of a coal terminal due to protests by local citizens. The governor issued a statement saying: "I agree with the local residents. There is no need to turn this resort into a polluted place."<sup>95</sup>

## The Toll of Russia's Coal

Russia has 228 coal mining companies, with the top four - SUEK, Kuzbassrazrezugol, SDS and Mechel - accounting for over half of total production.<sup>96</sup> The rapid expansion of the country's coal industry has caused serious environmental problems such as enormous dust and particle pollution, depletion of water resources, contamination of underground and surface reservoirs, and loss of agricultural lands. A special working group of the Ministry of Energy concluded that during the last 5 years, the discharges of dangerous wastes to water and air "stabilized at high levels."<sup>97</sup> Both the amount of waste and the total area of affected land "continue to grow." Mine tailings, which are full of toxins, are simply piled on site and continue to poison the environment long after mining has finished. In Russia, most former coal mines remain abandoned waste sites, and the industry seldom undertakes clean-up operations or restoration of land.<sup>98</sup>

90 "Coal Statistics," Webpage World Coal Association, 2013

91 "Russian Coal Producers Invest in Operations," Vladislav Vorotnikov, Coal Age, March 2013

92 "Thermal Coal: Coal at a Crossroads," Deutsche Bank, 2013

93 "Electricity Information 2011," IEA

94 "Russian Coal Producers Invest in Operations," Vladislav Vorotnikov, Coal Age, March 2013

95 "Russian Far East coal terminal halted due to environmental concern," Russia beyond the headlines, July 29, 2013

96 "Russian Coal Producers Invest in Operations," Vladislav Vorotnikov, Coal Age, March 2013

97 "Protocol of the meeting of special working group on environmental safety in the coal industry," Ministry of Energy of Russia, June 13, 2013

98 "Russian Coal Industry: Environmental and Public Health Impacts and Regional Development Prospects," Ecodefense, June 2013

## IV. The "Hot Spots"

In Russia, most former coal mines remain abandoned waste sites.



Another environmental problem associated with the coal mining industry is methane emissions. Between 1.5 billion and 2 billion cubic meters of methane are released into the atmosphere from Russia's underground and open cast coal mines.<sup>99</sup> Methane is not only one of the most potent greenhouse gases, but also a major cause of fatal accidents in Russia's underground coal mines. The projected increase in coal production and Russia's failure to improve safety standards will undoubtedly increase the likelihood of major accidents, such as in 2007, when 110 coal miners died in a methane blast in the Ulyanoskaya mine in Kemerovo.<sup>100</sup> As Ruben Bodanov, deputy head of the Russian Miner's Union says: "Coal mining companies prefer to get by with cheap labor and poor safety standards. The result is that life is also cheap."<sup>101</sup>

## Drowning in Coal Dust

"Coal mining companies prefer to get by with cheap labor and poor safety standards. The result is that life is also cheap."

Most of Russia's coal is mined in the Kuznetsky Basin (Kuzbass) in the region Kemerovo. Decades of coal mining have poisoned the air and water of the Kuzbass and led to disastrous impacts for the population. The concentration of air pollutants is at minimum two to three times as high as in the rest of Russia. And according to the official report "State of the Environment in the Region Kemerovo in 2011," drinking water in the vicinity of the mines is highly polluted. The many abandoned mines leach heavy metals into the water ways and even the soils of the region are severely contaminated, so that agricultural products contain high levels of lead, cadmium, mercury and arsenic. Accordingly, sickness and death rates have respectively risen to 19% and 20% between 1993 and 2006, and the life expectancy of citizens is much lower than in other parts of Russia.<sup>102</sup>

Mining also takes a serious toll on the indigenous Shor and Teleut tribes as their ancestral lands and culture are being destroyed. The Shors, who live almost exclusively in Kemerovo, are surrounded by coal strip mines, which have destroyed the hunting and fishing grounds that their traditional livelihoods depend on. The waste water from the mines is channeled into the local rivers and has contaminated the drinking water. Coal dust literally covers everything. It penetrates into the houses and the people's lungs. Veniamin Boriskin, an indigenous Shor describes the fate of his village: "The mines ignore the people of Kazas and continue to tear our land to pieces. Once a settlement of 50 houses with large families, the village has now nearly died out. At the edge, another village has emerged - the cemetery."<sup>103</sup>

99 "Environmental problems of mining companies in Kuzbass," by V.V.Senkus and V.F.Mayer, 2012

100 <http://www.ibtimes.com/trapped-dying-methane-russias-dangerous-coal-mines-1078330>

101 "Mine safety - a matter of life and death," The Moscow News, May 31, 2010

102 "Human Development Report for the Russian Federation: Energy Sector and Sustainable Development," UNDP, 2009

103 "Coal Mining in Kemerovo Oblast, Russia," IWGIA, September 2012



# Kazakhstan

## Central Asia's Coal Giant

Kazakhstan is the world's 10<sup>th</sup> largest coal producer and 7<sup>th</sup> most important exporter.<sup>104</sup> In 2012, it produced 126 million tons of coal and exported 32 million tons. Coal provides 74% of Kazakhstan's electricity, a dependency leading to carbon emissions of over 15 tons per capita – on par with those of Canada and around double the European average.<sup>105</sup>

Among the largest coal mining companies operating in Kazakhstan are Bogatyr Komir (owned by the Russian company Rusal and the Kazakh state-owned Samruk Energo), multinational steelmaker ArcelorMittal and the infamous Eurasian Natural Resources Corporation (ENRC), a company that is being investigated by the UK's Serious Fraud Office over allegations of fraud, bribery and corruption in its mining operations in Kazakhstan and Africa.<sup>106</sup>

The Kazakh coal industry is booming and shows no signs of slowing down. Coal production increased by 60% since 2005, and exports have almost doubled.<sup>107</sup> The national mining association, AGMP, announced plans for a series of new mines in the Karaganda Basin and estimated that production will grow a further 25% by 2020. Although the country's authoritarian government recently announced a plan to grow renewables to account for 50% of national electricity consumption by 2050, there are no signs that coal investments will be scaled back. On the contrary: the Kazakh Minister of Industry announced that total investments in the coal mining industry will amount to US \$4 billion over the next decade.<sup>108</sup> The assumption is that coal production would simply be transferred to the export market if domestic demand declines.

Due to the appalling working conditions in Kazakhstan's mines, labor dissent is growing. Labor activist Pavel Shumkin, who at 65 has already lived a decade longer than the average Kazakh coal miner, says: "The bosses have billions and I have my pension of US \$150 a month. They breathe a different air."<sup>109</sup> Safety is a major concern. Over the last nine years, 107 miners have died in ArcelorMittal-owned coal mines as a result of accidents involving methane explosions, coal failures and gas blowouts. Downsizing and efficiency measures are thought to have impacted on worker safety – the number of workers employed in the company's mines has halved since 1995, and miners report having to work on tasks for which they are not qualified.<sup>110</sup>

104 "Key World Energy Statistics 2013," IEA  
 105 <http://data.worldbank.org/topic/climate-change>  
 106 "Scandal-hit miner ENRC shunned by leading City brokers," The Independent, May 10, 2013  
 107 2012 figures – ibid. 2005 figures based on IEA World Energy Statistics  
 108 "Kazakhstan prepares to grow coal production," Coal Age, September 24, 2013  
 109 "Kazakhstan mining giants seek to placate simmering labour dissent," Business Features, July 1, 2012  
 110 <http://bankwatch.org/bwmail/52/health-and-safety-line-arcelormittals-kazakh-operations>

### IV. The "Hot Spots"

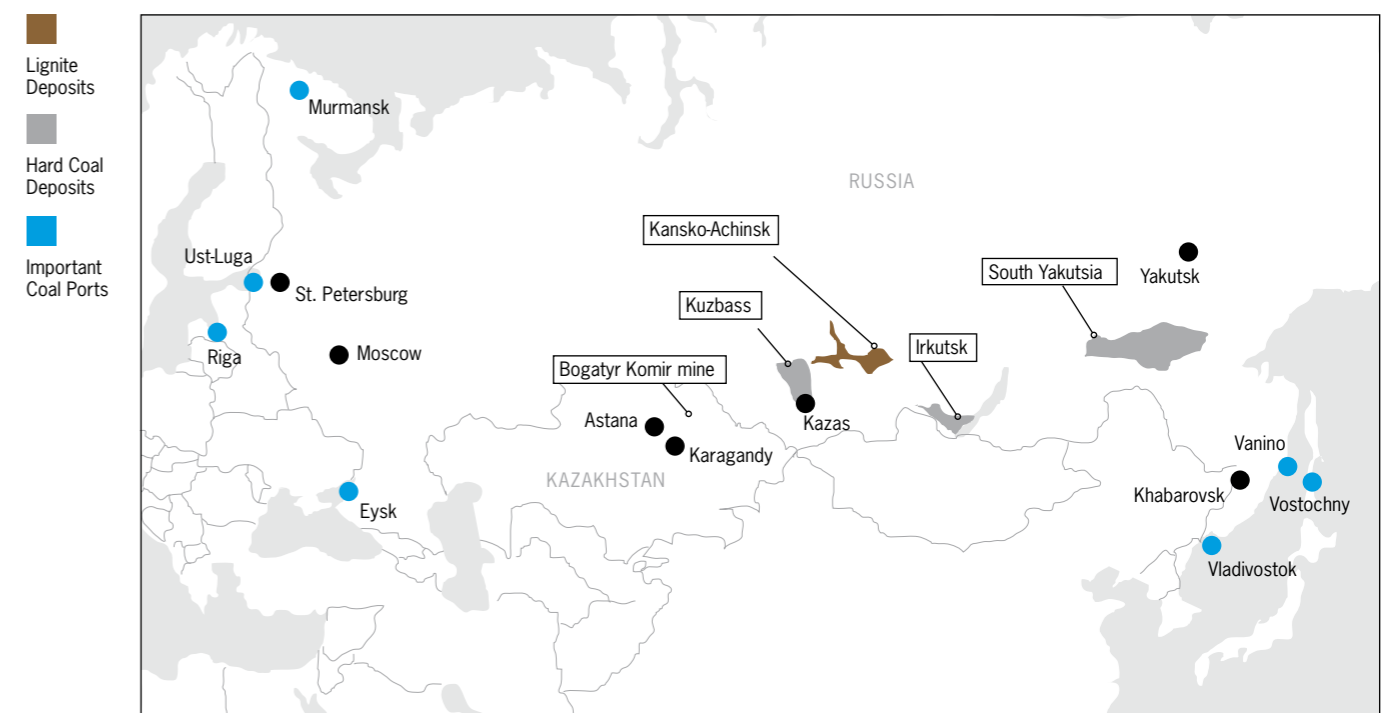
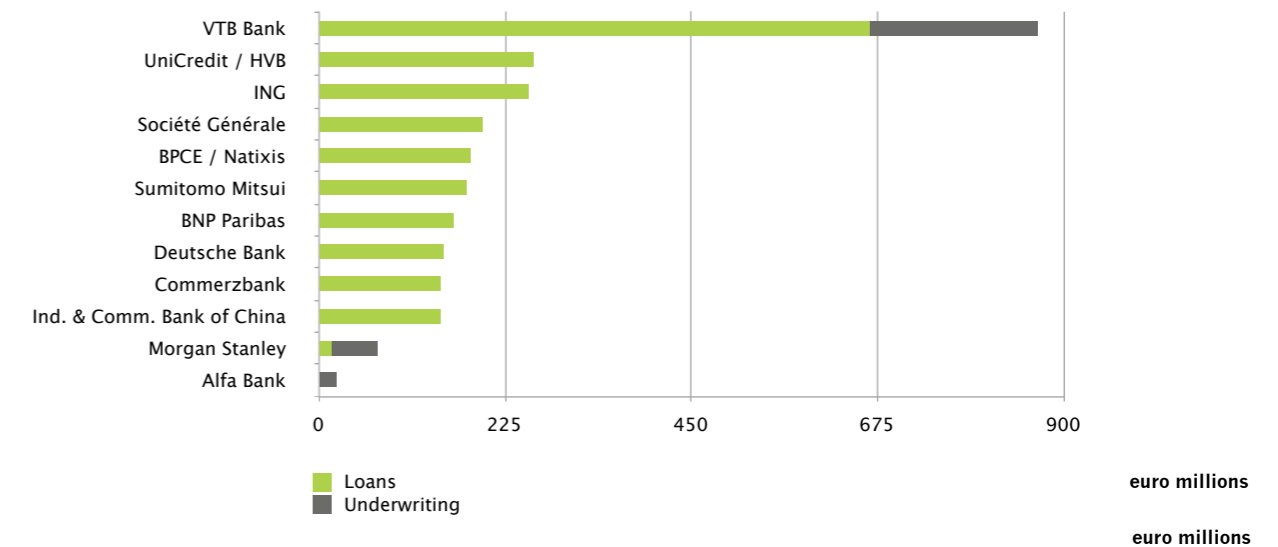
ENRC is being investigated of fraud, bribery and corruption.

## Top Coal Mining Banks for Russia and Kazakhstan

The following chart shows the 12 biggest financiers of the Russian and Kazakh coal mining sector since 2011. Only the first, and the last bank are Russian. With over 878 million euro, the VTB Bank holds the top position in this hot spot. Next in line is UniCredit (259 million euro) and close behind, ING (253 million euro). Overall the "diversity" of the represented banks is interesting: within the top 12 are banks from 9 different countries.

The largest deal was VTB's 964 million euro loan to Mechel (roughly half of this was attributed to coal mining). In fact, VTB seems to be a "house bank" for Mechel – all 12 of its deals were with this company. Morgan Stanley made loans not only to Mechel, but also to scandal-ridden Eurasian Natural Resources.

Banking on Coal in Russia & Kazakhstan, 2011 – mid-2013







Open cast mine, Germany

Photo: B. Arnold/BUND



# Central Europe

## The Lignite Triangle

For the second time in just 5 years, Poland is hosting the UN Conference on Climate Change. This record is only topped by its neighbor, Germany, which hosted 3 UN Climate Summits in the 1990s. Germany was also one of the first countries to establish feed-in tariffs for renewable energy, which now accounts for almost 23% of the country's power generation. You would think these two countries are truly concerned about protecting climate stability. Germany and Poland are, however, the world's 8th and 9th largest coal producers.

While Germany will soon close its last hard coal mines in 2018, it continues to mine lignite. Lignite – also called “brown coal” – is a low-grade coal that results in the highest CO<sub>2</sub> emissions per unit of energy generated. And climate-concerned Germany is the world's largest lignite miner. In 2012, it produced 185 million tons of the dirty fuel. That's almost as much as the lignite production of Russia, Australia and India combined. Poland is the world's fifth largest producer of lignite (64 million tons in 2012) and mines more hard coal than any other country in Europe.<sup>111</sup>

The Czech Republic is the third cornerstone of Central Europe's “lignite triangle.” Although its production is significantly smaller than either of its neighbors, it is still the world's eighth largest lignite producer. Approximately every fourth ton of lignite worldwide is mined either in Germany, Poland or the Czech Republic.<sup>112</sup>

## Germany

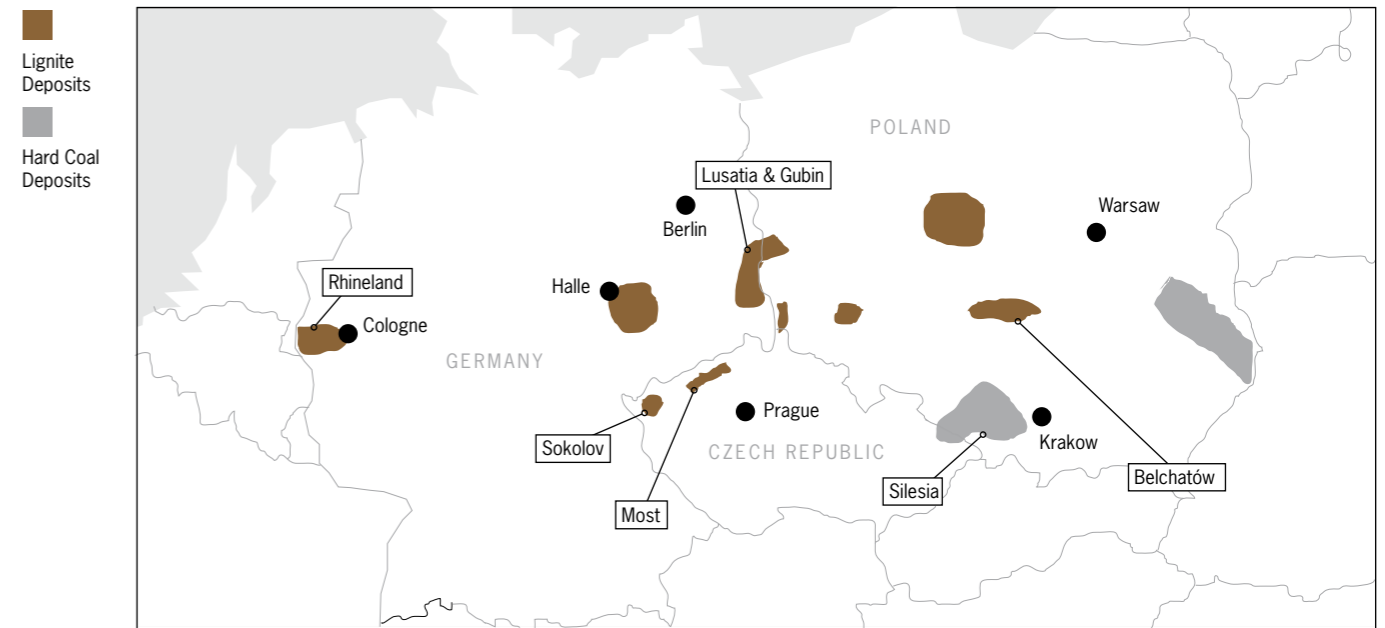
As government subsidies for the production of hard coal run out in 2018, hard coal mining will soon be history in Germany. The long-term damages, however, are here to stay, and are appropriately termed “eternity costs” (Ewigkeitskosten) in German. The voids created through deep underground mines have caused wide-spread subsidence in the Ruhr and Saar Regions, Germany's centers of hard coal mining. In many areas, the ground has sunken between 5 and 20 meters, causing not only enormous damages for home-owners, but also creating the need to continue pumping out water as villages and, in some cases, entire cities would otherwise turn into lakes. In 2006, the accounting firm KPMG put forward an estimate of 13 billion euros for the “eternity costs” of Germany's hard coal mines. KPMG, however, warned that the true costs could be much higher as many of the risks are incalculable.<sup>113</sup>

The end of its hard coal mining era, however, hasn't dampened Germany's appetite for coal. Its consumption of hard coal has increased. Now, Germany imports its hard coal from countries like Colombia, Russia, the U.S. and South Africa. In return, they get the eternity costs.

Lignite is, however, a different story. In Germany, it's a tale of two utilities: Vattenfall and RWE. Both companies operate enormous open cast mines, and their business model is built around this extremely dirty and inefficient fuel. In 2012, Vattenfall produced 80% of the electricity it sold in the German market by burning lignite. The annual emissions of 3 of Vattenfall's lignite power stations (Jämschwalde, Schwarze Pumpe and Boxberg) exceed the total emissions of Sweden, the country whose government, incidentally, owns Vattenfall.<sup>114</sup> Two of RWE's recently

### IV. The “Hot Spots”

Every fourth ton of lignite worldwide is mined in Germany, Poland or the Czech Republic.



extended lignite-fired power plants now emit more CO<sub>2</sub> than Finland.<sup>115</sup> And what's worse: both of these power stations are set to operate until at least 2045.

## Europe's Biggest Hole

RWE mines around 100 million tons of lignite per year in three huge opencast mines between Cologne and Aachen. With a depth of more than 450 meters, and an operating surface of 40 square km, RWE's open pit mine in Hambach is Europe's biggest hole. By 2040, over 15.4 billion tons of overburden will have been removed to reach the seams of lignite with which RWE plans to feed its new power stations. Over 5,000 people will be displaced, one of Germany's oldest forests destroyed and the water balance of the entire region permanently disturbed.<sup>116</sup>

“God created Lusatia, but it was the devil who put coal under it.”

Vattenfall does most of its lignite mining in Eastern Germany in Lusatia, the border region to Poland. The company is trying to push through three mine expansions and two new pits here. Its expansion plans will displace many villages inhabited by Sorbs, a distinct Slavic minority with its own traditions and language, which has lived in Lusatia since the 6th century AD. The Domowina, the Sorbs' traditional government, has appealed to the German Federal Government for protection against the growing threat of their cultural extinction through lignite quarries.<sup>117</sup>

Although local communities and the environment movement have fought tooth and nail against further lignite mining, they have sadly seen little success in stopping new mines. Legally, coal is still “king,” in Germany. This goes back to a law from 1937, when the Nazi regime declared mining of raw materials a “national priority,” making it easy for companies to relocate communities living on top of the coal fields. Since 1945, an estimated 110,000 people have been displaced for coal mines in Germany. Communities are, however, challenging this law, and in the upcoming weeks, a judgment of Germany's Constitutional Court is expected.

The scale of destruction still being wreaked on communities and landscapes to mine yesterday's fuel is unconscionable. As an old saying in Lusatia goes, “God created Lusatia, but it was the devil who put the coal under it.”

111 “Coal Statistics,” World Coal Association, 2013

112 Calculated on the basis of “Statistik der Kohlenwirtschaft” (Coal Industry Statistics) for 2011, as the 2012 data was not yet available.

113 “KPMG Studie: Ewigkeitskosten der Kohle betragen 13 Milliarden Euro,” Wirtschaftswoche, December 14, 2006

114 According to the IEA's Energy Statistics 2013, Sweden emitted 44.9 million tons of CO<sub>2</sub> in 2011.

115 Finland emitted 55.6 million tons CO<sub>2</sub> in 2011.

116 <http://www.bund-nrw.de/hambach>

117 <http://en.wikipedia.org/wiki/Sorbs>



## Renewable David Versus Carbon Goliath

For decades, the combination of strip-mining and building huge thermal power plants nearby has generated enormous profits for Vattenfall and RWE. Now, there is, however, talk that Vattenfall may get rid of its German operations<sup>118</sup> and RWE has recently announced radical plans to re-shape itself.<sup>119</sup> What has happened?

Economically, RWE and Vattenfall are both troubled companies. They have maneuvered themselves into a vicious circle by building extremely expensive new power plants, which require huge amounts of lignite to operate at capacity. This in turn, forces them to sink large amounts of money into developing new mine expansions. These power stations may, however, never return a profit as Germany's rapidly expanding share of renewable energy is beginning to push coal out of the market. Whereas the electricity market used to be dominated by a handful of large utilities, the revolution in renewables has enabled a multitude of small companies, energy cooperatives, municipalities and private citizens all over the country to produce electricity. The days of "peaceful coexistence" between renewables and coal are over in Germany.

## Poland

Poland has a long history of coal mining and was, for many decades, a major coal exporter. Although domestic production remains at high levels, the country has become a net importer since 2008. The reason is obvious: Poland generates more than 80% of its electricity by burning coal.<sup>120</sup> The Polish power plants are, however, outdated: 2/3 of the installed generation capacity is more than 30 years old. The modernization of the sector could be the perfect opportunity to shift energy generation towards renewables and energy efficiency, but the government, unfortunately, seems unwilling to abandon the well-trodden dusty coal track. No other member of the European Union is planning as many new coal-fired power plants as the host of the UN Climate Summit 2013. The government's plans foresee the construction of 11,300 MW of new coal-fired generation, with lignite playing a major role.<sup>121</sup>

As many of the country's coal mines will be mined out within the next few years, it looks as if Polish utilities are about to create the same vicious circle that RWE and Vattenfall are experiencing in Germany. New plants will require new mines, new mines will require a constant coal demand, and power plants will need many operation hours to stay profitable...

Most of Poland's coal and lignite mining companies are completely or partially state-owned or state-controlled. While Kompania Weglowa focuses its production on hard coal, the two main drivers of lignite mining expansions are PGE and Ze Pak. State-owned PGE is Poland's biggest energy supplier with a 40% market share in 2011. PGE produced 69% of its energy on the basis of lignite. It runs Europe's biggest climate killer, the lignite-fired power plant Belchatów, which emitted 35.2 million tons of CO<sub>2</sub> in 2012.<sup>122</sup>

PGE is pushing plans to open a new open-pit lignite mine near Gubin, close to the German border. PGE is, in fact, operating in the same lignite basin as Vattenfall on the other side of the border. The Gubin reserves are supposed to secure PGE's coal supply from 2030 onwards. If this plan proceeds, lignite will be "locked" into Poland's electricity generation for many decades to come.

118 "Vattenfall will angeblich deutsche Kraftwerke verkaufen," Der Tagesspiegel, March 1, 2013

119 "Under threat, German utility says it will create a new "Prosumer" business model," Peak Oil News, October 26, 2013

120 "Strategia Bezpieczeństwo Energetyczna i Środowisko," Ministerstwo Gospodarki i Ministerstwo Środowiska, 2012 (Ministry of Economy and Ministry of Environment)

121 <http://bankwatch.org/our-work/projects/coal-fired-power-plants-poland>

122 This is more than the total emissions of neighboring Slovakia.

## IV. The "Hot Spots"

No other member of the EU is planning as many coal fired power plants as Poland.

"Are sun and wind less Polish than coal?" Polish speaker in a radio debate.



Around 2,000 people from 15 settlements would have to leave their homes to make way for the mine. But protests are growing. People in Gubin are already feeling the impact of lignite mining because the operations of Vattenfall on the German side have led to a significant drop of ground water levels and rising dust pollution on both sides of the border. Two referendums held in 2009 in the affected communities of Brody and Gubin rejected the plans for the mine, but were ignored by the relevant authorities. Communities on both sides of the border oppose the expansion plans of PGE and Vattenfall for lignite in the region.

Opposition is also rising because of the air pollution caused by Poland's coal-burning. Recently, Polish citizens took to the streets in Krakow to demand immediate steps to lower concentrations of particulate matter in Krakow and other cities. According to European Environmental Agency data, 6 out of 10 European cities with the highest concentrations of particulate matter are in Poland.

Ze Pak, Poland's second biggest lignite miner, owns exploration licenses for untapped reserves of nearly 3 billion tons, more than Poland's total lignite output since 1945. Zbigniew Bryja, the head of Ze Pak's mining unit, leaves no doubt about his company's plans to recover these reserves: "Lignite is the cheapest fuel at the moment. Moreover, its price is the most stable and predictable compared to hard coal, oil or gas. I think lignite is becoming Poland's raison d'état."<sup>123</sup>

The relationship between the coal industry and the Polish state seems, indeed, to be very close. So close that it's sometimes hard to tell who is who. The Polish Government is, for example, doing its best to give coal "a voice" during the UN climate talks. Parallel to the UN Conference on Climate Change, it will be presiding over a high-profile "summit" of the international coal industry in Warsaw. It has also consistently opposed all EU climate regulation efforts.

Can anyone tell us why Poland is hosting the UN Climate Summit for the second time in five years?

123 "Poland, wedded to coal, spurns Europe on clean energy targets," New York Times, November 1, 2013





Antismog Mourning Procession, Cracow, 2013

Photo: Mateusz Wojton

# Czech Republic

The Czech Republic is the third cornerstone of Central Europe's lignite triangle. At 55 million tons, the Republic's annual coal production is much smaller than Germany's or Poland's.<sup>124</sup> The country, however, has one of the world's highest coal per capita ratios. For every citizen in the Czech Republic, about 5 tons of coal are mined annually. If China had a similar coal appetite, it would almost have to double its production.

There are three important coal basins in the Czech Republic: the Most and Sokolov lignite basins in northern Bohemia and the Silesia hard coal basin. The biggest expansion plans are in the Most basin. The existing mining permits, however, set strict boundaries to protect both inhabited and ecologically valuable areas in the region. But if mining continues at the current rate, the area will be mined out by 2022. Outside of the boundaries, however, lie 750 million tons of brown coal which would enable coal mining to 2100 and beyond.

For every Czech citizen, about 5 tons of coal are mined annually.

The fight is on about the future of northern Bohemia.

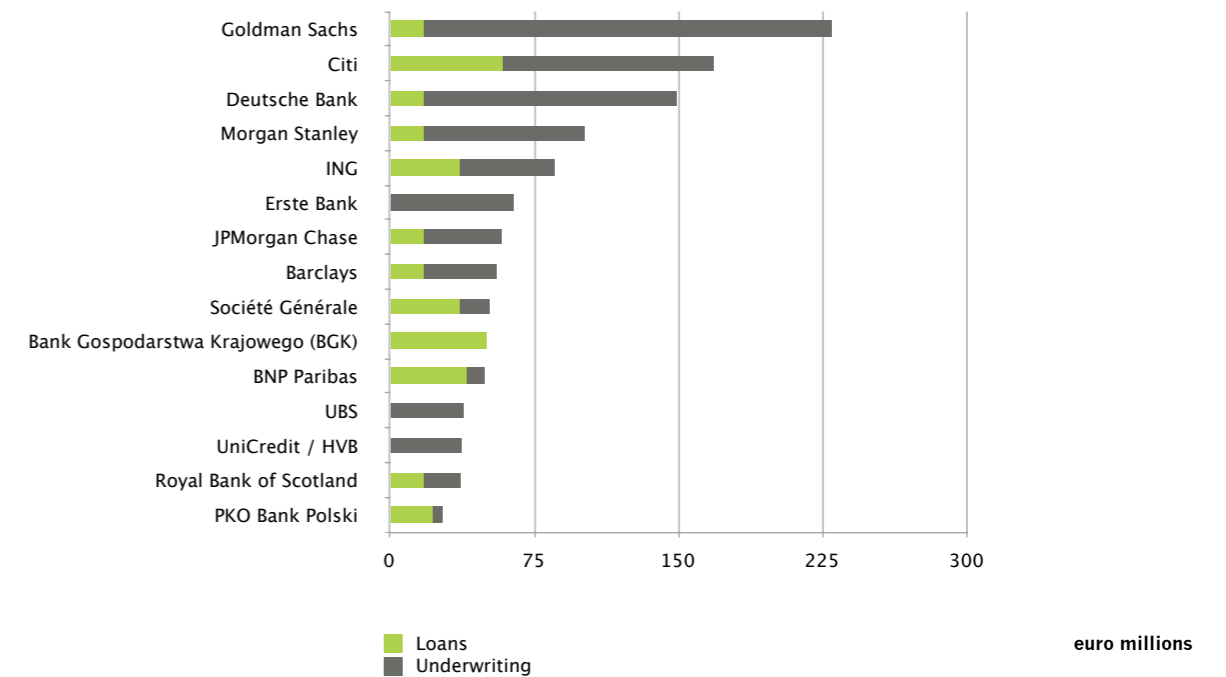
Policy makers are therefore at a crucial crossroads, and the fight is on about the future of northern Bohemia. The expansion of the ČSA mine would destroy the town of Horní Jiřetín and the village Černice. More than 2,000 citizens would have to be relocated. Furthermore, the 27,000 citizens of Litvinov would be affected by the nearby open-pit mine which would reach as close as 500 meters to inhabited areas. Not to mention the irreplaceable natural habitats on the hillsides of the Ore Mountains. Grassroots movements and a national network of environment NGOs are fighting to keep this coal in the ground.

## Top Coal Mining Banks for Central Europe

The following chart shows the 15 biggest financiers of coal mining in Central Europe from 2011 onwards. When looking at the combined total, Goldman Sachs is a clear number one with 229 million euro. Next is Citi (168 million euro), followed by Deutsche Bank (149 million euro). All 3 banks, however, acted mostly as underwriters. The largest deal we turned up was a bond issue of over 2 billion euro for RWE, Germany's largest lignite miner. The bond issue was underwritten by Goldman Sachs and Deutsche Bank.<sup>125</sup>

While the Polish State Development Bank BGK is number 10 and the PKO Bank Polski is number 15 in our overall ranking, they jump up several ranks when only direct lending is considered. Both BGK and PKO Bank Polski provided their biggest loan to Kompania Weglowa. Although PKO Bank Polski's total contributions to the coal mining sector were smaller than BGK, it was much more engaged in backing lignite mining operations. Citi, the number one lender in our analysis, supported virtually all of the companies active in the "lignite triangle."

Banking on Central European Coal, 2011 - mid-2013





# Colombia

## Living between Coal Mines

The coal sector is booming in Colombia. Since 2000, coal production has more than doubled and now totals 89 million tons per year. And forecasts predict a further rise to 150 million tons per year by 2020. The war-torn nation already extracts more coal than the rest of Latin America combined.

Time and again, the Colombian government has declared that mining is an “engine of development” for the country. But after decades of coal mining, there is no visible benefit for the population in the mining regions. Some 90% of Colombia’s coal is produced in the provinces of La Guajira and Cesar, near the Caribbean coast. After 30 years of coal mining, these provinces are among the poorest in the country.<sup>126</sup>

In Colombia, coal is an export business. While a few small underground artisanal mines produce coal for the domestic market, 92% of the nation’s coal is shipped out of country. Four big international companies, operating in Cesar and La Guajira, produce virtually all of Colombia’s export coal. Enormous open-pit mines scar the landscape, making it impossible to imagine that these were once green and productive lands. The traditional inhabitants, indigenous and Afro-Colombian communities, have lost large parts of their land. But even their remaining lands offer no reprieve from the mining industry. Mountainous waste rock dumps tower over the villages and noise is a constant companion: explosions, heavy machinery and trucks ferrying the coal day and night. Mining is a 24-hour industry in La Guajira and Cesar.

The Cerrejón mine in La Guajira covers an area of 69,000 hectares. It is the biggest mine in all of Latin America and is owned by the biggest multinational mining companies: Anglo American, BHP Billiton and Glencore Xstrata. Cerrejón pioneered open-pit coal mining in Colombia in the 1970s. For local people, the mine seems like an insatiable monster intent on devouring their most precious resources: land and water.

In 2001, police and private security forces entered the village of Tabaco. They expelled the inhabitants and bulldozed their houses, leaving the community traumatized and impoverished. It took years and years of international pressure to make Cerrejón sign an agreement that it would provide the community with new land and houses. The company, however, is in no hurry to see this promise fulfilled. While the old village was long ago buried beneath a waste rock dump, the people of Tabaco are still waiting.<sup>127</sup>

Although much of their land had already been taken, the Wayúu communities in the South of La Guajira never imagined that even their river would become a target for the company’s greed. That is, until Cerrejón announced its intention to develop a 500 million ton coalfield beneath the Ranchería River. In the semi-arid South of La Guajira, this river is a lifeline for local communities and sacred to the Wayúu. Cerrejón’s plan to divert the river would impact dozens of Wayúu villages, whose livelihoods revolve around the Ranchería. As Oscar Guariyu, the elected President of the Wayúu communities in the southern Guajira, points out: “We are not against the development of our country, but we are against a blind development. The relocation of the river would be at the expense of our territory, our environment, our health and our culture. For an indigenous community there is no development without land. An indígena without territory is no longer an indígena.”<sup>128</sup> The unstable international thermal coal market has proved lucky for the Wayúu as low coal prices forced Cerrejón to postpone its plan. But when coal prices rise again, the Wayúu will be fighting for their very survival.

126 “Cesar - Informe sobre el Estado de Avance de los Objetivos de Desarrollo del Milenio - Estado de Avance 2011”, UNDP 2012 & “La Guajira 2012 - Estado de avance de los Objetivos de Desarrollo del Milenio”, UNDP 2012

127 Video footage of the forced displacement of Tabaco: <http://www.youtube.com/watch?v=FPzhP7OaPIM>

128 Speech held by Oscar Guariyu at the RWE shareholder meeting, April 18, 2013

### IV. The “Hot Spots”

“An indígena without territory is no longer an indígena.”



Photo: Sebastian Rötters

El Hatillo

Drummond is accused of having financed Colombia’s paramilitary forces.

If Cerrejón is the best-known coal company in Colombia, then Drummond is the most controversial. The privately owned U.S. company started its mining operations in the Cesar department at the beginning of the 90s, and is accused of having financed the so-called ‘North Block’ of Colombia’s paramilitary forces. Former paramilitaries have said under oath that the company financed the “Juan Andres Alvarez” paramilitary unit between 1996 and 2006, the year of the North Block’s demobilization. Without the money from Drummond, declared the former members of the unit, it would never have been able to increase its numbers of armed fighters. For the company, the protection of business interests obviously outweighed the hundreds of killings, forced disappearances and massive displacement of peasants reported in the area.<sup>129</sup>

On March 12th 2001, Valmore Locarno Rodríguez and Victor Hugo Orcasita, respectively president and vice-president of the miner’s union Sintramienergetica, were on a bus with other co-workers. As the bus travels from the Drummond mine to the next town, it is stopped by members of the paramilitary unit Juan Andres Alvarez. They storm the bus, force the workers to disembark and execute Locarno Rodríguez with 4 shots to the head. Hugo Orcasita is abducted. When his body shows up the next day, it shows clear indications that he was first tortured and then shot. Although Drummond denies any responsibility for these deaths, a former subcontractor, Jaime Blanco Maya, was recently sentenced to 38 years of prison by a Colombian court. During the court proceedings, Blanco Maya and other former paramilitaries stated under oath that company officers - who are still employed by Drummond - were involved in these crimes. In its judgment against Blanco Maya,



the court therefore expressly ordered public prosecutors to begin investigations against the respective members of Drummonds' management.<sup>130</sup>

Near Drummond's operations, lie the La Francia and El Hatillo mines, which were acquired by the U.S. bank Goldman Sachs in 2010 and 2012 respectively. These mines, together with others owned by Drummond and Prodeco (a subsidiary of Glencore Xstrata), have caused extremely high air and water pollution in the communities of El Hatillo, Plan Bonito and Boquerón. The three communities are boxed in by the mines. The air is full of dust, and many people are stricken with respiratory or other health problems. The situation is especially bad for El Hatillo where hardly anyone has a job and arable land is no longer available.

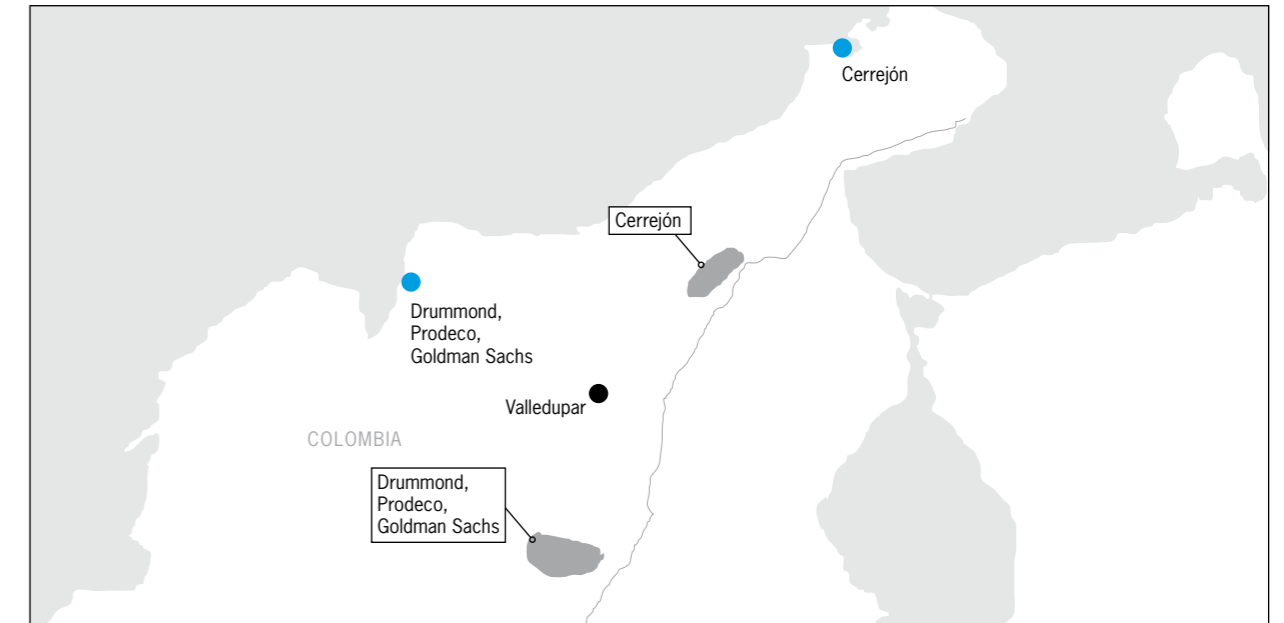
Due to the absolutely dismal situation of these three communities, in 2010, the Colombian authorities put out an order to the mining companies that they must resettle El Hatillo and the other villages. This is the first time in Colombian history that the government has acknowledged the pollution problems of communities living adjacent to mines.<sup>131</sup> The companies, however, ignored, delayed and then fought the resettlement order. In the meantime, people continue to live in the polluted area and especially in El Hatillo, hunger is a constant companion. In August 2013, its leaders published a communiqué appealing to the companies: "The community will not survive if there is no relocation process. This is our third try and we wish that it will be the last one and one that will be dignified and successful."

In the meantime, coal mining in Colombia continues to expand. New port facilities have been built, with more under construction. Many more concessions have been given out and further expansion is still projected, while homeless farmers and indigenous communities struggle for survival among the coal mines. The alliance of government and coal companies continues to create dependency while calling it development.

#### IV. The "Hot Spots"

One of Drummond's top financiers is offering a human rights debit card. What's next?

■ Hard Coal Deposits  
■ Important Coal Ports



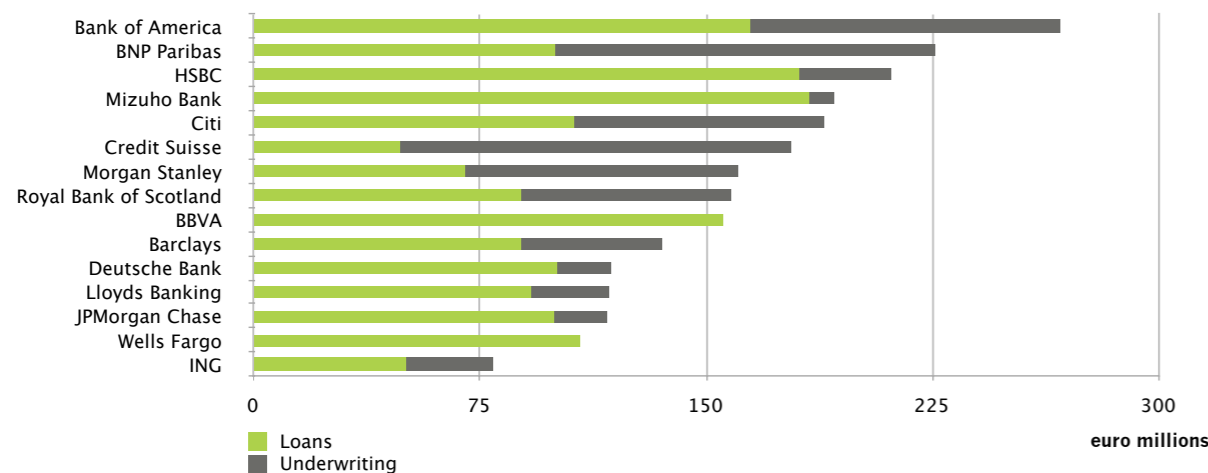
### Banking on Human Rights Offenders

We also undertook a separate analysis to see which financial institutions have been bankrolling the company Drummond since 2009. Five of the banks below (HSBC, BBVA, Mizuho, Citi and BNP Paribas) are signatories to the Global Compact, which states: "Businesses should support and protect the protection of internationally proclaimed human rights." Bank of America, one of Drummond's top 3 financiers, is currently offering a special "human rights debit card" to its customers. The Drummond case shows just how meaningless and cynical banks' human rights promises are.

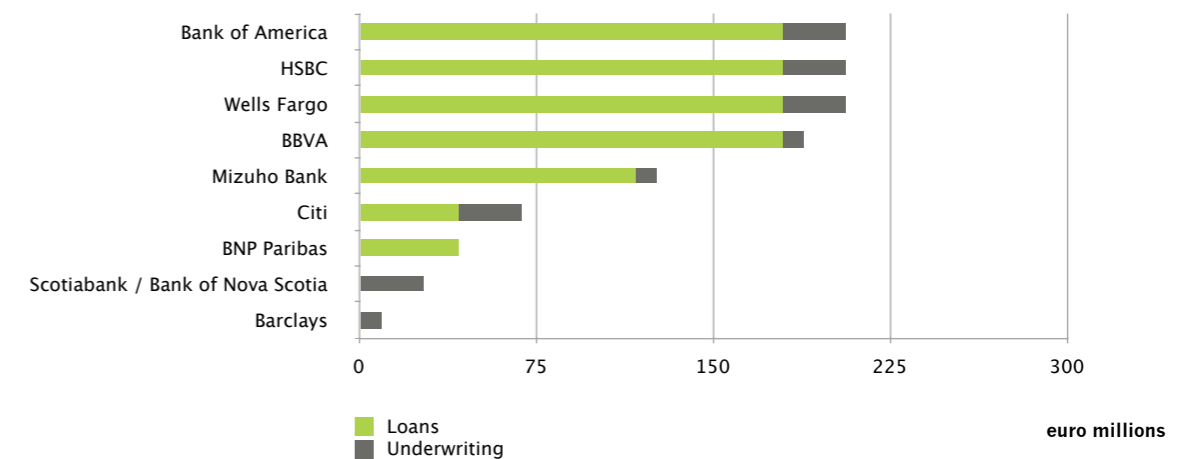
### Top Coal Mining Banks for Colombia

The following chart shows the top 15 financial institutions, which played the lead role in financing the coal mining sector in Colombia since 2011. With an exposure of 267 million euro, Bank of America is number one, while BNP Paribas (226 million euros) and HSBC (211 million euros) are number 2 and 3 respectively. When only considering direct lending, however, the Japanese bank Mizuho, took lead position, while Credit Suisse was the largest underwriter.

Banking on Colombian Coal, 2011 - mid-2013



Banks financing Drummond, 2009 - mid-2013



130 Judgment against Jaime Blanco Maya, January 25th, 2013.

131 "Resolución No. 0970", Ministerio de Ambiente, Vivienda y Desarrollo Territorial, May 20th, 2010.



# Southern Africa Cape Coal

While the legacy of coal mining has already left a heavy mark on some countries, others are just experiencing the first wave of international exploration teams searching for rich coal fields. In South Africa, the long-term negative impacts of decades of coal extraction are highly visible, particularly in the form of diminished and polluted water resources. In neighboring Mozambique, the dawn of a new era of coal mining has just begun, but the negative impacts are already being felt. Meanwhile in Botswana and Zimbabwe, foreign companies from China, India or the United Kingdom have just started prospecting or negotiating concession leases.

## South Africa No Water - No Life

South Africa holds the world's fourth largest coal reserves and produced 259 million tons in 2012. About ¾ of its production is used domestically. This is no surprise, as the country generates 94% of its electricity by burning coal. 74 million tons of coal were exported in 2012, mainly to Europe and Asia.<sup>132</sup> The country's coal mining sector is dominated by Anglo-American, Exxaro, Sasol, BHP Billiton and Xstrata. The 'big five' account for 80% of South Africa's coal production.

South Africa is a water-stressed country, where rainfall is scarce and unevenly distributed so that drinking water often has to be pumped over hundreds of kilometers.<sup>133</sup> While the country's National Water Act of 1998<sup>134</sup> recognizes that "water is a resource that belongs to all people," the reality is that it belongs more to some than to others. The coal industry is one of the biggest users and polluters of water in the country. For both underground and surface mining, groundwater is pumped out, water tables are lowered and ecosystems and agricultural production are damaged. Leached water from waste rock dumps and discharge from the mines themselves, have immense impacts on water resources.

Nowhere is this more evident than in Mpumalanga, the province east of Johannesburg, where a large part of the country's water reserves is generated. The wetlands of Mpumalanga are a network of hundreds of lakes and rivers. Four of South Africa's biggest rivers – the Tugela, Vaal, Olifants and Pongola – have their source here. Mpumalanga is, however, also South Africa's cradle of coal mining. While the coal miners continue to expand their business into new regions and provinces, the terrible heritage of abandoned coal mines remains. Hundreds of them leak acid mine water laced with heavy metals into the waterways. Acid mine drainage contaminates water resources for decades and threatens the water supply.<sup>135</sup> People and wildlife in the Mpumalanga Lake District already suffer from a shortage of potable water. Many peasants face the problem that groundwater is too contaminated to even use it for irrigation.

The Olifants River, which supplies the famous Kruger National Park, is another victim of the industry's dirty footprint. Decade-long coal mining has polluted the river and degraded its water quality. To make matters worse, the Olifants also has to serve as water supply for several coal-fired power plants nearby. Year by year, it loses more water and the surrounding region is slowly turning into a wasteland. Ironically, the water of the river is too contaminated to be used in the thermal power plants without prior treatment. The water problem is widespread all over the mining regions. The contaminated water reservoirs of Middelberg and Witbank put even Johannesburg's fresh water supply at risk.<sup>136</sup>

132 "Coal statistics", World Coal Association, 2013

133 "Bitter Coal – Summary," urgewald, 2013

134 "National Water Act, Act No. 36," Republic of South Africa, 1998

135 "Coal mining on the Highveld and its implications for future water quality in the Vaal river system", McCarthy & J.P. Pretorius, 2009

136 "Water Hungry Coal," Greenpeace Africa, 2012

### IV. The "Hot Spots"

Acid mine drainage contaminates water resources for decades.



Photo: Peter Steudtner

Brickbuilder from Moatize village. Mining giant Vale took away his home and livelihood for a coal mine.

In Soutpansberg, CoAL started a water war against the local population.

In theory, South Africa's Department of Water Affairs is responsible for management and fair allocation of water supplies to different sectors of society. In practice, it turns out that at least 1/3 of the country's coal mine operators haven't even bothered to apply for a water license. South Africa's Department of Mineral Resources lists 118 operating coal mines, but only 83 have been issued water licenses.<sup>137</sup> In a country where water shortage is a permanent problem, the further development of the coal sector is a recipe for disaster. South Africa's Department of Water Affairs projects that water demand will exceed supply by 2025. But already today, more than 1.9 million children have no access to clean water. Greenpeace South Africa comments aptly: "water and coal cannot be strategic resources at the same time."

Nowadays the new frontier of coal mining has spread into the north and so has the struggle for water. Soutpansberg ("Salt Pan Mountain") in Limpopo Province is one of the new battlefields. In this dry and semi-arid region, the local population is defending its scarce water resources against aggressive coal mining companies. Their worst enemy is called Coal of Africa Limited (CoAL).

CoAL, an emerging South African mining company, started operating the Vele mine in Limpopo Province in 2012. The company is prospecting for an additional project, the highly controversial Makhado mine. It is located in an area that has been excluded by other mining companies due to its constant water scarcity. CoAL estimated that the mine will need approximately 4.6 million liters of water per day. Even according to the company's own studies, the mine would exhaust ground water deposits within a couple of years, leaving local communities without a water supply.

This prompted fierce resistance. Local farmers and traditional communities wrote letters to CoAL's investors and shareholders, stressing 32 criminal charges which



have been brought against the company. They told the company's shareholders, "we do not understand why visitors feel they can come into our ancestral lands, destroy it totally in a few decades and walk away, leaving just a desert and a wasteland."<sup>138</sup> But CoAL seems well-connected, and the regional government issued a permit for the mine in September 2013. "There is a huge fight coming," said Jonathan Mudimeli, chairperson of the Mudimeli Royal Council, whose community is in the middle of the proposed mine.<sup>139</sup> The locals are determined to win this war, because "without water there is no life."<sup>140</sup>

## Mozambique No Crops, Only Dust

Mozambique produced 4.9 million tons of coal in 2012, which were almost entirely exported.<sup>141</sup> The country's high quality coking coal reserves have attracted the attention of international coal miners. Mozambique is considered to hold the most important new coking coal reserves in the world, after Mongolia. Various forecasts predict that Mozambique might produce up to 100 million tons of coal per year after 2015, but this would entail huge infrastructure investments first.

Most of the country's mineral reserves are situated in the Tete province, a region squeezed in between Zimbabwe, Zambia and Malawi. An estimated 100 firms are prospecting for minerals in this region already. More than 50 are looking for coal – and none is Mozambican.<sup>142</sup> However up until now, the only active coal mining projects are Rio Tinto's Benga mine and Vale's Moatize mine. Together these two alone hold estimated reserves of 4.5 billion tons.<sup>143</sup> With these two projects, the era of large-scale mining has begun in Mozambique.

Although coal mining has just started, the problems are already as evident as in South Africa's Limpopo province. The contracts between the mining companies and the state are kept secret.<sup>144</sup> And, the relocation of communities living above the coal reserves has proved to be a catastrophe.

Brazilian mining giant Vale relocated 716 families from Moatize to make way for an open-cast coal mine. In the process, however, Vale destroyed the community's sources of food production and income, without providing a viable alternative.

Many families from Moatize were relocated to Cateme, a dry, hot and desolate area, which produces no crops, only dust.<sup>145</sup> They wrote letters, first to the company, and then to the Mozambique National Assembly to complain about the unbearable living conditions here. When none of these actions had any impact, they marched on the company's offices and blocked VALE's rail link to the port of Beira, stopping all coal trains for about 24 hours. Riot police dispersed the peaceful demonstration, with 14 people arrested and four more severely injured.<sup>146</sup> The next day, police came to Cateme, threw teargas into the houses and arrested some of the men. Two of the victims reported being tortured in prison. Despite nationwide media coverage of their situation, the community still lives without water and electricity services. VALE is making vast sums now from the land in Moatize, but its original owners have been dumped like waste.

138 "CoAL out of Africa," The Gaia Foundation, December 13, 2011  
 139 "Coals Hidden Water Cost to South Africa," Yolandi Groenwald, Greenpeace Africa, 2012  
 140 Open Letter to shareholders and investors of CoAL, Dzomo la Mupo, 2011  
 141 "Jahresbericht 2013," Verein der Kohlenimporteure, 2013  
 142 Said by provincial director for Mining Resources and Energy, Manuel José Sithole, 2012  
 143 "The New Frontier Mozambique," AME Group, 2013  
 144 "MOZAMBIQUE News Reports & Clippings, ed.207," Joseph Hanlon, November 5, 2012  
 "What is a House without Food?," Human Rights Watch, 2013  
 145 "Notes from the Field: Vale-displaced communities in Cateme," Justica Ambiental, October 10, 2012  
 146 "Visual Letters to the UN on Forced Resettlement in Northern Mozambique," Peter Steudtner, 2013

### IV. The "Hot Spots"

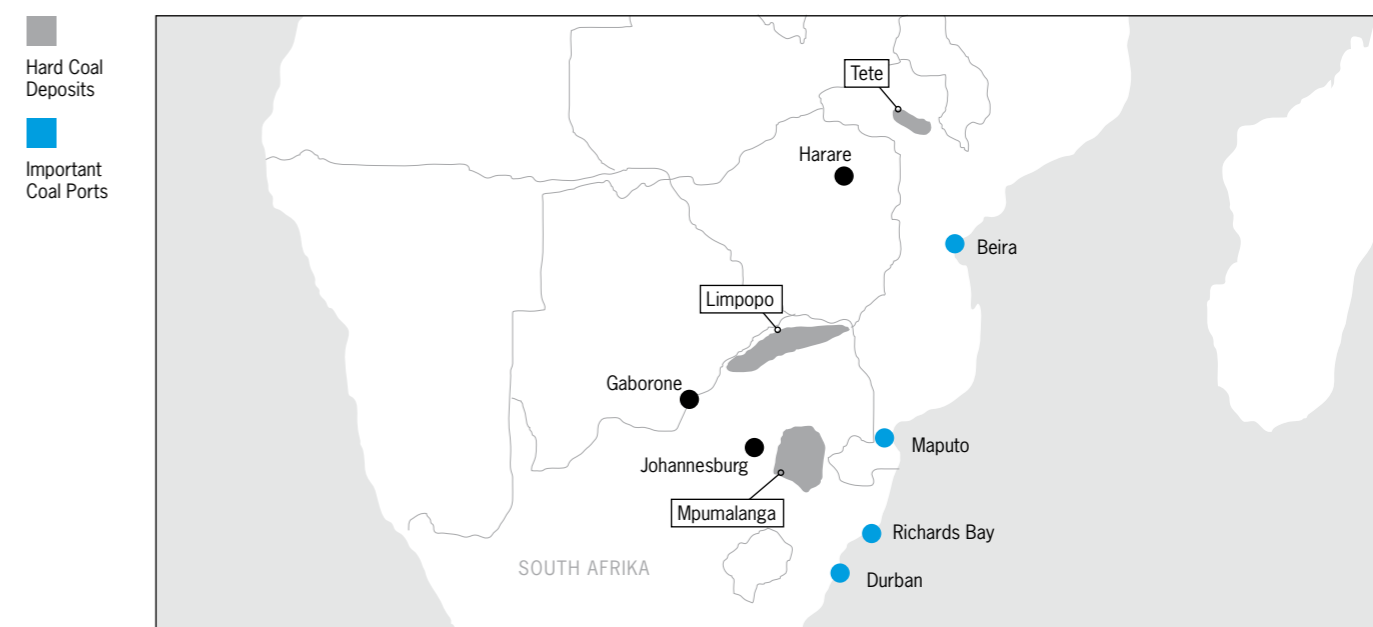
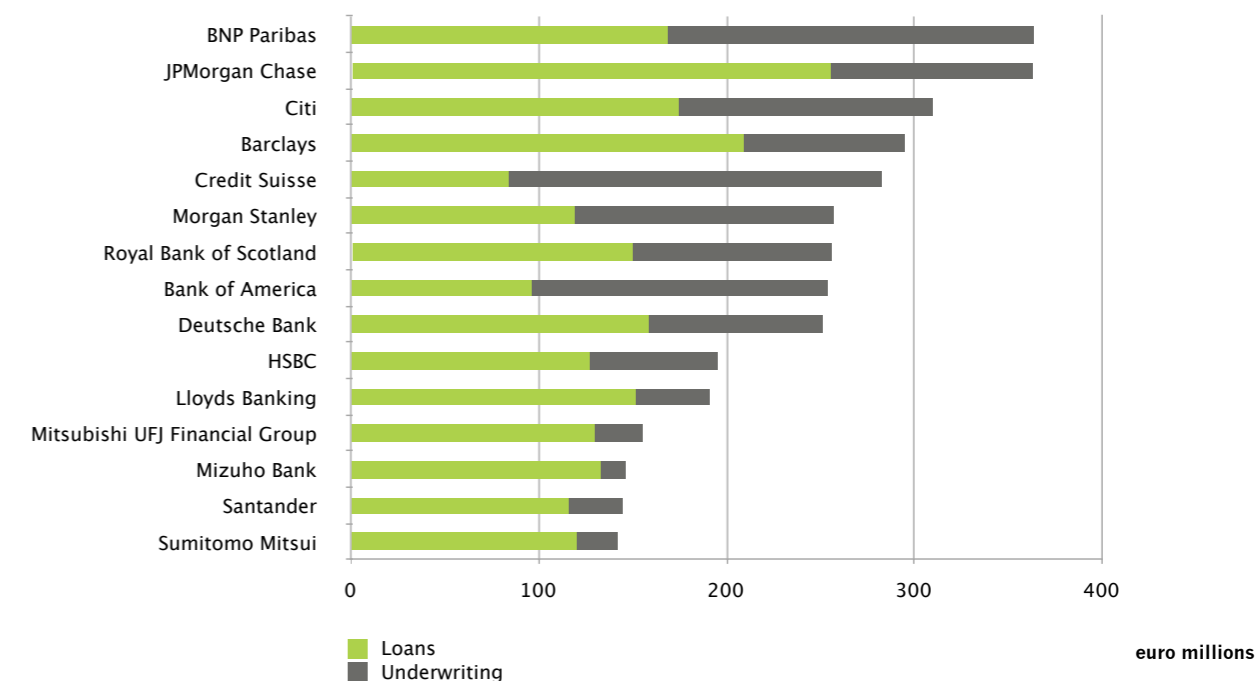
The relocation of communities has proven to be a real catastrophe.

## The Top Coal Mining Banks for Southern Africa

The following chart shows the 15 banks that provided the most financing for companies involved in the Southern Africa hotspot between 2011 and mid-2013. BNP Paribas and JPMorgan Chase rank as equal first, lending or underwriting 363 million euros each, with Citi ranking third with 310 million euros.

JP Morgan Chase and Deutsche Bank were the main financiers of Coal of Africa Limited (CoAL), lending or underwriting 86 million and 18 million euros respectively, primarily through share issues. But the largest deals for this hotspot were for Glencore Xstrata, which accounted for over 75% of the total finance issued.

Banking on Southern African Coal, 2011 - mid-2013





# USA Leveling Mountains, Demolishing Communities

The United States has by far the world's largest coal reserves, and is the second biggest coal producer after China. But, with 935 million tons produced 2012, US coal production has fallen more than 10% from its 2008 peak, as strengthened federal regulations on emissions, nationwide campaigns to shut down coal plants and falling natural gas prices have taken their toll on the industry.

Five companies are responsible for 58% of US coal production: Peabody Energy, Arch Coal, Alpha Natural Resources, Cloud Peak Energy and CONSOL Energy. Over 90% of US coal is consumed domestically. However, as domestic consumption falls, exports are growing rapidly, particularly to the EU.<sup>147</sup>

US coal production is witnessing a shift from underground to surface mining and an attendant shift from East to West. While production from underground mines has remained roughly constant since 1949 (and is lower today than in underground mining's heyday in the 1920s), the amount of coal produced by surface mines has exploded, rising more than six-fold in the same period.

This shift has been primarily driven by technological developments that make it feasible to mine the large, deep coal seams of the Powder River Basin. Ironically, it has also been caused in no small part by the passage of air pollution regulations.<sup>148</sup> In the 1960s, energy companies favored Appalachian coal due to its higher energy content in comparison to Western coal. However, Western coal contains significantly less sulphur on average than Appalachian coal. The restrictions placed on sulphur emissions under the Clean Air Act have thus contributed to a general shift away from Appalachian coal and towards large Western surface mines. In 1970, coal mined west of the Mississippi accounted only for 7% of the US total and increased to 58% by 2011.

The Appalachian coal industry's response has been to turn increasingly to the more labor- and cost-efficient mountaintop removal surface mining - which has also allowed the industry to tap into lower-sulphur coal seams in central Appalachia that were previously uneconomical to recover. Mountaintop removal mining began in the 1970s, but has grown rapidly since the 1990s: it currently accounts for no more than 8% of US coal production, but contributes widespread environmental devastation of forests and streams throughout Appalachia.<sup>149</sup>

## Intoxicated Landscapes

Coal mining in the United States has devastating impacts on the health of miners, communities, and the environment. In the eastern Appalachian region, coal mines and coal slurry waste ponds have sickened and displaced communities, destroyed mountain ecosystems, and put the lives of miners at risk. Out west in the Powder River Basin coalfields, immense strip mines have destroyed grassland habitat and contaminated groundwater.

Coal mines and slurry waste from coal preparation plants threaten human health and endanger the physical safety of communities. Liquid coal slurry waste contains toxic chemicals that can leach into groundwater and pose severe health risks for communities near slurry ponds or underground slurry injection sites. For example, in Prenter, West Virginia, where an underground injection of coal slurry contaminated the town's water supply, six people in a ten-house neighborhood were diagnosed with brain tumors. Hundreds of coal slurry ponds are located in coal states in the central and eastern part of the country, imperiling local water sources

## IV. The "Hot Spots"

Toxic coal slurry waste ponds have sickened and displaced communities.



and risking catastrophic floods of toxic sludge if decades-old earthen containment dams were to fail.

## Blasting Appalachia

The mines have buried over 3,000 km of streams and clearcut 5,000 km<sup>2</sup> of forest.

Although both surface and underground coal mines in the US have harmed communities and ecosystems, mountaintop removal surface mining has posed a uniquely destructive threat to Appalachian communities. Mountaintop removal mines excavate topsoil and blast subsurface rock layers above and between coal seams. Mines deposit the resulting waste rock and soil in neighboring mountain valleys as massive valley fills that are hundreds of feet long and hundreds of feet high, and can leach pollutants, including heavy metals, into streams and groundwater. To date, these mines have buried over 3,000 kilometers of streams and clear-cut 5,000 square kilometers of hardwood forest.<sup>150</sup> Despite a recent decline in coal production in the Appalachian region, coal companies are continuing to apply for permits to build new and expand existing mountaintop removal mines.

The environmental impacts of mountaintop removal mining include air pollution from blasting, contamination of streams and groundwater from toxic mine runoff, and the destruction of entire mountaintop and valley ecosystems to expose coal seams. A survey of peer-reviewed studies published in Science in 2011 concluded that the practice causes "pervasive and irreversible" environmental damage "that mitigation practices cannot successfully address."<sup>151</sup> The survey also concluded that public health studies of mountaintop removal mining found that it has a "high potential for human health impacts." Other studies have found that living near mountaintop removal mines is associated with elevated risks of cancer, heart

147 "Quarterly Coal Report, October-December 2012", US Energy Information Administration, March 2013

148 "Big Coal: The Dirty Secret Behind America's Energy Future", Jeff Goodell, 2006

149 <http://www.smithsonianmag.com/science-nature/Mining-the-Mountain.html>

150 "Mountaintop Removal: 'Pervasive and Irreversible' Damage in Appalachia", Physicians for Social Responsibility.

151 "Mountaintop Mining Consequences", Palmer, et al., Science 8 January 2010



disease, kidney disease, birth defects, and premature mortality.<sup>152</sup> In addition to threatening human health, mountaintop removal mines have uprooted entire communities and destroyed national historic sites.<sup>153</sup>

## Blue Skies to Brown Horizons

The Powder River Basin in the western states of Montana and Wyoming contains one of the largest coal deposits in the world and is home to the North Antelope Rochelle mine and the Black Thunder mine, the world's two largest coal mines by production volume. Coal mining and coal bed methane production from this region pose significant threats to the climate and have also caused air pollution, drained aquifers, contaminated water supplies and sacrificed delicate grassland prairie ecosystems for massive strip mines.<sup>154</sup>

These impacts have been felt by ranchers and Native American communities alike, as Otto Braided Hair of the Northern Cheyenne noted: "Within minutes of where we live, in almost any direction, there is ongoing destruction from coal mining... The blue skies are streaked with a brown haze of pollution, and the sacred waters are being threatened and damaged due to coal bed methane development, among other indications of disregard to the environment."<sup>155</sup>

With US coal-fired power generation in steep decline, coal producers in the Powder River Basin such as Arch Coal and Peabody Energy have sought to tap export markets as a source of future growth. These coal exports have already generated controversy: In January 2013, two senators called for investigations into royalty payments on exported coal that mining companies allegedly failed to pay the US government. And with existing US coal export terminal infrastructure operating at maximum capacity, there are several live proposals to develop new coal terminals in the Pacific Northwest and along the Gulf Coast, which have met with strong popular resistance.<sup>156</sup>

Shipping an anticipated 127 million metric tons of coal by rail per year through West Coast and Gulf communities would have severe impacts on air quality, public health, and local economies while exacerbating the climate crisis by facilitating the extraction of Powder River Basin coal that would otherwise stay in the ground. At port communities, rail, road, and ship traffic, combined with fugitive dust from coal stockpiles would put Native American heritage sites, public health, and the survival of coastal fisheries at risk. For example, the site of the proposed Cherry Point terminal would desecrate land that is sacred to the Lummi Nation, while endangering crab fisheries and feeding grounds for salmon and orca.

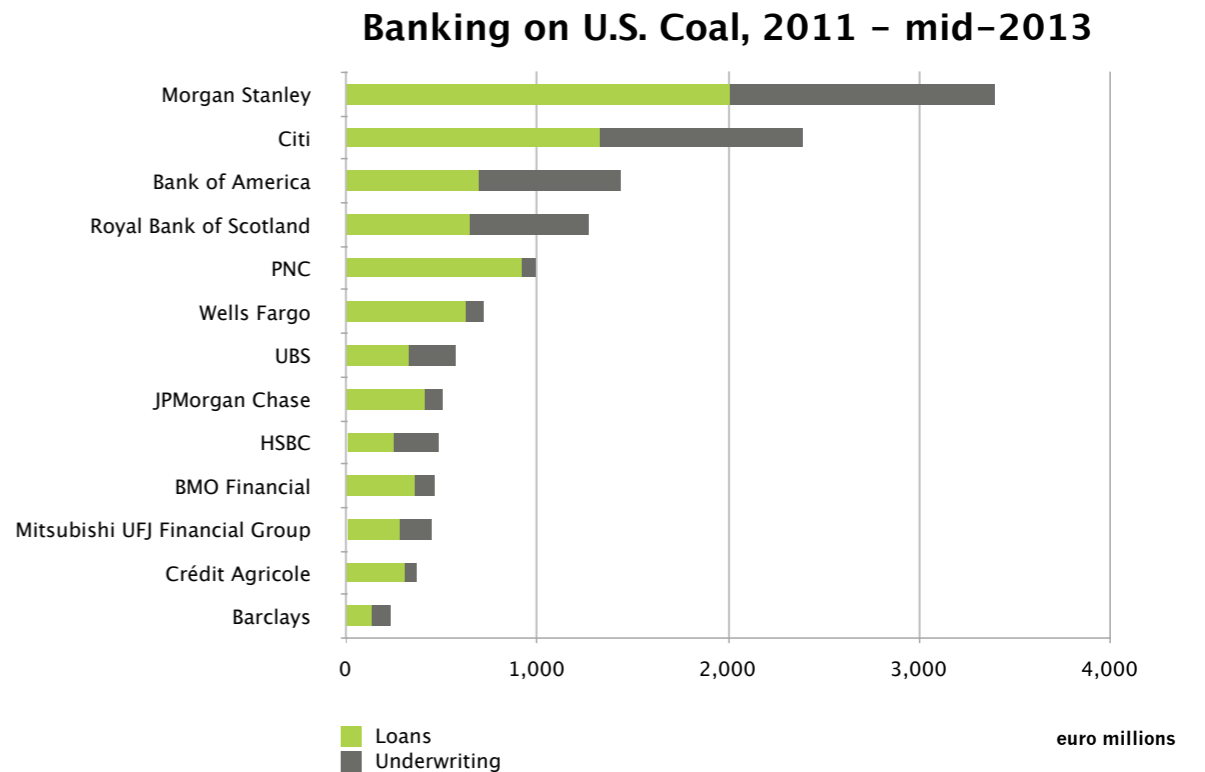
## Fruitful Resistance

In the face of coal mining's impacts on communities and the environment, pressure on the coal industry has been building from Native American nations, port cities throughout the Pacific Northwest, communities in the Appalachian coalfields, and university campuses across the country. This pressure, combined with strategic litigation, has accelerated the shutdown of the US coal fleet, with 150 coal plant retirements announced since 2010.<sup>157</sup> In addition, community pressure coupled with deteriorating financial outlook for coal exports has led to the cancellation of

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"Within minutes of where we live, in almost any direction, there is ongoing destruction from coal mining."

three proposed coal export terminals in the Pacific Northwest as of 2013.<sup>158</sup> In Appalachia, Patriot Coal was compelled to agree to phase out its mountaintop removal mining operations as part of its 2012 bankruptcy settlement. And a growing wave of student pressure on hundreds of campuses has called on universities to divest from coal miners and other fossil fuel companies.



152 Several health studies on MTR are available at the Coal River Mountain Watch website: <http://crmw.net/resources/health-impacts.php>

153 "Coal Risk Update: Arch Coal, the Blair Mountain Battlefield, and Bank Human Rights Commitments", Rainforest Action Network, March 2013

154 "Conservation Groups Challenge US Forest Service's Plan for Dirty Coal Strip Mining in National Grassland", Powder River Basin Resource Council, December 6, 2011

155 "The True Impact of Coal Mining", Bruce Nilles, Huffington Post, October 30, 2009

156 "Demand Cools as Fight Rages over Coal-Export Terminals", Seattle Times, Sept. 3, 2013

157 "150 Plants Retired: Another Major Milestone Hit in Moving Beyond Coal", Mary Anne Hitt, October 8, 2013





## V. Moving Away from Coal

In their glossy Corporate Social Responsibility (CSR) reports, most banks emphasize their investments in renewable energy. And yes, it's true that more money is also flowing into renewable energy. But as long as banks are still pouring money into high-carbon sectors, that added percentage in renewables finance is not going to make much difference to our climate.

One of the most frightening figures in our study is the almost 400% increase in coal financing over the past 8 years. Asking banks to move away from coal or to reduce their fossil fuel portfolio does not make you popular in these institutions. Banks hate doing less of something, as everything (climate change included) is seen as a "business opportunity." But that's what we are asking. We want banks to say "no", when the Australian coal industry asks for that next coal terminal loan or when Indonesian companies want a financial push for their rush into central Borneo. Banks must stop seeing coal as a business opportunity. Bankers must realize that they live on the same planet as the rest of us, and on that planet, coal is an opportunity for climate suicide.

The World Bank president Jim Yong Kim sums it up nicely in his preface to the "Turn Down the Heat" report: "The science is clear. There can be no substitute for aggressive emissions reductions targets."

### Public banks moving away from coal

2013 has been a watershed year for NGOs campaigning against public coal finance. A number of international public banks have finally started to acknowledge the devastating impacts of coal on our climate and on the health of communities. And more importantly, they have begun taking concrete steps to clean the coal dust out of their portfolios.

The World Bank was the first to move. Its new "Energy Sector Directions Paper," released on July 17th, stated that the Bank will from now on only fund new greenfield coal-fired power plants "in rare circumstances."<sup>159</sup>

Just one day after this announcement, the Export-Import Bank of the United States said "no" to an application for financing the construction of a new coal fired power plant in Vietnam.<sup>160</sup> This was in the wake of President Barack Obama's commitment to put "an end to US government support for public financing of new coal plants overseas" (with some exceptions).<sup>161</sup>

159 "Toward a Sustainable Energy Future for All: Directions for the World Bank Group's Energy Sector", World Bank, July 2013

160 "Ex-Im Bank Halts U.S. Funding Review for Vietnam Coal Plant", Bloomberg News, July 18, 2013

161 "The President's Climate Action Plan", The White House, June 2013





Photo: Rainforest Action Network

There is a long road between public announcements and a clean portfolio.

Next came the European Investment Bank (EIB). With a lending portfolio of 72 billion euro, the EIB is actually a much bigger lender than the World Bank. On July 24th 2013, the EIB announced the adoption of a new Emissions Performance Standard (EPS)<sup>162</sup> of 550 grams of carbon dioxide per kilowatt hour (CO<sub>2</sub>/kWh) to be applied to all fossil fuel generation projects.<sup>163</sup> This standard will exclude the financing of most new coal-fired and lignite-fired power projects. Since 2010, the EIB is also putting a “shadow carbon price” of 28 euros on each ton of CO<sub>2</sub>, with the price going up each year to reach 45 euros by 2030.

But this was not all. Prior to the 2013 meeting of the G20 in Russia, the Nordic countries made a joint statement with the US on September 4th, stating that “the leaders of Denmark, Finland, Iceland, Norway, and Sweden will join the United States in ending public financing for new coal-fired power plants overseas, except in rare circumstances.”<sup>164</sup>

The European Bank for Reconstruction and Development (EBRD) also plans to revise its energy policy in 2013. And, in what NGOs took to be a hopeful sign, the bank pulled out of financing the controversial Kolubara B lignite power plant in Serbia in September 2013.<sup>165</sup>

The real test, however, is how these newly adopted policies will be implemented in practice. And this is where problems are cropping up. An example is the World Bank’s Indonesia Infrastructure Guarantee Fund. This Fund is using World Bank money to develop 16,000 MW (!) of coal-fired power generation in Indonesia. The very first project to be developed is the 2,000 MW Central Java Power Project, which has incited thousands of local residents to multiple protests, resulting in violent clashes with project security and the military. The World Bank must ensure that the limits in its New Energy Directions paper are applied to all World Bank finance, including infrastructure funds, development policy loans and financial intermediaries.<sup>166</sup>

As this example shows, there is a long road between public announcements and a clean portfolio. We, nonetheless, believe that the adoption of the cited policies are an important first step on that road. Although, public pressure will have to force these institutions to make good on their promises, the new policies set an important precedent.

And when we are talking about precedents, there is another institution we should mention: the U.S. Overseas Private Investment Corporation (OPIC). OPIC is a government-owned institution, which provides financing, guarantees and political risk insurance for U.S. companies. What is notable is that OPIC took a conscious decision to do less fossil fuel finance in 2008 and then actually began changing the contents of its portfolio. OPIC has a greenhouse gas cap that caps the emissions it can have ‘on its books’ for any fiscal year. The policy requires a 30% reduction in portfolio GHG emissions by 2018 and 50% by 2023. OPIC must account for the direct GHG impact of any project it finances and count that against its target. Given legacy emissions from past projects, OPIC in 2011 financed US \$1.3 billion in clean energy and no fossil fuel projects.

Now that’s pretty amazing and shows how hard it sometimes is to figure out exactly who the bad and the good guys are. We have state-backed OPIC in the U.S. deciding to count and significantly cut its financed greenhouse gas emissions back in 2008, while in Germany or Japan, it’s still unthinkable for state-backed export credit agencies to back off a deal for mere climate reasons. Although they are public players, in some areas, the so-called export banks or export credit agencies

162 Emission Performance standards are requirements that set specific limits to the amount of pollutants that can be released into the environment from power plants.  
 163 “European Investment Bank to reinforce support for renewable and energy efficiency investment across Europe”, EIB, July 24, 2013  
 164 “Joint Statement by Kingdom of Denmark, Republic of Finland, Republic of Iceland, Kingdom of Norway, Kingdom of Sweden, and the United States of America”, The White House, September 4, 2013  
 165 “EBRD gives up Kolubara B lignite power plant project in Serbia”, CEE Bankwatch, September 9, 2013  
 166 “World Bank Accelerating Coal Development in Indonesia”, Oil Change International, September 2013



have a great deal of influence on private banks. Many coal projects in developing countries are financed by a web of public and private bank contributions. Private banks' participation in certain deals – the biggest and the most controversial ones – often depend on state banks guaranteeing that they will take on the risk if the deal goes bad. These guarantees vary from country to country, but if the U.S. and Nordic export banks don't do coal-fired power any more, that is an important precedent, both for private and public financial institutions.

The U.S. commitment actually goes a step further. On October 29th 2013, the US Treasury Department declared that it would instruct its representatives in the Multilateral Development Banks to vote against financial support for new coal-fired power plants around the world, adding that the United States would also seek to push private investors to favor energy technologies that are better for the environment.<sup>167</sup>

Some of the most important international development institutions and the export banks of the U.S. and the Nordic countries now recognize that coal-fired power projects are harmful to the climate, to people's health and have no place in development financing.

While we expect (and hope) that these new policy decisions will make it harder for the coal industry to raise money, there is a big gap in almost all of these policies. They focus on coal-fired power generation, but mention neither coal mining nor coal infrastructure. This is an area, in which both public and private banks must amend their policies. Large investments into new coal mines and infrastructure also have a "lock-in" effect and should be excluded for the very same reasons as investments into coal-fired power.

## Private Bank Policies: Mostly Hot Air

While the leading public banks have begun taking first steps away from coal, private commercial banks are still deep into coal. Although many private banks have over the years developed standards or policy statements of some kind, these are often weak or even meaningless, when it comes to coal.

For the coal power sector, the most stringent policy to date is HSBC's 2011 energy policy,<sup>168</sup> which includes an Emissions Performance Standard (EPS) of 550g CO<sub>2</sub>/kWh - the same level applied by the European Investment Bank. However, HSBC only applies this standard to developed countries. For developing countries, an EPS of 850g CO<sub>2</sub>/kWh applies. Other bank standards are instead based on thermal efficiency thresholds. BNP Paribas<sup>169</sup> and Société Générale<sup>170</sup>, for example, require an efficiency ratio of 43% in high income countries and 38% elsewhere. From our viewpoint, these standards are incredibly low (modern gas-fired power plants can, for example, reach an efficiency level of 60%). We also do not understand the reasoning of having different emissions performance or efficiency standards for developed and developing countries. Can developing countries better afford an inefficient use of fuel or higher emissions? We don't think so. What can in any case be said about these standards, is that they fall far short of the European Investment Bank's emissions performance standards and the World Bank's policy on new coal power plants.

While some banks do have general mining sector policies, these are for the most part so weak that they do not exclude even the blackest sheep in the corporate mining herd. When it comes specifically to coal mining, hardly any bank standards exist. The only policies and statements that directly relate to coal are mostly about

## V. Moving Away from Coal

There is a huge gap in the banks' new climate policies: they don't mention coal mining.

Mountaintop Removal. Mountaintop Removal or MTR is a special mining technique in which the tops of mountains are literally blown up to reach the coal seams beneath.

Following many years of campaigning by Rainforest Action Network (RAN), some US banks adopted sector thresholds or enhanced due diligence processes for financing this type of coal mining.<sup>171</sup> But as RAN revealed in its latest Coal Finance Report Card,<sup>172</sup> the same banks remain heavily involved in financing Mountaintop Removal companies. In Europe, Credit Suisse, however, adopted in 2010 a mining policy that seems much more solid: it lists mountaintop removal mining as one of seven "excluded activities."

## The Policy Lie

Unfortunately, it's also a prime example of what we call: the big policy lie. Increasingly, banks have begun issuing all kinds of commitments and policy statements which look good at first glance. For example like this:

"Credit Suisse does not directly finance or provide advice on operations to extract coal or other resources where mountaintop removal mining practices are used."<sup>173</sup>

Did you catch the trick word, which allows Credit Suisse to feel that this sentence is in no way an impediment to channeling millions of euros into the coffers of companies practicing mountaintop removal?<sup>174</sup> The word is: "directly." So Credit Suisse is not giving a loan to blow up mountains (this would, after all, make them somewhat unpopular in Switzerland). No, all they are doing is giving a "general corporate loan," to a company that does mountaintop removal, which (surprise, surprise) might be using this loan to blow up mountains or, to be fair, for other things. No one really knows, but it lets Credit Suisse do all the financing it wants for Mountaintop Removal companies and look good at the same time. What a great deal – that's why more and more banks are putting out ever improving standards on the kinds of projects they will under no circumstance finance. The big policy lie is based on the fact that banks do very little project financing. They mostly finance companies and can pretend not to know that their money is flowing into nasty activities.

We've picked Credit Suisse here as an example, but let us be clear that this is fairly typical behavior for the universe of commercial banks. It's rare to find banks, which are serious about applying quality environment and social policies to general corporate finance.

As we saw in our research, almost all finance for the coal mining sector is in the form of corporate loans or underwriting of shares and bonds. The percentage of direct project finance that showed up in our research was, in fact, so small (around 2%) that we haven't even mentioned it up to now.

Many of the most controversial projects are financed by banks giving companies "blank checks" in form of revolving credit facilities, corporate loans or raising money for them through share or bond issues.

Almost all of the commercial banks in this study claim to deeply care about our climate, but as long as they have no real exclusion policies or standards for corporate finance, their money will continue to be used for investments that are turning up the heat.

When it comes to coal mining, hardly any bank standards exist.

167 "U.S. Says It Won't Back New International Coal-Fired Power Plants", The New York Times, October 29, 2013

168 "Energy Sector Policy", HSBC, January 2011

169 "Corporate Social Responsibility – Sector Policy – Coal-Fired Power Generation", BNP Paribas, September 2011

170 "Corporate Social Responsibility – Coal-Fired Power Sector Policy", Société Générale, May 2011

171 A threshold standard in this case, prohibits lending to companies with more than a certain percentage of coal production from Mountaintop Removal mining.

172 "Extreme investments: U.S. banks and the coal industry", Rainforest Action Network, May 2013

173 "Summary of Mining Policy", Credit Suisse, October 2010

174 Since Credit Suisse published this policy in November 2010, it has provided loans and investment banking services of over 260 million euro to the 4 companies practicing MTR that we included in this research. It's likely that if we would have researched more companies, this amount would be even higher.





ANZ

ANZ Bourke Street Mall

sussan

portmans

ANZ  
Opening Hours  
Thursday 9.30am - 5.00pm  
Friday 9.30am - 6.00pm  
Sunday 10.30am - 5.00pm

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## Ethical indexes – What are They Measuring?

So-called “ethical indexes” and “CSR (Corporate Social Responsibility) rating agencies” play a key role in helping banks maintain this chasm between policy and practice.

Commercial banks, like most companies, like to praise themselves for their achievements in sustainability. They frequently mention their inclusion in one of the main “sustainability indexes,” such as the Dow Jones Sustainability Indexes, the FTSE4Good indexes, the ASPI Eurozone index or the Ethibel Sustainability Index. These indexes are linked to CSR rating agencies, which evaluate publicly listed companies based on their environmental, social and governance performance.

The ethical rating agencies’ evaluation of the banking sector is problematic. For the indexes, banks are required to report only on their direct impacts, like office paper consumption, direct CO<sub>2</sub> emissions from heating, air conditioning and business travel. The indexes, however, ignore that banks’ major climate impact is through their core business activities: financing and investment. While CSR rating agencies do also have a category called “controversial deals,” there is no real analysis of banks’ lending or investment portfolios. Instead, CSR rating agencies often simply rate a bank’s communication skills: CSR Reports, policy commitments and self-evaluation on the basis of questionnaires.

In our view, the methodology of these rating agencies is deeply flawed and superficial, when it comes to the finance sector. The rating agencies themselves have, in fact, become part of the problem. They are partially to blame that among banks, “sustainability” has come to mean publishing the best CSR report, instead of having a cleaner portfolio.

How else to explain that Bank of America was included in the Dow Jones Sustainability Index in September 2013, at a moment in time when the bank had just committed to underwriting a new share issue for Coal India, the world’s second largest producer of coal.<sup>175</sup> Around the same time, Australia based ANZ was chosen as the new “Industry Group Leader” in the banking sector, although it is Australia’s biggest lender to a series of coal and gas export terminal projects threatening to destroy the Great Barrier Reef.<sup>176</sup>

Ethical and sustainability index providers must exclude the most carbon intensive banks from their indexes. Our study shows that a very small number of banks provide 71% of the finance fueling a coal boom with disastrous local and global impacts. Any index that includes even one of the world’s top 20 climate killer banks surely cannot be serious about “sustainability” in any sense of the word.

## The fight against coal finance goes global

All over the world, the resistance against coal mining, coal infrastructure and coal power projects is growing. These civil society movements are also closing in on the industry’s financiers. Over the past few years, more and more campaigns have begun to target public and private banks, investors and insurance companies for their investments in coal projects around the world.

Affected communities are raising their voices at the shareholder meetings of banks. In May 2013, a spokesperson of “Keeper of the Mountains” from Appalachia spoke at the shareholder meetings of German, Swiss, French and UK banks, challenging them for their support of companies involved in mountaintop removal.<sup>177</sup> That same month, more than 30 coal and climate activists from communities across the

175 “Sustainable” badge for Bank of America stretches credibility of Dow Jones Sustainability Index”, BankTrack, September 13, 2013

176 „ANZ awarded Australia’s biggest lender to Great Barrier Reef-destroying coal and gas“, Market Forces, May 2, 2013

177 “NGOs criticize poor performance new leadership Deutsche Bank”, Urgewald - Facing Finance - OXFAM - Dachverband der Kritischen Aktionärinnen und Aktionäre, May 22, 2013

## V. Moving Away from Coal

CSR rating agencies never analyze banks’ full portfolios for exposure to controversial sectors like coal.

More and more public and private banks are being targeted for their involvement in coal projects around the world.

U.S., and as far away as India, gathered with Rainforest Action Network at Bank of America’s Annual General Meeting (AGM) to take their message to the top executives and directors of the bank.<sup>178</sup> In June, sixty prominent Australians called on the ‘big four’ Australian banks (ANZ, Westpac, Commonwealth Bank and NAB), to end fossil fuel investment through an open letter organized by 350.org and Market Forces.<sup>179</sup> As a result of this campaign, many Australians have put these banks “on notice” and have warned that unless loans to coal and gas projects stop, they will take their money elsewhere. And that’s exactly what happened on October 26th in Melbourne at ANZ’s offices<sup>180</sup> and on November 1<sup>st</sup> and 2<sup>nd</sup> across Australia at Commonwealth Bank offices.<sup>181</sup> Customers lined up in front of local branch offices, cut through their credit cards and closed their accounts with the bank.

Also in October 2013, World Development Movement in the United Kingdom shut down a HSBC city branch as part of a climate protest against the bank’s investments in fossil fuels. The activists dressed as coal miners and cordoned off the area outside the bank. They used ‘climate crime scene’ hazard tape and eviction notices to highlight HSBC financing of coal mining companies in Indonesia, which are pushing people off their land and polluting their water.<sup>182</sup> This November, Friends of the Earth France is mobilizing against Société Générale because its involvement in the Alpha Coal project in Australia. In the UK, grandparents occupied the offices of Barclays in Bristol in order to protest against the bank’s financing for coal infrastructure projects.<sup>183</sup>

2013 also saw one of the first shareholder resolutions on climate presented at a bank AGM. In the U.S., Boston Common Asset Management filed such a resolution to the U.S. bank PNC Financial, requesting it to assess the scale of greenhouse gas emissions enabled through its lending portfolio, as well as its exposure to climate change risk in its lending, financing and investing activities.<sup>184</sup> PNC is indeed the only major bank located in Appalachia, and has significant financial involvement in Mountaintop removal companies. The resolution received over 22% support, which is a very good result for a first time resolution. It was also the first time the Securities and Exchange Commission accepted such a resolution and recognized that climate change represents a “significant policy issue” for the bank and its shareholders.

Some investors have also started to take action on coal companies in the past few months. Storebrand, a major Norwegian pension fund and life insurance firm, announced in July that it had divested from 19 fossil fuel companies including 13 coal extractors. It explained its decision to divest by pure financial grounds, to ensure “long-term stable returns,” because these stocks will be “worthless financially” in the future. Quoted in a press release, Storebrand head of sustainable investment Christine Tørklep Meisingset said, “exposure to fossil fuels is one of the industry’s main challenges, and for us it is essential to work purposefully to take our share of responsibility”.

And Storebrand is not the only example. SWIP, the Scottish Widows Investment Partnership, one of Europe’s largest asset management companies, has also “reduced its active exposure to pure play coal miners to zero in both equity and fixed income.”<sup>185</sup>

A new international fossil fuels divestment campaign coordinated by 350.org has been launched around the world. As a result, some university foundations or endowments have started to divest their fossil fuel assets. This campaign has just

178 “Bank of America Meeting Dominated by Anti-Coal Activists”, The Street, May 9, 2013

179 “Sixty prominent Australians call on ‘big four’ banks to end fossil fuel investment”, Market Forces and 350.org, June 28, 2013

180 “ANZ customers divest in Melbourne!”, Market Forces, October 26, 2013

181 “One hundred customers abandon Commonwealth Bank in fossil fuel protests”, Market Forces, November 2, 2013

182 “HSBC shuts down City branch in face of climate protest”, World Development Movement, October 10, 2013

183 “Grandparents ‘occupy’ Bristol bank in climate change protest”, Bristol24-7, March 7, 2013

184 “Financial institutions: the next chapter in climate change shareholder activism”, Lexology, May 7, 2013

185 “Is the tide turning on ‘big carbon’? The surprising step change in the stranded assets debate.”, Responsible Investor, August 30, 2013





Australia



USA

begun and recently expanded from the U.S. to Canada, Australia, New Zealand, Europe and the UK.<sup>186</sup> It will increase public pressure on institutional investors, including private banks as asset managers, in the months and years to come. Banks are under pressure, but there is still a long way to go and much to do. Join the campaign and contact NGOs campaigning against coal finance in your country.

## Don't Bank on Coal

Behind every coal mine there is a bank. Make sure it's not yours. As a bank customer, you are an investor. So think about what you want to invest in. Solar, wind and energy efficiency or coal and climate change? Into communities' needs or into their displacement? Money has power, one way or the other. Take responsibility for yours, and make a conscious choice about the institutions that you entrust your money to.

Find out if there is an ethical bank in your region and move your money there. There are ethical banks in many countries across the world - you can find them through the European Federation of Ethical and Alternative Banks in Europe, the Move your Money campaigns in the US and the UK, or through asking members of the Bank-Track network in your country.<sup>187</sup> Banking with an ethical bank is the best way to ensure that your money works for your future, and not for King coal.

Make sure you choose an ethical bank for your current account.

If there is no ethical bank in your region, then go to a credit union or co-operative bank. But whatever you do, don't bank with a financial institution that's betting on yesterday's fuel. This means you should also take a look at your insurance or your pension fund. Find out what they invest in. Ask questions and tell them that you want a long-term investment in our common future. Check out 350.org's website and draw up your own "personal divestment roadmap."

## What needs to happen?

Our study shows that coal is an ugly dirty business, wherever it's mined. It's a business we want to end. It's a business we want banks to get out of.

Banks must stop both direct and indirect finance for coal power, coal mining or coal infrastructure projects. This includes underwriting of share or bond issues to raise capital for coal investments. Banks must also start becoming responsible asset managers and divest from the coal companies in their portfolios. Banks must stop trading coal, both in terms of 'physical coal' and coal derivatives.

In terms of disclosure, banks need to calculate and reduce the financed emissions associated with their loans, investments and other financial services. The very next step must be to decrease these financed emissions, in line with climate targets, and shift energy portfolios from fossil fuels to renewables and energy efficiency.

Do it!

<sup>186</sup> <http://gofossilfree.org/>

<sup>187</sup> <http://www.banktrack.org/>





Worker in one of Coal India's mines.



# Methodology

The research in this report updates and far expands the analysis of bank finance for coal mining undertaken in the earlier report, Bankrolling Climate Change. We have extended our analysis to 70 coal mining companies, from the 36 covered previously. While Bankrolling Climate Change focused only on the biggest coal producers, the new research has attempted to capture the cutting edge of mine expansions by also including many smaller players. We extended the selection of banks from 93 to 106, including some substitutions. And we have updated the financial analysis for the selected banks and companies for the period January 2011 - August 2013.

## Data collection and analysis

For the 70 coal mining companies and their key subsidiaries, information was gathered on their coal output and the share of their total assets used for coal mining (*the coal mining percentage*).

We researched all lending and underwriting activities carried out by the selected 106 banks for the selected 70 coal mining companies and their subsidiaries in the period January 2011 - August 2013, using annual reports, stock exchange filings and other company publications, archives of trade magazines, local newspapers, financial press and specialized financial databases (Thomson ONE Banker, Bloomberg). The value of each individual loan and share or bondholding underwritten was multiplied by the company's *coal mining percentage*.

The analysis established the value, in million euros, of financing by type (loans and underwriting), by each bank. Trends were analysed for the period 2005-2013 for the 36 coal mining companies that were already part of the analysis for Bankrolling Climate Change.

## Types of financing relationships

### Corporate loans

The most straightforward way to borrow money is in the form of a loan from a commercial bank. Loans can be either short-term or long-term in nature. Short-term loans (including trade credits, current accounts, leasing agreements, etc.) have a maturity of less than a year, are often provided by a single commercial bank, and are mostly used as working capital for day-to-day operations. Long-term loans have a maturity of at least one year, and generally of three to ten years. Often long-term loans are extended by a *loan syndicate*, a group of banks brought together by one or more arranging banks.

### Share issues

Issuing shares on a stock exchange gives a company the opportunity to increase its equity by attracting a large number of new shareholders, or increasing the equity from its existing shareholders. When a company offers its shares on the stock exchange for the first time, this is called an Initial Public Offering (IPO). When a company's shares are already traded on the stock exchange, this is called a secondary offering. To arrange an IPO or a secondary offering, a company needs the assistance of one or more (investment) banks, which will promote the shares and find shareholders. The role of investment banks in this process therefore is very important.

### Bond issues

Issuing bonds can best be described as cutting a large loan into small pieces, and selling each piece separately. Bonds are issued on a large scale by governments, but also by corporations. Like shares, bonds are traded on the stock exchange. To issue bonds, a company needs the assistance of one or more (investment) banks which underwrite a certain amount of the bonds. Underwriting is in effect buying with the intention of selling to investors. Still, in case the investment bank fails to sell all bonds it has underwritten, it will end up owning the bonds.

## Calculated elements

### Coal mining percentage

For each financing relationship, an assessment was made of a company's involvement in coal mining as a proportion of its overall business activities (*the coal mining percentage*). For project finance, and other forms of targeted finance, this percentage is 100%. For general forms of finance (corporate loans, share and bond issuances) this coal percentage is equal to the proportion of the company's assets that are related to coal mining. Where possible, this was derived from the companies' annual reports. Where a company did not have an (English language) annual report available, and its website indicates that the company is only active in coal mining, we used a coal percentage of 100%.

For companies where this was not clear, an *asset-production ratio* (APR) was used. The APRs were developed by compiling the total asset and production figures for companies that were 100% engaged in coal mining, and for those where asset segment analyses were available. These figures were then used to estimate the level of assets needed to produce one ton of coal. Where necessary, currencies were converted to dollars. The ratios were then categorised on the basis of the country of investment. Outliers were removed. (These could be caused by, for example, recent investments which had not yet led to an increase in production). The APRs were then used to calculate the assets in coal mining on the basis of a company's production figures. The assets in coal mining were then divided by total assets to obtain the coal mining percentage.

In few cases, production figures were not available, and/or the segment analysis did not provide asset data. For these cases, the segment analysis of cost was used as an indicator of assets in coal mining and the coal mining percentage.

### Regional percentage

A number of companies have mining operations in more than one country. When the segment analysis also included geographical information, this was used to calculate the percentage of total assets in coal mining in given hot spots – the *regional percentage*. In cases where geographic asset information was lacking, geographic coal production figures were used as an indicator to calculate the percentage of total production that occurred in given hotspots.

### Coal mining amount

Multiplying the coal mining percentage by the full amount of the financing relationship results in the *coal mining amount*: the amount of finance used for coal mining. This is the amount shared among the different banks involved in the financial transaction.

### Hot spot amount

Multiplying the coal percentage and the regional percentage by the full amount of finance results in the hot spot amount: the amount of finance used for the coal activities of a company in each given hot spot. This is the amount shared among the different banks which are involved in the financial transaction in each hotspot.

### Amounts financed per bank



After calculating the total *coal mining amount* and the *hot spot amount*, these amounts were distributed among the different banks involved in the deal. Where the amount per bank was not known, an estimate was used. The estimates are based on the following “rules of thumb”:

- In the case of loans (corporate loans or revolving credit facilities), 40% of the total amount is committed by bookrunners and 60% by other participants. An exception was made where the number of bookrunners was (almost) equal to, or higher than, the amount of participants, to ensure that the amount provided by bookrunners is always higher than the amount provided by participants. In such cases, the reverse percentage is applied: 60% for the bookrunners and 40% for the arrangers. For example, if there are five bookrunners and four participants and the amount of the loan is €100, the estimate will be that the bookrunners commit 60% (€12 each) and the participants 40% (€10 each).

- In the case of share- and bond issuances, 75% of the total amount is committed by bookrunners and 25% by other participants of the syndicate. The amount provided by bookrunners should always be higher than the amount provided by participants.

The financial analysis for this study was provided by Profundo, an economic research consultancy specialized in the analysis of commodity chains, financial institutions and Corporate Social Responsibility (CSR) issues. Profundo helps its clients to research financial and trade relations, to document corporate irresponsible behaviour and identify opportunities to promote sustainable development. Profundo works primarily for environmental, human rights and development organisations in the Netherlands and abroad, but media, companies and government agencies also increasingly use Profundo’s knowledge and experience.



Photo: World Development Movement



Company List			Annual Coal Production 2012 (million metric tons)
Company alphabetical order	Company based in	Coal mining operations in the following hotspots	
Adani Enterprises	India	India, Indonesia, Australia	4.0
Adaro Energy	Indonesia	Indonesia	47.2
African Rainbow Minerals	South Africa	South Africa	19.6
Alliance Resource Partners	USA	USA	30.8
Alpha Natural Resources	USA	USA	98.7
Anglo American	UK	Australia, Colombia, South Africa	99.3
Arch Coal	USA	USA	122.5
Bandanna Energy	Australia	Australia	0.0
Banpu	Thailand	Indonesia, Australia	41.6
Bayan	Indonesia	Indonesia	16.3
BHP Billiton	Australia, UK	Australia, Colombia, South Africa, USA	110.5
Borneo Lumbung	Indonesia	Indonesia	3.6
Bumi Resources	Indonesia	Indonesia	74.4
China Guodian Corporation	China	China	68.5
China Huaneng Group	China	China	68.6
China National Coal Group	China	China	176.0
China Power Investment Corporation	China	China	60.5
China Shenhua Group	China	China	460.0
Cloud Peak Energy	USA	USA	81.6
Coal India	India	India	452.2
Coal of Africa	South Africa	South Africa	3.4
Consol Energy	USA	USA	56.0
Czech Coal	Czech Republic	Czech Republic	14.1
Datong Coal Mine Group (Shanxi)	China	China	132.1
Drummond Co.	USA	Colombia, USA	29.0
Erdenes Tavan Tolgoi	Mongolia	Mongolia	15.0
Essar	India	India	0.0
Eurasian Natural Resources Corp	UK	Kazakhstan, Mozambique	25.9
Exxaro	South Africa	South Africa	40.1
Glencore Xstrata	Switzerland	Australia, Colombia, South Africa	132.2
Global Coal Management	UK	Bangladesh	0.0
GVK	India	Australia, India	0.0
Huainan Mining Industry Group	China	China	71.1
Indika	Indonesia	Indonesia	36.8
Jindal Steel & Power	India	India, South Africa, Mozambique, Indonesia, Australia	5.3
Kailuan Group	China	China	83.5
Kompania Weglowa	Poland	Poland	40.0

Company List			Annual Coal Production 2012 (million metric tons)
Company alphabetical order	Company based in	Coal mining operations in the following hotspots	
Kuzbassrazrezugol (UGMK)	Russia	Russia	45.5
Lanco Group	India	India	3.1
Mechel	Russia	Russia, USA	27.8
Ncondezi Coal Mining	Mozambique	Mozambique	0.0
New World Resources	UK, Netherlands	Poland, Czech Republic	11.2
Peabody Energy	USA	USA, Australia, China and Mongolia	207.7
PGE (Polska Grupa Energetyczna)	Poland	Poland	50.5
Pingdingshan Coal Company	China	China	50.0
Reliance Power	India	India	0.0
Rio Tinto	Australia, UK	Australia, Mozambique	31.6
RWE	Germany	Germany	101.7
Sakari Resources	Singapore	Indonesia	10.8
Samruk-Energo	Kazakhstan	Kazakhstan	44.0
Sasol	South Africa	South Africa	40.0
Severni Energetika (formerly Litvinovska uhelna)	Czech Republic	Czech Republic	4.1
Shaanxi Coal & Chemicals Industry Group	China	China, Australia	114.0
Shanxi Coking Coal Group	China	China	105.4
Shanxi Jincheng Anthracite Mining Group	China	China	54.7
Shanxi Lu'An Mining Group	China	China	80.1
Shanxi Meijin Energy Group	China	China, Australia	0.7
Siberian Business Union (SDS)	Russia	Russia	23.4
Singareni Collieries Company (SCC)	India	India	53.2
SUEK (Siberian Coal Energy Co.)	Russia	Russia	97.5
TECO Energy	USA	USA	5.4
Toba Bara Sejahtera	Indonesia	Indonesia	5.6
Vale	Brasil	Mozambique, Australia	7.1
Vattenfall	Sweden	Germany	62.4
Waratah Coal	Australia	Australia	0.0
WICET Holdings Pty Limited	Australia	Australia	0.0
Whitehaven Coal	Australia	Australia	7.4
Yangquan Coal Industry Group (Shanxi)	China	China	68.8
Yankuang (Mining) Group	China	China, Australia	75.3
Ze Pak S.A.	Poland	Poland	14.5



**Ranking of all banks:**

Total finance for coal mining from all researched banks, 2005 – mid-2013

Bank	Underwriting in million Euro	Loans in million Euro	Total in million Euro	Ranking
Citi	3,686	3,612	7,298	1
Morgan Stanley	4,508	2,718	7,226	2
Bank of America	4,022	2,536	6,558	3
JPMorgan Chase	4,245	1,746	5,991	4
Deutsche Bank	3,897	1,295	5,193	5
Credit Suisse	3,517	1,435	4,953	6
Industrial and Commercial Bank of China	4,203	719	4,922	7
Royal Bank of Scotland	2,133	2,673	4,806	8
Bank of China	1,908	2,716	4,623	9
BNP Paribas	1,955	2,466	4,421	10
UBS	2,997	1,097	4,094	11
Barclays	1,744	2,015	3,759	12
China Construction Bank	2,883	550	3,433	13
Agricultural Bank of China	2,724	415	3,138	14
HSBC	1,015	1,506	2,521	15
China Development Bank	1,648	810	2,459	16
Mitsubishi UFJ Financial Group	481	1,827	2,309	17
Standard Chartered	319	1,975	2,294	18
Crédit Agricole	523	1,481	2,005	19
Goldman Sachs	1,624	380	2,004	20
Sumitomo Mitsui	166	1,819	1,986	21
Société Générale	576	1,352	1,927	22
ING	412	1,182	1,595	23
ANZ	177	1,403	1,580	24
Wells Fargo	246	1,094	1,340	25
Commerzbank	241	1,065	1,305	26
UniCredit / HVB	361	921	1,282	27
Mizuho Bank	215	1,053	1,267	28
BBVA	276	913	1,190	29
PNC*	69	1,030	1,099	30
VTB Bank*	262	817	1,079	31
Commonwealth Bank	25	1,046	1,071	32
Lloyds Banking	384	672	1,056	33
National Australia Bank	137	861	998	34
China Merchants Bank	989	-	989	35
Santander	419	561	981	36
BPCE / Natixis	143	779	921	37
BMO Financial	183	697	879	38
ICICI Bank	-	873	873	39

**Ranking of all banks:**

Total finance for coal mining from all researched banks, 2005 – mid-2013

Bank	Underwriting in million Euro	Loans in million Euro	Total in million Euro	Ranking
State Bank of India	162	699	861	40
Westpac	152	676	828	41
Macquarie Bank	483	282	765	42
Scotiabank / Bank of Nova Scotia	230	415	644	43
Bank of Communications	501	55	556	44
Royal Bank of Canada	127	410	537	45
TD Bank	121	403	524	46
Raiffeisen Zentralbank	-	454	454	47
Intesa SanPaolo	33	369	402	48
Nordea	94	306	399	49
Rabobank	27	364	391	50
LBBW	79	271	349	52
Bank of India	-	317	317	53
Bank Mandiri*	25	251	276	54
ABN AMRO*	27	243	271	55
SEB Bank	88	159	247	56
KfW	-	216	216	57
US Bank*	16	198	214	58
CIBC	62	144	206	59
Erste Bank	101	91	192	60
KBC	14	136	150	61
Nedbank	-	145	145	62
Axis Bank*	14	131	144	63
HSH Nordbank	-	129	129	64
Standard Bank	22	106	128	65
BayernLB	37	85	122	66
Helaba	-	119	119	67
DZ Bank	-	119	119	68
Firststrand Bank*	-	105	105	69
Banco do Brasil	17	63	79	70
Banco Bradesco	17	51	68	71
BNDES*	-	67	67	72
China Exim Bank	48	14	62	73
Power Finance Corporation*	-	51	51	74
Crédit Mutuel	-	51	51	75
Bank Gospodarstwa Krajowego (BGK)*	-	50	50	76
Itaú Unibanco	-	30	30	77
Mediobanca	-	30	30	78



**Ranking of all banks:**

Total finance for coal mining from all researched banks, 2005 – mid-2013

<b>Bank</b>	<b>Underwriting</b> in million Euro	<b>Loans</b> in million Euro	<b>Total</b> in million Euro	<b>Ranking</b>
PKO Bank Polski*	5	22	27	79
CIMB Niaga*	.	26	26	80
Alfa Bank*	25	.	25	81
DekaBank	.	25	25	51
La Caixa	.	18	18	82
Danske Bank	.	17	17	83
Swedbank	.	17	17	84
Norddeutsche Landesbank	.	15	15	85
HDFC Bank*	4	8	12	86
Caja Madrid	.	8	8	87
Life Insurance Corporation of India*	2	.	2	88
BNY Mellon*	.	1	1	89
Bank central asia (BCA)*	.	.	.	90
Bank Gospodarki Żywnościowej (BGZ)*	.	.	.	91
Bank Millenium*	.	.	.	92
Bank Rakyat Indonesia*	.	.	.	93
Caixa Economica Federal*	.	.	.	94
Danamon Bank*	.	.	.	95
Dexia*	.	.	.	96
Getin Noble Bank*	.	.	.	97
IDFC*	.	.	.	98
Industrial Development Bank of India*	.	.	.	99
La Banque Postale*	.	.	.	100
Lippo Bank*	.	.	.	101
SunCorp*	.	.	.	102

\*based only on data from 2011 to mid-2013

**About Us**

**urgewald** is a German environment and human rights organization, whose mission is to address the underlying causes of global environmental destruction and poverty. We monitor the activities of German banks and companies abroad and work closely with affected communities and NGOs in the global South to stop destructive investments. urgewald's director, Heffa Schücking is a recipient of the Goldman Environmental Prize and in 2010 urgewald received the Solbach-Freise Prize for Civil Courage.

**BankTrack** is a global network of civil society organizations and individuals tracking the operations of the private financial sector (commercial banks, investors, insurance companies, pension funds) and its effect on people and the planet. BankTrack has 40 members and partners from 17 countries. The network conducts research on projects and policies and co-ordinates and supports international campaigns to prevent harmful impacts of private financial sector operations on the environment and people.

**CEE Bankwatch Network** is an international NGO with member organisations currently from 13 countries across the Central and Eastern Europe and Commonwealth of Independent States region. Its mission is to prevent the environmentally and socially harmful impacts of international financial institutions and EU funding, and to promote alternative solutions and public participation.

**Polish Green Network (PGN)** is an alliance of strongest environmental and sustainable development associations and foundations based in the largest cities of Poland. Main areas of activities are advocating for social and environmental justice within sustainable development, establishing social control mechanisms over public funds, increasing consumers impact on multinational corporations, building public support for development and providing development assistance in the Global South and Eastern Europe.





**BANKTRACK**

**CEE** bankwatch  
network

