REPORT:
ET BRICS 300
2011 CARBON RANKINGS

Environmental Investment Organisation

Where the needs of the future meet the practicalities of the present

WHO WE ARE

ENVIRONMENTAL INVESTMENT ORGANISATION

An independent non-profit research organisation promoting ecological investment systems

WHAT WE DO

ENVIRONMENTAL TRACKING

ET Carbon Rankings

creating public pressure through the “spotlight effect”

ET Index Series

creating share price incentive through supply & demand pressure

ET Engagement

engaging with companies to improve standards of disclosure & lower emissions

WHY WE DO IT

designed specifically to reduce
global corporate Greenhouse Gas emissions

info@eio.org.uk | www.eio.org.uk

The Environmental Investment Organisation (EIO) is an independent non-profit body that seeks to improve the environmental 'output' of the financial system. In recent years this mandate has been focused almost entirely on the need to tackle the climate crisis.

ET BRICS 300 Carbon Rankings 2011 Report

Autumn 2011

T: +44 208 801 0570

E: info@eio.org.uk

www.eio.org.uk

Foreword

Dear Reader,

Welcome to the ET BRICS 300 Report, one in a series of Regional Carbon Ranking Reports being released this week and complimenting the release of the ET Global 800 on the 1.11.11.

I think we can all agree that our rapidly changing and interconnected world is full of complex ecological, economic, social and health problems amongst many others. 'Progress' is clearly a very uneven and unequal process, but such has been the fate of humanity since the beginning of documented history.

The EIO does not claim to have a solution to any of the aforementioned problems. Instead, its sole focus is to prevent a problem that we have hardly seen the beginning of, but which, if allowed to spiral out of control, is almost guaranteed to make every other problem worse.

No less an authority than the US Department of Defense has described the likely consequences of severe climate change as a "threat multiplier". In plain language, whatever problems we already have, and no-one could overstate them, a climate calamity could prove one complex problem too many.

Some may confidently predict our ability to adapt, but that theory has never been applied in practice to a planet made up of over 150 independent nation states and 7 billion people, and rising.

Perhaps the greatest risk we face in dealing with this situation is the delusion that our current global political system is guaranteed to solve this problem. It is not.

So, is it possible to turn this impending disaster on its head and galvanise the entire global business and financial system in a new direction? Many individuals are already 'doing their bit' on multiple fronts all around the world. Progressive corporations and organisations are already making great efforts to address not only carbon emissions but broader environmental and human priorities.

But against this giant problem of climate change, surely we need an extra push. Something so in tune with the existing system that it can get right inside, like the famous "Trojan Horse" of ancient history, and put a stop to the madness of human induced climate change before it is too late. For surely the issue here is the time line. If the conclusions of our scientists are to be shown any respect, then there is no more time to emit and massive action is required now.

But what kind of action? Skillful action, if we are to carry people with us. For example, we do not need to decimate beautiful countryside with giant wind turbines when there are hundreds of square miles of empty ocean just waiting to be exploited by offshore wind farms benefiting from economies of scale which can hardly be imagined.

We need to think big and act fast, but not in haste. Every action has trade-offs and we certainly do not want to solve one problem by creating new ones.

Problem solving is as much an Art as a Science and so is the case with the subject matter of this report. In an ideal world every company would be reporting accurate and comprehensive Scope 1, 2 and 3 carbon emissions data. With such information available the ET Carbon Ranking would be able to very effectively reward emission reduction and penalise polluters. However, despite the very serious risks we are taking with our climate system, this information does not exist.

The EIO does not pretend that its system is perfect, or that a perfect system is even possible. It is a pragmatic and practical system working with the latest available data. It is our best effort to order this information in a logical manner. If the ranking and the indexes they are designed for can create incentives for higher universal standards of reporting followed by radical emission reduction strategies, it will have served its purpose. Whatever controversies are encountered in the process will be more than justified by such a result.

On the 4th October 2011 the Greenhouse Gas Protocol's new Scope 3 Corporate Accounting Standard was released. The EIO has always stated that Scope 3 is an essential component of the GHG Reporting process and that once the standard was released our Rankings would be adjusted to incentivise full Scope 3 disclosure.

We have fulfilled this pledge and wasted no time in doing so. The intensity metric now used to compile the Ranking includes a weighting for Scope 3 based on the worst case benchmark company for its broad sector. Additionally, we have rewarded companies over and above their emission intensity according to the number of Scope 3 categories reported.

As stated in my foreword to our first Reports on the ET Europe 300 and ET UK 100 Carbon Rankings, the chasm between public policy, public understanding, corporate behaviour and scientific reality is extraordinary and profound. The need for a practical mechanism to work quickly, circumventing the aforementioned log jam, is immense.

It may be true that “not everything that can be counted, counts, or that everything that counts, can be counted” but we can at least put the numbers we do have to good use.

Michael Gill,

Strategic Director & Founder, The Environmental Investment Organisation

October 2011

CONTENTS 3

EXECUTIVE SUMMARY

The ET Carbon Rankings serve the twin purpose of encouraging transparency through making emissions data more publicly accessible, while also laying the foundations for the ET Index Series, a market mechanism designed to tackle emissions within a rapid time-frame.

With the introduction of the long awaited New Scope 3 Standard from the Greenhouse Gas (GHG) Protocol on the 4th October, the EIO has taken a proactive approach to incentivising companies to adopt this important new standard in GHG Reporting. The finalised standard has been the result of a three year global multi-stakeholders process that included more than 2,300 participants and road-tested by 60 companies in 17 countries.

It has long been the EIO's stated view that Scope 1 & 2 emissions do not in themselves provide an accurate picture of a company's carbon impact and therefore a bold approach needs to be taken in distinguishing between those companies reporting Scope 3 and those that are not.

This latest set of Carbon Rankings build on the methodology established previously for the ET UK 100 and ET Europe 300, launched in April 2011, where companies were placed into one of four Disclosure and Verification categories based on their Scope 1 & 2 emissions, and then ranked by carbon intensity (tonnes of CO2 equivalent per million US dollars of turnover: tCO2e/$M turnover).

Where data is incomplete or not reported, companies are benchmarked against their sectoral competitors using the highest reported emissions intensity for that sector. Companies in each category are then ranked according to their emissions intensity across the three Scopes. Additionally, within their respective Disclosure Categories, companies are advantaged according to the number of Scope 3 categories disclosed, over and above their intensity.

Please see the methodology section for a fuller explanation.

THE RANKINGS ARE BASED ON THE FOLLOWING CORE PRINCIPLES:

- DATA USED IN THE RANKINGS MUST BE PUBLICLY AVAILABLE AND THEREFORE FULLY TRANSPARENT.
- IN ORDER TO ADDRESS THE ISSUE OF CLIMATE CHANGE, THE RANKINGS' PRIMARY OBJECTIVE MUST BE TO ENCOURAGE DISCLOSURE.
- DATA WHICH HAS BEEN VERIFIED BY AN INDEPENDENT THIRD PARTY WILL ALWAYS BE RANKED ABOVE DATA WHICH HAS NOT.
- COMPANIES HONEST ENOUGH TO DISCLOSE THEIR TOTAL EMISSIONS MUST NOT BE PENALISED FOR DOING SO RELATIVE TO THOSE WHO FAIL TO DISCLOSE.
- IN ORDER TO BE FULLY EFFECTIVE, THE RANKINGS MUST TAKE INTO ACCOUNT THE FULL SCOPE OF A COMPANY'S CARBON EMISSIONS, INCLUDING SCOPE 3.

EXECUTIVE SUMMARY

Key Findings

- 11% of companies publicly disclose complete and independently verified Scope 1 and 2 emissions data
- **66% of companies do not publicly disclose their emissions data**
- 23% of companies in BRICS report Scope 3 categories, within a range of one to six categories
- **6 out of 300 companies report five or more Scope 3 categories.**
- Gold Fields tops the ET BRICS 300 Carbon Ranking, followed closely by Santander Brazil
- **The biggest absolute emitter for which information was available was Sasol, followed by Petrobras, with Scope 1 & 2 emissions of 74,976,000 and 62,840,000 (tCO2e/$M turnover), respectively**

Starting with a surprise result, the 2011 ET BRICS 300 Carbon Ranking is topped by Gold Fields, a South African mining company. However, this is explained due to it being the only company in the BRICS 300 which discloses eight Scope 3 Categories. It therefore earns its top spot under the EIO's methodology, which rewards companies for their Scope 3 disclosure. It is followed by banking giant Santander Brazil and the Brazilian mining company, Vale, both of whom disclose six Scope 3 categories. However, since Santander has an emissions intensity of 103.8 tCO2e/$M turnover, compared with 4,672.3 tCO2e/$M turnover for Vale, Santander gains the advantage.

The top 10 is dominated by seven Brazilian companies; with two South African companies and one Indian company also making the grade.

Perhaps again surprisingly, the first Russian company, TNK-BP Holdings, enters the Ranking at 23rd with an emissions intensity of 3,027.9 tCO2e/$M turnover. This is because it is the only Russian company to provide **complete and verified data**. The first Chinese company to enter the ranking, Hong Kong based CLP Holdings, comes in at 30th, despite declaring high absolute Scope 1 and 2 emissions of 41,793,000 tCO2e, equating to a Scope 1 and 2 intensity of 5,561.69 tCO2e/$M turnover. However, its data is complete and verified, and the company is thus rewarded for its commendable transparency.

All of the top 10 companies earn their place as the only companies across the entire region to disclose three or more Scope 3 emissions categories as well as having at least their Scope 1 & 2 emissions data independently verified.

Among those companies in the ET Carbon Rankings' first Disclosure Category who do not report on Scope 3 emissions but have Scope 1 and 2 emissions data independently verified, the top performers can be found in positions 18, 19 and 20. These are ABSA Group (South Africa), Barath Petroleum (India) and Tractebel (Brazil).

The best placed company in the ET Carbon Rankings' second Disclosure Category, **unverified but complete data**, comes in at position 34. This is Massmart, a South African Consumer Services company, which disclosed six Scope 3 categories.

SUMMARY

Its emissions data was not verified and therefore it did not break into the top category. Had this been the case it would have been ranked third. Similarly, the second in the unverified category, CESP, a Brazilian Alternative Energy company, ranked 35th and disclosing five Scope 3 categories, would have ranked fourth, with a very low overall emissions intensity of across the three Scopes of 95.72 (tCO2e/$M turnover), thereby beating any other company disclosing five Scope 3 categories.

In terms of comparative analysis of reporting trends across the region, South African and Brazilian companies clearly lead the field in terms of disclosing public and complete information, based on full disclosure of Scope 1 and 2 according to the ET Carbon Ranking methodology, with 56% and 36% of the companies doing so, respectively. South African companies also perform well in terms of having their data independently verified, with 31% of the companies reporting complete data also having at least their Scope 1 and Scope 2 emissions data verified, by far and away the highest of any BRICS country. Brazilian companies come second on this crucial count, 22% of companies reporting complete data also having the data verified. Other countries score very low in terms of verification, as well as in reporting complete data, which explains why the top performers in our ranking are mainly Brazilian and South African companies.

With 66% of the companies not reporting any data at all, there is clearly a long way to go in the BRICS emissions reporting landscape.

The ET Carbon Rankings make up the first phase of the Environmental Tracking concept. The EIO would like to use the Rankings to create a series of tradeable ET Indexes, providing the investment community with a mainstream tool to encourage transparency and emission reductions on a global scale. It has already demonstrated the ability of these ET Indexes to track their conventional equivalents, through the launch of its two pilot indexes, the ET Europe 300 and the ET UK 100 earlier this year, based on its previously published rankings. These indexes can be described as a market mechanism designed to lower corporate emissions by influencing a company's share price.

Key Reporting Recommendations

- **Report Scope 1, 2 & 3 emissions following GHG Protocol guidelines**
- **Ensure emissions data is publicly available in CSR/Sustainability reports/Integrated Annual report and online**
- **Have emissions data verified by an independent third party**
- **Ensure verification statements are easily available to the public**

Know your Scopes!

- **Scope 1 emissions: All direct emissions**
- **Scope 2 emissions: Indirect emissions generated from the purchase of electricity**
- **Scope 3 emissions: All other indirect emissions, such as distribution of goods, transportation of purchased goods, transportation of waste, disposal of waste, employee commuting, business travel or investments.**

CARBON RANKING 7

METHODOLOGY

The ET Carbon Rankings have been designed specifically to encourage disclosure and verification, paving the way for absolute emissions reductions.

THE CARBON RANKINGS HAVE BEEN DESIGNED SPECIFICALLY TO ENCOURAGE DISCLOSURE AND VERIFICATION

In essence, the ET Carbon Ranking methodology follows a three step process based on four information categories, as detailed below.

Step 1: Categorisation

Companies are placed into one of **four data categories**:

- **1) Public, Complete, Verified**
- **2) Public, Complete, Unverified**
- **3) Public, Incomplete**
- **4) No Public Data**

COMPANIES WITH EXTERNALLY VERIFIED DATA WILL ALWAYS FIND THEMSELVES RANKED ABOVE THOSE WITH UNVERIFIED DATA

Step 2: Inference

Wherever data is not complete, which means Scope 1 and 2 have not been reported for the company's entire operations or they have not been expressed in a sufficiently clear manner or there is simply no public data available, a worst case figure is inferred; based on the highest reported emissions intensity by any company within the same sector across the full universe of companies within the ET Carbon Rankings. This is designed specifically to encourage disclosure and to avoid penalising companies honest enough to report their emissions figures.

The same principle is applied but in a slightly different manner to Scope 3 emissions. Because of the controversial nature of Scope 3 emissions - by definition they are not under the ownership or direct control of a company, nor do they always lend themselves to easy calculation or identification, it does not appear logical to the EIO for these emissions to be given equal weight to Scope 1 and 2 emissions, which clearly are the responsibility of the company.

COMPANIES THAT DO NOT HAVE ANY PUBLICLY AVAILABLE DATA ARE BENCHMARKED AGAINST THE HIGHEST INTENSITY FROM THE WORST PERFORMING COMPANY WITHIN THEIR SECTOR

CARBON RANKING 8

METHODOLOGY

Scope 3 Categories:

Upstream

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased asset

Downstream

9. Downstream transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investment

IT IS KEY THAT SCOPE 3 EMISSIONS ARE IDENTIFIED, REPORTED AND ULTIMATELY REDUCED

The EIO's current approach is to give a **50% weighting** to any **fully reported and verified Scope 3 emission total reported according to the 15 categories of the new Scope 3 standard**. This is then added to the Scope 1 and 2 total that has already been reported. Whenever a company does not report a complete and verified Scope 3 total, exactly the same inference method described for Scope 1 and 2 is employed for Scope 3 emissions.

The company in the relevant sector **across the full universe of ET Rankings** with the highest reported Scope 3 figure is identified and used to infer a figure for the remaining companies, thus avoiding penalising a company for being honest enough to report a high figure. The only route by which a company can avoid having an inferred figure allocated to them is to report its own complete and verified figure, and if that happens to be lower than the existing benchmark, then it gains the advantage of a higher ranking position by virtue of its lower emission total. If it is higher, then all the remaining non disclosing companies are benchmarked against it.

In summary, combined emissions intensity across the three Scopes is calculated according to the following formula: 100% of Scope 1 & 2 emissions intensity (disclosed or inferred) + 50% of Scope 3 emissions intensity (disclosed or inferred).

Step 3: Ranking

Once companies have been categorised according to the completeness and verification of their Scope 1 & 2 data, they are firstly ranked according to the number of Scope 3 categories disclosed.

Secondly, companies are ranked within the Disclosure Categories, according to their combined emissions intensity across the three Scopes. Please refer to the inference method as described in the previous section for detail on how companies not providing complete data are treated.

CARBON RANKING 9

METHODOLOGY

Accounting for size

Emissions intensity is calculated using turnover figures from the same financial year as their latest publicly available (at time of publication) reported emissions.

Whilst there is no universally accepted system of establishing relative company size, turnover is generally accepted within the field of carbon accounting as a reasonable metric to determine company size.

Where one or more companies have the same emissions intensity within the Rankings, smaller market capitalisation is given an advantage. The justification for this is simple: larger companies have greater resources to both improve their reporting and realign their business towards a low carbon model.

FOR A COMPLETE EXPLANATION OF THE METHODOLOGY BEHIND THE ET CARBON RANKINGS PLEASE VISIT EIO.ORG.UK

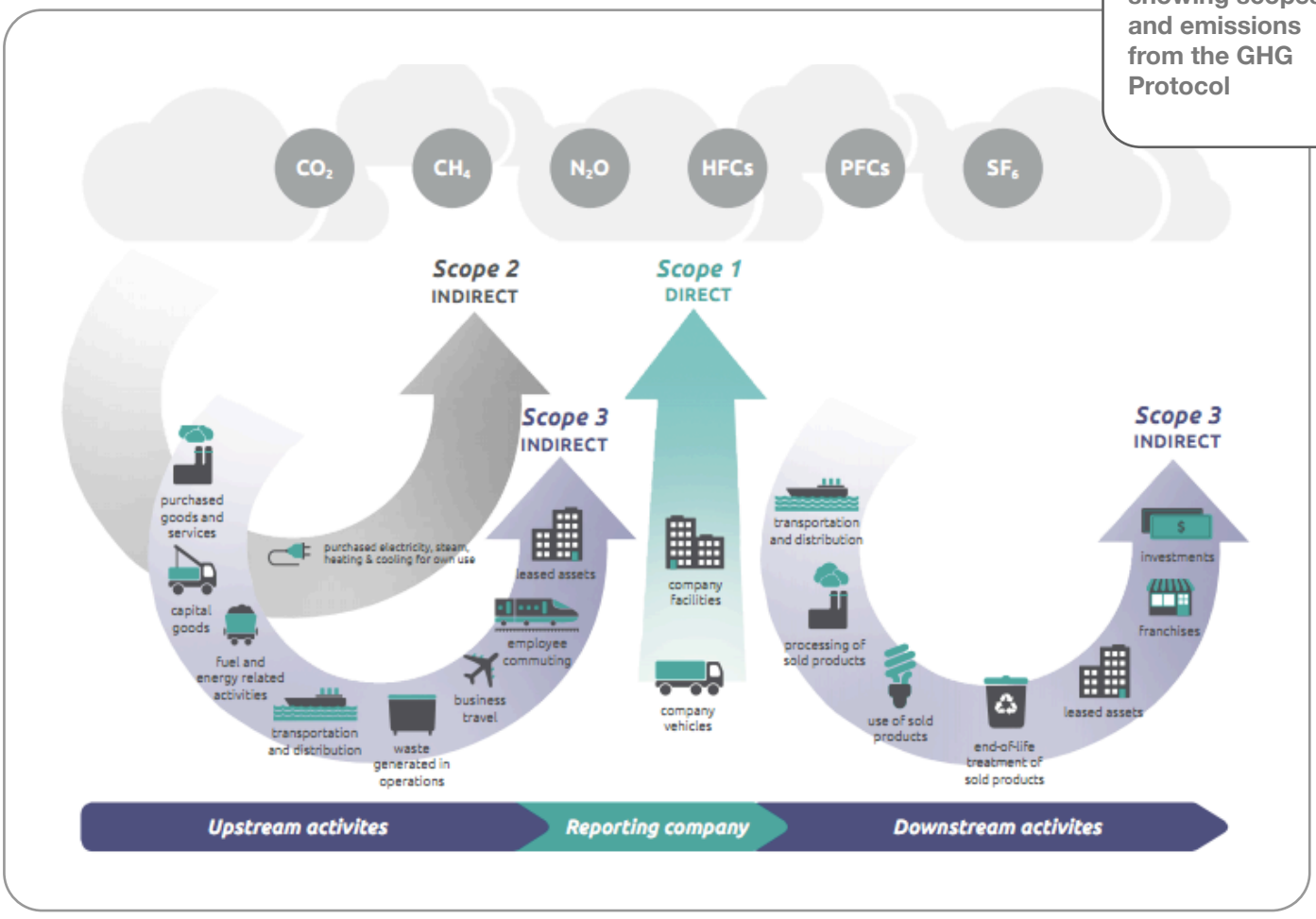


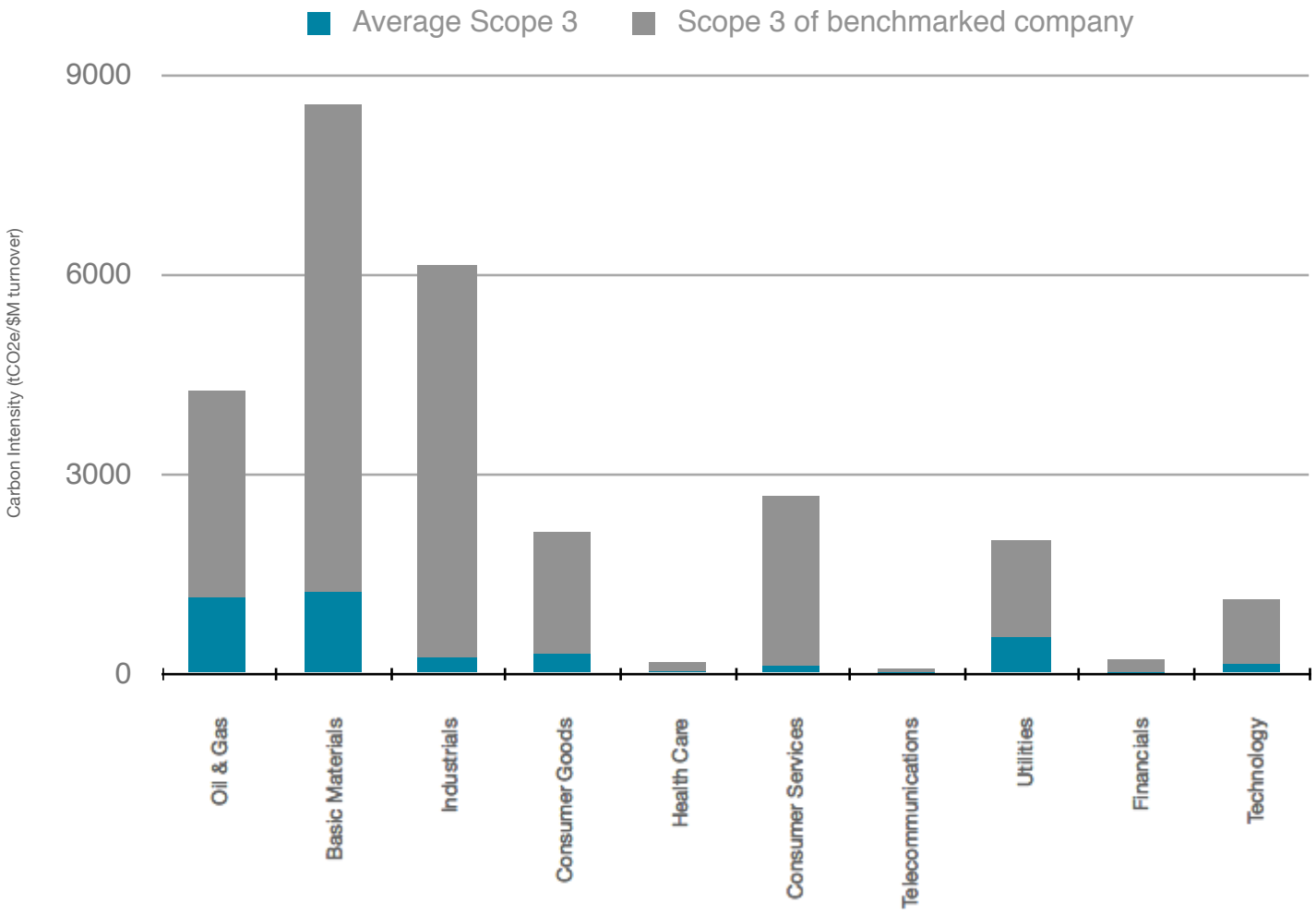
Diagram showing scopes and emissions from the GHG Protocol

SPOTLIGHT ON 10

SCOPE 3

Global Scope 3 Analysis

Figure 1.



Global Scope 3 Benchmark companies

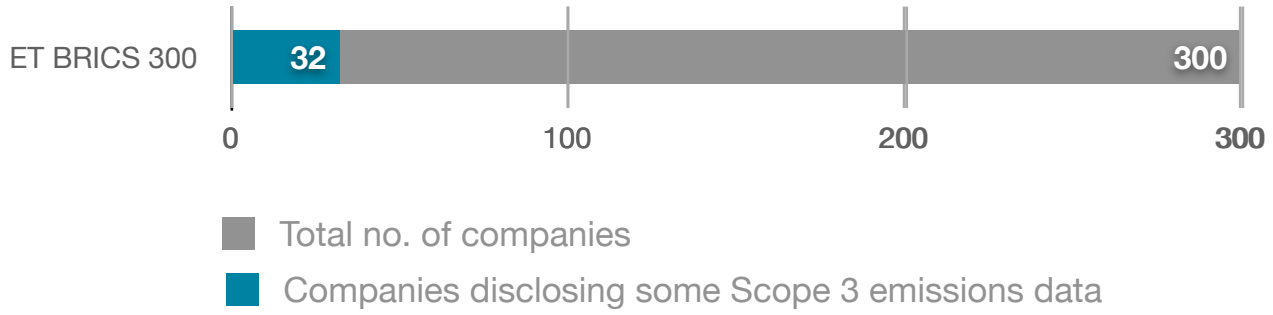
Figure 2.

Sector	Benchmark Company Name	No. of Scope 3 Categories Disclosed	Scope 3 Intensity	Sector Scope 3 Intensity Average
Oil & Gas	OMV	1	**4,246.31**	1,133.87
Basic Materials	Rio Tinto	3	**8,547.13**	1,222.48
Industrials	Delta Electronics	1	**6,130.53**	238.84
Consumer Goods	Reckitt Benckiser Group	4	**2,115.76**	289.92
Health Care	Baxter Int.	6	**166.90**	19.50
Consumer Services	IC Hotels Group	4	**2,665.29**	101.85
Telecommunications	Sprint Nextel	2	**64.51**	6.02
Utilities	RWE	3	**1,998.50**	536.19
Financials	British Land	4	**206.53**	7.76
Technology	Motorola Mobility	4	**1,103.38**	141.30

SCOPE 3

BRICS 300 Scope 3 Analysis

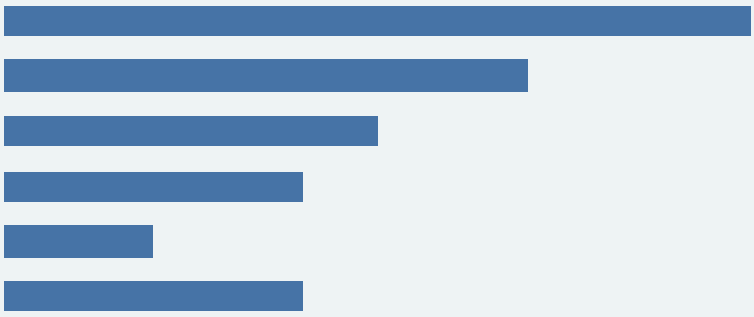
Figure 3.



BRICS 300 Extent of Scope 3 Disclosure

Figure 4.

Scope 3 categories disclosed	Number of companies
1	10
2	7
3	5
4	4
5	2
6	4
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-



This clearly demonstrates that the BRICS region still has a long way to go in terms of beginning to account for the full extent of its companies' Scope 3 emissions.

INFERENCE: SCOPE 3

Figure 5.

As these three companies from the **Basic Materials** sector fail to disclose all 15 Scope 3 categories as defined by the GHG Protocol Corporate Value Chain (Scope 3) Standard , their disclosed Scope 3 figures are considered to be incomplete, and therefore they are **given an inferred Scope 3 figure**.

Disclosure & Verification status	Carbon Rank	Company Name	No. of S3 Categories Disclosed	Total Scope 3 Emissions	Disclosed Scope 3 Intensity	Inferred Scope 3 Intensity
No Public Data	276	China Shenhua	-	No Public Data	-	8,547.13
No Public Data	277	NMDC	-	No Public Data	-	8,547.13
No Public Data	278	Coal India	-	No Public Data	-	8,547.13

Rio Tinto is one of the Scope 3 benchmark companies for the **ET Global Universe**, which means it is the company with the highest disclosed Scope 3 intensity within the **Basic Materials** sector.

Sector	Benchmark Company Name	Scope 3 Intensity
Oil & Gas	OMV	4,246.31
Basic Materials	Rio Tinto	8,547.13
Industrials	Delta Electronics	6,130.53
Consumer Goods	Reckitt Benckiser Group	2,115.76
Health Care	Baxter Int.	166.90
Consumer Services	IC Hotels Group	2,665.29
Telecommunications	Sprint Nextel	64.51
Utilities	RWE	1,998.50
Financials	British Land	206.53
Technology	Motorola Mobility	1,103.38

SPOTLIGHT ON 13

INFERENCE: SCOPE 1 & 2

Figure 6.

American Electric Power is the company with the highest emissions intensity disclosing complete data within the Electricity Industry across the entire **ET Global Universe**.

Disclosure & Verification status	Carbon Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Emissions Intensity (tCO2e/$M turnover)	No. of S3 Categories Disclosed
Complete & Unverified	126	Potash Corporation	10,315,000.00	1,518.86	-
Complete & Unverified	127	Xcel Energy	80,500,000.00	7,815.68	-
Complete & Unverified	128	American Electric Power	134,000,000.00	9,288.14	-

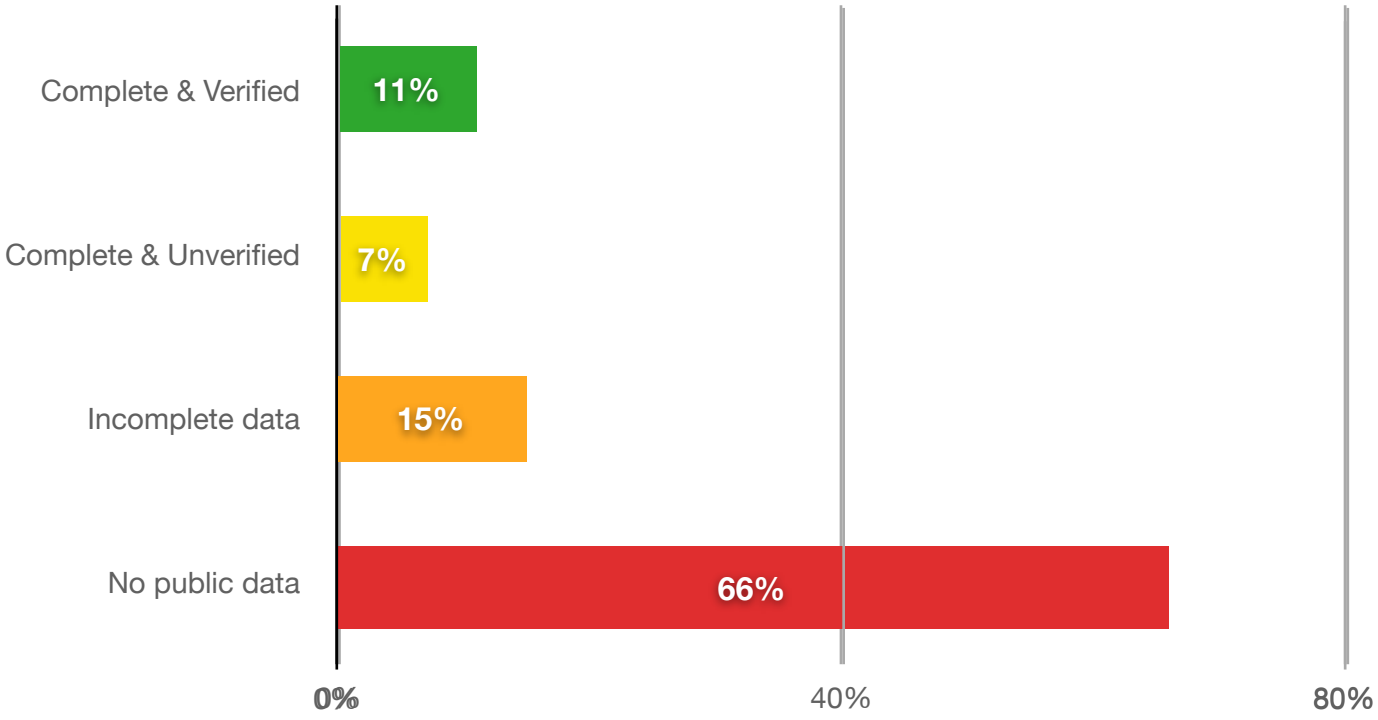
Disclosure & Verification status	Carbon Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Emissions Intensity (tCO2e/$M turnover)	No. of S3 Categories Disclosed
No Public Data	299	ENN Energy Holdings	No Public Data	9,288.14	-
No Public Data	300	Sabesp	No Public Data	9,288.14	-

Here, ENN Energy Holdings and Sabesp have been benchmarked against the highest disclosing company with complete data from the Electricity industry. This means they have been given an *inferred* intensity of 9,288.14 tCO2e/$M turnover. This is not an approximation of their emissions but a means of making sure that the highest *disclosing* company in the sector is not penalised for being honest enough to report a large figure.

As both companies have the same *inferred* intensity figure, the company with the largest market capitalisation is placed lower down the Ranking.

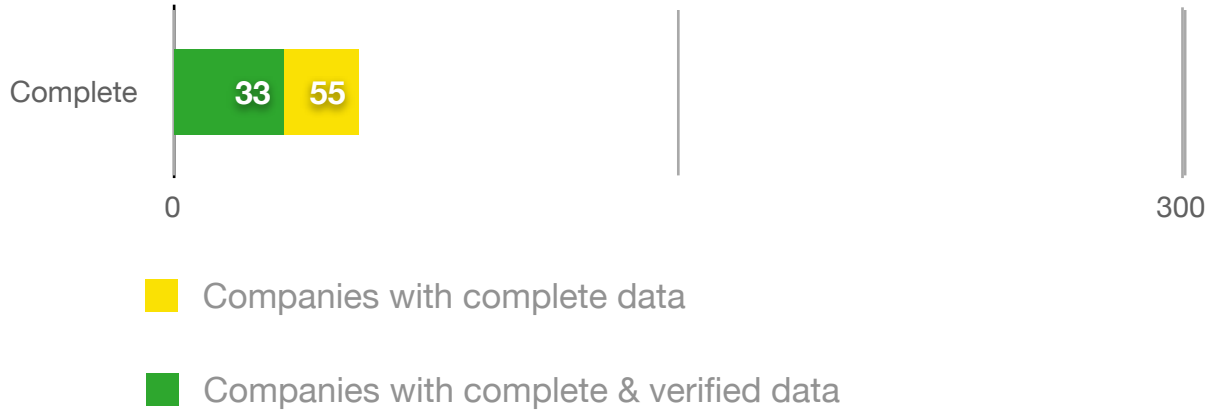
The disclosure and verification landscape of the ET BRICS 300

Figure 7.



Complete data versus verified data

Figure 8.



ANALYSIS

ET BRICS 300 Top 5

Figure 9.

ET Rank	Company Name	S1+2 emissions (tCO2e)	S1+2 Intensity	Scope 3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Gold Fields	6,400,000	1,157.06	8	5,430.63	Complete & Verified
2	Santander BR	19,563	0.56	6	103.83	Complete & Verified
3	Vale	19,990,000	398.72	6	4,672.28	Complete & Verified
4	Itau Unibanco	34,196	0.56	5	103.83	Complete & Verified
5	Inf. Development Finance	4,066	4.50	4	107.77	Complete & Verified

Topping the 2011 ET BRICS 300 Carbon Ranking is the South African based precious metal producer, **Gold Fields**, with a combined emission intensity of 5,430.63 (tCO2e/$M turnover).

Following it are the Brazilian based bank **Santander BR**, mining corporation **Vale** and the Latin American bank **Itau Unibanco**, with respective carbon intensities of 103.83, 4,672.28 and 103.83 (tCO2e/$M turnover).

Infrastructure Development Finance, the Indian based, integrated infrastructure finance company, ranks fifth with a combined emissions intensity of 107.77 (tCO2e/$M turnover).

Emissions Intensity is measured in tCOe/$M turnover)

ET BRICS 300 Bottom 5

Figure 10.

ET Rank	Company Name	S1+2 emissions (tCO2e)	S1+2 Intensity	Scope 3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
296	Federal Grid Company	no public data	9,288.14	-	10,287.39	No public data
297	Cheung Kong Holdiings.	no public data	9,288.14	-	10,287.39	No public data
298	NTPC	no public data	9,288.14	-	10,287.39	No public data
299	ENN Energy Holdings	no public data	11,162.43	-	12,161.68	No public data
300	Sabesp	no public data	11,162.43	-	12,161.68	No public data

Last among BRICS 300 biggest companies is the Brazilian state owned water and sewage company **Sabesp,**

ENN Energy Holdings, the Honk Kong based investment holdings company which are engaged principally in the investment, operation and management of gas pipeline infrastructure rank at 299th place. **NTPC**, India's largest power company have been ranked at 298th place, as they also fail to publicly disclose data.

The Hong Kong property development and strategic investment company, **Cheung Kong Holdings**, rank at 297th place. At place 296 is the **Federal Grid Company**, the operator and manager of Russia's electricity transmission grid system.

(Emissions Intensity is measured in tCOe/$M turnover)

ANALYSIS

Highest and Lowest Absolute Emitters:

Scope 1 & 2

Taken from the 55 Companies reporting complete data

Lowest Absolute Emitters (Scope 1 & 2 Only)

Figure 11.

Absolute Rank	ET Rank	Company Name	Scope 1+2 emissions (tCO2e)	Scope 1+2 Intensity	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	49	BMF Bovespa	843	0.98	104.24	Complete & Unverified
2	7	Redecard	1,134	0.72	103.98	Complete & Verified
3	38	MRV	1,439	0.77	104.03	Complete & Unverified
4	5	Infr. Dev. Finance	4,066	4.50	107.77	Complete & Verified
5	43	Lojas Renner	5,118	3.09	1,335.73	Complete & Unverified

Figure 11 lists the five lowest absolute emitters from those disclosing complete Scope 1 & 2 information. Verification status is included on the right but does not affect the ranking.

BMF Bovespa has the lowest recorded absolute emissions, but rank relatively low in the ET rankings, as they have failed to verify their data. Likewise, MRV and Lojas Renner, report low emissions but rank at 38th and 43rd place respectively, as they report unverified data.

Highest Absolute Emitters (Scope 1 & 2 Only)

Figure 12.

Absolute Rank	ET Rank	Company Name	Scope 1+2 emissions (tCO2e)	Scope 1+2 Intensity	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
51	22	Reliance Industries	20,089,280	683.36	2,806.52	Complete & Verified
52	23	TNK-BP Holdings	26,000,000	904.77	3,027.93	Complete & Verified
53	30	CLP Holdings	41,793,000	5,561.69	6,560.94	Complete & Verified
54	21	Petrobras	62,840,000	599.48	2,722.63	Complete & Verified
55	17	Sasol	74,976,000	4,705.52	6,828.68	Complete & Verified

Figure 12 lists the five largest absolute emitters from those disclosing complete Scope 1 & 2 information, ignoring verification status.

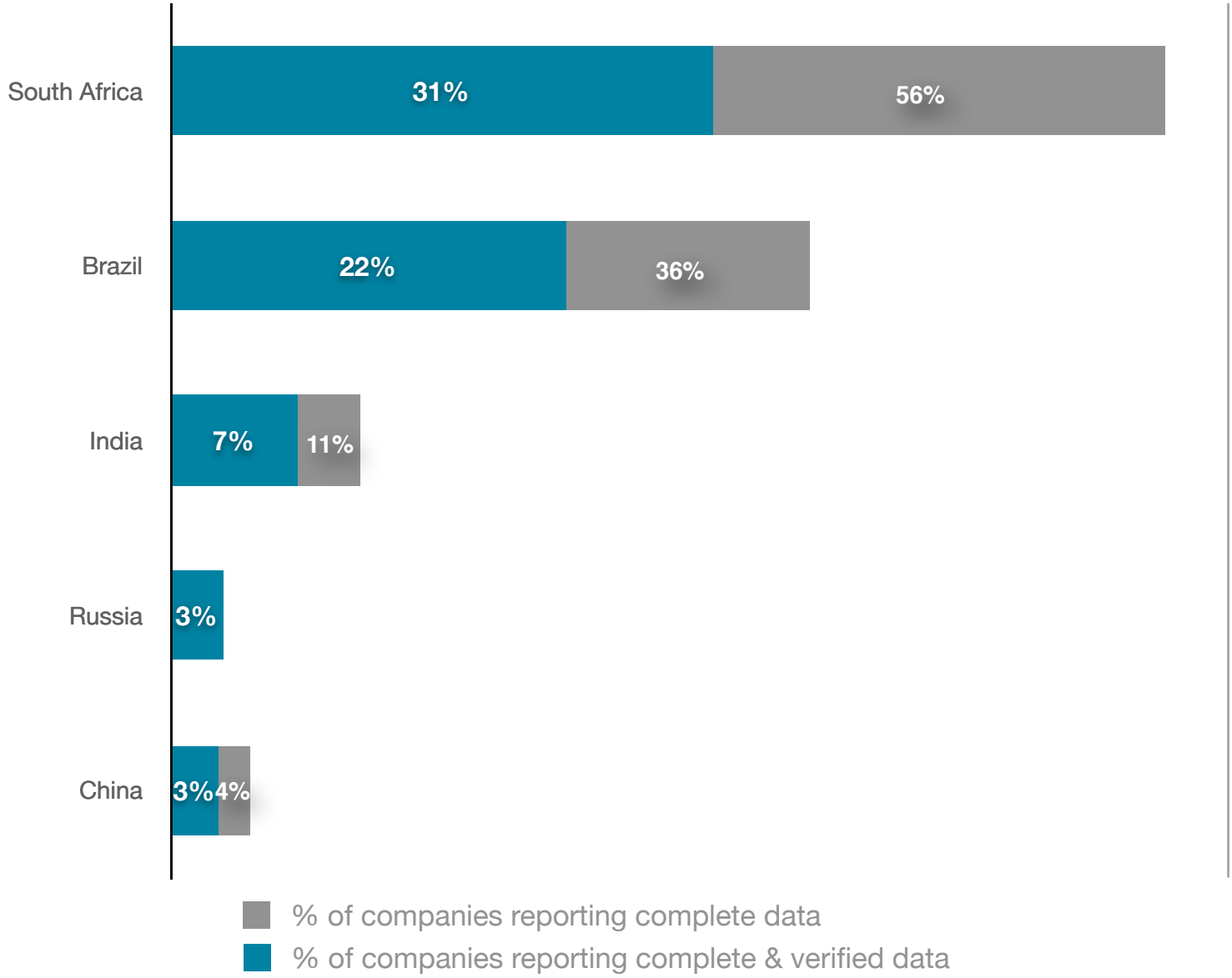
The five highest emitters of the BRICS 300, rank relatively well in the ET Rank as they have all put complete and fully verified data in the public domain.

Sasol, with the highest absolute emissions for Scope 1 and 2, ranks at 17th place as they have not only fully disclosed their scope 1 and 2 emissions but have also partially disclosed their scope 3 emissions.

Summary

Countries leading the field of disclosure

Figure 13.



It is interesting to note that the percentage of companies reporting complete data is below 60%, even in the country with the highest degree of reporting. This is indicative that though the BRICS are making progress in terms of GHG emissions reporting, there is still a long way to go. The degree to which there is verification of data by an independent source is particularly low in Russia and China both showing only 3% of companies having their emissions data verified.

Indeed in Russia verification was undertaken by the sole company to report complete data. This places South Africa and Brazil well in the lead of regional emissions reporting and verification.

However, all five of the BRICS countries still have significant room for improvement.

Spotlight on: Brazil

Top 5

Figure 14.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(2)	Santander BR	19,563	0.56	6	103.83	Complete & Verified
2	(3)	Vale	19,990,000	398.72	6	4,672.28	Complete & Verified
3	(4)	Itau Unibanco	34,196	0.56	5	103.83	Complete & Verified
4	(7)	Redecard	1,134	0.72	3	103.98	Complete & Verified
5	(8)	Cemig PN	331,795	42.82	3	127.97	Complete & Verified

Bottom 5

Figure 15.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
162	(250)	Gerdau PN	No Public Data	2,514.91	-	6,788.48	No Public Data
163	(253)	Sider Nacional	No Public Data	2,514.91	-	6,788.48	No Public Data
164	(259)	HRT Petroleo	No Public Data	4,705.52	-	6,828.68	No Public Data
165	(265)	OGX Petroleo	No Public Data	4,705.52	-	6,828.68	No Public Data
166	(300)	Sabesp	No Public Data	11,162.43	-	12,161.68	No Public Data

Spotlight on: Russia

Top 5

Figure 16.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(23)	TNK-BP Holdings	26,000,000	904.77	-	3,027.93	Complete & Verified
2	(78)	RusHydro	No public data	2,248.83	-	2,333.99	Incomplete
3	(86)	Novolipetsk Steel	No public data	2,514.91	-	6,788.48	Incomplete
4	(87)	OJSC Novolipetsk	No public data	2,514.91	-	6,788.48	Incomplete
5	(89)	Tatneft	No public data	4,705.52	-	6,828.68	Incomplete

Bottom 5

Figure 17.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
30	(274)	OJSC Polyus Gold	No Public Data	2,993.71	-	7,267.28	No Public Data
31	(275)	Polyus Gold	No Public Data	2,993.71	-	7,267.28	No Public Data
32	(284)	LSR Group	No Public Data	4,735.84	-	7,801.11	No Public Data
33	(295)	Inter RAO UES	No Public Data	9,288.14	-	10,287.39	No Public Data
34	(296)	Federal Grid Co.	No Public Data	9,288.14	-	10,287.39	No Public Data

Spotlight on: China

Top 5

Figure 22.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(58)	China Telecom	Incomplete	149.35	-	181.61	Incomplete
2	(97)	China Coal Energy	Incomplete	2,993.71	-	7,267.28	Incomplete
3	(124)	China Minsheng Banking	No public data	366.30	-	469.57	No public data
4	(137)	PICC Property & CLTY.	No public data	366.30	-	469.57	No public data
5	(150)	China CITIC Bank	No public data	366.30	-	469.57	No public data

Bottom 5

Figure 23.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
38	(272)	Yanzhou Coal Mining	No public data	2,993.71	-	7,267.28	No Public Data
39	(276)	China Shenhua	No public data	2,993.71	-	7,267.28	No Public Data
40	(285)	China COMMS.CON.	No public data	4,735.84	-	7,801.11	No Public Data
41	(288)	China NAT.BLDG.MRA.	No public data	4,735.84	-	7,801.11	No Public Data
42	(290)	Anhui Conch Cement Hldg.	No public data	4,735.84	-	7,801.11	No Public Data

Spotlight on: Hong Kong (China)

Top 5

Figure 24.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(30)	CLP Hldg.	41,793,000	5,561.69	-	6,560.94	Complete & Verified
2	(32)	Swire Pacific	16,125,825	4,292.54	-	7,357.81	Complete & Verified
3	(33)	Power Assets Hdg.	8,650,000	6,483.14	-	7,482.39	Complete & Verified
4	(46)	Lenovo Group	66,234	4.43	1	556.12	Complete & Unverified
5	(51)	HYSAN Development	35,813	157.81	-	261.07	Complete & Unverified

Bottom 5

Figure 25.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
67	(289)	NWS Hldg.	No Public Data	4,735.84	-	7,801.11	No Public Data
68	(292)	GCL-Poly Energy Hldg.	No Public Data	9,288.14	-	10,287.39	No Public Data
69	(293)	China Res. Power Hdg.	No Public Data	9,288.14	-	10,287.39	No Public Data
70	(297)	Cheung Kong Infr. Hdg.	No Public Data	9,288.14	-	10,287.39	No Public Data
71	(299)	ENN Energy Hldg.	No Public Data	11,162.43	-	12,161.68	No Public Data

ANALYSIS

Spotlight on: India

Top 5

Figure 18.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(5)	Infr. Dev. Finance	4,066	4.50	4	107.77	Complete & Verified
2	(12)	Larsen & Toubro	394,320	50.09	2	3,115.36	Complete & Verified
3	(19)	Bharat Petroelum	4,413,370	165.99	-	2,289.15	Complete & Verified
4	(22)	Reliance Industries	20,089,280	683.36	-	2,806.52	Complete & Verified
5	(48)	Tata Power	11,180,307	4,124.65	1	5,123.90	Complete & Unverified

Bottom 5

Figure 19.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
52	(286)	Jaiprakash Associates	No Public Data	4,735.84	-	7,801.11	No Public Data
53	(287)	Grasim Industries	No Public Data	4,735.84	-	7,801.11	No Public Data
54	(291)	Asian Paints	No Public Data	4,735.84	-	7,801.11	No Public Data
55	(294)	Power Grid Corp. India	No Public Data	9,288.14	-	10,287.39	No Public Data
56	(298)	NTPC	No Public Data	9,288.14	-	10,287.39	No Public Data

Spotlight on: South Africa

Top 5

Figure 20.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	(1)	Gold Fields	6,400,000	1,157.06	8	5,430.63	Complete & Verified
2	(6)	Woolworths Hdg.	384,436	140.25	4	1,472.89	Complete & Verified
3	(11)	Standard Bank Group	203,929	9.18	2	112.45	Complete & Verified
4	(17)	Sasol	74,976,000	4,705.52	1	6,828.68	Complete & Verified
5	(18)	ABSA Group	415,000	36.25	-	139.51	Complete & Verified

Bottom 5

Figure 21.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
35	(201)	Spar Group	No Public Data	505.91	-	1,853.22	No Public Data
36	(202)	Shoprite	No Public Data	505.91	-	1,853.22	No Public Data
37	(206)	Pioneer Food Group	No Public Data	795.34	-	1,853.22	No Public Data
38	(210)	Tiger Brands	No Public Data	795.34	-	1,853.22	No Public Data
39	(281)	REMGRO	No Public Data	4,292.54	-	7,357.81	No Public Data

BRICS versus BASICs

The **BRICS** (Brazil, Russia, India, China, and South Africa) is a grouping of emerging economies that have shown particularly rapid economic development in recent years, and have adopted regulatory policies aimed at liberalising their economies. Already, the BRICS represent over 25% of world GDP, up from 18% in 1990. In 2008, these five countries represented 31% of global energy use and 35% of CO2 emissions from fuel combustion. These shares are likely to rise further in coming years if their strong economic performance continues (IEA, 2010).

THE BRICS (BRAZIL, RUSSIA, INDIA, AND CHINA, AND SOUTH AFRICA) IS A GROUPING OF EMERGING ECONOMIES THAT HAVE SHOWN PARTICULARLY RAPID ECONOMIC DEVELOPMENT IN RECENT YEARS

Russia is the odd one out among the pack, from both an economic and an emissions perspective, having industrialised far earlier than the other BRICS. It has a much higher GDP per capita as well as higher standards of living and education, and being an Annex 1 country in the Kyoto Protocol bound Russia to make GHG emissions reductions during the first commitment period while the other BRICS would not be obligated until the second phase beginning in 2012. The latter fact aligns Russia more closely with developed countries than the other BRICS when it comes to climate change mitigation.

Recognising the common climate challenges facing them, Brazil, South Africa, India and China are now part of a geo-political alliance known as **BASIC** (Building and Strengthening Institutional Capacities on Climate Change: www.basic-project.net). This is a forum for collaboration among experts from various developing countries working on adaptation and mitigation action plans. These countries have taken a united position on emission reductions, supporting the establishment of quantified emission reduction commitments for the continuation of the Clean Development Mechanism (CDM) with no gap between the first and second commitment periods.

RECOGNISING THE COMMON CLIMATE CHALLENGES FACING THEM, BRAZIL, SOUTH AFRICA, INDIA AND CHINA ARE NOW PART OF A GEO-POLITICAL ALLIANCE KNOWN AS BASIC (BUILDING AND STRENGTHENING INSTITUTIONAL CAPACITIES ON CLIMATE CHANGE

Domestically the BASICs are all exploring market-based mechanisms. For example, India is currently setting up a Perform-Achieve-Trade (PAT) scheme promoting energy efficiency, and Brazil is considering the development of regional carbon markets.

AN INTERNATIONAL STANDARD FOR THE MEASUREMENT, REPORTING AND VERIFICATION OF GREENHOUSE GAS EMISSIONS, IS ON THE AGENDA FOR THE DURBAN TALKS IN 2011

The BASIC governments also agree that without support from the developed world, it will not be possible for developing countries to implement policies and take appropriate measures to mitigate climate change.

In 2010, the Cancun summit established the Green Climate Fund (GCF) for this purpose. The GCF handles the funds and is charged with its distribution, but has not provided a mechanism to raise the money - its goals of $30 billion for 2010-2012 and $100 billion annually by 2020 are making slow progress. The final details of the administration of the GCF , as well the need for the internationally standardised measurement, reporting and verification of greenhouse gas emissions, are on the agenda for COP17 in Durban in November 2011.

Asian giants

In terms of total carbon dioxide emissions, China and India are the first and third largest emitters globally, according to data published by the US Energy Information Administration (US EIA), though on a per capita basis both are far down the list. Asian neighbours China and India are often cited together in the climate change debate, with similarities such as a large population, expanding economies and significant production activities of developed countries being outsourced to these countries. However, significant differences exist, such as the fact that China's total and per capita carbon dioxide emissions are much higher than India's, as is its GDP per capita.

IN TERMS OF TOTAL CARBON DIOXIDE EMISSIONS, CHINA AND INDIA ARE THE FIRST AND THIRD LARGEST EMITTERS GLOBALLY, THOUGH ON A PER CAPITA BASIS BOTH ARE FAR DOWN THE LIST

Despite their rapid economic growth, both China and India are relatively poor countries compared with developed countries, making raising incomes a high priority and hence it seems unlikely that either country will accept binding stringent emission reductions targets in the foreseeable future. Both countries have indicated a preference for intensity targets (GHGs emissions per unit of GDP) over absolute targets: China has pledged to reduce the emissions intensity of its economy by 40/45% in 2020 compared to 2005, and India by 20/25%. In both cases these emissions intensity targets appear to be part of a national strategy to increase energy efficiency rather than part of a deliberate plan to reduce global warming (Massetti, 2011).

Chinese Emission Landscape

China has historically argued that industrialized countries should lead in mitigating emissions since they bear primary responsibility for the historical build-up of GHGs. This principle of 'common but differentiated' responsibilities was agreed in the United Nations Framework Convention on Climate Change.

CHINA HAS HISTORICALLY ARGUED THAT INDUSTRIALIZED COUNTRIES SHOULD LEAD IN MITIGATING EMISSIONS SINCE THEY BEAR PRIMARY RESPONSIBILITY FOR THE HISTORICAL BUILD-UP OF GHGS

However, China is also taking significant domestic action to reduce its own GHG emissions and to participate in the CDM regime. In June 2007, China released its National Climate Change Program, outlining activities, incentives, and targets to mitigate GHG emissions and to adapt to the consequences of potential climate change, including lowering its energy intensity, increasing renewable energy use by 2020, increasing energy efficiency standards, promoting the development of nuclear power, and development of a coal-bed methane capture industry.

National climate change goals have continued to be included in China's Five-Year Plan framework. In 2009 the Chinese government announced the target to cut the country's CO2 emissions per unit GDP in 2020 by 40% - 45% compared to the level of 2005, and Climate Action Tracker (www.climateactiontracker.org) reports that recent energy and emissions data indicates that China will exceed this pledge, though faster than expected economic growth is likely to lead to total emissions in 2020 being higher than previous estimates. Revised targets for the period 2011-2015 aim for a decrease of 17% in China's carbon dioxide emissions per unit of GDP, an increase in the share of non-fossil fuels in primary energy consumption, and a decrease of 16% in energy consumption relative to GDP.

CHINA'S COMMITMENTS FOR EMISSIONS CONTROL OVER THE NEXT DECADE ARE NOT CONTINGENT ON THE INTERNATIONAL NEGOTIATIONS OR ON COMMITMENTS BY ANY OTHER COUNTRY

China's commitments for emissions control over the next decade are not contingent on the international negotiations or on commitments by any other country. It is exploring new policy options, including carbon taxes and carbon markets, and new market-based mechanisms to control the increase in GHGs. In July 2011 the Chinese government announced that it will pilot a

IN JULY 2011 THE CHINESE GOVERNMENT ANNOUNCED THAT IT WILL PILOT A CARBON TRADING SCHEME AND BUILD A MARKET FOR EMISSIONS TRADING TO MEET POLLUTION GOALS

carbon trading scheme and build a market for emissions trading to meet pollution goals. To get the scheme going, Beijing will widen the difference in electricity tariffs between power-intensive sectors and other industries, improve laws, regulation and taxation policies to encourage energy conservation, and ask financial groups to fund low-carbon emission projects.

Indian Emissions Landscape

Like China, **India** has consistently resisted any attempts for hard limits on its own GHG emissions expecting developed countries to take the lead. India has also rejected attempts at imposing an emissions verification scheme and is instead pushing for relaxed restrictions on intellectual property rights for climate mitigation and adaptation technologies, equitable access to sustainable development practices, and unilateral trade measures.

INDIA HAS REJECTED ATTEMPTS AT IMPOSING AN EMISSIONS VERIFICATION SCHEME AND IS INSTEAD PUSHING FOR RELAXED RESTRICTIONS ON INTELLECTUAL PROPERTY RIGHTS FOR CLIMATE MITIGATION AND ADAPTATION TECHNOLOGIES

India announced its first National Action Plan on Climate Change in 2008, listing technology policies such as energy efficiency, mandatory energy audits for large energy consuming industries, and development of solar energy, but no targets for reduction of emissions total or intensity. Domestic policy has continued to develop with an Expert Group on Low Carbon Strategies for Inclusive Growth, a multi-stakeholder group given the mandate to develop a roadmap for India to achieve low-carbon development. The government is also trying to incentivise industry to move towards better energy efficiency and lower emission procedures by introducing market-driven initiatives, such as the Perform, Achieve & Trade (PAT) system, which aims to enhance cost effectiveness of improvements in energy efficiency in energy - intensive large industries and facilities through certification of energy savings that could be traded, and a federal approach to mitigation and adaptation with State-level Action Plans that require states to implement concrete actions to address climate change.

INDIA ANNOUNCED ITS FIRST NATIONAL ACTION PLAN ON CLIMATE CHANGE IN 2008, LISTING TECHNOLOGY POLICIES BUT NO TARGETS FOR REDUCTION OF EMISSIONS TOTAL OR INTENSITY

India has not mandated any GHG emissions reduction targets for industrial sectors to date but Indian businesses appear to have been proactive

in setting their own voluntary targets. The majority of Carbon Disclosure Project (CDP) respondents have assigned a senior level committee to develop their climate change strategy, and are increasingly participating in advocacy on climate change.

Brazilian Emission Landscape

Brazil has the lowest total CO2 emissions of any of the BRICS. Its major sources of GHG emissions are unsustainable land use, large livestock numbers, and large scale use of fossil fuels in its mineral processing industries as well as deforestation. Brazil's energy sector actually contributes little to its GHG emissions since the majority of its power comes from hydroelectricity, of which Brazil is one of the world's largest producers. Brazil's energy matrix is one of the cleanest in the world with renewables accounting for 44% of its total primary energy supply (IEA, 2010).

BRAZIL HAS THE LOWEST TOTAL CO2 EMISSIONS OF ANY OF THE BRICS

BRAZIL'S ENERGY MATRIX IS ONE OF THE CLEANEST IN THE WORLD WITH RENEWABLES ACCOUNTING FOR 44% OF ITS TOTAL PRIMARY ENERGY SUPPLY

In a similar stance to China and India, until recently the Brazilian government took the view that since the accumulation of GHG in the atmosphere was principally the fault of the developed countries, they must take the majority of necessary actions to tackle the problem. As Brazil's vulnerability to climate change became more apparent it established a 'National Plan on Climate Change' in 2008 that aimed to increase energy efficiency, maintaining a high proportion of Brazil's electricity supply from renewable sources, increase use of biofuels in the transport sector, reduce the rate of de-forestation, and eliminate net loss of forest coverage. A Business Council for Sustainable Development aims to turn these goals into practical initiatives.

The Brazilian National Fund on Climate Change was established in December 2009 to allocate a portion of the government's revenue from oil production to mitigate the impact of oil production and combat climate change by providing grants and loans to adaptation and mitigation initiatives. The fund is overseen by the Ministry of Environment and operated by the National Social and Economic Development Bank.

THE BRAZILIAN NATIONAL FUND ON CLIMATE CHANGE WAS ESTABLISHED IN DECEMBER 2009 TO ALLOCATE A PORTION OF THE GOVERNMENT'S REVENUE FROM OIL PRODUCTION TO MITIGATE THE IMPACT OF OIL PRODUCTION AND COMBAT CLIMATE

LANDSCAPE

South African Emission Landscape

US EIA DATA FOR 2009 PLACES SOUTH AFRICA TWELFTH IN THE RANKING OF COUNTRIES BY THEIR TOTAL CARBON DIOXIDE EMISSIONS, WITH THE COUNTRY AS A WHOLE RESPONSIBLE FOR 451 MILLION TONS CO2

South Africa acknowledges the threat posed by climate change due to GHG emissions and has begun to address the issue through national regulations, regional coordination with other Southern African Development Community (SADC) nations, and participation in international initiatives. US EIA data for 2009 places South Africa twelfth in the ranking of countries by their total carbon dioxide emissions, with the country as a whole responsible for 451 million tons CO2. The last year that the South African Department of Environmental Affairs and Tourism published emissions data by sector was 1994, which indicated that the energy sector was responsible for the bulk of the total emissions, due in large part to South Africa's reliance on domestic coal for fuel. The industrial sector, transportation, agricultural processes, and waste management account for approximately a quarter of the total carbon equivalent emissions.

SOUTH AFRICA HAS LAID OUT A NATIONAL CLIMATE CHANGE RESPONSE STRATEGY, WHICH OUTLINES GUIDELINES AND A SUSTAINABLE ENERGY PROGRAMME FOR KEEPING AN INVENTORY OF GHG EMISSIONS

In 1997, South Africa ratified and adopted the United Nations Framework Convention on Climate Change and the Kyoto Protocol. It has created a National Committee on Climate Change and laid out a National Climate Change Response Strategy, which outlines guidelines and a sustainable energy programme for keeping an inventory of GHG emissions.

South Africa now publishes an annual Environmental Sustainability Indicators Technical Report, which defines the efforts and actions the government and industry must take to create an effective framework for the monitoring and reporting of GHG emissions along with identifying areas of progress and problems. The report touches on 20 environmental sustainability indicators gleaned through analysis of a wide array of data sets.

THE STATUS OF SOUTH AFRICA AS THE MOST ECONOMICALLY DEVELOPED AND LARGEST EMITTER OF GHG EMISSIONS AMONG SADC NATIONS, PLACES IT AS THE DE FACTO LEADER OF SUSTAINABILITY POLICY IN SUB-SAHARAN AFRICA

The status of South Africa as the most economically developed and largest emitter of GHG emissions among Southern African Development Community (SADC) nations, places it as the de facto leader of sustainability policy in Sub-Saharan Africa. The current focus of the SADC is on mitigating the effects of climate change already present in Southern Africa while establishing a system of linking sustainability methodologies and regulations between countries.

Russian Emission Landscape

Russia is the world's fourth highest carbon dioxide emitter based on US EIA data, ranking third amongst the BRICS in 2009, below both China and India. On a per capita basis, however, Russia has the highest CO2 emissions of the BRICS countries with 11.2 tons CO2 per capita in 2009 (EIA, 2010). A significant amount of Russia's GHG emissions derive from its large petroleum industry, particularly from its natural gas extraction and distribution processes.

ON A PER CAPITA BASIS RUSSIA THE HIGHEST CO2 EMISSIONS OF THE BRICS COUNTRIES WITH 11.2 TONS CO2 PER CAPITA IN 2009

In October 2004, the Russian Parliament ratified the country's signature of the Kyoto Protocol, agreeing to limit its GHG emissions by the end of the Protocol's first commitment period (2008-2012) at the level of country's emissions in 1990. However, Russia's GHG emissions fell by 34% between 1990-1998, due to the economic downturn after the collapse of the former Soviet Union. Gradual increases as a result of economic recovery are expected to be sustained, and future emission predictions for Russia suggest that the 'Business as Usual' scenario will result in emissions in 2020 being 25% below 1990 levels (Wagner et al., 2009). Therefore, even Russia's revised Kyoto pledge in 2010, to reduce emissions by 15-25% relative 1990 levels by 2020, will likely require no additional investments or structural reforms (World Bank, 2008).

RUSSIA'S REVISED KYOTO PLEDGE IN 2010, TO REDUCE EMISSIONS BY 15-25% RELATIVE 1990 LEVELS BY 2020, WILL LIKELY REQUIRE NO ADDITIONAL INVESTMENTS OR STRUCTURAL REFORMS

Domestic policy in Russia has lagged that of the other BRICS, though it has a number of energy efficiency policies, including the 2009 Energy Efficiency Legislation, and substantial participation in Joint Implementation Mechanism projects under the Kyoto Protocol. In December 2009, a non legally binding Climate Doctrine was approved. It set out national strategic guidelines and targets and formed a foundation for future climate change-related policy.

Although Russia has participated in international climate negotiations to date, in 2011 the Russian government indicated that it would not join a new Kyoto agreement post 2012, as it would be unlikely to require emissions cuts from developing countries.

IN 2011 THE RUSSIAN GOVERNMENT INDICATED THAT IT WOULD NOT JOIN A NEW KYOTO AGREEMENT POST 2012

NEGOTIATIONS CONTINUE IN THE BUILD UP TO DURBAN LATER THIS YEAR, WITH UNFCCC EXECUTIVE SECRETARY CHRISTIAN FIGUERES URGING COUNTRIES TO PUSH AHEAD WITH THEIR WORK TO AIM FOR ANOTHER SIGNIFICANT STEP IN ADDRESSING GLOBAL CLIMATE CHANGE

THE EU IS REFORMING ITS EMISSIONS TRADING SYSTEM (ETS), PRODUCING NEW, BINDING TARGETS FOR RENEWABLE ENERGY IN MEMBER STATES, PROVIDING A LEGAL FRAMEWORK TO PROMOTE THE DEVELOPMENT OF CARBON CAPTURE AND STORAGE (CCS), AND BRINGING IN THE NEW EFFORT SHARING DECISION

International Outlook

The Kyoto Protocol will remain in force until 2012, but so far there is no legally binding emissions treaty to replace it. The Copenhagen (2009) and Cancun (2010) climate conferences both produced accords, but lacked binding commitments. Negotiation continues in the build up to Durban later this year, with UNFCCC Executive Secretary Christian Figueres urging countries to push ahead with their work to aim for another significant step in addressing global climate change in 2011 at Bangkok's summit (UNFCCC 2011). In the meantime, market-based schemes are beginning to occur at the national level in spite - or perhaps because - of a lack of concrete agreement at the international level.

In 2009, the EU launched the Climate and Energy Package, aiming to reduce GHG emissions by 2020 by 20% compared to 1990 levels, to deliver 20% energy consumption from renewable sources, and to reduce primary energy use by 20% compared with projected levels. To achieve this, the EU is reforming its Emissions Trading System (ETS), producing new, binding targets for renewable energy in Member States, providing a legal framework to promote the development of carbon capture and storage (CCS), and bringing in the new Effort Sharing Decision. This supplements existing legislation under the EU ETS, Renewables Directive, and various efficiency and quality standards across a range of industries. The implementation of these is left to individual EU Member States (European Commission 2010).

A US cap-and-trade scheme has to date failed to be passed into law, but inter-state and intra-state schemes are becoming more prevalent in progressive states in the North-West and Mid-Atlantic. However, states such as Texas which are still heavily reliant on fossil fuels and energy-intensive industries are resisting local and national initiatives.

Figure 26.

Sector: Oil & Gas

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	SESOL	ZA	74,976,000	4,705.52	1	6,828.68	Complete & Verified
2	BHARAT PETROLEUM	IN	4,413,370	165.99	-	2,289.15	Complete & Verified
3	PETORBRAS	BR	62,840,000	599.48	-	2,722.63	Complete & Verified

Sector: Basic Materials

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	GOLD FIELDS	ZA	6,400,000	1,157.06	8	5,430.63	Complete & Verified
2	VALE	BR	19,990,000	398.72	6	4,672.28	Complete & Verified
3	FIBRIA	BR	1,503,435	436.78	3	4,710.34	Complete & Verified

Sector: Industrials

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	LARSEN & TOUBRO	IN	394,320	50.09	2	3,115.36	Complete & Verified
2	BIDVEST GROUP	ZA	684,591	47.84	-	3,113.11	Complete & Verified
3	SWIRE PACIFIC	HK	16,125,825	4,292.54	-	7,357.81	Complete & Verified

Sector: Consumer Goods

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	NATURA ON	BR	10,218	3.30	1	1,061.18	Complete & Verified
2	COSAN ON	BR	2,339,054	795.34	1	1,853.22	Complete & Verified
3	STEINHOFF INTL.	ZA	823,881	131.59	-	1,189.47	Complete & Unverified

Sector: Health Care

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	DR REDDYS LAB.	IN	278,000	177.23	-	260.68	Complete & Unverified
2	NETCARE	ZA	Incomplete	66.25	-	149.70	Incomplete
3	GSK PHARMS.	IN	Incomplete	237.23	-	320.68	Incomplete

Figure 26. (continued)

Sector: Consumer Services

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	WOOLWORTHS HLDG.	ZA	384,436	140.25	4	1,472.89	Complete & Verified
2	MASSMART	ZA	309,297	50.01	6	1,382.66	Complete & Unverified
3	THE FOSCHINI GROUP	ZA	172,180	145.78	4	1,478.43	Complete & Unverified

Sector: Telecommunications

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	TELESP ON	BR	381,530	40.20	1	72.45	Complete & Verified
2	MTN Group	ZA	1,122,515	64.79	1	97.05	Complete & Unverified
3	CHINA MOBILE	HK	Incomplete	64.79	-	97.05	Incomplete

Sector: Utilities

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	CEMIG	BR	331,795	42.82	3	127.97	Complete & Verified
2	TRACTEBEL	BR	5,554,865	2,248.83	-	2,333.99	Complete & Verified
3	CLP HOLDINGS	HK	41,793,000	5,561.69	-	6,560.94	Complete & Verified

Sector: Financials

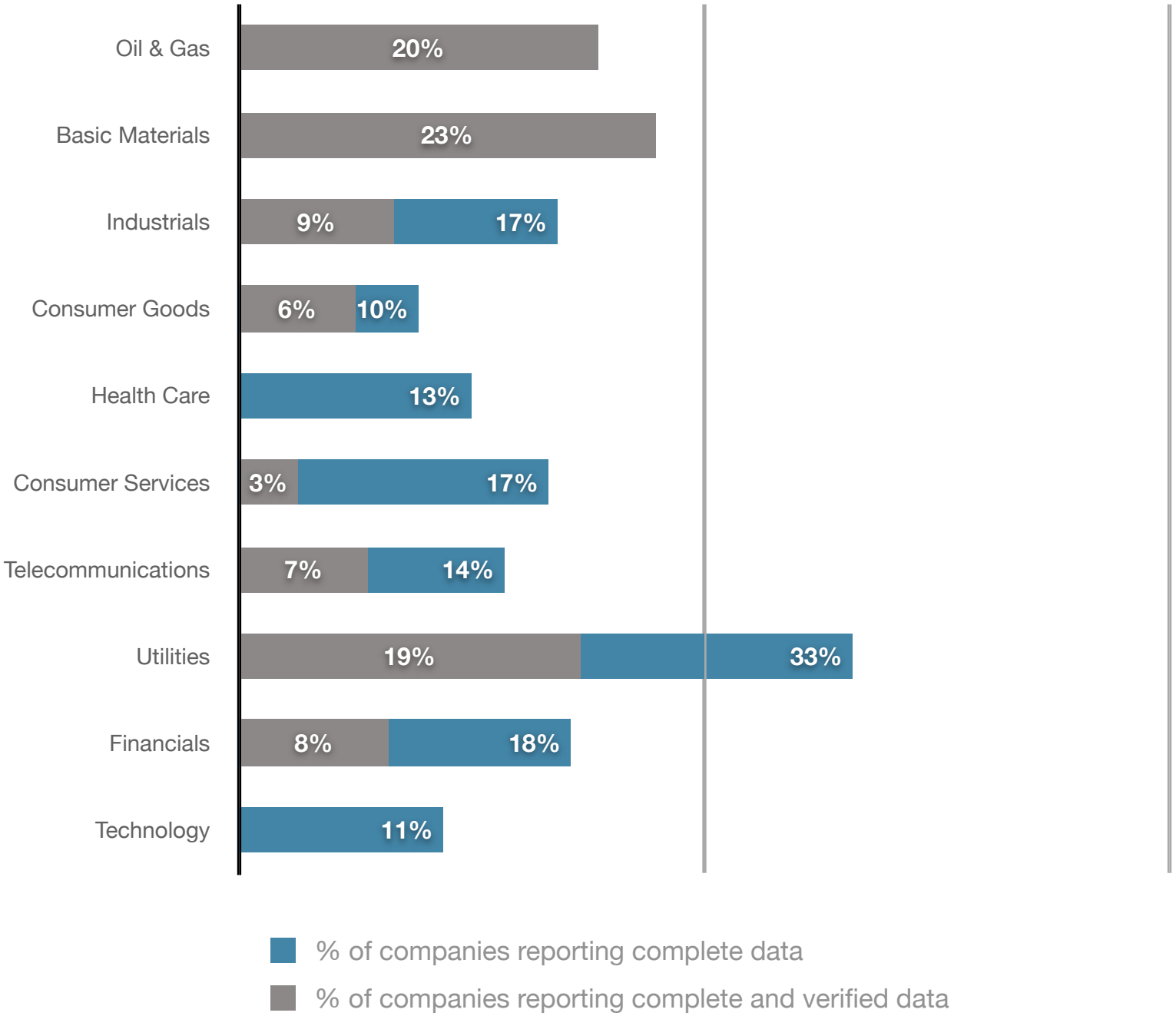
Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	SANTANDER BR	BR	19,563	0.56	6	103.83	Complete & Verified
2	ITAUUNIBANCO	BR	34,196	0.56	5	103.83	Complete & Verified
3	INFR.DEV.FINANCE	IN	4,066	4.50	4	107.77	Complete & Verified

Sector: Technology

Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	LENOVO GROUP	HK	66,234	4.43	1	556.12	Complete & Unverified
2	WIPRO	IN	Incomplete	42.50	-	594.19	Incomplete
3	INFOSYS	IN	Incomplete	42.50	-	594.19	Incomplete

Summary
Sectors leading the field of disclosure

Figure 27.



The Rankings show that there is vast room for improving GHG emissions reporting and verification throughout the BRICS and its dominant industry sectors. Basic Materials, with one of the highest carbon intensities, has the largest percent reporting Complete and Verified data. Interestingly, the industry sector with the highest carbon intensity, Utilities, also has a high average percent of companies reporting Complete data. The sector with the lowest percent of companies reporting was Consumer Goods.

Verifier Analysis

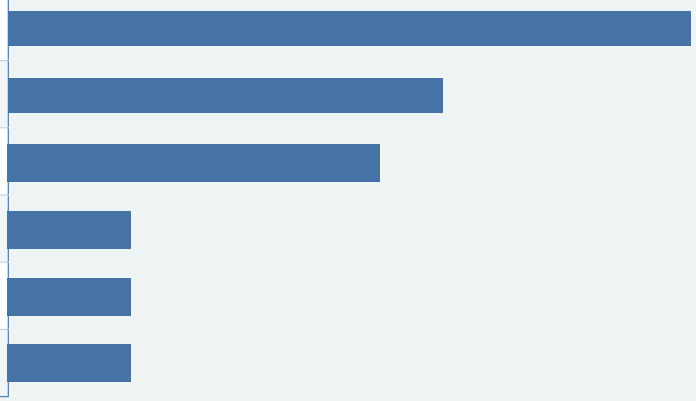
The breakdown of the top 6 verifiers shown in figure 22 is taken from companies which have been categorised as having their emissions Independently verified under the ET Carbon Ranking methodology.

With around 11% of the BRICS emissions data being verified, the verification level in this region is relatively low, especially in comparison with European companies. The verification market is largely centralized, with the largest three audit firms being responsible for about 67% of the verifications. PwC is the biggest player in the region, with a market share of 30% of the companies analysed in the Rankings. In total 33 different verifiers were identified across the region.

The large number of different verifiers also results in different approaches and verification guidelines being adhered to by the verifiers. This makes it more difficult for the users of the reports to value the verification reports.

Figure 28.

Verifier Name	No. of companies verified in BRICS 300
PwC	10
KPMG	6
Ernst & Young	6
DNV	2
Deloitte	2
Bureau Veritas	2



DISCUSSION 33

KEY POINTS

Non-Sectoral approach

The ET Carbon Ranking methodology is based on a non-sectoral approach as it is intended to create incentives for disclosure and emissions reduction across the board. Under this wider Environmental Tracking system, companies with higher intensities will experience greater downward pressure than those with low intensities, reflecting the science behind climate change mitigation dictating that absolute emissions have to be reduced.

Disclosure & Verification before intensity

WITHOUT COMPLETE AND VERIFIED DATA WE CANNOT ACCURATELY PAINT A PICTURE OF THE EMISSIONS LANDSCAPE

It could be argued that the present Ranking does not accurately reflect the emissions landscape as the key determinant of positioning is disclosure and verification before intensity. However, without complete and verified data we cannot accurately paint a picture of the emissions landscape.

High intensity by definition

By definition some companies pollute more than others, moreover, many of these companies provide valuable and vital services to society. Yet without strong incentives to change, they will continue to carry out their activities in a way which is detrimental to the environment. Virtually all the technological advances needed to tackle climate change are already in existence, or are only a few years away with the necessary investment.

CONSIDERING BUSINESS' MOTIVATION TO PROVIDE SHAREHOLDER RETURN, WE CAN INCENTIVISE CHANGE THROUGH AFFECTING A COMPANY'S SHARE PRICE

The only way we can expect these companies to invest in new technologies and employ new environmentally friendly policies is to provide them with an incentive to do so. The EIO argues that within the framework of the existing system this incentive must accord with a company's raison d'être: to maximise share price return. This can only be achieved by creating a system which influences share price according to the environmental costs of a company's actions.

REPORTING 34 LANDSCAPE

Sustainability reporting has grown rapidly over the past two decades as companies supplement their annual reports with issues pertaining to corporate social responsibility.

However, the lack of a universally accepted or mandatory standard concerning corporate responsibility disclosure means both reporting formats and content vary widely.

There is some evidence that emerging economy firms' CSR priorities differ from those in developed markets. Corporate sustainability reporting had tended to be the undertaken mainly by large companies in developed markets but, more recently, a noticeable increase in sustainability reporting among emerging economy firms has been observed, with emerging economy firms outperforming those from industrialized nations in their coverage of GRI indicators (Preuss & Berkemeyer, 2011).

The ET BRICS 300 report findings agree with this, and, while the studies acknowledge the limitations of their approach, they suggest that "either emerging economy enterprises are leading the way in terms of addressing sustainability, or they have been able to use GRI reporting as window-dressing to hide a dirtier reality" (Preuss & Berkemeyer, 2011).

The Chinese government appears to be laying the foundation for an improvement in reporting. In the 2009 Copenhagen Accord, China pledged to start reporting its emissions every two years going forward. It is developing a multi-step, bottom-up reporting process that uses periodic audits and reviews to cross-check and correct energy use and emissions data. Local and provincial officials are held responsible for meeting efficiency and energy intensity targets, and large state-owned companies, are under pressure to file reports. Companies in China appear to be aiming to increase their competitiveness by making carbon asset management an integral part of their business operations.

- **Scope 1 emissions**:
  All direct emissions
- **Scope 2 emissions**:
  Indirect emissions generated from the purchase of electricity
- **Scope 3 emissions**:
  All other indirect emissions, such as distribution of goods, transportation of purchased goods, transportation of waste, disposal of waste, employee commuting, business travel

AS THE BRICS 300 CARBON RANKING HIGHLIGHTS, THERE IS EVIDENCE THAT EMERGING ECONOMY FIRMS' CSR PRIORITIES DIFFER FROM THOSE IN DEVELOPED MARKETS

LANDSCAPE

Responses to the Carbon Disclosure Project (CDP) provide some insight into the attitude of corporations to emissions reporting. In China, the response rate for the CDP increased in 2010, though the CDP noted that reporting quality could be improved, especially an increase in quantitative rather than qualitative data as few companies undertake comprehensive GHG emissions accounting and disclosure.

AMONG CORPORATES IN INDIA, RESPONSES TO THE CDP IN 2010 INCREASED, AND SHOWED AN IMPROVEMENT IN THE QUALITY OF INFORMATION DISCLOSURE

Among corporates in India, responses to the CDP in 2010 increased, and showed an improvement in the quality of information disclosure. Disclosure of emissions across all three Scopes improved.

In Brazil, more companies are beginning to address the challenges of climate change, though many seem reluctant to even discuss their approach to climate governance citing incompleteness of their emissions data.

The response rate of corporations in Russia is similar to the low level of participation in China, clearly lagging behind other emerging economies.

Within South Africa, organisations like the South African Institute of Chartered Accountants (SAICA) and Integrated Reporting Committee (IRC) aim to encourage a culture of corporate responsibility, especially as it pertains to sustainability through the publishing of South Africa's Integrated Reporting Framework.

THE RESPONSE RATE OF CORPORATIONS IN RUSSIA IS SIMILAR TO THE LOW LEVEL OF PARTICIPATION IN CHINA, CLEARLY LAGGING BEHIND OTHER EMERGING ECONOMIES

In 2000 the Carbon Disclosure Project launched an initiative to encourage corporate GHG disclosure. However, this information is not always included in sustainability reports or placed in the public domain.

Variations

THERE ARE CURRENTLY WIDE VARIATIONS IN INTERPRETATION OF METHODS FOR THE MAJORITY OF VOLUNTARY SCHEMES

As pointed out by the ERM (2010) study on GHG reporting methods and initiatives, "Voluntary methods are open to varying degrees of interpretation by the user whilst mandatory methods tend to be much more prescriptive. An example of this can be seen on the issue of boundary setting. Voluntary methods such as the WBCSD/WRI GHG Protocol, and voluntary reporting schemes such as CDP, allow the user to select the boundary based on a number of options (e.g. operational or financial control; equity share), to ensure maximum flexibility. By way of contrast, mandatory schemes and their associated calculation methods, such as those for the UK Carbon Reduction Commitment and the schemes linked to trading of emissions allowances or permits (e.g. EU ETS; JVETS), define quite precisely the boundary, to ensure consistency in reporting between organisations covered by the scheme."

Gaps

ERM (2010) NOTES THAT THERE ARE FEW INITIATIVES PROVIDING INCENTIVES SUCH AS LEAGUE TABLES OR FINANCIAL PENALTIES/REWARDS - A GAP THE EIO SEEKS TO ADDRESS DIRECTLY THROUGH ITS ET CARBON RANKINGS AND INDEX SERIES

Interestingly, the report notes that "few methods or initiatives provide incentives such as benchmarks, league tables and financial penalties/rewards". This is a gap the EIO seeks to address through its Environmental Tracking (ET) Carbon Rankings and Index Series.

The report also draws attention to the "lack of clear statement of a 'mandatory minimum' GHG reporting requirements in most of the voluntary methods and initiatives", suggesting that "most voluntary methods have shied away from being prescriptive on key issues or have put complex arrangements in place to ensure adaptability" in order to encourage maximum uptake (ERM 2010).

Please see the Reporting guidance section (pages 42-43) for suggestions on the EIO's recommendations for how companies can report their GHG emissions more clearly.

IBM

Direct, Indirect Greenhouse Gas GRI EN16

Total direct and indirect greenhouse gas emissions by weight.

Direct and Indirect Greenhouse Gas (GHG) Emissions (in metric tonnes CO2 equivalent)	2010	2009	2008	2007	Company has targets for year:	C1
CO2 Direct	276,721	235,656	296,768	301,993		
CO2 Indirect Scope 2	2,125,986	2,380,946	2,381,447	2,445,791		
CH4 Direct						
N2O Direct	17,441	11,235	5,386	6,685		
HFCs Direct	42,289	14,566	13,060	10,570		C6
PFCs Direct	232,290	181,907	256,667	251,617		
CF6 Direct	9,549	13,291	8,452	9,066		
Subtotal Direct (Scope 1)	546,245	456,655	580,343	579,931		
Scope 1 data coverage (e.g. as % of revenues, employees, etc...): owned and leased operations	100					
Scope 1 estimated total (for 100% data coverage)						
Scope 1 emissions intensity per 100K revenue						
Total direct GHG emissions factored against base figure (please specify base figure here, e.g., revenue, volume or production, floor space area, etc):						
Subtotal Indirect (Scope 2)	2,125,986	2,380,946	2,381,447	2,445,791		
Scope 2 data coverage (e.g. as % of revenues, employees, etc...): owned and leased operations	100					
Scope 2 estimated total (for 100% data coverage)						
Scope 2 emissions intensity per 100K revenue						
Total Direct and Indirect GHG Emissions	2,672,231	2,837,601	2,961,790	3,006,271		
Subtotal Scope 3 (from GRI EN17 "GHG Scope 3 Emission")						
Total GHG Emissions	2,672,231	2,837,601	2,961,790	3,006,271		

Taken from IBM's website, this template clearly shows Scope 1 & 2 emissions and is easily accessible from the company's online GRI index (see next page), under the EN16 link.

IBM also provides its Scope 3 emissions information which is clearly referenced under EN17.

IBM ranks 35 in the ET North America 300 and discloses 4 Scope 3 categories.

GRI 38

TEMPLATE

☐	3.12	Table identifying the location of the Standard Disclosures in the report. Identify the page numbers or web links where the following can be found: * Strategy and Analysis 1.1 - 1.2; * Organizational Profile 2.1 - 2.10; * Report Parameters 3.1 - 3.13; * Governance, Commitments, and Engagement 4.1 - 4.17; * Disclosure of Management Approach, per category; * Core Performance Indicators; * Any GRI Additional Indicators that were included; and * Any GRI Sector Supplement Indicators included in the report.
☐	3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).
☐	3.2	Date of most recent previous report (if any).

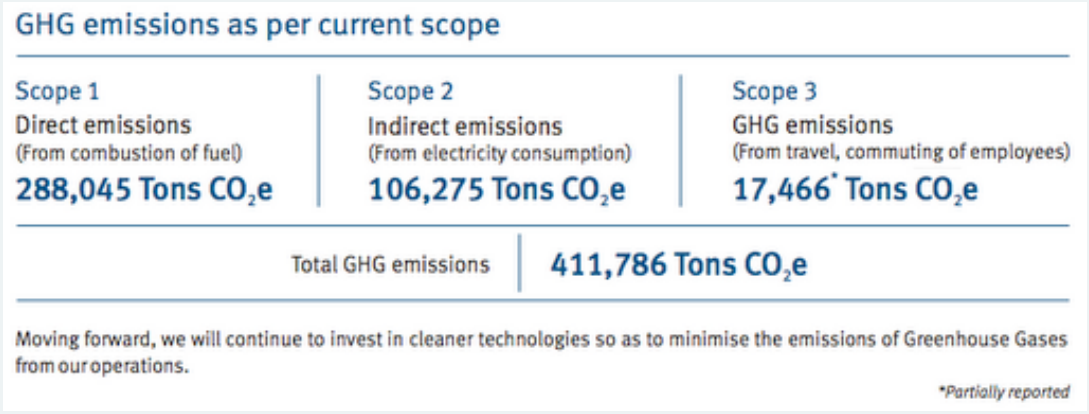
Using a GRI index helps anyone reading a report to navigate it quickly and easily.

It is strongly advised to clearly label where any verification statement can be found within the report.

☐	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity. (Additional)
☐	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. (Additional)
☐	EN16	Total direct and indirect greenhouse gas emissions by weight. (Core)
☐	EN17	Other relevant indirect greenhouse gas emissions by weight. (Core)
☐	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved. (Additional)
☐	EN19	Emissions of ozone-depleting substances by weight. (Core)
☐	EN20	NOx, SOx, and other significant air emissions by type and weight. (Core)

Clear labeling of where GHG emissions totals, calculated as tCO_2e (metric tonnes of CO_2 equivalent) is extremely important for a member of the general public to be able to find the data easily.

EXAMPLES



GHG emissions as per current scope

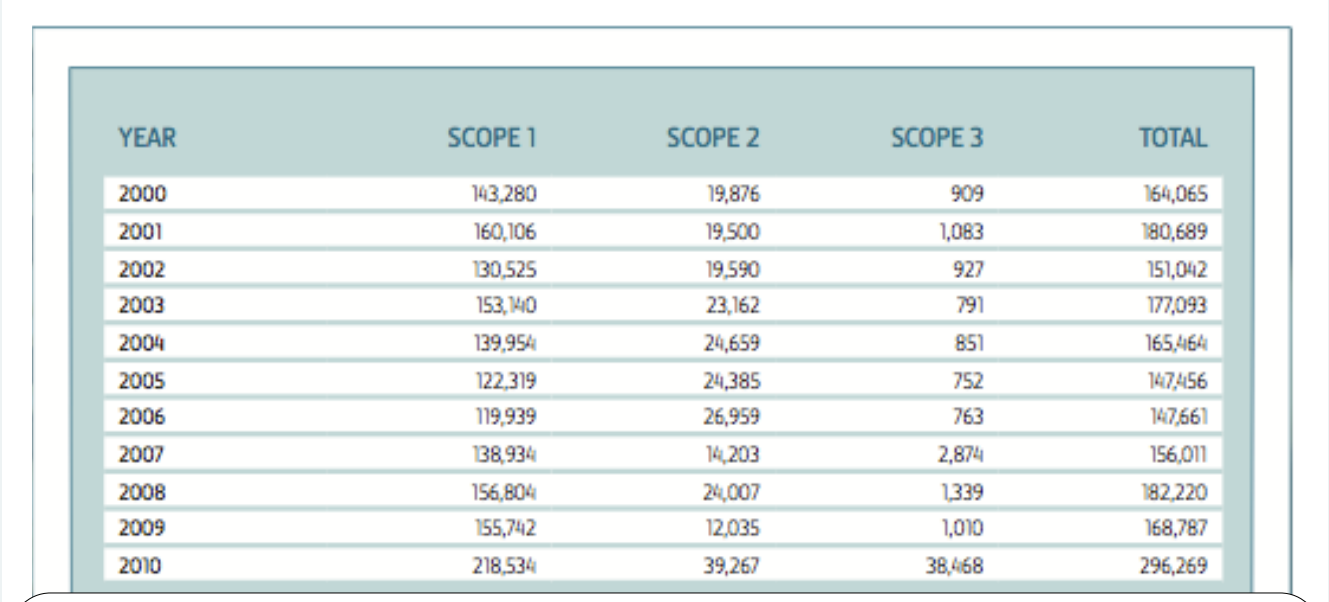
Scope 1	Scope 2	Scope 3
Direct emissions (From combustion of fuel)	Indirect emissions (From electricity consumption)	GHG emissions (From travel, commuting of employees)
288,045 Tons CO_2e	106,275 Tons CO_2e	17,466* Tons CO_2e

Total GHG emissions: 411,786 Tons CO_2e

Moving forward, we will continue to invest in cleaner technologies so as to minimise the emissions of Greenhouse Gases from our operations.

*Partially reported

India - a simple but effective graphic in conveying the information under Scope 1, 2 & 3 emissions with explanatory notes. Note that this company includes a disclaimer on the completeness of its Scope 3 emissions reporting; care was taken to ensure that all Scope 1 and Scope 2 emissions covered at least 95% of the business.



YEAR	SCOPE 1	SCOPE 2	SCOPE 3	TOTAL
2000	143,280	19,876	909	164,065
2001	160,106	19,500	1,083	180,689
2002	130,525	19,590	927	151,042
2003	153,140	23,162	791	177,093
2004	139,954	24,659	851	165,464
2005	122,319	24,385	752	147,456
2006	119,939	26,959	763	147,661
2007	138,934	14,203	2,874	156,011
2008	156,804	24,007	1,339	182,220
2009	155,742	12,035	1,010	168,787
2010	218,534	39,267	38,468	296,269

Brazil - here the GHG emissions by scope are clearly displayed in tabular format with an unusually extensive history of previous years' emissions.

EXAMPLES

Comparative information:

		Reporting year		
		2007	2008	2009
Scope	**Source**	**Company total (CO2eq tons)**	**Company total(CO2eq tons)**	**Company total(CO2eq tons)**
Scope 1	Company owned vehicles	27 872.00	32 378.20	68.79
	Stationary fuels	455.70	228.90	293.26
	Fugitive emissions	20 896.60	26 275.60	27 343.78
Sub-total scope 1		**49 224.30**	**58 882.70**	**27 705.83**
Scope 2	Electricity usage	290 466.00	288 229.10	329 023.53
Sub-total scope 2		**290 466.00**	**288 229.10**	**329 023.53**
Sub-total scope 1 and 2		**339 690.30**	**347 111.80**	**384 435.19**
Scope 3	Employee commute	Did Not Report (DNR)	32 554.70	**31 119.00**
	Business travel - flights	2 288.00	1 923.10	**7 434.73**
	Business travel - car rental	DNR	DNR	**90.50**
	Business travel - taxis (incl shuttle)	DNR	DNR	**23.84**
	Distribution (3rd party)	DNR	22 248.50	**24 507.71**
	Water	DNR	DNR	**117.67**
	Waste (materials life-cycle)	DNR	4 317.40	**4 582.24**
Sub-total scope 3		**N/A**	**61 043.70**	**67 875.69**
Sub-total SA		**341 978.30**	**408 627.40**	**452 310.88**
Country Road		**DNR**	**DNR**	**17 610**
Total		**341 978.30**	**408 627.40**	**469 920.88**

South Africa - reporting that goes beyond best practice guidelines, disclosing current and previous years' emissions by Scope, breaking down individual categories within each Scope, as well as showing a clear improvement in depth of reporting over the three-year period.

EXAMPLES

The table below shows FirstRand's carbon emissions in terms of the latest calculation with new items in scope. Comparable scope across 2009/2010 is included to show real changes in emissions during the year.

Carbon emissions and energy management

R million	2010 (New scope)	2010 (Comparable scope)	2009	% change (Comparable scope)
Carbon emissions (Metric tonnes of CO_2 equivalents)[1]				
Fuel use	295	265	485	(45)
Business fleet travel	9 321	9 321	11 173	(17)
Electricity (owned buildings)	211 543	206 101	197 587	4
Electricity (leased buildings)	99 639	99 639	173 631	(43)
Paper use	5 925	5 709	1 758	225
Business road travel	7 333	5 184	302	1 617
Business air travel	4 386	4 342	4 899	(11)
Refrigerants	2 598	–	Not in scope	Not in scope
Total carbon emissions	**341 040**	**330 561**	**389 835**	**(15)**
Energy used (Kw/h) (000)	**297 855**	**292 572**	**371 218**	
Energy saved (Kw/h) (000)	**14 612**	**14 529**	**18 584**	
Value of savings (R'000)	**4 708**	**4 463**	**6 632**	

1 *All figures reflect the prior financial year due to the duration of the carbon footprint calculation.*

South Africa - this company reported a lot of detail but could helped readers by identifying the different emission Scopes covered.

GHG emissions by Activity Category

	tCO2e	%
Fuels and lubricants	15,333.00	77.33%
Refrigeration gases	69.26	0.35%
Other fugitive emissions	1.37	0.01%
Electrical energy infrastructure	1,529.60	7.71%
Electrical energy acquired	2,893.74	14.59%
Total	19,826.97	100.00%

Emissões de Gases do Efeito Estufa por Escopo

GEE	Escopo 1	Escopo 2	Escopo 1	Escopo 2	Total
	t	t	tCO2e	tCO2e	tCO2e
CO2	16,789.07	2,893.74	16,789.07	2,893.74	19,682.81
CH4	1.69	0.00	35.44	0.00	35.44
N2O	0.13	0.00	39.48	0.00	39.48
HFCs	0.05		69.24		
HFC-32	0.01		6.79		
HFC-125	0.01		31.77		
HFC-134a	0.02		30.68		
SF6	0.00		0.00		
Total			16,933.23	2,893.74	

Brazil - good range of data provided, though the information in the lower table could have easily been provided in simple English to make it accessible to a wider audience.

GUIDANCE

- **Report Scope 1, 2 & 3 emissions following GHG protocol guidelines**
- **Ensure emissions data is publicly available in CSR/Sustainability reports/Integrated Annual report and online**
- **Have emissions data verified by an independent third party to a recognised standard**
- **Ensure verification certificates are easily available to the publicly**

Companies can easily improve their standings within the ET Carbon Rankings by following several simple steps:

1. Publishing emissions data for Scopes 1, 2 and 3 in the public domain, in a clear and accessible manner, either on the company website or in a Sustainability Report, Annual report, Integrated Annual report or ideally, all of those that apply.

2. Ensuring this information has been externally verified to a reasonable standard of assurance, ideally against a specific GHG standard such as ISO 14064-3, but at least in accordance with a general assurance standard, such as ISAE 3000 (the International Standard on Assurance Engagement).

3. Calculate Scope 3 emissions comprehensively according to the new GHG protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The latest information on verification of Scope 3 can be found at the GHG Protocol and ISO websites.

4. Ensure that any verification statement is publicly available and included in the relevant Sustainability Report or Annual Report, as well as ensuring it can be easily found on your company's website.

One of the primary aims of the EIO's series of Rankings is to ensure that reliable GHG emissions data is publicly available and we applaud all companies making a serious effort to reach this standard.

Encouraging clearer reporting

The key areas which are identified by the various bodies of research carried out in the field of GHG emissions reporting, including by the EIO, suggest that there is an urgent need for:

- Standardised reporting
- More emphasis on the verification of GHG emissions data reported by companies

The following page outlines the EIO's suggestions for how companies could and should report their emissions going forward.

ET REPORTING 43 TEMPLATE

REPORTING TEMPLATE

The reporting template below provides guidance on how companies can report their Greenhouse Gas emissions in a **simple**, **clear** and **cross comparable** format. It is intended to integrate with the existing and widely used GHG Protocol standard of reporting emissions in terms of Scope 1, 2 & 3. Crucially, it seeks to provide a framework by which companies can report their key GHG information in one place covering three core areas: **total GHG emissions**; **scope of reporting**; and, **verification**. The EIO is currently exploring how it might be able to link the reporting of such data directly to the ET Carbon Rankings.

ENVIRONMENTAL TRACKING REPORTING TEMPLATE

Reporting Period:

1 January 2009 to 31 December 2010: Yes/No? _____

If other please specify _____

	Metric tonnes of CO2e (tCO2e)	
	2010	2009
Scope 1	25,000	23,000
Scope 2	350,000	370,000
Scope 3	11,000,000	9,600,000
Total gross emissions	**11,375,000**	**9,993,000**
Green tariff Energy Purchased	(28,000)	-
Total net emissions	**11,347,000**	**9,993,000**

Boundary setting:

What reporting boundary method have you adopted under the terms of the GHG Protocol?

_____

Scope of Reporting: Scope 1 & 2

Do the gross emissions reported for Scope 1 & 2 as defined by the GHG Protocol represent 100% of your company's emissions for these Scopes? Yes/No?

_____

If you have answered no to the previous question, what percentage of your company's operations do they represent?

_____

Scope of Reporting: Scope 3

How many of the 15 Scope 3 categories, as defined by the GHG Protocol, does your company disclose data for? Please attach a full breakdown with the percentage coverage for each _____

Verifications/Assurance (to be completed by an independent third party)

Name of Verifier: _____

Which standard has been used to assure the data? (E.g. ISO14064, AA1000AS etc) _____

Which Scopes have been verified? _____

If the company is reporting Scope 3 emissions, has it covered all of the Scopes accurately (for Scope 3 please refer to the GHG Protocol new Corporate Value Chain (Scope 3) Accounting and Reporting Standard), including any GHGs not covered by the GHG Protocol which may be material? Yes/No?

_____

Are there any material issues with the numbers represented for the company under Scope 1, 2 or 3? Yes/No?

_____

Is the data presented by the company representative of the company's entire scope of operations? Yes/No? If no approximately what % does it cover?

_____

Please state any other further comments or qualifications

_____

Please attach the verification full statement.

ET INDEX 44 SERIES

Moving forward: The ET Index Series

The ET Carbon Rankings represent the first phase of the Environmental Tracking concept, paving the way for the ET Index Series, which will follow soon after.

The ET Index Series has been designed to provide the investment community with a tool to encourage transparency and emission reductions on a global scale. Through the creation of a mainstream financial product, in the form of a series of broad market indexes, the world's largest companies can be incentivised to cut their emissions. This is done by re-weighting companies in the index series, either positively or negatively, on a sliding scale, according to their position in the ET Carbon Ranking.

As pointed out by the recent Mercer report on Climate Change Scenarios and the Implications for Asset Allocation (Mercer 2011), the use of sustainability themed indices in passive portfolios is identified as one way investors can take action to improve their portfolio resilience to climate-related risks.

However, the key question, which the EIO seeks to address through its Index series, is how to create an investable index which can have sufficient appeal to investors, evidently concerned with the bottom line. This is why the ET Index Series has been created to mirror the risk/reward profile of their non weight-adjusted counterparts, whilst still applying pressure to companies across the board to reduce their emissions.

The potential of ET Index Series to tackle GHG emissions rests on the logic that if a significantly large pool of investors track the indexes, it will alter the supply and demand for these companies' shares based on their position in our Ranking. This effectively increases the cost of emitting Greenhouse Gases, incentivising companies to take action.

INDEX CONCEPT

NATIONAL INDEXES:

ET UK 100

REGIONAL INDEXES:

ET EUROPE 300

ET NORTH AMERICA 300

ET ASIA-PACIFIC 300

ET BRICS 300

GLOBAL INDEXES:

ET GLOBAL 800

ET GLOBAL 1200

THROUGH APPLYING PRESSURE TO A COMPANY'S SHARE PRICE, THE ET INDEX SERIES AIMS TO RAISE THE COST OF CARBON FOR COMPANIES

GLOSSARY OF TERMS

BAU: Business As Usual

BASIC: Building and Strengthening Institutional Capacities on Climate Change

BRICS: Brazil, Russia, India, and China, and South Africa

CCC: Committee on Climate Change

CDM: Clean Development Mechanism

CED: Clean Energy Dialogue

CO2e: Greenhouse Gas emissions expressed as Carbon Dioxide (CO2) Equivalents, meaning calculated to express their global warming potential in terms of CO2.

CRC: Carbon Reduction Commitment

C(S)R: Corporate (Social) Responsibility

DECC: Department of Energy and Climate Change

EIO: Environmental Investment Organisation

ET: Environmental Tracking

EU ETS: EU Emissions Trading Scheme

GCF: Green Climate Fund

GDP: Gross Domestic Product

GHG: Greenhouse Gas

GRI: Global Reporting Initiative

GWP: Global Warming Potential

IMF: International Monetary Fund

ISAE: International Standard on Assurance Engagements

ISO: International Organization for Standardization

JVETS: Japanese Voluntary Emissions Trading Scheme

kWh: kilowatt hours

Mt: Mega tonnes

OECD: Organisation for Economic Co-operation and Development

RGGI: Regional Greenhouse Gas Initiative

JI: Joint Implementation

tCO2e: Metric Tonnes Carbon Dioxide Equivalent

ROC: Renewable Obligation Certificates

Scope 1 (or S1): All direct GHG emissions.

Scope 2 (or S2): Indirect GHG emissions from consumption of purchased electricity, heat or steam.

Scope 3 (or S3): Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

UNFCCC: United Nations Framework Convention on Climate Change

WBCSD/WRI: World Business Council for Sustainable Development / World Resources Institute

WCI: Western Climate Initiative

BIBLIOGRAPHY 46
OF SOURCES

BP (2011) BP Statistical Review of World Energy June 2011, October 2011. Available from: http://www.bp.com/statisticalreview

CDP (2011) Carbon Disclosure Project Brazil Report 2011. Available from: https://www.cdproject.net/CDPResults/CDP-2010-Brazil-Report-portuguese.pdf

CDP (2010) Carbon Disclosure Project 2010 China Report. Available from: https://www.cdproject.net/CDPResults/CDP_2009_China_Report_English.pdf

CDP (2010) Carbon Disclosure Project 2010 India Report. Available from: https://www.cdproject.net/CDPResults/CDP_Report-Final_India.pdf

CDP (2010) Carbon Disclosure Project 2010 Russia Report. Available from: https://www.cdproject.net/CDPResults/CDP-2010-Russia50-Report.pdf

De Sepibus, Joelle and Tuerk, Andreas (2011) New Market-Based Mechanisms Post 2012: Institutional Options and Governance Challenges when Establishing a Sectoral Crediting Mechanism. Available from http://ssrn.com/abstract=1935802

Department of Environmental Affairs (2009) Environmental Sustainability Indicators, Technical Report 2009. Department of Environmental Affairs, Pretoria.

EIA (2009) International energy statistics. Available from: http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=90&pid=44&aid=8

GHG Protocol, 2011. Corporate Value Chain (Scope 3) Accounting and Reporting Standard. [Online] Available at: http://www.ghgprotocol.org/files/ghgp/Corporate%20Value%20Chain%20(Scope%203)%20Accounting%20and%20Reporting%20Standard.pdf

Integrated Reporting Committee (IRC) of South Africa (2011) Framework for integrated reportIng and the integrated report: Discussion paper. Available at: http://www.sustainabilitysa.org/Portals/0/IRC%20of%20SA%20Integrated%20Reporting%20Guide%20Jan%2011.pdf

International Energy Agency (2010) IEA statistics: CO2 emissions from fuel combustion highlights. Available from http://www.iea.org/co2highlights/co2highlights.pdf

International Energy Agency (2006) Optimizing Russian Natural Gas- Reform and Climate Policy. Available from www.iea.org/textbase/nppdf/free/2006/russiangas2006.pdf (page 15)

Lutz , Preuss and Ralf, Barkemeyer (2011) CSR priorities of emerging economy firms: is Russia a different shape of BRIC? Corporate Governance, Vol. 11 Iss: 4, pp.371 – 385

Massetti, Emanuele (2011) A Tale of Two Countries: Emissions Scenarios for China and India, FEEM Working Paper No. 24.2011; CMCC Research Paper No. 105. Available from http://ssrn.com/abstract=1788229

Mintzer, Irving, J. Amber Leonard, and Iván Darío Valencia (2010) Counting the Gigatonnes: Building trust in greenhouse gas inventories from the United States and China. World Wildlife Fund, Washington D.C.

Nielson, Leslie (2009) Parliament of Australia Economics Section, Climate change policy: Brazil, China, India and Russia. Available from http://www.aph.gov.au/library/pubs/bn/2008-09/ClimateChange.htm

The Pew Centre on Global Climate Change (2008) Climate Change Mitigation Measures in India: International Brief 2. Available from http://www.pewclimate.org/docUploads/India-FactSheet-09-08.pdf

The Pew Centre on Global Climate Change (2007) Climate Change Mitigation Measures in the Peoples Republic of China: International Brief 1. Available from http://www.pewclimate.org/docUploads/International%20Brief%20-%20China.pdf

BIBLIOGRAPHY 47

OF SOURCES

SADC, SARDC, IUCN & UNEP (2008) Southern Africa Environment Outlook, SADC, SARDC, IUCN & UNEP, Gaborone/Harare/Nairobi,

Department of Environmental Affairs: Republic of South Africa. South African Department of the Environment Affairs: State of the Environment: http://soer.deat.gov.za

United Nations Development Programme (2011) Blending Climate Finance Through National Climate Funds. Available from:
http://asia-pacific.undp.org/documents Blending_Climate_Finance_Through_National_Climate_Funds.pdf

United Nations Development Programme (2009) National Human Development Report in the Russian Federation: Energy Sector and Sustainable Development. Available from http://www.undp.ru/documents/180-eng2-01-04.pdf

United Nations (2008) Millennium development goals indicators: The official United Nations site for MDG indicators. Available from http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=749&crid=

Wagner, Fabian and Amann, Markus (2009) Greenhouse Gas - Air Pollution Interactions and Synergies (GAINS), Analysis of the proposals for GHG reductions in 2020 made by UNFCCC Annex 1 Countries: Implications of the Economic Crisis. Available from http://gains.iiasa.ac.at/gains/reports/Annex1-pledges_WEO2009.pdf

World Bank (2008) Energy efficiency in Russia: Untapped reserves. Available from http://www.ifc.org/ifcext/rsefp.nsf/AttachmentsByTitle/FINAL_EE_report_Engl.pdf/$FILE/Final_EE_report_engl.pdf

World Resources Institute (2009) Mitigation actions in China: Measurement, reporting and verification. Available from http://pdf.wri.org/working_papers/china_mrv.pdf

T: +44 208 801 0570

E: info@eio.org.uk

www.eio.org.uk

Report Authors:

Sam Gill

Myriam Neaimeh

Catherine Pargeter

Matthew Caville

Douglas Herling

Desiree Lucchese

Jan Ludolf Heeres

Rachel Whittaker

Aurel Schmid

Antonia Weitzer

Michael Gill

Report Researchers:

Adam Smith, Ali Stoddart, Alison Richardson, Alla Novick, Asif Rahman, Bryn Stott, Chris, Rowohlt, Dana Galiyeva, Daniel Durham, Daniel Hammond, Douglas Herling, Eid Ahmaro, Ewa Susek, George Koukopoulos, Guglielmo Savarese, Harini, Manivannan, Honor Cowen, Itnuma Subba, Jillian Watt, Joe Dorfman, Jorge Infantes, Krystyna Kowalczyk, Leia Achampong, Liam Campbell, Lisa Zentner, Luca Tanadini, Marta Kowalska, Nashwan Nasir, Oliver Bubb-Humfryes, Richard Arnold, Ruth Apps, Samantha Parsons, Samuel Adjei, Sebastian Hoeg, Simon Jones, Thomas Barrett, Tom Pritchard, Yiannis Bartzilas, Zankhana Shah