Environmental Tracking

Carbon Rankings

REPORT:
ET GLOBAL 800
2013 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 research body promoting carbon transparency and investment solutions designed to address climate change.

WHAT WE DO

ENVIRONMENTAL TRACKING

ET Carbon Rankings

scoring the world's largest companies by greenhouse gas emissions & levels of transparency

ET Index Series

mainstream index series designed to give investors broad market exposure whilst capitalising on, and driving, the shift towards a low carbon economy

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

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Foreword

Dear Reader,

Welcome to the ET Global 800 Report, examining the greenhouse gas emissions and transparency of the world's largest 800 companies. The ET Carbon Rankings apply a uniform methodology across all sectors within a single public Ranking.

This is one in a series of ET 2013 Carbon Ranking Reports covering the world's largest 1,300 companies and being released in the week commencing 29th April.

Many companies now benefit from talented, dedicated sustainability staff and are earning top spots for their efforts, but the overall picture globally remains poor. Many companies go to great lengths to collect and analyse detailed greenhouse gas (GHG) data, only to fail at the last hurdle with simple errors in data presentation, such that a member of the public cannot decipher what the data means when set against the accepted GHG Protocol standard, the most widely used international accounting tool for GHG emissions. Unless all companies are reporting and presenting their GHG data in a clear and uniform manner, the task of cross comparing against companies becomes all but impossible.

Why is it that despite nearly two decades of major international initiatives, such as the UN Global Compact, the Global Reporting Initiative (GRI) and the Carbon Disclosure Project (CDP), we find ourselves in this situation? In the case of the GRI, its broad range of topics and lack of any specific format for GHG data presentation, even lacking specific headings for Scope 1, 2 and 3 emissions, explains itself. In the case of the CDP, operating as a private database with limited public access, the onus has been taken away from the responsibility of companies to report their own GHG emissions data in a clear, publicly accessible manner. Is it any wonder some companies are confused as to exactly what is expected of them? In simple terms, clear GHG reporting needs to be prioritised from the ever widening scope of CSR reporting if we are to have any chance of even passing the first hurdle of the climate crisis, which is to establish the reliability of the data itself.

The EIO does not usually involve itself in the scientific debate, preferring to let those with the necessary competence address such complex questions. Yet I could not help but be struck by a recent BBC Horizon Television Documentary entitled 'Global Weirding', a phrase which seems to neatly encapsulate the current facts on the ground. Of particular note was a claim by US scientist Professor Katharine Hayhoe and quoted by many other sources including the Met Office, that atmospheric humidity has increased by 4% since 1970. Given that many of the extreme weather events we are facing are moisture driven, this seemed to me to be a quite startling number. If we had been told that the global temperature had increased by 4% in the last 40 years, I think most people would realise that something quite serious was happening. Given an average is simply that and severe events will concentrate at particular times and places, given time lags are an inevitable part of the climatic process, we have not even begun to see the impact of this or many other consequences of climate change. I do find it surprising this particular number has not received greater attention. It does not require 'an Einstein' to

Foreword

work out that the wettest (or snowiest) decade since records began might have something to do with a 4% rise in atmospheric moisture.

The term 'Denialist' has often been used to describe arguments querying the current scientific consensus. But I do not see a consensus. On the contrary, it seems to me there are a great range of predicted outcomes and only those that are relatively 'unalarmist' get any serious press.

Unfortunately, we have no real idea of the parameters of what we are triggering, being a complex interaction of social, economic and climatic forces. I fear, as is already happening, first the vulnerable will suffer and then chaos and carnage will catch up with the rest. We are in effect driving in the dark without lights, with a misplaced over-confidence in where we are heading. Nothing new there in the history of human intelligence, it is just that on this occasion a miscalculation will leave 7 billion and counting in its aftermath.

There is no historical precedent to this situation. There is no textbook answer. The real 'denial' is in failing to recognise there is no obvious solution to this problem, in this extraordinarily complex globalised world. The global economy is made up of nearly 200 individual nation states with vast gulfs of wealth, geographical size, exposure to risks, asymmetric political and social systems and multiple competing priorities. On the evidence to date, they are simply not going to suddenly a) all agree to a meaningful new global emissions regime and b) implement it even if they did all sign it.

The only immediate decentralised non-governmental solution I can see is from the activities of the investment world. Yet this will involve a fundamental and profound rethink of the purpose of the investment system and its current models, including current models of SRI and Ethical Investment, if we are to have the slightest chance of impacting this problem in any serious or rapid time frame.

Statements of intent. Fine. Statements of principle. Fine. But surely, we need to ask the long hard question, what might actually work?

Who knows how the final days of the people of Easter Island played out, but I can imagine as those involved looked around them and asked 'what have we done?', their more intelligent young offspring were less than complimentary. A modern translation might read 'thanks a tonne!'.

Michael Gill,

Strategic Director & Founder, The Environmental Investment Organisation

April 2013

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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 operate globally and incentivise carbon reductions within a rapid time-frame.

This latest set of Carbon Rankings build on the methodology established previously for the ET 2011 Carbon Rankings, where companies were placed into one of four Disclosure and Verification categories and then ranked by carbon intensity (tonnes of CO2 equivalent per million US dollars of turnover) based on Scope 1, 2 & 3 emissions.

Where data is incomplete or not reported, companies are benchmarked against their sectoral competitors using the highest reported emissions intensity for that sector. *Please see the EIO website methodology section for a more comprehensive explanation of the four disclosure categories and the inference method.*

With the introduction of the long awaited New Scope 3 Standard from the Greenhouse Gas (GHG) Protocol in 2011, the EIO continues to take a proactive approach to incentivising companies to adopt this important new standard in GHG Reporting. 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 to reward those companies fully reporting Scope 3 data.

Only when a company reports or explains its data across all 15 categories will that Scope 3 data be accepted. In all other cases, whilst the Scope 3 data is recorded and published, the inference method determines the actual Scope 3 intensity applied within the Ranking. The disclosure categories and inference method are essential tools to ensure that the ET Carbon Ranking is based on cross comparable information and no company is unfairly disadvantaged by disclosing fully its Scope 1, 2 and 3 emissions.

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

- BASF, (Complete & Verified), comes top, disclosing all 15 Scope 3 Categories, according to the GHG Protocol Scope 3 Reporting Standard, with a combined Scope 1, 2 & 3 emissions intensity of 932.74 tCO2e/$M turnover.
- **US based First Energy comes last, with no public data and an inferred combined Scope 1, 2 & 3 emissions intensity of 10,342.03 tCO2e/$M turnover.**
- RWE, (Complete & Verified), has the highest publicly disclosed Scope 1 & 2 figure of 166,200,000 tCO2e, with a combined Scope 1, 2 & 3 intensity of 3,870.19 tCO2e/$M turnover.
- **GDF Suez, (Complete & Verified), has the second highest publicly disclosed Scope 1 & 2 figure of 156,899,254 tCO2e, with a combined Scope 1, 2 & 3 intensity of 2,617.98 tCO2e/$M turnover.**
- 63% of companies in the ET Global 800 report incomplete data or no data at all, indicating the scale of the GHG reporting challenge.
- **Italy and Spain rank joint highest in terms of disclosure and verification with 62% of companies reporting complete data and a further 54% having their data verified.**
- In total, only 21% of the ET Global 800 report public, complete and independently verified data, as defined by the ET Global Carbon Ranking Methodology.

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.

SUMMARY

Key Findings

- **Europe leads the world on all disclosure metrics: 35% of companies report complete and independently verified data. This compares to 11% for the BRICS, the lowest of any region.**
- **8 of the top 10 companies in the ET Global 800 are Europe based.**
- **267, or 33%, of companies within the ET Global 800, report one or more Scope 3 categories. However, only 15, or 2%, report 5 or more Scope 3 categories.**
- **Of this group, only one company, BASF, reports all 15 Scope 3 categories, according to the GHG Protocol Scope 3 Reporting Standard.**

With 258 companies not reporting any data at all, and 243 reporting incomplete data, there is clearly significant room for improvement in the Global emissions reporting landscape.

The ET Carbon Rankings make up the first phase of the Environmental Tracking concept paving the way for the second stage: the ET Index Series. This will see the Rankings used to create a series of tradeable 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 with minimal tracking error, through the launch of its two pilot indexes, the ET Europe 300 and the ET UK 100, based on previously published Rankings. For more information, including backtested performance data based on the 2013 ET Carbon Rankings, please refer to the ET Index Section of the EIO website.

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 public**

RANKING 8

HIGHLIGHTS

ET Global 800 Top 10

Figure 1.

ET Rank	Company Name	S1+2 emissions (tCO2e)	S1+2 Intensity	S3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	BASF	25,799,000	266.25	15	932.74	Complete & Verified
2	Swisscom	23,242	1.86	4	37.58	Complete & Verified
3	BCE	215,029	10.98	2	46.70	Complete & Verified
4	Singapore Telecom	181,965	11.81	2	47.53	Complete & Verified
5	Telefonica	1,728,109	20.86	1	56.58	Complete & Verified
6	BT Group	710,000	21.76	3	57.48	Complete & Verified
7	France Telecom	1,362,641	22.83	1	58.55	Complete & Verified
8	Deutsche Telekom	2,138,039	27.65	1	63.37	Complete & Verified
9	Telecom Italia	1,141,355	28.90	2	64.62	Complete & Verified
10	Vodafone Group	2,199,598	29.49	2	65.21	Complete & Verified

Topping the 2013 ET Global 800 Carbon Ranking is the German based chemical company BASF, which is the only company in the Global 800, and indeed the entire ET Global Universe, to report on all 15 Scope 3 categories. Any company with complete and verified Scope 1 & 2 emissions reporting fully on Scope 3 emissions is guaranteed a top spot in the Rankings. BASF is the only company not to have been given an inferred Scope 3 intensity within its sector, meaning that the numbers displayed reflect its actual reported Scope 3 intensity. This combined intensity figure, which gives Scope 3 emissions a 50% weighting, stands at 932.74.

Second place is occupied by the Telecoms company Swisscom with a combined carbon intensity of 37.58. Swisscom discloses 4 Scope 3 categories. Canada based telecoms company BCE ranks third with a combined intensity of 46.70.

Fourth placed Singapore Telecom is the only Asian company to make the top 10.

(Emissions Intensity is measured in tCO2e/$M turnover)

RANKING 9

HIGHLIGHTS

ET Global 800 Bottom 10

Figure 2.

ET Rank	Company Name	S1+2 emissions (tCO2e)	S1+2 Intensity	S3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
791	Petrochina	No public data	*3,926.62*	-	*7,086.52*	No public data
792	Surgutneftegas	No public data	*3,926.62*	-	*7,086.52*	No public data
793	EOG Resources	No public data	*3,926.62*	-	*7,086.52*	No public data
794	Phillips 66	No public data	*3,926.62*	-	*7,086.52*	No public data
795	Anadarko Petroleum	No public data	*3,926.62*	-	*7,086.52*	No public data
796	Oil Company Lukoil	No public data	*3,926.62*	-	*7,086.52*	No public data
797	Pembina Pipeline	No public data	*6,421.64*	-	*7,727.13*	No public data
798	Origin Energy	No public data	*6,421.64*	-	*7,727.13*	No public data
799	Edison Intl.	No public data	*9,036.54*	-	*10,342.03*	No public data
800	First Energy	No public data	*9,036.54*	-	*10,342.03*	No public data

The last four places in the ET Global 800 are occupied by Utilities companies, two from the United States, one from Australia and the other from Canada. The remainder of the bottom 10 is occupied by companies from the broad Oil and Gas sector.

First Energy, the US Electricity conglomerate, comes bottom overall as the largest of the four companies in the Utilities sector not to publicly disclose emissions data. USA's Edison International is saved from the bottom spot by virtue of having a slightly smaller market value compared to First Energy.

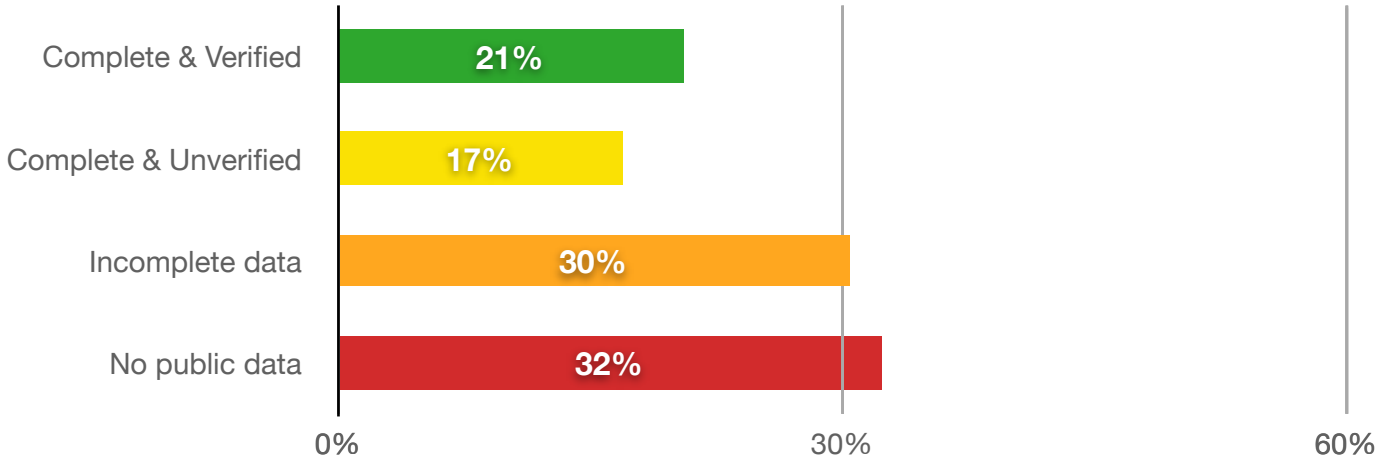
50% of the bottom 10 companies are based in the USA those not already mentioned coming from Russian, and China also. Again, where companies have the same combined intensity score across the three Scopes, advantage is given to the smaller company in terms of market value.

(Emissions Intensity is measured in tCO2e/$M turnover)

OVERVIEW

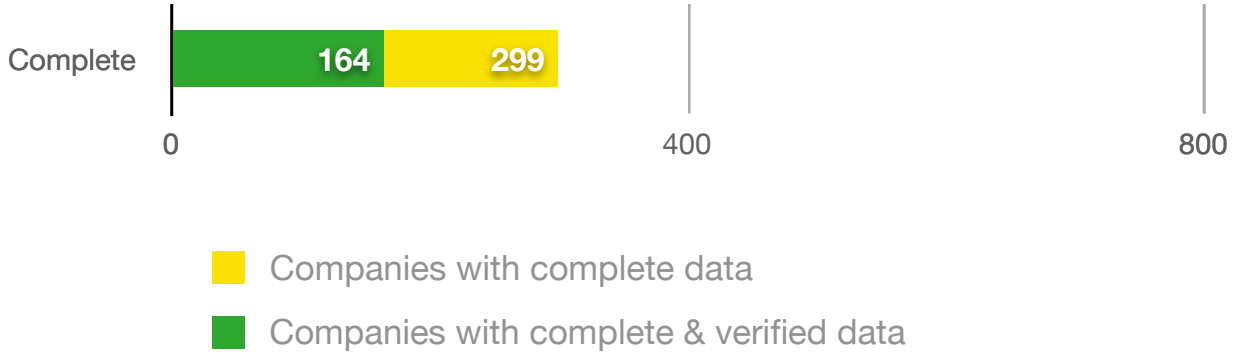
The disclosure and verification landscape of the ET Global 800

Figure 3.



Complete data versus verified data

Figure 4.



CARBON RANKING 11

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** based on Scope 1 & 2 emissions:

- **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 12

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 Scope 3 emissions 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 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 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

First companies are categorised according to the completeness and verification of their Scope 1 & 2 data. Secondly, companies are ranked within the Disclosure Categories, according to their combined emissions intensity across Scopes 1, 2 and 3; with the exception of any company reporting complete Scope 3 data across all 15 GHG Protocol Scope 3 Standard categories in addition to having complete and verified Scope 1 & 2 data. Companies falling into the latter category will rank above all other companies in the Rankings, and will be differentiated according to combined intensity. Please refer to the inference method as described in the previous section for details on how companies not providing complete data are treated.

CARBON RANKING 13

METHODOLOGY

Accounting for size

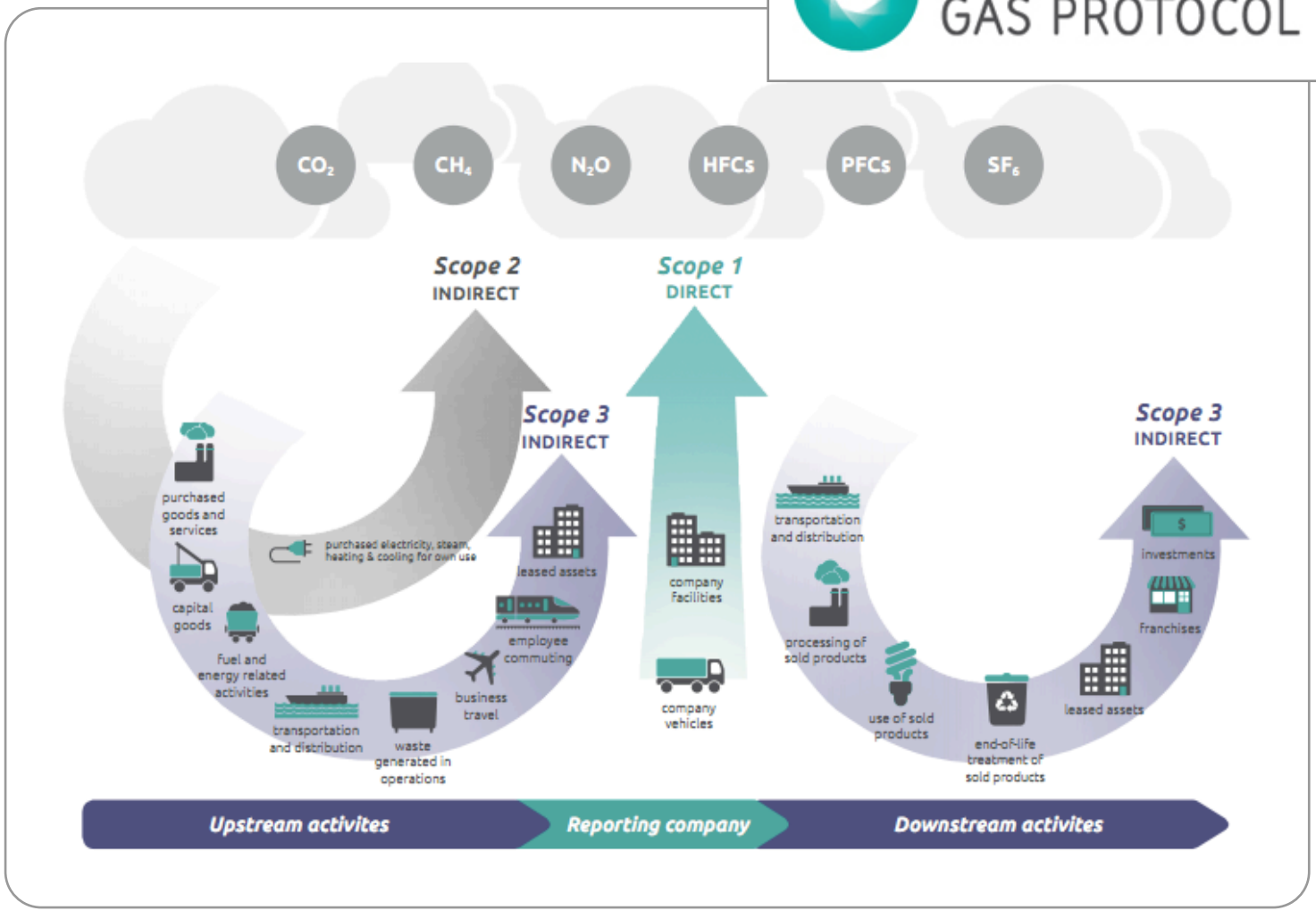
Emissions intensity is calculated using turnover figures from the same financial year as their latest publicly available (at time of publication) reported emissions.

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

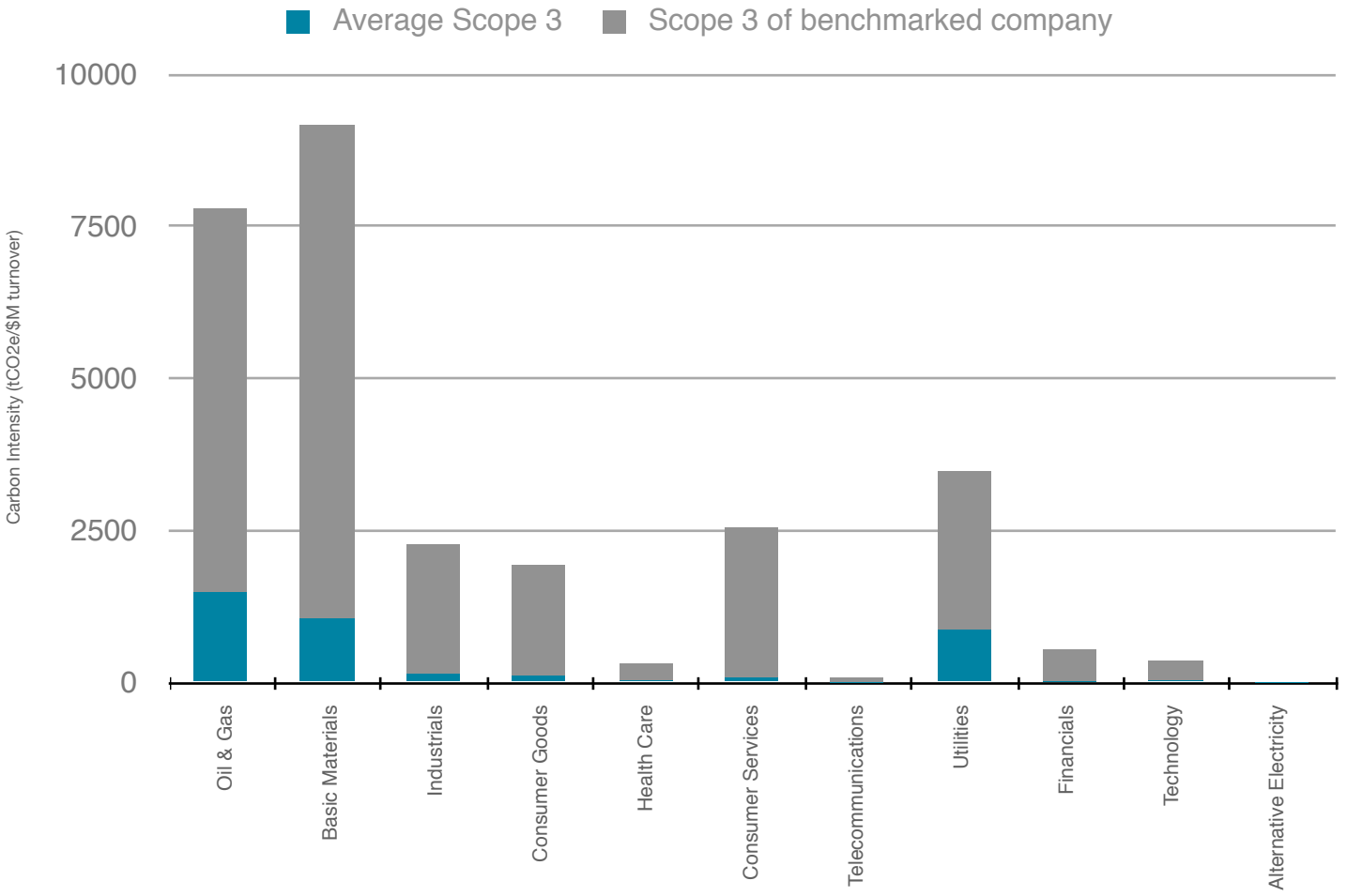
GREENHOUSE GAS PROTOCOL



SCOPE 3

Global Scope 3 Analysis

Figure 5.



Global Scope 3 Benchmark companies

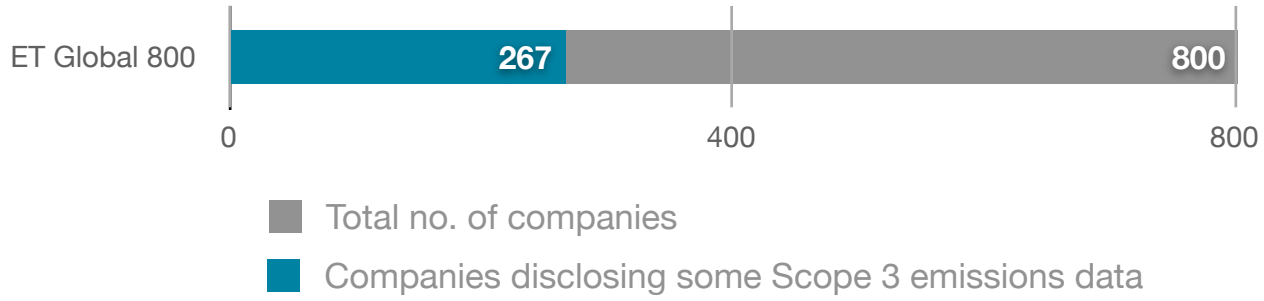
Figure 6.

Sector	Benchmark Company Name	No. of Scope 3 Categories Disclosed	Scope 3 Intensity	Sector Scope 3 Intensity Average
Oil & Gas	Santos	1	**6,319.81**	1,473.57
Basic Materials	Rio Tinto	3	**8,120.15**	1,047.41
Industrials	Honda Motor	1	**2,130.92**	129.73
Consumer Goods	Panasonic	2	**856.03**	109.11
Health Care	Baxter Intl	12	**291.54**	23.43
Consumer Services	Intercontinental Hotels Gp.	2	**2,475.03**	72.80
Telecommunications	Sprint Nextel	5	**71.44**	7.35
Utilities	PG&E	1	**2,610.97**	861.67
Financials	British Land	3	**531.72**	9.96
Technology	Intel	3	**314.82**	36.16
Alternative Energy	Cemig	3	**0.45**	0.45

SCOPE 3

Global 800 Scope 3 Analysis

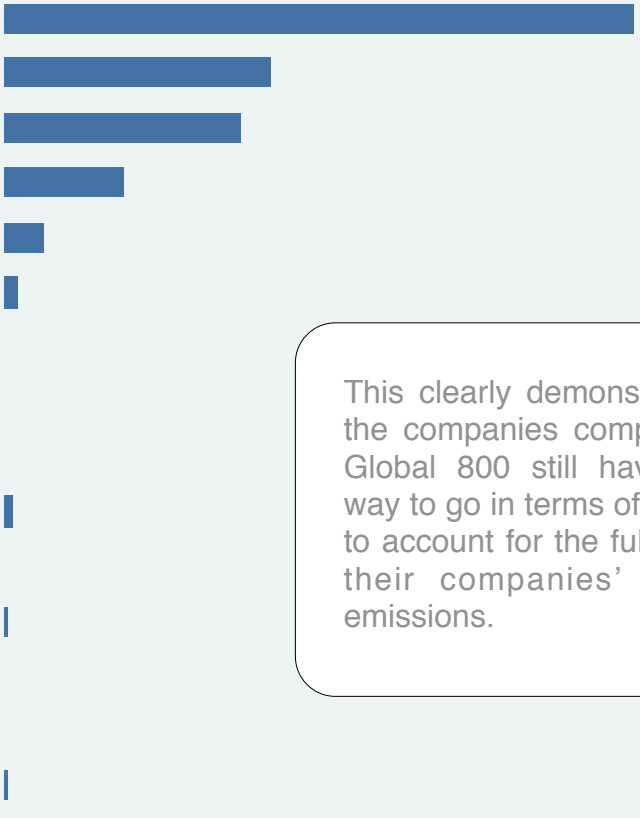
Figure 7.



Global 800 Extent of Scope 3 Disclosure

Figure 8.

Scope 3 categories disclosed	Number of companies
1	125
2	53
3	47
4	24
5	8
6	3
7	0
8	0
9	0
10	2
11	0
12	1
13	0
14	0
15	1



This clearly demonstrates that the companies comprising the Global 800 still have a long way to go in terms of beginning to account for the full extent of their companies' Scope 3 emissions.

INFERENCE: SCOPE 3

NB. Example taken from ET Global 800

Figure 9.

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	777	Mfrisco	-	No Public Data	-	8,120.15
No Public Data	778	Silver Wheaton	-	No Public Data	-	8,120.15
No Public Data	779	China Shenhua	-	No Public Data	-	8,120.15

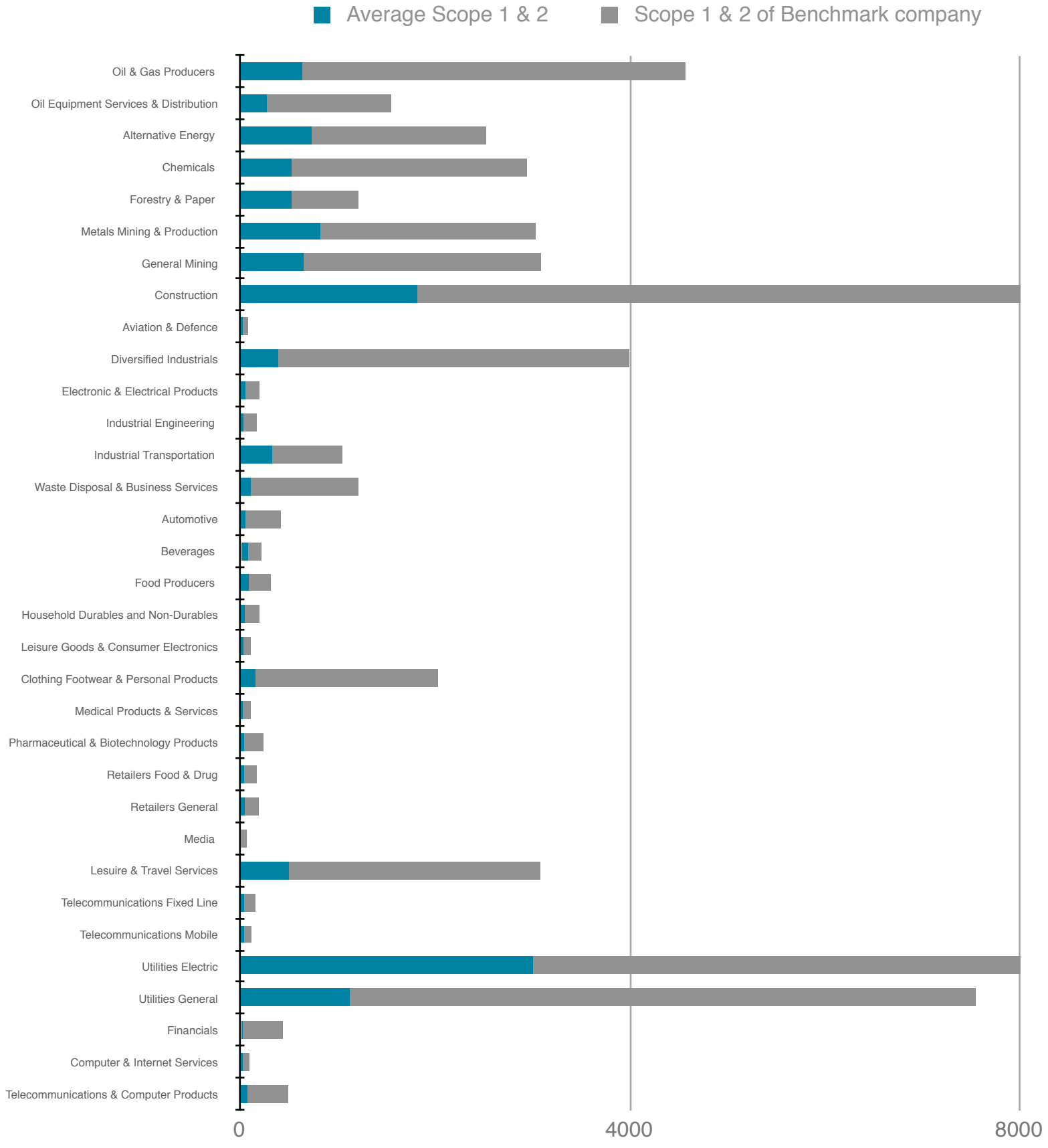
Rio Tinto is one of the Scope 3 benchmark companies for the **ET Global Universe**, which means it is the company with the highest disclosed Scope 3 intensity within the **Basic Materials** sector.

Sector	Benchmark Company Name	Scope 3 Intensity
Oil & Gas	Santos	6,319.81
Basic Materials	Rio Tinto	8,120.15
Industrials	Honda Motor	2,130.92
Consumer Goods	Panasonic	856.03
Health Care	Baxter Intl	291.54
Consumer Services	Int. Continental Hotels Group	2,475.03
Telecommunications	Sprint Nextel	71.44
Utilities	PG&E	2,610.97
Financials	British Land	531.72
Technology	Intel	314.82
Alternative Energy	Cemig	0.45

SCOPE 1 & 2

Global Scope 1 & 2 Analysis

Figure 10.



SCOPE 1 & 2

Global Scope 1 & 2 Benchmark companies

Figure 11.

Sector	Benchmark Company Name	Scope 1 & 2 Intensity	Sector Scope 1 &2 Intensity Average
Oil & Gas Producers	Sasol	3,926.62	637.62
Oil Equipment, Services & Distribution	Transcanada	1,274.87	274.59
Alternative Energy	Tractebel	1,792.34	732.14
Chemicals	Air Prds& Chems	2,412.22	527.69
Forestry & Paper	Mondi	685.07	528.76
Metals Mining & Production	Usiminas	2,203.99	825.31
General Mining	Harmony Gold Mng	2,434.17	652.35
Construction	ACC	16,462.39	1,818.72
Aviation & Defence	Meggitt	54.67	25.31
Diversified Industrials	Swire Pacific	3,602.58	393.03
Electronic & Electrical Products	Samsung Elto.Mechanics	139.38	54.13
Industrial Engineering	Mahindra & Mahindra	130.66	33.84
Industrial Transportation	A P Moller - Maersk	720.44	328.55
Waste Disposal & Business Services	Waste Man	1,099.20	110.08
Automotive	Astra International	360.96	56.47
Beverages	Sabmiller	139.63	77.65
Food Producers	Monsanto	222.05	87.10
Household Durables and Non-Durables	Steinhoff Intl	146.90	49.53
Leisure Goods & Consumer Electronics	Samsung Electronics	73.34	34.27
Clothing, Footwear & Personal Products	Colgate-Palmolive India	1,870.83	157.14
Medical Products & Services	Mediclinic International	77.42	29.46
Pharmaceutical & Biotechnology Products	Novozymes	198.15	38.83
Retailers Food & Drug	Lawson	130.51	39.56
Retailers General	The Foschini Group	142.70	46.36
Media	Dai Nippon Printing	53.33	15.97
Lesuire & Travel Services	Int. Continental hotels gp	2,576.05	498.77
Telecommunications Fixed Line	Chunghwa Telecom	121.62	36.84
Telecommunications Mobile	Taiwan Mobile	70.96	40.01
Utilities Electric	American Elec Power	9,036.54	3,007.06
Utilities General	Duke Energy	6,421.64	1,124.00
Financials	Weyerhaeuser	418.28	22.78
Computer & Internet Services	Wipro	63.80	28.49
Telecommunications & Computer Products	United Micro Eltn	413.39	76.90

INFERENCE: SCOPE 1 & 2

Figure 12.

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	297	Duke Energy	93,300,000.00	6,421.64	-
Complete & Unverified	298	Xcel Energy	79,300,000.00	7,446.89	-
Complete & Unverified	299	American Elec Power	136,000,000.00	9,036.54	-

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	799	Edison Intl.	No Public Data	9,036.54	-
No Public Data	800	First Energy	No Public Data	9,036.54	-

NB. Example taken from ET Global 800

Here, Edison International and First Energy 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 9,036.54 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.

ANALYSIS

Highest and Lowest Absolute Emitters:

Scope 1 & 2

Taken from the 356 Companies reporting complete data

Lowest Absolute Emitters (Scope 1 & 2 Only)

Figure 13.

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	37	BMF Bovespa	773	0.75	266.61	Complete & Verified
2	38	Prologis	8,667	5.65	271.51	Complete & Verified
3	40	HK Exs & Clear	11,137	11.73	277.59	Complete & Verified
4	17	Asustek Computer	13,060	0.99	158.40	Complete & Verified
5	2	Swisscom	23,242	1.86	37.58	Complete & Verified
6	243	Kohls	27,269	1.45	1,238.97	Complete & Unverified
7	248	SES FDR	27,496	12.03	1,249.55	Complete & Unverified
8	39	Deutsche Boerse	29,799	10.12	275.98	Complete & Verified
9	41	British Land	31,346	61.61	327.47	Complete & Verified
10	202	Li & Fung	32,120	1.60	429.61	Complete & Unverified

Figure 13 lists the ten lowest absolute emitters from those disclosing complete Scope 1 & 2 information. Verification status is included on the right but does not affect the ranking.

Despite their low absolute emissions, BMF Bovespa, Prologis and Hong Kong Exchange and Clearing, which occupy 1st, 2nd and 3rd places do not appear in the top 30 of the ET Carbon Ranking.

50% of the companies come from the broad Financials sector, 20% from Consumer Services followed by another 10% in each of the Technology, Consumer Goods and Telecommunications Sectors.

Only one company, Swisscom, also ranks in the top 10 of the ET Carbon Rankings, which orders companies based on intensity.

ANALYSIS

Highest and Lowest Absolute Emitters:

Scope 1 & 2

Taken from the 299 Companies reporting complete data

Highest Absolute Emitters (Scope 1 & 2 Only)

Figure 14.

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
290	297	Duke Energy	93,300,000	6,421.64	7,727.13	Complete & Unverified
291	161	Lafarge	95,000,000	4,714.57	5,780.03	Complete & Verified
292	158	Holcim	99,100,000	4,373.13	5,438.59	Complete & Verified
293	110	Enel	123,832,000	1,210.82	2,516.30	Complete & Verified
294	276	Gazprom	133,400,000	878.81	4,038.71	Complete & Unverified
295	299	American Elec Power	136,000,000	9,036.54	10,342.03	Complete & Unverified
296	121	Exxon Mobil	143,000,000	329.85	3,489.76	Complete & Verified
297	108	E On	146,200,000	981.75	2,287.24	Complete & Verified
298	111	GDF Suez	156,899,254	1,312.50	2,617.98	Complete & Verified
299	128	RWE	166,200,000	2,564.70	3,870.19	Complete & Verified

Figure 14 lists the ten largest absolute emitters from those disclosing complete Scope 1 & 2 information, ignoring verification status.

Six of the bottom 10 are from the carbon intensive Utilities sector, including, the largest absolute emitter in the ET Global 800 across Scope 1 & 2 emissions, RWE.

Interestingly there is a large gulf between the first and last of the bottom 10 with the total Scope 1 & 2 emissions of Duke Energy only 56% those of bottom ranked RWE.

Perhaps unsurprisingly, two of the world's largest cement companies, French based Lafarge and Swiss based Holcim, feature in the bottom 10.

Lafarge emits 4,100,000 tCO2e less per year than its competitor and is marginally less carbon efficient.

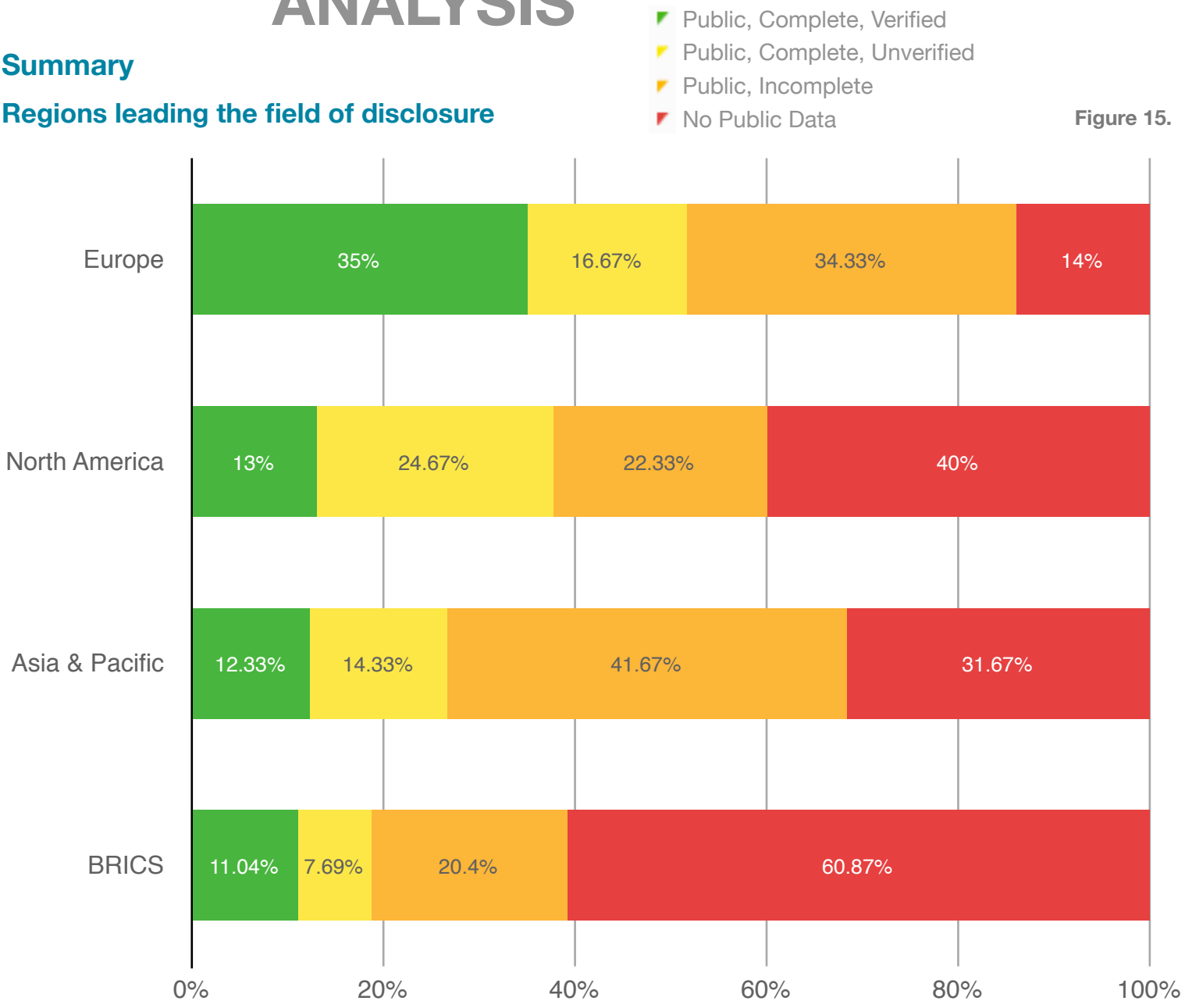
Interestingly, within the Utilities sector whilst those in the bottom 7 have comparative absolute emissions, some appear to be far more efficient than others. American Electric Power has a Scope 1 & 2 emissions intensity of 9,036.54 tCO2e/$M turnover, compared to EON and GDF Suez, which have intensities approximately 5 times lower at 2,287.24 and 2,617.98 tCO2e/$M turnover, respectively.

ANALYSIS

Summary

Regions leading the field of disclosure

Figure 15.



There are multiple ways of presenting the above information: ranking regions according to lowest levels of companies failing to report any data; combining the total number of companies reporting complete data (verified or unverified); and, by the total number of companies reporting public, complete and verified data.

Since the purpose of the ET Carbon Rankings is to incentivise all companies across all regions to report complete and verified data, the regions have been ranked by the total number of companies reporting public, complete and verified data.

Whilst it is perhaps of no great surprise that Europe is the leading region in terms of complete and verified disclosure of GHG data, it is perhaps more surprising that Asia-Pacific has a higher proportion of companies reporting some data than North America.

It is equally surprising that the level of complete and verified data is essentially comparable between the BRICS, Asia Pacific and North American Regions. Clearly, in all regions, the gap between aspiration and reality is great.

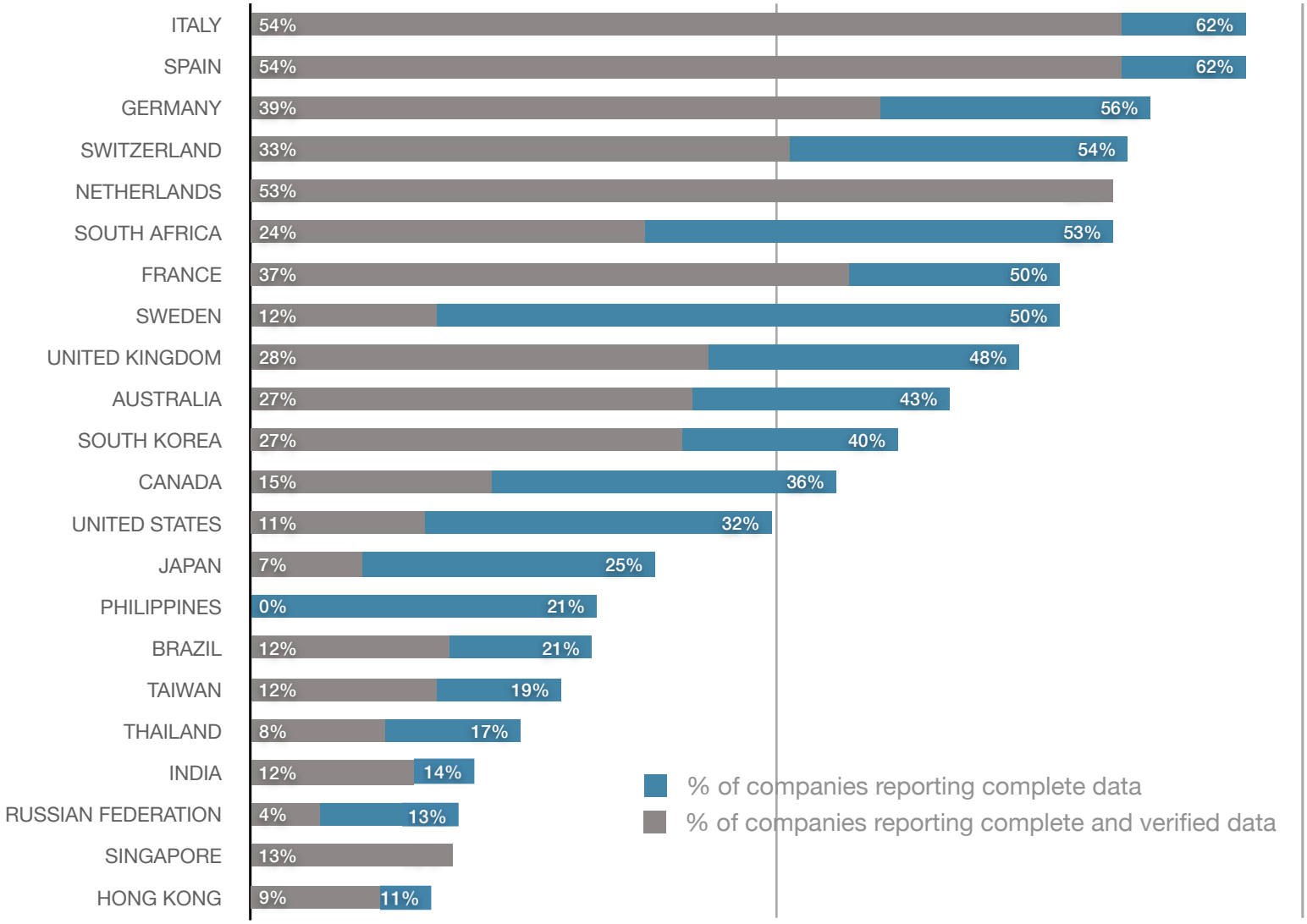
ANALYSIS

Summary

Please note that only countries with 10 or more companies in the ET Global 800 Ranking have been included in this analysis

Countries leading the field of disclosure

Figure 16.



Italy and Spain rank joint highest in terms of disclosure and verification with 62% of companies reporting complete data and a further 54% having their data verified.

While intensity figures may to a certain extent be explained by different economic sectors, performance in terms of disclosure objectively measures how transparent companies in a particular geography are about their emissions. The results confirm the regional disclosure analysis on the previous page. European countries are clearly leading the way, with 7 of the top 10 countries located in Europe. The worst placed European country, the UK, is well ahead of all the remaining countries, with the exception of Australia, in terms of public disclosure of complete GHG emissions data.

It is also interesting to note that no company from the Philippines sought verification.

Figure 17.

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	Saipem	IT	1,441,000	90.27	0	3,250.18	Complete & Verified
2	Statoil	NO	13,700,000	118.10	1	3,278.00	Complete & Verified
3	Hess	US	5,100,000	132.58	3	3,292.49	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	BASF	DE	25,799,000	266.25	15	932.74	Complete & Verified
2	Glencore International	GB	12,034,000	63.99	1	4,124.07	Complete & Verified
3	Syngenta	CH	952,000	74.75	2	4,134.82	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	Sumitomo	JP	247,202	6.89	3	1,072.36	Complete & Verified
2	EADS	NL	1,048,901	16.19	0	1,081.65	Complete & Verified
3	Fiat Industrial	IT	598,000	18.67	1	1,084.14	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	Loreal	FR	166,250	6.20	4	434.21	Complete & Verified
2	Richemont	CH	68,900	6.90	1	434.91	Complete & Verified
3	LVMH	FR	313,436	10.05	2	438.06	Complete & Verified

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	Roche Holding	CH	862,889	18.57	1	164.34	Complete & Verified
2	Biogen Idec	US	101,146	19.89	1	165.66	Complete & Verified
3	Astrazeneca	GB	700,000	20.63	2	166.40	Complete & Verified

Intensity is measured as tCO2e/$Million turnover

Sector: Consumer Services

Figure 17. (continued)

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	British Sky B Group	GB	36,609	3.41	4	1,240.93	Complete & Verified
2	PPR	FR	118,010	7.32	3	1,244.84	Complete & Verified
3	News Corp	US	479,051	14.34	1	1,251.86	Complete & Verified

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	Swisscom	CH	23,242	1.86	4	37.58	Complete & Verified
2	BCE	CA	215,029	10.98	2	46.70	Complete & Verified
3	Singapore Telecom	SG	181,965	11.81	2	47.53	Complete & Verified

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	Centrica	GB	7,696,591	207.45	3	1,512.94	Complete & Verified
2	National Grid	GB	8,704,000	382.81	3	1,688.29	Complete & Verified
3	E On	DE	146,200,000	981.75	4	2,287.24	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	BMF Bovespa	BR	773	0.75	4	266.61	Complete & Verified
2	Prologis	US	8,667	5.65	1	271.51	Complete & Verified
3	Deutsche Boerse	DE	29,799	10.12	0	275.98	Complete & Verified

Sector: Technology

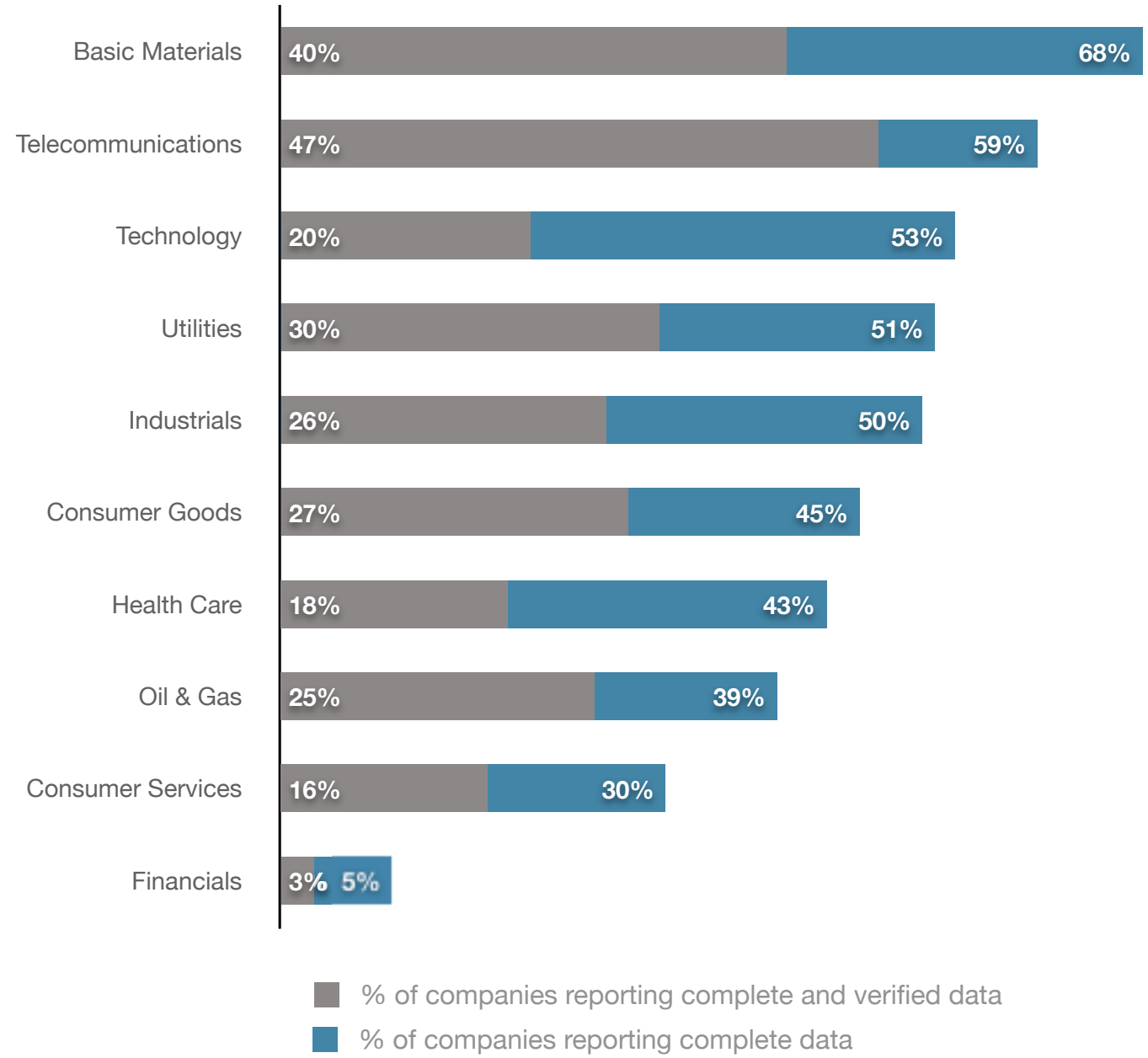
Sector Rank	Company Name	Cntry	Absolute Emissions tCO2e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Asustek Computer	TW	13,060	0.99	1	158.40	Complete & Verified
2	Nokia	FI	216,300	4.24	5	161.65	Complete & Verified
3	Dell	US	436,230	7.01	1	164.42	Complete & Verified

Intensity is measured as tCO2e/$Million turnover

Summary

Figure 18.

Sectors leading the field of disclosure



The Global Rankings show that there is vast room for improvement of GHG emissions reporting and verification in the dominant industry sectors. Basic Materials and Utilities, despite being carbon intensive industries, have some of the largest percentage of companies reporting complete data. Interestingly, Basic Materials also has the second highest percentage of companies reporting verified emissions data, with only Telecommunications boasting a higher figure. The sector with the lowest percentage of companies reporting complete data was Financials.

DISCUSSION 27

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.

LANDSCAPE

Global Reporting landscape

Despite significant action being taken in the past twenty years, we still have a long way to go. With large differences between regions, large differences between developed and developing countries as well as large differences between companies, there is vast room for improvement, innovation and collaboration. But in order to improve, we should first know where we are. That is why monitoring of and (complete) reporting on GHG emissions is crucial to taking the next steps.

Sustainability Reporting

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

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.

AS THE ET GLOBAL 800 CARBON RANKING HIGHLIGHTS, THERE ARE MAJOR DISCREPANCIES BETWEEN COMPANIES IN REGARD TO THE QUALITY OF REPORTING

A large number of Europe's top companies follow the framework set out by the Global Reporting Initiative. This clearly defines the disclosure of environmental, social and governance indicators, including Greenhouse Gas emissions expressed as metric tonnes of CO2 equivalent (tCO2e). (See page 36 for more details). However, following GRI guidelines does not specifically require clear Scope 1 and 2 reporting.

The internationally recognised and accepted standard for Greenhouse Gas (GHG) reporting has been established by the Greenhouse Gas Protocol, and defines Greenhouse Gas emissions reporting by Scope 1, 2 and 3 emissions. However, as this report highlights companies do not always apply the standard correctly. Important issues of coverage and key calculation and reporting requirements are often not clearly stated or are hidden within the main document.

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.

- **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

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

Variations

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."

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

Gaps

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 for suggestions on the EIO's recommendations for how companies can report their GHG emissions more clearly.

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)	2011	2010	2009	2008	Company has targets for year:	C1
CO2 Direct	197,914	276,721	235,656	296,768		
CO2 Indirect Scope 2	2,199,564	2,125,986	2,380,946	2,381,447		
CH4 Direct						
N2O Direct	29,224	17,441	11,235	5,386		C5
HFCs Direct	65,637	42,289	14,566	13,060		C6
PFCs Direct	221,074	232,290	181,907	256,667		C7
CF6 Direct	13,960	9,549	13,291	8,452		
Total Direct (Scope 1)	527,809	578,290	456,655	580,333		
Scope 1 data coverage (e.g. as % of revenues, employees, etc...): Owned and leased operations	100	100	100	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):						
Total Indirect (Scope 2)	2,199,564	2,125,986	2,380,946	2,381,447		
Scope 2 data coverage (e.g. as % of revenues, employees, etc...): Owned and leased operations	100	100	100	100		
Scope 2 estimated total (for 100% data coverage)						
Scope 2 emissions intensity per 100K revenue						
Total Direct and Indirect GHG Emissions	2,727,373	2,704,276	2,837,601	2,961,780		
Subtotal Scope 3 (from GRI EN17 "GHG Scope 3 Emission")						
Total GHG Emissions	2,727,373	2,704,276	2,837,601	2,961,780		

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 50th in the ET North America 300 and 187th in the Global 800.

GRI 31

TEMPLATE

3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.

3.7 State any specific limitations on the scope or boundary of the report[8].

If boundary and scope do not address the full range of material economic, environmental, and social impacts of the organization, state the strategy and projected timeline for providing complete coverage.

3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.

3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.

Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.

ASSURANCE

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).

ASPECT: EMISSIONS, EFFLUENTS, AND WASTE

CORE **EN16** Total direct and indirect greenhouse gas emissions by weight.

CORE **EN17** Other relevant indirect greenhouse gas emissions by weight.

Global Reporting Initiative™

Using a Global Reporting Initiative index helps anyone reading a report to navigate it quickly and easily.

To the left are the key indicators the EIO focuses on to determine:

✓ the scope of a company report

✓ whether or not any material elements have been excluded

✓ whether is has been assured by a third-party

✓ whether the company is reporting its Scope 1, 2 and 3 emissions.

EXAMPLES

Overview of Scope 3 emissions by the BASF Group for 2012 (in accordance with the GHG Protocol)

Nr.	Category	GHG Emissions [CO_2 equivalents in millions of tons]
1	Purchased goods and services	46.7
2	Capital goods	1.4
3	Fuel- and energy-related activities	2.8
4	Upstream transportation and distribution	1.9
5	Waste generated in operations	0.6
6	Business travel	0.3
7	Employee commuting	0.3
8	Upstream leased assets	0.2
9	Downstream transportation and distribution	1.3
10	Processing of Sold Products	Undetermined*
11	Use of sold products	57.4
12	End-of-life treatment of sold products	16.4
13	Downstream leased assets	Not relevant***
14	Franchises	Not relevant***
15	Investments	0,0****

Explanations:
*For a chemicals company at the beginning of the value chain, such as BASF, the effort to determine Scope 3 emissions from the further processing of our products (Category 11 Processing of Sold Products) is not reasonable.
** Expert estimate. The activities of BASF as a lessee account for less than 20% of our activities in the area of Leased Assets Upstream (Category 8).
*** BASF does not engage in franchising activities.
**** Data from 2009.

We have summarized the procedure and assumptions in the calculation of emissions in the named categories in our emission report based on the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standards template
Read more... (pdf, 134 kb)

Standards Greenhouse Gas Protocol standards

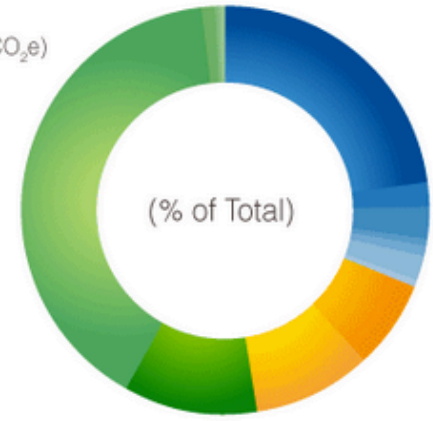
In this example we see the company disclose fully on all 15 GHG Protocol Scope 3 categories. The company clearly identifies each category, reports its emissions and explains any omissions.

BASF is the only company in the ET Carbon Rankings series to report on all 15 Scope 3 categories, and therefore enjoys pole position in both the ET Global 800 and ET Europe 300 for the second time running.

EXAMPLES

Baxter's Global GHG Emissions Footprint, 2011*

Totals
(Metric Tons CO_2e)



	2010	2011	2011 (% of Total)
Upstream (Scope 3)			
Purchased Goods and Services	1,036,000	1,121,000	23.1%
Capital Goods	96,000	96,000	2.0%
Upstream Transportation and Distribution	115,000	124,000	2.6%
Waste Generated in Operations	6,000	7,000	0.1%
Employee Business Travel	50,000	51,000	1.1%
Employee Commuting	84,000	84,000	1.7%
Upstream Leased Assets	21,000	22,000	0.5%
Subtotal	**1,408,000**	**1,505,000**	**31.1%**
Baxter Operations (Scope 1 and 2)			
Facility/Vehicle Fuel Usage (Scope 1)	328,000	336,000	6.9%
Purchased Energy (Scope 2)	443,000	458,000	9.5%
Subtotal	**771,000**	**794,000**	**16.4%**
Downstream (Scope 3)			
Downstream Transportation and Distribution	484,000	523,000	10.8%
Use of Sold Products	1,875,000	1,955,000	40.3%
End-of-life Treatment of Sold Products	55,000	57,000	1.2%
Franchises	7,000	7,000	0.1%
Investments	4,000	4,000	0.1%
Subtotal	**2,425,000**	**2,546,000**	**52.5%**
Total	**4,604,000**	**4,845,000**	**100.0%**

* The emissions reported in this graph are presented in accordance with guidance provided by the GHG Protocol (Scope 1 and Scope 2) and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Baxter does not currently report Scope 3 emissions in the following categories: Fuel and Energy-related Activities (not included in Scope 1 or Scope 2 emissions), Processing of Sold Products, and Downstream Leased Assets.

Here we see a very good example of clear reporting, across all Scopes adhering to the GHG Protocol terminology and presenting information over multiple years for ease of comparison.

Baxter International ranks 35th in the ET Global 800 and 13th in the ET North American 300.

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 public**

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 proposal for the ET Reporting template initiative.

ET REPORTING 35 TEMPLATE

The EIO, is seeking sponsorship for its forthcoming Environmental Tracking (ET) Reporting Template initiative. The ET Reporting Template will provide companies with a cloud-based, simple, straightforward and standardised way of reporting their greenhouse gas emissions in the public domain. The EIO is offering sponsors the opportunity to showcase their brand while supporting a cutting edge and urgently needed piece of infrastructure in the carbon reporting landscape.

Below is an example of the points the template will seek to cover.

ET Reporting Template

ENVIRONMENTAL TRACKING REPORTING TEMPLATE		
Reporting Period:		
1 January 2011 to 31 December 2012: Yes/No? _____		
If other please specify _____		
	Metric tonnes of CO2e (tCO2e)	
Scope 1		
Scope 2		
Scope 3		
Scope 3 Upstream		
Purchased goods and services		
Capital Goods		
Fuel - and Energy - related Activities not included in Scope 1+2		
Transportation & Distribution (Upstream)		
Waste Generation in Operations		
Business Travel		
Employee Commuting		
Leased Assets (Upstream)		
Investments		
Scope 3 Downstream		
Transportation & Distribution (Downstream)		
Processing of Sold Products		
Use of Sold Products		
End-of-Life Treatment of Sold products		
Leased Assets (Downstream)		
Franchises		
Total gross emissions		
Green tariff Energy Purchased		-
Total net emissions		

ET REPORTING 36 TEMPLATE

While many companies disclose their greenhouse gas emissions through third party databases such as the Carbon Disclosure Project, there is currently no standardised reporting template available for companies to disclose their emissions on their websites, corporate social responsibility reports and/or annual reports. With many variations and inconsistencies in reporting styles and practices, the vast majority of information disclosed by companies on their greenhouse gas emissions is extremely difficult to interpret and makes cross comparison virtually impossible. In order to address this issue the EIO is proposing its ET Reporting Template initiative.

ENVIRONMENTAL TRACKING REPORTING TEMPLATE (Continued)
Other greenhouse gases
Does your company produce any greenhouse gases which are not covered by the Kyoto basket of 6 gases? Yes/No?
If you have answered yes to the previous question what percentage do they represent of the total and have they been included in the Scope 1, 2 and 3 calculations listed above?
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 Scope 3 categories 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.

Introduction

On the 8th of December 2012, the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) completed its eighteenth annual meeting. Convened to discuss the future of the Kyoto Protocol, as well as funding initiatives for developing states threatened by climate change, the meeting produced the Doha Climate Gateway. This agreement mandated an eight-year extension of the Kyoto Protocol, including the extension of Kyoto's flexible mechanisms, such as Emissions Trading, Joint Implementation, and the Clean Development Mechanism. In addition, it includes the basis of a Loss and Damage Clause, which was formalised for the first time at this meeting. This mechanism is a landmark attempt to financially compensate countries that are significantly affected by the negative effects of climate change. The Doha Climate Gateway also approved moving forward with the Durban Platform. Agreed at the previous COP in 2011, the Durban Platform mandated countries to reach an agreement on a work-plan for legally binding post-Kyoto negotiations by 2015, to be implemented by 2020. Reaction to this meeting has been varied, with developed states arguing that the Loss and Damage Clause is a breakthrough; and developing states demanding that more needs to be done.

Extension of Kyoto

While other aspects of the agreement are highly debated, many see COP18's extension of the Kyoto Protocol as the success that the meeting set out to achieve. Yet the fact remains that nearly 85 percent of global emissions remain outside of the jurisdiction of this agreement. One of the world's largest emitters, the United States, is not party to the Kyoto Protocol, and Canada, another sizeable emitter, withdrew from the Protocol altogether in 2011. Parties at Doha called for the post-Kyoto climate agreement to be inclusive, allowing all states to participate.

States participating in the new second Kyoto period are now bound by targets of 18 percent below 1990 emissions levels. However, these targets are insufficient in addressing the global

climate crisis, according to Intergovernmental Panel on Climate Change (IPCC) reports (Greenpeace 2012). Countries agreed to revisit targets in 2014, and in the interim, to increase their internal national efforts. The EU has pledged to increase its emission reduction commitments from 20 percent to 30 percent of 1990 levels by 2020, dependant on other developed countries setting similar targets (UNFCCC 2012).

One of the most contentious issues that threatened to derail the Doha negotiations was the issue of 'hot air'. In short, the delegations of Russia, Ukraine, Poland, and Belarus expressed their desire for their accumulation of unused carbon credits, otherwise known as Assigned Amount Units (AAUs), or 'hot air', to be carried over to the second Kyoto commitment period.

The large accumulation of unused carbon credits originates from the fact that the Kyoto Protocol used 1990 as its baseline year to measure carbon levels, at which point industrial output was far higher than it was following the collapse of the Soviet Union. This permitted former Soviet countries to engage in the controversial practice of making large profits from selling vast quantities of surplus emissions credits, granted to them upon signing the Kyoto Protocol. If the Doha agreement had been altered to include this intervention before the final plenary session, the Doha Climate Gateway document would have required extensive rewording. The final paper was therefore decided upon without taking note of the protest. Other delegations discussed the possibility of only dealing in AAU credits at a domestic level, or auctioning hot air to prevent countries from being allocated too many or too few AAUs. This will be further discussed at subsequent UNFCCC meetings.

Many believe the Doha agreement failed to differ from previous international climate meetings in which meaningful international efforts were also stunted for various reasons. Many developing nations have welcomed a second Kyoto commitment period, but are concerned that stalling the introduction of a replacement policy until between 2015 and 2020 will not serve to effectively mitigate anthropogenic climate change.

Furthermore, Australia, Canada, and the United States remain uncommitted to the climate change regime, yet these positions have been increasingly challenged by the EU due to its strong bargaining position, as well as by increasingly assertive small island states.

Loss and Damage Clause

An inclusion within the Climate Gateway Agreement that many have hailed as a breakthrough is the Loss and Damage Clause. The basic idea of this clause is to compensate countries affected by the negative impacts of climate change. This includes impacts related to extreme weather events, and slow onset events such as coral bleaching and land erosion. Countries are invited to build national risk management strategies, and present them to the UNFCCC, where a body will then decide on the appropriate level of compensation. However, the clause stops short of making developed nations legally liable for the negative consequences of these climate changes. Moving away from discussions around mitigation and adaptation, the clause has created consensus that the negative impacts of climate change are unavoidable, and that we must move forward with compensation at once. At COP19, which will be held in 2013, supplementary institutional arrangements will be decided upon to address loss and damage in vulnerable developing countries (IISD December 2012).

Green Climate Fund

Referring to the agreed $100 billion per year to vulnerable countries, decided at Copenhagen in 2009, negotiators in Durban sought a final settlement on where these funds would come from, how they would be managed, and a timetable on incremental increases of this aid. This funding is meant to be a combination of private and public funding managed by the Green Climate Fund (GCF). Established at Copenhagen, the fund is designed to raise and manage the transfer of such funds from developed to developing nations. This includes financial support offered to clean technology transfer and capacity-building

(UNFCCC 2009). Yet COP18 did not reach consensus on this proposal. According to Greenpeace, a large part of the failure is a result of blocking tactics utilised by the United States, Japan, Canada, and New Zealand: real progress on clean development and technology will only be made once these large economies relinquish their dependence on fossil fuel economics (Greenpeace 2012). As of the end of COP18, there were no firm commitments for the GCF, nor was there there consensus on the distribution or allocation of funding. Nonetheless, the Green Climate Fund is expected to begin its work in the second half of 2013, with projects beginning in early 2014.

One positive in the financial sphere of Doha came in the form of firm commitments by Germany, the United Kingdom, France, Denmark, Sweden, and the EU Commission, who all committed concrete financial pledges to the fund totaling $10 billion, for the period leading up to 2015 (Greenpeace 2012).

Flexible Mechanisms

The outcome of the COP18 did little to address ongoing issues of implementation, reform, or finance of the three flexible mechanisms.

Though the three flexible mechanisms, the Clean Development Mechanism (CDM), Joint Implementation (JI), and International Emissions Trading (EIT) were extended to 2020, delegates at the COP could not reach consensus on a much-needed reform of the CDM. As the delegate of Zambia argued, reforming of the CDM is necessary to address uncertainty over transparency, accountability, and methodologies of implementation. The CDM, for example, is not clear on the interplay between access to carbon credits through CDM projects, and the availability of technology through technology transfer initiatives. Developed countries can invest in Certified Emissions Reduction Projects (CERP) in developing countries to earn AAUs, yet developed countries are not obliged to share more energy efficient products or designs with the countries that they are assisting. Other questions arose over access to flexible mechanism projects for countries not participating in the second Kyoto commitment period. For example, whether countries who don't sign up to Kyoto's second

commitment period will be able to use CDM projects to generate excess carbon credits, or whether these credits will count towards their initial Kyoto commitments. Further calls were made to reform the distribution of CDM projects, which have traditionally been focused on countries with adequate infrastructure. For example, only 2.7 percent of registered Certified Emissions Reduction (CER) projects leading up to 2012 have been focused on Sub-Saharan Africa, one of the world's poorest regions that is in need of much greater assistance (Boyd 2009).

Furthermore, a debate took place on the inclusion of flexible mechanisms within the second Kyoto period. A proposal was put forward to limit the benefits of flexible mechanisms to those countries that agreed to partake in the second commitment period, thereby excluding countries that refused to ratify Kyoto, or have since left the agreement. It was ultimately concluded that access to flexible mechanisms would be limited to countries that agree to a second commitment period.

Negotiating Blocs at the Talks

Many delegates formed coalitions with other parties sharing their interests at COP18. The following sections outline the positions of some of these blocs:

The Alliance of Small Island States (AOSIS)

One of the most important coalitions within the meeting was AOSIS. During the 20th century, sea levels have risen by an average of around 1.7 millimeters per year, with evidence showing that the most drastic rise has occurred most recently. As around 23 percent of the world's population lives in coastal regions, and a significant number of people therefore are threatened by rising sea levels. Low-lying small island states represent the most vulnerable states to the changing climate, as rising sea levels have begun to cause erosion and could inundate or engulf some regions. Recent projections by the IPCC (a scientific body established by the United Nations) show that sea levels may rise between 26 and 59 centimetres by the end of the 21st century (IPCC 2007). In

context, the Pacific small island of Tuvalu is only 460 centimeters above sea level at its highest point. In an even more drastic situation, the Maldives, at its highest point, is only 243 centimeters above sea level. However, over 80 percent of the country is less than 100 cm above sea level (UNDP 2011). Some experts have even gone so far as to project that if current trends remain in a business-as-usual scenario, these two island states will be uninhabitable by 2100. Without immediate action, even the widely accepted 2 degrees celsius reduction in global temperatures, according to AOSIS, will not be enough to prevent catastrophic damage to small island states (UNDPI 2011).

In his opening statement before COP18, the representative of Nauru, on behalf of AOSIS, reiterated a necessity for bringing all countries together under one strong agreement, which he argued must begin with a strengthened Kyoto Protocol during its second implementation phase. Though the Protocol has been a point of contention, with many arguing it is not capable of effectively governing the climate change regime, AOSIS states believe that it is their best opportunity to immediately combat climate change at the multilateral level. He also argued that small island states require funding which can be made available through a global platform of negotiations. He said that long-term finance was the missing link in the Durban Platform, and that efforts need to be made towards fulfilling the promise of the $100 billion per year that developed countries had committed to spending on climate change abatement and adaptation projects (AOSIS 2012). The agreement reached at Doha attempted to partly address funding issues through the Loss and Damage Clause.

Umbrella Group

Representatives of the Umbrella Group, which is traditionally composed of Australia, Canada, Japan, New Zealand, Norway, Russia, Ukraine and the United States, stated that the second commitment period of the Kyoto Protocol must be implemented on 1 January 2013, for an eight-year period. The Umbrella Group appears to be supportive of continuing Kyoto's flexible

mechanisms, and ensuring broad access to them. Commitments to the Kyoto Protocol are, as the Umbrella Group has noted, a broad and shared endeavour that must support all nations. Furthermore, on international actions, the Group supports a bottom-up approach, including incentivising nations to comply. The group has traditionally called for a "common ground" in climate negotiations (IISD May 2012). As such, their current stance relates to the necessity of equalising emissions levels between Annex I countries (those countries classified by the Kyoto Protocol as developed) and major emitters such as India and China. They look to negotiate a new binding agreement that is equally applicable to all nations.

Least Developed Countries (LDCs)

Representatives of the Least Developed Countries (LDCs) spoke out against the lack of formal commitments achieved at COP18. They had sought improved and firm commitments to finance during the 2013-2020 gap between major climate agreements, and are disappointed at Doha's failure to achieve this. Many LDCs are extremely vulnerable to climate change, and therefore LDCs remain adamant over the necessity of a strong Kyoto Protocol. They also advocated removing the right to purchase AAUs for developed countries that did not ratify the second Kyoto commitment period. Furthermore, there was general criticism of that fact that a firm decision on the Loss and Damage Clause was delayed for a year. AOSIS, LDCs and the Africa Group represent over a billion people who are vulnerable to climate change.

Coalition for Rainforest Nations

At COP18, the Coalition for Rainforest Nations supported the implementation of a second Kyoto implementation period, but argued that it should incorporate a mid-term target review to align targets with recommendations made by the fifth IPCC report (to be completed in 2014). They also felt that each country should report their own emissions, to maintain their environmental integrity, and they staunchly supported policies designed to reduce deforestation, such as the United Nations

Reducing Emissions from Deforestation and Forest Degradation (REDD) programme.

In paying forest land managers more than they would gain by selling timber, the programme provides an economic incentive for forest managers to leave trees, and any carbon dioxide sequestered within them, intact. This strategic funding programme also supports programmes such as REDD+, which is an expanded program that channels REDD funding to those managers implementing sustainable forest management and biodiversity protection plans. As many coalition countries have channelled extensive financial resources into erosion control, carbon sinks, and forest maintenance projects, the coalition argued that funds to continue these projects, such as those made available through REDD+, should be made available more widely.

Conclusion

Ultimately, the Doha agreement can be viewed as a "very modest step forward in safeguarding the only existing legally binding, top-down and rule-based system" (IISD December 2012). As with previous COP meetings its ambition was loftier than its outcome, however incrementally it is a step in the right direction. Yet to the scientific community, the current commitments under the newly agreed second Kyoto period are "almost laughably insufficient" (Jagger 2012). As has been a traditional theme with climate negotiations, policy responses appear drastically disconnected from the scientifically identified need to take significant mitigative actions.

In the final days of the meeting, the lead negotiator of the Philippines Nederev Sano, addressed the COP, leaving delegates with a lasting question for this and future negotiations: "…If not us, then who? If not now, then when? If not here, then where?" COP19 will be held in December 2013, in Poland.

ET INDEX 44 SERIES

Environmental Tracking Carbon Index 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.

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

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

CCC: Committee on Climate Change

CCX: Chicago Climate Exchange

CDM: Clean Development Mechanism

CED: Clean Energy Dialogue

CRC: Carbon Reduction Commitment

C(S)R: Corporate (Social) Responsibility

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

DECC: Department of Energy and Climate Change

EIO: Environmental Investment Organisation

EPA: Environmental Protection Agency (US)

ET: Environmental Tracking

EU ETS: EU Emissions Trading Scheme

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

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