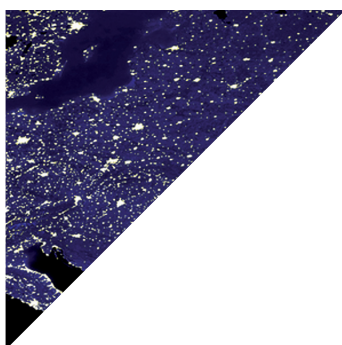


# CDP Climate Change Report 2015

## Companies and cities for low carbon economy in Central and Eastern Europe

Written on behalf 822 of investors with €86 trillion in assets



## CDP 2015 climate change scoring partners

CDP works with a number of partners to deliver the scores for all our responding companies.

These partners are listed below along with the geographical regions in which they provide the scoring. All scoring partners have to complete a detailed training course to ensure the methodology and guidance are applied correctly and the scoring results go through a comprehensive quality assurance process before being published. In some regions there is more than one scoring partner and the responsibilities are shared between multiple partners.

In 2015, CDP worked with RepRisk, a business intelligence provider specializing in ESG risks ([www.reprisk.com](http://www.reprisk.com)), who provided additional risk research and data into the proposed A-List companies to assess whether they were severe reputational issues that could put their leadership status into question.

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China



France



Japan, Turkey



Japan, Korea



Germany & Austria



Brazil



Korea



Japan



Latin America



Spain & Portugal (Iberia)



Japan



Germany & Austria



All regions

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## Paul Dickinson

### Executive Chairman CDP



Decarbonizing the global economy is an ambitious undertaking, even over many decades... corporate leaders understand the size of the challenge, and the importance of meeting it. We are on the threshold of an economic revolution that will transform how we think about productive activity and growth.

**CDP was set up, almost 15 years ago, to serve investors. A small group of 35 institutions, managing US\$4 trillion in assets, wanted to see companies reporting reliable, comprehensive information about climate change risks and opportunities.**

Since that time, our signatory base has grown enormously, to 822 investors with US\$95 trillion in assets. And the corporate world has responded to their requests for this information. More than 5,500 companies now disclose to CDP, generating the world's largest database of corporate environmental information, covering climate, water and forest-risk commodities.

Our investor signatories are not interested in this information out of mere curiosity. They believe, as we do, that this vital data offers insights into how reporting companies are confronting the central sustainability challenges of the 21st century. And the data, and this report, shows that companies have made considerable progress in recent years – whether by adopting an internal carbon price, investing in low-carbon energy, or by setting long-term emissions reduction targets in line with climate science.

For our signatory investors, insight leads to action. They use CDP data to help guide investment decisions – to protect themselves against the risks associated with climate change and resource scarcity, and profit from those companies that are well positioned to succeed in a low-carbon economy.

This year, in particular, momentum among investors has grown strongly. Shareholders have come together in overwhelming support for climate resolutions at leading energy companies BP, Shell and Statoil. There is ever increasing direct engagement by shareholders to stop the boards of companies from using shareholders' funds to lobby against government action to tax and regulate greenhouse gasses. This activity is vital to protect the public.

Many investors are critically assessing the climate risk in their portfolios, leading to select divestment from more carbon-intensive energy stocks – or, in some cases, from the entire fossil fuel complex. Leading institutions have joined with us in the Portfolio Decarbonization Coalition, committing to cut the carbon intensity of their investments.

This momentum comes at a crucial time, as we look forward to COP21, the pivotal UN climate talks, in Paris

in December. A successful Paris agreement would set the world on course for a goal of net zero emissions by the end of this century, providing business and investors with a clear, long-term trajectory against which to plan strategy and investment.

Without doubt, decarbonizing the global economy is an ambitious undertaking, even over many decades. But the actions that companies are already taking, and reporting to CDP, show that corporate leaders understand the size of the challenge, and the importance of meeting it.

We are on the threshold of an economic revolution that will transform how we think about productive activity and growth. We are beginning to decouple energy use and greenhouse gas emissions from GDP, through a process of 'dematerialization' – where consumption migrates from physical goods to electronic products and services. This will create new assets, multi-billion dollar companies with a fraction of the physical footprint of their predecessors.

Similarly, there is a growing realization that 'work' is no longer a place, but increasingly an activity that can take place anywhere. And it no longer relies on the physical, carbon-intensive infrastructure we once built to support it.

In the 19th century we built railway lines across the globe to transport people and goods. Now we need to create a new form of transportation, in the form of broadband. Investment in fixed and mobile broadband will create advanced networks upon which the communications-driven economy of the 21st century can be built – an economy where opportunity is not limited by time or geography, and where there are no limits to growth.

An economic revolution of this scale will create losers as well as winners. Schumpeter's 'creative destruction', applied to the climate challenge, is set to transform the global economy. It is only through the provision of timely, accurate information, such as that collected by CDP, that investors will be able to properly understand the processes underway. Our work has just begun.



## Hanna Gronkiewicz-Waltz

Mayor of the City of Warsaw



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The City of Warsaw, together with over 300 largest world cities and over 5000 global companies, each year discloses to the CDP strategies and actions related to GHG emissions reduction, proving that Non-state Actors take leadership in tackling climate change.

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**Cities consume nearly 80% of all energy used in the European Union. Their share in greenhouse gases emissions is about the same. These facts confirm cities' key role in tackling climate change and reveal their potential to accelerate a global shift from the economy based on fossil fuels towards the low-carbon economy.**

Local governments are the first to bear the consequences of climate change. While fighting against increasing number of extreme weather events, thousands of cities all over the world work to mitigate their CO<sub>2</sub> emissions. Additionally, more and more cities, including Warsaw, are preparing strategies on adaptation to climate change. We invest in energy efficiency, sustainable transportation and renewable energy sources, scaling-up our approaches by local, national and global partnerships and finally we, the local governments, are lobbying for the constant involvement in the international negotiations.

It was in Warsaw for the very first time in the history of UN climate summits when the voice of the cities was officially heard. During the Cities Day, which constituted a part of the COP-19 Conference, representatives of local and subnational authorities were formally a part of the dialogue with the representatives of the Parties to the Convention and the United Nations.

This tradition shall be upheld during the nearing COP-21 in Paris. The Warsaw delegation, led by me, will participate in multiple events connected with climate negotiations and role of cities in various climate-related actions. Among them will be the Climate Summit for Local Leaders, hosted by Mayor of Paris and U.N. Secretary-General's Special Envoy for Cities and Climate Change. Together with representatives of other metropolises and city organizations we

participate in – C40, EUROCITIES and ICLEI – we will be discussing how to influence the outcome of the Conference, which will hopefully bring us a new world climate agreement, aiming to keep the global warming below 2° Celsius.

The City of Warsaw, together with over 300 largest world cities and over 5000 global companies, each year discloses to the Carbon Disclosure Project strategies and actions related to GHG emissions reduction, proving that Non-state Actors take leadership in tackling climate change. This is why it is so important that during this unique, world climate debate in Paris cities and companies constituted equal partners in the dialogue. We in Warsaw are already working together with local companies on climate-related actions, including cooperation within the platform Partnership for Climate and within the EU project URBAN LEARNING on integrative energy planning. We do realize that without such close cooperation between crucial stakeholders we cannot achieve our ambitious climate goals – both on local level, in accordance with the Sustainable Energy Action Plan for Warsaw in the perspective of 2020, and on international level, in accordance with UN world climate agreements.



Consistency in the approaches to the NFR Directive implementation across the EU Member States is crucial.

## Update: The EU Non-Financial Reporting Directive

### Are we on track?

On September 29th 2014, the EU Council approved the Directive on disclosure of non-financial and diversity information by certain large corporations of “public interest” with at least 500 employees. The directive has to be enforced by 2017 under the EU Accounting Directive and is currently undergoing the implementation process in the EU countries. The Member States do have some flexibility on certain aspects, e.g. how to specify the Directive’s text, where the information needs to be reported, how the data should be verified and which companies should be required to report. Member States are currently implementing the environmental reporting component of the Directive quite differently, which could lead to a patchwork of fragmented and incompatible national reporting requirements. At the same time institutional investors’ demands for globally comparable, verified corporate environmental data throughout companies whole supply chain have become even clearer and more urgent over recent months.

### CDP’s key principles regarding NFR

Consistency in the approaches to the NFR Directive implementation across the EU Member States is crucial. Disclosures made by companies will only be useful to shareholders if they can be compared to disclosures made by peer companies, even if they happen to be listed in another EU country. New regulatory requirements should be in line with existing best practice in corporate disclosure. To avoid reporting only for the sake of reporting, it is important to promote the consistency of reported information for investors and to reduce the reporting burden for companies. The primary purpose of annual reports by listed companies is to inform shareholders and influence their behavior. Therefore reported information should answer its customer’s needs and should allow investors to compare different companies, and should be an accurate representation of the risks and opportunities facing companies. Information reported to shareholders should be presented alongside assured financial information and should be possible for a third party to assure. Non-financial information should be reported with the same degree of care and rigor as financial information and should be presented alongside it in the same report to increase visibility and usage of such information for decision making processes.

### CDP’s position

CDP’s long-term endorsement by more than 800 institutional investors with over €86 trillion of assets under management has de-facto introduced a standard for reporting corporate environmental information. Some 5,500 companies worldwide (of which around 1,800 alone are in Europe) already apply this reporting standard, cumulatively representing over half of the world’s market capitalization.

Institutional investors use non-financial CDP data in their daily decision making via various information channels such as Bloomberg terminals, CSR reports, annual financial statements, ESG ratings, as well as directly through CDP. CDP data is also used to drive change through corporate supply chains, and to inform environmental policy that relates to business activity.

### How CDP can help

Via the CDP reporting platform, companies already report information to investors that fulfils their requirements as regards environmental reporting. In addition to this, CDP has promoted the development of standards for mainstream non-financial reporting through its support of the Climate Disclosure Standards Board (CDSB), in coalition with seven other key environmental NGOs (CERES, The Climate Group, The Climate Registry, IETA, WBCSD, WEF, WRI).

CDSB’s reporting framework is a unique tool, which would enable companies to use data from their CDP response to comply with the new EU accounting directive as regards environmental reporting. The CDSB reporting framework also provides the basis on which the social and governance reporting requirements could be built.

### How your company can get involved

In order to make the new legislation meaningful, as well as simple to implement by companies, we encourage you to advocate your national governments directly and through your trade associations. A pragmatic EU wide approach to non-financial reporting is the optimal solution for business and investors. It should build on available and established reporting frameworks, such as CDSB. CDP and CDSB are here to support you in that effort. Our staff are available to answer any questions and provide further information.

## Rafal Hummel

Executive Director, Head of Climate Change and Sustainability Services in EY Poland.



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In times of globalization, comparability of consistently presented data is absolutely key to investors. It is the smart regulation and assurance provided by the professional firms that will significantly improve the reliability and comparability of the data reported by issuers and, ultimately, make the investing decisions easier.

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**Business leaders around the world understand the need for a more encompassing approach to sustainability – and so do we. Our professionals provide sustainability services across industry sectors and are committed to working with like-minded organizations or those looking to make the move toward developing leading sustainability initiatives.**

After the first, CDP CEE 100 Climate Change 2014 Report, we in EY Poland are really proud to have a chance to write the report again in 2015. I must admit that despite increasing response ratio this year, I expected higher number of entities sharing their climate strategies, green-house gas emission and use of energy with CDP. My expectations were high, because 2015 has been without any doubt a very strong year for sustainability reporting and overall investors awareness related to climate change globally.

Based on the recent EY study completed in 2015 and involving over 200 senior decision-makers at institutional investors in Europe, America and Australia, investors' interest in nonfinancial reporting shifted significantly within only one year. Vast majority of experts interviewed considered nonfinancial data relevant to all the industry sectors and saw integrated reports as essential information used while making investment decisions. They also admitted that nonfinancial data reporting demonstrates the company's risk management and long-term capital value strategy. Such a dynamic increase in overall awareness globally took place in only one year and shows a very clear trend – investors would like to see more nonfinancial data then they currently get from the companies. One could ask whether all the environmental, social and governance-related information is really nonfinancial? Changes in worker safety, energy efficiency, water consumption or level of CO<sub>2</sub> emission, related company's strategy and ability to improve will have clear forward-looking financial implications. Combining the above with the fact that market valuations of public companies included in S&P 500 index have never been as far from its book values as they are now, explains why investors nowadays require much more information than they can find in the financial statements.

The above trends are clearly visible globally. Both, the level of response to CDP's questions and EY observations, show that currently the expectations of

investors in CEE region are increasing but have not yet reached the same level. The more dynamic change however, may be just around the corner. The results of separate CDP's initiative related to reporting of climate risks and strategy within the supply chain, show that over forty companies in the same region responded in 2015 to CDP questionnaires on request of the business partners. This may indicate that issuers do react quickly if they face pressure from the buyers of their products or services. Are not the company's investors an equally important stakeholder group ?

We expect the local investors' trend to follow the global trend with regional increase in expectations related to reporting of nonfinancial data. The result of changing requirements from the investors group should go hand in hand with the implications of 2014 European Council directive related to disclosure of nonfinancial data that is being implemented in the member states in 2016 with its effects for larger entities starting from 2017. Decision-makers responding to EY research in 2015 believe that when things are more regulated, there is better comparability of the data from issuers. In times of globalization, comparability of consistently presented data is absolutely key to investors. It is the smart regulation and assurance provided by the professional firms that will significantly improve the reliability and comparability of the data reported by issuers and, ultimately, make the investing decisions easier.

We hope that this report as well as other CDP's and EY's activities will continue to help raising awareness related to not only issues but also opportunities within the climate change subject. In EY, we have a very long tradition in helping our clients in multiple types of reporting, communication with the market and in providing assurance and data reliability to investors. I strongly believe that regional results of the CDP survey and dynamic growth in number of sustainability reports issued will place CEE much closer to more mature regions in 2016.

## Executive summary

Supply chain responding

**43**

Responding companies:

**17**

Directly responding companies:

**8**

Integrate climate change into business strategy:

**100%**

Set an emissions reductions target:

**77%**

Provide incentives for management of climate change:

**71%**

Top risks:

- ▼ Fuel and energy taxes and regulations 65%
- ▼ Reputation 53%
- ▼ Cap and trade schemes 35%

Top opportunities:

- ▼ Changing consumer behavior 59%
- ▼ Reputation 53%
- ▼ Fuel and energy taxes and regulations 47%

Reported Scope 1 and Scope 2 emissions:

**100%**

Scope 1 and 2 verification:

**82%**

Disclosure of climate change data beside CDP response:

**82%**

Reported both absolute and intensity targets:

**6%**

Reported absolute targets only:

**53%**

Reported intensity targets only:

**18%**



**Climate change goes way beyond environmental issues and is regarded as one of the most significant challenges the today's world is facing. It may have serious and unpredictable implications on the way the economies and markets will behave in the coming decades.**

**The risks and uncertainties climate change imposes on consumer behavior, security of supply chain, asset value and the continuity of business operations are of profound importance for day-to-day operations and the main reasons why companies must take responsibility for their overall carbon impact.**

The way businesses approach understanding and managing of these risks can provide them with knowledge necessary to improve operational performance, increase efficiency and transparency. Moreover, taking active approach in developing climate change resilience becomes more and more important component of vital shareholder, employee and other stakeholder relationships.

It is for these reasons that, today more than ever before, investors around the world seek nonfinancial information to underpin their investment decisions. CDP has built a unique global tool that assesses and manages corporate exposure to climate change risks and plays a significant role in performance comparison and sharing of the best practices. It collects data that helps to move climate change into the mainstream business thinking and contributes to more deliberate activities that are aimed at leading to more sustainable economy. This year CDP on behalf of 822 institutional investors has requested over 5,000 of the world's largest companies to report their climate strategies, green house gas emissions as well as energy use. Globally, 1,997 of requested companies, representing over 55% of the world's market capitalization of listed companies have decided to respond to the questionnaire and work together in raising the environmental awareness to support building a low carbon economy.

**In CEE Region, CDP asked 100 largest companies listed on Warsaw, Prague and Budapest Stock Exchanges as well as Nasdaq Baltic Market to disclose the crucial climate change data. Unfortunately, the response rate recorded in this area was significantly lower than at global level with only 17 companies reporting to CDP and out of which 9 responding via their parent companies.** The overall

percentage of companies willing to participate ranks CEE well below European average and global average of almost 40% and is comparable to the results obtained in Portugal and Ireland. It may suggest that the awareness of climate change risks or benefits and their potential impact on reputation and value for investors is still limited in the region.

**Although the larger local firms in CEE may not have a direct pressure to report environmental data due to lower, than in more mature markets, investors' expectations, a positive influence on CEE may come from the west through supply chain reporting.** CDP runs its supply chain program to better understand how global businesses manage climate risks and how they are positioned to exploit the associated opportunities – and to encourage both: purchasing companies and their suppliers to take action. **For the current year's report, 43 CEE companies reported to CDP on request from their partners who analyze the impact their supply chain has on the environment.** This trend results from the fact that the large multinationals already well aware of the importance of the environmental issues, set environmental criteria for their existing or potential suppliers.

**Not only businesses but also cities as parts of the entire global economy are more and more vulnerable to risks relating to climate change. The threat to the value of a company or municipal infrastructure can be reduced only through strategic addressing of the challenges and utilizing business opportunities resulting from the climate change requirements.** Those, between others, will include innovative technology and solutions.

What can be observed is that cities begin to play important role in motivating the businesses to act in a sustainable way.

Before the COP19 in 2013, the City of Warsaw led the CEE capitals to encourage governments from the region towards more sustainable, energy efficient

## Executive summary

scenarios. Warsaw is one of the leading CEE cities setting the tone in sustainability initiatives and together with over 300 largest world cities each year discloses to the CDP strategies and actions related to GHG emissions reduction. The city of Częstochowa has been active in co-operating with companies willing to provide sustainable solutions and is the winner of numerous prizes in this area. Recently, it has established the Board of Sustainable Development of Częstochowa at the Office of the President of the City, setting a benchmark for other cities and towns to follow.

The need for joint cooperation between all countries and economy sectors is additionally reinforced by the fact that the increasing air pollution, which is constantly driving climate change, is also the single largest environmental health risk. Recent studies conducted by World Health Organization together with OECD in 2015 show that economic cost of health impact in Europe amounts to \$1.6 trillion in deaths and diseases each

year, which is nearly equivalent to one tenth of the gross domestic product of the entire European Union in 2013. This amount corresponds to the total that societies will have to pay for necessary measures, that should be taken in order to minimize the negative effects of air pollution. As this problem is now the top political priority, developing strategies and greater transparency among business entities could be one of the factors contributing to maintenance of sound economy and growth.

In 2009 the Companies in Central and Eastern Europe were called for the first time to report the risks, strategies and impacts they have on the environment and the natural resources. Despite six years have passed, the disclosure in response to CDP's requests from CEE-based companies remains still at unsuccessful level. In 2015, out of 100 largest listed companies in Poland, Hungary, the Czech Republic and the Baltic States only 8 reported directly to CDP and 9 of them reported through parent companies. The global increasing trend in number of investors interested in environmental data within the last five years, does not seem to be as visible in CEE as it is in western European countries, Australia or Americas. As a result, companies from the region were not encouraged enough to disclose their climate risks through CDP's reporting initiative.

Poland continues to be the country with the largest number of companies reporting directly to CDP within the CEE Region. Companies listed on the Warsaw Stock Exchange represent 68% of CDP CEE 100 2015 sample, what reflects strong contribution of Poland to the CEE economy. Comparing to other countries in the Region, Polish entities dominate this year's respondents

**Table 1. CEE Overview**

Global	2010	2015
Analyzed responses*	6 (9)	7 (9)
Market cap of analyzed companies \$m	19,386	24,255
Scope 1	10,9 MtCO <sub>2</sub> e	9,5 MtCO <sub>2</sub> e
Scope 2	2,9 MtCO <sub>2</sub> e	1,6 MtCO <sub>2</sub> e
Scope 1 like for like: 3 companies	10,9 MtCO <sub>2</sub> e	5,8 MtCO <sub>2</sub> e
Scope 2 like for like: 3 companies	2,9 MtCO <sub>2</sub> e	1,3 MtCO <sub>2</sub> e

\* the number in brackets refers to companies that responded after the deadline to a parent company. They are not included in analysis



list with 62% (5 direct respondents, but with only 7% response rate). In Hungary 2 companies out of 10 requested decided to answer the questionnaire (making the highest response rate of 20%), while in Czech Republic there was no single company out of 8 questioned submitting their answers directly.

### Central and Eastern Europe Specific Challenges

Several important reasons for the low response rate in CEE can be pointed out. In the recent decades, CEE countries were putting extensive efforts to catch-up with “western” more developed economies. The consequences of the global economic downturn set in by mid-2008 have seriously disrupted the development opportunities for several countries in the region. This made contribution to sustainable growth even more challenging task. In emerging markets largely representing CEE area, where maturity of economies, political systems and regulatory framework vary between the regions, levels of disclosure tend to be lower. It comes down to the fact that, locally, awareness of and focus on benefits from driving transparency, sustainability and responsibility in business is still relatively low.

It must be emphasized that some of companies resist to disclose crucial climate change data, because it is considered as sensitive factor or a source of competitive advantage. Innovative environmental strategies or opportunities associated with climate change create value for a company and improve its market position. Some of the CEE businesses trying to reach the development level of leading European enterprises can mistakenly see the risk that disclosure

could potentially lead to loss of their competitive edge as other competitors could find it very easy to imitate such a strategy or exploit the opportunities.

Furthermore, corporate sector and governments tend to consider climate change policies very costly and do not recognize their profitability in the long-term. That is why still little resources and attention are being devoted to these initiatives.

Many firms in CEE may wrongly believe, EY study shows that globally some firms think alike too, that building climate change resilience means throwing money away and is just a moral obligation, that has to be fulfilled. In their opinion, in return for being socially responsible, it has to give up on significant part of its profits. It should be also emphasized that due to 2008 financial crisis many enterprises confronted difficulties in raising capital that restricted operational and investment capabilities. Some of them in order to continue had to lower its activity in area of social responsibility projects as in their belief it generates unnecessary costs.

Reporting on climate change issues should rather be considered as a starting point for driving progress towards innovativeness and improvement of operational efficiency than just a cost factor. By assessing performance, companies can identify their strengths and weaknesses and define opportunities. Only having identified and quantified the weaknesses and threats one can manage them and ultimately minimize their impact. It will also provide them with competitive advantage when material shift in regulatory and legal framework concerning carbon emissions will be introduced. These regulatory changes will evolve over time and become more demanding, meaning that companies that decided to cooperate in early stages would benefit from increased cost savings and be able to quickly boost profitability as compared to their peers.

But ultimately direct interest in sustainability reporting should lay with them as it can help markets function more efficiently or drive progress towards sustainable development goals. Unlike the majority of companies in more developed regions, companies in CEE still see climate change reporting and initiatives as an avoidable cost, whereas they might recognize a value in it and consider it more of an investment with a highly positive present value. Experience of some successful companies show that, this investment should no longer be perceived as part of public relations but rather as a strategic approach and risk management likely to bring efficiencies and savings in core business together with stronger reputation and stakeholders’ interest.



Stock market graphs, rancrations

## Sustainable investing hits mainstream

**“I think there are great benefits to investment managers who are able to integrate environmental data into their models. They are the leaders in finding a value-driver within an industry and modeling it when the rest of the market can’t. That gives you a competitive advantage.”**

**George Serafeim**  
Harvard Business School

### Growing need for nonfinancial reporting among investors as an incentive for companies to contribute to greater transparency

Today’s complex business models and constantly changing operational environment have contributed to the fact that investors more and more often seek information that goes far beyond financial statements – no matter if it is for marketing purposes, to generate higher returns or do good for the society. Based on recent EY study, almost 71% of them see integrated reports as essential or important and rank them as second most useful source when making investment decisions just behind companies’ traditional annual reports.

Moreover this data started to be regarded as relevant to all sectors of economy, because it leads to better understanding of company’s performance and accurate analysis of risk across investor’s portfolios. With the current trend observable in the graph it is very likely that the non-financial information will soon be as desirable as the traditional annual reports and that investors will seek integrated reports. This is mainly due to the fact that non-financial reporting, being forward-looking focused, discloses the risks and their potential impact whereas the traditional financial statements reflect historical data which is often already discounted in the share price.

The fact that the value of the company is based much more on non-financial data is visible in the developed economies, where the market capitalization significantly exceeds the book value of the net assets. The gap is substantially lower in developing countries and it may be geared to lower access to non-financial information. The businesses that understand the need of determining environmental, social and economic sustainability risks and opportunities create value for stakeholders and show how well-positioned their business is for future growth. The real challenge seems to be to change the mindset to start to trust that it is still worth to disclose, even not yet having perfect KPIs. Transparency in early stage and fair disclosing of the business impact may turn out to be less painful and risky from the perception perspective than pretending everything works perfectly and then reporting unsuccessful audited results when required by regulation. However, despite the clear message from the investor base, many companies still fail to deliver transparent high-quality information in these

areas. They do not seem to yet recognize the role that nonfinancial reporting plays in attracting capital and its effective allocation.

**Figure 1. Growing interest in nonfinancial reporting seen in significant shifts since 2014**





### CEE countries lag behind other European peers in structured ESG data evaluation

Based on EY global survey, investors in the developed markets of Europe lead their peers in more formal integration of ESG data into their decision-making. More than in any other region they rely on conducting either informal or structured, methodical evaluation of companies' environmental and social impact statements or use guidelines from third parties (80,8% of respondents). But provision of ESG information by issuers and its use by investors varies substantially across Europe.

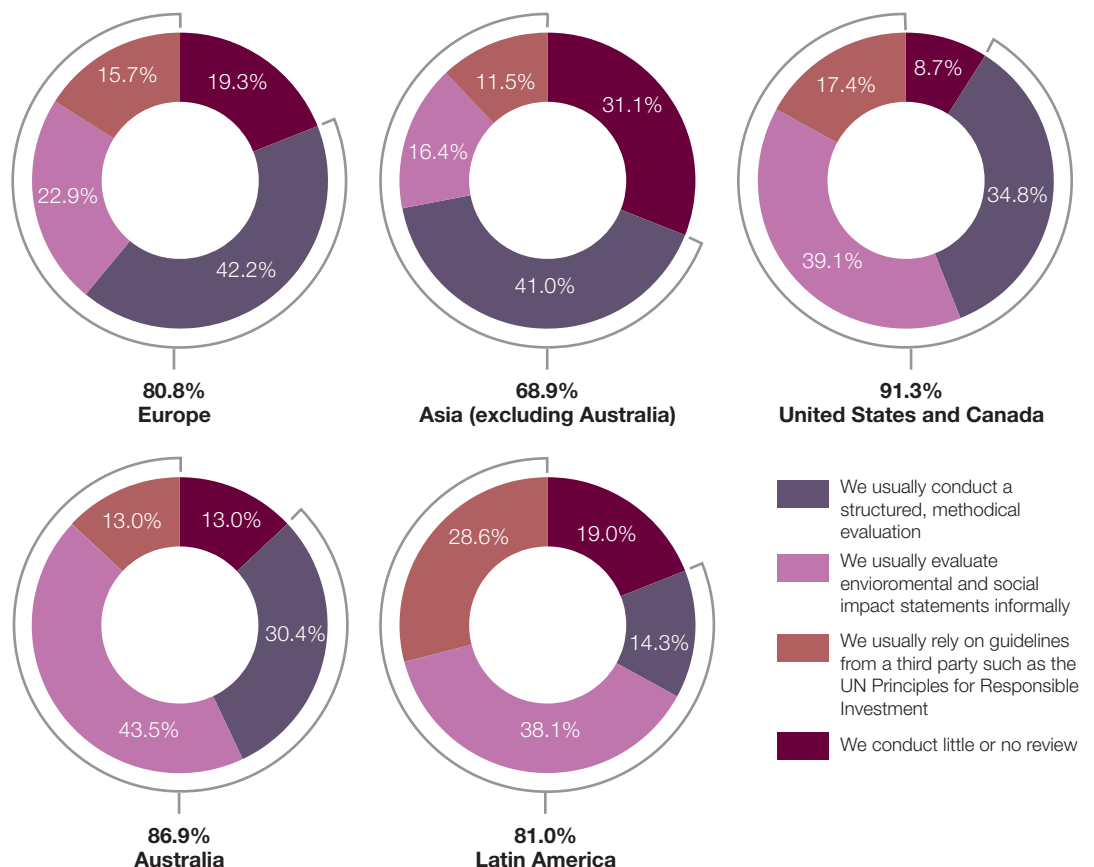
In comparison to Western markets in CEE Region the levels of disclosure are visibly lower. It may suggest that CEE companies have different motivation – they believe that the only way to attract capital and investor's attention is to maximize profits and increase asset value. Moreover, they seem not to have noticed that nowadays cognizant businesses do not focus on price competition, because it's the most common and short-term approach. These leaders compete through values, reported

as nonfinancial data - through mitigating climate change risks, building strategies and disclosure so that stakeholders could see how they are addressing current and future challenges. If CEE companies do not change their attitude and fail to catch-up with the leaders, they may find it hard to compete to attract global investors.

On the other hand it is worth to underline that part of responsibility for lack of initiative lays also on the side of investors themselves. Majority of stakeholders within this region neither factor in the impact that major climate change events will have on the value of their investments nor realize how much of their portfolio is directly exposed to energy companies that will be affected by global warming or governmental regulation aimed at preventing climate change. There also exists a general perception that ESG reporting is just about taking a moral stance instead of recognizing the risks that are hidden behind the lack of climate change strategy. However, investor's portfolio profits and losses are increasingly determined by incorporating ESG data into decision-making.

**Figure 2. Solid majorities in all regions surveyed evaluate ESG information using structured methods, informal evaluation or third-party guidelines**

What approach is typically taken in reviews of ESG information?



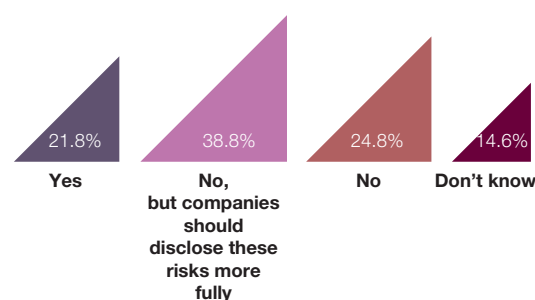


# Sustainable investing hits mainstream

It is also worth stressing that another reason why investors do not pay enough attention to nonfinancial reporting may be that data provided by issuers is not relevant to companies' risk and performance assessment. Nearly 40% of investors surveyed by EY say that disclosed ESG risks should be addressed more fully and 25% of them believe that information provided is not adequate at all. Poor quality and absence of clear standards in reporting is the main cause why there are still investors who do not consider it pivotal in decision making process. Majority of those investors not using nonfinancial information (representing minority of investors in general) assessed the company's disclosures to be unclear in terms its linkage to financial impact, there was also a significant percentage suggesting that these disclosures are inconsistent, unverifiable or incomparable and therefore does not meet the needs of users. First of all, unlike in case of traditional financial reporting, which is based on universal standards such as IFRS or US-GAAP, comparable guidelines for preparing sustainability reports have not yet been widely applied and required by regulators. Although a number of organizations, including Global Reporting Initiative, is already involved in setting standards in nonfinancial reporting, there is still significant deficit of information that is useful in evaluating environmental performance.

**Figure 3. Investors say companies do not adequately disclose their ESG risks**

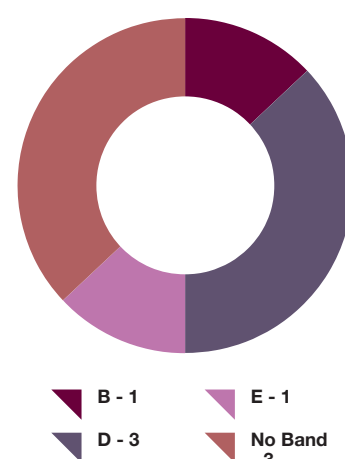
Do companies adequately disclose their ESG risks that could affect current business models?



Secondly, the reason of insufficient reporting can be also dependent of the size of issuing company. Large cap companies reveal stronger tendency to disclose non-financial information, because of greater availability of resources and ability to prepare such reports, while smaller businesses often highlight the cost of such undertaking. But in practice, once a company starts producing such reports it is able to manage these issue more efficiently. In view of the above, both companies and investors in CEE Region should act together in raising their awareness of climate change risks and opportunities and CDP's initiative is one of the few ways to do so. Performance scores, which are granted by CDP, may in the future serve the purpose

of universal performance evaluation tool according to sustainability criteria. Investors worldwide use ratings given by independent agencies to reassure their decisions and the demand for such knowledge in sustainability area is also increasing as markets become more complex. These ratings could be an additional aspect of financial analysis, which enables to comprehensively measure the entire risk spectrum hidden in investment portfolios. Assessments given by CDP and other organizations of this kind provide the necessary information for the whole range of stakeholders and allow businesses for benchmarking of their greenhouse gas emissions against the leaders and take action to mitigate climate change.

**Figure 4. 2015 performance bands CEE**



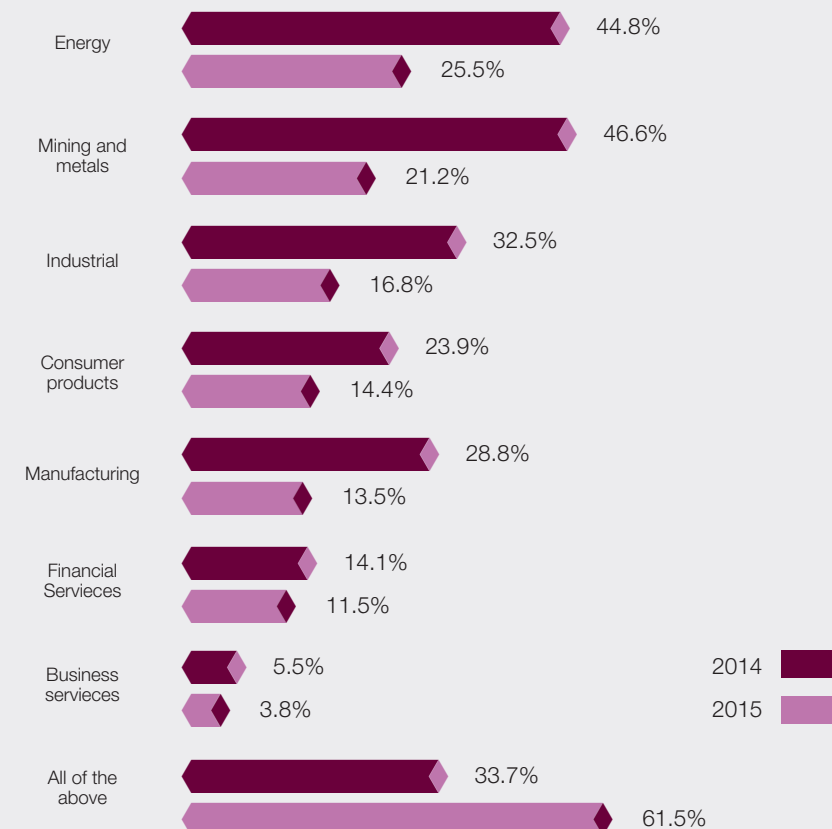
**Figure 5. Disclosure scores over time in CEE\***



\* There was only one company that was scored and granted with performance band in 2010 in 2015 every company responding directly to CDP CEE revised scoring and personalize Performance Summary.

**Figure 6. Investor interest in nonfinancial information spans all sectors**

In which sectors are you more likely to consider nonfinancial data most relevant?

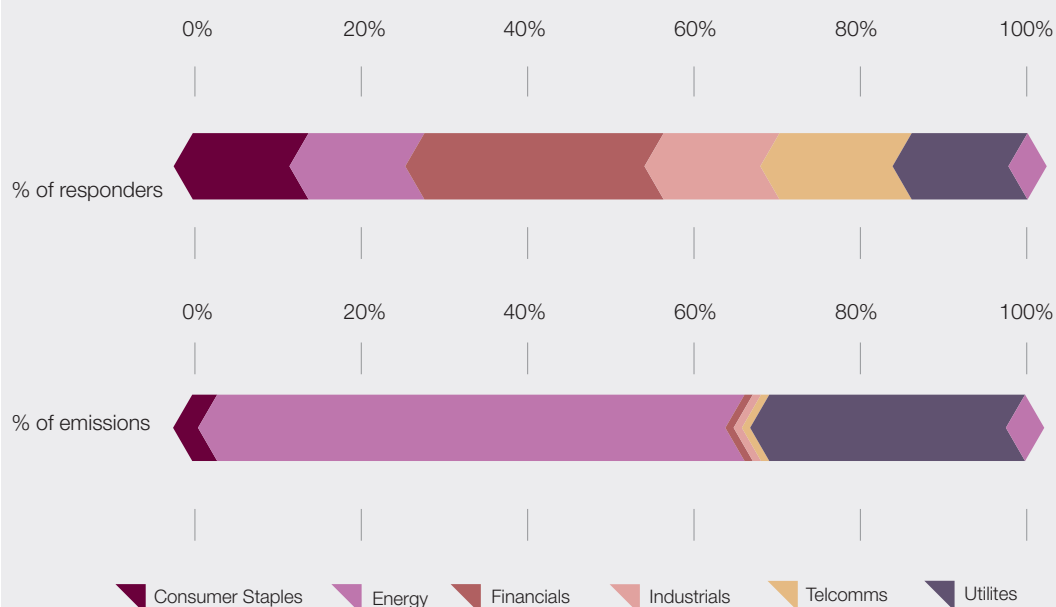


Despite expanded use of non-financial data across all industries (EY study noted a very dynamic change in this area between 2014 and 2015), there are still industries where this kind of information remains the most desirable. Investors still consider it more relevant or required when it comes to Energy, Mining and Metals or Industrial sector than to for example, financial services and this is due to their significant exposition to ESG risks and potential influence on other sectors.

However, the common practice globally is that companies that are not expected or required to report emissions and fuel consumption do so, there are some highly pollutive entities providing insufficient or no disclosure. Similar trend can be observed when it comes to the reporting to CDP in CEE.

Majority of companies that responded to CDP questionnaire operate in Financials or Consumer sector and at the same time the percentage of emissions that they are responsible for only amounts to 4%. On the other hand, Energy sector businesses accounting for the largest overall emissions in responders' group, were the least willing to participate in the CDP's initiative – only 1 out of 6 requested companies submitted its response. It may seem disappointing given the fact that these companies should be the most aware and have sufficient knowledge to report environmental data in comparison to other sectors. Lack of such disclosures can clearly make it more difficult for investors to assess the risks and impede entities' operational efficiency what ultimately may translate in lower investors' interests in such companies shares.

**Figure 7. CEE - % proportional of responders / emissions**



## CEE responding companies and their performance

### **CDP motivates companies and cities to disclose their environmental impacts, giving decision makers the data they need to change market behavior.**

For over a decade CDP has worked with companies to catalyze action towards a more sustainable world. This is a world with significant opportunities for business.

Companies that measure their environmental risk are better positioned to manage it strategically. And those that are transparent and disclose this information are providing decision makers with access to a critical source of global data that delivers the evidence and insight required to drive action.

Some 5,000 organizations across the globe measure and disclose their climate change, over 1000 disclose water and forest-risk information in response to CDP's information requests. This data is collected by CDP annually on behalf of institutional investors, purchasing organizations and government bodies.

Any organization wishing to publicly report their greenhouse gas emissions, climate change strategies, water stewardship approach and deforestation risk management, can do so through CDP.

Responding to CDP is a great opportunity for a company to revise its strategy, benchmark the performance, monitor and measure cost savings, and identify risks and opportunities associated with climate change. An increasing amount of requirements, which are imposed by public opinion and regulators, force

companies to become transparent and reveal non-financial data, including environmental strategies and risk management.

### **Benefits of providing sustainability disclosure for financial efficiency and market position improvement**

Companies that disclose to CDP are able to demonstrate:

- Increased awareness of greenhouse gas emissions hot spots so that they can begin to reduce them.
- Business leadership in understanding the risks from climate change, deforestation and water scarcity.
- How they are creating opportunities to innovate and generate revenue from sustainable products and services.
- How they are future-proofing their business from climate change and water impacts.

The identification of areas where action is required usually takes place during the launching phase of improvement process. In order to identify ineffective areas of company's operation, one has to monitor the CO<sub>2</sub>e emission and the usage of fuel, water and electricity. However, there is a difference between having the information available and being able to use it in an efficient way.

In order to help companies meet this challenge, CDP designed and annually revises its international information request. The standardized questionnaire simplifies the data analysis, which also translates into facilitation for investors.

### **Disclosure in CEE, attitude to nonfinancial reporting and new regulations**

Disclosure from Central and Eastern European companies is still at a very low level. From the sample of the 100 largest listed companies in Poland, the Czech Republic, Hungary and the Baltic States, only eight disclosed directly to CDP and eight disclosed through parent companies.

Those companies that are leading in the region by participating in CDP's climate change program are still somewhat project-oriented, rather than strategic, in their approach to addressing climate change. The majority of reporting companies lack emission reduction targets, and even leading companies in the region are failing to analyze their Scope 1 and Scope 2 emissions, nor verify emissions data with third parties.

However, there are signs that companies in the region are beginning to recognize the challenge posed by climate change. **All but one are engaging with policymakers, 100% have charged a board member with responsibility for the area, and 82% of companies have emission reduction initiatives underway.**

The trend should be strengthening due to increased investors interest and new regulation coming into force in 2016.

## In 2014 the Council of the European Union approved a new directive on disclosure of non-financial information for companies with over 500 employees within the EU.

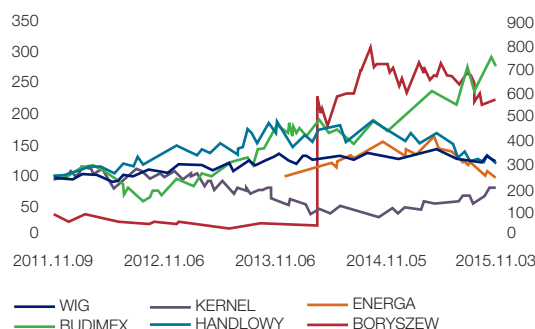
The Directive 2014/95/EU on disclosure of non-financial and diversity information by certain large undertakings and groups amends the Accounting Directive 2013/34/EU. It requires companies concerned to disclose in their management report, information on policies, risks and outcomes as regards environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors. This will provide investors and other stakeholders with a more comprehensive picture of a company's performance. This is a legislative initiative with relevance for the European Economic Area (EEA).

The new rules will only apply to some large companies with more than 500 employees. This includes listed companies as well as other public-interest entities, such as banks, insurance companies, and other companies that are so designated by Member States because of their activities, size or number of employees. The scope includes approx. 6 000 large companies and groups across the EU.

The Directive leaves significant flexibility for companies to disclose relevant information in the way that they consider most useful, either in integrated or in a separate report. Companies may use international, European or national guidelines which they consider appropriate (for instance, GRI, the UN Global Compact, the OECD Guidelines for Multinational Enterprises, ISO 26000).

The Directive entered into force on 6 December 2014. EU Member States have two years to transpose it into national legislation

**Figure 8. Impact of implementation of emission reduction activities on financial results of reporting companies**



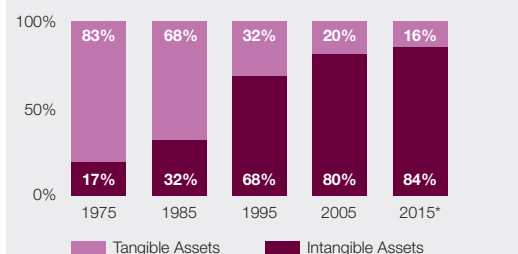
Contribution to managing the climate change issues can have measurable influence on financial results and increase shareholders value. The financial performance of majority of Polish companies, who provided information to CDP, is better than main stock index in Poland (WIG Index). For four out of six analyzed companies indexes were higher than WIG (the other two being just slightly below the WIG). It may indicate that environmental awareness and appropriate reporting and disclosure of nonfinancial information is highly appreciated by investors, which is reflected in their stock prices.

#### Intangibles identify an organization's true value

The confluence of risks and opportunities associated with environmental, social and economic performance has made sustainability a strategic priority for companies as part of their overall business strategy. Measuring an organization's environmental, social and economic performance is often referred to as the "triple bottom line." Ocean Tomo's 2015 Intangible Asset Market Value report suggests that only 16% of an S&P 500 company's market value can be explained by its physical and financial assets whereas 84% relates to intangible assets value. The share of tangible assets in the value of a company accounts for only 16% and this is down from 83% in 1975. The share of intangible factors in the market capitalization of a firm rose from 17% in 1975 to over 80% of the company's value in

the current decade. This majority of the company's value comprises intangible factors, such as intellectual capital, human capital, brand and reputation, and relationships with regulatory bodies, non-governmental organizations, customers, suppliers and other external stakeholders – most of these measures can nowhere be found in financial statements. Analysis of the data on the below chart brings to a conclusion that the investors look for more than just financial statements and are more and more interested in nonfinancial reporting which undoubtedly is beneficial for the company and is becoming a standard part of annual reporting.

**Figure 9. Components of S&P 500 market value**

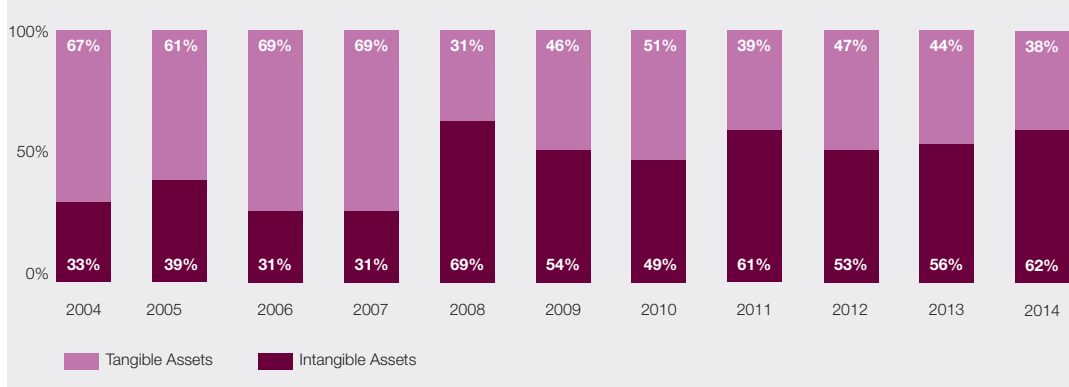


Source: <http://www.oceantomo.com/blog/2015/03-05-ocean-tomo-2015-intangible-asset-market-value/>

#### The share of tangible and intangible factors in the value of the WIG20 companies

Similar trend can be observed for Polish stock market, however with a much smaller gap between the book value and the market value. The analysis based on WIG20 (index comprising of the 20 biggest companies listed on the Warsaw Stock Exchange) reveals the fact that so far in CEE nonfinancial reporting plays less significant role for investors than globally. There is still potential for the stock prices to rise but the investors need to be better informed and the companies should be ready to be more transparent. This only can be obtained through regular and comprehensive reporting on the company's risks and its impact on environment and all the stakeholders. Investors know there is a 'hidden value' not fully recognized in financial statements, that is, to a great extent attribute to intangible assets and they will be willing to invest in the companies that understand this relation.

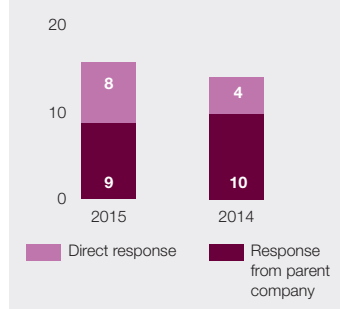
**Figure 10. The Changing concept of an organization value**



**The share of intangible factors in the market capitalization of a firm rose from 17% in 1975 to over 80% of the company's value in the current decade**

## CEE responding companies and their performance

**Figure 11. Number of companies responses in 2014 and 2015**



### Response rate

The response rate within CEE 100 in 2015 accounted for only 17 companies. However, it was an increase comparing to 2014, when 14 companies submitted answers to the questionnaire. Only 8 of this year's participants decided to disclose directly to CDP, while others reported via parent companies.

Improving awareness through measurement and disclosure is crucial to effective management of carbon and climate change risk. To encourage companies to respond to CDP annually is therefore one of the main purposes of this report. This initiative allow investors and businesses to assess entity's performance and identify problems and opportunities related to climate change issues.

Most of the companies that reported in 2014 did so in 2015, which is a positive sign and shows that the companies which once evaluated their impact are interested to monitor it in the following years. One would expect also that the companies reporting other non-financial data would also be natural candidates to respond to CDP. Therefore, CDP cooperates with other framework providers in order to boost the response rate and to provide the companies a comprehensive framework for reporting and risk analysis.

### CDP's collaboration with GRI

GRI and CDP signed a memorandum of understanding that will see the two non-profit organizations work together to further align areas of their reporting approaches and guidance for companies.

Close alignment with internationally recognized best practice avoids duplication of disclosure efforts. It will improve the consistency and comparability of environmental data, making corporate reporting more efficient and effective and ease the reporting burden for the thousands of companies that use CDP's climate change and supply chain programs and the GRI Sustainability Reporting Guidelines. This will be achieved by allowing data points to be used in both reporting channels. The information provided through either channel can form parts of a sustainability report using the GRI Guidelines and/or to answer parts of CDP questionnaires.

From 100 companies approached by CDP CEE, 22 are also reporting under GRI framework. 6 of them responded to the CDP.

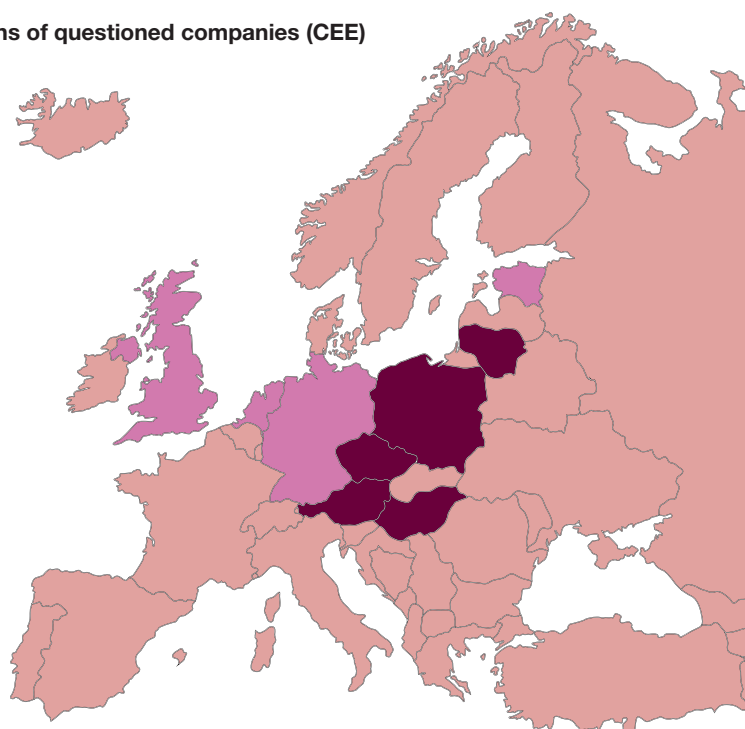
The 2014 report contained a list of 10 biggest companies in CEE together with a comment that it is expected that all the biggest companies should report to CDP in 2015. None of those 10 biggest companies in CEE 100 in 2014 that were expected to respond in 2015 took part in the current year survey. Below is the list of 10 biggest companies who responded in 2015.

**Table 2. 10 biggest companies who responded in 2015:**

Erste Group Bank AG
ING Group
Orange
Banco Santander
Societe Generale
Telia Sonera
UniCredit
MOL Nyrt.
Budimex S.A
Magyar Telekom Nyrt.

Source: Europe: 300 of the largest companies in Europe based on market capitalization (FTSEurofirst 300 Eurozone)  
<https://www.cdp.net/Documents/disclosure/2015/Companies-requested-to-respond-CDP-climate-change.pdf>  
<http://pl.investing.com/equities>

### The origins of questioned companies (CEE)



- Origins of questioned companies, which submitted response
- Origins of questioned companies, which not responded to CDP

Companies from Austria, United Kingdom and Germany were asked, because they operate mostly in CEE



## IKEA - Low carbon supply chain

As part of the strategy "People and Planet Positive" by the end of 2015 IKEA Group plans to allocate a total of EUR 1.5 billion around the world for the development of a low carbon economy. The company has agreed, among others, to purchase 314 wind turbines in 9 countries and 700 000 solar panels. Part of these investments will be made in Poland.

Not only has the IKEA been improving its own energy efficiency but also it has influenced positively its supply chain by cooperating with the Polish firms manufacturing IKEA supplies. Currently about two thirds of the Polish IKEA suppliers have been working to boost their energy efficiency.

The energy efficiency is being monitored based on the "Sustainability Reports" filled by the suppliers, which are one of the IWAY standard requirements (IWAY is a code of conduct for suppliers). The firms manufacturing for IKEA report annually energy consumption and emissions level as well as the way they manage energy, materials usage, water consumption and recycling.

Consequently, part of the suppliers have decided to invest in renewable energy and thanks to this lower their emissions and increase their energy security.

The main aspects of the energy efficiency cooperation are:

- ▼ Energy audits
- ▼ Implementation of the energy management systems
- ▼ Improvement of the energy use monitoring
- ▼ Sharing the best practices between IKEA manufactures and external suppliers.

**Although the pressure on big local firms in CEE to report environmental data is still limited due to relatively low investors' expectations, a positive trend can be observed regarding response rate in supply chain reporting, separate CDP's initiative, within this Region. In this year's report 43 CEE companies reported to CDP on request from their partners who analyze the impact on the environment of their supply chain. This trend results from the fact that the big multinationals, already well aware of the importance of the environmental issues, set environmental criteria for their potential suppliers.**

CDP started its supply chain program to better understand how global businesses are addressing climate risks and how they are positioned to exploit

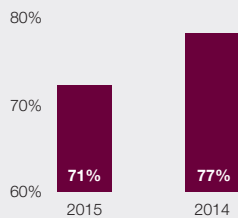
the associated opportunities. The main aim of this initiative is to drive the necessary action among both corporations and their suppliers. Climate change risk management within supply chains creates environmental and financial advantages of cooperation between companies. Multinationals, which encourage their suppliers to measure and disclose climate change issues, help them reduce risk and identify opportunities. At the same time, they can better understand provider's practices and identify issues that may impact them indirectly. Such action can also strengthen competitive advantage – not only by increasing efficiency but also making suppliers more attractive to customers, who value sustainable approach. By putting pressure on partners, multinational companies improve sustainability performance of the entire supply chains.

## Supply chain report – Initiative of L'Oréal

Leaders, such as L'Oréal, realize the importance of collaboration through effective supplier evaluation framework. L'Oréal Group has been disclosing through CDP since 2003 and was a founding member of CDP's Supply Chain Leadership Collaboration Project in 2007. Since its suppliers' activities represent 28% of its carbon emissions, L'Oréal believes such activity is part of its broader environmental footprint. By engaging and training its buyers, the company has made it possible to mobilise suppliers and convince that measures aimed at reducing GHG emissions play an inevitable part of a company's global performance. CDP supply chain scoring is a part of L'Oréal partner's evaluation and their performance on climate change is fully included in supplier relationship and challenged during business reviews. Since 2014, it is compulsory for company's strategic suppliers to take part in the CDP Supply Chain and 89% of suppliers invited (192 out of 215) have done so. Among respondents, 85% are measuring their CO<sub>2</sub> emissions and over 60% have clear objectives for mitigating climate change risk. By 2020 L'Oréal wants to involve 100% of its suppliers in their sustainability program

## Key findings CEE

**Figure 12. Provide incentives for management of climate change**



### Overview of 2015 Disclosure

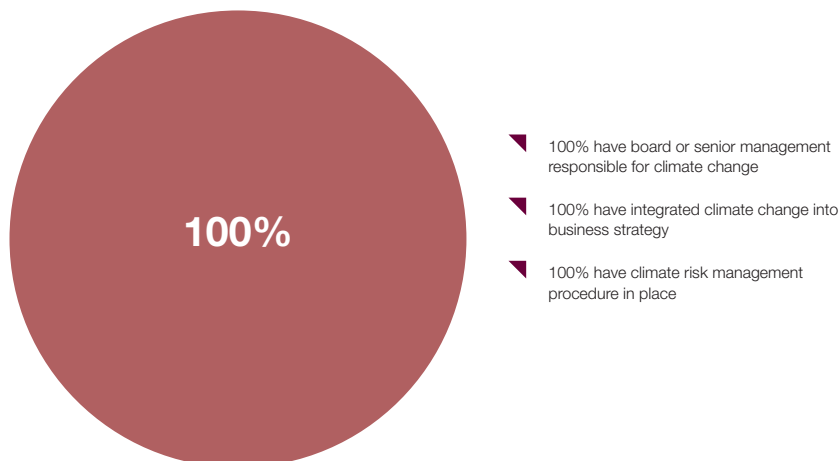
Regarding the structure of the Climate Change Information Request, the following sections have been established to present the results of the questionnaire:

- ▼ Governance and Strategy,
- ▼ Climate Change Risks,
- ▼ Climate Change Opportunities,
- ▼ Emissions: Scope 1 and Scope 2,
- ▼ Targets,
- ▼ Verification,
- ▼ Scope 3 Emissions.

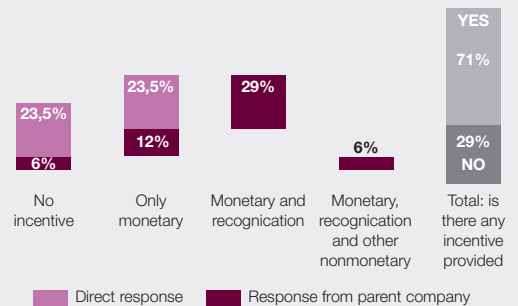
### Governance and Strategy

**It may be astonishing that only 71% (down from 77% in 2014) of responding companies provide some incentives for the management to encourage climate change initiatives, especially as all companies that responded to the questions have board or senior management responsible for climate change.** What is more they have integrated climate change into their business strategy and have got climate risk management procedures. The international leaders in climate change management claim incentives are one of the best practice while GHG emissions reduction targets are to be met. Yet at the CEE level companies are not setting their targets which might be a barrier to provide climate mitigation incentives. In general, for the environmental issues to be taken seriously, the leaders should set targets and provide incentives just as they do in other areas.

**Figure 13. Companies responses to strategy related questions:**



**Figure 14. Percentage of companies that provided incentives for the reliable management of climate change issues grouped by the type of incentive**



71% of the companies responding to CDP admitted to provide incentives for employees that are engaged in managing climate change issues (See Figure 14). It is a decrease comparing to last year when 77% of surveyed declared willingness to gratify activity in this area. The monetary incentive, which remains the most popular, was reported by every rewarding company and most of them decided to reward also by recognition. Only one respondent adopted also other motivation measures. Among companies reporting directly to CDP, the monetary type of incentive was the only one provided.

Approach to sustainability and specifically how it is included in the company's strategy and stakeholder situation, alignment of the sustainability communication and other information reported publicly, clarification of roles for oversight responsibility of sustainability activities, including external reporting and establishing parameters for sustainability reporting are recommended to be a responsibility of the board and top management.

However, it is not only the board or a single unit that should be involved in the sustainability vision and activities. Mitigating environmental risks and sustainable development is a multidisciplinary area that needs to involve entire organization, spreading the idea and implementing the strategy along the whole structure (and even beyond throughout supply chain) can bring the real and long term results. Sustainability initiatives can lead to new business development, attracting new market and creating new job. Those should contribute to generating value for the company, its shareholders, employees, community and any other stakeholders.

## Seven Tips for Raising Sustainability Awareness in the Organization (by COSO)

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) has built an Enterprise Risk Management Integrated Framework that is used worldwide to identify and manage corporate risk. Sustainability can, and should, be integrated into the analysis. Moreover, managing of sustainability risk should not be the responsibility of one function but is relevant to all aspects and operating units of the business. Therefore, it should be incorporated as a fundamental part to the organization's vision and strategy. As stated in a study Integrating the triple bottom line into an enterprise risk management program "Sustainability must permeate organizational thinking from the boardroom and executive suite to the shop floor. It needs to be integrated into division, business unit and operations planning and activities to be truly effective. For organizations still struggling to make sustainability a higher priority at the executive level, COSO offers seven steps to initiate a sustainability approach:

- ❑ Get leadership involved.
- ❑ Engage stakeholders
- ❑ Integrate sustainability into the corporate strategy from the start
- ❑ Identify and then assess materiality of risks.
- ❑ Look for quick wins.
- ❑ Be open and transparent.
- ❑ Choose the right measurement tools.

Source: "Demystifying Sustainability Risk – Integrating the triple bottom line into an enterprise risk management program" by Ernst & Young LLP Craig Faris, Brian Gilbert, Brendan LeBlanc, Miami University Brian Ballou, Dan L. Heitger, research commissioned by COSO.

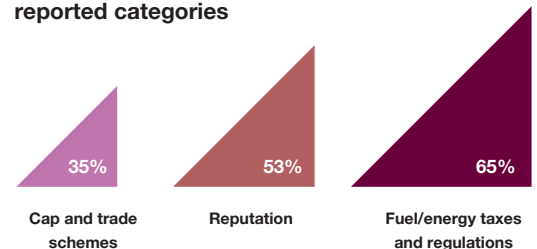
Reputation:  
risk or opportunity

**53% vs 53%**  
reported  
as risk      reported  
as opportunity

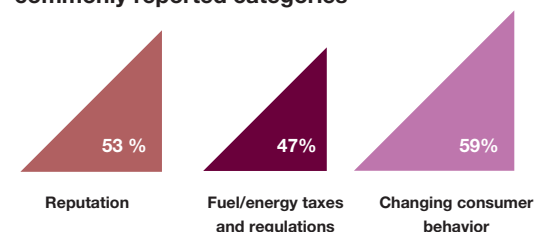
### Climate Change Risks

The most common reported risks categories by the respondents were fuel or energy taxes and regulations, then reputation and cap and trade schemes. The respondents pointed out that cap and trade schemes and energy are crucial to their business as they have direct impact on them, e.g. the cost of operating increases when a company has to buy additional or more expensive rights to emit GHG or pay additional taxes for energy consumption. Some companies indicated indirect impact of cap and trade, e.g. hotel companies could suffer from decreasing number of reservation due to higher prices of plane tickets caused by additional fees demanded by airline operators. The change of taxes or regulations can arise from climate related events and impact for instance the fees which may make operating the business more difficult. Turned out that reputation is considered at the same relevance. The reputation impacts their ability to find new clients and also helps them to maintain business contact with existing ones. That also influence on their business relationship with dealers or suppliers. Similarly to previous year report the same number of respondents see reputation as risk and as opportunity.

**Figure 15: Percentage of companies reported risks from the most commonly reported categories**



**Figure 16: Percentage of companies reported opportunities from the most commonly reported categories**



### Climate Change Opportunities

The most common reported opportunities were changing consumer behavior (59%) and reputation (53%). Positive picture of the company impacts business relationship with investors, potential clients and also existing ones. Changes in behavior of the users could result in reduction of energy usage or on the other hand by adding sustainable and green products enable the company to expand their portfolio. Because there is nothing more certain in life as taxes, fuel and energy taxes can also be considered as an opportunity. The management realizes profits from investing in the reduction of GHG emission as it may significantly decrease their future emission taxes.

## Climate change opportunities Erste Group Bank AG

At the end of 2014 Erste Group Bank AG prolonged the contract with Austrian electric energy provider (Naturkraft). As since 2011 Erste Group Bank AG will use in 2016 and 2017 only 100% CO<sub>2</sub> free electricity. Different to other Austrian banks Erste Group Bank AG produces approximately 40% of the electric energy by its own hydro power plant located in Unzmarkt/Frauenburg province of Styria.

Following Group energy sourcing policy Erste Bank Croatia also changed to CO<sub>2</sub> free electricity saving 4,500 tons CO<sub>2</sub> per year. Moreover, the activity is moving to the new office that is called "Erste Campus" and is pre certified with DGNB gold - one of the highest standards available for office buildings. Energy savings are expected of approximately 30% but have to be verified in 2016 when the building is fully operated.

## Key findings CEE



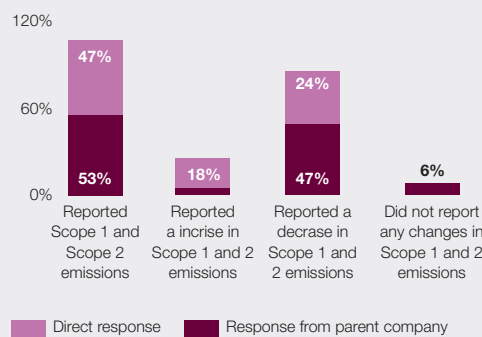
**IKEA Group in Poland set a target to produce as much renewable energy as is consumed by its stores, factories, offices, shopping malls and distribution centers in Poland and this target will be met in a couple of months thanks to energy from wind farms and biomass**



### Emissions: Scope 1 and Scope 2

All companies responding to CDP in 2015 reported their Scope 1 and Scope 2 emissions (See Figure 17). As much as 71% of them declared a decrease in their overall carbon impact as compared to previous year. This indicates that the number of companies reporting reduced emissions is increasing - in 2014 it amounted to 69%. Only one company did not report any changes in emissions level.

**Figure 17. Percentage of companies reported Scope 1 and Scope 2 emissions**



### The Greenhouse Gas Protocol

The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions.

This initiative arose when World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) recognized that an international standard for corporate GHG accounting and reporting would be necessary in light of evolving climate change policy. The GHG protocol allows companies to account for the GHG impact on their own operations and increase the profits and efficiency as a result. It helps businesses to identify the full impact of their activities and focus on areas of their value chain, where the potential of improvement is the greatest.

The GHG Protocol separates greenhouse gas emissions into three different categories:

**Scope 1:** Direct emissions arising directly from sources that are owned or controlled by the entity

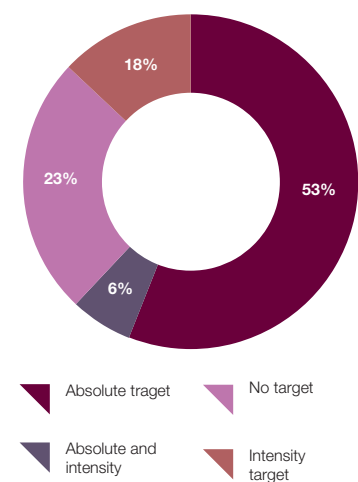
**Scope 2:** Indirect emissions generated by purchased electricity, heat or steam

**Scope 3:** Other indirect emissions that are a consequence of the activities of an organisation but occur from sources not owned or controlled by the organisation. This includes emissions associated with waste, water, business travel, commuting and procurement.

### Targets

In 2014 the percentage of companies setting emissions reduction targets amounted to 92%. This year 77% of 2015 CDP respondents specified such goals in their strategies. Most of the new direct respondents do not have emissions reduction targets in 2015.

**Figure 18. Percentage of companies with defined targets**

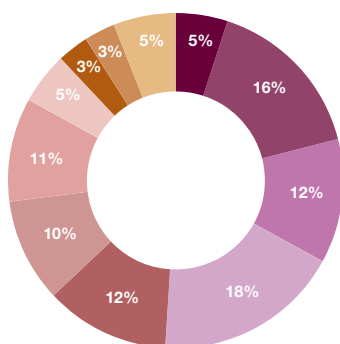


A company can include both absolute and intensity targets to minimize its carbon footprint. An absolute target indicates a percentage of emissions reduction which a company wants to achieve in the specified time period with regards to the base year. Every intensity target has its own unit and CO<sub>2</sub>e emissions reduction assigned to that unit, e.g. tCO<sub>2</sub>e per employee or hotel room or agency. Almost 60% of responding companies set an absolute target, but only 24% reported intensity goals.

Quickly developing and expanding companies may not be eager to set an absolute target, which they would not be able to achieve. Those which do so and additionally have a relative target can drive both total emission reduction and measure the efficiency of their operations. Leading companies should consider setting both absolute and intensity target in the future to benefit from their combined effect. Setting appropriate KPI in relation to intensity goals and ongoing monitoring and reporting it (also using CDP framework), could be an effective way to improve the results.

Within emissions reduction activities companies implement different methods to help them achieve the predefined goals. Budget dedicated for energy efficiency is the most common approach in driving investments decreasing the carbon impact and accounted for 18% of all reported methods. It is followed by compliance with regulatory requirements/ standards, which is applied by 16% of respondents (see Figure 19).

**Figure 19. Percentage of methods to drive investments in emissions reduction**



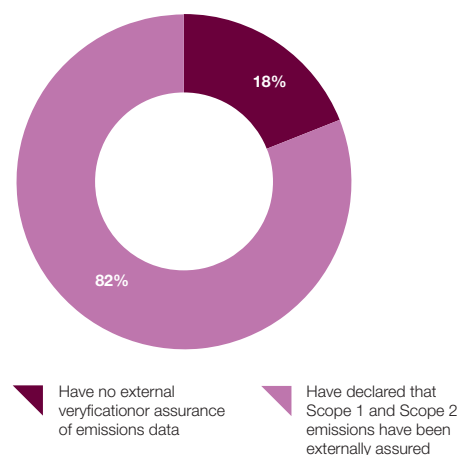
- Compliance with regulatory requirements/standards
- Employee engagement
- Dedicated budget for energy efficiency
- Internal incentives/recognition programs
- Financial optimization calculations
- Dedicated budget for low carbon product R&D
- Lower return of investment (ROI) specification
- Internal price of carbon
- Internal finance mechanisms
- Dedicated budget for other emission reduction activities
- Other

## Verification

A successful strategy implemented to tackle climate change risk should assure the credibility of reported data and it is usually the common practice of the leaders addressing this issue. 82% of surveyed companies indicated that reported Scope 1 and Scope 2 emissions data have been verified by third parties, while 18% of them did not receive any assurance.

Majority of the data reported is assured and similar positive trend is observed also in GRI reporting. While in 2013 only 9% of the GRI reports in CSE were seeking assurance, in 2014 the assurance seeking reports accounted for 24% of all the reports published in CSE. Increased verification should improve the reliability of the data and credibility among investors which will also broaden the usage of nonfinancial reporting.

**Figure 20. Percentage of companies with external verification of emissions data**



# Commit to Action: Unlocking corporate climate ambition

## 7 Climate Leadership Initiatives

CDP and the We Mean Business Coalition are offering companies a platform to act and be recognized for leadership on climate change. Top climate performers already report stronger financial performance and a better ability to manage the shifting dynamics of natural resources supply, customer demand and regulatory controls. This year, CDP is inviting companies to look beyond their disclosure and speak out on behalf of the business community in support of a universal climate agreement ahead of the UN Climate Change Conference in Paris in December.

More than 223 companies representing \$5+ trillion USD revenue have committed to one or more of the following climate initiatives:

- Commit to adopt science based emission reduction targets
- Commit to report climate change information in mainstream reports as fiduciary duty
- Commit to removing commodity-driven deforestation from all supply chains by 2020
- Commit to responsible corporate engagement in climate policy
- Committing to procure 100% of electricity from renewable sources
- Commit to put a price on carbon
- Commit to reduce of short-lived climate pollutant emissions

**223+**  
Companies representing more than \$5+ trillion USD revenue have committed to one or more climate initiative\*



## Key findings CEE

### Scope 3 emissions

**71% of questioned companies reported Scope 3 emissions in at least one area, when in 2014 91% disclosed such information. Use of sold products continued to be the source with highest level of reported emissions, but it is considered relevant by only 41% of respondents. The rest described it as irrelevant or have not evaluated such a category.**

According to responding companies the following categories of the sources of Scope 3 emissions were the most significant (reported by 50% or more companies):

- ▼ **Business travel**
- ▼ **Employee commuting**
- ▼ **Purchased goods and services**

Business travel is considered as the most significant source of Scope 3 emissions, whilst emissions reported in this area remain marginal. It is also the case for employee commuting, which share amounts to 0,3% of total and only 6 companies out of 17 surveyed prepared calculation in this field.

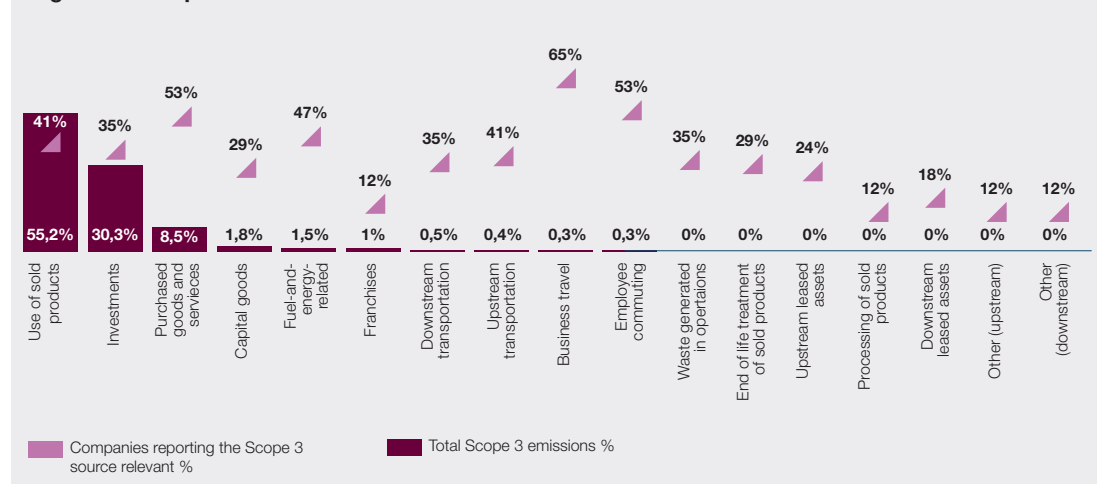
It is worth noting, that companies report only some of their Scope 3 emissions. Two of respondents decided to disclose in only 1 category out of 17 specified. If they are not able to calculate emissions, they usually mark some sources as: "Relevant, not yet calculated". And that gives only part of the picture of their overall carbon impact. CDP encourages companies to focus and calculate emissions for those categories that can be classified as relevant and material in their own business context. This is also reflected in the scoring.

Numerous further conclusions can be drawn from the analysis of the above information with several positive trends for sustainability and overall tackling climate change. One of the very positive environmental aspects is growing popularity of interactive teleconference and messaging systems extensively used by companies that significantly limit the amount of business traveling. Not only does it save time for the employees and boosts their efficiency but it also reduces the GHG emissions. Increased use of on-line communication also reduces the amount of employee commuting, allowing for flexibility of home office, not mentioning the paper waste.

Another sign of the growing potential of the sustainable economy is a strong interest of the lead business tenants in the office buildings certifications, like LEED or BREEAM. It has become a natural expectation and the buildings without the proper certifications assuring their ecological friendliness combined with economic efficiency are experiencing a substantial drop in demand even when offered at lowered rates.

The global economy has seen increasing interest in green ordering and sustainable supply chain management. Green public orders support innovative solutions and whole industries at the same time improving the quality of living. EcoBuy programme introduced by municipality of Vienna saves 30,000 tonnes of CO<sub>2</sub> emissions annually, which translates into approximately EUR 17 million of pure monetary savings, not taking into account positive effects observable from broader macroeconomic perspective. Sustainable supply chains implemented by large multinationals contribute to development of local economies, that would struggle to remain competitive based on purely financial criteria. This leads to better quality available to larger group in aim of building a better world for all.

**Figure 21. Scope 3 emissions**



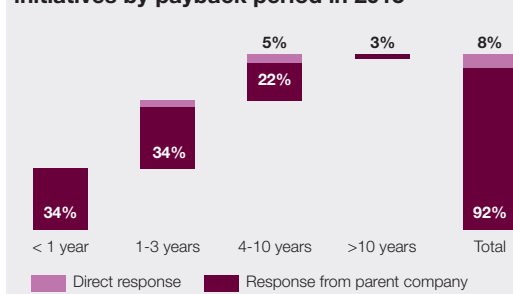
### Companies recognize accelerated positive results of implementing environmental activities

Milton Friedman used to say that “the business of business is business” which still remains a common belief when looking at the CEE economy. According to this view the investors and the management should focus only on the activities that generate value to the business and any other should be abandoned. However, in fact the climate change and its challenges has already become a business opportunity and this trend will strengthen in near future.

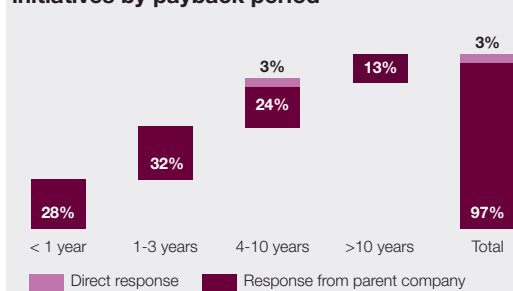
Investment in sustainability initiatives has been gradually implemented in the strategy and business plans also in CEE. Companies management boards have finally begun to identify value added being generated by the green initiatives and the payback period from this investment is expected to shorten. According to the 2015 responses received by CDP 68% of reported initiatives are believed to have payback period within three years which is less than most of standard investments. This brings 8pp increase comparing to the last year results. These short term returns of capital indicate that environmental initiatives could bring surprisingly fast results.

Year over year reported initiatives are getting shorter payback periods. Only 3% reported initiatives are considered as long term with the payback period exceeding 10 years. This is 10 percentage points less than the previous year.

**Figure 22. Percentage of companies reporting initiatives by payback period in 2015**

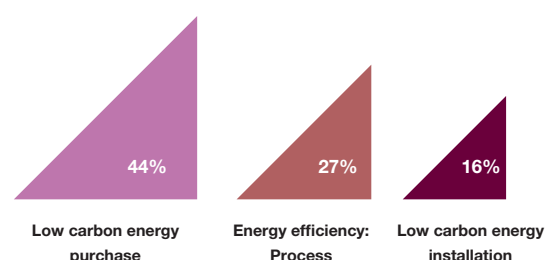


**Figure 23. Percentage of companies reporting initiatives by payback period**

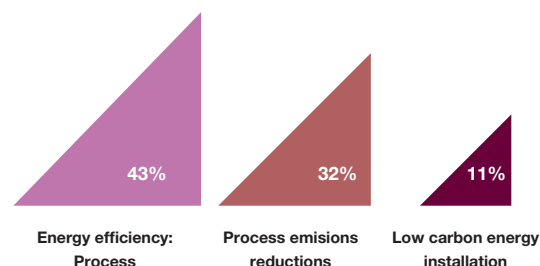


According to the survey companies believe that the highest results in CO<sub>2</sub>e annual savings can come from low carbon energy purchase (44%), then energy efficiency processes (27%) and low carbon energy installation (16%). These are 3 top factors that can influence annual CO<sub>2</sub>e savings. They have changed drastically comparing to the last year whereas almost 84% of respondents indicated low carbon energy purchase as main factor that can impact CO<sub>2</sub>e savings. Remaining 16 percent pointed out fugitive emissions reduction and energy efficiency processes, which are now main reason for the changes.

**Figure 24. Annual CO<sub>2</sub>e top 3 savings %**



**Figure 25. Annual monetary top 3 savings %**



When it comes to annual monetary savings almost half of the respondents think that it will come from energy efficiency process. Another part (32%) of respondents pointed out process emissions reductions and (11%) show low carbon energy installation as main factor that will impact annual monetary savings. Energy efficiency process is in the top 3 for both monetary savings and CO<sub>2</sub>e. Last year almost all respondents (98,9%) pointed out energy efficiency process. Comparing with the previous year that number decreased to 43%.

**All companies that provided the report to CDP are estimating in total that annual CO<sub>2</sub> savings will be almost 758 thousand of metric tonnes CO<sub>2</sub>e. What is more the annual monetary savings are estimated to EUR 20,254 thousand. They are going to achieve these numbers because of diverse emission reduction initiatives like investment in wind farms, increase of teleconference instead of travel, installed capacity of 20 MW, tree planting, community gardens or even purchase of hybrid electric cars.**

## City's perspective

### – interview with Krzysztof Matyjaszczyk

The City Mayor of Częstochowa



The cooperation of the local government with companies is the basis for the reduction of the emissions of greenhouse gases to the atmosphere. It is also an important part of the process of sustainable development of our municipality.

**Government of the City of Częstochowa is very active in the area of sustainable, low carbon economy implementing energy planning, energy efficiency and supporting deregulation of the energy market in Poland. Our strategic aim it to be part of the most advanced, climate friendly cities in Europe. The government of Częstochowa is leading among polish cities in sustainable energy management**

**Dear Mr President, what factors are in your opinion of key importance for the implementation of an effective strategy in the city?**

All local governments are responsible for the quality of life of their inhabitants. It is extremely important to shape the public space, care for its development as well as for the natural environment, which supports the social and economic growth. These issues are included in the strategic documents and operating plans of the municipalities. Such documents in the sphere of implementation of low-emission economy are: the Assumptions to the Supplies of Heat, Electricity and Gaseous Fuels, the Sustainable Energy Support Action Plan and the Low-Emission Economy Plans.

Shaping of local energy economy, where energy related, environmental and social issues are at balance, is very important in this process. Being aware of the energy and environmental related issues, the local government of Częstochowa has been developing this area since 2003 and recently had several successful achievements in this sphere both locally, and in regional, domestic and international scale.

The local government conduct its activities in consultation with the local community, implementing the 5xE rule (Education, Ecology, Energy, Effectiveness, Economy). The partnership based on cooperation with the administrators of the energy media that enables continual improvement of the energy security of Częstochowa and allows for conducting pro-environmental and cost-saving focused activities is also very important.

The activities in this sphere require proper staff to represent the interests of the municipality and the customers at modern cooperation platforms, such as: the Commission for Local Energy Policy at the Silesian Union of Municipalities and Districts, the Regional Energy Board of the Silesian Province, the Coalition for the Establishment of the National System of Sustainable Energy Management. Thanks to our active participation in such bodies, we can say that we have implemented the old principle: "nothing new without common consent". Only the activities

in all these fields, starting with appropriate strategies through collaboration, sharing with experiences and the involvement of the local community, gives the opportunity to properly and effectively shape and implement low-emission economy at the local government level.

It should be stressed that the local government of Częstochowa is the winner of numerous prizes, among other things including:

- The New Impulse – the prize awarded by the editor's office of the Nowy Przemysł (New Industry) monthly for the involvement in activities promoting energy-saving technologies, shaping of the energy efficiency awareness of the inhabitants and for pioneer activities on the energy market;
- The "Certificate of Victory" diploma for taking the third place in the 1st Season of the European Renewable Energy Sources Champions League in 2010 in the category of cities with more than 100,000 inhabitants;
- The diploma and the statuette for taking the 2nd place in the Polish Renewable Energy Sources Champions League in 2010 in the category of cities with more than 50,000 inhabitants;
- The honourable mention and the title of a "City with a Climate" in the "Municipality with a Climate" competition;
- The 1st place in the category of cities with district rights in the Self-government Management Leader 2012 competition – Technical services in the sphere of local energy economy;
- The honourable mention in the "City with Opportunities – City of Sustainable Development" competition for consistent and innovative activities aimed at the improvement of the energy efficiency;
- The honourable mention in the ECO-CITY competition for the environmental building policy.

**Do you believe that the companies operating in Częstochowa can support the city's efforts in the sphere of sustainable development and the reduction of the emissions of greenhouse gases?**



**The city is obliged to inspire and implement activities in the sphere of development of low-emission economy, especially in the face of the fact that the cities within the European Union consume circa 70% of the energy and are responsible for the emissions of circa 70% of greenhouse gases to the atmosphere**

**Krzysztof  
Matyjaszczyk  
The City Mayor  
of Częstochowa**



The cooperation of the local government with companies is the basis for the reduction of the emissions of greenhouse gases to the atmosphere. It is also an important part of the process of sustainable development of our municipality.

An important document regulating this sphere and specifying the obligations of all sectors of the economy will be the National Programme of Low-emission Economy Development, which is currently discussed.

In Częstochowa, the cooperation of the local government with the companies has already brought results, among other things in the sphere of: new connections to the district heating network, the construction of important elements of the power grid infrastructure and the development of the network supplying natural gas to the city. All these components together with ongoing modernisations carried out by the Operators of the Distribution Systems result in the improvement of the energy efficiency in the field of limitation of distribution and transmission losses, the improvement of the efficiency of the sources and savings in the consumption of fuels and energy by the end customers. The key example of the collaboration of the local government with a company is the new energy plant build by Fortum 5 years ago, which produces heat and electricity in cogeneration process.

The local government of Częstochowa is seeking different areas of cooperation with the entrepreneurs operating in our municipality. We have established the Board for Sustainable Development of Częstochowa at the Office of the President of the City of Częstochowa.

Resuming, it should be stressed that the current legal status, the competition among individual local governments and the intensity of the changes in the economic life “forces” municipalities to cooperate with

different companies especially with the energy ones in the sphere of shaping and implementation of low-emission economy.

#### **Do you think that the city is able to stimulate the development of low-emission economy?**

The city is obliged to inspire and implement activities in the sphere of development of low-emission economy, especially in the face of the fact that the cities within the European Union consume circa 70% of the energy and are responsible for the emissions of circa 70% of greenhouse gases to the atmosphere. An environmentally aware local government, such as Częstochowa, has appropriate guidelines for effective shaping of this area in its strategic documents. It also has staff responsible for local energy and environmental policies of the city. Acceding the Covenant of Mayors, Częstochowa committed to limit the emissions of CO<sub>2</sub> by 20% by 2020. In order to accomplish this goal, the active participation of all members of the local community is required. It is stimulated by educational activities for children and youth, such as Euronet 50/50 MAX, Drop to Drop or Municipal Smart Energy Days – addressing the inhabitants of our city of all ages, as well as conferences addressed to the representatives of the municipalities and the training courses for the administrators of public utility buildings.

All the above activities enable us to start shaping the attitudes of energy customers and fuel users responsible for the environment from an early age. They also guarantee proper implementation of low-emission economy at all levels: starting with households, through public utility facilities, to services and businesses.



## Company's perspective - interview with Manuel Villén Naranjo

Chief Innovation & Sustainability Officer of OHL



**OHL operates world-wide, what is Your experience with sustainability of the public sector. In other words which countries or maybe cities are the most sustainable and why?**

**Mr Manuel Villen Naranjo:** Presently, many countries are concerned about sustainability matters around the world. From the perspective of a concessions and construction group, the interest in sustainability is reflected in the public sector through new regulations or new requirements in project tenders. The specifications in regard to environmental management have increased and ever more administrations and clients are aimed at sustainable construction, for example, considering environmental certificates for projects such as LEED (Leadership in Energy & Environmental Design), BREEAM (Building Research Establishment Environmental Assessment Methodology) and others, or including more efficient technologies in the project design. In this way, OHL has obtained more than 100 certificates in environmental management worldwide and has developed several sustainable construction projects, with 22 LEED certificates and 7 LEED registers in USA, 5 LEED certificates in Spain and, also, a double certificate in LEED and GSAS (Global

Sustainability Assessment System) was requested for a project in Qatar.

In CEE countries, an example of sustainable and efficient technology requested in project specifications is the tunnel boring machine (TBM) used for Gdansk tunnel in Poland instead of other construction processes. This innovative technology applied by OHL is an environmentally friendly solution which has been rewarded, reducing waste, dust emissions and water consumption and obtaining good production performance levels with safe working conditions.

In addition, another related aspect that can be highlighted is the growing interest of the cities in initiatives and platforms about city resiliency or sustainability, such as the CDP Cities program.

**Do You think national and local governments can influence private sector and support companies in their sustainability efforts?**

**Mr Manuel Villen Naranjo:** Yes, the national and local governments are essential to promote sustainability efforts in the private sector and the way to a low carbon economy. Important example is the public-private partnership,





### Key elements within the sustainability strategy:

- **Assess and properly manage the environmental risks;**
- **Comply with the environmental regulations, contractual requirements and commitments voluntarily undertaken;**
- **Plan and develop the activities under the best environmental practices and applying the best feasible and available technologies;**
- **Increase training and raising awareness in employees, companies and society;**
- **Track and control environmental indicators at all activities;**
- **Establish targets for a continuous improvement, and**
- **Encourage a bidirectional and trustworthy communication with interested parties.**

**Manuel Villen Naranjo**  
**OHL**



the governments are able to stimulate various initiatives and best practices within the companies. Recent experiences of the OHL Group in public-private partnerships include:

- The Pro Climate Forum promoted by the Madrid City Council, which is aimed at fighting against atmospheric pollution through an exchange of experience, the dissemination of innovating actions and promoting new initiatives in the matter. Specifically, OHL has been able to move forward in the three lines of work shared with the Forum: procurement of sustainable forest products, energy efficiency and sustainable mobility.
- The Spanish Green Growth Group promoted by the Ministry of Environment (MAGRAMA), which intends to establish synergies between the Administration and business sector to encourage environmental preservation. The idea is to increase company participation, share information, locate opportunities and support presence in international forums. OHL has joined this initiative with another thirty Spanish companies.
- The Environmental Leadership for Competitiveness Program (PLAC) of the Mexican Federal Attorney for Environmental Protection (PROFEPA), which is intended to promote the organizations to take leadership of their partner companies in terms of eco-efficiency for a better management in the operations. OHL has achieved good results in its Mayakoba complex (OHL Developments) and has involved 20 companies to develop sustainable practices.

**OHL was invited to join the authorities in Spain and Mexico, what is the main expertise the public sector is looking for, and how private company can support local and national authorities?**

**Mr Manuel Villen Naranjo:** The environmental commitments for governments are growing and there is social pressure towards a global deal in climate change; many organizations demand a universal agreement during the next UN Climate Change Conference in Paris. In this context, some public actors want to convey to society about the vision of an economic growth model compatible with the efficient use of natural resources. Efficient use means working together to protect biodiversity, the quality of air, soil and water and, of course, to reduce greenhouse gas emissions linked to climate

change.

The authorities are looking for companies or private actors to support in the way to preserve the quality of environment through the efficient use of resources with their expertise, their best practices and their influence across the supply chain; because public-private partnerships will be essential in order to evolve to sustainable economies. There is a challenge for the companies and governments, the economies that lead the transformation will be the first to leverage the opportunities that green growth is already beginning to provide. The business sector has an enormous opportunity to position itself and to lead the change in the growth model.

**OHL has its sustainability strategy implemented for many years now. Could You explain more about its key elements?**

**Mr Manuel Villen Naranjo:** The sustainability has been integrated into the strategy since the approval of the OHL's Commitment on Environmental Sustainability in 1998, that is intended to provide the maximum satisfaction to the customers and to create value in sustainability conditions by attending the necessities and expectations of all representatives interested.

Presently, the OHL's CSR Master Plan establishes a framework where is included, among others, the OHL's Environment and Energy Master Plan (EEMP). The EEMP is the strategic management tool which integrates and coordinates the efforts of all operating divisions of the Group, ensuring the development of the environmental commitments in each activity. It applies to the entire OHL Group in all its locations. The different lines of action of the EEMP cover the management of significant environmental aspects, the environmental risks and business opportunities and the specific characteristics of the territories where the Group operates. For the period 2011 - 2015, the main areas considered are: the low-carbon economy, the water footprint and the conservation of ecosystems.

Moreover, the EEMP includes other projects to improve the environmental management such as the review of policies, commitments and internal rules or training efforts. In 2014 a significant effort was made in communication, sharing the expertise of OHL with stakeholders.

## Company's perspective - interview with Mikael Lemström

CEO Fortum Power and Heat Polska



### **1. Fortum is an international company with the long sustainability traditions. What is your approach to minimise the environmental impact?**

Fortum minimises its impact on environment and tackles environmental challenges through investments and projects directly related to our core business. Fortum operates worldwide and the company encountered a serious challenge of air pollution in cities – especially in the Central and Eastern Europe. It is a real problem for the residents that in long-term may have a negative impact on their health. Many cities in Poland, due to a big number of individual heat sources, such as stoves or small coal fired boilers affecting the air quality, face a serious challenge that could be solved with the experience and technology already used for example in Sweden.

### **2. Could you explain the solution used in Sweden and how could that be applied in the CEE region?**

As late as at the beginning of 1980's, Stockholm still coped with the problem of significant air pollution. Today the capital of Sweden is considered to be one of the greenest cities in the old continent. Comparing to 1980, carbon dioxide emission level dropped in this city by

60 percent, nitrogen oxides by 80 percent and sulphur dioxide by 95 percent. The volume of CO<sub>2</sub> emissions is 4 tons per resident per year, while in the US or Australia this ratio on average reaches 20 tons per resident.

The CHP plants supplying heat to Stockholm are fired with the fuel mix consisting i.a. with biomass and waste. Such strategy mitigates business risks related to the price fluctuation of raw materials and supports better waste management. Stockholm stores at landfills only 1% of its waste while in Poland this ratio reaches as much as 75%.

In 2010, Fortum commissioned in Częstochowa one of the most modern combined heat and power plants fired with coal and biomass in this part of Europe. The share of the latter fuel in the generation of energy is being gradually increased. Initially, it was 25% and now it is 35%. Fortum also decided to invest in a new CHP plant in Zabrze, which will be fired most of all with coal and RDF (Refuse Derived Fuel) with the possibility of combustion of biomass and a mix of these three fuels. The quantity of RDF can reach up to 50% of the total fuel. Our CHP plant will provide secure and green district heat for nearly 70 thousand households in Zabrze and Bytom. This in turn will significantly contribute to the quality of air and have positive impact on waste management. In both cases, the attitude of



**The positive attitude of local authorities to companies and their investments as well as the collaboration at the planning and implementation stages are of key importance**

**Mikael Lemström  
Fortum**



local authorities to this type of investments and their collaboration at the planning and implementation stages are of key importance.

### **3. Do you think national and local governments can influence private sector and support companies in their sustainability efforts?**

Yes, of course. Local governments face major challenges and have a crucial influence on the quality of life in the city. When looking at the problem of air quality in Poland, we see two parallel initiatives that should be implemented: the first is educating the community and the second - assuming a strategic approach on the national level.

Without resolute steps both on the national and local levels, it will not be possible to quickly change the quality of air in Polish cities. The opportunities for local communities lay both in the education in potential hazards associated with individual heat sources and the use of the lowest quality of fuel in them, as well as in consistent expansion of district heating systems supplied by local CHP plants.

The most effective and environmentally friendly method of district heat production is its generation at CHP plants fired with locally available fuels. In order to enable the development of CHP plants in Poland, it is necessary to develop on central level a long-term high-efficiency co-generation (i.e.: generation of heat and electricity in a single technological process) support scheme. It will allow companies to invest in new heat and electricity sources and to cover increasing energy demand of Polish cities. (A good example of such investment is our new CHP plant in Zabrze, which will be commissioned in 2018).

The example of Stockholm clearly shows that gradual improvement of the quality of city air is possible. Thanks to comprehensive activities carried out both on central and local levels, within 30 years, it was possible to make the city become one of the greenest capitals in Europe. Such situation was achieved mainly thanks to the dynamic growth of the district heating network providing reliable, secure and green heating to the residents. In Poland the adoption of the anti-smog law is the first step to enable the local government to effectively combat air pollution and it will result in the improvement of the air quality in Polish cities.

### **4. Do you experience behavioral change among communities that you are operating in?**

The quality of air has become an important issue for the residents of Polish cities. It is visible that Poles more and more often select district heat than previously. It is reflected by the numbers: in 2014, Fortum signed nearly 30 percent more agreements for connection to the

district heating network in Poland than in the previous year. Moreover, nearly half of them were concluded with customers who used to have their own heat sources or had such sources already designed, but decided to use district heat instead. In 2015, we plan to spend the total amount of 180 million zlotys on investments. Nearly 27 million zlotys from the above amount will be designated for the expansion of the district heating networks and the connection of new customers. We have also started the construction of a multi-fuel CHP plant in Zabrze. The total value of the investment is going to reach 870 million zlotys. We are also continuously maintaining and modernising our existing portfolio. For example, we are going to carry out a 12 million zlotys worth modernisation of one of the boilers in Bytom. We believe that communities and local governments are much more conscious about the impact of the air quality to humans life and that Fortum has real, solutions to this challenge, based on experience.

## **Fortum**

Fortum is the owner of district heating systems in Wrocław, Częstochowa and Plock, and CHP Plants in Zabrze, Bytom and Częstochowa.

In 2014, the company invested more than 44 million zlotys in Poland.

Fortum distributes heat to the residents via a continually modernised and expanded district heating network with total length exceeding 800 km

Fortum proactively contributes to the improvement of air quality. In 2014, the company signed 160 connection agreements for a total capacity of 74 MW. In case of small coal fired sources with installed capacity of about 0.5 MW, the connection to the district heating networks means the reduction of carbon dioxide emissions by about 8,000 kg/year, dust by 2,500 kg/year, sulphur oxides by 40 kg/year, benzo(a)pyrene by 2.7 kg/year and soot by 63 kg/year.

**The case for corporate action on climate change has never been stronger and better understood. With the scientific evidence of manmade climate change becoming ever more incontrovertible, leading companies and their investors increasingly recognize the strategic opportunity presented by the transition to a low-carbon global economy.**

Global	2010	2015
Analyzed responses	1,799	1997
Market cap of analyzed companies \$m*	25,179,776	35,697,470
Scope 1	5,471,135,029	5,382,729,269
Scope 2	1,028,216,410	1,129,285,204
Scope 1 like for like: 1306 companies	4,135,221,637	4,425,037,242
Scope 2 like for like: 1306 companies	796,039,173	887,110,745

\* Market capitalization figures from Bloomberg at 1 January 2010 and 1 January 2015.

And they are acting to seize this opportunity. The latest data from companies that this year took part in CDP's climate change program – as requested by 822 institutional investors, managing US\$95 trillion in assets – provide evidence that reporting companies are taking action and making investments to position themselves for this transition.

Growing momentum from the corporate world is coinciding with growing political momentum. Later this year, the world's governments will meet in Paris to forge a new international climate agreement. Whatever the contours of that agreement, business will be central to implementing the necessary transition to a low-carbon global economy.

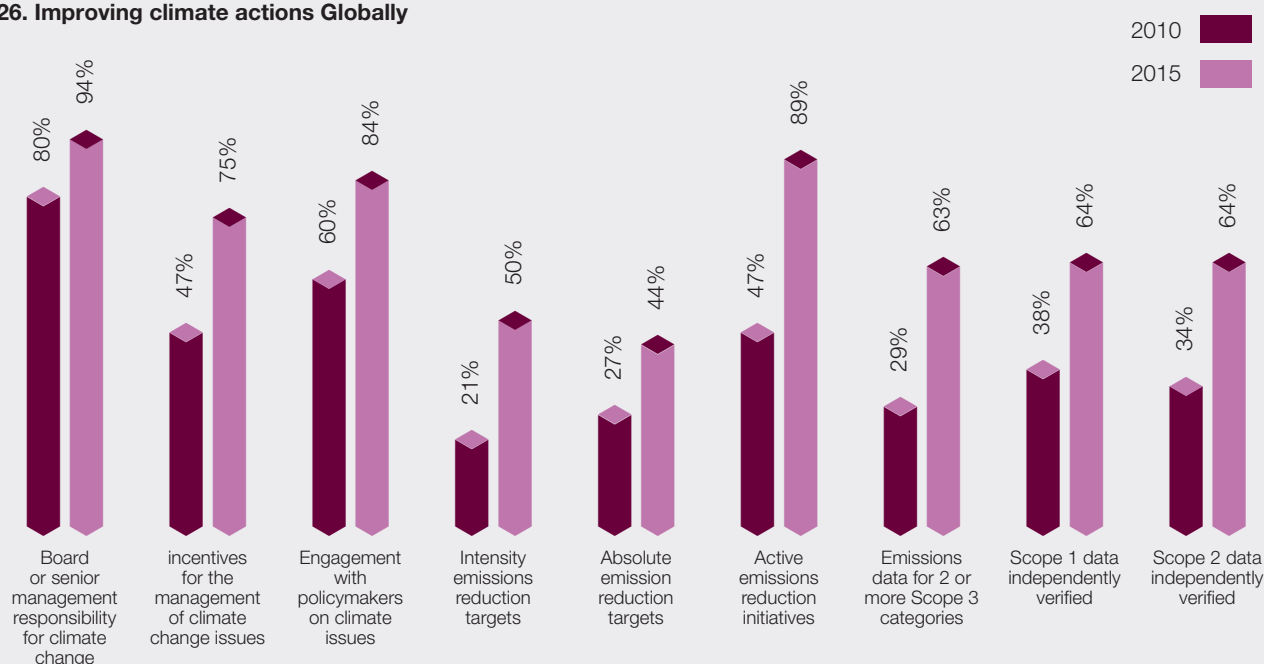
Business is already stepping up. The United Nations Environment Programme estimates that existing collaborative emissions reduction initiatives involving companies, cities and regions are on course to deliver the equivalent of 3 gigatons of carbon dioxide reductions by 2020. That's more than a third of the 'emissions gap' between existing government targets for that year and greenhouse gas emissions levels consistent with avoiding dangerous climate change.

Those investors who understand the need to decarbonize the global economy are watching particularly closely for evidence that the companies in which they invest are positioned to transition away from fossil fuel dependency.

By requesting that companies disclose through CDP, these investors have helped create the world's most comprehensive corporate environmental dataset. This data helps guide businesses, investors and governments to make better-informed decisions to address climate challenges.

This report offers a global analysis of the current state of the corporate response to climate change. For

**Figure 26. Improving climate actions Globally**






**We are targeting the full operational emissions for the organisation, including electricity, natural gas, diesel and refrigerant gases used in operational buildings and fleets.**

**J Sainsbury Plc**


**CDP has changed the way investors are able to understand the impact of climate change in their portfolio... promoting awareness of what risks or benefits are embedded into investments.**

**Anna Kearney**  
**BNY Mellon**

the first time, CDP compares the existing landscape to when the world was last on the verge of a major climate agreement. By comparing data disclosed in 2015 with the information provided in 2010, this report tracks what companies were doing in 2009, ahead of the ill-fated Copenhagen climate talks at the end of that year.

The findings show considerable progress: with corporate and investor engagement with the climate issue; in leading companies' management of climate risk; and evidence that corporate action is proving effective. However, the data also shows that much more needs to be done if we are to avoid dangerous climate change.

#### **Growing corporate engagement on climate change...**

For the purposes of this 2015 report and analysis, we focused on responses from 1,997 companies, primarily selected by market capitalization through regional stock indexes and listings, to compare with the equivalent 1,799 companies that submitted data in 2010. These companies, from 51 countries around the world, represent 55% of the market capitalization of listed companies globally.

The data shows significant improvements in corporate management of climate change. What was leading behavior in 2010 is now standard practice. For example, governance is improving, with a higher percentage of companies allocating responsibility for climate issues to the board or to senior management (from 80% to 94% of respondents). And more companies are incentivizing employees through financial and non-financial means to manage climate issues (47% to 75%).

Importantly, the percentage of companies setting targets to reduce emissions has also grown strongly. Forty four per cent now set goals to reduce their total greenhouse gas emissions, up from just 27%

in 2010. Even more – 50% - have goals to reduce emissions per unit of output, up from 20% in 2010.

Companies are responding to the ever-more compelling evidence that manmade greenhouse gas emissions are warming the atmosphere. This helps build the business case for monitoring, measuring and disclosing around climate change issues. But greater corporate engagement with climate change is at least partly down to influence from increasingly concerned investors.

#### **... Amid growing investor concern**

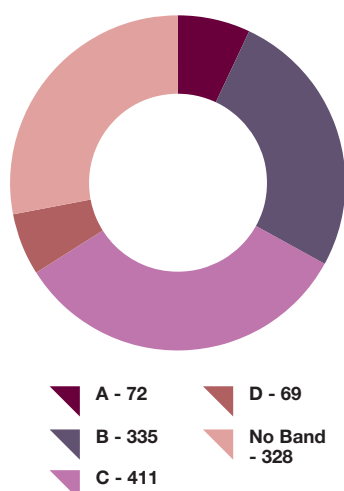
Since 2010, there has been a 54% rise in the number of institutional investors, from 534 to 822, requesting disclosure of climate change, energy and emissions data through CDP.

Investors are also broadening the means by which they are encouraging corporate action on emissions. In recent years, they have launched several other initiatives.

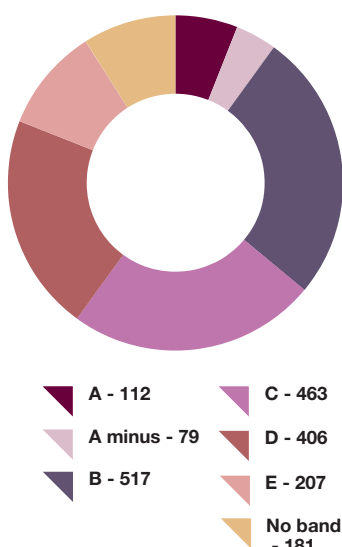
For example, a number of institutional investors have come together in the 'Aiming for A' coalition, to call on specific major emitters to demonstrate good strategic carbon management by attaining (and maintaining) inclusion in CDP's Climate A List. The A List recognizes companies that are leading in their actions to reduce emissions and mitigate climate change in the past CDP reporting year. In 2015, following a period of engagement with the companies, the coalition was successful in passing shareholder resolutions calling for improved climate disclosure at the annual meetings of BP, Shell and Statoil, with nearly 100% of the votes in each case.

Investors are also applying principles of transparency and exposure to themselves. More than 60 institutional investors have signed the Montréal Carbon Pledge, under which they commit to measure and publicly disclose the carbon footprint of

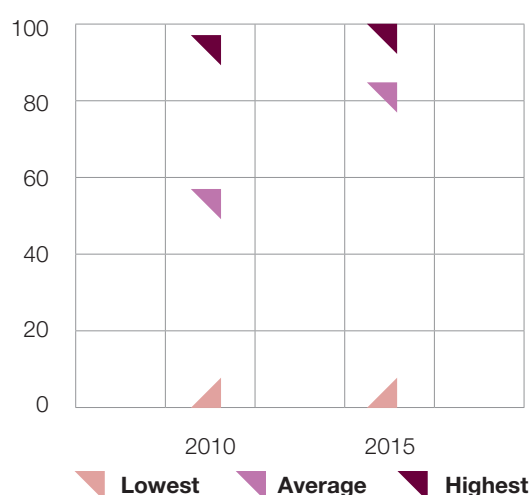
**Figure 27. 2010 performance bands globally\***



**Figure 28. 2015 performance bands globally**



**Figure 29. Disclosure scores over time Globally**



\* in 2010 not all companies were scored for performance





**We have a public commitment to meet 100% of electricity requirements through renewables by fiscal 2018 and we will be investing in about 200 MW of solar PV plants.**

**Infosys**



**Google uses carbon prices as part of our risk assessment model. For example, the risk assessment at individual data centers also includes using a shadow price for carbon to estimate expected future energy costs.**

**Google**



their investment portfolios on an annual basis. It aims to attract commitment from portfolios totaling US\$3 trillion in time for the Paris climate talks.

Investors are seeking to better understand the link between lower carbon emissions and financial performance, including through the use of innovative investor products such as CDP's sector research, launched this year, which directly links environmental impacts to the bottom line. Some investors are taking the next logical step, and are working to shrink their carbon footprints via the Portfolio Decarbonization Coalition (PDC). As of August, the PDC – of which CDP is one the founding members – was overseeing the decarbonization of US\$50 billion of assets under management by its 14 members.

#### **Leading to effective corporate action**

Companies are responding to these signals. In total, companies disclosed 8,341 projects or initiatives to reduce emissions in 2015, up from 7,285 in 2011 (the year for which the data allows for the most accurate comparison). The three most frequently undertaken types of project are: improving energy efficiency in buildings and processes; installing or building low carbon energy generators; and changing behavior, such as introducing cycle to work schemes, recycling programs and shared transport.

More than a third (36%) of reporting companies have switched to renewable energy to reduce their emissions. These 550 companies represent an increase of 6% since 2011. On average, the companies that purchased renewable energy in 2015 have doubled the number of activities they have in place to reduce their emissions, showing their growing understanding or capacity to realize the benefits of lower carbon business. Further, 71% (1,425) of respondents are employing energy efficiency measures to cut their emissions, compared with 62% (1,185) in 2011, demonstrating that companies are committed to reducing wasted energy wherever possible.

Companies are also quietly preparing for a world with constraints – and a price – on carbon emissions. In the past year particularly, we have seen a significant jump in the number of companies attributing a cost to each ton of carbon dioxide they emit, to help guide their investment decisions. This year 435<sup>2</sup> companies disclosed using an internal price on carbon, a near tripling of the 150 companies in 2014. Meanwhile, an additional 582 companies say they expect to be using an internal price on carbon in the next two years.

However, these efforts have not proved sufficient to adequately constrain emissions growth. On a like-for-like basis, direct ('Scope 1') emissions from the companies analyzed for this report grew 7.1% between 2010 and 2015. Scope 2 emissions, associated with purchased electricity, grew 11.4%. These increases, while disappointing, are considerably lower than the growth of the companies involved: the total market capitalization of the sample grew by 67% over the same period. The rise in emissions is

also considerably lower than would have been the case without the investments made by responding companies in emissions reduction activities.

#### **Good progress – but it needs to accelerate**

Companies disclosing through CDP's climate change program have made substantial progress in understanding, managing and beginning to reduce their climate change impacts. However, if dangerous climate change is to be avoided, emissions need to fall significantly.

Governments have committed to hold global warming to less than 2°C above pre-industrial levels. The Intergovernmental Panel on Climate Change calculates that to do this, global emissions need to fall between 41% and 72% by 2050. Although more companies are setting emissions targets, few of them are in line with this goal. In most cases, targets are neither deep enough nor sufficiently long term.

More than half (51%) of absolute emissions targets adopted by the reporting sample extend only to 2014 or 2015. One third (32%) run to 2020 but only 6% extend beyond that date. The figures for intensity targets are almost identical. This caution in target setting is likely the result of the uncertain policy environment: many companies will be awaiting the outcome of the Paris climate talks before committing to longer-term targets.

However, a number of big emitters – such as utilities Iberdrola, Enel and NRG – have established long-term, ambitious emissions targets that are in line with climate science. These companies recognize that there is a business case for taking on such targets and setting a clear strategic direction, including encouraging innovation, identifying new markets and building long-term resilience. Many other companies have pledged to do so through the We Mean Business 'Commit to Action' initiative.

CDP aims to work along a number of fronts to help other companies, especially in high-emitting sectors, join them. With its partners, CDP has developed a sector-based approach to help companies set climate science-based emissions reduction targets. The Science Based Targets initiative uses the 2°C scenario developed by the International Energy Agency.

Looking forward, CDP will encourage more ambitious target setting through our performance scoring, by giving particular recognition to science-based targets. We are planning gradual changes to our scoring methodology that will reward companies that are transitioning towards renewable energy sources at pace and scale.

In addition, CDP is working with high-emitting industries to develop sector-specific climate change questionnaires and scoring methodologies, to ensure that disclosure to CDP, and the actions required to show leading performance, are appropriate for each sector. In 2015, we piloted a sector-specific climate change questionnaire and scoring methodology

The numbers for companies using or planning to implement internal carbon pricing are based on the sample analyzed for Putting a price on risk: Carbon pricing in the corporate world. Of the 1,997 companies analyzed in this report 315 have disclosed that they set an internal carbon price, with 263 planning to do so. For more detail, see <https://www.cdp.net/CDPResults/carbon-pricing-in-the-corporate-world.pdf>



**The climate negotiations in Paris at the end of the year present a unique opportunity for countries around the world to commit to a prosperous, low carbon future. The more ambitious the effort, the higher the rewards will be. But Paris is a milestone on the road to a better climate, not the grand finale.**

Unilever



privately with selected oil and gas companies, ahead of their intended implementation in 2016.

#### **And business needs a seat at the table in Paris**

The Paris climate agreement will, we hope, provide vital encouragement to what is a multi-decade effort to bring greenhouse gas emissions under control. It will hopefully give private sector emitters the confidence to set longer-term emissions targets aligned with climate change. Companies and their investors therefore will be, alongside national governments, arguably the most important participants in ensuring the success of the global effort to rein in emissions.

Companies that have an opinion on a global climate deal are overwhelmingly in support: when asked if their board of directors would support a global climate change agreement to limit warming to below 2°C, 805 companies said yes, while 111 said no. However, a large number of respondents (1,075) stated they have no opinion, and 331 did not answer the question. This suggests either a lack of clarity

around the official board position on the issue, or that many companies are not treating the imminent climate talks with the necessary strategic priority.

#### **Conclusion**

The direction of travel is clear: the world will need to rapidly reduce emissions to prevent the worst effects of climate change. And the political will is building to undertake those reductions. The majority of those reductions will need to be delivered by the corporate world – creating both risk and opportunity.

CDP and the investors we work with have played a formative role in building awareness of these risks and opportunities. Our data has helped build the business case for emissions reduction and inform investment decisions. The corporate world is responding, with thousands of emissions reduction initiatives and projects. But the data also shows that efforts will need to be redoubled, by both companies and their investors, if we are to successfully confront the challenge of climate change in the years to come.

## A deeper dive into corporate environmental risk

Central to CDP's mission is communicating the progress companies have made in addressing climate change, and highlighting where risk may be unmanaged. To better do so, CDP has introduced sector-specific research for investors.

This forward-looking research links environmental impacts directly to the bottom line and directs investors as to how they can engage with companies to improve environmental performance.

The research flags topical environmental and regulatory issues within particular sectors, relevant to specific companies' financial performance and valuation, and designed for incorporation into investment decisions. Sectors covered to date include automotive, electric utilities and chemicals. The research is intended to support engagement with companies, providing actionable company-level conclusions.

To better equip investors in understanding carbon and climate risk, CDP is also developing further investor tools such as a carbon footprinting methodology, and is working continuously to improve the quality of our data.

## Working towards water stewardship

CDP has this year introduced the first evaluation and ranking of corporate water management, using scoring carried out by our lead water-scoring partner, South Pole Group.

The questions in the water disclosure process guide companies to comprehensively assess the direct and indirect impacts that their business has on water resources, and their vulnerability to water availability and quality.

Introducing credible scoring will catalyze further action. It will illuminate where companies can improve the quality of the information they report, and their water management performance. Participants will benefit from peer benchmarking and the sharing of best practice.

Water scoring will follow a banded approach, with scores made public for those companies reaching the top 'leadership' band. Scoring will raise the visibility of water as a strategic issue within companies and increase transparency on the efforts they are making to manage water more effectively.

Furthermore, scoring will be used to inform business strategies, build supply chain resilience and secure competitive advantage. We hope that keeping score on companies and water will reduce the detrimental impacts that the commercial world has on water resources, ensuring a better future for all.

### Each year companies that participate in CDP's climate change program are scored against two parallel assessment schemes: performance and disclosure.

The performance score assesses the level of action, as reported by the company, on climate change mitigation, adaptation and transparency. Its intent is to highlight positive climate action as demonstrated by a company's CDP response. A high performance score signals that a company is measuring, verifying and managing its carbon footprint, for example by setting and meeting carbon reduction targets and implementing programs to reduce emissions in both its direct operations and supply chain.

The disclosure score assesses the completeness and quality of a company's response. Its purpose is to provide a summary of the extent to which companies have answered CDP's questions in a structured format. A high disclosure score signals that a company provided comprehensive information about the measurement and management of its

carbon footprint, its climate change strategy and risk management processes and outcomes.

The highest scoring companies for performance and/or disclosure enter the A List (Performance band A) and / or the Climate Disclosure Leadership Index (CDLI). Public scores are available in CDP reports, through Bloomberg terminals, Google Finance and Deutsche Boerse's website.

In 2015 the climate change scoring methodology was revised to put more emphasis on action and as a result achieving A is now better aligned with what the current climate change scenario requires.

CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at <https://www.cdp.net/Documents/Guidance/2015/CDP-conflict-of-interest-policy.pdf>

#### What are the A List and CDLI criteria?

##### To enter the A List, a company must:

- ▼ Make its response public and submit via CDP's Online Response System
- ▼ Attain a performance score greater than 85
- ▼ Score maximum performance points on question 12.1a (absolute emissions performance) for GHG reductions due to emission reduction actions over the past year 4% or above in 2015)
- ▼ Disclose gross global Scope 1 and Scope 2 figures
- ▼ Score maximum performance points for verification of Scope 1 and Scope 2 emissions (having 70% or more of their emissions verified)
- ▼ Furthermore, CDP reserves the right to exclude any company from the A List if there is anything in its response or other publicly available information that calls into question its suitability for inclusion. CDP is working with RepRisk in 2015 to strengthen this background research.

*Note: Companies that achieve a performance score high enough to warrant inclusion in the A List, but do not meet all of the other A List requirements are classed as Performance Band A- but are not included in the A List.*

##### To enter the CDLI, a company must:

- ▼ Make its response public and submit via CDP's Online Response System
- ▼ Achieve a disclosure score within the top 10% of the total regional sample population\*

\*Note: while it is usually 10%, in some regions the CDLI cut-off may be based on another criteria, please see local reports for confirmation.

#### Communicating progress

Central to CDP's mission is communicating the progress companies have made in addressing climate change, and highlighting where risk may be unmanaged. To better do so, CDP is changing how our climate performance scoring is presented, and we have introduced sector-specific research for investors.

#### Banding performance scores

Starting with water and forests in 2015 and including climate change and supply chain in 2016, CDP is moving to present scores using an approach that illustrates companies' progress towards environmental stewardship. Each reporting company will be placed in one of the following bands:

- ▼ **Disclosure** measures the completeness of the company's response;
- ▼ **Awareness** measures the extent to which the company has assessed environmental issues, risks and impacts in relation to its business;
- ▼ **Management** measures the extent to which the company has implemented actions, policies and strategies to address environmental issues;
- ▼ **Leadership** looks for particular steps a company has taken which represent best practice in the field of environmental management.

We believe that this approach will be clearer and easier to understand for companies, investors and other stakeholders. Water and forest scores will use this new presentation of banded scores in 2015, while the updated scoring methodology for climate change will be available in February 2016 with results in late 2016.

# The Climate A List 2015



Company	Country
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## Consumer Discretionary

Best Buy Co., Inc.	USA
BMW AG	Germany
Coway Co Ltd	South Korea
Fiat Chrysler Automobiles NV	Italy
Las Vegas Sands Corporation	USA
LG Electronics	South Korea
Melia Hotels International SA	Spain
NH Hotel Group	Spain
Nissan Motor Co., Ltd.	Japan
Sky UK Limited	United Kingdom
Sony Corporation	Japan
Wyndham Worldwide Corporation	USA
YOOX SpA	Italy

## Consumer Staples

Asahi Group Holdings, Ltd.	Japan
Brown-Forman Corporation	USA
Diageo Plc	United Kingdom
J Sainsbury Plc	United Kingdom
Kesko Corporation	Finland
L'Oréal	France
Nestlé	Switzerland
Philip Morris International	USA
SABMiller	United Kingdom
Suntory Beverage & Food	Japan
Unilever plc	United Kingdom

## Energy

Galp Energia SGPS SA	Portugal
PTT Exploration & Production Public Company Limited	Thailand

## Financials

Company	Country
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Bank of America	USA
BNY Mellon	USA
CaixaBank	Spain
Citigroup Inc.	USA
Credit Suisse	Switzerland
Dexus Property Group	Australia
Foncière des Régions	France
Grupo Financiero Banorte SAB de CV	Mexico
Host Hotels & Resorts, Inc.	USA
ING Group	Netherlands
Intesa Sanpaolo S.p.A	Italy
Investa Office Fund	Australia
Investec Limited	South Africa
Kiwi Property Group	New Zealand
Macerich Co.	USA
MAPFRE	Spain
Nedbank Limited	South Africa
Principal Financial Group, Inc.	USA
Raiffeisen Bank International AG	Austria
Shinhan Financial Group	South Korea
Simon Property Group	USA
Standard Chartered	United Kingdom
State Street Corporation	USA
T.GARANTİ BANKASI A.Ş.	Turkey
The Hartford Financial Services Group, Inc.	USA

## Health Care

Roche Holding AG	Switzerland
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## Industrials

Abengoa	Spain
Carillion	United Kingdom
CNH Industrial NV	United Kingdom

Company	Country
CSX Corporation	USA
Dai Nippon Printing Co., Ltd.	Japan
Deutsche Bahn AG*	Germany
Deutsche Post AG	Germany
FERROVIAL	Spain
Huber + Suhner AG	Switzerland
Hyundai E&C	South Korea
Kingspan Group PLC	Ireland
Kone Oyj	Finland
Obrascon Huarte Lain (OHL)	Spain
Pitney Bowes Inc.	USA
Raytheon Company	USA
Royal BAM Group nv	Netherlands
Royal Philips	Netherlands
Samsung C&T	South Korea
Samsung Engineering	South Korea
Schneider Electric	France
Senior Plc	United Kingdom
Shimizu Corporation	Japan
Siemens AG	Germany
Stanley Black & Decker, Inc.	USA
United Technologies Corporation	USA

## Information Technology

Accenture	Ireland
Adobe Systems, Inc.	USA
Alcatel - Lucent	France
Apple Inc.	USA
Atos SE	France
Autodesk, Inc.	USA
Cisco Systems, Inc.	USA
EMC Corporation	USA
Google Inc.	USA

\*Deutsche Bahn responded through Mittelstand program and is not included in analysis

\*Harmony Gold Mining is not part of analysis sample

Company	Country
Hewlett-Packard	USA
Hitachi, Ltd.	Japan
Juniper Networks, Inc.	USA
LG Innotek	South Korea
Microsoft Corporation	USA
Samsung Electro-Mechanics Co., Ltd.	South Korea
Samsung Electronics	South Korea

## Materials

BillerudKorsnäs	Sweden
Givaudan SA	Switzerland
Harmony Gold Mining Co Ltd*	South Africa
International Flavors & Fragrances Inc.	USA
Kumba Iron Ore	South Africa
Sealed Air Corp.	USA
Symrise AG	Germany
The Mosaic Company	USA

## Telecommunication Services

Belgacom	Belgium
KT Corporation	South Korea
LG Uplus	South Korea
Sprint Corporation	USA
Swisscom	Switzerland
Telefonica	Spain
Telenor Group	Norway

## Utilities

ACCIONA S.A.	Spain
E.ON SE	Germany
EDP - Energias de Portugal S.A.	Portugal
Entergy Corporation	USA
Iberdrola SA	Spain



## Appendix 1

### Investor signatories and members

Figure 30. Investor signatories by location

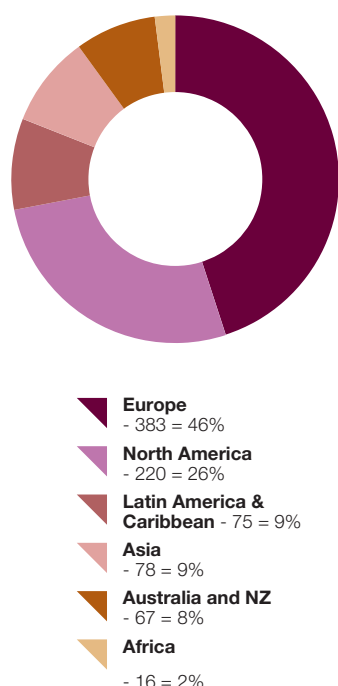
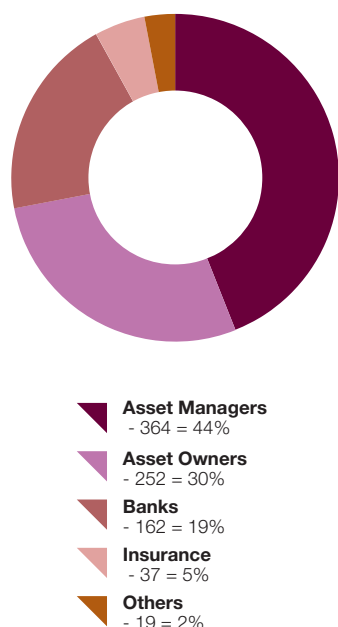


Figure 31. Investor signatories by type



**CDP investor initiatives – backed in 2015 by more than 822 institutional investors representing in excess of US\$95 trillion in assets – give investors access to a global source of year-on-year information that supports long-term objective analysis.**

This includes evidence and insight into companies' greenhouse gas emissions, water usage and strategies for managing climate change, water and deforestation risks. Investor members have additional access to data tools and analysis.

**to become a member visit:**

<https://www.cdp.net/en-US/Programmes/Pages/what-is-membership.aspx>

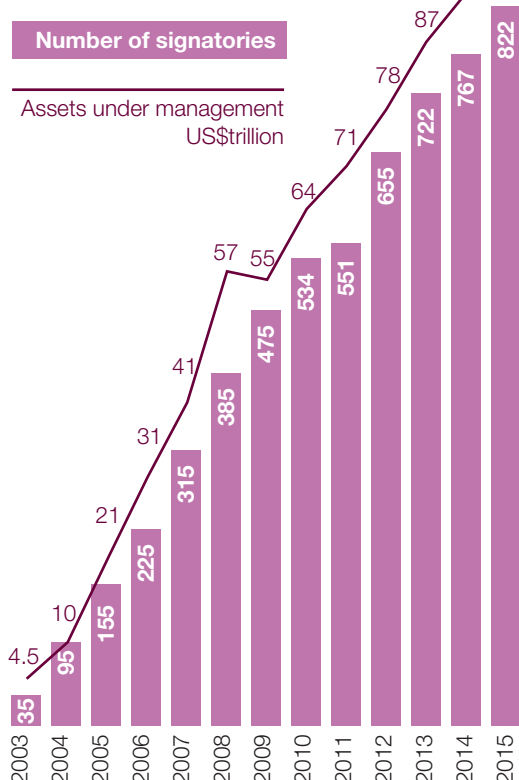
**To view the full list of investor signatories please visit:**

<https://www.cdp.net/en-US/Programmes/Pages/Sig-Investor-List.aspx>

### Investor members

ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar  
AEGON N.V.  
Allianz Global Investors  
ATP Group  
Aviva Investors  
AXA Group  
Bank of America Merrill Lynch  
Bendigo & Adelaide Bank Limited  
BlackRock  
Boston Common Asset Management, LLC  
BP Investment Management Limited  
California Public Employees' Retirement System  
California State Teachers' Retirement System  
Calvert Investment Management, Inc.  
Capricorn Investment Group, LLC  
Catholic Super  
CCLA Investment Management Ltd  
ClearBridge Investments  
DEXUS Property Group  
Etica Sgr  
Fachesf  
FAPES  
Fundação Itaú Unibanco  
Generation Investment Management  
Goldman Sachs Asset Management  
Henderson Global Investors  
HSBC Holdings plc  
Infraprev  
KLP  
Legg Mason Global Asset Management  
London Pensions Fund Authority  
Maine Public Employees Retirement System  
Mobimo Holding AG  
Morgan Stanley  
National Australia Bank Limited  
NEI Investments  
Neuberger Berman  
New York State Common Retirement Fund  
Nordea Investment Management  
Norges Bank Investment Management  
Overlook Investments Limited  
PFA Pension  
Previ  
Real Grandeza  
Robeco  
RobecoSAM AG  
Rockefeller Asset Management, Sustainability & Impact Investing Group  
Royal Bank of Canada  
Royal Bank of Scotland Group  
Sampension KP Livsforsikring A/S  
Schroders  
SEB AB  
Sompo Japan Nipponkoa Holdings, Inc  
Standard Chartered  
Sustainable Insight Capital Management  
TD Asset Management  
Terra Alpha Investments LLC  
The Wellcome Trust

Figure 32. Investor signatories over time



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