

Climate Change Resilience in Europe

A Snapshot of the Private Sector

March 2014



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Report prepared by



About CDP

CDP is an international, not-for-profit organization headquartered in the European Union, and providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information.

We work with market forces to motivate European companies to disclose their impacts on the environment and natural resources and take action to reduce them. CDP now holds the largest collection globally of primary climate change, water and forest-risk information and puts these insights at the heart of strategic business, investment and policy decisions.



Introduction



Adaptation is not only a story of risk management, but also of opportunity. Companies that act today may gain competitive advantage tomorrow.



Greenhouse gases already released into the atmosphere will, no matter what reductions in emissions occur in the coming years, make at least some level of climate change inevitable. This change is already beginning to be manifested as weather conditions become more variable and a range of physical impacts, like droughts and severe storms, occur with greater frequency and severity. Many of the essential conditions on which businesses rely are changing, leading to increasing prices, as well as shortfalls in the quality and supply of goods and services provided to customers.

In order to stay competitive and withstand the change needed to operate successfully, the private sector across Europe is increasingly considering adaptation as a key action within established business strategies and risk management processes. Business leaders are accounting for climate impacts and working to understand if, how, and where, climate risks are material to their bottom line.

Adaptation is not only a story of risk management, but also of opportunity. Companies that act today may gain competitive advantage tomorrow. Being an adaptive business means being agile - responding to changing information, considering this before making investments, and integrating this into its analysis of the potential market opportunities. Adaptation, in short, is good business.

This report shares key findings from data collected by CDP from the FTSEurofirst 300 Index (the 300 largest companies ranked by market capitalization in the FTSE Developed Europe Index) as well as the largest 100 listed companies in Central & Eastern Europe (CEE).

This snapshot does not include all the European companies that disclose through CDP but provides some indication of the type of information we hold. The wealth of CDP data provides valuable, actionable insights into which sectors are already feeling the effects of climate change, who is taking action, who has the most to lose, across what timeframes different sectors will be impacted, how regional differences may manifest, and much more.

A handwritten signature in black ink that reads "Steven M. Tebbe".

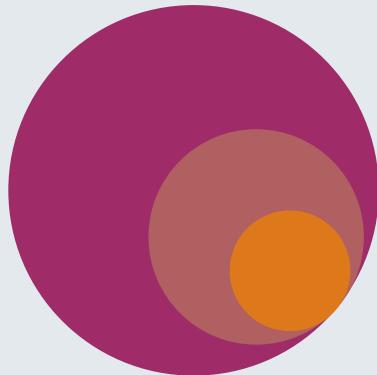
Steven Tebbe
Managing Director

Adaptation in Europe



In 2013 the European Union decided that 20% of its spending over the 2014-2020 period would be spent towards climate action (through the European Structural Investment Fund). These funds would be invested in instruments that contribute to strengthen energy security and build a low-carbon, resource-efficient and climate resilient economy that will enhance Europe's competitiveness and create more and greener jobs. This allocation will be governed by a cooperative process between DG CLIMA and Member States to build towards positive climate action and the objectives set forth by the European Council. European businesses are significant stakeholders and participants in this process, and the CDP data shared in this report will help European decision makers understand the vulnerabilities and opportunities that climate change poses to the private sector.

European companies reporting climate information to CDP



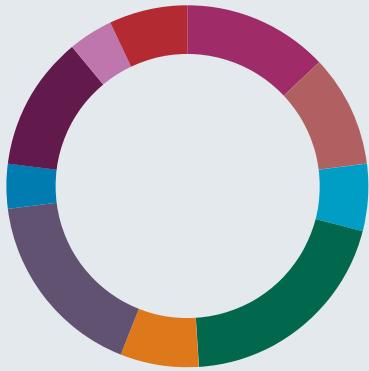
- **4540** Total companies globally disclosing climate data to CDP
- **1365** EU companies disclosing climate data to CDP
- **270** Disclosing companies covered in this snapshot report

This snapshot report looks at climate disclosures made by 270 of the largest European listed companies. These companies, representing 20 countries, identified a total of 780 risks from physical climate impacts in their businesses.

The analysis conducted across 10 different sectors also shows that companies identified 379 opportunities highlighting that for every opportunity the risks are two.

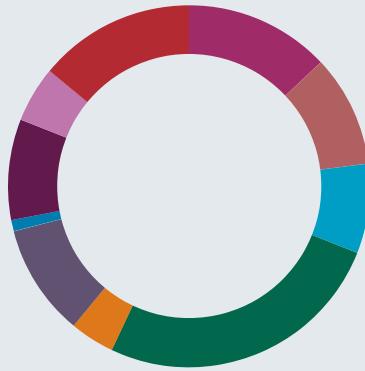
Company sample used to produce this report

Sector representation



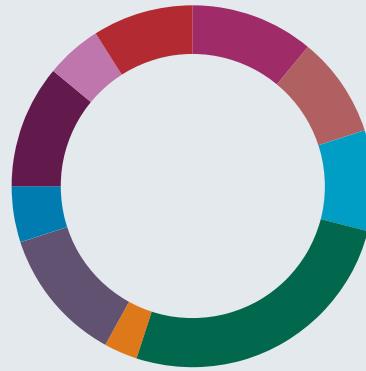
- **13%** Consumer discretionary
- **10%** Consumer staples
- **6%** Energy
- **20%** Financials
- **7%** Healthcare
- **17%** Industrial
- **4%** Information technology
- **12%** Materials
- **4%** Telecoms services
- **7%** Utilities

Share of physical climate risks identified per sector



- **13%** Consumer discretionary
- **10%** Consumer staples
- **8%** Energy
- **26%** Financials
- **4%** Healthcare
- **10%** Industrial
- **1%** Information technology
- **9%** Materials
- **5%** Telecoms services
- **14%** Utilities

Share of physical climate risks identified per sector



- **11%** Consumer discretionary
- **9%** Consumer staples
- **9%** Energy
- **26%** Financials
- **3%** Healthcare
- **12%** Industrial
- **5%** Information technology
- **11%** Materials
- **5%** Telecoms services
- **9%** Utilities

Responding companies identified 780 risks driven by physical climate change; those same companies identified 379 opportunities.

Businesses identify two risks for every one opportunity

How are companies impacted by a changing climate?

Most companies are already impacted by climate change today, which results in increased risks for their businesses.



32%

Reduction/disruption
in production capacity.

▼ 32% Reduction/disruption in production capacity

Example from the industrial sector: "(For us), extreme weather, drought and flooding may disrupt the supply of certain produce and products. This can directly affect the revenue of our supply chains, but also can have a negative impact on our reputation and create a demand for more local sourcing." **A.P. Moller - Maersk**

▼ 10% Inability to do business

Example from financial sector: "(We) rely heavily on efficient data IT infrastructure to provide uninterrupted and efficient services to customers. In case of severe climate conditions leading to flooding (in our) data centres in the Netherlands, services to customers would be severely impacted." **ING Group**

▼ 31% Increased operational cost

Example from the energy sector: "...damage to offshore platforms or structures may result in the suspension of activities and adversely affect the company's financial condition... Financial implications include increased insurance premiums and engineering costs." **Petrofac**

▼ 3% Reduced demand goods/services

Example from the consumer staples sector: "(Changes) in physical climate parameters spark the deterioration of fragile natural environment (e.g. coral reefs). As a result some areas become less attractive for tourists and consequently the hotels located in these areas could see their activity reduced." **Accor**

▼ 8% Increased capital loss

Example from financial sector: "As an investor, (we) may face negative returns related to investments in companies affected by sea-level rise." **Credit Suisse**

▼ 16% Other

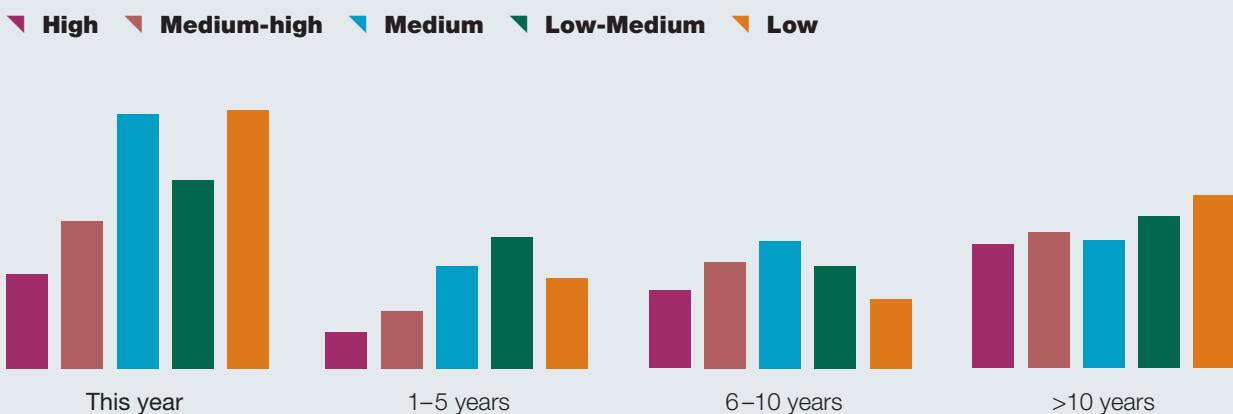
Example from the utilities sector: "Higher temperatures can disturb power plants' normal operation... (as they) decrease the volume of compressed air inserted in the combustion chambers thus decreasing energy generation." **EDP - Energias de Portugal S.A.**

When will climate impacts occur, and how severe will they be?

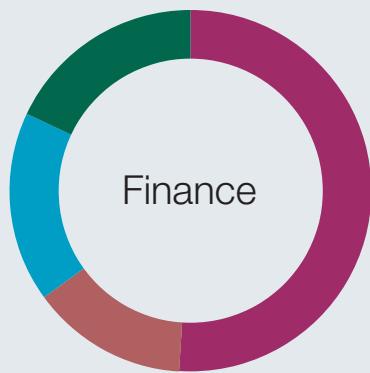
Most businesses are already experiencing climate impacts today, while high magnitude impacts are anticipated to increase in the future

Companies think differently about current impacts than future ones, which are challenging to anticipate and assess. Companies with longer term horizons (e.g. companies with large fixed assets) are leading the way on anticipating future impacts, while other companies are sometimes hindered by short-term planning focus.

Timeline of impact magnitudes (all sectors)

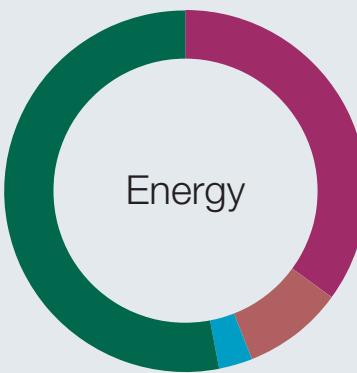


When do different sectors anticipate they will see climate impacts?



- **51%** This year
- **14%** 1–5 years
- **17%** 6–10 years
- **18%** > 10 years

Today and tomorrow: half of the climate impacts affecting companies in the **financial sector** are occurring today, for example through increasing costs, impact on profits and ROI associated with extreme weather, and as insurance premiums increase.



- **35%** This year
- **9%** 1–5 years
- **3%** 6–10 years
- **53%** > 10 years

In the longer term: data from the **energy sector** show a very different outlook than finance. Here, impacts ranging from rising sea levels damaging coastal facilities to inadequate access to water for cooling are anticipated to be most severe in the coming decade.

Which sectors see the most serious risks?

33%

Financial sector companies account for nearly 33% of all high magnitude or high likelihood risks mentioned in the survey.

25%

Consumer discretionary companies identify another 25% of all the high magnitude or high likelihood risks.

How will companies prosper in a changing climate?

Companies are not only minimising their risk, but are also identifying and seizing new opportunities in a changing climate.



43%

Of companies anticipate increased demand for existing products/services.

▼ 43% Of companies anticipate increased demand for existing products/services

Example from the industrial sector: "ICT solutions have a role to play in managing flood risks and more generally in water management, representing a revenue opportunity for BT and reputational gain if we can demonstrate our role in managing water sustainably and preventing flooding." **BT Group**

▼ 6% Increased production capacity

Example from consumer discretionary sector: "The strength and maturity of cotton fibre would be somewhat improved ...and improve the quality of our products" **adidas Group**

▼ 5% Investment opportunities

Example from utilities sector: "Investments will be needed in power generation networks to increase their resilience to extreme weather events. (They) will offer the opportunity to introduce smart grid technologies that ensure reliability of power supply during extreme weather events through increasingly distributed power generation." **ENEL SpA**

▼ 18% New products/business services

Example from the financial sector: "Through the development of financial instruments such as catastrophe bonds, especially for regions such as Africa which are particularly impacted by climate change, the financial risks posed by natural disasters and droughts can be managed." **Barclays**

▼ 17% Reduced operational costs

Example from industrial sector: "Shorter and milder winters with less snow and cold can increase the productivity at some construction sites, as construction activity may experience less potential delay due to snowfall." **Skanska AB**.

▼ 11% Other

Example from consumer staples sector: "By replacing barley in beer production with the more water-efficient sorghum or cassava which grows in semi-arid regions, we can adapt our product line to more climate change-resistant raw materials. Doing this in advance of competitors gains us commercial advantage." **Diageo Plc**

European companies know that taking care of water means taking care of business.

Water impacts and availability are crucial aspects of climate adaptation. Water stewardship is an important climate resilience measure. 70 European companies responded to CDP's 2013 water information request.

83% of European respondents report having operations located in water-stressed regions and almost three-quarters (73%) report being exposed to risks in either their direct operations or their supply chain.

All European respondents have information on their direct water usage. 96% of European respondents report having a water management policy, plan or strategy in place, with 81% reporting board-level oversight of those policies, strategies or plans.

Corporate transparency and policy initiatives supporting water stewardship across Europe are key drivers of change



Water scarcity, especially in developing regions, may lead to greater political and economic instability and in turn affect VINCI's operations.

VINCI
CDP EU Water
policy report 2013



Cities stand at the front lines of climate change – and of climate action.

21 major European cities disclosed climate information to CDP in 2013. For most, adaptation to climate change is already an integral part of their agenda with 9 out of 10 stating they have plans in place for adapting to the physical effects of climate change.

The impacts for cities are real and imminent, but so are solutions. For example, from the government in Berlin:

"Berlin will suffer from hot days, which will occur more frequently. Thus, Berlin's Urban Development Plan on Climate Issues offers ideas on a citywide, subregional and location-specific scale to encounter this challenge. These include

- ▼ Optimising heat-sensitive facilities as retirement homes and hospitals
- ▼ Greening of roofs, facades and courtyards
- ▼ Planting of trees in selected areas
- ▼ Monitoring of changes in urban densification
- ▼ Creating fresh air corridors in inner-city areas, including the former Tempelhof airport"

CDP's Cities' data provides powerful insights into how cities across Europe are addressing the impacts of a changing climate.

Policy conclusions and recommendations

In Europe, businesses across a wide range of sectors are already experiencing the impacts of a changing climate, and are taking this issue seriously. Employees, customers, infrastructure, resources, profits and investments are already at risk, with more impacts expected in the coming years. Governments and policy-makers in Europe have an important role to play in supporting business resilience, removing barriers and incentivising action in key areas. The CDP Europe data provides an important insight into these key areas, and constitutes an extensive knowledge base of climate risks and opportunities over a 10-year timescale. Moreover, the CDP Europe data reflects the perspective of companies from a wide range of sectors and European countries. CDP offers crucial insight to inform adaptation strategies that minimise risks and maximise opportunities for European business activities.

Change is happening

Evidence from the companies themselves demonstrates that climate resilience and adaptation are material issues for business.

EU policymakers must work with the private sector to address climate risk and build resilience.

When to act

Many businesses are already experiencing impacts – others will soon.

CDP data indicates the sectors needing support first from governments, and those who will require assistance in the future.

Who to assist

Not all sectors and companies are the same. Location, business acumen, asset life, markets and supply chains will all combine to affect the risks and impacts at a company level. The solutions may not be generic across companies in a sector.

Policy makers need data to know where to start.

Risk vs opportunity

New risks are emerging, but so are new opportunities.

Government decision makers need to know where to place the right incentives to help business flourish in a changing climate.



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This report was authored for CDP by Acclimatise. Acclimatise is a specialist consulting, communications and digital application company providing world-class expertise in climate change adaptation and risk management. Acclimatise bridges the gap between the latest scientific developments and real world decision-making, helping its clients to introduce cost-effective measures to build climate resilience into their strategies, processes and activities. Please direct any questions to p.adams@acclimatise.us.

Examples of Acclimatise's recent work in Europe include:

- ▀ In the latest national UK Climate Change Risk Assessment, Acclimatise was lead author of the assessment of the current and projected climate change risks and opportunities for the Business, Industry and Services Sector.
- ▀ Acclimatise and COWI developed guidelines for EU project developers to understand the steps they can take to make infrastructure projects resilient to climate change within a standard project lifecycle appraisal.