

# REVIEW

## OF VOLUNTARY AND REGULATORY CARBON REPORTING BY COMPANIES AROUND THE WORLD

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**What** countries have instituted regulations requiring companies to measure their greenhouse gas (GHG) emissions?

**How** could these regulations be strengthened to help meet the «2°C» goal adopted by all member countries at the COP21 summit?

**In what** ways do new French regulations on reporting of significant GHG emissions constitute a major advance in carbon reporting?

To complement recent news focusing on reporting of carbon emissions in France, Carbone 4 offers its readers this review to put voluntary and regulatory carbon reporting mechanisms used by companies in a global perspective.

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## ACKNOWLEDGEMENTS

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# INTRO

## CARBON REPORTING IS BACK ON DECISION-MAKERS' AGENDAS

*"By analogy, a framework for firms to publish information about their climate change footprint, and how they manage their risks and prepare (or not) for a 2 degree world, could encourage a virtuous circle of analyst demand and greater use by investors in their decision making. It would also improve policymaker understanding of the sources of CO<sub>2</sub> and corporate preparedness."*

*Mark Carney, Governor of the Bank of England, speaking at Lloyd's of London, 29 September 2015.*

Following on the COP21 summit and in the context of mobilization by many actors in the public and private sectors – particularly investors – access to **carbon/climate data** is once again emerging as a high-priority issue for elaborating climate policy.

Although the notion of climate reporting encompasses many indicators (quantitative, strategic, governance-related, etc.), **the prime indicator for any and all carbon strategies is quantification of greenhouse gas emissions emitted by a company or corporate entity.**<sup>1</sup>

*" Access to carbon/climate data is once again emerging as a high-priority issue for elaborating climate policy "*

Some countries have opted for regulations that require companies to measure GHG emissions linked to their activity.

Under article 75 of the French Environment Code, a significant number of companies in France, those with 500 or more employees, must publicly disclose their greenhouse gas emissions. Article 225 of the Commerce Code (recently supplemented by article 173 of the Energy Transition Act ) also encourages publicly traded corporations and non-listed companies with 500 or more employees and sales or balance sheet in excess of €100 million to report the greenhouse gas emissions linked to their activity, including emissions related to use of the goods and services produced.

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**In addition to discussion of French regulations, this review documents existing mechanisms and regulations around the world that aim to make data on corporate GHG emissions available to decision-makers.**

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<sup>1</sup>Our discussion here is limited to emissions generated by companies. There are other scopes, such as infrastructure and projects, stocks and bonds, green bonds, etc. that are covered by regulatory or voluntary reporting mechanisms.

<sup>2</sup>This article has recently been enriched by the application decree pertaining to article 173-IV of the Energy Transition for Green Growth legislation. This is the first such provision in the world, extending the reporting scope to direct and indirect emissions by the company, and concentrating on significant emission categories.

# 1

# REVIEW OF CURRENT CARBON EMISSION REGULATIONS IN THE WORLD

## 1.1 VOLUNTARY AND REGULATORY REPORTING MECHANISMS

Since the late 1990s many governmental and private-sector initiatives have emerged to make carbon data more widely available.

Today two types of carbon reporting exist:

- voluntary mechanisms
- regulatory mechanisms.

### THE CARBON DISCLOSURE PROJECT: AN EXAMPLE OF A VOLUNTARY MECHANISM INVESTORS TACKLE THE CLIMATE ISSUE

The Carbon Disclosure Project (CDP) was launched in 2000 by an alliance of 35 investors who sought to accelerate access to carbon data in order to develop new investment strategies.

Fifteen years later, there are now over 5,000 countries around the world that report their emissions to CDP via a dedicated questionnaire (as opposed to 253 companies in 2003)<sup>3</sup>. The response rate increased on average by 15% annually between 2010 and 2015, an illustration of the rising stakes related to carbon emissions for companies.

“ There are now over 5,000 countries around the world that report their emissions to CDP ”

Country-by-country comparison of the percentage of respondent companies out of the total number of companies solicited by CDP reveals strong participation of publicly traded corporations in the United States (70%), Canada (61%), Brazil (63%) and South Africa (79%)<sup>4</sup>. In France the response rate is only 39%, despite carbon regulations derived from the Grenelle II legislation (see above).

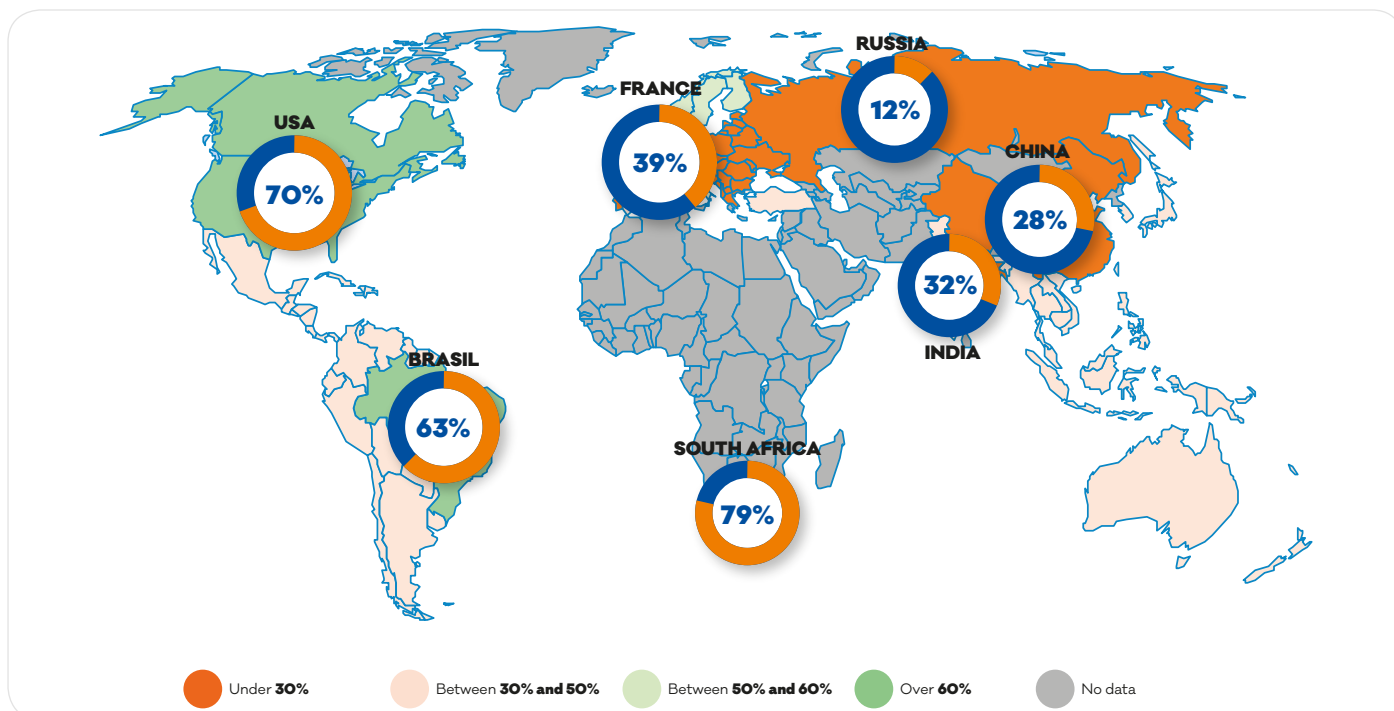


Figure 1: % of companies who fill out the CDP questionnaire compared to total number of companies solicited (CDP figures)

<sup>3</sup>We note, however, that the CDP questionnaire, which includes a quantitative section and a qualitative assessment section, does not impose a reference method or tool for GHG reporting and assessment.

<sup>4</sup>The companies approached by CDP are generally those listed in stock exchange indexes of the most heavily traded companies (SBF250 for French companies, S&P500 for U.S. corporations).

## 1.2 OVERVIEW OF MANDATORY CARBON REPORTING REGULATIONS IN THE WORLD

“ 15 G20 countries have regulations pertaining to carbon emissions ”

The majority of G20 countries, responsible for over 80% of world GHG emissions, have regulations pertaining to carbon emissions<sup>5</sup>. G20 countries that have no specific carbon regulations are Russia, India, Saudi Arabia, Argentina and Indonesia. These countries collectively generate 17% of world GHG emissions (World Bank, 2011).

The map below also shows the countries that have hosted or will host a Conference of the Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC). NB: Qatar, Peru, Kenya and Morocco do not have carbon regulations.

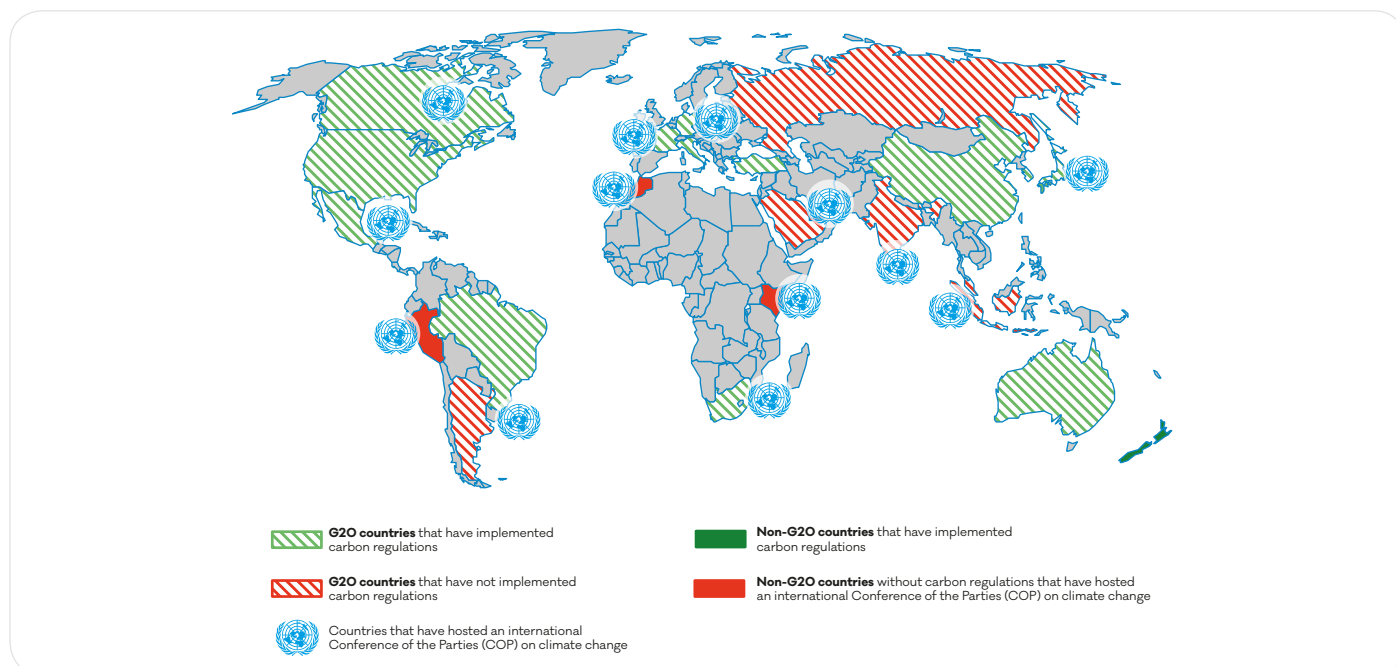


Figure 2: G20 member countries and past or future COP host countries, with or without carbon regulations

## 1.3 HISTORY OF IMPLEMENTATION OF CARBON REGULATIONS

Carbon regulations are recent: most current mechanisms were adopted between 2010 and 2015 (see table).

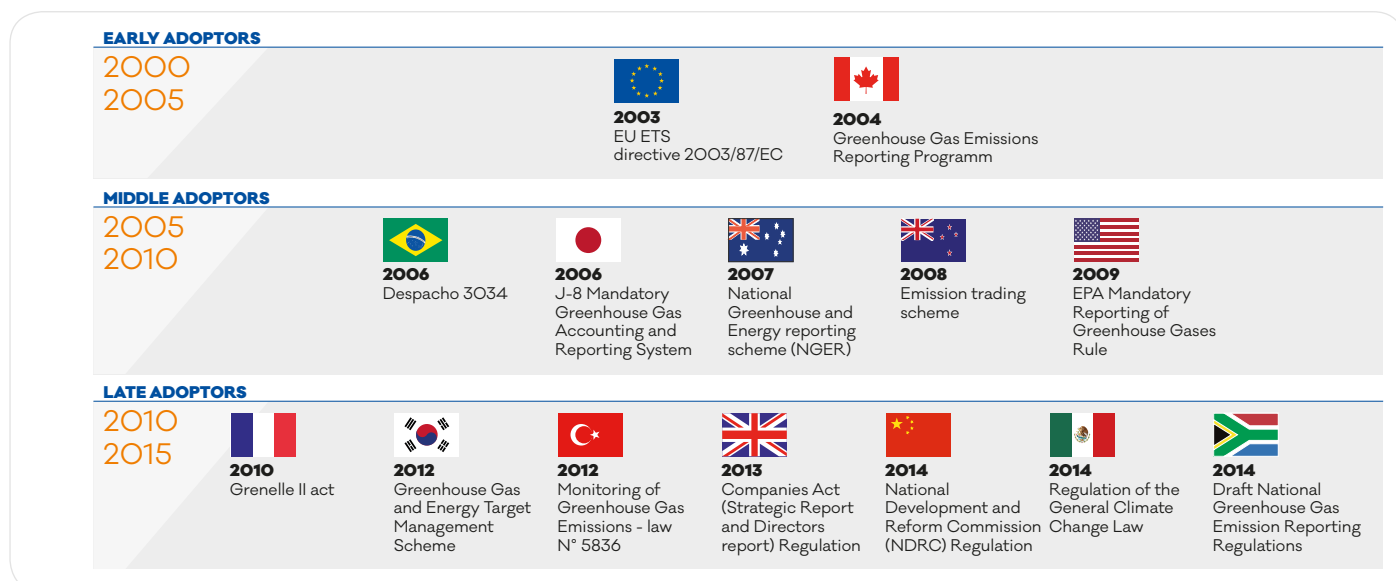


Figure 3: Date of implementation of carbon regulations around the world

<sup>5</sup>The gases considered for the purposes of this review are methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>).

## 1.4 COMPANIES IMPACTED BY CARBON REPORTING REGULATIONS

### THREE APPROACHES TO CARBON REPORTING

The main difference between countries is the target of the carbon regulations implemented.

Three main approaches to carbon reporting can be identified:

- **Sectoral approach:** carbon emission reporting applies to activity sectors with very high GHG emissions (e.g. in the United States, where regulations apply to specific sectors such as power generation and the chemicals industry);
- **Threshold approach:** carbon emission reporting applies to companies with GHG emissions, fossil fuel consumption or production volume in excess of a given threshold, regardless of sector (e.g. Canada, where regulations apply to all establishments emitting over 50 ktCO<sub>2</sub>eq per year);
- **Corporate entity approach:** carbon emission reporting applies to certain types of companies, e.g. companies with 500 or more employees (France) or publicly traded companies (United Kingdom).

The threshold and sectoral approaches are predominant.

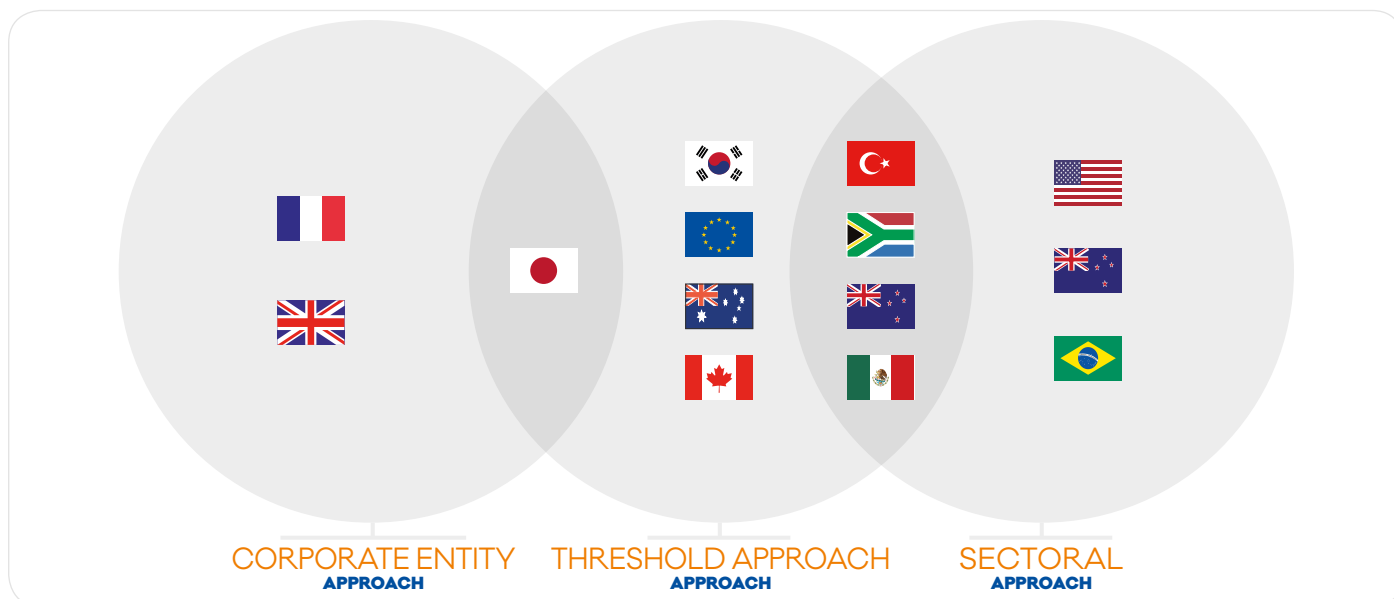


Figure 4: Country breakdown by approach defining which companies are subject to carbon regulations

## 1.5 SCOPE OF GHG EMISSIONS REPORTED BY COMPANIES

As a reminder, carbon accounting uses three distinct scopes to categorize a company's GHG emissions. These accounting principles and application guidelines are internationally recognized and robust<sup>6</sup>.

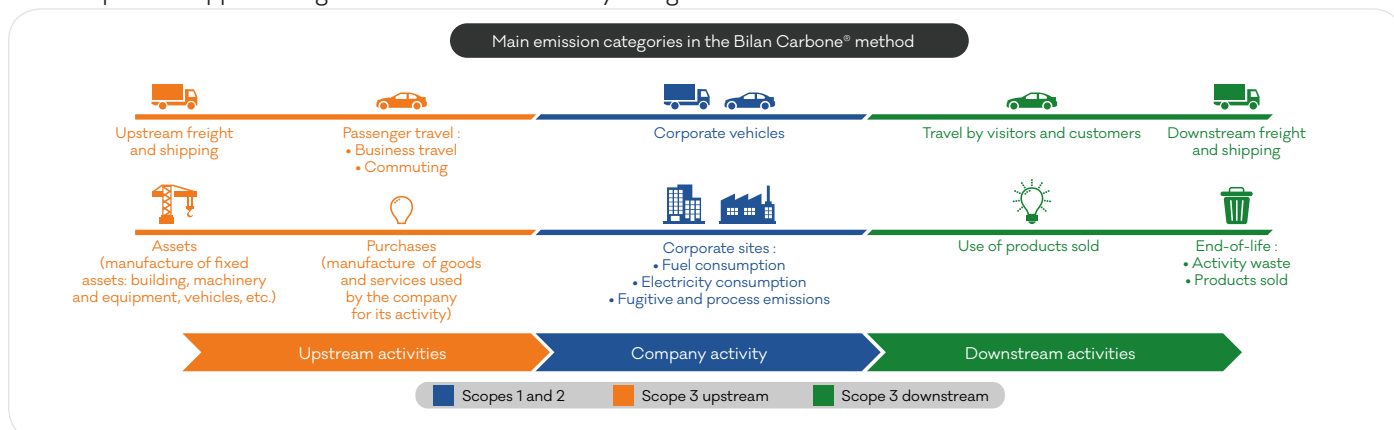


Figure 5: GHG emission accounting scopes

Note : The following emissions are not shown above: investments, downstream franchises, and upstream leased assets. These categories are applied only to certain activities. Upstream fuel consumption is not shown either.

<sup>6</sup>The main reference tools for GHG emission accounting are the ISO 14064/14069 standard, the Bilan Carbone® method in France, and the GHG Protocol, a private sector standard.

“ With publication of the application decree for article 173-IV of the Energy Transition Act, France is the first country in the world to make indirect emission reporting mandatory ”

The scope of reported emissions varies significantly from one country to another. Most countries’ regulations cover only Scope 1 emissions, i.e. direct GHG emissions. In some countries, however, companies are encouraged to report indirect emissions (Scope 3 upstream and downstream emissions). With publication of the application decree for article 173-IV of the Energy Transition Act, France is the first country in the world to make this type of reporting mandatory.

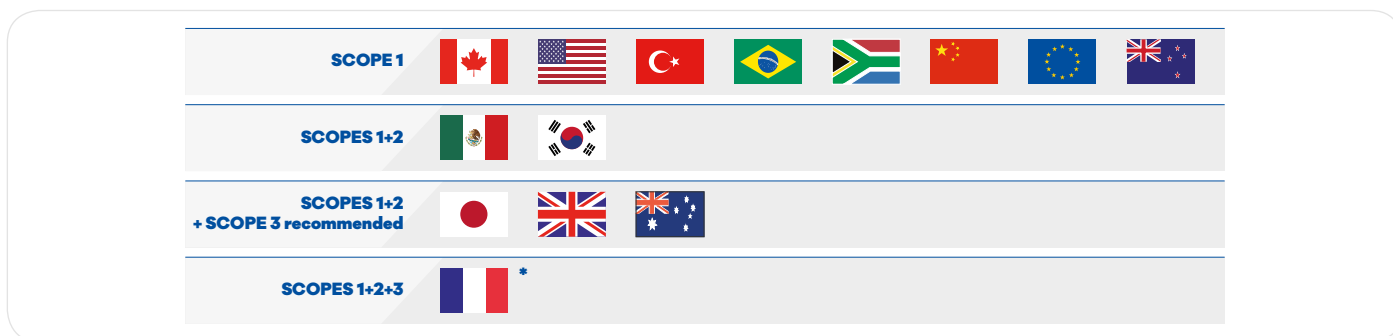


Figure 6: Mandatory emission accounting scopes under carbon reporting regulations

\*Application decree for article 173-IV of the Energy Transition Act issued 19 August 2016, pertaining to disclosure of significant direct and indirect GHG emissions by companies subject to article 225 of the Commerce Code.

## 1.6 AVAILABILITY OF CARBON EMISSION DATA FOR THE GENERAL PUBLIC

Even if companies report their GHG emissions, these data are not always widely available for information processing and analysis. Data transparency and availability are key factors for elaboration of climate policies, whether public or in the private sector. South Africa and Mexico are not cited because their reporting mechanisms have not been fully implemented.

“ Carbon data are not always widely available for information processing and analysis ”

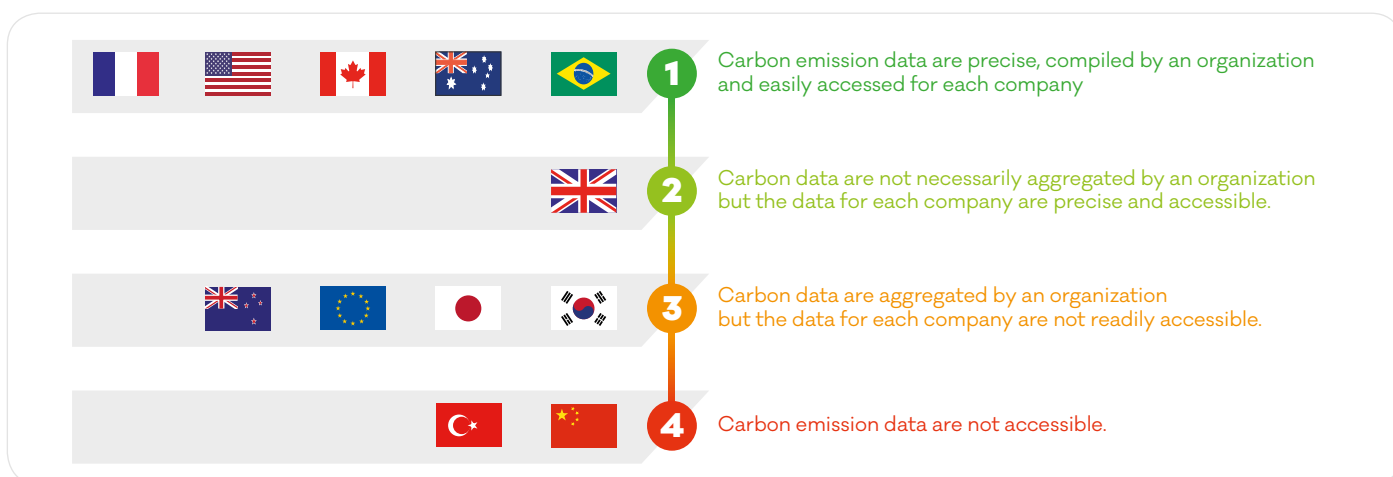


Figure 7: Carbon data transparency for the general public

# 2

## ANALYSIS

### 2.1 LIMITATIONS OF CORPORATE CARBON REPORTING

- Carbon reporting is gradually becoming common international practice. This is seen in the rising number of carbon regulations adopted around the world, and in the growing number of companies that reply to the CDP questionnaire. This practice is limited to developed and emerging-economy countries.
- Mandatory carbon reporting is still a recent practice: most existing mechanisms were implemented between 2010 and 2015.
- Emission accounting is in most cases restricted to Scope 1 or Scope 2. France is the first country to require reporting of indirect GHG emissions.
- The regulatory target varies significantly between countries: the classes of corporations required to report GHG emissions are not the same, making a global analysis of carbon regulations a complex exercise.

### 2.2 OUR RECOMMENDATIONS FOR IMPROVING CARBON REGULATIONS WORLDWIDE

As most countries have set up their carbon regulations in recent years, since 2010, it is still too early to analyze the performance of their mechanisms, notably in terms of GHG emission reductions.

Recommendations can be formulated, however, to improve corporate carbon reporting and meet the challenges of the 2°C goal and the transition to a low-carbon economy.

#### 2.2.1 IMPLEMENTATION OF CARBON REGULATIONS ACROSS ALL RAPIDLY DEVELOPING COUNTRIES

To support the emergence of low-carbon models for development, relevant indicators must be available for monitoring purposes, in particular for corporate GHG emissions. So-called emerging or developing countries should implement carbon reporting mechanisms that are appropriate for the sectors of their economies with the highest emissions, to facilitate deployment of their national contribution to the fight against climate change.

#### 2.2.2 SCOPE 3 ACCOUNTING FOR INDIRECT EMISSIONS

Reporting Scope 1 and 2 emissions will not suffice to ensure transition to a low-carbon economy. For most economic sectors (other than extractive industries), the significant GHG emissions are Scope 3 emissions, indirect emissions either upstream or downstream of the corporate activity itself.

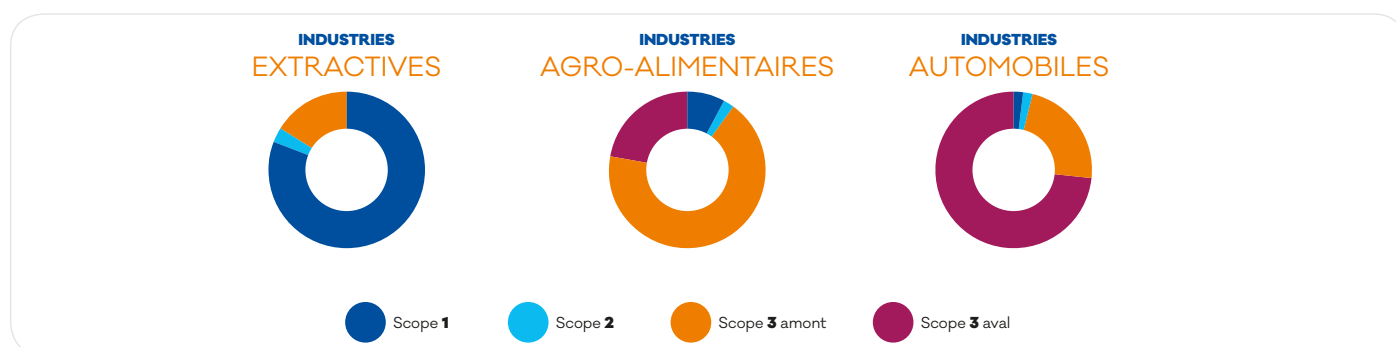


Figure 8: Examples illustrating the distribution of GHG emissions across scopes for three sectors of the French economy



If indirect emissions are not taken into account for emission reduction plans, economic value chains cannot engage upon their transition to a low-carbon economy.

The key notion is to focus on the most significant emission categories: this is the only way to motivate companies to concentrate on the areas with the highest stakes for them, and to make reporting feasible in terms of the time and cost of information gathering, so that this practice can be widely adopted around the world.

“ The reporting of the most significant emission categories is the only way to motivate companies to concentrate on the areas with the highest stakes for them ”

This is not a new vision for actors in carbon accounting; there are sectoral methodologies to identify the most significant emission categories for sectors with high carbon emissions. These methodologies are available in France on the ADEME website. Furthermore, consulting firms (including Carbone 4) have developed dedicated carbon balance calculation methods, focusing on the most significant emission categories, in the context of action to measure the carbon footprint of companies in the investment portfolios of financial companies (sometimes numbering several thousand companies).

### 2.2.3 IMPLEMENTATION OF MANDATORY GHG EMISSION REDUCTION PLANS, IN KEEPING WITH A 2°C TRAJECTORY

Lastly, GHG emission reporting should be accompanied by mandatory emission reduction plans (as required by regulations in France and the United Kingdom, for example).

“ The emission reduction action plans must be compatible with a 2°C trajectory ”

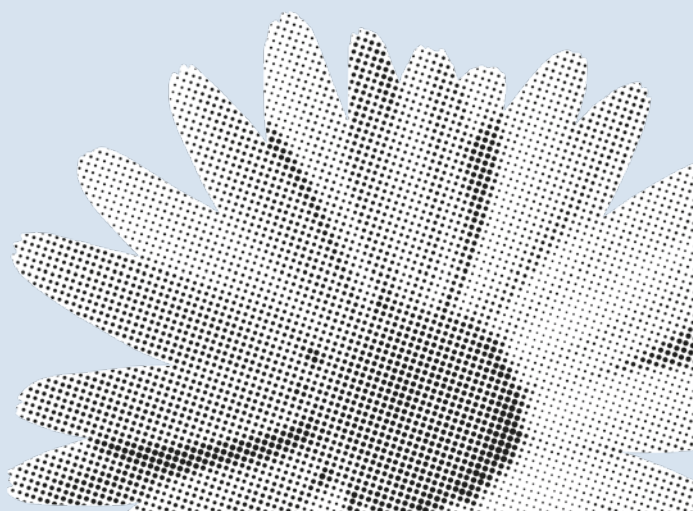
For the sectors of the economy with the highest levels of emissions, the emission reduction action plans must be compatible with global emissions trajectories that are in line with the goal of keep climate warming within the limit of 2°C above pre-industrial era averages. If not, the pace of transition will not be rapid enough to effectively combat climate change and its economic consequences.

The Science-Based Targets initiative launched by CDP is a step in this direction. Under this initiative companies set relative and absolute targets in keeping with sectoral objectives laid out by the International Energy Agency in order to attain the 2°C goal. As of the start of 2016, 120 companies had already committed to adopt targets under this initiative. Carbone 4 has worked on this type of action with several companies.



Carbone 4 is a consulting firm specialized in carbon emission accounting. Drawing upon its experience with over 200 carbon balance assessments for major groups, Carbone 4 works with companies in all sectors of the economy to advance their sustainable development programs. Consult our website for information on all our services, from support for voluntary and regulatory carbon emission reporting and implementation of action plans to developing emission reduction objects under the Science-Based Targets initiative.

[www.carbone4.com](http://www.carbone4.com)



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