

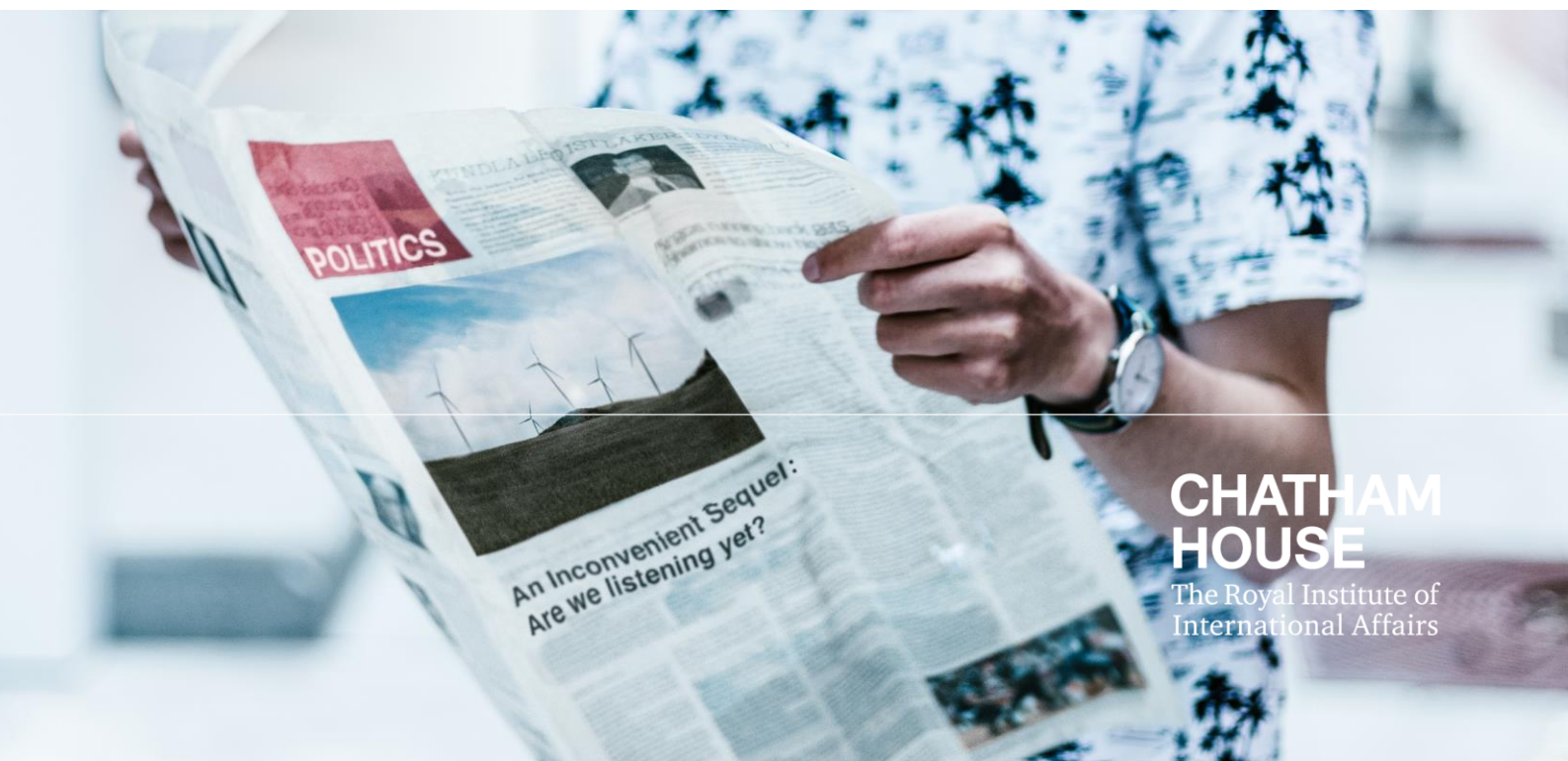
## Background Paper

Jill Duggan

Energy, Environment and Resources Department | November 2018

---

# The Role of Sub-state and Non-state Actors in International Climate Processes: Corporate Sector



## Summary

- The corporate sector has traditionally engaged governments at national rather than international level in lobbying for action related to climate change. Where it has engaged at an international level, this has often been to restrain regulation and ambition, such as in air transport. Over time, many businesses have increasingly understood that there is more commercial opportunity in a strong, consistent approach to tackling climate mitigation and adaptation, and an increasing number are willing to speak up on the issue. The Paris Climate Conference in 2015 demonstrated this positive engagement.
- Businesses are more powerful when engaging directly with national governments on detailed policies – by demonstrating what is possible and indirectly influencing national governments' international pledges. Traditional trade/industry sector associations and groups have tended to suffer from the 'lowest common denominator' effect of their least progressive members. Progressive business groups coalescing around climate ambition can help to counter this.
- Unlike at the Copenhagen climate talks in 2009, the business community provided a positive, supportive backdrop to the 2015 Paris talks, mindful of the public relations opportunities in taking a progressive stance and of the benefits of targets that reflected the science. The carbon market was a particular focus for corporates, which succeeded in getting emissions trading options and market mechanisms included in Article 6 of the Paris Agreement.
- Given the challenging political contexts since 2015, the corporate sector will have a key role to play in persuading national governments how technologies and expertise have moved on since the pledges were made. With increasing awareness of resource scarcity, businesses are pursuing ever more creative solutions.
- Wide recognition that the avoidance of future emissions is increasingly dependent on developing and emerging economies means that business voices from these countries will potentially be more influential in the next few years.

## Introduction

This paper looks at the ways in which the corporate sector has influenced global climate ambition and how it can be more effective in the future. The paper has been informed by a series of discussions with key actors – including government negotiators, business groups and individual businesses. Interviewees have, in many cases, preferred anonymity in exchange for frankness, and so none have been named here. However, due to the timescale for the paper, all of the interlocutors have been from developed-country regions – including the US, the EU, France and the UK.

The corporate sector considered in this paper includes a number of distinct but overlapping groups:

- **Individual companies** that are large enough and motivated enough to provide resourcing for interventions and be influential. This group includes the major oil and gas companies, many large energy generators, global steel corporations, cement producers and vehicle manufacturers. These large corporations are, naturally, looking to further their own commercial interests, though they may present themselves as having a broader social agenda given their position as major employers with strategic importance. It is notable that new technology companies are not very vocal in this area, although most have joined broader coalitions such as We Are Still In – a US group set up to counter the sceptical climate rhetoric from President Donald Trump – and initiatives to obtain energy from renewable sources.
- **Traditional sector associations** – groups of companies with very similar businesses and therefore common sets of issues. These groups may be organized on a national level, a regional level and sometimes on a global level. Ambition is usually limited by the least progressive members, but sector associations' secretariats can often act as educational or progressive forces within their industries. This can mean that externally they actively restrain ambition or change, while internally they are pushing members to be more progressive.
- **New sector associations** – these include those focused on new industries such as wind energy, electric vehicles, and carbon capture and storage (CCS), but also those focused on particular policy initiatives. Many oil and gas firms and energy generators have been active in promoting carbon pricing, often through engagement in organizations such as the International Emissions Trading Association (IETA) – which also includes members involved in the broking and trading side of carbon markets. Oil, gas and energy companies also have a strong presence in the climate debate, alongside the technology providers in organizations pressing for CCS and carbon capture utilization and storage (CCUS). These new sector associations usually include members from all points along the supply chain. They will, like traditional sector associations, be very focused on the needs of their members but will normally see advantage in pressing for more rapid change (backed by financial incentives).
- **Cross-sectoral business and trade organizations** – these include national business groups such as the Kaidenren in Japan and the Confederation of British Industry (CBI) in the UK, as well as chambers of commerce. The least progressive members of these groups can also inhibit ambition (the 'lowest common denominator' effect), but – as with sector associations – the groups may still be a force for progress and modernization within their membership. This can lead to them changing positions while presenting a very different external face. For instance,

the Kaidenren has generally played a restrictive role on climate ambition within Japan, whereas the CBI has moved from scepticism to limiting support to becoming an advocate for ambitious action on climate change at a high level within the UK.

When traditional cross-sectoral business groups are organized across countries or regions, this ‘lowest common denominator’ effect becomes more pronounced. This is evident, for example, with Business Europe, which represents national business groups from across the EU and has often raised perceived competition issues as a reason to rein back climate ambition. These organizations have to straddle a broad range of member perspectives. This often produces conservative responses to policy proposals with, not surprisingly, a focus on voluntary initiatives rather than regulation or mandated targets. It is notable that certain technology companies, which have enormous potential power to promote change, have been reluctant to step beyond conservative positions. For example, Facebook, Google and Microsoft ‘have failed to distance themselves from [Business Europe’s] proposal to fight any effort by the EU to set more ambitious climate change goals’.<sup>1</sup>

Nevertheless, there is anecdotal evidence that the secretariats of these organizations tend to be more progressive than their membership. As with sector associations, the secretariats can act as a force for shifting towards more progressive positions.

### Cross-sectoral progressive alliances

Concern over global warming – and consequent environmental and social problems – has led to the growth of a number of business groups whose common focus is progressive action on climate change. These groups are sometimes focused on a single issue – such as the US Climate Action Partnership (US CAP), which in 2009 was involved in the drafting and support of the Waxman Markey Bill to (unsuccessfully) introduce a ‘cap and trade’ programme for carbon emissions. Others, such as the California Climate Action Registry, the Carbon Disclosure Project and RE100, recruit businesses that need to make specific commitments or undertake particular actions. These commitments are useful in getting across a message about where businesses see their opportunities. Other groups, such as The B Team or The Prince of Wales’s Corporate Leaders Group, combine a cross-sectoral group of high-profile incumbent businesses, predominantly from Europe and North America, to press for action or ambition.

Often the cross-sectoral nature of these groups can make it difficult for them to coalesce around more specific and detailed messaging beyond the need for disclosure or broad ambition.

## The business role in influencing the negotiations

Corporate non-state actors are ‘observers’ to the international climate negotiations. This means that their access and agency in the negotiations are limited, as is the case with all non-state actors. However, some corporate groups or specific corporate actors may attend as part of a national delegation or business group delegation.

---

<sup>1</sup> Vaughan, A. (2018), ‘Tech companies unclear over stance on new potential new energy targets’, *Guardian*, 19 September 2018, <https://www.theguardian.com/environment/2018/sep/19/tech-giants-fail-to-distance-from-businesseurope-fight-against-eu-climate-targets>.

Historically, in the mid-1990s, the differing views of traditional and more progressive business voices were formally recognized in the United Nations Framework Convention on Climate Change (UNFCCC) process<sup>2</sup> by allowing presentations from these two groups. This reflected the increasingly opportunity-driven approach by some businesses, which replaced a primarily defensive, protectionist approach.<sup>3</sup>

Most interlocutors who were contacted for this paper agreed that the influence of corporates and corporate groups has been felt primarily (though not exclusively) at the national level, well in advance of the annual climate negotiations. They noted that business groups have been most effective when lobbying for their self-interest.

### Influencing national governments

Many of the interviewees from national governments emphasized the role that business and business groups played at the national level – in promoting particular policies, supporting (or hindering) ambition and creating a context for political decisions to address climate change. Not surprisingly, the level of influence is usually (though not always) linked to the importance of individual sectors or companies for the national economy – vehicle manufacturers in Germany, the City of London supporting market solutions in the UK, the nuclear lobby in France, to name but a few local European examples.

National airlines often have a disproportionate influence on their governments because of their symbolic importance.

### Using self-interest and narrow focus at an international level

An example of how corporates have influenced ambition at an international level is the way airlines, through the International Air Transport Association (IATA), have sought to minimize the action required of them to limit their greenhouse gas emissions. IATA has lobbied to retain the regulation of emissions under the International Civil Aviation Organization (ICAO), rather than allowing it to come under the auspices of the UNFCCC directly. A more positive illustration is that of the chemical sector and its role in the Kigali Amendment<sup>4</sup> to the Montreal Protocol to limit hydrofluorocarbons. Dupont was singled out for praise in this respect, though interviewees noted that businesses often deploy a strategy of resisting policy change until they are able to offer their own solutions to the market.

---

<sup>2</sup> The UNFCCC process allows statements to the plenary – in the mid-1990s the business sector was allowed two – recognizing progressive and incumbent interests.

<sup>3</sup> World Business Council for Sustainable Development (2010), *Private Sector and the UNFCCC: Options for Institutional Engagement*, <https://www.wbcsd.org/contentwbc/download/3111/39294> (accessed 5 Nov. 2018).

<sup>4</sup> The Kigali Amendment to the Montreal Protocol divided the world economies into three groups, each with a target phase-down date. The richest countries, including the US and those in the EU, will reduce the production and consumption of hydrofluorocarbons (HFCs) from 2019. Much of the rest of the world, including China, Brazil and all of Africa, will freeze the use of HFCs by 2024. A small group of the world's hottest countries, such as Bahrain, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia and the United Arab Emirates, have the most lenient schedule and will freeze HFC use by 2028.

## The role of business in the run-up to Paris

It was acknowledged that the business community provided a positive and supportive backdrop to the 2015 Paris talks and the historic climate agreement. This contrasted sharply with the mass of messaging and strong negative content surrounding the Copenhagen talks six years earlier. There were several reasons for this shift. Among them was the recognition by many companies of the public relations opportunities in taking a progressive stance. Similarly, companies noted the benefits of targets that reflected the science and that could minimize the risk of investing in 'stranded assets'.

The Paris summit had been flagged well in advance of 2015 as the chance to deliver an international agreement after the perceived failure of the Copenhagen conference. As such, there was a lot of activity behind the scenes, well ahead of the actual conference. The UNFCCC secretary-general at the time, Christiana Figueres, developed a shadow team led by Tom Carnac to motivate the 'troops' of non-state actors. French Foreign Minister Laurent Fabius – president of the Paris Climate Conference – and his appointee as special ambassador, Laurence Tubiana, devoted much time to building the diplomatic momentum among parties to the negotiations.

For the business community, one of the important developments was the creation of We Mean Business, a coalition of major business non-governmental organizations (NGOs), predominantly from Europe and North America.<sup>5</sup> The purpose of the coalition was to coordinate the messaging and activities of the partners for maximum impact in the run-up to the Paris conference. It developed joint messaging and briefing, and rigorously sought to amplify the business voice. The World Economic Forum (WEF) also fixed Paris in its sights when it kicked off a two-year run-up in January 2014. Momentum-building orchestrated by the UN and supported by major institutions such as the World Bank provided platforms for business leaders to set out the business case for strong targets to provide them with direction. These platforms also highlighted the progress that key businesses had made since Copenhagen.

While it is true that most Nationally Determined Contributions (NDCs) were developed in advance of the Paris talks, the choreography of the conference, backed by a strong message of support from leading multinationals, undoubtedly boosted negotiators' confidence that they were aligned to popular sentiment.

### Businesses' focus on carbon markets

Analysis of business engagement in international negotiations during the early years of this century<sup>6</sup> shows remarkable consistency with the positions held today, albeit with fewer players than now. This early analysis found that businesses favoured an approach characterized as:

---

<sup>5</sup> The partners in the coalition were CDP, The Climate Group, Ceres, BSR, The B Team, The Prince of Wales's Corporate Leaders Group and the World Business Council for Sustainable Development.

<sup>6</sup> Hamilton, K., Brewer, T., Aiba, T., Sugiyama, T. and Drexhage, J. (2002), *The Kyoto-Marrakech System: a Strategic Assessment Module 2: Corporate engagement in US, Canada, the EU and Japan and the influence on domestic and international policy*, London: Imperial College London, <https://www.imperial.ac.uk/media/imperial-college/research-centres-and-groups/icept/7294716.PDF> (accessed 5 Nov. 2018).



---

voluntary rather than mandatory, market rather than regulatory, ‘inclusive’ rather than restrictive vis a vis technology, and in the case of emissions trading: all borders, all activities, full fungibility inclusive of non-Kyoto nations. Indeed there is an international business ‘consensus’ that these market-orientated approaches will deliver, if ‘flexibility’ is fully handed over to business.<sup>7</sup>

In the run-up to Paris, the most engaged business groups were those that wished to ensure that trading of emissions liability was included. The inclusion of trading options under Article 6 of the Paris Agreement indicates that they were successful in this. In particular, negotiators singled out IETA as pushing for recognition of market mechanisms in the agreement even in the face of ministerial indifference and hostility from some governments. Some national governments opposed the inclusion of markets as they did not want subnational trading systems to be regulated under international rules – they were concerned about competence for rule-setting. Other actors, such as the EU, were keen to have a framework for recognition of allowances, and there was strong support from governments and project developers that had been involved in the Clean Development Mechanism, set up under the predecessor to Paris, the Kyoto Protocol.<sup>8</sup>

IETA and those involved in trading carbon were prepared to grapple with the text and press this hard. There was also a broad swathe of support for market mechanisms from the wider business community that was following the climate negotiations, which undoubtedly helped to create the right environment for Article 6. A number of different factors motivated these businesses, many of which had, by 2015, been included within trading systems for some time. For the oil and gas companies, trading provides flexibility to delay divestments and changes to business models. Many major corporations from other sectors had been swayed by the extensive advocacy undertaken by organizations such as IETA and the World Bank’s Carbon Pricing Leadership Coalition. It is open to debate whether trading can produce the level of reductions needed in the timescale outlined in the Paris Agreement – and reinforced by the recent Intergovernmental Panel on Climate Change (IPCC) special report on *Global Warming of 1.5°C*.<sup>9</sup> However, the mantra has become so strong that it allows companies to feel that they have engaged in the detail of the discussion.

### Including new business voices and actions

One of the major outcomes of Paris was the recognition of the need to include a broader range of actors in discussing the climate change regime. A way was needed to include other voices in the debate without creating ever more complexity. The vehicle for this, started at the Fijian Conference of the Parties (COP) in Bonn in 2017, was the Talanoa Dialogue.

The Talanoa Dialogue ‘invites everyone to engage in finding a solution, first by preparing submissions in response to three questions: Where are we? Where do we want to go? How do we get there?’<sup>10</sup> Analysis of the responses to these questions gives some interesting insights into the

---

<sup>7</sup> Ibid., p. 7.

<sup>8</sup> Müller, B., Andrade, T., Hession, M., Kizzier, K. and Miguez, J. (2018), *Article 6: Market approaches under the Paris Agreement*, Oxford: European Capacity Building Initiative, [https://www.ecbi.org/sites/default/files/Article%206%20Final\\_1.pdf](https://www.ecbi.org/sites/default/files/Article%206%20Final_1.pdf) (accessed 5 Nov. 2018).

<sup>9</sup> Intergovernmental Panel on Climate Change (2018), ‘Global Warming of 1.5 °C’, <http://www.ipcc.ch/report/sr15/> (accessed 16 Nov. 2018).

<sup>10</sup> COP 23 Presidency Secretariat (2018), ‘Presidency Releases Template to Guide Inputs to the Talanoa Dialogue’, 22 March 2018, <https://cop23.com.fj/presidency-releases-template-guide-inputs-talanoa-dialogue/> (accessed 16 Nov. 2018).

motivations of businesses for engaging with the climate negotiations. Their self-declared reasons for engagement included to:

Showcase their climate action and leadership; precipitate action from government to create the conditions necessary for business to increase climate action; request to be seen as key actors in meeting the climate challenge, and accordingly seek more integral involvement for themselves in national and international climate policymaking.<sup>11</sup>

The Talanoa Dialogue follows the Marrakech Partnership for Global Climate Action, which enables and encourages collaboration between governments, cities, business and investors to act on climate change to implement the Paris Agreement. The Lima–Paris Action Agenda, launched at the Lima Conference in 2014, aimed to mobilize non-state actors, including the corporate sector, to work together to fight climate change. The latter used the Nazca Climate Action portal to showcase ‘game-changing actions being undertaken by thousands of cities, investors and corporations’.<sup>12</sup>

## What made Paris a success?

Paris was planned for well in advance. The UNFCCC secretary-general’s office played a key role in coordinating a campaign to build momentum and inclusion. From the Climate March coinciding with the UN General Assembly meeting in New York in 2014 through the launch of the Lima–Paris Action Agenda that year, there was a steady drum beat. A major part of this success was finding a role and a platform for all sectors – creating a chorus of voices from unexpected quarters to support the call to action in Paris. The corporate sector played a successful role in providing supportive statements, commitments and visible leaders. More specifically, those who had an interest in doing so worked hard to ensure that market mechanisms had a place in the final agreement.

There was also something of ‘an alignment of the stars’ for Paris. The US president, Barack Obama, was a supporter of action on climate change. While Copenhagen had failed to live up to expectations, by the time of Paris the US federal government had its strategy in place and was able to ensure a meaningful outcome. The White House, in the run-up to Paris, had secured historic agreements with the Chinese government on climate change and the joint hopes of the US and China for an outcome from Paris.<sup>13</sup> The EU 28 was in a relatively strong position to coordinate its response. Even the appalling terrorist attacks in Paris just a few weeks before, when 130 people were killed, played a sad part – with heads of state and government turning up at the start of the conference in solidarity against terrorism as much as in order to tackle climate change.

So alongside the strategy of pledge and review, the consummate diplomacy of the French hosts, the choreographed momentum-building by the UNFCCC and the management of expectations by major

---

<sup>11</sup> Talanoa Dialogue for Climate Ambition (2018), ‘Overview of Inputs to the Talanoa Dialogue’, [https://img1.wsimg.com/blobby/go/9fc76f74-a749-4eec-9a06-5907e013dbc9/downloads/1cbos7k3c\\_792514.pdf](https://img1.wsimg.com/blobby/go/9fc76f74-a749-4eec-9a06-5907e013dbc9/downloads/1cbos7k3c_792514.pdf) (accessed 5 Nov. 2018).

<sup>12</sup> UNFCCC (2014), ‘New Portal Highlights City and Private Sector Climate Action’, press release, 11 December 2014, <https://unfccc.int/news/new-portal-highlights-city-and-private-sector-climate-action> (accessed 5 Nov. 2018).

<sup>13</sup> The White House: President Barack Obama (2015), ‘FACT SHEET: The United States and China Issue Joint Presidential Statement on Climate Change with New Domestic Policy Commitments and a Common Vision for an Ambitious Global Climate Agreement in Paris’, 25 September 2015, <https://obamawhitehouse.archives.gov/the-press-office/2015/09/25/fact-sheet-united-states-and-china-issue-joint-presidential-statement> (accessed 6 Nov. 2018).



governments, there was something about the political circumstances at that time that contributed to the outcome.

## What has happened since?

Three years on from 2015, in a world where populist politics are on the rise, where a US administration is threatening to withdraw from the Paris Agreement and Europe is distracted by the impact of immigration (as well as Brexit) on its political well-being, it is hard to be so certain that a similarly ambitious agreement could be achieved so resoundingly. Trade wars, both real and threatened, are in the news, exacerbating the perception of competitive distortions and making agreements even more challenging to achieve.

The role of business in such circumstances is even more important in persuading national governments how technologies, understanding and business models have moved on since the Paris pledges were made. Even in that short time, there has been a remarkable drop in the cost of renewable energy – for example, from around £140 per kilowatt hour (kWh) to just £57/kWh for offshore wind in the UK.<sup>14</sup>

Businesses have also become more concerned about resource scarcity and have responded with ever more creative solutions. Closed-loop manufacturing and circular-economy models are by no means commonplace, nor were they unheard of prior to Paris. The EU and China had already signed a Memorandum of Understanding on the Circular Economy<sup>15</sup> prior to Paris. But such approaches are being geared up at a speed that was unforeseen, and have been taken up ever more visibly by giant technology companies such as Apple. Rapid expansion of digital technology has provided the tools to enable the spread of the ‘sharing economy’ – from mobility to clothes – and more efficiently manage energy sources.

More businesses recognize that having ‘stretch’ targets – those they don’t yet know how to meet – can drive innovation and creativity, and an increasing number are willing to call for such aspirational ambition. In a recent video for the Prince of Wales’s Corporate Leaders Group, a number of companies called for ambitious stretch targets that acted as a catalyst and could inspire and drive their employees to perform ‘miracles’.<sup>16</sup>

There is an acceptance that stakeholders in most economies know what needs to be done in the energy and transport sectors – the technologies are there even if the plans for their deployment are inadequate. Increasingly, ambition is restricted by the question of how to tackle other sectors such as agriculture and land use, buildings and infrastructure, and changes in lifestyles.

---

<sup>14</sup> Baringa Partners LLP (2015), *UK CfD auctions: a triumph for competition? An in-depth look into the results of the inaugural UK CfD auction*, <https://www.baringa.com/getmedia/9d31be6e-99f2-4762-b2cb-ac45833d7f88/CfD-2015-Viewpoint-EMAIL/> (accessed 6 Nov. 2018).

<sup>15</sup> European Commission (2018), *Memorandum of Understanding on Circular Economy Between the European Commission and the National Development and Reform Commission of the People’s Republic of China*, [http://ec.europa.eu/environment/circular-economy/pdf/circular\\_economy\\_MoU\\_EN.pdf](http://ec.europa.eu/environment/circular-economy/pdf/circular_economy_MoU_EN.pdf) (accessed 6 Nov. 2018).

<sup>16</sup> The Prince of Wales’s Corporate Leaders Group (2018), ‘Aiming for Zero: Business leadership for a net zero economy’, <https://www.corporateleadersgroup.com/reports-evidence-and-insights/collections/net-zero> (accessed 6 Nov. 2018).

In order for businesses to have an impact on raising climate ambition, these are the sectors and themes that policymakers and their negotiators are anxious to address alongside the options for adaptation that are becoming uncomfortably necessary. The voices that provided the background of business support for the Paris Agreement are, through their exposure, well known and well understood. While the causes of climate change are very much the responsibility of the developed world, there is acknowledgment that the avoidance of future emissions is down to developing and emerging economies. This means that the voices of businesses from these economies will be more powerful in providing support in the future.

## Conclusions

Businesses are most powerful when they are engaging directly with national governments on detailed policies – by demonstrating what is possible. This influence can feed into national governments’ international pledges. Businesses can play this role at an international level, but it happens more rarely and their voice on specific issues has often tended to restrain regulation and ambition, such as in the air transport sector. Carbon pricing is an area in which businesses have been successfully vocal.

There is still a need for cross-sectoral progressive business groups to counter messaging from large, traditional business groups (such as Business Europe) that often reflects a ‘lowest common denominator’ position. Policymakers need voices of business support in pursuing ambitious targets and policies, particularly where there has been vocal resistance from other business groups.

Targeting this supportive messaging for maximum effect has been important. One of the lessons from the run-up to Paris was the importance of coordinating across business groups to provide consistent, ambitious messaging and a ready stable of ‘ambassadors’ from business to provide media quotes. Although this messaging did not reach the negotiators directly, it provided succour to politicians.

Politicians and negotiators are often not up to date with the latest business initiatives, and often unfamiliar with what is going on in other parts of government. Business can bridge this gap by presenting the evidence to them. The role of RE100 and other commitment groups is important in persuading more reluctant states of the benefits of climate action. Where major multinationals have committed to using renewable energy or electric vehicles, for example, they have judged that it makes sense to expand and invest in places where those commitments can be honoured.

## Recommendations for future effectiveness

Businesses should engage early and in a coordinated way at all levels – at national level to support more ambitious NDCs, and at regional and global levels to bring greater collaboration to the debate.

They should collaborate with other groups (such as trade unions, and regional and local governments) to demonstrate what can be done on the themes that are exercising national and international governments – buildings, agriculture, forestry, industry.

Businesses should recognize current concerns by promoting the opportunities for new jobs and growth offered by new technologies that also address air quality and climate change.

Messaging and advocacy need to go beyond the usual climate audience to other businesses, and to other ministries such as finance and industrial strategy.

The most powerful business voices have, to date, come from the developed world. Unexpected and fresh voices from different industries, different countries and regions are now needed to get ‘buy-in’ and acceptance from a broad range of countries which are concerned that tackling climate change should not hamper their ability to grow.

## About the author

**Jill Duggan** is an independent consultant and the founder of Carbon Policy Associates Ltd, and has long experience of working on climate and energy issues. From May 2016 to February 2018, she was director of The Prince of Wales's Corporate Leaders Group and director of the European Green Growth Platform. Jill has been deeply involved in the development of climate policy with the UK government and at the European Commission, and has worked extensively in the US and Canada. She was an executive committee member of Doosan Babcock, a technology provider to the energy industry, from 2011 to 2014. She has also been a board member of a diverse range of organizations, from the European Power Plant Suppliers Association to Sandbag, a global climate think-tank. She has a broad understanding of the opportunities and obstacles that face businesses and policymakers in tackling climate change. Jill has recently been appointed to the Advisory Group of the Economic and Social Research Council's Centre for Climate Change Economics and Policy.

---

# Independent thinking since 1920

Chatham House, the Royal Institute of International Affairs, is a world-leading policy institute based in London. Our mission is to help governments and societies build a sustainably secure, prosperous and just world.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or any information storage or retrieval system, without the prior written permission of the copyright holder. Please direct all enquiries to the publishers.

Chatham House does not express opinions of its own. The opinions expressed in this publication are the responsibility of the author(s).

Copyright © The Royal Institute of International Affairs, 2018

Cover image: Photo by Priscilla Du Preez, 'Climate Reality' via Unsplash, 2017

Cover image copyright © Priscilla du Preez

ISBN 978 1 78413 308 5