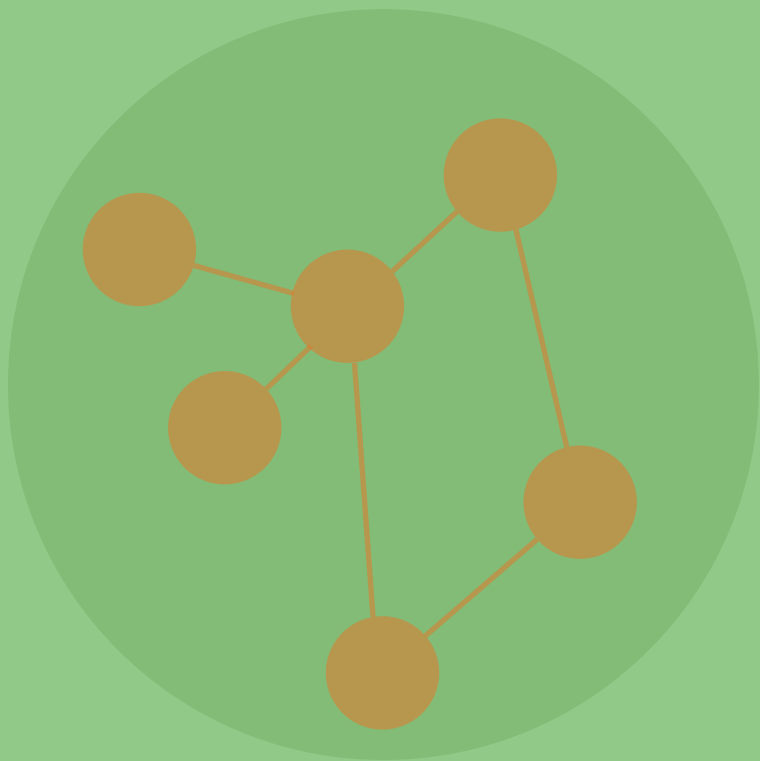


HARNESSING COMPANY CLIMATE ACTION BEYOND PARIS



Oscar Widerberg
Philipp Pattberg
FORES Study 2015:6



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Oscar Widerberg & Philipp Pattberg

Fores study 2015:6

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About Fores

The green and liberal think tank

FORES — Forum for Reforms, Entrepreneurship and Sustainability — is an independent think tank dedicated to furthering entrepreneurship and sustainable development through liberal solutions to meet the challenges and possibilities brought on by globalization and global warming. Fores' main activities are to initiate research projects and public debates that result in concrete reform proposals in relevant policy areas such as: environmental policy; migration; entrepreneurship; and economic policy.

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Philipp Pattberg is Professor for Transnational Environmental Governance and department head of the Department of Environmental Policy Analysis, Institute for Environmental Studies, Vrije Universiteit Amsterdam. His current research scrutinizes institutional complexity and fragmentation across environmental domains. He is co-chairing the Board

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About the study

This study has been published within the context of Fores' Climate and Environmental Policies program and the Fores Reference Group for International Climate Policy. The reference group gathers policy makers, companies, NGOs, negotiators, and academics together to discuss the international COP climate summits, their outcomes and their relevance for the industry, policy makers and society as a whole. Members of the reference group have provided, in writing and during meetings, valuable input to this study. In order to ensure the quality of all Fores studies, they are reviewed by at least two referees with expert knowledge on the topic. The authors are responsible for the conclusions of this study.

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Foreword

Companies Engagement is crucial

Every now and then a debate takes place as to whether companies should be allowed to participate in climate negotiation conferences. Some believe that their presence will dampen ambition. Others think that having business on board is crucial, and therefore welcome all companies who wish to join in on the deliberations.

While it is important to differentiate between companies, in general Fores believes that it is best to speak with all parties willing to listen. By engaging businesses, one gains a better understanding of their desires and worries. If the world is to one day be fossil fuel free, this means all companies have to be as well. By talking with and involving companies, the likelihood they will understand this eventuality increases.

Companies are not only interlocutors, but also key implementers of climate policy. All targets put on the table before COP21 in Paris need to be implemented; at least partially by companies. Yet in the discussions

leading up to Paris, the debate has often focused on the fact that companies are taking the lead. Specifically, many companies in different sectors are laying out more ambitious targets and are now waiting for governments to act.

This has led to a discussion about how the actions of companies, and other non-state actors like cities and regions, can help bridge the so-called ‘ambition gap’: the gap between current emissions and pledges and what is needed to keep global temperature from rising more than 2°C. In conjunction with COP20 in Lima, the UNFCCC launched the NAZCA database where companies and other non-state actors can submit their targets. This is part of the Lima-Paris Action Agenda – an attempt to create momentum before Paris.

In favoring the engagement of business in the establishment of a new international climate regime, it is crucial to also assess the role they can play in bridging the ambition gap. Philipp Pattberg and Oscar Widerberg, both at the Institute for Environmental Research at the Vrije Universiteit in Amsterdam, have greatly contributed to a more sound understanding of the potential businesses can have in regards to climate action.

Pattberg and Widerberg advocate a somewhat more sober approach to the potential of companies participating in cooperative initiative and targets. Real potential exists, but the assessment of ongoing initia-

tives illustrates that the results do not necessarily live up to the hype. Furthermore these scholars address the fact that additionality, or the idea that emissions reductions can be counted as additional to country targets, remain a challenge.

Although they do not wish to downplay the positive momentum created by the NAZCA database, the authors note the need for further transparency and initiative follow-up in order to augment the credibility of cooperative initiatives.

As we hope to demonstrate, although companies that set reduction targets do not greatly effect direct emission reduction potentials, they do have an indirect effect on the pledges made by countries. Should all companies live up to their targets, it is likely that countries will be more ambitious when updating their pledges. Even if company targets do not help bridge the 2020 or 2025 targets, they may prove useful in pushing countries to set targets that will bridge the ambition gap by 2030 or 2035.

Daniel Engström Stenson

Program Manager, Fores Climate and Environmental Policies

Chair of the Fores Reference Group on international Climate Policy

Executive summary

The inability of governments to steer the global community towards a safe de-carbonization pathway has left an ‘ambition gap’ between projected emissions levels and the goal of limiting global warming to 2° Celsius. In the run-up to COP21 in Paris, the private sector and its potential to help bridge this gap have drawn considerable attention. For instance, the Lima-Paris Action Agenda (LPAA) and the Non-State Actor Zone for Climate Action (NAZCA) have boosted attention, legitimacy, and research into non-state climate action by recording thousands of commitments made by cooperative initiatives comprised of hundreds of companies and investors.

This report explores companies’ climate actions by surveying past studies and new data on 2,111 companies spread across 101 cooperative initiatives in the NAZCA database¹ and the CONNECT project². Starting from

1. <http://climateaction.unfccc.int/>

2. www.fragmentation.eu

the premise that non-state action should be additional to government action in order to close the ambition gap, we focus on the discrepancies between potential and actual cooperative initiative participant performance.

This study illustrates how companies collaborate with one another – in addition to working with the government and civil society – which results in an intricate web of global climate governance. Within this emerging web, a few key players figure prominently. Leading companies like Unilever, Philips, and H&M have the potential to inspire others to cut emissions further by connecting different companies and investors in cooperative initiatives. Adding up estimates from several studies about such cooperative initiatives, we find potential GHG mitigation to range from 2.7 to 3.1 GtCO₂e by 2020. Should this potential be realized, it would provide a substantial contribution towards bridging the ambition gap.

Nonetheless, it is important to note that the distribution of companies researched here is heavily skewed towards the Global North and from sectors with relatively small emissions. Key companies have a patchy track-record in achieving net GHG reductions, and information on the actual performance of companies in cooperative initiatives is scarce. In fact, available ex-post data on emissions reductions paints a somber picture in which actual mitigation levels remain far below

estimated potential mitigation levels. Moreover, the impact of overlaps in participation between cooperative initiatives and the national accounts remains largely unknown. Available estimations diverge considerably.

To harness the massive potential of companies taking climate action, both in terms of direct GHG emissions reductions and through indirect actions like information exchange and influencing future country pledges, our study recommends five actions:

1. Develop common performance criteria for cooperative initiatives that accommodate the diversity of initiatives and actions, while simultaneously safeguarding the ability to tangibly assess the success/failure of reaching stated goals. Direct cuts in GHG emissions should be a criteria, however, since many cooperative initiatives do not aim to cut emissions, using a number of other output-based variables could prove interesting. To the utmost extent possible, performance criteria should be streamlined with available data registries in order to simplify and improve potential reporting procedures.

2. Make progress reporting using common criteria compulsory for cooperative initiatives featured on homepages and publications of international organizations (e.g., NAZCA). Compulsory reporting with common criteria should be put in place in return for the substantial good-will and positive exposure provided for those companies that engage in climate change action.

3. Carry out regular reviews of cooperative initiatives based on progress reporting and other previously developed performance criteria. This could be carried out by civil society actors, technical experts, and international organizations to assess progress towards commitments, as well as identifying leaders and laggards. Identifying success factors and challenges also enables learning and adaptation within the initiatives, possibly improving their performance.

4. Support key players by raising awareness about front-runners and champions. A ranking of key players in cooperative initiatives – according to a number of criteria like actual progress against concrete targets and scope of engagement – could induce a race-to-the-top situation where companies would compete to be climate action champions.

5. Provide encouragement and support for companies in developing countries to join cooperative initiatives so as to increase the involvement and ownership of companies in developing countries and their supporting governments. For this to succeed, information about cooperative initiatives and company involvement needs to become more accessible for UNFCCC member states. The LPAA could play a major role in this respect.

To summarize, we are cautiously optimistic about the increased integration of companies into the global climate change regime. Increased engagement by companies may, in the long run, help countries to over achieve or surpass their pledges, thus stimulating more ambitious pledges.

Companies are key in reducing emissions. Still, one should exercise caution when expecting companies' voluntary initiatives to close the ambition gap.

1. Introduction

National mitigation pledges made under the United Nations Framework Convention on Climate Change (UNFCCC) fall short of achieving the decarbonization pathways necessary to stay below the internationally agreed upon 2° Celsius warming above preindustrial levels. Even if the reductions in all greenhouse gas (GHG) emissions from pre-2020 policies could be realized, and all Intended Nationally Determined Contributions (INDCs) for 2025 and 2030 would be implemented, a substantial ‘ambition gap’ remains between actual and desired GHG trajectories (UNEP 2014; UNEP 2015b) (see Figure 1). Based on an assessment of 146 INDCs covering 86 % of global GHG emission, the UNFCCC Secretariat has forecasted that full implementation of current mitigation pledges would lead to 2.7° C warming by 2100 (UNFCCC 2015). How can we close this ambition gap by 2020

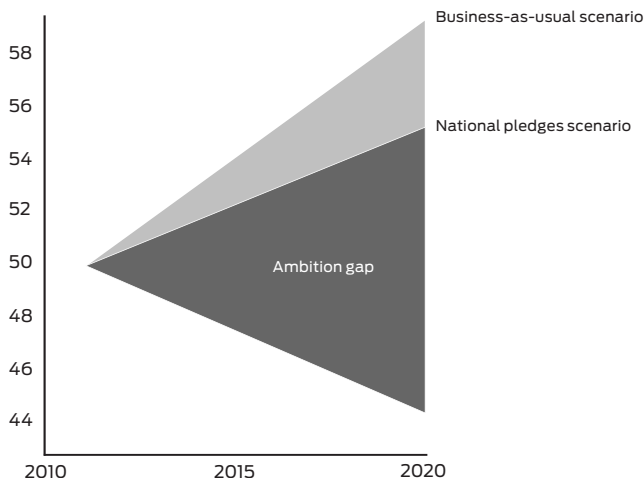


Figure 1. Stylized representation of the ambition gap (based on figure in Hsu et al., 2015)

and beyond? One prominent suggestion has been to harness the potential of the private sector. The past 15 years have witnessed a growing number of companies taking climate action such as: joining so-called cooperative initiatives with other actors (including states and non-governmental organizations), making public climate commitments, and showcasing practical solutions. Clearly some companies are choosing to become a positive force rather than obstructive agents in combatting climate change. For instance, Microsoft's 'Carbon Fee' model sets a company-wide

internal carbon price,¹ IKEA's €1 billion pledge to fight climate change,² and Unilever's high-profile engagement with sustainability issues³ exemplify climate action taken by companies.

The estimated mitigation potential of climate actions by companies is substantial. An impact assessment made by PwC on the Low Carbon Technology Partnership initiative (LCTPi), a cooperative initiative comprised of 140 companies and 50 partners, contends it could generate 65% of the global GHG reductions needed to achieve the 2 degree target (PwC 2015).

The role of private sector engagement has also been recognized by the UNFCCC. Since COP17 in Durban, governments have been discussing the role of companies in a Paris agreement under Workstream 2 in the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP 2). During COP20 in Lima in 2014, the 'Lima – Paris Action Agenda' (LPAA) was drafted by the Peruvian and French COP presidencies, the Office of the Secretary-General of the United Nations, and the UNFCCC Secretariat. The LPAA aims to boost non-state climate action taken by companies, investors, cities, and regions. In connection to the

1. <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>

2. <http://www.reuters.com/article/2015/06/04/us-ikea-climatechange-idUSKB-NoOKoNN20150604>

3. <http://uk.businessinsider.com/unilever-ceo-speaks-on-climate-change-2014-12?r=US&IR=T>

LPAA, a Non-State Actor Zone for Climate Action (NAZCA) was launched and placed on the UNFCCC homepage. This features a platform for companies and other non-state actors to show-case their climate commitments. To date, NAZCA contains over 700 companies engaging in 23 different cooperative initiatives.⁴

Yet if cooperative initiatives involving companies are going to bridge the ambition gap, they must generate substantial and tangible reductions in GHG emissions going beyond and adding onto national pledges. Why? If governments already count on companies achieving GHG mitigation as part of national pre and post 2020 pledges, then action that does not exceed national pledges leaves the ambition gap unchanged. Hence additionality is a key component for bridging this gap. Additionality is also an important factor for ensuring that mitigation commitments are fulfilled and accounted for by reducing incentives for free-riding behavior and 'green-washing'. The German carmaker Volkswagen, who was recently caught cheating on emissions controls, highlights the risks associated with an over-reliance on private governance, self-regulation, and voluntary action. Volkswagen had four different climate action promises registered in

4. Updated 15 November 2015

NAZCA.⁵ While this report focuses on additionality, we should mention that other perspectives on the role of companies and non-state actors in global climate governance exist. For example, non-state climate action can be perceived primarily as “supportive of national climate policy” (Chan, Van Asselt, et al. 2015) and as instruments for implementing and

How can we close this ambition gap by 2020 and beyond? In the run-up to the 21st Conference of the Parties (COP21) in Paris, one prominent suggestion has been to harness the potential of the private sector. The past 15 years have witnessed a growing number of companies taking climate action such as: joining so-called cooperative initiatives with other actors (including states and non-governmental organizations), making public climate commitments, and showcasing practical solutions. Clearly some companies are choosing to become a positive force rather than obstructive agents in combatting climate change. For instance, Microsoft’s ‘Carbon Fee’ model sets a company-wide internal carbon price, IKEA’s €1 billion pledge to fight climate change, and Unilever’s high-profile engagement with sustainability issues exemplify climate action taken by companies.

The estimated mitigation potential of climate actions by companies is substantial. An impact assessment

5. Volkswagen’s four commitments were later removed from the NAZCA database.

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This report advocates urgently to take stock and look ahead to the future when it comes to corporate

engagement in climate change governance. While positive expectations about companies' abilities to close the ambition gap are perhaps theoretically sound, to date few empirical assessments exist that substantiate these claims. This report is a step towards bridging this knowledge gap. Empirically, we focus on climate actions taken by companies through transnational cooperative initiatives, meaning they include participants from more than two countries or states.⁶ National climate initiatives, such as the Haga Initiative in Sweden and individual company commitments, are excluded from our analysis. In total we analyzed 2,111 companies across 101 cooperative initiatives. Of these, 1,336 companies were spread across 78 cooperative initiatives collected by the CONNECT project and the remaining 775 companies and investors participated in 23 cooperative initiatives recorded in the NAZCA database.

In order to assess the contribution of companies – both actual and potential – needed to bridge the ambition gap, we address three broad themes:

6. Data on cooperative initiatives comes from the 'CONNECT project', which is comprised of 78 cooperative initiatives (Pattberg et al. 2014; Dias Guerra et al. 2015), and NAZCA with 30 cooperative initiatives (<http://climateaction.unfccc.int/>). To a lesser extent, data from the 'transnational climate change governance initiatives' project (Bulkeley et al. 2014; Bulkeley et al. 2012) and the 'Climate Initiatives Platform' comprising roughly 200 initiatives (<http://climateinitiativesdatabase.org/>) has also been consulted. Data on companies was collected from the Amadeus database for European private and public companies and the CDP 500 for GHG emission data. To every possible extent, data from 2014 was used.

- First, we map the overall, and hitherto unknown, landscape of companies engaging in global climate governance. Their interactions with governments and other non-state actors are examined. Through this we identify the key leaders and crucial players.

- Second, we explore the theoretical potential to close the ambition gap and achievements related to this. Here, we also critically examine the additionality of company-based climate actions.

- Third, we explore transparency in cooperative initiatives to understand what's missing. This helps detect green-washing and to identify leaders and laggards. We discuss the fact that most cooperative initiatives are not primarily designed to directly mitigate emissions, but instead focus on information exchange, financing, capacity building, advocacy, and other things.

Key concepts and acronyms

Global climate governance architecture

Overarching system of public and private institutions in an issue area encompassing organizations, regimes, and other forms of principles, norms, regulations, and decision-making procedures (Biermann, et al. 2009).

CDP

Organization, formerly known as the Carbon Disclosure Project, holding the world's largest registry on self-reported data from global companies on GHG emissions, water, and forest data.

Climate commitment

Publicly expressed commitment made by a company to support a climate policy that leads to emissions reductions and/or a promise to mitigate GHG emissions from economic activities such as manufacturing, facilities, or transportation.

CONNECT project

Research project that began in 2013 to examine the fragmentation of climate environmental governance, including climate change.

Cooperative initiative

Joint commitments or actions by multiple partners aiming to mitigate climate change. In this report, it is used as a comprehensive term for what has been called “transnational climate change governance initiatives,” “climate experiments,” and “transnational climate institutions.”

NAZCA

The Non-State Actor Zone for Climate Action that was launched in 2014 alongside the Lima Paris Action Agenda (LPAA). It features a homepage stating the cooperative initiative and individual commitments made by companies, investors, cities, regions, international organizations, philanthropists, and countries.

2. PARTICIPATING PLAYERS

In this first section we position companies within the broader structure of global climate governance. Where do companies fit in the global climate governance architecture, which also consists of countries and NGOs? In which countries and sectors do we find the most companies engaging in cooperative initiatives? Do certain players emerge as more central than others?

2.1 COMPANIES INVOLVED IN GLOBAL CLIMATE GOVERNANCE

The growing involvement and visibility of companies and cooperative initiatives in global climate governance exemplifies a tendency to move away from state-led, top-down regulations, towards more hybrid and bottom-up approaches (Pattberg 2005; Levy and Newell 2004; Bernstein 2002; Zelli, Gupta,

and van Asselt 2012). As the willingness and capacity of governments to set, implement, and enforce global norms is challenged, we are witness to an ever-growing dominance of market-based instruments (e.g., carbon trading) that are preferred above ‘command-and-control’-style regulation (Conca 2005; Pattberg and Stripple 2008; Meckling 2011). Companies long focused on influencing policy through holding key positions in central organizations (Levy and Egan 1998; Newell and Paterson 1998) or lobbying national governments (Meckling 2011). The rise of cooperative initiatives, however, marks a shift towards the more public role of companies, as well as an increasing complexity how climate is governed globally. In an attempt to capture this growing complexity of global climate governance, the CONNECT project has mapped and arranged¹ 78 cooperative initiatives in a ‘governance triangle’(see Figure 2) and divided into seven zones depending on the type of participants like public authorities (states, cities, and regions), Civil Society Organizations (CSOs), and companies (Dias Guerra et al. 2015; Abbott and Snidal 2009).²

1. www.fragmentation.eu

2. For a comprehensive list of CONNECT project cooperative initiatives and their abbreviations, refer to Annex 1.

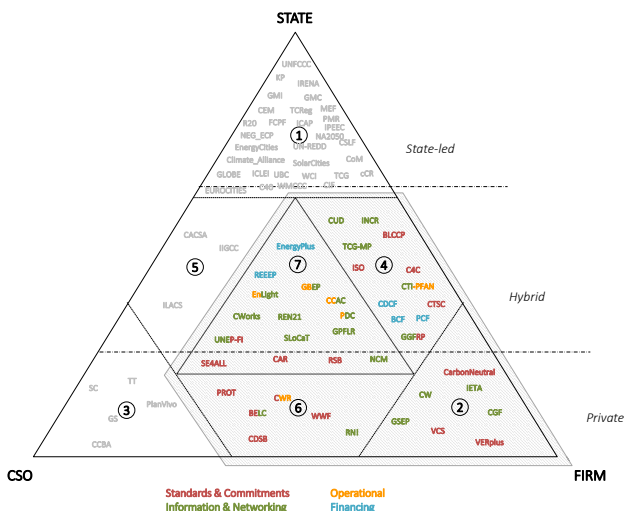


Figure 2. The CONNECT Project climate governance triangle
(based on Abbott and Snidal 2009a, 2009b,
and Abbott 2012; own data)

Participants with a governing function have been listed for each initiative. What results is a list of companies, CSOs, international organizations, and countries that engage more instrumentally, beyond simply making a commitment, in cooperative initiatives. To grasp how the initiatives connect, the 42 cooperative initiatives in zones 2, 6, 4, and 7 can be connected in a network diagram where initiatives sharing at least one member are linked.¹ The result is visualized below in Figure 3.

1. Four isolates have been removed. For more information on the methodology, please refer to Pattberg et al. 2014.

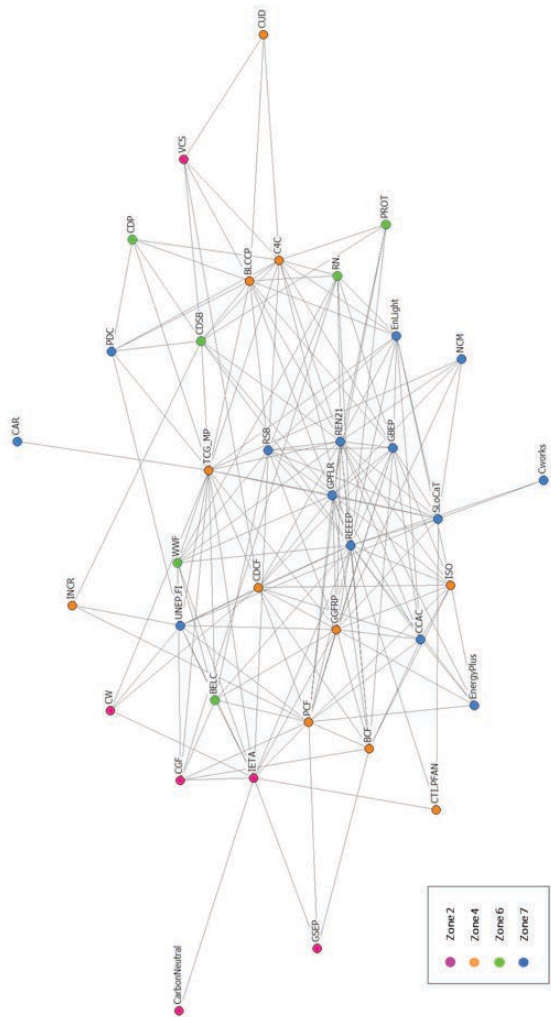


Figure 3. Network diagram of 42 collaborative initiatives connected by shared members

This demonstrates that cooperative initiatives are highly interconnected; companies and their partners rarely work in isolation and instead form an intricate web characterized by overlaps and connectivity. Figure 3 illustrates how companies engaging in the global climate governance architecture are more structurally connected than they are frequently perceived to be. They liaise with other state and non-state actors through cooperative initiatives by forming new collaborations with multiple partners. Hence companies form part of a dynamic system involving public and private actors, what we call an ‘architecture’, that underpins many of the emerging challenges we discuss in this report.

2.2 SECTORAL AND GEOGRAPHICAL DISTRIBUTION

Maximizing the potential benefits of cooperative initiatives means engaging large GHG emitting sectors in countries that already have high, or rapidly increasing emissions. In this section, we examine the sectoral and geographical distribution of companies participating in cooperative initiatives.

Examining sectoral distribution in the CONNECT project first, commercial services and consumer goods comprise the lion’s share of companies involved. The

number of utilities and energy companies involved is fairly small. For example, energy, utilities, and oil and gas represent only 6 % of the sample (see Figure 4). Examining the distribution of 1,159 individual commitments in NAZCA,¹ relevant emitting sectors like transportation make up 14% of the total number of commitments while energy and utilities represent a mere 13%. Hence, similar to the CONNECT project data, consumer goods and service industries represents the majority of companies involved in cooperative initiatives, at least in terms of absolute numbers.

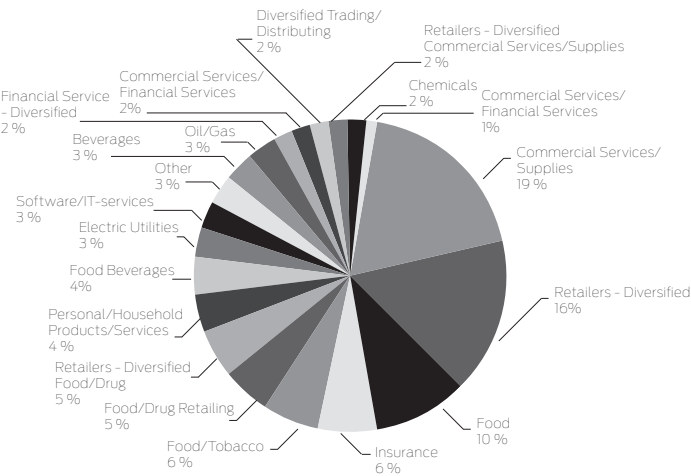


Figure 4. Sectoral distribution of companies in the CONNECT project data

1. Updated 2015 October 26.

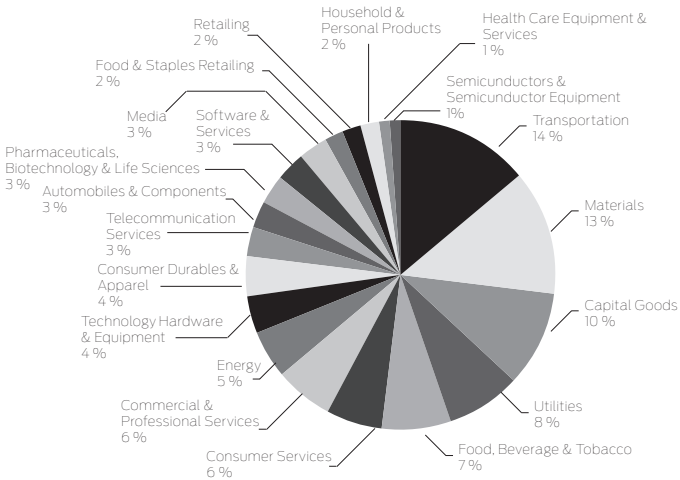


Figure 5. Sectoral distribution of companies making individual commitments in NAZCA

To summarize, we see that companies in consumer goods and services, retail, and financial services make up the greatest portion of participants in cooperative initiatives.

Second, we examined the geographical location of companies by plotting the frequency of their headquarters and found a skewed distribution towards the Global North and OECD countries (see Figure 6).

Geographical frequency of

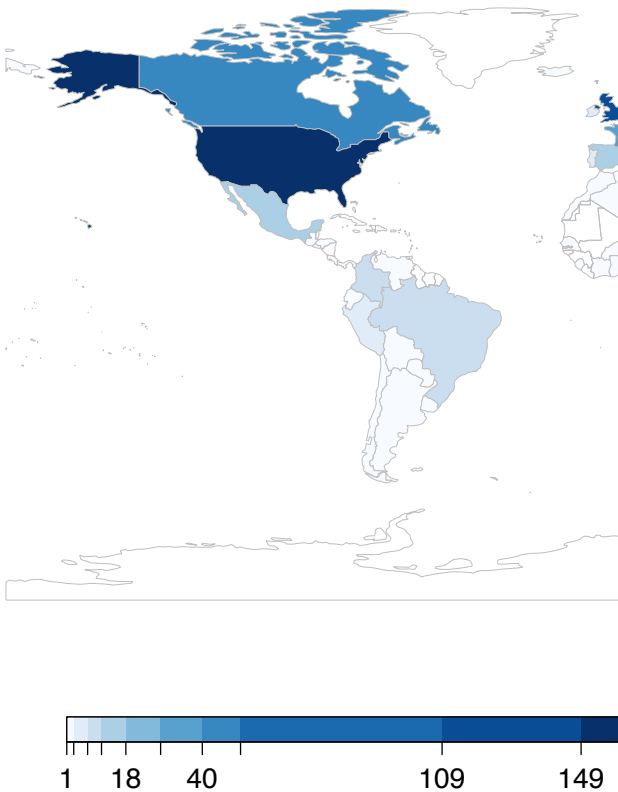
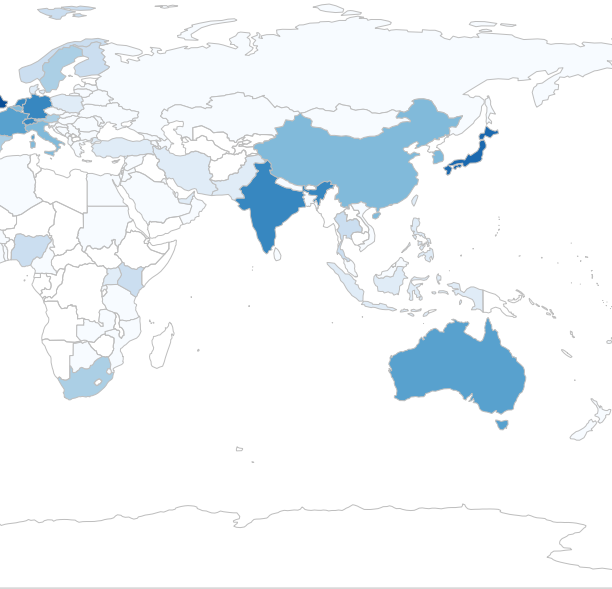


Figure 6. Distribution of headquarters for 1,825 companies from NAZCA and CONNECT data

companies in CONNECT and NASCA



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Companies headquartered in the US, France, the UK, and Sweden clearly dominate the geographical distribution of NAZCA. This confirms previous research on the bias of climate action by non-state actors towards developed countries (Bulkeley et al. 2014). It is interesting to note that active companies are not only situated in countries that take a leadership role in climate change negotiations, but also come from important laggards such as the US, Japan, and Australia.

Emerging economies such as China, India, and Brazil are also represented. This is significant because these are countries, unlike those in Europe, where emissions are increasing significantly. Moreover, in NAZCA, the dominance of companies from the Global North could arguably be considered a reason for countries in the Global South to resist further integration of non-state actors into the UNFCCC. Some developing countries, for instance the countries participating in the Bolivarian Alliance for the Peoples of Our America (ALBA) group, have expressed skepticism towards the increasingly visible role of companies in the negotiations. They fear that developed countries are trying to avoid their responsibilities from previous decisions, such as the promises made on climate finance or deviations from the principle of common but differentiated responsibilities. By further involving companies

located in the Global South and emerging economies, the legitimacy of the process could be increased by building trust through improved representation.

2.3 KEY PLAYERS

Moving from a macro-level to a micro-level, it is interesting to see if – among the thousands of companies participating in cooperative initiatives – any important players emerge. Instead of defining ‘importance’ by emission levels, number of employees, or annual turnover, we suggest that companies become central in the global climate governance architecture through their structural position within cooperative initiatives. A central structural position allows companies to function as gate-keepers, facilitators, and bridges between different groups. They become crucial actors in facilitating information and resource exchange upon which cooperative initiatives rely.

When calculating centrality among cooperative initiatives, it is useful to start with overlaps in membership by asking: Are there companies participating in several initiatives? Of NAZCA’s 775 companies and investors participating in 23 cooperative initiatives,¹ about 13% (100 companies and investors) participate in more than one cooperative

1. Updated 23 October 2015

initiative. Of the 775 companies, 65 participate in two initiatives, 24 participate in three initiatives, and 7 participate in four initiatives. The remaining four companies participate in four or more initiatives simultaneously. The companies participating in several initiatives can be said to ‘connect’ the 23 initiatives. These companies are called “connectors” and can act as gate-keepers between the initiatives for: exchanging information, transferring lessons learned, and encouraging participants in one initiative to join another initiative. For instance, peer-pressure has been found to be an important explanatory variable for companies who take environmental action (Delmas and Toffel 2004). Moreover, these connectors regularly act as orchestrators, leaders, and champions driving the creation and growth of cooperative initiatives (Hale and Roger 2014).

To locate the connectors, we first visualized the NAZCA data as a network diagram where cooperative initiatives (pink squares) are connected to and by companies (blue circles) (see Figure 7).

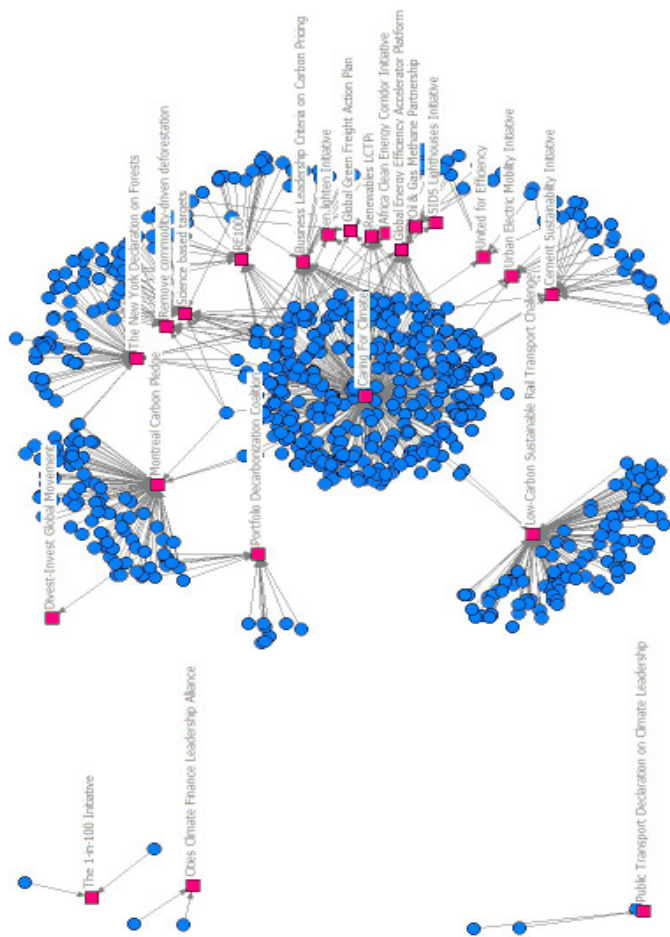


Figure 7 Network diagram of companies in NAZCA's 23 cooperative initiatives

Together, the 100 connectors tie 20 out of the 23 initiatives together into one network. Only three of the initiatives are so-called “isolates,” meaning they are not tied to the others. Only seven companies are not connected to the rest through shared connectors. The 100 connectors are good candidates for being key players. Network analysis allows for several measures of centrality to be calculated to locate these key companies. For instance, “degree centrality” tells us which companies have the most connections. Meanwhile “betweenness centrality” tells us which companies connect different parts of the network. Centrality measures can be calculated after changing the network from ‘2-mode’ to ‘1-mode’, meaning that we only visualize companies and connect them if they participate in the same cooperative initiatives.

In Figure 8, companies that participate in the same cooperative initiative are linked by a grey line. Overlapping membership in cooperative initiatives, degree, and betweenness have been calculated and the top-ten companies in each variable have been indicated in red.

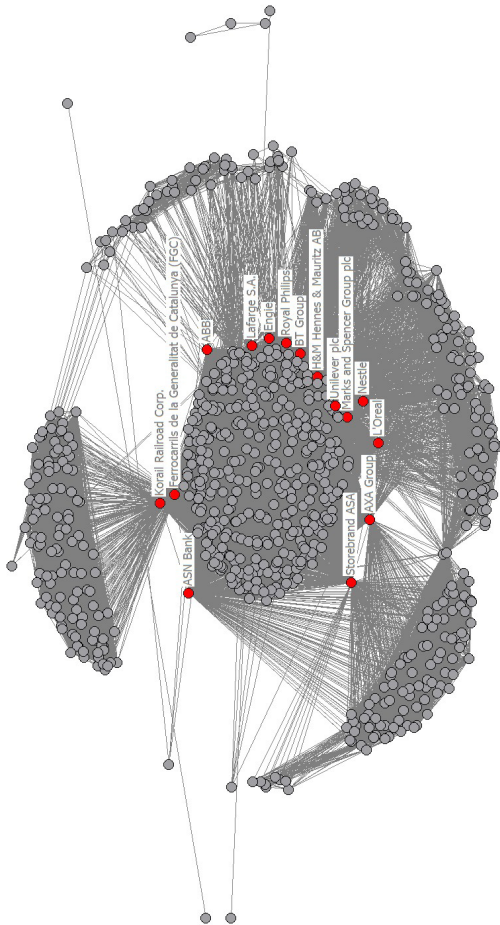


Figure 8. NAZCA's 15 companies with the highest centrality scores

According to the three measures described, 15 companies stand out as the most connected. The most active companies in NAZCA are Royal Philips (a member of seven initiatives) and Unilever and Nestlé (each members of six initiatives). By examining degree centrality, in the case of the NAZCA data, while the three top-scorers remain high in the rankings, we also uncover others like AXA Group, Ferrocarrils de la Generalitat de Catalunya (FGC), and Korail Railroad Corp. Finally looking at betweenness, namely the companies that connects different communities to one another, we find again the AXA Group, Ferrocarrils de la Generalitat de Catalunya (FGC), and Korail Railroad Corp. topping the list as central players.

To gain a better understanding of what type of companies engage heavily in cooperative initiatives and/or hold key positions in these networks, we collected a series of basic data, including: turnover, number of employees, individual commitments, cooperative initiatives, and GHG emission trends (see Table 1).

Company	Description ¹	Initiatives ²	Commitments ³	Emissions (CO ₂ e) ⁴
Unilever	<ul style="list-style-type: none"> British-Dutch consumer goods company Employs more than 173,000 people Annual turnover of almost \$65 billion 	<ul style="list-style-type: none"> Business Leadership Criteria on Carbon Pricing Caring for Climate RE100 Science Based Targets Remove commodity-driven deforestation The New York Declaration on Forests 	<ul style="list-style-type: none"> Issue \$410 million in green bonds for projects on energy efficiency and sustainable and international water management Put CO₂ emissions from factories below 2008 levels by 2020 (44% reduction). Reduce emission intensity from manufacturing operations by 39% by 2020. 	<ul style="list-style-type: none"> Reduced direct emission from 1.1Mt in 2011 to 1.0Mt in 2013 and their indirect emissions from 1.5Mt to 0.9Mt.
Nestlé	<ul style="list-style-type: none"> Swiss food and beverage giant Employs over 339,000 people Annual turnover of \$100 billion. 	<ul style="list-style-type: none"> Caring for Climate RE100 Science Based Targets Criteria on Carbon Pricing The New York Declaration on Forest Business Leadership Criteria on Carbon Pricing 	N/A	<ul style="list-style-type: none"> Reduced direct CO₂ emissions from 3.9Mt in 2011 to 3.7Mt in 2013, while in the same period increased indirect emissions from 3.1Mt to 3.4Mt.

1. All financial data was from Forbes, 2014 except for the data about Korail, Engie, and ASN bank. Here we used each company's respective website to gather data.

2. NAZCA cooperative initiatives.

3. NAZCA individual commitments.

4. Self-reported data from GDP 500, company homepages, and company reports.

Company	Description	Initiatives	Commitments	Emissions (CO2e)
L'Oreal	<ul style="list-style-type: none">• Cosmetics and beauty company• Employs 78,600 people,• Annual turnover nearly \$30 billion.	<ul style="list-style-type: none">• Caring for Climate RE100• Science Based Targets The New York Declaration on Forest	<ul style="list-style-type: none">• Reduce operational emissions by 60% by 2020.	Data not available
AXA Group	<ul style="list-style-type: none">• French investment banking firm,• Employs over 98,000 people,• Annual turnover over \$153 billion	<ul style="list-style-type: none">• Caring for Climate• Science Based Targets• Remove commodity-driven deforestation Montreal Carbon Pledge	<ul style="list-style-type: none">• Reduce internal CO2 intensity from power, travel, and paper consumption by 25 % per full-time employee between 2012 and 2020.	<ul style="list-style-type: none">• Significant drop from 0.24Mt in 2011 to 0.17Mt in 2013.
Marks & Spencer Group	<ul style="list-style-type: none">• British retailer,• Almost 86,000 employees,• Annual turnover over \$17 billion.	<ul style="list-style-type: none">• Caring for Climate• Science Based Targets• Remove commodity-driven deforestation• The New York Declaration on Forest	<ul style="list-style-type: none">• Reduce CO2 emission intensity across value chain by 35 % between 2q 007 and 2015.	<ul style="list-style-type: none">• Reduced carbon footprint by 24 % over the past 7 years.

Company	Description	Initiatives	Commitments	Emissions (CO2e)
Storebrand ASA	<ul style="list-style-type: none"> • Caring for Climate • Montreal Carbon Pledge • Portfolio Decarbonization Coalition 	<ul style="list-style-type: none"> • Caring for Climate • RE100 • Science Based Targets • The New York Declaration on Forest 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Increased its CO2 emissions by 0.9% (equivalent to 10.4t) in 2014.
ASN Bank	<ul style="list-style-type: none"> • Dutch ASN Bank, • Employs 144 employees, • Turnover not found, profit margin of €58.6 million in 2014. 	<ul style="list-style-type: none"> • Caring for Climate • Montreal Carbon Pledge 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Data not available
Lafarge	<ul style="list-style-type: none"> • French cement producer • Employees just over 63,000 people • Annual turnover of \$17.1 billion. 	<ul style="list-style-type: none"> • Caring for Climate • Cement Sustainability Initiative • Business Leadership Criteria on Carbon Pricing 	<ul style="list-style-type: none"> • Reduce CO2 emissions by 33% per ton cement by 2020 	<ul style="list-style-type: none"> • Total emissions output of over 106Mt in 2013. Total emission increase of 1.5% from 104.7Mt in 2011 to 106.3Mt in 2013.
Korail Railroad Corp.	<ul style="list-style-type: none"> • -South Korean railway company, turnover was €1.3 billion (2013). 	<ul style="list-style-type: none"> • Caring for Climate • Low-Carbon Sustainable Rail Transport Challenge 	<ul style="list-style-type: none"> • Reduce operational CO2 intensity by 9.7% from 2007 till 2020 	<ul style="list-style-type: none"> • Data not available

Company	Description	Initiatives	Commitments	Emissions (CO2e)
Ferrocarrils de la Generalitat de Catalunya (FCG)	<ul style="list-style-type: none">Spanish railway company⁵	<ul style="list-style-type: none">Caring for ClimateLow-Carbon Sustainable Rail Transport Challenge	N / A	Data not available
Royal Philips	<ul style="list-style-type: none">Dutch electronics company,105,000+ employees,Annual turnover of \$29.7 billion	<ul style="list-style-type: none">Caring for ClimateRE100Science Based Targets The New York Declaration on Forest driven Deforestation Business Leadership Criteria on Carbon PricingGlobal Energy Efficiency Accelerator Platform	<ul style="list-style-type: none">Improve operational efficiency and reduce emission from operations, travel, and logistics by 40% by 2015	<ul style="list-style-type: none">Small increase in direct emissions from 0.42Mt in 2011 to 0.44Mt in 2013, but reduced indirect emissions from 0.47Mt to 0.41Mt. Overall decrease of around 5% from 2011-2013.
BT Group	<ul style="list-style-type: none">British telecommunications companyEmploys 87,800 peopleIts 2014 turnover was \$29.6 billion.	<ul style="list-style-type: none">Caring for ClimateRE100Science Based TargetsBusiness Leadership Criteria on Carbon Pricing	<ul style="list-style-type: none">Maintain annual emission reduction of 80% below 1997.80% reduction of emission intensity in ton of CO2 per million pound added value by 2020	<ul style="list-style-type: none">Strong reduction, from 1.5Mt in 2012 to 0.39Mt in 2013, representing an almost 75% decrease.

5. Information not available

Company	Description	Initiatives	Commitments	Emissions (CO2e)
H&M	<ul style="list-style-type: none"> • Swedish retail company • Over 93,000 employees • 2014 turnover of more than \$22 billion. 	<ul style="list-style-type: none"> • Caring for Climate • RE100 • Science Based Targets • Remove commodity-driven Deforestation 	<ul style="list-style-type: none"> • Reduce emission intensity of store electricity consumption by 20%/m2 by 2020 	<ul style="list-style-type: none"> • 22% increase in the company's total emissions from 0.28Mt in 2011 to 0.34Mt in 2013.
ABB	<ul style="list-style-type: none"> • Automation company based in Switzerland • Employs around 140,000 people • 2014 turnover over \$40 billion 	<ul style="list-style-type: none"> • Caring for Climate • Global Energy Efficiency Accelerator Platform • Renewables LCTPI • United for Efficiency 	<ul style="list-style-type: none"> • N / A 	<ul style="list-style-type: none"> • 14% increase in total emissions from 1.46 Mt in 2011 to 1.67 Mt in 2013.
Engie	<ul style="list-style-type: none"> • French electricity and utility company • Employing almost 153,000 • Annual turnover €74.7 billion (2014). 	<ul style="list-style-type: none"> • Caring for Climate • Business Leadership Criteria on Carbon Pricing • Global Energy Efficiency Accelerator Platform • Renewables LCTPI 	<ul style="list-style-type: none"> • Reduce direct CO2 emissions from Belgian electricity generation by 2% from 2007-2015 	<ul style="list-style-type: none"> • Data not available

All 15 key players except for one (Korail) are based in Europe. Among the rest, there is a large variation in terms of sectors, size, turnover, GHG emissions, and reduction ambitions. For instance, the number of employees range from anywhere from 144 at ASN Bank to over 390,000 employees at Nestlé. Annual turnover ranges USD \$1.5 billion at Korail to AXA Group's turnover of more than USD \$150 billion.

The picture is also quite uneven in terms of mitigation commitments. Storebrand ASA's annual emissions sits at 1180.4 t CO₂ and is nearly 2,000 times lower than AXA Group's emissions, which, in turn, is the lowest emitter in the CDP 500.¹ Lafarge, on the other hand, emitted GHGs nearly equal to that of the Czech Republic. Ten out of the 15 key players have made one or more individual pledge that include specific reduction targets and timeframes. Some companies sign on for several schemes whereas others sign up for just one. Trends in GHG emissions are equally scattered, even in light of a slight overall increase. CDP data was available for seven key players – Unilever, Nestlé, BT Group, ABB, AXA Group, H&M, Lafarge and Royal Philips – with mean direct emissions from 2011-2013 ranging widely. At one end was H&M's 0.014Mt compared to Lafarge's 96.3Mt. Similarly, in

1. CDP 500 records GHG emissions by the world's 500 largest listed companies and publicly available via the CDP's homepage

terms of indirect emissions, the mean range is 0.14Mt for the AXA Group and 8.6Mt for Lafarge. Despite decreased overall emissions from Unilever and AXA Group, the total seven company average increased from 12.8Mt (sd = 33.8Mt) in 2011 to 12.9 (sd = 34.1Mt) in 2013. This can largely be attributed to Lafarge's large and increasing total emissions, particularly in indirect emissions from 2011-2013. Both H&M and Royal Philips increased their emissions whereas Nestlé's indirect emissions increased at the same rate as its direct emissions decreased, in the same time-period.

The top 15 companies examined in our analysis vary significantly in terms of size, turnover, and GHG mitigation performance. Clearly several companies have accomplished considerable reductions in their operations, however, the majority have either increased or stabilized their emissions. Given their function as role-models and gate-keepers for information exchange between initiatives, this is somewhat worrisome. This is a missed opportunity where companies could have a multiplier effect by showcasing how to accomplish net GHG reductions in their operations. Finally, acknowledging the miniscule emission levels of some leading companies in our sample, like that of AXA Groups versus that of Lafarge, suggests that companies might have other competencies and specializations in mitigating climate

change other than simply reducing GHG emissions. Other standards for assessing the performance of AXA Group, for example, might be more appropriate. We will return to this issue in Section 4.

3. ACHIEVING EMISSION REDUCTIONS

In this section we zoom out to the macro-level and examine the potential versus actual emission reductions of cooperative initiatives. We review a series of estimations on how large the emission reductions could be and compare them with what we know about realized mitigation. We also engage with the question as to whether mitigation, specifically through cooperative initiatives, is additional to national pledges, policies, and INDCs.

3.1 THE EMISSIONS REDUCTION POTENTIAL OF COOPERATIVES INITIATIVES

Positive expectations vis-à-vis cooperative initiatives are fueled by studies estimating their GHG mitigation potential. The first estimates were published in a paper

in Nature and suggested that 21 ‘fictive’ sector-based initiatives could mitigate 17[±]3 Gt CO₂e by 2020 (Blok et al. 2012), which exceeds the emission gap by 5 Gt CO₂e by 2020. The authors propose eight initiatives directed towards businesses, specific business sectors, and industry organizations that could mitigate 5.7 Gt CO₂e by 2020.

Initiative	Assumption	Potential (Gt CO₂e)	Proposed existing Initiative/ organization
Emissions reduction	30% of top 1,000 global emitters reduce 10% below BAU	0.7	World Business Council for Sustainable Development
Supply-chain emission reductions	30% of top 1,000 global emitters reduce 10 % below BAU	0.2	Consumer Goods Forum
Green financial institutions	20 largest banks reduce carbon footprint of 10% of their assets by 80%	0.4	UNEP-FI
Voluntary offsetting	20% of light industry and commercial sector offset their emissions	2.0	
Cars and trucks	Globally save 1 additional liter per 100 km in 2020	0.7	
Wind energy	Additional 650 GW of wind capacity	1.2	
International aviation and maritime transport	50% is assumed implementation of potentials defined in other studies	0.2	
Fluorinated gases	Half of the technical mitigation potential	0.3	Refrigerants, Naturally!
TOTAL		5.7	

These ‘fictive’ initiatives range from business-wide collaborations, like emission reductions and supply-chain measures, to more sector specific initiatives like cars and trucks and fluorinated gases. The initiative with the largest single impact in the study – 35% of the total mitigation potential from businesses – comes from voluntary emissions offsetting in light industry and commercial sectors. This 2012 study injected discussions about cooperative initiatives into the public debate by suggesting that there is a significant emission potential available independent of the struggling UNFCCC negotiations.

Moving from the sphere of fictive to existing cooperative initiatives, at least three studies have estimated these emission reduction potentials. Cambridge Institute for Sustainability Leadership (CISL) and Ecofys examine five initiatives: the Cement Sustainability Initiative; en.lighten; the Tropical Forest Alliance 2020; WWF Climate Savers; and Refrigerants, Naturally! (CISL and Ecofys 2015). Additionally, UNEP studied 15 initiatives from sub-national authorities of which six business initiatives are included: the Business Environmental Leadership Council (BELC); Cement Sustainability Initiative (CSI); World Wide Fund for Nature (WWF) Climate Savers; Ultra-Low CO₂ Steelmaking (ULCOS); Caring for Climate; and Science Based Targets. Finally, Hsu

and colleagues study five initiatives with quantifiable targets including: the Africa Clean Energy Corridor; Sustainable Energy for All Global Energy Efficiency Accelerator Platform (SE4ALL); Small Island Developing States Lighthouse Initiative; Compact of Mayors; and the New York Declaration on Forests. In Table 3, the mitigation potential for each of the initiatives is listed.

Initiative	Mitigation potential (MtCO₂ e) by 2020	Source	Launched
Cement Sustainability Initiative	60 – 160	CISL & Ecofys, 2015 ¹	1999
en.lighten	60 40 – 70	CISL & Ecofys, 2015 UNEP, 2015	2009
Tropical Forest Alliance 2020	20 – 200	CISL & Ecofys, 2015; UNEP, 2015	2012
WWF Climate Savers	10 – 32	CISL & Ecofys, 2015	1999
Refrigerants, Naturally!	0.0 – 0.7	CISL & Ecofys, 2015	2004
Global Gas Flaring Reduction Partnership (GGFR)	100	UNEP, 2015	2002

1. Numbers represent scenarios based on current conditions, i.e., no “scaling up” or other “possible” futures are taken into account in the report.

Initiative	Mitigation potential (MtCO₂ e) by 2020	Source	Launched
CCAC Oil and Gas Methane Partnership	30	UNEP, 2015	2014
The Climate-smart Investment Initiative	340	UNEP, 2015	2014
Africa Clean Energy Corridor	0.000042	Hsu et al., 2015	2014
Sustainable Energy for All Global Energy Efficiency Accelerator Platform	1750	Hsu et al., 2015	2014
New York Declaration on Forests	330.1	Hsu et al., 2015	2014
TOTAL	2740 - 3073		

Aggregating the numbers, UNEP concludes that, in total, 2.5 to 3.3 GtCO₂e could be mitigated from the 15 initiatives in their study (UNEP 2015a). CISL and Ecofys estimated the potential of the five initiatives they examined to approximately total 200 MtCO₂e, with a possibility to increase up to 500 MtCO₂e. Consequently, in the most optimistic scenario, the initiatives examined here have limited prospects of

bridging the global ambition gap of 8-12 GtCO₂e. Hsu and colleagues arrive at 2.54 Gt CO₂e in potential mitigation by 2020.

Adding all the estimations¹ gives us a range of 2.740 to 3.073 GtCO₂e by 2020, thus providing a substantial contribution towards bridging the ambition gap. To achieve this, however, the mitigation potential needs to be harnessed and cooperative initiatives need to generate actual GHG reductions.

3.2 THE ACHIEVED GHG REDUCTION OF COOPERATIVE INITIATIVES

The previous sections discussed estimations of potential mitigation from participating in cooperative initiatives based on: assumptions about rates of implementing commitments, number of participants and scale-effects, future energy scenarios, etc. To adequately assess whether these commitments are being realized by initiative partners requires ex-post data. Unfortunately such data is largely unavailable, thus examining the passage from potential to actual GHG mitigation from cooperative initiatives proves highly difficult. This is particularly salient given that most initiatives were launched recently, many as late as 2014.

1. Note that only cooperative initiatives with a strong business component have been included in the overview. Cooperative initiatives engaging sub-national authorities, for instance, are excluded.

By examining only those initiatives that began before 2010, the chances that ex-post data is available increases. In Table 2, five initiatives began before 2010: the Cement Sustainability Initiative (1999); WWF Climate Savers (1999); Global Gas Flaring Reduction Partnership (GGFR) (2002); Refrigerants, Naturally! (2004); and en.lighten (2009). We found ex-post data for three of these initiatives: the Cement Sustainability Initiative (1999); WWF Climate Savers (1999); and Refrigerants, Naturally!

- The Cement Sustainability Initiative: The CSI reports that its participants have reduced their emissions by 19% since 1990, equaling 114 MtCO₂e. CSI attributes this to both innovation in production processes as well as efficiency improvements and renewable fuel substitutions (2015). In CSI's 2012 progress report, despite a reduction of 16% in emissions per ton of product (WBCSD 2012), an increase in 39% of CO₂ emissions was detected due to production increases. The cumulative effects of 20+ years of sectoral innovation is significantly less than the estimated potential of an annual decline, ranging from 60 to 160 MtCO₂e (see Table 2).

- WWF Climate Savers: According to one review, the program partners abated over 100 MtCO₂e during

from 1999-2011 (Ecofys 2012). If averaged over the 12 years Climate Savers has been in place at the time of writing, the annual achieved mitigation amounts to roughly 8 MtCO_{2e}. This falls just below the lower range of the initiative's mitigation potential by 2020 (see Table 2). Hence reaching full potential would require a quadrupling of the achieved mitigation.

- Refrigerants, Naturally!: Widerberg and Pattberg (2015) note that, according to self-reported data, partners in Refrigerants, Naturally! have achieved a 1.2 million CO_{2e} in actual reductions. This represents around 0.4% of the estimated mitigation potential of reducing fluorinated gases estimated by Blok and colleagues.

Thus the performance of companies in cooperative initiatives appears to fall short of their estimated potentials. This suggests that joining an initiative is not providing sufficient incentives to lower emissions. A handful of studies try to assess the impact of joining arrangements similar to cooperative initiatives on companies. For example, firms participating in the now defunct Chicago Climate Exchange (CCX) – at the time the largest voluntary GHG cap-and-trade market – only marginally reduced their emissions when compared to non-participating firms (Matisoff

2012). Matisoff finds no effect when firms join the Carbon Disclosure Project (CDP), a voluntary carbon management scheme. Brouhle and colleagues have found that Canadian companies participating in the Verified Carbon Standard (VCS+) – a carbon accounting system – did not outperform non-participating companies in 2004, as recorded in the Canadian Mandatory Greenhouse Gas Reporting Program (2010). Climate Wise,² a voluntary US-based program intended to reduce GHG footprint and increase R&D in climate friendly technologies, shows similarly dismal results among participating firms (Brouhle, Graham, and Harrington 2013). Examining patent applications, Brouhle and colleagues (2013) find some evidence that Climate Wise has promoted innovations among companies with low R&D spending from the outset.

To summarize, current information about the performance of cooperative initiatives is patchy at best. The available ex-post information on emission reductions paints a somber picture of actual mitigation levels, which remain far below estimated potential mitigation levels. The effects of a company joining a cooperative initiatives is also questionable, with little proof of a substantial shift in emission trends.

2. This is not to be confused with ClimateWise, an insurance industry initiative started in 2007 and run by University of Cambridge's Institute for Sustainability Leadership (CISL)

Hence harnessing cooperative initiatives' potential in terms of GHG mitigation requires a radical break with current trends in company emission patterns and performance in similar voluntary arrangements.

3.3 OVERLAPS AND ADDITIONALITY IN COOPERATIVE INITIATIVES

In our section on Participating Players, we show how 100 companies participate in more than one cooperative initiative in NAZCA. The overlap in membership creates unclear accounting rules and augments the risks for double-counting when assessing the mitigation potential and performance of cooperative initiatives. For example, Unilever – a Climate Performance Leader according to the CDP (2014) – participates in six cooperative initiatives and has registered three individual commitments in NAZCA. It has over 173,000 employees and 400 different brands. Since 2010, Unilever has increased its net global emissions by 4%, but reduced its emissions in manufacturing by 43% in relative terms compared to a 1995 baseline (Unilever 2015). In the case of Unilever, when manufacturing, transport, and consumption are global, to what initiative, region, city, or country should such achievements be attributed?

Bridging the ambition gap requires mitigation achievements to be additional to current national policies and the future implementation of the INDCs (Widerberg and Pattberg 2015), otherwise there will be no change to the status quo. Studies examining the overlap between cooperative initiatives and governments' policies and pledges, however, have yielded some dramatically divergent results. In 2015, UNEP (2015a, 25) concluded that "the overlap between the impact of non-state action and the impact of policies related to pledges is uncertain, but most likely not more than one third of the total impact of non-state action." UNEP carried out its analysis based on assumptions and modelling using potential impacts given certain technologies and the effectiveness of policies and pledges in place. Another recent analysis, conducted by the Dutch Environmental Assessment Agency (PBL), reached a rather different conclusion stating: "The overlap between pledges and international initiatives is estimated to be 70%." (Roelfsema, Harmsen, and Olivier 2015). The overlap is large enough to call into question the potential for cooperative initiatives to significantly help bridge the ambition gap.

The discrepancies between UNEP's and PBL's reports and conclusions likely depend on case selection and demonstrate just how difficult it is to quantify

additionality. UNEP includes 15 cooperative initiatives taken from the Climate Initiative Database. PBL include another set of 16 initiatives. They share only two cases: C40 and the Cement Sustainability Initiative (CSI), which are illustrative for the studies' different approaches. For CSI, PBL assumes that in a baseline scenario the initiative's participants will increase emissions by 20% from 2010-2020, and a 20% reduction is a best-case scenario. The UNEP report bundles the CSI's mitigation potential with other companies and thus does not provide specific figures. The CSI authors conclude, based on a small sample of individual cases, that "companies appear to be on track to meet their emission reduction commitments" (UNEP 2015a, 9) which averages 22.6% by 2020. Yet the projections of both reports seem to contradict CSI's own numbers suggesting an increase in GHG emissions from the participating companies. Why? Despite large efficiency gains in GHG intensity over the past 20 years, they attribute this rise in emissions due to increasing production levels. Hence, in the case of CSI, the mitigation achievements based on technical innovation disappear when accounting for rebound effects.³

Finally, both UNEP and PBL estimate the effect of

3. The "Rebound Effect" is a term used in energy and environmental economics where the expected efficiency gains from technology change are offset by behavioral change (e.g., more production due to market gains).

an overlap in mitigation potential between cooperative initiatives to be small. For instance, UNEP finds only a 2% overlap between cities and business, a 10% overlap between regions and business, and a 6% overlap between lighting and business (UNEP 2015a). PBL reaches a similar conclusion, only accounting for overlaps in the same country and the same sector. Again, estimating the overlaps between cooperative initiatives is heavily influenced by a selection bias since the few quantitative assessments made tend to select cases from different sectors and constituencies. Our analysis of key players in Section 2 demonstrates a considerable overlap in participation between the initiatives, with roughly 13% (100 companies and investors) taking part in more than one cooperative initiative.

The discussion on additionality emanates from the notion that companies can contribute to bridging the ambition gap left by insufficient governmental de-carbonization. Since projections estimating the impacts of the current INDCs for 2025 and 2030 show that the gap is likely to persist in the medium-term (UNEP 2015b), additional efforts are urgently needed. The potential from GHG mitigation from cooperative initiatives is clearly substantial, but ex-post data on the performance of these initiatives, and the unclear magnitude of overlaps between national accounts and

initiatives, highlights the importance of using caution when making projections.

4. Transparency

The sobering performance of cooperative initiatives to date raises questions about the added value of providing companies with the good-will and legitimacy created by the UNFCCC through the LPAA. Some would argue that the very framing of cooperative initiatives as ‘additional’ could be questioned since climate action by companies and other non-state actors simply contributes and supports countries in achieving their national policies and INDCs. Ultimately, countries are responsible and any mitigation could be counted in the national account of the country where it is achieved. On the hand Companies, at least as reported in the CDP, calculate their emission reductions on a group level. The mismatch between accounting levels and responsibility is confusing and creates ample opportunity for free-riding behavior. Companies can simply make voluntary commitments

without having to justify or report on their actions. Moreover, many, if not most, cooperative initiatives are not geared directly towards GHG mitigation, instead viewing this as a co-benefit. In the Montreal Carbon Pledge, for example, “investors commit to measure and publicly disclose the carbon footprint of their investment portfolios on an annual basis.”¹ What this assumes is that information disclosure will prompt behavioral change among the signatories and, perhaps, their clients. Consequently, measuring the performance of the Montreal Carbon Pledge by only looking at GHG mitigation would be unfair since their goals are related to other types of changes.

In this section, we discuss transparency as a means to reduce the dangers of company green-washing behavior as well as the potentials/challenges for using performance metrics other than GHG emissions.

4.1 TRACKING CURRENT AND FUTURE GHG MITIGATION REDUCTIONS

Ensuring transparency is key to lessening free-riding behavior. However, there is currently no common platform for providing transparent information on ongoing and future GHG emission reductions achieved

1. <http://montrealpledge.org/>

by the participants of cooperative initiatives. Yet, new tracking mechanisms are proliferating and becoming more accessible. Aside from business sectors included in emission trading where reporting is compulsory and standardized, over the past 10 years voluntary reporting to carbon registries such as the CDP have grown significantly in scale and scope. The CDP is perhaps the best known carbon registry for companies. It surveys companies on their carbon emissions, and has grown from just over 1,300 respondents in 2007 (Kolk, Levy, and Pinkse 2008) to over 5,000 respondents in 2014. The CDP questionnaires include GHG emissions but also collect other data such as: climate related investments and strategies, perceptions of climate risks, and carbon intensity. CDP is also expanding their reporting to include supply-chain measures, forest and water related actions, and enabling cities to begin reporting too.

Several other reporting standards and registries operate in addition to or in cooperation with the CDP. For example, the Greenhouse Gas Protocol, Investors on Climate Change, and the Climate Bonds Initiative all allow different types of businesses to report their actions, investments, and emissions. NAZCA – the UN-supported platform for non-state climate action – has capitalized on this wealth of information by sharing the business data from the CDP, Investors on

Climate Change, UN Global Compact, and the Climate Bonds Initiative on their website. This provides a first step towards a monitoring system for cooperative initiatives and their participants. Since NAZCA was only recently launched, it will take some time to assess whether it is a useful source of information. Still, this will heavily depend on the quality of the data input from businesses, which has proven to be a challenge in the past. Matisoff and colleagues (2013), for example, find that from 2003-2010 the quality of reporting to the CDP was mixed. They even found that some industries showed a negative trend in transparency levels over time.

4.2 MEASURING NON-EMISSION RELATED COMMITMENTS

The limited set of cooperative initiatives with quantifiable GHG mitigation targets suggest that most initiatives have different goals, other than directly reducing emissions. Yet, such non-emissions related initiatives have goals that indirectly could mitigate GHGs. Cooperative initiatives that, for example, support pricing carbon, promote carbon disclosure, or improve information exchange among partners, have a different theory of change than those aiming for direct

emission cuts. As such, the criteria and indicators used for tracking progress should be different than those measuring impact in terms of CO₂e reduction or energy use. Instead, performance could be measured at output level by assessing the concrete and tangible products and activities of a particular cooperative initiative. High output does not necessarily lead to changes in outcomes (at the behavioral level) or impact, but it at least provides insight into the level of activity.

The recently launched Global Aggregator for Climate Action (GAFCA) tries to capture performance in cooperative initiatives beyond emissions reductions. GAFCA focuses on 53 initiatives launched during the New York Climate Week in September 2014. Data is being collected on multiple descriptors, including: actors, function, geographical representation, and organizational characteristics. A key variable for measuring performance is the output level indicator called ‘Function-Output-Fit (FOF)’ (Pattberg et al. 2012). The FOF variable links the function or aim, as stated by the cooperative initiative, and its output (i.e., its actions). Subsequently, the researchers assess whether there is a ‘fit’ between the function and the output. An effective initiative is thus one which has a clear output suitable to its function (Chan, Falkner, et al. 2015). The GAFCA researchers findings indicate that about 13% were led by business and industry and

1 out of every 9 participants comes from the business community. A majority of initiatives assessed, around 65%, have “full functional output fit” or “partial fit,” which demonstrates a fairly positive development after only one year of inception.

GAFCA is a welcome contribution towards understanding the performance of cooperative initiatives in a broader sense, beyond just GHG emissions. Its methodological framework builds on previous research carried out by social scientists that have substantially increased our understanding of business’ and other non-state actors’ roles in climate governance over the past 10 years (e.g., Pattberg et al. 2012; Bulkeley et al. 2014; Hoffmann 2011). A key challenge to these type of data collection projects is to create continuity and increase the reliability of the data collected. Each update of the database also requires significant time and effort from analysts. Building a methodology and reliable process for monitoring cooperative initiatives, similar to repositories for individual commitments such as CDP, is urgently needed given their increasing role in reaching global climate governance goals.

5. A way forward

Climate action taken by thousands of companies who have joined cooperative initiatives and publishing climate pledges has been a source of positive momentum for the struggling UNFCCC deliberations. To many observers, company actions can make a welcome contribution towards bridging the gap left after insufficient national government de-carbonization commitments. We have shown how several studies estimate the substantial potential companies have for closing this ambition gap.

However, we have also shown the moderate results of current initiatives, namely: how individual companies are able to reduce the carbon intensity of their products, but not net their emissions. Furthermore we have demonstrated how little data exists to date on the actual performance of cooperative initiatives in terms of GHG reductions. Moreover, the geograp-

hical and sectoral distribution of companies is heavily skewed towards industries providing consumer goods and services in the Global North, thus omitting large emitters and emerging economies that are crucial to solving the problem.

Our argument, that additionality is key if cooperative initiatives are to bridge the emission gap, is easy to make in theory, but difficult to evaluate in practice. It opens up a range of accounting challenges, such as to count (or not) all emissions in national accounts, or if actions by multinational companies should be assessed by their additionality. Some would argue that additionality is an inappropriate lens to use given cooperative initiatives exist to boost state actions and increase governments' ambitions (and hence should not to be considered 'additional'). Their purpose is commonly not to directly mitigate GHG emissions, but instead to engage in secondary climate activities such as providing information, finances, moral support, and technologies for others to mitigate their emissions. In that case, the performance standards need to be adjusted and based on the goals of each initiative.

Yet when goals and performance measurements are opaque or non-existent, the risk for free-riding and 'green-washing' behavior increases. Also, all commitments are voluntary thus there is little

opportunity to enforce accountability in case pledges are not kept. When the UNFCCC provides a platform such as the LPAA and NAZCA, it lends substantial legitimacy and good-will to companies without asking for anything in return. It is thus a fairly low-cost/high-return investment for any company to join a cooperative initiative, or even make an individual commitment.

The challenges to retaining the positive momentum of private sector engagement in climate change are numerous, yet there is still great potential to be harnessed. To tackle the challenges, we suggest focusing on the following five improvements:

1. Develop common performance criteria for cooperative initiatives that accommodate the diversity of initiatives and actions, while simultaneously safeguarding the ability to tangibly assess the success/failure of reaching stated goals. Direct cuts in GHG emissions should be a criteria, however, since many cooperative initiatives do not aim to cut emissions, using a number of other output-based variables could prove interesting. To the utmost extent possible, performance criteria should be streamlined with available data registries in order to simplify and improve potential reporting procedures.

2. Make progress reporting using common criteria compulsory for cooperative initiatives featured on homepages and publications of international organizations (e.g., NAZCA). Compulsory reporting with common criteria should be put in place in return for the substantial good-will and positive exposure provided for those companies that engage in climate change action.

3. Carry out regular reviews of cooperative initiatives based on progress reporting and other previously developed performance criteria. This could be carried out by civil society actors, technical experts, and international organizations to assess progress towards commitments, as well as identifying leaders and laggards. Identifying success factors and challenges also enables learning and adaptation within the initiatives, possibly improving their performance.

4. Support key players by raising awareness about front-runners and champions. A ranking of key players in cooperative initiatives – according to a number of criteria like actual progress against concrete targets and scope of engagement – could induce a race-to-the-top situation where companies would compete to be climate action champions.

5. Provide encouragement and support for companies in developing countries to join cooperative initiatives so as to increase the involvement and ownership of companies in developing countries and their supporting governments. For this to succeed, information about cooperative initiatives and company involvement needs to become more accessible for UNFCCC member states. The LPAA could play a major role in this respect.

Annex

Zone	Acronym	Name
1	C40	C40
1	cCR	carbonn Climate Registry
1	CEM	Clean Energy Ministerial
1	CIF	Climate Investment Funds
1	Climate_ Alliance	Climate Alliance of European Cities with Indigenous Rainforest Peoples
1	CoM	Covenant of Mayors
1	CSLF	Carbon Sequestration Leadership Forum
1	EnergyCities	Energy Cities
1	EUROCITIES	EUROCITIES
1	FCPF	Forest Carbon Partnership Facility
1	GLOBE	GLOBE International
1	GMC	Global Mayors Compact
1	GMI	Global Methane Initiativwe
1	ICAP	International Carbon Action Partnership
1	ICLEI	ICLEI - Local Governments for Sustainability
1	IPEEC	International Partnership for Energy Efficiency Cooperation
1	IRENA	International Renewable Energy Agency
1	KP	Kyoto Protocol
1	MEF	Major Economies Forum
1	NA2050	North America 2050
1	NEG_ECP	New England Governors and Eastern Canadian Premiers' Annual Conference
1	PMR	Partnership for Market Readiness
1	R20	R20
1	SolarCities	Solar Cities

Zone	Acronym	Name
1	TCG	The Climate Group States and Regions
1	TCReg	The Climate Registry
1	UBC	Union of Baltic Cities
1	UN_REDD	The UN-REDD Programme
1	UNFCCC	United Nations Framework Convention on Climate Change
1	WCI	Western Climate Initiative
1	WMCCC	World Mayors Council on Climate Change
2	CarbonNeutral	CarbonNeutral Protocol
2	CGF	The Consumer Goods Forum
2	CW	ClimateWise
2	GSEP	Global Sustainability Electricity Partnership (formerly the E8)
2	IETA	International Emissions Trading Association
2	VCS	Verified Carbon Standard (formerly the Voluntary Carbon Standard)
2	VERplus	VER+
3	CCBA	Climate, Community and Biodiversity Alliance (CCB Standard)
3	GS	The Gold Standard
3	PlanVivo	Plan Vivo
3	SC	SOCIALCARBON
3	TT	Transition Towns
4	BCF	BioCarbon Fund
4	BLCCP	The Business Leadership Criteria on Carbon Pricing
4	C4C	UN Global Compact Caring for Climate
4	CDCF	Community Development Carbon Fund
4	CTI-PFAN	Climate Technology Initiative PFAN
4	CTSC	Carbon Trust Standard for Carbon
4	CUD	Connected Urban Development

Zone	Acronym	Name
4	GGFRP	Global Gas Flaring Reduction Partnership
4	INCR	Investor Network on Climate Risk
4	ISO	ISO GHG Accounting Standards 14064-14065
4	PCF	Prototype Carbon Fund
4	TCG_MP	The Climate Group (Member Principles)
5	CACSA	Global Alliance for Climate-Smart Agriculture
5	IIGCC	Institutional Investors Group on Climate Change
5	ILACS	International Leadership Alliance for Climate Stabilization
6	BELC	Pew Business Environmental Leadership Council
6	CDP	Carbon Disclosure Project
6	CDSB	Climate Disclosure Standards Board
6	CWR	Carbon War Room
6	PROT	Greenhouse Gas Protocol
6	RN!	Refrigerants, Naturally!
6	WWF	WWF Climate Savers
7	CAR	Climate Action Reserve
7	CCAC	Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants
7	Cworks	Climate Works Best Practices Network
7	EnergyPlus	International Energy and Climate Initiative
7	EnLight	En.Lighten
7	GBEP	Global Bioenergy Partnership
7	GPFLR	The Global Partnership on Forest and Landscape Restoration
7	NCM	Networked Carbon Markets Initiative
7	PDC	Portfolio Decarbonization Coalition
7	REEEP	Renewable Energy and Energy Efficiency Partnership

Zone	Acronym	Name
7	REN21	The Renewable Energy Policy Network for the 21st Century
7	RSB	The Roundtable on Sustainable Biofuels (RSB Standard)
7	SE4ALL	Sustainable Energy for All
7	SLoCaT	Partnership on Sustainable Low Carbon Transport
7	UNEP-FI	UNEP Finance Initiative

BIBLIOGRAPHY

- Abbott, Kenneth W., and Duncan Snidal. 2009a. "The Governance Triangle: Regulatory Standards Institutions and the Shadow of the State." In *The Politics of Global Regulation*, eds. Walter Mattli and Ngaire Woods. Princeton: Princeton University Press. http://www.asil.org/files/abbotsnidal_march2008.pdf.
- Becker, Claudia. 2014. "Clever Cooling vs. Global Warming." presented at the Refrigerants, Naturally! Cool Partnership, Webinar, April 14. <http://www.unep.org/ozonaction/InformationResources/OzonActionWebinar/2014/RefrigerantsNaturallyCoolpartnership/tabid/816780/Default.aspx>.
- Bernstein, Steven. 2002. "Liberal Environmentalism and Global Environmental Governance." *Global Environmental Politics* 2 (3): 1–16.
- Blok, Kornelis, Niklas Höhne, Kees van der Leun, and Nicholas Harrison. 2012. "Bridging the Greenhouse-Gas Emissions Gap." *Nature Climate Change* 2 (7): 471–74.
- Brouhle, Keith, Brad Graham, and Donna Ramirez Harrington. 2013. "Innovation under the Climate Wise Program." *Resource and Energy Economics* 35 (2): 91–112. doi:10.1016/j.reseneeco.2012.12.002.
- Brouhle, Keith, and Donna Ramirez Harrington. 2010. "GHG Registries: Participation and Performance Under the Canadian Voluntary Climate Challenge Program." *Environmental & Resource Economics* 47 (4): 521–48. doi:10.1007/s10640-010-9391-4.
- Bulkeley, Harriet, Liliana Andonova, Michele M. Betsill,

- Daniel Compagnon, Thomas Hale, Matthew J. Hoffmann, Peter Newell, Matthew Paterson, Charles Roger, and Stacy D. VanDeveer. 2014. *Transnational Climate Change Governance*. New York, USA: Cambridge University Press.
- CDP. 2014. "The CDP Climate Performance Leadership Index 2014." London, UK: CDP. <https://www.cdp.net/CDPResults/CDP-climate-performance-leadership-index-2014.pdf>.
- Chan, Sander, Robert Falkner, Harro Asselt, Matthew Goldberg, and Jade Zhao. 2015. "Galvanizing Climate Action: A Progress Assessment of Climate Actions Launched at the 2014 Climate Summit in New York." Grantham Research Institute on Climate Change and the Environment (DIE).
- Chan, Sander, Harro Van Asselt, Thomas Hale, Kenneth W. Abbott, Marianne Beisheim, Matthew Hoffmann, Brendan Guy, et al. 2015. "Reinvigorating International Climate Policy: A Comprehensive Framework for Effective Nonstate Action." *Global Policy* (November 2015), Forthcoming. http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2654214.
- CISL, and Ecofys. 2015. "Better Partnerships: Understanding and Increasing the Impact of Private Sector Initiatives."
- Conca, Ken. 2005. "Old States in New Bottles? The Hybridization of Authority in Global Environmental Governance." *The State and the Global Ecological Crisis*, 181–205.
- CSI. 2015. "Publication of the CSI GNR 2013 Data." <http://www.wbcdcement.org/index.php/en/news-stories/2015/459-publication-of-the-csi-gnr-2013-data>.
- Delmas, Magali, and Michael W. Toffel. 2004. "Stakeholders and Environmental Management Practices: An

- Institutional Framework.” *Business Strategy and the Environment* 13 (4): 209–22.
- Dias Guerra, Flavia, Oscar Widerberg, Philipp Pattberg, and Marija Isailovic. 2015. “Mapping the Institutional Architecture of Global Climate Change Governance.” Technical Paper R15-09. Amsterdam, the Netherlands: Institute for Environmental Studies (IVM).
- Ecofys. 2012. “The Carbon Impact of WWF’s Climate Savers Programme.” http://www.ecofys.com/files/files/ecofys_2012_carbon_impact_wwf’s_climate_savers.pdf.
- Hale, Thomas N., and Charles Roger. 2014. “Orchestration and Transnational Climate Governance.” *The Review of International Organizations* 9 (1): 59–82.
- Hoffmann, M. 2011. *Climate Governance at the Crossroads : Experimenting with a Global Response after Kyoto: Experimenting with a Global Response after Kyoto*. Oxford University Press.
- Kolk, Ans, David Levy, and Jonatan Pinkse. 2008. “Corporate Responses in an Emerging Climate Regime: The Institutionalization and Commensuration of Carbon Disclosure.” *European Accounting Review* 17 (4): 719–45.
- Levy, David L., and Daniel Egan. 1998. “Capital Contests: National and Transnational Channels of Corporate Influence on the Climate Change Negotiations.” *Politics and Society* 26: 337–62.
- Levy, David L., and Peter J. Newell. 2004. *The Business of Global Environmental Governance*. MIT press.
- Matisoff, Daniel C. 2012. “Privatizing Climate Change Policy: Is There a Public Benefit?” *Environmental and Resource Economics* 53 (3): 409–33. doi:10.1007/s10640-012-9568-0.
- Matisoff, Daniel C., Douglas S. Noonan, and John J.

- O'Brien. 2013. "Convergence in Environmental Reporting: Assessing the Carbon Disclosure Project." *Business Strategy and the Environment* 22 (5): 285–305. doi:10.1002/bse.1741.
- Meckling, Jonas. 2011. "The Globalization of Carbon Trading: Transnational Business Coalitions in Climate Politics." *Global Environmental Politics* 11 (2): 26–50.
- Newell, Peter, and Matthew Paterson. 1998. "A Climate for Business: Global Warming, the State and Capital." *Review of International Political Economy* 5 (4): 679–703.
- Pattberg, Philipp. 2005. "The Institutionalization of Private Governance: How Business and Nonprofit Organizations Agree on Transnational Rules." *Governance* 18 (4): 589–610.
- Pattberg, Philipp, Frank Biermann, Sander Chan, and Aysem Mert. 2012. *Public-Private Partnerships for Sustainable Development: Emergence, Influence and Legitimacy*. Cheltenham; Northampton, Ma: Edward Elgar.
- Pattberg, Philipp, and Johannes Strippel. 2008. "Beyond the Public and Private Divide: Remapping Transnational Climate Governance in the 21st Century." *International Environmental Agreements: Politics, Law and Economics* 8 (4): 367–88.
- Pattberg, Philipp, Oscar Widerberg, Marija Isailovic, and Flavia Dias Guerra. 2014. "Mapping and Measuring Fragmentation in Global Governance Architectures: A Framework for Analysis." Report R-14/34. Amsterdam: IVM Institute for Environmental Studies.
- PwC. 2015. "Low Carbon Technology Partnerships Initiative: Impact Analysis." <http://lctpi.wbcsdservers.org/wp-content/uploads/2015/11/LCTPi-PWC-Impact-Analysis.pdf>.

- Roelfsema, Mark, Mathijs Harmsen, and Jos Olivier. 2015. "Climate Action Outside the UNFCCC." Policy Brief. The Hague: PBL Netherlands Environmental Assessment Agency.
- UNEP. 2014. "The Emission Gap Report 2014." Nairobi, Kenya: United Nations Environment Programme (UNEP).
- . 2015a. "Climate Commitments of Subnational Actors and Business: A Quantitative Assessment of Their Emission Reduction Impact." Nairobi, Kenya: United Nations Environment Programme (UNEP).
- . 2015b. "The Emissions Gap Report 2015 – Executive Summary." Nairobi, Kenya.
- UNFCCC. 2015. "Global Response to Climate Change Keeps Door Open to 2 Degree C Temperature Limit." UNFCCC. <http://newsroom.unfccc.int/unfccc-newsroom/indc-synthesis-report-press-release/>.
- Unilever. 2015. "Greenhouse Gases." Unilever Global Company Website. <https://www.unilever.com/sustainable-living/the-sustainable-living-plan/reducing-environmental-impact/greenhouse-gases/>.
- WBCSD. 2012. "10 Years of Progress - Moving on to the next Decade." Cement Sustainability Initiative.
- Widerberg, Oscar, and Philipp Pattberg. 2015. "International Cooperative Initiatives in Global Climate Governance: Raising the Ambition Level or Delegitimizing the UNFCCC?" *Global Policy* 6 (1): 45–56.
- Zelli, Fariborz, Aarti Gupta, and Harro van Asselt. 2012. "Horizontal Institutional Interlinkages." In *Global Environmental Governance Reconsidered*, edited by Frank Biermann and Philipp Pattberg, 175–98. Cambridge Massachusetts: MIT Press.

Addendum

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Abbott, K.W. and D. Snidal, 2009b. Strengthening International Regulation through Transnational New Governance: Overcoming the Orchestration Deficit. Vanderbilt Journal of Transnational Law 42, 1-80.

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Abbott, K.W. 2012. The Transnational Regime Complex for Climate Change. Environment & Planning C: Government & Policy, 30(4), 571-590.

The inability of governments to steer the global community towards a safe de-carbonization pathway has left an ‘ambition gap’ between projected emissions levels and the goal of limiting global warming to 2° Celsius. Private sector initiatives have therefore come to be seen as a potential way to help bridge this gap.

This report explores companies’ climate actions by surveying past studies and new data on 2,111 companies spread across 101 cooperative initiatives. Starting from the premise that non-state action should be additional to government action in order to close the ambition gap, it focuses on the discrepancies between potential and actual cooperative initiative participant performance.

The study concludes that company climate actions create a positive momentum for broader climate action. However, the authors also note the need for further transparency and initiative follow-up in order to augment the credibility of cooperative initiatives.