

# Briefing

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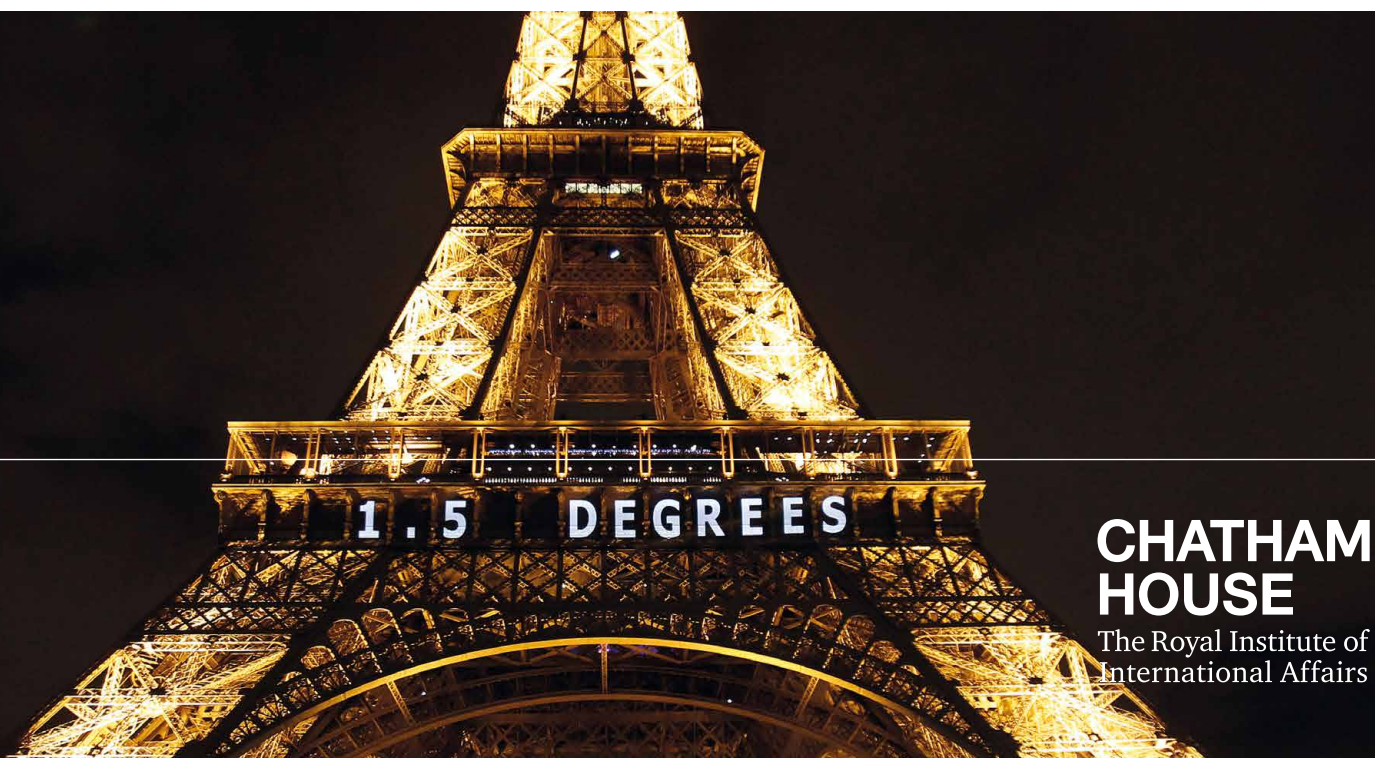
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## Post-Paris: Taking Forward the Global Climate Change Deal

### Summary

- The Paris Agreement, reached at COP21, was a triumph of diplomacy. The deal can be characterized as: *flexible*, combining a ‘hard’ legal shell and a ‘soft’ enforcement mechanism; *inclusive*, as it was adopted by all 196 parties to the UNFCCC and is therefore the first truly global climate deal; *messy*, as the bottom-up process of creating nationally determined contributions means the system is unstandardized; *non-additive*, as the contributions do not currently deliver the agreement’s stated long-term goal of keeping the rise in global average temperature to ‘well below 2°C’; and *dynamic*, as the deal establishes a ratchet mechanism that requires more ambitious contributions every five years.
- The next five years are critical for keeping the below 2°C goal within reach. A ‘facilitative dialogue’ starting in 2018 will give states the opportunity to revisit their contributions in advance of the agreement entering into force in 2020. International forums, such as the G7 and G20, can play a crucial role in kick-starting these efforts.
- The ‘coalitions of the willing’ and clubs that were launched under the Lima-Paris Action Agenda provide an innovative space for state and non-state actors to unlock transformational change. However, it is important that these groups set specific and measurable targets to ensure effective delivery of objectives.
- The post-Paris regime implies a significant role for civil society organizations. However, in many countries the ‘safe operating space’ both for these organizations and for the media is shrinking. Expanding the capacity of civil society and the media in areas such as communications, litigation, project implementation and technical expertise will be important if they are to support the regime effectively.



### Introduction

The Paris Agreement, reached at the 21st Conference of the Parties (COP21) in December 2015, was a triumph of diplomacy – one achieved not just in the corridors of Le Bourget in Paris but at dogged negotiations over six years following the low point of Copenhagen in 2009, when talks collapsed amid chaos and confusion. If Copenhagen was the nadir of global summitry, Paris was its resurrection. Glacial progress in other international forums, such as the World Trade Organization, had led many to question the future of multilateralism. A new climate deal to which nearly 200 countries have agreed shows that the UN system can still deliver meaningful progress on critical issues.

Diplomacy was crucial. The successive COP presidencies of Peru and France, supported by the tireless efforts of the UN Framework Convention on Climate Change (UNFCCC) Secretariat, were instrumental to the success of Paris. The global diplomatic network of France, which established a climate change representative in every major embassy around the world, provided the capacity needed to align all the major governments and manage expectations appropriately. But diplomacy was not confined to formal intergovernmental channels. Non-state actors, including think-tanks, NGOs and business groups, played a crucial role, too: these institutions led from the front, generating ideas and shaping national political conditions that contributed to an enabling environment for deal-making.

Besides diplomacy, a number of other factors contributed to the success of Paris:

**Technological progress.** Since Copenhagen, the low-carbon economy has gone from being a largely theoretical concept to becoming a practical reality. In 2015 renewable energy attracted nearly \$286 billion of investment globally; and for the first time ever, more new capacity was created for this sector than for fossil fuels.<sup>1</sup> There is a growing sense in government and business that it is now a question of when, not if, the low-carbon transition will occur – and as a result competitiveness concerns are receding and government ambition is increasing. This dynamic was reinforced by multiple commitments from business and finance leaders in the run-up to Paris.

**Alignment between the two largest emitters.** One of the key obstacles to a breakthrough at Copenhagen was the gulf between the mutual expectations of the United States and China, and the failure to bridge

that gulf during the final hours of negotiations. That experience was not repeated at Paris. Indeed, sustained bilateral climate diplomacy in the months preceding COP21 – exemplified by joint announcements in 2014 and 2015 of targets and expectations for the deal – ensured that both countries came to Paris with compatible agendas. Crucially, this alignment of the world's two largest emitters signalled to other countries that a deal was within reach.

### Inevitably, the compromises of the Paris Agreement make it both a huge achievement and an imperfect solution to the problem of global climate change.

**Political pragmatism.** The Paris outcome was the result of genuine negotiation and compromise – the dynamics of previous eras of UNFCCC talks, typified by maximalist positions, intransigence and retrenchment, were conspicuously absent. The result was a pragmatic deal based on bottom-up action and mutual accountability between states. This stands in marked contrast with the top-down, legally binding framework of the Kyoto Protocol, which the European Union (EU) and others sought to replicate at Copenhagen. In one sense, the Paris deal could be characterized as trading architectural integrity for political feasibility. But hard international law is something of an oxymoron: many governments failed to meet their Kyoto commitments without penalty, and Canada abandoned its obligations entirely with no consequence; thus it is questionable how much this trade-off cost in reality. Its benefits, however, are clear: it allowed major countries to sign up to the deal; it averts the need for the US Senate to pass an 'advice and consent' vote to allow for ratification (this would require a two-thirds majority and would be unlikely to succeed); and it avoids imposing unacceptable new obligations on big emerging economies, such as India and China, by allowing them to 'nationally determine' their contributions.

Inevitably, the compromises of the Paris Agreement make it both a huge achievement and an imperfect solution to the problem of global climate change. This paper considers Paris's achievements and imperfections, as well as the emergent global regime that COP21 has delivered. In addition, it identifies key implications for future climate action.

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<sup>1</sup> FS School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance (2016), *Global Trends in Renewable Energy Investment 2016*, [http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres\\_0.pdf](http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres_0.pdf) (accessed 5 Apr. 2016).

## Characterizing the new global climate regime

The Paris outcome lays the foundations for a new global climate regime. It has three components:

**1. The Paris Agreement.** This is a legally binding framework that enters into force in 2020, once at least 55 countries accounting in total for at least 55 per cent of global emissions have acceded to it. Its stated long-term goal is to hold ‘the increase in the global average temperature to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels’, and to ‘achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century’.<sup>2</sup>

In pursuit of this goal, Parties are obligated to submit to a registry their ‘Nationally Determined Contributions’ (NDCs),<sup>3</sup> which set out their pledges for climate action every five years. In addition, the agreement establishes a transparency framework for monitoring, reporting and verifying country actions.

**2. A COP decision.** This includes a number of important elements that, combined, define a pre-2020 agenda with immediate effect (for more details, see below). It also includes language on the divisive issue of climate finance, which ‘*strongly urges* developed country Parties to scale up their level of financial support, with a concrete roadmap to achieve the goal of jointly providing USD 100 billion annually by 2020’. Furthermore, it provides decisions to enhance capacity-building measures for developing countries and to support technology development and transfer.

**3. The Lima-Paris Action Agenda.** This consists of a range of informal commitments, primarily from non-state actors (companies, investors, and regional and municipal authorities). The dynamic behind this agenda was a key element of diplomatic efforts in the run-up to Paris, and it will need to be preserved if momentum is to be sustained. To this end, a UN summit of leaders from government, business, cities and civil society is to be held in Washington in May 2016.

Below we explore the key characteristics of the new regime. It can be described as:

### Flexible

Although the Paris Agreement is binding, the outcomes that governments are aiming to achieve are not. So while

governments are legally obligated to periodically produce and register NDCs, they are not legally obligated to achieve them. As noted above, this differs from the pre-Copenhagen aspiration for a top-down, legally binding agreement, although whether it is a weakness – given the problems of enforcement – is debatable. Indeed, some have argued that the lack of an enforcement mechanism may mean that states are free to make more ambitious pledges than would otherwise be the case.

In essence, the Paris Agreement provides a flexible system that combines a ‘hard’ legal shell with a ‘soft’ enforcement mechanism. However, this is not to say that there will be no legal enforcement. In keeping with the new regime’s bottom-up nature, the agreement is likely to be enforced at the national level, where law is, in any case, harder. Some governments have already announced plans to enshrine their NDCs in law, while many others are legislating on key policies and targets. A state that is flagrantly failing to deliver on its NDC can expect a significant deterioration in its soft power; and, in response, other governments could choose to impose soft or hard sanctions, ranging from criticism through to some form of trade sanction (e.g. border tax adjustments that take into account the higher carbon intensity of the offending state’s exports).

Given its sensitivity to political realities, this hybrid system is likely to be durable and may prove to serve the regime well. However, it leaves open important questions about how monitoring and enforcement will operate in practice. These issues are further explored below.

### Inclusive

All 196 parties to the UNFCCC adopted the Paris Agreement at COP21. For the first time, the world has a truly global climate deal by which developed and developing countries alike are bound.

Such inclusiveness was enabled by political pragmatism. The agreement includes the principle of ‘common but differentiated responsibilities’, which has been at the heart of historical tensions about how to differentiate obligations for developed and developing countries (and where the distinction between ‘developed’ and ‘developing’ should be drawn). But the bottom-up process for generating NDCs provides for ‘self-differentiation’, which means that the tensions that divided countries during the Copenhagen negotiations can be avoided, even if the issues underlying those tensions are not necessarily fully resolved.

<sup>2</sup> UNFCCC (2015), ‘Adoption of the Paris Agreement: Proposal by the President’, Draft Decision, 12 December 2015, <https://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf> (accessed 13 Apr. 2016).

<sup>3</sup> Strictly speaking, the term ‘Intended Nationally Determined Contributions’ (INDCs) applies at present – ‘NDCs’ will apply from 2020 onwards. However, for the sake of simplicity, this paper uses only the term ‘NDCs’.

In addition, the Paris Agreement provides space for actions by non-state actors through the Lima-Paris Action Agenda. If the momentum among businesses, financial institutions, cities and regions is maintained after Paris, the agenda is likely to prove an important source of climate action, albeit one that raises some challenges for the regime.

**Messy**

Because the NDCs were generated by a bottom-up process, they are wholly unstandardized. Some include an absolute emissions reduction from a chosen reference year, some a proposed peak year for emissions, and others a deviation from business as usual. Some are economy-wide, while others relate only to selected sectors. Some include other elements related to finance and adaptation. This lack of standardization poses significant challenges in aggregation and comparison: it may prove difficult to assess what the NDCs mean in terms of total emissions reductions or how individual countries compare in terms of their overall ambition.

The details of the transparency framework that will determine how emissions and implementation of NDCs are measured, reported and verified have still to be hammered out. This is likely to be one of the crucial negotiating topics in the coming years. Although the regime will apply to both developed and developing countries, it seems unlikely that there will be strong independent verification. Governments will be required to ‘regularly’ disclose emissions and progress on NDCs; but there will be open-ended ‘flexibility in implementation’ for developing countries. Depending on the course of future negotiations, this could, in practice, place minimal obligations on the governments of those countries. The recent uncertainty about China’s emissions<sup>4</sup> highlights the extent – and, not least, the importance – of the challenge.<sup>5</sup>

The transparency framework will apply to states only, so aggregating state and non-state action while avoiding double-counting poses further challenges. A recent United Nations Environment Programme (UNEP) analysis estimated that between 33 per cent and 70 per cent of emissions reductions achieved through non-state initiatives may already be included in national targets, but it warned that it is ‘difficult to assess whether all the international initiatives actually deliver on promises, as most initiatives propose only voluntary commitments and hence make it difficult for

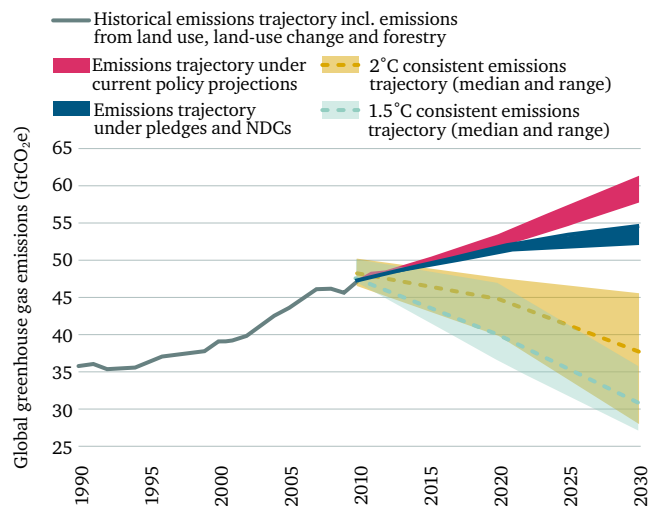
accountability and compliance to be enforced and sometimes lack robust monitoring, reporting and verification’.<sup>6</sup>

In some cases, new technology may provide the opportunity to improve monitoring of certain actions – for example, satellites and cell phones could make it easier to identify and record deforestation. Improved monitoring, in turn, could enhance transparency since it would increase the ability of both state and non-state actors to hold other state and non-state actors to account.

**Non-additive**

The long-term goal of keeping the global temperature rise to well below 2°C while pursuing efforts to limit that increase to just 1.5°C is highly ambitious. As Figure 1 shows, the ambitions enshrined in current individual pledges fall short of achieving this long-term target – even when the challenges of aggregating the NDCs are taken into account. Thus there is a disconnect between collective ambition and national ambition, which manifests itself as a quantifiable emissions gap between the emissions needed if the long-term goal is to be achieved and the emissions implied by the NDCs in aggregate.

**Figure 1: Emissions gap between NDCs and the long-term goal**



Source: Adapted from Climate Action Tracker (2015), <http://climateactiontracker.org/news/222/emissions-gap-how-close-are-indcs-to-2-and-1.5c-pathways.html> (accessed 14 Apr. 2016).

<sup>4</sup> Liu, Z. et al. (2015), ‘Reduced carbon emission estimates from fossil fuel combustion and cement production in China’, *Nature*, doi:10.1038/nature14677 (accessed 5 Apr. 2016).

<sup>5</sup> Buckley, C. (2015), ‘China burns much more coal than reported, complicating climate talks’, *New York Times*, 3 November 2015, [http://www.nytimes.com/2015/11/04/world/asia/china-burns-much-more-coal-than-reported-complicating-climate-talks.html?\\_r=0](http://www.nytimes.com/2015/11/04/world/asia/china-burns-much-more-coal-than-reported-complicating-climate-talks.html?_r=0) (accessed 5 Apr. 2016).

<sup>6</sup> UNEP (2015), *The Emissions Gap Report 2015: A UNEP Synthesis Report*, [http://uneplive.unep.org/media/docs/theme/13/EGR\\_2015\\_301115\\_lores.pdf](http://uneplive.unep.org/media/docs/theme/13/EGR_2015_301115_lores.pdf) (accessed 5 Apr. 2016).

The emissions gap is set to grow. While a 2°C pathway requires a rapid decline in annual global net emissions to close to zero by the second half of the century, the NDCs imply that emissions will continue to rise throughout that period.

### Dynamic

To address the non-additive nature of current contributions and close the emissions gap, the Paris Agreement includes a review mechanism that obliges countries to submit new NDCs, representing ‘a progression’ beyond current contributions (i.e. more ambitious), every five years following a ‘stocktake’ two years beforehand. The mechanism creates a dynamic five-year rhythm, aligning action across all countries to send a consistent and clear signal to business and financial communities. The underlying logic is that continued progress in the real economy will enable governments to raise ambition, which, in turn, will drive further progress, thereby creating virtuous cycles of improvement.

### Implications

We have characterized the nascent climate regime as flexible, inclusive, messy, non-additive and dynamic. Below we consider a number of important implications that can be drawn from that characterization.

#### The next five years are crucial

It is crucial that the Paris Agreement enters into force in 2020 with significantly higher ambitions. First, a decade in which ambitions are not raised (i.e. not until 2025) could sap the international process of the momentum that was achieved in the run-up to, and during, Paris. Second, waiting until 2025 will leave parties with an insurmountable emissions gap. According to Climate Action Tracker, the emissions gap will grow from around 3 gigatonnes of carbon dioxide equivalent (GtCO<sub>2</sub>e) a year at present to some 11 GtCO<sub>2</sub>e a year in 2025 – which is more than the current emissions level of China.

Moreover, 2025 is also at least five years after global emissions are supposed to have peaked under a 2°C least-cost pathway. The later the peak year, the deeper and faster emissions reductions must happen subsequently if the long-term goal is to remain within reach. This will increase ‘asset stranding’, economic costs and the reliance

on speculative negative emissions technologies such as bioenergy with carbon capture and storage (BECCS).

### It is crucial that the Paris Agreement enters into force in 2020 with significantly higher ambitions.

However, in what was a triumph for the French presidency of the COP – given the reluctance of many governments to commit to raising ambition in the near future – the Paris COP decision (which takes effect immediately) includes a number of pre-2020 actions that could enable a near-term increase in ambition. A ‘facilitative dialogue’ starting in 2018 gives states the opportunity to revisit their contributions and either increase or confirm them when the Paris Agreement enters into force in 2020.

Whether the United States increases its ambition is particularly important because it is a rather special case: since its existing NDC expires in 2025 (whereas those of other countries expire in 2030), it has been ‘urged’ to submit a 2030 target in 2020. Other countries and regions – in particular, major emitters such as China, the EU and India – will pay careful attention to the US 2030 target in order to assess whether it constitutes an increase in ambition relative to the current emissions trajectory or business as usual.

Similarly, owing to the focus within US domestic politics on competitiveness with other major powers, increased ambition is likely to require substantial updates from other major emitters, especially China. From a broader perspective, an increase in ambition among the major emitters has the potential to unlock ambition among other countries. Thus, if countries are to move forward together, the climate diplomacy of the major emitters will be key to clarifying mutual expectations and creating a shared understanding of respective political, economic and technological potential.

How much more ambitious might the big emitters need to be? Analysis from Climate Interactive and the Massachusetts Institute of Technology (MIT) offers an indication.<sup>7</sup> For expected warming of 1.8°C by the end of the century, the following revisions would be required:

- The United States revises its NDC from 26 per cent below 2005 levels by 2025 to 45 per cent by 2030.
- The EU revises its NDC from 40 per cent below 1990 levels by 2030 to 47 per cent.
- China revises its NDC to bring forward its peak year for emissions from 2030 to 2025.

<sup>7</sup> Sterman, J., Jones, A., Johnston, E. and Siegel, L. (2015), ‘Climate Interactive Ratchet Success Pathway: Assumptions and Results’, Climate Interactive, p. 4, <https://www.climateinteractive.org/wp-content/uploads/2015/12/Ratchet-Success-14-December-2015.pdf> (accessed 5 Apr. 2016).

Such revisions will not be easy to achieve. But given the change in ambition over the six years between Copenhagen and Paris, it is not impossible that the next five years will lead to substantial revisions. Indeed, analyses of the NDCs suggest that many are conservative and could be exceeded, meaning that governments might be able to increase ambition in the near term. In this scenario, it will be important that upward revisions are maximal – that is, fully recognizing this emissions reduction potential rather than holding it back for future revisions.

Things have got off to an uneven start. China has announced it expects to exceed its 2020 target; thus hopes are high that it will exceed its 2030 NDC too. However, the European Commission's March communication on 'The Road from Paris'<sup>8</sup> in effect overlooks the pre-2020 opportunity to increase ambition; instead, it locks in the current 2030 target until expiry. Though not representing an official EU position, the commission's communication signals weak ambition within Europe and will do nothing to encourage higher ambition among other major emitters.

### Long-term success depends on near-term decisions

Even as they seek to raise near-term ambitions, governments must not lose sight of long-term objectives. A myopic focus on increasing 2030 targets risks failing to prepare for what will need to come after – namely, rapid, deep and sustained emissions cuts leading to net zero emissions in the second half of this century.

The important point here is that whether economies are able to decarbonize on such a challenging trajectory will depend on the policies and investments they make early on. Infrastructure lifetimes mean many investments made today will still be operating in 30–40 years' time when, for example, electricity and transport systems need to be approaching zero carbon. Plans that work backwards from a long-term goal are required to ensure that today's decisions do not preclude tomorrow's emissions reductions. This is the case not only in transport and power, but equally in other sectors such as the built environment, agriculture and forestry.<sup>9</sup>

Decarbonization will not be achieved simply by avoiding lock-in to high-carbon infrastructure, however. Plans

must also lay the foundations for the development and deployment of second- and third-generation technologies that can deliver the 'hard to reach' emissions reductions at the end of the marginal abatement cost curve, otherwise achievable only at an unfeasibly high carbon price.

### A myopic focus on increasing 2030 targets risks failing to prepare for what will need to come after – namely, rapid, deep and sustained emissions cuts leading to net zero emissions in the second half of the century.

This is not simply a planning exercise. If done properly, it will have immediate consequences for investment decisions and policy-making. The Paris Agreement states that governments 'should strive to formulate and communicate long-term low greenhouse gas emission development strategies' by 2020. Those strategies will allow for a crucial examination of the credibility of governments' long-term ambitions and the extent to which they are consistent with Paris's long-term goals and with current policy-making. The G7 countries, which committed themselves in 2015 to decarbonize their economies 'over the course of the century', will be expected to show leadership in the formulation of long-term strategies. However, the G20, which counts major emitting developing countries among its members, would be a more appropriate group to push this agenda forward.

### There is likely to be a greater focus on the contribution of sinks to managing climate risk

The Paris Agreement's long-term goal to 'achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century' has renewed the focus on carbon sequestration as a mitigation strategy. This is a good thing in principle, as there are significant sequestration opportunities available in the agriculture and land-use sectors. Strategies such as afforestation, wetlands restoration and soil carbon management offer proven means of sequestering carbon at an affordable cost, essentially transforming the land-use sector from source to sink. Moreover, if implemented appropriately, these strategies can provide wider environmental and social co-benefits.<sup>10</sup>

<sup>8</sup> European Commission (2016), 'Communication from the Commission to the European Parliament and the Council', <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-110-EN-F1-1.PDF> (accessed 5 Apr. 2016).

<sup>9</sup> Deep Decarbonization Pathways Project (DDPP) (2015), *Pathways to deep decarbonization*, Sustainable Development Solutions Network (SDSN) and the Institute for Sustainable Development and International Relations (IDDRI), [http://deepdecarbonization.org/wp-content/uploads/2016/03/DDPP\\_2015\\_REPORT.pdf](http://deepdecarbonization.org/wp-content/uploads/2016/03/DDPP_2015_REPORT.pdf) (accessed 5 Apr. 2016).

<sup>10</sup> Caldecott, B., Lomax, G. and Workman, M. (2015), *Stranded Carbon Assets and Negative Emissions Technologies: Working Paper*, Oxford: Smith School of Enterprise and the Environment, University of Oxford, <http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/Stranded%20Carbon%20Assets%20and%20NETs%20-%2006.02.15.pdf> (accessed 5 Apr. 2016).

A reasonable concern, however, is that a major push to maximize removals by sinks could undermine efforts to transform the wider economy, as it could provide a bigger carbon budget to fossil fuel-intensive sectors such as power and transport. In such a case, decarbonization of fossil fuel emissions would be delayed, hampering long-term mitigation efforts.

This concern is heightened by the challenges of reliably measuring, reporting and verifying removals in the land-use sector, which in turn can create incentives for governments to develop accounting rules that risk overstating net removals, as has happened in the past. Furthermore, at the fundamental level, there is no equivalence between releasing emissions from a long-term geological store and sequestering emissions into a non-permanent terrestrial sink.

A second concern relates to large-scale deployment of speculative negative emissions technologies such as direct air capture, ocean fertilization, ocean liming and bioenergy with carbon capture and storage (BECCS). It is assumed by many climate models that BECCS will be widely deployed in the second half of the century in many pathways consistent with the 2°C objective.<sup>11</sup> BECCS technology essentially consists of displacing fossil fuels with biomass-derived fuels and capturing and storing the emissions at combustion. CO<sub>2</sub> is removed from the atmosphere twice: once biologically (i.e. through photosynthesis as the biomass feedstock grows), and once industrially (i.e. through the carbon capture and storage process – CCS). This theoretically results in negative emissions. However, the technology is highly speculative and relies not only on CCS (which remains commercially unproven) but also on the large-scale use of bioenergy. Based on experience so far, this raises major questions about the risk of indirect emissions (e.g. as agriculture expands into forests to accommodate growing acreage of bioenergy crops), competition with food production and water use, and impacts on biodiversity. One recent analysis of scenarios consistent with the goal of limiting warming to below 2°C found that assumptions for BECCS deployment could require between 7 per cent and 25 per cent of agricultural land.<sup>12</sup> Accommodating this demand for land in the context of rising demand for food and other uses would be an almost impossible challenge.

Maximizing sequestration potential in the land-use sector will require governments to develop comprehensive land-management frameworks that can assess the mitigation potential of land under different uses and weigh that potential against other objectives, such as food security. This approach implies lower levels of livestock production, which currently uses around 75 per cent of agricultural land globally and is a major source of direct and indirect emissions, accounting for 14.5 per cent of the global total of anthropogenic greenhouse gas emissions.<sup>13</sup>

### **A focus on both public and private finance is needed to deliver a low-carbon transformation**

Delivering a low-carbon transformation requires shifting financial flows from high-carbon to low-carbon investments. In conceptualizing this challenge, two numbers are important: \$100 billion and \$1 trillion.

Within the UNFCCC context, \$100 billion a year is what was pledged by developed countries at Copenhagen to support adaptation and mitigation in developing countries. It has since become a divisive issue in the negotiations: there are disagreements over what counts towards the total (export credits and pre-existing aid flows, for example), how it should be measured (whether the full bilateral loan should be taken into account or only the subsidized portion, as is the case under OECD-DAC accounting rules), and what portion public finance should account for (a particularly important point for adaptation).

### **Developed countries are ‘urged’ to set out a roadmap to providing \$100 billion annually by 2020. However, the thorny accounting problems remain unresolved, as do issues related to measurement, reporting and verification.**

Paris resolved very little in this area. Developed countries are ‘urged’ to set out a roadmap to providing \$100 billion annually by 2020. However, the thorny accounting problems remain unresolved, as do issues related to measurement, reporting and verification. Reaching agreement on what should count towards the \$100 billion and then delivering it will be crucial to maintaining political momentum after Paris.

<sup>11</sup> Smith, P. et al. (2015), ‘Biophysical and economic limits to negative CO<sub>2</sub> emissions’, *Nature Climate Change*, doi:10.1038/nclimate2870 (accessed 5 Apr. 2016).

<sup>12</sup> Ibid.

<sup>13</sup> Bailey, B., Froggatt, A. and Wellesley, L. (2014), *Livestock – Climate Change’s Forgotten Sector: Global Public Opinion on Meat and Dairy Consumption*, Research Paper, London: Royal Institute of International Affairs, <https://www.chathamhouse.org/sites/files/chathamhouse/field/document/20141203LivestockClimateChangeForgottenSectorBaileyFroggattWellesleyFinal.pdf>.

The other – and even bigger – challenge is mobilizing the substantial investment required to deliver a low-carbon transformation. Scale and timing are crucial, as infrastructure financed today will still be operating and affecting emissions in 2050 – by which time the world should be approaching full decarbonization. There are various estimates as to how much investment is needed, but \$1 trillion a year between now and 2050 is widely used as a benchmark. For the power sector alone, there is an estimated \$12.1 trillion ‘opportunity’ over the next 25 years (to 2040) to deliver a 2°C pathway.<sup>14</sup>

Early and unequivocal signs that governments are serious about implementing their NDCs will be central to investor confidence and the mobilization of capital. But this transformation will also require innovation and attention from financial institutions, governments and regulators. On the risk side, the Financial Stability Board’s Task Force on Climate-related Financial Disclosures will help financial institutions to better understand exposure to fossil fuel investment. On the ‘opportunity’ side, continent-

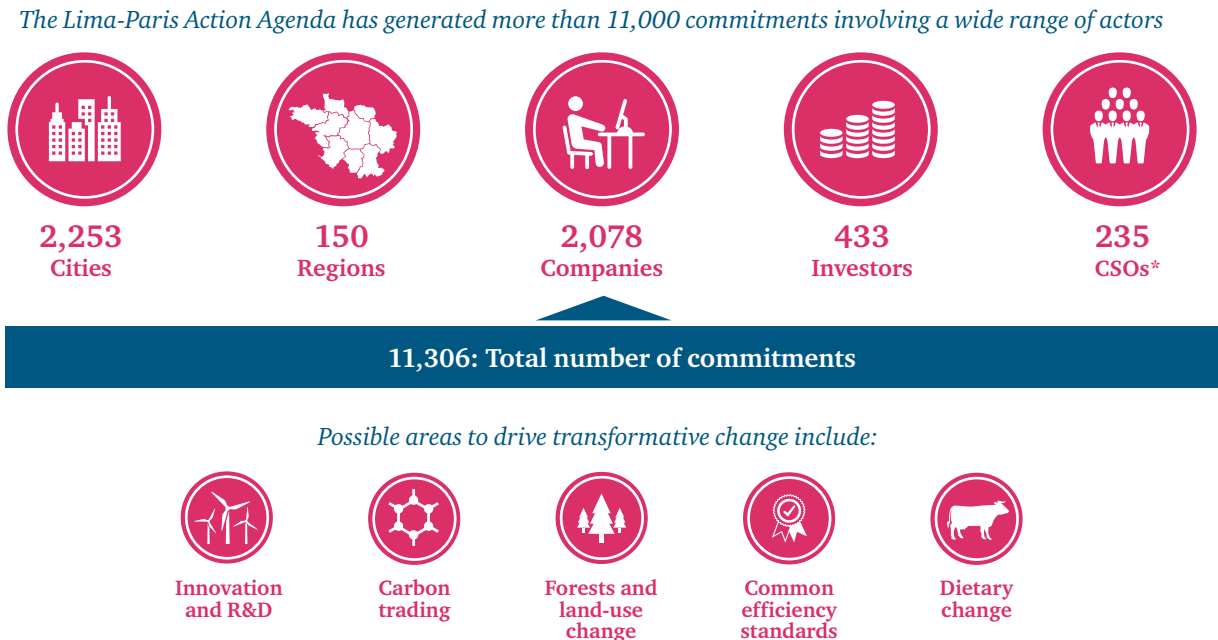
scale renewable energy projects (such as those launched in Paris<sup>15</sup>) and initiatives to create ‘investable’ NDCs and green infrastructure will help scale up investment, while targeted use of public finance is a core part of the overall solution.

**Creating ‘coalitions of the willing’ and a club culture?**

For some time before the Paris breakthrough, academics such as David Victor had been proposing minilateral ‘climate clubs’ or ‘coalitions of the willing’ as the solution to the UNFCCC’s glacial progress. The logic behind this proposal is that such groups can provide a more conducive forum for small numbers of like-minded governments to ‘get things done’ on a particular issue than can large-scale negotiations, where ‘nothing will be agreed until everything is agreed’ and agreement requires consensus among 196 parties.<sup>16</sup>

The most common proposals include a club of carbon-trading countries<sup>17</sup> and a club of high-ambition free-trading countries that penalize non-members through border tax

**Figure 2: Clubs and coalitions of the willing**



\* Civil society organizations  
 Source: Non-State Actor Zone for Climate Action, <http://climateaction.unfccc.int/> (accessed 13 Apr. 2016).

<sup>14</sup> Zindler, E. and Locklin, K. (2016), ‘Mapping the gap: the road from Paris, finance paths for a 2-degree future’, presentation at CERES MTG Project, 27 January 2016, <http://www.ceres.org/resources/reports/mapping-the-gap-the-road-from-paris/> (accessed 5 Apr. 2016).  
<sup>15</sup> For example, the African Renewable Energy Initiative and India’s International Solar Alliance.  
<sup>16</sup> For a discussion of climate clubs, see Falkner, R. (2015), ‘A minilateral solution for global climate change? On bargaining efficiency, club benefits and international legitimacy’, Centre for Climate Change Economics and Policy at the Grantham Research Institute on Climate Change, Working Paper No. 197, <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/07/Working-Paper-197-Falkner.pdf> (accessed 5 Apr. 2016).  
<sup>17</sup> See, for example, Keohane, N., Petsonk, A. and Hanafi, A. (2015), ‘Toward a club of carbon markets’, *Climatic Change*, doi:10.1007/s10584-015-1506-z (accessed 5 Apr. 2016).



adjustments.<sup>18</sup> However, many have come to use the term ‘club’ more loosely, essentially to mean ‘coalitions of the willing’ devoted to various issues on which governments may wish to cooperate. Given that the NDCs are supposed to provide a floor for ambition, there is certainly scope for clubs to emerge among governments wishing to go further and faster.

In the past, proposals for climate clubs tended to encounter fierce resistance from developing countries, which pointed to the UNFCCC as the only legitimate forum for agreeing rules on climate change. But since a climate deal has now been reached, this is much less of an issue.

Climate clubs need not be limited to nation states. Indeed the Lima-Paris Action Agenda created a positive dynamic of coalition formation among non-state actors. As shown in Figure 2, there is potential to drive transformative change in a range of areas including innovation and R&D, carbon trading, forest and land-use change, common efficiency standards, and dietary change. There are, however, questions about how these groups can evolve into effective vehicles for delivery of climate actions while preserving their innovative and creative nature. Clubs should set common targets or collective goals that are specific and measurable, and for which members can be held accountable. This, in effect, means finding a way for them to ‘engage and dock’ with the NDC registry and transparency framework while still providing for flexibility in the means of delivery.

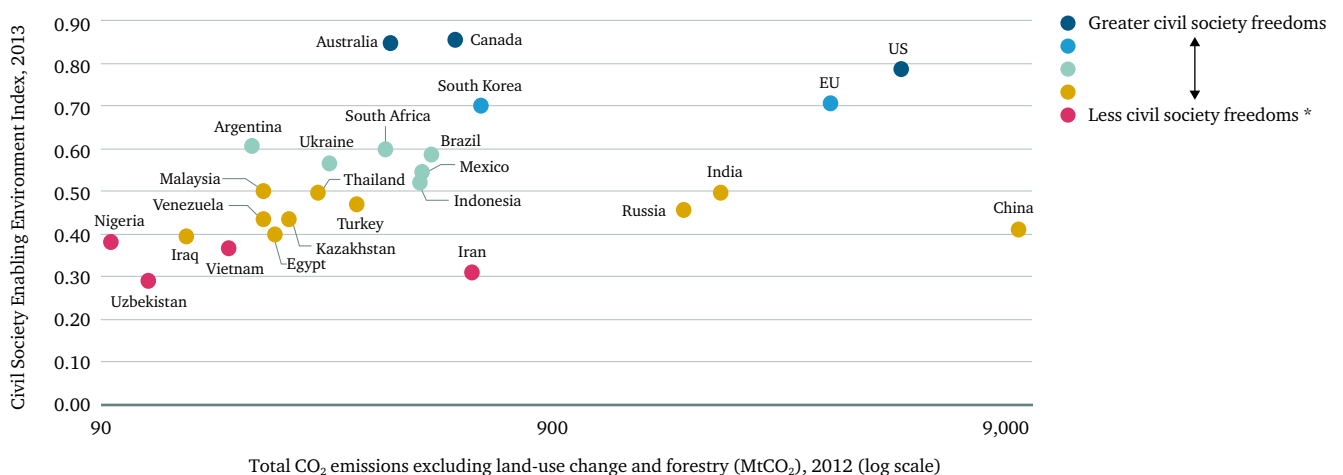
### The important role of civil society

The new regime implies a very significant role for civil society that includes:

- Holding governments to account in the absence of binding commitments and an enforcement mechanism;
- Evaluating (and verifying) government implementation of commitments in the absence of an independent verification mechanism;
- Assessing the adequacy of commitments – both in aggregate and individually – against long-term objectives; and
- Mobilizing around key opportunities to push governments to raise ambition.

The role of civil society is by no means confined to mitigation; it applies equally to adaptation and the mobilization of climate finance. Nor will civil society and the media focus only on governments. The post-Paris regime’s emphasis on non-state action and the potential for climate clubs (particularly in the absence of robust monitoring, reporting and verification standards applicable to non-state actors) will put increasing pressure on civil society to monitor business and the actions and commitments of other non-state actors.

Figure 3: Total emissions and civil society freedoms among major emitting countries



\* Coloured ranking system adapted from CIVICUS (2013), Enabling Environment Index, <http://civicus.org/eei/> (accessed 13 Apr. 2016). Sources: CAIT Climate Data Explorer (2012), <http://cait.wri.org/> (accessed 13 Apr. 2016); CIVICUS (2013), Enabling Environment Index.

<sup>18</sup> See, for example, Nordhaus, W. (2015), ‘Climate clubs: overcoming free-riding in international climate policy’, *American Economic Review*, doi:10.1257/aer.15000001 (accessed 5 Apr. 2016).

At the same time, the ability of civil society organizations (CSOs) and the media to deal with this increased level of activity is being challenged, as Figure 3 shows. In many countries, the 'safe operating space' for CSOs and media organizations is shrinking. Indeed, government efforts to constrain CSOs through funding restrictions, onerous operating requirements, restrictions on foreign organizations, and even smear campaigns and open harassment are increasingly evident in all regions of the world. Between 2012 and 2015 more than 60 countries reportedly passed or initiated legislation restricting CSO freedoms.

### The future emissions trajectories of China and India are critical to global climate objectives, but in both countries the scope for environmental CSOs to influence government is narrowing.

Not surprisingly, CSOs and the media often come under pressure in precisely those countries where they are most needed. The future emissions trajectories of China and India are critical to global climate objectives, but in both countries the scope for environmental CSOs to influence government is narrowing. In India, Greenpeace was called 'anti-national' by the federal government, its bank accounts frozen and foreign staff members deported. Meanwhile, a new law

in China will require NGOs to register with the police, seek approval to carry out various activities, and report to a supervisory authority.

Furthermore, CSOs and the media may be constrained in some of the poorest and most climate-vulnerable countries, where adaptation is the overwhelming priority. The most recent CSO Sustainability Index, which is published by USAID, recognized the important role of sub-Saharan African CSOs but lamented the 'daunting hurdles' they face from 'non-supportive or hostile governments'.<sup>19</sup>

The increasing demands placed on CSOs and the media by the new climate regime will, in some cases, stretch institutional and operational capacities. The issue is not simply one of financial resources: CSOs and media organizations may need to develop new expertise and technical skills, or new specialist organizations may need to be established. Capacity needs will vary from country to country, but may include communications, litigation (see Box 1), project implementation and technical expertise on particular issues such as climate finance.

Maximizing the operating space for CSOs and media organizations and optimizing their capabilities will pose new challenges for official donors, philanthropic foundations and governments, as well as for the organizations themselves.

#### Box 1: Climate-related litigation

Litigation has the potential to play an increasing role in holding governments and business to account for actions on climate change. As has been seen in other sectors, such as the tobacco industry in relation to cancer, wilful negligence in the face of scientific evidence can have far-reaching legal consequences. In 1998 the largest US tobacco companies and 46 US states signed the Tobacco Master Settlement Agreement, whereby manufacturers agreed to pay an estimated \$206 billion over the first 25 years of the agreement.<sup>a</sup>

While there are, of course, significant differences between climate change and tobacco, litigation related to the former has been increasing of late. In June 2015 courts in the Netherlands ordered the government to cut emissions by at least 25 per cent over the next five years after a civil action had been brought by campaigners.<sup>b</sup> In November 2015 ExxonMobil was subject to an investigation by the New York Attorney General

into whether the company had lied about the risks of climate change and whether it had failed to disclose to investors just how those risks might affect oil companies' business models.<sup>c</sup> It will be difficult post-Paris for any country or business to claim credibly that it was unaware of potential climate impacts, including in relation to how the long-term goal of holding global average temperature increases to well below 2°C could affect their business models.

<sup>a</sup> State of California Department of Justice Office of the Attorney General, <https://oag.ca.gov/tobacco/msa> (accessed 5 Apr. 2016).

<sup>b</sup> Nelson, A. (2015), 'Dutch government ordered to cut carbon emissions in landmark ruling', *Guardian*, 24 June 2015, <http://www.theguardian.com/environment/2015/jun/24/dutch-government-ordered-cut-carbon-emissions-landmark-ruling> (accessed 5 Apr. 2016).

<sup>c</sup> Gillis, J. and Krauss, C. (2015), 'Exxon Mobil investigated for possible climate change lies by New York Attorney General', *New York Times*, 6 November 2015, [http://www.nytimes.com/2015/11/06/science/exxon-mobil-under-investigation-in-new-york-over-climate-statements.html?\\_r=0](http://www.nytimes.com/2015/11/06/science/exxon-mobil-under-investigation-in-new-york-over-climate-statements.html?_r=0) (accessed 5 Apr. 2016).

<sup>19</sup> USAID (2014), *The 2014 CSO Sustainability Index For Sub-Saharan Africa*, <https://www.usaid.gov/sites/default/files/documents/1866/2014%20Africa%20CSOSI%20FINAL.pdf> (accessed 13 Apr. 2016).

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## Conclusion

Paris was a resounding success. The flexible, inclusive and dynamic characteristics of the new regime provide a solid anchor for efforts to manage climate risk. The positive energy generated, along with the mobilization of both state and non-state actors, is a remarkable achievement. However, the new regime is somewhat messy and unstandardized, and does not yet add up to a credible 'below 2°C' pathway. Ensuring that it functions effectively and maximizes ambition will require the following:

- Urgent climate diplomacy among the major emitters to deliver a joint material increase in ambition by 2020;
- National planning processes that ensure long-term decarbonization objectives inform short-term policies and investments;
- Comprehensive national land-use strategies that transform the land-use sector from source to sink without compromising wider decarbonization efforts and food security;
- Measures under which the financial system and its regulations support the shift to low-carbon investment;
- Continued development of the regime to better accommodate climate clubs, including encouraging their formation subject to appropriate governance and appropriate monitoring, reporting and verification; and
- Allowing CSOs to support the regime effectively by removing constraints on the freedoms of those organizations and the media, as well as by enabling investment in new areas of capacity.

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Cover image: The slogan '1.5 Degrees' is projected on the Eiffel Tower as part of the World Climate Change Conference 2015 (COP21) on 11 December 2015 in Paris, France.

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