

# Phoenix from the ashes: an analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change – Part I

**Wolfgang Obergassel (né Sterk), Christof Arens, Lukas Hermwille, Nico Kreibich, Florian Mersmann, Hermann E Ott and Hanna Wang-Helmreich**

*Wuppertal Institute for Climate, Environment and Energy, Germany\**

## Summary

After 25 years of United Nations (UN) climate diplomacy, the world's governments have for the first time in history negotiated a treaty that envisages climate action by all countries. Despite all shortcomings, the Paris Agreement may therefore be labelled a success. It also demonstrates that environmental multilateralism is not dead. The Parties to the United Nations Framework Convention on Climate Change (UNFCCC) were able to conclude a treaty under international law, with an innovative legal approach in order to satisfy the constitutional peculiarities of the United States of America (US). The successful outcome of Paris has thus restored some of the confidence in international diplomacy lost over the last decade.

The Agreement's ambition of limiting global warming to 'well below 2°C and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels' represents a quantitative increase compared with the previous wording and a reinterpretation of the Convention's ultimate purpose: the Convention's objective is to avoid dangerous climate change; the Paris Agreement now posits that any global warming is dangerous. Furthermore, countries agreed that the temperature limit is to be reached by, first, a peaking of greenhouse gas emissions 'as soon as possible' and, secondly, 'a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century'. This is therefore the main message from Paris: the age of fossil fuels is over.

Shortcomings include the lack of legal bindingness as far as national contributions relating to mitigation, adaptation and finance are concerned. Indeed, contributions that countries have submitted fall far short of the stipulated global ambition: even if fully implemented, global mean temperature would most likely still increase in the range of 2.7°C to 3.5°C. This is a serious shortfall and action to strengthen those contributions, especially by large emitters, must start by 2018 in order to keep the world on a path that is considered safe for humanity.

However, international negotiations can rarely take decisions that have not previously been prepared nationally. The role the international climate process can play at the moment is to serve as a catalyst for national developments by keeping the issue on the agenda and forcing national policy-makers to revisit it continuously. The question is therefore not whether the Paris Agreement will deliver the emission reductions necessary, but whether the Agreement has the potential to catalyse further changes, whether it becomes a pacemaker for policy processes – at the international level and in the capitals of the world. From this perspective, the Paris Agreement is much stronger than many had expected.

Instead of legal sanctions, the Paris Agreement relies on a mechanism of 'naming and shaming' to ensure implementation: it creates a reputational risk through the establishment of mandatory transparency and review provisions. This innovative review mechanism ('ratchet') aims for the Parties to enhance their contributions every five years. Starting in 2018, these 'stocktakes' will create moments of concentrated political attention every five years that may be used for fostering the dynamic of the process.

While there is no legal obligation to strengthen the first round of contributions, they are thus not necessarily the last word, given the growing awareness of climate change impacts and the growing dynamics in renewable energy, battery technologies and other solutions, which may quickly render previous goals obsolete. To date, the climate regime has had no mechanism to confront governments with such developments – and to take up these dynamics.

It will be crucial for the success of the regular stocktakings that countries transparently report the implementation of their contributions and subject their efforts to review. In this regard, the Agreement defines a 'transparency framework', which has yet to be fleshed out. Apart from increasing the level of ambition, the details of the transparency framework will be the most relevant field of work in the coming years.

One reason the Paris Agreement won the support of developing countries was its recognition of two decade-long demands: first, it elevates the standing of adaptation in the international climate regime. Crucially, action on adaptation is to be reviewed and accelerated every five years in parallel to the contribution cycles for mitigation. However, while the need for substantial adaptation finance has been recognised in the Paris Agreement, it does not include a collective, quantified goal for adaptation finance.

---

\* The views expressed in this article are strictly those of the authors. © Wuppertal Institute for Climate, Environment and Energy, 2016 [www.wupperinst.org](http://www.wupperinst.org). Contact Wolfgang Obergassel ([wolfgang.obergassel@wupperinst.org](mailto:wolfgang.obergassel@wupperinst.org)); Hermann E Ott ([hermann.ott@wupperinst.org](mailto:hermann.ott@wupperinst.org)).

Secondly, the Paris Agreement recognises that there are adverse climate impacts that cannot be adapted to – and that they must be dealt with. This was a crunch issue until the very end because, while developing countries wanted the concept of 'loss and damage' to be included in the final Agreement text, developed countries feared it could be used for compensation and liability claims. The final outcome gives consideration to both positions: while the Paris Agreement features an article on loss and damage, the decision text contains a clause that precludes the concept from being used as a basis for compensation and liability claims.

The finance part of the Paris Agreement is weak. It does not contain any compulsory language to scale up climate finance. Only the accompanying decision text reiterates that the goal of mobilising an annual US\$100 billion of North–South financial flows in 2020 and beyond, already promised in Copenhagen, is still valid. Furthermore, the Parties agreed to set a new, collective financing target by 2025. In this context, the US\$100 billion figure is now considered the floor of financial contributions, rather than the ceiling as was the case before Paris.

The adoption of the Paris Agreement is not the end, but the beginning of a process. Its effectiveness depends on whether the momentum of Paris can be turned into a political force. This momentum was to a large extent created by the 'high ambition coalition' of small island states, least developed countries and the European Union (EU). It ultimately even included traditional blockers such as Japan and the US and was one of the main drivers of an outcome at the upper end of what seemed politically possible. Keeping this coalition alive, at least in its core, would help to work towards a progressive implementation and evolution of global climate policy, both inside and outside of the UNFCCC regime. Global climate diplomacy requires such a driver, as numerous occasions in the past have shown. The EU should not let this opportunity slip away and should strengthen ties with those countries originally forming this group. This coalition would be in a position to push for the Agreement's early entry into force and for the speedy strengthening of national contributions.

## Table of Contents

### Part I

#### Summary

- 1 Introduction
- 2 Tracing the Paris outcome
  - 2.1 Negotiation dynamics
    - 2.1.1 Overcoming static differentiation
    - 2.1.2 A climate diplomacy masterpiece
  - 2.2 Legal form – treaty or not?
  - 2.3 Purpose of the Agreement
  - 2.4 Individual efforts
  - 2.5 Mitigation
    - 2.5.1 Ambition
    - 2.5.2 Reducing emissions from deforestation and forest degradation (REDD+)
    - 2.5.3 Aviation and shipping
    - 2.5.4 Cooperative mechanisms
  - 2.6 Adaptation
  - 2.7 Loss and damage
  - 2.8 Means of implementation
    - 2.8.1 Finance
    - 2.8.2 Technology
    - 2.8.3 Capacity building
  - 2.9 Three elements for increasing ambition over time
    - 2.9.1 Global stocktake and contribution cycle
    - 2.9.2 Transparency framework
    - 2.9.3 Facilitative compliance mechanism
  - 2.10 Increasing short-term ambition
    - 2.10.1 Technical examination processes
    - 2.10.2 Lima–Paris Action Agenda

### Part II – to be published in Volume 28 Issue 1

#### Summary

- 3 Assessment: the stage is set, waiting for more action
  - 3.1 Assessing the Paris outcome: the benchmark for success
  - 3.2 Differentiation: an agreement applicable to all
  - 3.3 Ambitious global targets: towards decarbonisation?
  - 3.4 National contributions: insufficient and non-binding
  - 3.5 Ratchet mechanism: a political pacemaker to strengthen ambition
  - 3.6 Transparency: fine print to be drafted
  - 3.7 Promoting a long-term perspective: new horizons
  - 3.8 Finance: vague language
  - 3.9 Reducing emissions from deforestation and forest degradation (REDD+): what future role?
  - 3.10 International cooperative approaches: what basis for market mechanisms?
  - 3.11 Loss and damage: a new pillar of climate policy
  - 3.12 Adaptation: strengthened role
- 4 Outlook: next steps on a long journey towards decarbonisation
  - 4.1 The return of environmental multilateralism
  - 4.2 Cultivating coalitions
  - 4.3 What role for non-Party actors?
  - 4.4 The Paris Agreement is not the end but the beginning

## I Introduction

On 12 December 2015, the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the so-called Paris Agreement. Paris thus finally concluded the long process of crafting a new international climate regime that began with the adoption of the Bali Roadmap in 2007, failed spectacularly in Copenhagen 2009 and resumed with a new approach in Durban 2011. The conference in Paris concluded this process, as demanded in the Durban Platform, with the adoption of a treaty under international law that represents the first truly collective effort by the world community to tackle climate change.

Global political conditions at first sight did not seem to be particularly favourable for major advancements in environmental multilateralism. While Copenhagen had been overshadowed by the global financial crisis, in 2015 the world's attention was riveted on the conflict between Russia and the Ukraine, the wars in the Middle East and the resulting mass refugee movement, and to the rise of Islamic terrorism. The conference's host city itself had been shaken to the core by a terrorist attack taking more than 100 lives two weeks before the start of the conference.

The political atmosphere of the climate negotiations leading up to the conference was, however, much more positive than in Copenhagen 2009. Of course, the negotiating text was still heavily square-bracketed, denoting areas of disagreement, and the Parties were still rehashing the 25-year old arguments about who should contribute how much to the fight against climate change. However, on the positive side, the negotiating text was much shorter than the text that had been on the table at the beginning of the Copenhagen conference. The workload was also much lighter than it had been in 2009. Copenhagen had had the task of forging an entirely new regime in all aspects; not only mitigation, but also adaptation, finance, technology and capacity building. Much of this work had been completed after 2010, with the creation of a raft of new institutions: the Green Climate Fund, the Adaptation Committee, the Technology Executive Committee and the Clean Technology Centre and Network.

Perhaps most importantly, the two traditional main antagonists, China and the United States of America (US), had already largely reconciled their differences in November 2014, with a highest-level announcement by the two presidents. Not only the traditionally progressive countries but also US diplomacy went into top gear to pave the way for the new Agreement, with President Obama having defined climate policy as a legacy issue. This Sino-US rapprochement was supported by a host of multilateral efforts, peaking in September 2015 when United Nations (UN) Secretary General Ban Ki-Moon invited heads of state and government to a climate summit. On this occasion, civil society in the US staged the largest-ever climate demonstration, when more than 300,000 people gathered in New York to demand stronger climate action. This positive momentum was taken up and strengthened on the opening day of the conference by the attendance of 150 heads of state and government.

There was therefore much confidence that there would be some agreement in Paris. The question was whether it would be an agreement at the lowest common denominator or an agreement with actual impact. As environmental NGOs framed it: the choice was between an agreement that would limit the increase of global mean temperature to 1.5°C compared with pre-industrial levels or one that would take us to a world with an increase of 3°C or more. In the end, the Paris Agreement leaves it open: the almost 200 countries assembled in Paris settled for a deal that offers the chance to keep global temperature rise at a level that does not endanger our civilisation, but only if the national and sub-national activities are swiftly and decisively strengthened and put into effect.

## 2 Tracing the Paris outcome

### 2.1 Negotiation dynamics

#### 2.1.1 Overcoming static differentiation

While the Durban Platform contains a mandate to negotiate a new climate agreement 'applicable to all', the negotiations under the Durban Platform continued to be as dominated by disagreements over the respective roles of the so-called 'industrialised' and 'developing' countries as they have always been. The traditional industrialised countries (listed in Annex I of the UN Framework Convention on Climate Change) have been keen to break down the so-called 'firewall', the clear distinction between Annex I and non-Annex I countries (traditionally 'developing countries') that is laid down in the Framework Convention of 1992. While the Convention and its Kyoto Protocol have imposed obligations on Annex I countries, no such obligations have so far existed for non-Annex I countries. Annex I (industrialised) countries argued that this distinction was outdated since many non-Annex I (developing) countries were nowadays wealthier than many of the traditional industrialised countries and their contribution to global emissions had also grown rapidly.

By contrast, in particular the group of Like-minded Developing Countries (LMDCs)<sup>1</sup> strongly resisted any explicit or implicit dissolution of the traditional distinction between the Annexes. They maintained that Annex I countries should continue to take the lead since they are the ones who caused the climate problem, (still) have much larger economic resources to do something about it and have, in the view of the LMDCs, so far mostly failed to meet their previous commitments in terms of reducing their own emissions and in providing support to non-Annex I countries. However, the configuration of negotiation groups has changed significantly over the last five years, with the Group of 77 (G77) and China, the traditional coalition of most developing countries, losing much of its former coherence. Within this group, the countries most vulnerable to the impacts of climate change, the

<sup>1</sup> The group of like-minded developing countries includes China, India and other Asian countries such as Malaysia, countries in the Organization of Petroleum Exporting Countries such as Saudi Arabia, and some Latin American countries such as Bolivia and Venezuela.

Alliance of Small Island States (AOSIS) (representing the Small Island Developing States (SIDS)) and the least developed countries (LDCs), increasingly demanded strong mitigation action by all large emitters, be they from long-established countries or newly industrialised countries. Further differentiation was marked by the formation of the Independent Association of Latin America and the Caribbean (AILAC), a group of progressive countries that posited that all countries should contribute strongly to fighting climate change.

The negotiations were also complicated by the inability of the US to ratify any legally binding climate agreement under the constitution and the current configuration of national political realities. In the run-up to Paris, the US Republican Party made its opposition to any climate action clearer than ever before. The line had historically been that the US should not commit to climate action unless its main competitors, in particular China, also committed. The Obama administration undercut this line of reasoning with a series of high-level initiatives demonstrating that China and others were in fact willing to step up their efforts. The US Republicans reacted by publicly declaring that US participation in the new climate agreement was not going to be reliable as they would do whatever they could to undermine any action the Obama administration was going to take.<sup>2</sup> The Durban Platform negotiations were thus strongly dominated by the US administration's desire to shape an agreement that would not require ratification by Congress. This entailed in particular avoiding the adoption of any legally binding commitments.

The main breakthrough to overcome this series of obstacles had arguably already been made at the 2013 conference in Warsaw, which had created the concept of 'intended nationally determined contributions' (INDCs). On the one hand, using the term 'contributions' instead of 'commitments' accommodated the position of the LMDCs that there should be no binding commitments for non-Annex I countries – as well as the desire of the US to avoid binding commitments. On the other hand, Annex I countries prevented creating any differentiation between themselves and non-Annex I countries regarding the legal nature of participation in the new Agreement; instead of differentiated provisions as demanded by the LMDCs, the Warsaw decision contained only one set of provisions applying to all countries.<sup>3</sup> The world community therefore settled on a lower common denominator in an endeavour to establish common national contributions for all countries.

In contrast to Copenhagen, the basic shape of the Paris Agreement had therefore been defined well in advance of the crucial conference. There was increasing optimism that Paris would not become another Copenhagen. However, the question was whether the new agreement would be worth the paper it was written on. Up until the penultimate version of the new agreement submitted by the

French presidency, the options for the outcome ranged from high ambition to near meaninglessness.

Adoption of the more ambitious end of the range was helped along by the re-formation of the Durban coalition of the European Union (EU), LDCs, SIDS and other progressive countries that had secured the adoption of the Durban Platform. The 'high ambition coalition' was initiated by the Marshall Islands and had been in the works for six months before entering the limelight in the second week of the conference. This time it became even more broad-based than in Durban, ultimately effectively taking in all major groups except the LMDCs. The main goals of the 'ambition coalition' were to achieve a legally binding agreement, an ambitious long-term goal, five-year cycles to review and strengthen countries' contributions, and strong transparency provisions to track countries' progress in implementing their contributions.<sup>4</sup>

What tilted the balance in favour of a comparatively ambitious agreement was apparently in particular Brazil's joining of the ambition coalition. Brazil had in recent years predominantly been aligned with China and India, who were opposing the ambition coalition's demands on the long-term goal, five-year cycles and transparency. Brazil's break with its usual allies was reportedly a game changer that gave the French presidency room to keep pushing for an ambitious outcome.<sup>5</sup>

The way to agreement was also paved by the strong alignment of China and the US, which had been crucial in shaping the basic contours of the deal. How close the rapprochement of the traditional antagonists had become was highlighted in the final hours of the conference, when the US sought to correct a 'typo' in the final draft of the Agreement, substituting 'should' for 'shall' in the sentence: 'Developed country Parties shall continue taking the lead by undertaking economy-wide absolute emission reduction targets'. As noted above, the US was meticulous to ensure that no language would find its way into the Agreement that could be construed as constituting new commitments which would require Congressional approval. This last-minute change might easily have unravelled the entire Agreement, and it was reportedly China who bailed the US out. Where the 'shall' came from appears to be a mystery.<sup>6</sup> The sentence echoes Article 3.1 of the UNFCCC, which also uses 'should'.

### 2.1.2 A climate diplomacy masterpiece

Maintaining the constructive spirit throughout the fortnight of negotiations was not least the result of the extraordinary leadership provided by the French presidency. The French Minister of Foreign Affairs and International

2 GOP to attack climate pact at home and abroad <http://www.politico.com/story/2015/09/gop-congress-climate-pact-paris-213382>.

3 Sterk, W., C. Arens, N. Kreibich, L. Hermwille, F. Mersmann, T. Wehnert (2013): Warsaw groundhog days: old friends, positions and impasses revisited all over again at the 2013 Warsaw Climate Conference (Wuppertal: Wuppertal Institute for Climate, Environment and Energy) <http://wupperinst.org/en/info/details/wi/a/s/ad/2447/>.

4 EU and 79 African, Caribbean and Pacific countries join forces for ambitious global climate deal, [http://ec.europa.eu/clima/news/articles/news\\_2015120802\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2015120802_en.htm).

5 Foie gras, oysters and a climate deal: how the Paris pact was won <http://www.climatechangenews.com/2015/12/14/foie-gras-oysters-and-a-climate-deal-how-the-paris-pact-was-won/>.

6 China rescues US from Paris climate deal 'typo' fiasco <http://www.climatechangenews.com/2015/12/12/china-rescues-us-from-paris-climate-deal-typo-fiasco/>.

Development, Laurent Fabius and his team, headed by Climate Change Ambassador Laurence Tubiana had meticulously studied the failure of Copenhagen, as well as the much more successful negotiations in Cancún and Durban. Six diplomatic manoeuvres helped to ensure the success of the Paris talks.

- **Laying the ground early:** prior to the 2014 Conference of the Parties (COP) in Lima, the French presidency worked together with the Peruvian presidency to organise a series of ministerial meetings 'to get the ministers well-acquainted'.<sup>7</sup>
- **Inviting heads of states early to kick off the talks:** the attendance of heads of state and government at the opening of the talks set the scene for successful negotiations. It raised the stakes but at the same time allowed ministers to engage in the negotiations having the mandate for final submissions. In Copenhagen, negotiations had entered an impasse because negotiators (and ministers) felt they had no mandate to make final decisions with their bosses coming in to seal the deal at the end of the negotiations. Since the heads of state or government were not in a position to negotiate substantive issues, the talks collapsed. This was avoided in Paris and the weight of presidents and prime ministers was turned into a positive force.
- **Ensuring participation and transparency:** all the Parties including LDCs and SIDS highlighted the inclusive approach of the French presidency. Minister Fabius and his team relied heavily on the *indaba* negotiation format, which had been successfully employed by the South African hosts in Durban.<sup>8</sup> *Indaba* is a technique applied by Zulu and Xhosa peoples in southern Africa. In this format, delegates must not repeat their stated positions but outline their 'red lines' and, at the same time, provide solutions for common ground, so-called 'landing zones'. This approach allowed every Party to voice its views and positions and at the same time proved to be very effective in identifying consensus.
- **Embracing potential critics:** COP President Fabius appointed some of the most vocal critics as facilitators for the different issues, effectively vesting them personally in finding solutions. For example, Venezuelan head of delegation Claudia Salerno, who had harshly criticised the Copenhagen process, facilitated negotiating the preamble text of the Paris Agreement. Similarly, Fabius appointed the Bolivian minister René Orellana together with his Swedish colleague to facilitate negotiations on loss and damage, and Brazilian minister Izabella Teixeira to host the consultations on differentiation in the context of mitigation, transparency and finance.

- **A 'no surprise' policy:** the French presidency maintained a tight yet inclusive schedule. While in Copenhagen the Parties spent almost the entire first week of the COP fighting over agenda issues, the roadmap of the COP 21 negotiation process had been set well in advance. Also, the French Presidency did not attempt to short-cut the negotiation process by introducing its own negotiation text (as it had been attempted during the failed conferences in The Hague in 2000 and in Copenhagen in 2009). Instead, they engaged ministers in the laborious process of cleaning up the heavily bracketed draft text that had been prepared by the Parties themselves. This effectively created an understanding of collective responsibility for success or failure of the text.<sup>9</sup>
- **Providing an impeccable environment:** in contrast to the set-up in Copenhagen, the Paris talks were superbly organised. Decent food, spacious accommodation and a well organised conference venue played their part in maintaining a positive atmosphere. The unusual scheduling also contributed to the success. For example, the talks had commenced one day early. In the decisive moments COP President Fabius did not rush to present a new text but announced well in advance that a new draft negotiation text would be distributed on the Saturday morning, allowing everybody at least to get some sleep before the final consultations began.

Crucially, the French team had an intimate technical knowledge of all the negotiation issues. This enabled the French presidency to pursue a 'high-level equilibrium', where all negotiation groups had to make concessions, rather than a low-level equilibrium, the lowest common denominator.<sup>10</sup> Owing to these factors, the French presidency was able to reverse the traditional negotiation script: typically, in the final hours draft texts tend to be watered down. In Paris, however, the level of ambition was increased with the final draft that was ultimately agreed.

## 2.2 Legal form – treaty or not?

The Paris outcome consists of two parts: the Paris Agreement and the COP Decision, which adopts the Agreement and sets out the steps to taken in the next few years until the Agreement enters into force.

The Paris Agreement was the result of a process that had been initiated by the 17th Conference of the Parties in Durban 2011. There, the Parties had decided 'to launch a process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties'.<sup>11</sup> This formula was a compromise between, on the one hand, the EU and many developing countries calling for a legally binding treaty

7 IISD Reporting Services (2015): Summary of the Paris Climate Change Conference: 29 November–13 December 2015 *Earth Negotiations Bulletin* 12(663) (Paris: IISD Reporting Services) <http://www.iisd.ca/download/pdf/enb12663e.pdf>.

8 Sterk, W., C. Arens, F. Mersmann, H. Wang-Helmreich, T. Wehnert (2011): On the road again: progressive countries score a realpolitik victory in Durban while the real climate continues to heat up (Wuppertal: Wuppertal Institute for Climate, Environment and Energy) <http://wupperinst.org/en/info/details/wi/a/s/ad/1593/>.

9 IISD Reporting Services (2015): Summary of the Paris Climate Change Conference (n 7).

10 The Paris Agreement: historic! what's next? <http://www.blog-iddri.org/2015/12/14/the-paris-agreement-historic-but-whats-next/>.

11 Decision 1/CP.17: Establishment of an Ad Hoc Working Group on the Durban Platform for enhanced action FCCC /CP/2011/9/Add.1 (15 March 2012).

and, on the other hand, the US, which was adamant to achieve an outcome that did not need the approval of the Senate, and China and India, who insisted that there should be no new commitments for developing countries.<sup>12</sup>

The 'natural' legal form of the Paris Agreement would have taken the shape of a protocol similar to the Kyoto Protocol, as provided for in Article 17 of the UNFCCC.<sup>13</sup> This convention–protocol construction was the preferred approach developed in the late 20th century for environmental treaty regimes.<sup>14</sup> This, however, would have forced the US Government to submit the protocol to the Senate for ratification. The Parties in Paris therefore chose a legal form that is not provided for in the UNFCCC because it is neither an amendment to the convention nor a protocol. This innovative legal approach immediately sparked a discussion in the US as to whether the Paris Agreement is a treaty and whether it has to be submitted to the Senate for ratification.<sup>15</sup>

The answer to this question requires a distinction between the international legal system and the national legal sphere of the US. In public international law, a treaty is defined as meaning 'an international agreement concluded between States in written form and governed by international law'.<sup>16</sup> The Paris Agreement was certainly concluded between states and in written form, but is it also governed by international law? Since the Agreement was concluded at an international conference 'in pursuit of the objectives of the Convention' and since it uses the bodies and procedures developed in the context of the Convention (undoubtedly an international treaty), it may safely be concluded that it is governed by international law. The Paris Agreement is thus a (dependent) treaty under international law. It is dependent on the UNFCCC because only Parties to the Convention may ratify and because it cannot stand alone, since many clauses refer to the respective procedures and bodies of the UNFCCC.

Inside the US legal system, the analysis looks different. The executive branch may conclude 'treaties' and 'international agreements other than treaties'. The former need a two-thirds majority in the Senate for ratification, whereas other international agreements can be enacted by the US Government alone. The core question is thus whether the Paris Agreement is considered a 'treaty' under US constitutional law. The issue is addressed by the Foreign Affairs Manual of the US State Department, which provides that a president may conclude 'international agreements other than treaties' in three cases, eg pursuant to a treaty

authorised by the Senate, on the basis of existing legislation and pursuant to his authority as chief executive when such an agreement is not inconsistent with legislation enacted by Congress.<sup>17</sup> Since the Paris Agreement has been adopted pursuant to the UNFCCC, which has been ratified by the Senate, can be implemented based on the existing Clean Air Act and other legislation<sup>18</sup> and does not impose new substantive obligations upon the US, it may be considered an 'international agreement other than a treaty'<sup>19</sup> under US law and thus as not requiring the approval of the Senate.<sup>20</sup>

There is thus a real chance that the Paris Agreement might be spared the fate of the Kyoto Protocol, which was never even submitted to the Senate and which lacked the support of the US. It may therefore fulfil its function as a truly global agreement. One price to pay was a lesser one, namely the choice of a legal form that is not supported by specific provisions of the Convention. The second price weighs heavier, however: the Paris Agreement does not contain any binding obligations with regard to emission reduction or financing activities. These contributions were framed in non-binding language and/or relegated to decisions that are not considered legally binding. It may be concluded from this that the Paris Agreement provides just another example where the political and constitutional peculiarities of one country determine the shape of a vital agreement to protect the global commons.

However, the Agreement contains legally binding obligations to communicate new national contributions every five years. The Paris Agreement therefore does not resolve anthropogenic climate change in the same way as the Montreal Protocol resolved the issue of atmospheric ozone. Instead, it creates periodical political space that needs to be filled through national ambition (see section 3.5).

### 2.3 Purpose of the Agreement

The basic purpose of the Agreement was one of the many areas where the issue of differentiation was fought out. While in particular the LMDCs wanted language that the Agreement should 'enhance the implementation of the Convention', implying a continuation of the distinction between the Annexes, developed countries and AILAC supported language to 'further the objective of the

12 Sterk and others (2011): On the road again (n 8).

13 As for the history see Oberthür, S., H. E. Ott (1999): The Kyoto Protocol. International climate policy for the 21st century (Berlin/Heidelberg et al: Springer Verlag) 239 ff.

14 Cf Ott, H. E. (1998): Umweltregime im Völkerrecht. Eine Untersuchung über neue Formen internationaler institutionalisierter Kooperation am Beispiel der Verträge zum Schutz der Ozonschicht und zur Kontrolle grenzüberschreitender Abfallverbringungen (Baden-Baden: Nomos Verlag) 88.

15 Is the Paris climate agreement a treaty? <http://beforeitsnews.com/environment/2015/12/is-the-paris-climate-agreement-a-treaty-2543856.html>.

16 Vienna Convention on the Law of Treaties 1969 art 2.1(a).

17 Foreign Affairs Manual Chapter 700: Treaties and other international agreements, <http://www.state.gov/e/oes/rls/rpts/175/1319.htm>.

18 New analysis even concludes that the Paris Agreement unlocks the potential for the US administration to use provisions of the Clean Air Act that have to date not yet been applied to addressing climate change; see How the Paris climate agreement super-charges the Clean Air Act <http://thinkprogress.org/climate/2016/01/14/3739649/paris-climate-agreement-clean-air-act/>.

19 Not an 'executive agreement', however, because 'the term "executive agreement" is appropriately reserved for agreements made solely on the basis of the constitutional authority of the president'; see Foreign Affairs Manual (n 17) at 721.1.b.

20 This approach is not new and was for example also chosen in 2013 for the conclusion of the Minamata Convention on Mercury <https://www.washingtonpost.com/news/powerpost/wp/2015/11/30/trick-or-treaty-the-legal-question-hanging-over-the-paris-climate-change-conference/>. See also the note of the State Department <http://www.state.gov/r/pa/prs/ps/2013/11/217295.htm>.

Convention'. The US would have preferred having no separate article on purpose and instead to reflect purpose in the respective parts of the Agreement.

There was also controversy on whether explicitly to reference the Convention's principle of common but differentiated responsibilities and respective capabilities (CBDR–RC). The US had opposed including any references to this principle in the Durban Platform decision, reading it as shorthand for continuing the dichotomy of the Annexes.<sup>21</sup> However, in 2014, the joint announcement by China and the US had explicitly referenced CBDR–RC, but adding the phrase 'in light of different national circumstances', thus maintaining the basic principle but accommodating the US demand for a 'dynamic' interpretation. This wording was subsequently also included in the Lima Call for Climate Action,<sup>22</sup> but in Paris there was nonetheless resistance to including this wording in the Agreement.

Regarding specific objectives of the Agreement, in 2010, at COP 16 in Cancún, the Parties had agreed to keep global temperature increase below 2°C compared with pre-industrial levels. However, this had only been a COP decision; the question was therefore whether it would be possible to enshrine this temperature limit in the treaty that was to come out of Paris. In addition, SIDS and the LDCs had for a long time argued that 2°C was too weak a limit for them, with the associated sea-level rise and other impacts threatening the mere survival of some of their members. They had therefore pushed for strengthening the limit to 1.5°C and, owing to their insistence, the 2010 COP in Cancún had agreed that a review of the temperature limit would be conducted in 2013–15.

This review notwithstanding, until Paris the push for 1.5°C had found little favour with the large emitters – those who would need to undertake the necessary emission reductions. For some time industrialised countries had for a long time argued for maintaining the below 2°C limit, while in particular many oil-exporting countries preferred not to have any temperature limit at all in the Paris Agreement, and definitely not 1.5°C. The LMDCs argued that they could agree to 1.5°C provided that there was clarity on how this limit was going to be met. In their view, achieving 1.5°C would be the responsibility of the industrialised countries, requiring a massive scale-up of their own reductions and of support to developing countries, which were, however, not forthcoming.

Completion of the 2013–15 review of the temperature limit was similarly blocked. The review process had included a structured expert dialogue with scientists which had, amongst other things, concluded that holding global warming below 2°C was inadequate to prevent dangerous climate change. However, in Paris, China and Saudi Arabia in particular blocked adopting any substantive conclusions on the review, preferring to adopt only procedural conclusions, taking note of the report from the expert dialogue and thanking the experts involved.

Positions on the temperature limit shifted substantially during the Paris conference. While before the conference few expected agreement on the 1.5°C limit, in Paris, first individual EU Member States and then the entire EU came around to support 1.5°C as part of the 'high ambition coalition'. Support for 1.5°C was a *conditio sine qua non* for AOSIS and the LDCs, with whom the EU sought to align. The US and other industrialised countries subsequently also shifted their position in favour of 1.5°C, from which it might be surmised that these changes in position were motivated by negotiation tactics to separate the poorer developing countries from the larger emerging economy countries.

The final Agreement includes as its objective 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'. In addition, the Paris Agreement sets objectives to increase 'the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production', and to make 'finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development'. All of these objectives are set in the context of sustainable development and efforts to eradicate poverty.<sup>23</sup> The latter is an acknowledgement of developing countries' development concerns, which need to be taken into account in efforts to combat climate change.

The Agreement also repeats the Sino–US compromise on the Convention's CBDR–RC principle, adding 'in the light of different national circumstances'.<sup>24</sup> While developing countries thus won a hard-fought battle for reiteration of the differentiation principle, the new language can be interpreted to move beyond the static dichotomy of the Convention's Annexes.

## 2.4 Individual efforts

The negotiations on countries' contributions also largely revolved around the issue of differentiation. As noted above, many developing countries demanded that the Paris Agreement should continue the clear differentiation between Annex I and non-Annex I in the Convention, while developed countries wanted to dismantle this 'fire-wall'. They argued that this issue had been put to rest with the introduction of the concept of INDCs, where countries could 'self-differentiate' by adopting contributions in line with their individual national circumstances.

One of the main controversies in the negotiations was whether particular groups of countries should be required to adopt particular types of contributions. In particular, the LMDCs demanded that industrialised countries should adopt legally binding commitments without any conditions attached, while mitigation contributions by developing

21 Sterk and others (2011): On the road again (n 8).

22 Decision 1/CP.20: Lima call for climate action FCCC/CP/2014/10/Add.1 (2 February 2015).

23 Paris Agreement art 2.1; Decision 1/CP.21: Adoption of the Paris Agreement FCCC/CP/2015/10/Add.1, Annex: Paris Agreement (29 January 2016).

24 Ibid. art 2.2.

countries should continue to be voluntary and conditional on the provision of support by industrialised countries. They therefore wanted effectively to ‘copy-paste’ the Convention’s provision that the extent to which developing countries would implement the Agreement would depend on the effective provision of finance, technology and capacity building by developed countries. Industrialised countries in turn held that all countries should be obliged to offer an unconditional mitigation contribution (with the possibility to indicate further efforts that would be subject to the provision of support).

On the content of contributions, developing countries demanded that industrialised countries should adopt absolute economy-wide emission reduction targets, while developing countries’ contributions should be allowed to be diverse in nature, in accordance with respective national circumstances. By contrast, many industrialised countries demanded that all major economies should be required to adopt economy-wide emission targets. Furthermore, industrialised countries wanted to limit the scope of contributions to mitigation, while developing countries held that industrialised countries’ contributions should also include support to developing countries, and that developing countries should also be allowed to include adaptation. Many developing countries strongly rejected a ‘mitigation-centric’ agreement, demanding that there should be parity between mitigation, adaptation and provision of support.

The US had introduced a twist into the issue of bindingness. The US had for a long time suggested that, while all countries should be legally bound to provide contributions under the new Agreement, the content of the contributions should not be legally binding. In Paris, there was thus a controversial debate on whether the Agreement should require the Parties only to ‘prepare and communicate’ contributions, or whether the Parties should also be required to ‘implement’ them.

Article 3 of the final Agreement reads as follows: ‘As nationally determined contributions to the global response to climate change, all the Parties are to undertake and communicate ambitious efforts as defined in Articles 4, 7, 9, 10, 11 and 13 with the view to achieving the purpose of this Agreement as set out in Article 2’.<sup>25</sup> The article thus reflects developing countries’ demand that contributions should cover not only mitigation but all elements, as Article 4 covers mitigation, Article 7 adaptation, Article 9 finance, Article 10 technology, Article 11 capacity building and Article 13 transparency. However, the Agreement does not make developing countries’ contributions conditional on the provision of support, but it does recognise ‘the need to support developing country Parties for the effective implementation of this Agreement’.<sup>26</sup>

The subsequent Article 4 spells out the details on the contributions, stipulating that each Party ‘shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve’. In addition, ‘Parties shall pursue domestic mitigation measures, with the

aim of achieving the objectives of such contributions’.<sup>27</sup> The contributions are to be housed in a public registry maintained by the Secretariat.<sup>28</sup> The Agreement also enshrines the principle that there must be no backsliding in contributions by requiring that each successive contribution ‘will represent a progression beyond the Party’s then current nationally determined contribution’.<sup>29</sup>

Differentiation is addressed by the provision that developed countries ‘should continue taking the lead by undertaking economy-wide absolute emission reduction targets’, while developing countries are called upon to ‘continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances’.<sup>30</sup> Furthermore, support ‘shall be provided to developing country Parties for the implementation of this Article . . . recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions’.<sup>31</sup> The section also repeats the compromise on the CBDR–RC principle, stipulating that a Party’s contribution will reflect ‘its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances’.<sup>32</sup>

Further guidance on features of contributions, such as common timeframes, is to be developed in the coming years. Earlier drafts had included language that mitigation contributions should include unconditional parts, but this provision did not survive in the final Agreement. Neither are there mandatory information requirements for the submission of contributions yet. Here too further guidance is to be developed in the coming years.<sup>33</sup>

## 2.5 Mitigation

The mitigation part of the negotiations involved a complex set of sub-issues. At the aggregate level, there was the question of whether further to operationalise the temperature limit by means of another qualitative or quantitative long-term goal. Further discussions revolved around whether to have specific provisions addressing emissions from deforestation and from international aviation and shipping, and whether to include market-based mechanisms as in the Kyoto Protocol. The issue of individual efforts was discussed in section 2.4 above; notably, individual efforts cover not only mitigation, but also adaptation and provision of support.

### 2.5.1 Ambition

On ambition, a key discussion revolved around whether to adopt a global long-term emission target or other types of targets in order to turn the temperature limit into a concrete goal. The process under the Bali Roadmap from 2007

25 Ibid. art 3.

26 Ibid.

27 Ibid. art 4.2.

28 Ibid. art 4.12.

29 Ibid. art 3.

30 Ibid. art 4.3.

31 Ibid. art 4.5.

32 Ibid. art 4.3.

33 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 26–28.

to 2012 had already included this topic, but the diplomats at that stage were unable to agree on a long-term global emission goal. The 2015 G7 meeting in Elmau, Germany, had taken a unexpected step and called for a 'decarbonisation of the global economy over the course of this century' and supported setting a global emission target at 'the upper end of the latest Intergovernmental Panel on Climate Change (IPCC) recommendation of 40 to 70 per cent reductions by 2050 compared to 2010'.<sup>34</sup> In the climate negotiations, the EU and AILAC furthermore called for the achievement of zero net emissions of CO<sub>2</sub> and other long-lived greenhouse gases (GHGs) by the end of the century, while AOSIS and the LDCs called for global emission reductions of at least 70–90 per cent by 2050. Some SIDS also called for full decarbonisation by 2050. By contrast, in particular Arab and other oil exporting countries opposed including any language on decarbonisation or emission neutrality at all.

The penultimate negotiation draft still included a reference to 'reaching greenhouse gas emissions neutrality in the second half of the century'. In the final hours of negotiation, compromise language was included which had also been used in the Convention and practically represents a scientific definition of the term 'greenhouse gas neutrality'. Parties agreed to

... aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.<sup>35</sup>

Since almost all of the INDCs had been communicated before COP 21, the projected impact on emissions was well known before the conference started. According to an analysis conducted by independent research institutes, the 158 INDCs submitted by the beginning of December 2015 had the potential to limit warming to 2.7°C by 2100, if all governments met their pledges.<sup>36</sup> Other estimates ranged the likely impact to a projected warming of 3–3.5°C.<sup>37</sup> It was thus apparent from the outset that the Paris Agreement would fall well short of the goal to limit global mean temperature rise to below 2°C, not to mention 1.5°C. The Parties acknowledged this shortfall in the decision adopting the Agreement, which 'notes with concern' that the contributions 'do not fall within least-cost

2°C scenarios but rather lead to a projected level of 55 gigatonnes in 2030'.<sup>38</sup>

The effectiveness of the Paris Agreement in limiting global warming therefore depends on the quick strengthening of the nationally determined contributions (NDCs). The instrument for such strengthening is an innovative review mechanism (or 'ratchet') that aims for the Parties to strengthen their contributions every five years (see section 2.9.1 below).

Analyses immediately after Paris seem to indicate that an optimal use of the ratchet mechanism would be sufficient to keep global mean temperatures below 2°C.<sup>39</sup> This would imply, however, that by 2018 countries will have communicated strengthened contributions by 2030 and that they will have committed to longer-term targets with substantial emission reductions. In particular, if cuts by developing countries are envisaged, this would imply greater financial support from developed countries.

The technological means for staying below 1.5°C are basically the same as those required to stay below 2°C, although they would have to be developed faster.<sup>40</sup> According to this analysis, 'negative CO<sub>2</sub> emissions technology' will be required to reach both temperature goals, referring to technologies that take carbon out of the air. This could mean that, in order to achieve such large-scale negative emissions, the use of technologies that combine biomass energy systems with carbon capture and storage will be required.

### 2.5.2 Reducing emissions from deforestation and forest degradation (REDD+)

Deforestation and forest degradation activities are a major source of GHG emissions, being responsible for more than 10 per cent of the global GHG emissions. At the same time, forests store large amounts of carbon and provide numerous environmental and social functions. In order to support developing countries in their efforts to reduce emissions from forest activities and to protect and enhance forest carbon stocks, negotiations to establish a dedicated instrument, the REDD+<sup>41</sup> mechanism, had been ongoing since 2005.

In Paris, negotiators dealing with the issue of REDD+ met with their homework done. Technical issues had already been resolved in advance: In 2013, the Parties had adopted a package of 7 decisions that resulted in the Warsaw Framework for REDD+.<sup>42</sup> Three outstanding issues had been further agreed at the Subsidiary Body for Scientific and Technological Advice (SBSTA) session in Bonn

34 Leaders Declaration G7 Summit Germany (7–8 June 2015) [http://www.international.gc.ca/g8/g7\\_germany\\_declaration-g7\\_allemanne\\_declaration.aspx?lang=eng](http://www.international.gc.ca/g8/g7_germany_declaration-g7_allemanne_declaration.aspx?lang=eng).

35 Paris Agreement art 4.1 FCCC/CP/2015/10/Add.1 (29 January 2016).

36 Climate pledges will bring 2.7°C of warming, potential for more action <http://climateactiontracker.org/news/253/Climate-pledges-will-bring-2.7C-of-warming-potential-for-more-action.html>.

37 For an assessment of the different calculations see Levin, K., T. Fransen (2015): INSIDER: why are INDC studies reaching different temperature estimates? <http://www.wri.org/blog/2015/11/insider-why-are-indc-studies-reaching-different-temperature-estimates>.

38 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 17.

39 Climate Interactive's 'ratchet success' scenario yields expected warming by 2100 of 1.8°C (3.2°F), with a range of uncertainty from 0.9 to 2.4°C (1.7 to 4.4°F) <https://www.climateinteractive.org/blog/press-release-with-an-ambitious-review-cycle-offers-to-paris-climate-talks-could-limit-warming-below-2c/>.

40 This is suggested by an analysis of Climate Analytics <http://climateanalytics.org/hot-topics/feasibility-of-limiting-warming-to-below-1-5c>.

41 REDD+: Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

42 Sterk and others (2013): Warsaw groundhog days (n 3).

in June 2015 and were forwarded as draft decisions to the COP, who adopted all three of them. The first decision<sup>43</sup> gives additional guidance regarding the information the Parties must provide when informing on how social and environmental safeguards are being addressed and respected when implementing REDD+ activities. The second decision<sup>44</sup> assists developing countries willing to develop non-market based approaches as an alternative to results-based payments. With the decision on non-carbon benefits,<sup>45</sup> the Parties further agreed that, while benefits resulting from the implementation of REDD+ activities are to be incentivised, they do not constitute a requirement for developing countries seeking to receive support for these activities.

With the technical details being settled, the focus of the negotiations in Paris shifted to the role REDD+ would have post-2020: would REDD+ be explicitly mentioned in the Agreement text or would the Paris Agreement be sector-neutral? If it were to be included, what message would the respective section convey to those already implementing and supporting REDD+ action? Forests were high on the Paris agenda, in particular outside the negotiation rooms: the climate negotiations took off with the announcement by Norway, the United Kingdom (UK) and Germany to provide US\$5 billion of finance for REDD+ over the next five years and, in numerous side events, practitioners shared experiences made with REDD+ on the ground.

Within the negotiations on the Paris Agreement, the Parties built on the outcome of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) session from October in Bonn. The draft Agreement contained several references to REDD+ in numerous sections, including a separate article on REDD+. This article foresaw the establishment of a genuine REDD+ mechanism, a proposal pushed for by the Coalition of Rainforest Nations (CfRN), which supports a market-based approach for REDD+ financing. The REDD+ section also featured Bolivia's proposal to establish a Joint Mitigation and Adaptation mechanism (JMA) as a non-market based alternative of implementing forest protection activities. In the second week of the negotiations, however, the proposal to establish a new mechanism for REDD+ was dropped and was not reinserted although several Parties from the CfRN repeatedly requested that it should be part of the final text, as other Parties thought REDD+ could be better operationalised under existing institutions.

The Paris Agreement, therefore, does not install a new REDD+ mechanism, but instead builds on the Warsaw Framework for REDD+ and the related decisions: Article 5 of the Agreement, which is exclusively devoted to REDD+, states that the Parties 'are encouraged to take action to

implement and support . . . the existing [REDD+] framework',<sup>46</sup> including through results-based payments. The text also mentions the use of alternative policy approaches, such as joint implementation and adaptation approaches. It further states that: 'Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases'.<sup>47</sup>

Despite the fact that the wording of this paragraph has been strengthened in the course of the negotiation process (from 'are encouraged to take action' to 'should take action'), the general wording of the REDD+ article remains rather weak. However, the relevance of the concept is underscored with its explicit mention in the finance section of the COP Decision adopting the Paris Agreement, which contains a paragraph that stresses the importance of providing financial resources for REDD+ activities.<sup>48</sup>

### 2.5.3 Aviation and shipping

Emissions from international aviation and shipping activities account for an ever larger share of greenhouse gas emissions globally. If they were a country, they would rank amongst the world's top 10 emitters and have in recent years grown twice as fast as emissions in general, with projected increases of 250–300 per cent until 2050.<sup>49</sup> Over the years, many attempts have been made to include these 'bunker fuels' into the efforts to curb emissions, but without much success. The Kyoto Protocol in Article 2.2 requests that: 'Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases . . . from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively'. However, these organisations have to date not been able to agree on a common approach to deal with this issue.

The first draft of the Paris Agreement, submitted on 5 December 2015, included a comparable formulation in the draft Article 3.20, requesting the Parties to pursue their efforts through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) respectively. It went further, however, suggesting that these organisations should develop 'procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies'. While in particular the EU and the environmental integrity group (comprising Liechtenstein, Mexico, Monaco, the Republic of Korea, and Switzerland) supported such a clause, China, India, the US and others were opposed, and it was ultimately dropped from the draft early in the second week of negotiations. The Paris Agreement and the related decision do not mention aviation and marine transport emissions once.

43 Decision 17/CP.21: Further guidance on ensuring transparency, consistency, comprehensiveness and effectiveness when informing on how all the safeguards referred to in Decision 1/CP.16, appendix I, are being addressed and respected FCCC/CP/2015/10/Add.3 (29 January 2016).

44 Decision 16/CP.21: Alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests FCCC/CP/2015/10/Add.3 (29 January 2016).

45 Decision 18/CP.21: Methodological issues related to non-carbon benefits resulting from the implementation of the activities referred to in Decision 1/CP.16, para 70 FCCC/CP/2015/10/Add.3 (29 January 2016).

46 Paris Agreement art 5.2 FCCC/CP/2015/10/Add.1 (29 January 2016).

47 Ibid. art 5.1.

48 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 54.

49 Lee, D. S., L. L. Lim, B. Owen (2013): Bridging the aviation CO<sub>2</sub> emissions gap: why emissions trading is needed (Manchester: Dalton Research Institute/Manchester Metropolitan University) [http://www.cate.mmu.ac.uk/wp-content/uploads/Bridging\\_the\\_aviation\\_emissions\\_gap\\_010313.pdf](http://www.cate.mmu.ac.uk/wp-content/uploads/Bridging_the_aviation_emissions_gap_010313.pdf).

This leaves the issue completely up to ICAO and IMO, without any guidance from the climate regime – two organisations that are heavily influenced by the respective industries. Because of the growing emissions in this sector, the issue will have to be seriously addressed in the next years if the purpose of the Paris Agreement, enshrined in Article 2, is to be fulfilled. If not, any reduction efforts in the land transport sector might be compromised if there are not equally ambitious actions on international aviation and shipping.

#### 2.5.4 Cooperative mechanisms

Market-based policy schemes are spreading worldwide. About 40 national or subnational systems for emissions trading or taxing GHG emissions have been implemented to date.<sup>50</sup> However, 'national or subnational' are the key words here, as demand for emission reductions from international mechanisms remains low. Out of 86 countries that stated that they planned or considered using international market mechanisms in their INDCs, only 13 emerged as potential buyers, notably excluding the EU, which has been a major proponent of market mechanisms so far.<sup>51</sup> The EU and others nonetheless pushed strongly for the inclusion of market mechanisms in the Paris Agreement. However, leftist Latin American governments strongly resisted including market mechanisms.

To accommodate these countries, the final outcome makes no explicit mention of markets, but enables market-based approaches in several ways. One distinct feature is a new mechanism which is to 'promote the mitigation of greenhouse gas emissions while fostering sustainable development'.<sup>52</sup> While building on the experiences of the flexible mechanisms of the Kyoto Protocol,<sup>53</sup> the scope of this mechanism is broader in that it is not restricted to project-type activities. Furthermore, it is to 'deliver an overall mitigation in global emissions',<sup>54</sup> thus going beyond the zero-sum game of the Kyoto mechanisms to date. The deviation from the Kyoto world is also mirrored in the fact that both developed and developing countries can use the mechanisms, leading to a kind of hybrid between the Clean Development Mechanism and Joint Implementation, respectively. Other features of this mechanism include oversight by the UNFCCC, participation of public as well as private entities, and the prohibition of double counting (ie accounting for emission reductions at the same time in the inventories of the host country, as well as in the budget of the receiving country).

The decision text tasks the SBSTA with elaborating modalities and procedures for this mechanism.<sup>55</sup> It names important principles in this context, namely that reductions must be 'real, measurable and long-term'.<sup>56</sup> This last attribute was a major bone of contention. An earlier draft of the negotiation text stated that emission reductions must be 'permanent', but forest countries strongly pushed for the ultimately accepted formulation in order to open up the mechanism to land-use and forestry activities. Further, reductions must be additional, relate to yet-to-be defined 'specific scopes' of activities and be verified and certified by designated operational entities (DOEs).<sup>57</sup>

Moreover, the Paris Agreement allows the Parties to conduct 'cooperative approaches'.<sup>58</sup> Under these, mitigation outcomes can be 'internationally transferred' and 'used' against nationally determined contributions.<sup>59</sup> The respective Article 6.2 names environmental integrity, transparency and robust accounting as the core principles guiding these approaches, while UNFCCC oversight is not foreseen. Instead, the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA) is to develop dedicated guidance. These provisions could open many doors towards cooperation, for example the transfer of units stemming from bilateral schemes such as the Japanese Joint Crediting mechanism, but also to emissions trading between the Parties. However, these opportunities hinge on the yet-to-be-developed guidance.

## 2.6 Adaptation

With many developing countries already experiencing impacts of climate change, for many years, they have made efforts to raise the status of adaptation in the climate regime, which has historically been put in second place by developed countries.<sup>60</sup> In this regard, the outcome of climate negotiations in Paris can be considered a huge success for developing country Parties. Never before has greater importance been placed on national as well as global action to help people adapt to climate change impacts than in the Paris Agreement: recognising that adaptation 'is a key component of and makes a contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems',<sup>61</sup> the Paris Agreement furthers the participation of all countries in adaptation activities and requests all the Parties to engage in adaptation planning processes and the implementation of actions.<sup>62</sup> According to the Agreement, all adaptation

50 The World Bank (2015): State and trends of carbon pricing 2015 <http://documents.worldbank.org/curated/en/2015/09/25053834/state-trends-carbon-pricing-2015>.

51 Obergassel, W., M. Gornik (2015): Update on the role of market mechanisms in intended Nationally determined contributions (Wuppertal: Wuppertal Institute for Climate, Environment and Energy) (JIKO Policy Brief 04/2015) <http://www.carbon-mechanisms.de/en/2015/update-on-role-of-market-mechanisms-in-intended-nationally-determined-contributions/>.

52 Paris Agreement art 6.4 FCCC/CP/2015/10/Add.1 (29 January 2016).

53 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 37 ff.

54 Paris Agreement art 6.4d FCCC/CP/2015/10/Add.1 (29 January 2016).

55 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 38.

56 Ibid. para. 37b.

57 Ibid. paras 37c–d.

58 Paris Agreement art 6.2, 6.3 FCCC/CP/2015/10/Add.1 (29 January 2016).

59 Ibid.

60 Ott, H., W. Obergassel, C. Arens, L. Hermwille, F. Mersmann, H. Wang-Helmreich (2014): Climate policy: road work and new horizons – an assessment of the UNFCCC process from Lima to Paris and beyond *Environmental Liability* 22(6) 223–38 [http://wupperinst.org/uploads/tx\\_wupperinst/Post\\_Lima\\_Pre\\_Paris.pdf](http://wupperinst.org/uploads/tx_wupperinst/Post_Lima_Pre_Paris.pdf).

61 Paris Agreement art 7.2 FCCC/CP/2015/10/Add.1 (29 January 2016).

62 Ibid. art 7.9.

action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems.<sup>63</sup>

Article 7.1 of the Agreement establishes a long-term vision on adaptation. This issue was on the agenda of many developing countries, who aimed at ensuring parity between mitigation and adaptation in the Agreement. Developed countries, by contrast, had put forward a proposal for no text on this issue. The COP finally decided on a global goal to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change to ensure 'an adequate adaptation response in the context of the temperature goal referred to in Article 2'.<sup>64</sup> Parties explicitly recognise that the 'current need for adaptation is significant and that greater levels of mitigation can reduce the need for additional adaptation efforts'<sup>65</sup> as well as the associated costs. The explicit link to the temperature goal is important, as it acknowledges that global needs for adaptation depend heavily on the success of mitigation activities.

In parallel to the contribution cycles for mitigation, action on adaptation is to be reviewed and accelerated every five years. This was warmly welcomed by many developing country Parties as well as by observer organisations. Most of the INDCs submitted in the run-up to Paris by developing countries already included information regarding countries' adaptation priorities, implementation and support needs, as well as plans and actions. Offering flexibility regarding timing and methods for communicating information, the Paris Agreement requests all the Parties to compile information on these topics in an adaptation communication, which is to be recorded in a public registry maintained by the secretariat of the UNFCCC and updated periodically.<sup>66</sup> National adaptation communications will be part of the global stocktake (see section 2.9.1), thus offering opportunities to review the overall progress made in achieving the global goal on adaptation and to spiral up adaptation action and support.<sup>67</sup>

Increased adaptation finance was a top priority in the negotiations for many developing country Parties. The need for substantial adaptation finance is recognised in the Paris Agreement, which calls for a balance between adaptation and mitigation finance and support.<sup>68</sup> Although the call for balanced allocation is not new, in practice, developed countries have so far put adaptation finance in second place after mitigation finance. Furthermore, the Agreement recognises the need for public and grant-based resources for adaptation, as well as the special needs of the most vulnerable nations.<sup>69</sup> However, while the Agreement states that '[c]ontinuous and enhanced international support shall be provided to developing country Parties'<sup>70</sup> and recognises the importance of support for

and international cooperation on enhanced adaptation efforts,<sup>71</sup> it does not include a collective, quantified goal for adaptation finance, as had been demanded by developing countries.

Workstream 2 (WS2) of the ADP was originally designated only to increase the short-term (pre-2020) ambition of mitigation activities, particularly by developed countries.<sup>72</sup> Developing countries, however, especially those who are particularly vulnerable, fought hard for the recognition of adaptation under WS2. Amongst other issues, this was seen as a means to underline the importance of adaptation and was considered helpful to push climate change adaptation even higher on national agendas. In the end, despite hesitation by developed countries, developing countries were successful in their attempt to establish another institution under WS2 which will focus on adaptation. Thus, in Paris, the Parties launched a technical examination process (TEP) on adaptation in the period 2016–20 complementary to the existing mitigation TEP. This process will focus on lesson sharing and identifying opportunities for implementation and cooperative action and will thus increase countries' ability to adapt to climate change.<sup>73</sup>

Like the mitigation TEP, the adaptation TEP will be organised jointly by the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA) and conducted by the Adaptation Committee. It will take into account the process, modalities, outputs, outcomes and lessons learned from the TEP on mitigation. The goal of the new TEP will be the identification of concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions. To support the TEP on adaptation, the secretariat is to organise regular technical expert meetings (TEMs) and annually to prepare a technical paper.<sup>74</sup>

Apart from the Paris Agreement and associated decisions, ongoing business regarding adaptation centred on the Adaptation Committee, the Buenos Aires Programme of Work on Adaptation and Response Measures, the Nairobi Work Programme and the Adaptation Fund. Thus, the report of the Adaptation Committee resulted in COP decisions which, inter alia, invite the IPCC to enhance outreach activities that facilitate policy-makers' understanding of the impact of different levels of warming on adaptation planning and actions.<sup>75</sup> Furthermore, the Parties are invited to take into account climate risk screening of national development strategies and policies aimed at enhancing livelihoods and economic diversification to enhance climate resilience.<sup>76</sup>

Moreover, the COP requests the Technology Executive Committee (TEC) to consider how it can help the Parties to align their technology needs assessments (TNAs) with

63 Ibid. art 7.5.

64 Ibid. art 7.1.

65 Ibid. art 7.4.

66 Ibid. art 7.10, 7.11 and 7.12.

67 Ibid. art 7.14.

68 Ibid. arts 9.4 and 10.6.

69 Ibid. art 9.4.

70 Ibid. art 7.13.

71 Ibid. art 7.6 and 7.7.

72 See also Ott and others (2014): Climate policy (n 60) 223–38.

73 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 124, 125 and 127.

74 Ibid. paras 125, 126, 128 and 129.

75 Decision 3/CP.21: Report of the Adaptation Committee, para 4 FCCC/CP/2015/10/Add.2 (29 January 2016).

76 Ibid. para 6.

their national adaptation plans (NAPs). To this end, the TEC is to collaborate with the Climate Technology Centre and Network (CTCN), the Adaptation Committee and the Least Developed Countries Expert Group (LEG).<sup>77</sup> Decisions on the process to assess progress made regarding the formulation and implementation of NAPs were made separately.<sup>78</sup> Finally, the COP requests the Adaptation Committee to strengthen further cooperation with the Standing Committee on Finance (SCF) and other constituted bodies under the Convention to enhance coherence and collaboration regarding adaptation finance.<sup>79</sup> The Committee's recommendation for a closer cooperation with the Finance Mechanism had been discussed in the SBI before but had still been rejected by the SBI in Lima at COP 20.<sup>80</sup>

In the decision adopting the Paris Agreement, the COP, *inter alia*, requested the Adaptation Committee and the LEG jointly to develop modalities to recognise the adaptation efforts of developing country Parties, make recommendations to review in 2017 the work of adaptation-related institutional arrangements under the Convention and to consider methodologies for assessing adaptation needs. Furthermore, the Adaptation Committee and the LEG, in collaboration with the Standing Committee on Finance (SCF) and other relevant institutions, shall develop methodologies and make recommendations on taking the necessary steps to facilitate the mobilisation of support for adaptation in developing countries and reviewing the adequacy and effectiveness of adaptation and support.<sup>81</sup>

Concerning the implementation of the Buenos Aires Programme of Work on Adaptation and Response Measures (Decision 1/CP.10), the Parties (Argentina for the G77/China, Ghana for the African Group, and Saudi Arabia) criticised that during negotiations, discussions in the first week's contact group strongly depended on developments in negotiations under the ADP.<sup>82</sup> The forum is to provide a platform to allow the Parties to share information, experiences, case studies, best practices and views, and to facilitate assessment and analysis of the impact of the implementation of response measures. Thus, it supports the finding of recommendations for specific actions and enhances the capacity of the Parties, in particular developing country Parties, to deal with the impact of the implementation of response measures.

The final COP decision focused on continuing and improving the forum. To advance the work of the improved forum, the subsidiary bodies were to constitute *ad hoc* technical expert groups with balanced regional representation of the Parties to elaborate on the technical work. Furthermore, the COP adopted a work programme, which comprised the areas of economic diversification and transformation, just transition of the work force and the creation

of decent work and quality jobs. The implementation of the work programme is to address the needs of all the Parties, in particular, developing country Parties, and to be informed, *inter alia*, by the assessment and analysis of impacts. The work programme is to be reviewed by the subsidiary bodies (SBs) every three years. Finally, the COP requested the Secretariat to prepare, subject to the availability of financial resources, a guidance document to assist developing countries to assess the impact of the implementation of response measures, as well as technical materials to assist developing countries on their economic diversification initiatives.<sup>83</sup>

In the context of the Nairobi Work Programme (NWP), the Lima Adaptation Knowledge Initiative (LAKI)'s aims are the identification and prioritisation of knowledge gaps at the sub-regional level and to fill these gaps. The progress of LAKI in various sub-regions was stressed by the UN Environment Programme as well as by Botswana and Sri Lanka, who also welcomed LAKI's future workshops.<sup>84</sup> The information provided by LAKI was also recognised by the SBSTA in the conclusions of the NWP, which were adopted on Friday, 4 December. In the conclusions, the SBSTA, amongst other issues, also noted with appreciation the reports provided on good practices and lessons learned in adaptation planning and progress on implementing activities under the NWP, and the information provided by the Adaptation Committee and the Least Developed Countries Expert Group (LEG). Moreover, the SBSTA welcomed the launch of the Adaptation Knowledge Portal and recognised its role in enhancing the dissemination of knowledge developed under the NWP, the Adaptation Committee and the WIM (Warsaw International Mechanism on loss and damage associated with climate change impacts) Executive Committee.<sup>85</sup>

On Wednesday, 2 December, Adaptation Fund board chair Hans Olav Ibrekk (Norway) reported that the fund was heavily in demand and delivered effectively on its mandate. However, he feared that the sustainability of the fund was 'in danger'.<sup>86</sup> The share of proceeds from Clean Development Mechanism (CDM) activities for the fund had been declining substantially owing to extremely low prices for certified emission reductions (CERs), thereby causing financial difficulties for the fund. The report of the Adaptation Fund Board as well as a decision were adopted by the COP on Sunday, 13 December. The decision included the CMP's request to the Adaptation Fund Board to continue simplifying accreditation procedures for national implementing entities. Furthermore, the CMP urged the Parties to deliver on their announced financial contributions for the fundraising target of the Adaptation Fund

77 *Ibid.* para 5.

78 Decision 4/CP.21: National adaptation plans FCCC/CP/2015/10/Add.2 (29 January 2016).

79 Decision 3/CP.21: Report of the Adaptation Committee (n 75) para 7.

80 Ott and others (2014): Climate policy (n 60) 223–38.

81 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 41–45.

82 IISD Reporting Services (2015): Summary of the Paris Climate Change Conference (n 7).

83 Decision 11/CP.21: Forum and work programme on the impact of the implementation of response measures. FCCC/CP/2015/10/Add.2 (29 January 2016).

84 IISD Reporting Services (2015): Summary of the Paris Climate Change Conference (n 7).

85 Draft conclusions proposed by the chair; Nairobi work programme on impacts, vulnerability and adaptation to climate change FCCC/SBSTA/2015/L.19.

86 IISD Reporting Services (2015): Summary of the Paris Climate Change Conference (n 7).

Board as soon as possible and encouraged voluntary support for resource mobilisation of the Adaptation Fund Board in addition to the share of proceeds from CDM activities.<sup>87</sup>

## 2.7 Loss and damage

Loss and damage refers to adverse effects of climate change that cannot be adapted to. The concept has been a contentious issue of the climate change negotiations for many years. Developing countries, in particular LDCs, as well as other countries particularly vulnerable to the impacts of climate change, have been fighting strongly for its recognition. This was achieved implicitly with respective language in the preamble of the COP decisions in Doha in 2012, and explicitly by the installation of the WIM one year later. Despite these achievements, the issue of loss and damage had not progressed significantly since then. Owing to the late nomination of members, the Executive Committee of the WIM did not hold its first meeting until September 2015 and the implementation of the work plan has only just begun. In Paris, the COP noted 'with concern' the limited progress made and agreed to extend the members' terms of office. Parties further urged the Executive Committee to explore modalities of work to fulfil its mandate.<sup>88</sup>

Against the backdrop of the limited progress, the question of whether loss and damage would be a part of the Paris Agreement was key. In Paris, discussions were highly politicised and most deliberations on loss and damage took place informally behind closed doors. The recognition of loss and damage as a part of the Paris Agreement on the one hand and the question of liability and compensation on the other were the crunch issues that dominated the negotiations on this issue from the very beginning. In the course of 2015, developing countries had already made clear that a Paris Agreement without reference to loss and damage was not an option for them. The Umbrella Group, by contrast, called for the respective article of the draft Agreement to be removed, mainly because developing countries had called for compensation language in the text, causing fears of liability issues for developed countries. By recognising that this was seen as a no-go area by developed countries, the group of G77/China tabled an alternative proposal that made no reference to compensation in June 2015. Developed countries, however, continued calling for the issue to be addressed outside the Agreement text.

In the first week of the Paris negotiations, no fundamental progress was achieved. When the draft Agreement was forwarded to ministers, the option to exclude loss and damage from the Agreement was still on the table – as was its inclusion, either as a separate article or in the adaptation section. What prevented developed countries from agreeing on the inclusion of loss and damage in the Paris

Agreement continued to be the fears of liability and compensation, despite the fact that none of those terms was mentioned in the draft Agreement. To developed countries, the concept of loss and damage as such is associated with the notion of liability and compensation, even without these terms being explicitly alluded to, as Todd Stern, US special envoy for climate change, made clear: 'There is one thing we don't accept and won't accept in this agreement and that is the *notion* that there should be liability and compensation for loss and damage. That's a line that we can't cross'.<sup>89</sup> This position was shared by several other developed countries.

Against this backdrop, the US and other developed countries called for the insertion of a clause ensuring that the inclusion of loss and damage under the Paris Agreement would not provide any basis for liability and compensation. In the end, developing countries agreed to such a clause, which, however, is not contained in the Agreement itself, as the US had originally pushed for; but in the accompanying COP Decision. In paragraph 51 of the decision the COP 'agrees that Article 8 of the Agreement [on loss and damage] does not involve or provide a basis for any liability or compensation'.<sup>90</sup> In exchange, developing countries were able to anchor Article 8 as a separate article on loss and damage in the Paris Agreement.

This article underscores the relevance of dealing with loss and damage and lists eight areas of cooperation to enhance understanding, action and support, including early warning systems, slow onset events and non-economic losses. The Paris Agreement does not create a new mechanism, as originally proposed by developing countries, but states that the WIM is to operate under the governing body of the new Agreement. It further states that the WIM 'may be enhanced and strengthened'<sup>91</sup> in the future and continued, following a review in 2016, as contained in the COP Decision adopting the Agreement.<sup>92</sup> The decision further requests the Executive Committee of the WIM to establish a task force to develop recommendations for dealing with climate change related displacement.<sup>93</sup>

This reflects the call from developing countries for the installation of a climate change displacement coordination facility; however, without giving it the institutional strength G77/China had called for, who wanted the facility to be installed by the governing body of the Agreement. Parties also agreed on the installation of a clearinghouse for risk transfer,<sup>94</sup> as had been proposed by developed countries. This reflects recent initiatives outside the UNFCCC, such as the G7 Climate Risk Insurance Initiative launched in June, which is to cover 300 million people in developing countries with climate risk insurance.

87 Decision 1/CMP.11: Report of the Adaptation Fund Board FCCC/KP/CMP/2015/8/Add.1 (29 January 2016).

88 Decision 2/CP.21: The Warsaw International Mechanism for loss and damage associated with climate change impacts FCCC/CP/2015/10/Add.2 (29 January 2016).

89 United States of America (2015): Press briefing with Special Envoy for Climate Change Todd D. Stern <http://unfccc6.meta-fusion.com/cop21/events/2015-12-04-14-30-united-states-of-america> 13 minutes (emphasis added).

90 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 51.

91 Paris Agreement art 8.2. FCCC/CP/2015/10/Add.1 (29 January 2016) (emphasis added).

92 Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 47.

93 *Ibid.* para 49.

94 *Ibid.* para 48.

However, while the enhancement of support for dealing with loss and damage is part of the Agreement, there is no explicit reference to loss and damage in the finance section. A paragraph contained in the draft version of the Agreement forwarded to ministers after the end of the first week, which had called for the provision of support for addressing loss and damage, was ultimately deleted. Similarly, a paragraph clearly indicating that some of the impacts caused by climate change go beyond the limits of adaptation, which was included in the adaptation section of the draft Agreement until the very end of the negotiations, is not contained in the final version of the Paris Agreement. This paragraph would have underscored the recognition of loss and damage as a third pillar next to mitigation and adaptation.

## 2.8 Means of implementation

For developing countries effectively to implement their NDCs, industrialised countries will have to offer assistance in various forms. The basis for this obligation reaches back as far as the original text of the Convention (UNFCCC Article 4). Support for developing countries in general should come in the form of finance, technology development and transfer, and capacity building. Bearing in mind that finance and technology especially are 'hard currency', not only in the climate realm but have notable implications for country budgets, the history of the COPs has seen fights over this at almost every session.

A large portion of the Paris Agreement contains provisions offering support for developing countries, albeit of varying strength: Article 9 deals with finance, Article 10 with technology development and transfer, and Articles 11 and 12 with capacity building and education. Article 13 contains provisions not only for transparency of mitigation efforts but also for support offered and received. The decision on the adoption of the Paris Agreement contains a number of specifications to the articles mentioned above.

### 2.8.1 Finance

Fights over provisions on finance within the international climate regime have always threatened to 'break' the outcome of the negotiations as a whole, and Paris was no different in this regard.

Shortly before the start of COP 21, the Organization for Economic Co-operation and Development (OECD), together with the Climate Policy Initiative had issued a report on the mobilisation of climate finance by developed countries from 2013 to 2014, which calculated a sum of US\$62 billion in 2014, up from US\$52 billion in 2013.<sup>95</sup> In Copenhagen, industrialised countries had pledged to mobilise US\$100 billion in climate finance from a number of sources in 2020 and beyond, but the road to reach that goal had always been unclear. Therefore, being more than

halfway there was presented as a major success by many industrialised countries, including France, early in the first week of the Paris summit.

However, developing countries were less positive. India especially voiced serious concerns on the methodology and transparency of the report, which was mainly grounded within the accounting system of the OECD's Development Assistance Committee (OECD–DAC). The Indian Ministry of Economic Affairs published a paper casting serious doubts on the figures offered by the OECD report, and Indian officials at the Paris summit suggested that the true figure could be as low as US\$2.2 billion.<sup>96</sup>

It was clear that finance would once more be a major stumbling block for an agreement. A spin-off group on finance was formed, but every report back to the plenary in the following two weeks reiterated major difficulties in finding common ground. While partial agreements could be formed, such as that provision of financial resources should aim for a balance between mitigation and adaptation, most content remained completely unclear. A major point of contention was the question of how to codify possible financial contributions by developing countries, which was demanded by developed countries but firmly opposed by India, China and a number of other developing countries.

Developing countries, for their part, demanded that industrialised countries should provide a clear roadmap for how they intended to fulfil the US\$100 billion pledge, as well as firm commitments to increase the level of funding after 2020. They also demanded establishment of an iterative finance cycle regularly to evaluate and upscale the provision of finance by developed countries. After unsuccessful negotiations over the first week – the negotiation text still contained 107 square-bracketed passages and 18 options – finance was relegated to the ministerial level in the hopes that a decision could be formed on a higher political level.

COP President Fabius announced that an *indaba* on support would be formed, with finance high on the list of issues that needed to be resolved. On Thursday, 10 December, the Parties had managed to streamline the Agreement text down to only nine square brackets, seven of which would further specify and strengthen language on the provision of financial resources, such as 'predictable', 'sustained' or 'scaled-up' in the first paragraph.<sup>97</sup> At that point, the draft article on finance (then Article 6), still contained a clear reference to a progression from the US\$100 billion mobilisation goal of developed countries.

According to rumours in the corridors, more or less continuous informal negotiations took place until Saturday afternoon, in order to find common ground on finance in the Paris Agreement. The text finally provided to the public on Saturday, 12 December, at 13.30 (and adopted without changes in the closing plenary of the COP) had lost all qualifiers to the provision of climate finance in its

95 OECD (2015): Climate finance in 2013–14 and the US\$100 billion goal, a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI).

96 Paris climate talks: Indian officials accuse OECD of exaggerating climate aid <http://www.theguardian.com/environment/2015/dec/02/paris-climate-talks-indian-officials-accuse-rich-countries-of-exaggerating-climate-aid>.

97 See draft text issued 10 December 2015 @ 21.30.

first paragraph. It now only stipulates that: 'Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention'.<sup>98</sup>

The Paris Agreement also encourages other Parties to 'provide or continue to provide such support voluntarily'.<sup>99</sup> This poses no additional binding obligation on developing countries, but recognises the growing level of South–South financial support and partly accommodates developed countries' desire to broaden the donor base.

The Agreement text has also lost a direct reference to the US\$100 billion mobilisation goal, or, in fact, any language that would imply an obligation to scale up climate finance from current levels. Financial obligations had been a clear red line for the US, as this would have required ratification by the US Congress. As Congress had made it abundantly clear that it would decline any climate treaty, the US would have been unable to join the Agreement.

Some clearer language could be retained in the text of the decision adopting the Agreement. In paragraph 53 of the COP decision, the Parties decided that: 'developed countries intend to continue their existing collective mobilisation goal through 2025 . . . ; prior to 2025 the [CMA] shall set a new collective quantified goal from a floor of US\$100 billion per year . . .'.<sup>100</sup>

With this, developed countries have committed themselves again to a (non-binding) finance goal. However, with the second half of the paragraph, it is now clear that the promised US\$100 billion per year cannot be the ceiling of finance commitment, but rather must be a floor to scale up from before 2025. However, the paragraph may prove to be a double-edged sword for the coming negotiations, as the formulation of a 'collective quantified goal' will once more open up fights over financing commitments by at least the economically stronger developing countries.

The decision also urges developed countries to develop a 'concrete roadmap' for achieving the US\$100 billion pledge, and decides to conduct a facilitative dialogue at COP 22 in 2016 to assess progress and identify opportunities to enhance support.<sup>101</sup>

### 2.8.2 Technology

A crucial aspect to effective implementation of developing countries' nationally determined contributions is the access to technologies that make a shift away from fossil-based infrastructures possible. While always recognised, the issue of technology development and transfer had been out of the limelight of negotiations for some time, and had been relegated to the work of the subsidiary bodies. Thus, the further development of the Convention's Technology Mechanism, including the work of the Technology Executive Committee (TEC), and the development and operationalisation of the Climate Technology Centre and Network (CTCN) had been of rather low profile in recent years.

It had been clear from earlier drafts of the text developed in the sessions of the ADP that the Paris Agreement would contain provisions on technology development and transfer.<sup>102</sup> However, at least in the early days of the Paris conference, the topic unexpectedly gained some traction. A spin-off group on technology issues was created as early as 29 November, with the Parties proposing numerous amendments and text options immediately. The LMDC group proposed setting a goal for technology transfer by developed countries including associated finance. Especially for India, this also meant provision of finance to overcome the barriers of intellectual property rights (IPRs) of environmentally sound technologies. IPRs had long been a controversial issue in the negotiations on technology cooperation. Developed countries have always strongly opposed any reference to IPRs. The African group tabled a bridging proposal on a technology framework under the Paris Agreement. While the proposal was apparently met with general approval, many amendments were proposed and discussed. In the end, it was agreed to forward the proposal in its original form.

Negotiations on technology transfer seem to have moved fairly quickly and without much publicity in the second week. The text of 10 December contains neither square brackets nor options, and did not change in Article 10 of the final Agreement text. As one of the main achievements of the developing countries, it establishes the above-mentioned technology framework in order to provide guidance to the Technology Mechanism, which will now also serve the CMA. The technology framework also serves to pursue the long-term vision of all the Parties set out in Article 10.1, citing: ' . . . the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions'.<sup>103</sup>

The Paris decision requests the SBSTA to define further the technology framework starting at its next session in May 2016. Topics that should be taken into account include undertaking and updating technology needs assessments (TNAs) of developing countries, scaling-up of technical and financial support for TNAs, assessing technologies that are 'ready for transfer', and the enhancement of enabling environments as well as the removal of barriers to technology transfer.

Another success of developing countries is the establishment of a clear link between technology and finance. As set out in Article 10.5, the acceleration, encouragement and enablement of innovation is not only to be supported through the Technology Mechanism, but also through financial means by the Financial Mechanism of the Convention.<sup>104</sup> This link to the Financial Mechanism had been a

98 Paris Agreement art 9.1 FCCC/CP/2015/10/Add.1 (29 January 2016).

99 Ibid. art 9.2.

100 Decision I/CP.21: Adoption of the Paris Agreement (n 23) para 53.

101 Ibid. paras 114 ff FCCC/CP/2015/10/Add.1 (29 January 2016).

102 Ad Hoc Working Group on the Durban Platform for enhanced action, Second session, pt 11 (19–23 October 2015), Bonn, Germany: Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for enhanced action, Work of the ADP contact group, version of 23 October 2015 @ 23:30 hrs; Draft Agreement art 7 and Draft Decision paras 48 ff.

103 Paris Agreement art 10 para 1 FCCC/CP/2015/10/Add.1 (29 January 2016).

104 Ibid. art 10.5.

matter of debate between developing and developed countries for a long time.

IPRs predictably do not appear in the Agreement text. The mention of IPRs has always been a red line issue, especially for the US, and it cannot be expected that this will change in the future. However, the link between technology and finance at least acknowledges that finance could be needed for the acquisition of copy-righted technologies. Whether this will be sufficient to close the chapter on IPRs once again remains to be seen.

The decision text decides to strengthen the Technology Mechanism further, and reiterates that its institutions (ie TEC and CTCN) shall report to the future CMA. There will now be a periodic assessment of the Technology Mechanism's effectiveness in supporting the implementation of the Paris Agreement. The SBI is tasked with elaborating scope and modalities for this assessment, starting at its next session.<sup>105</sup>

### 2.8.3 Capacity building

Capacity building had in the past been another low-profile element of the UN climate regime's support structure. Industrialised countries had always recognised capacity building to be an essential element especially for LDCs, but developing countries had never managed to bring the issue to the top of the agenda. Consistent progress had been made over recent years, with the Durban Forum on Capacity-Building, a multi-stakeholder forum for sharing ideas and lessons learned, being the most visible outcome in 2011.

The Paris Agreement recognises the importance of the issue, but the text of the Agreement itself is relatively weak and non-binding. However, the accompanying decision text holds a negotiation success for developing countries: the Paris Committee on Capacity-building is created, with an aim to: 'address gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention'.<sup>106</sup>

The Committee will follow a work plan in the period of 2016–20, with a number of different issues related to the existing capacity-building framework under the Convention, as well as capacity gaps that should be addressed by the Parties. Each year, the Committee will focus on a special topic, and hold annual in-session meetings where these areas can be addressed. The SBI is tasked to develop terms of reference for the newly-established body to be approved by COP 22 in 2016.

## 2.9 Three elements for increasing ambition over time

Since the achievement of the contributions is not mandatory (see section 2.4 above), the Paris Agreement relies on three elements that provide transparency and create political moments that impose a threat of high political

costs for those Parties that do not keep up with their pledges: through periodic global stocktakes, through a robust transparency framework and through a facilitative compliance mechanism.

### 2.9.1 Global stocktake and contribution cycle

One of the central questions of the negotiation process was whether or not the Parties' contributions should be assessed internationally before adoption. Back in Lima in 2014 at COP 20, the Parties could not agree to such an international ex ante assessment. In particular, the LMDCs had rejected any international assessment of developing countries' intended contributions, citing reasons of sovereignty. Before Paris, there was therefore only a technical paper by the Secretariat assessing the global aggregate level of mitigation ambition of the INDCs, but no discussion of individual INDCs. The question therefore was whether there should be an international assessment post-Paris, when such a process should start and, in particular, whether it would already apply to the first implementation period of the Agreement.

A related question was the frequency of contribution cycles. Many INDCs have 2030 as their target date, some have 2025 and some have yet other dates. The question was therefore whether and how quickly countries, in particular those with 2030 and later target dates, would need to reconsider their contributions in the coming years. Given the low level of ambition of most INDCs, establishing no process to reconsider them would have put the temperature limit out of reach once and for all.

A group of countries including the African Group, AILAC, Brazil, the EU, Indonesia, Mexico, the Philippines, SIDS and the US strongly supported the establishment of an 'ambition mechanism' to regularly review and strengthen contributions every five years. By contrast, the LMDCs again rejected ex ante reviews of contributions, five-yearly cycles and enshrining an obligation to strengthen contributions as result of such a process.

Agreement was made possible by broadening the scope of the cycle to include not only mitigation, but also adaptation and provision of support.<sup>107</sup> This provision meets the demand of the LMDCs, in particular, that mitigation ambition and the provision of support need to be considered together. Parties thus agreed that contributions will be communicated every five years. The CMA will periodically take stock of the implementation of the Agreement to assess the collective progress. The stocktake is to be comprehensive, including 'mitigation, adaptation, means of implementation and support, and in the light of equity and the best available science'. This 'global stocktake' is to take place in 2023 and every five years thereafter. The outcome of the stocktake is to 'inform' the Parties in updating and enhancing their actions and support.<sup>108</sup>

<sup>107</sup> Bals, C., S. Kreft, L. Weischer (2016): Wendepunkt auf dem Weg in eine neue Epoche der globalen Klima- und Energiepolitik. Die Ergebnisse des Pariser Klimagipfels COP 21 (Bonn/Berlin: Germanwatch) <https://germanwatch.org/de/11492>.

<sup>108</sup> Paris Agreement art 14 FCCC/CP/2015/10/Add.1, Advance version (29 January 2016).

<sup>105</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 65–70.  
<sup>106</sup> Ibid, para 71.

The 2023 date for the first stocktake is owed to the fact that the Agreement's provisions can only become effective once the Agreement enters into force, which will probably take several years. To jumpstart the five-year cycle, the accompanying COP Decision therefore provides for a 'facilitative dialogue amongst the Parties in 2018 to take stock of the collective efforts . . . and to inform the preparation of nationally determined contributions'.<sup>109</sup> In conjunction with this initial stocktake, the IPCC is invited to provide a special report on the impacts of global warming of 1.5°C and related global emission pathways in 2018.<sup>110</sup> Finally, the Parties whose contributions contain a time frame up to 2025 are to communicate a new contribution by 2020 and every five years thereafter, while the Parties whose contributions have a time frame up to 2030 are to 'communicate or update' these contributions by 2020 and every five years thereafter.<sup>111</sup>

### 2.9.2 Transparency framework

Differentiation between developing and developed countries was the core controversy in the negotiations on how to track whether the Parties are implementing their contributions. So far, reporting and review provisions have differed substantially between the two groups. Industrialised countries and AILAC demanded to move towards a common framework that would generally be applicable to all, but with flexibility on the timing and detail in the reporting reflecting different capacities, and with support to developing countries. In contrast, many developing countries highlighted their low technical capacity and therefore opposed a 'one size fits all' approach, demanded to keep a clear differentiation between developed and developing countries. They also argued that a new system with increased requirements for developing countries had been agreed only five years earlier in Cancún<sup>112</sup> but that it had not yet been made operational, and therefore that this system should first be implemented before moving to a new system.

The final Agreement makes no fundamental distinction between developed and developing countries and provides that all the Parties must account for their contributions.<sup>113</sup> Detailed guidance is to be developed in the coming years, which will ensure that the Parties account for their contributions in accordance with methodologies and common metrics assessed by the IPCC, provide methodological consistency and strive to include all categories of emissions or removals. This guidance is to be applied to the second and following contributions under the Paris Agreement; the Parties may individually decide also to apply the guidance to their first contributions.<sup>114</sup>

The Agreement also establishes an 'enhanced transparency framework for action and support, with built-in flexibility which takes into account the Parties' different capacities'.<sup>115</sup> Whereas the aim of the framework for *transparency of action* is 'to provide a clear understanding' of climate action and to track progress, the aim of the framework for *transparency of support* is 'to provide clarity on support provided and received', and to provide an overview of aggregate financial support. The transparency framework is also to inform the global stocktake.<sup>116</sup>

The framework 'shall provide flexibility in the implementation of the provisions of this Article to those developing country Parties that need it in the light of their capacities'.<sup>117</sup> The framework is to build on the existing reporting and review arrangements under the Convention and is to 'be implemented in a facilitative, non-intrusive, non-punitive manner; respectful of national sovereignty, and avoid placing undue burden on Parties'.<sup>118</sup>

In detail, the Parties must provide national greenhouse gas inventories prepared regularly by using IPCC good practice guidance as well as information necessary to track progress made in implementing and achieving contributions.<sup>119</sup> Except for SIDS and LDCs, all Parties are required to submit this information at least every two years.<sup>120</sup> To support developing countries in complying with the Agreement's transparency provisions, the implementing decision establishes a 'Capacity-building Initiative for Transparency', to be supported by the Global Environment Facility.<sup>121</sup>

The transparency framework also requires developed country Parties to report on support provided in financial, technology and capacity-building terms. Developing country Parties providing support 'should' do the same, but are not bound by the Agreement.<sup>122</sup> In addition, the Parties should provide information on climate impacts and adaptation.<sup>123</sup>

The information provided by the Parties will be subject to a technical expert review, which is to consider support provided and to evaluate achievement of the contributions. The review is also supposed to identify areas of improvement and to review the consistency of the information provided with the requirements. In addition, the Parties must participate in a 'facilitative, multilateral consideration of progress'. The detailed modalities and procedures for the transparency framework are to be agreed in the following years.<sup>124</sup> They are to build on and eventually supersede the measurement, reporting and verification system established by the Cancún agreements and subsequent decisions.<sup>125</sup>

<sup>109</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 20.

<sup>110</sup> Ibid. para 21.

<sup>111</sup> Ibid. paras 23 ff.

<sup>112</sup> See Sterk, W., C. Arens, U. Eichhorst, F. Mersmann, H. Wang-Helmreich (2011): processed, refried – little substance added: Cancún climate conference keeps United Nations process alive but raises more questions than it answers (Wuppertal: Wuppertal Institute for Climate, Environment and Energy) <http://wupperinst.org/en/publications/details/wi/s/ad/1359/>.

<sup>113</sup> Paris Agreement art 4.13 FCCC/CP/2015/10/Add.1 (29 January 2016).

<sup>114</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 31 ff.

<sup>115</sup> Paris Agreement art 13.1 FCCC/CP/2015/10/Add.1 (29 January 2016).

<sup>116</sup> Ibid. arts 13.5 ff.

<sup>117</sup> Ibid. art 13.2.

<sup>118</sup> Ibid. art 13.3.

<sup>119</sup> Ibid. art 13.7.

<sup>120</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 90.

<sup>121</sup> Ibid. paras 84–88.

<sup>122</sup> Paris Agreement art 13.9. FCCC/CP/2015/10/Add.1 (29 January 2016).

<sup>123</sup> Ibid. art 13.8.

<sup>124</sup> Paris Agreement art 13.11–13.13. FCCC/CP/2015/10/Add.1 (29 January 2016).

<sup>125</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 98.

### 2.9.3 Facilitative compliance mechanism

Finally, the Agreement establishes a 'mechanism to facilitate implementation of and promote compliance with' its provisions. The mechanism will consist of a committee of 12 scientific, technical, socio-economic or legal experts to be elected by the CMA on the basis of equitable geographical representation.<sup>126</sup> The mandate of the compliance committee has been described with the same language as the transparency framework, namely it must be 'facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive', and 'shall pay particular attention to the respective national capabilities and circumstances of Parties'. The outcome of the MRV process will trigger the review by the committee established under the Agreement to address implementation questions and promote compliance in a facilitative and transparent way. Detailed modalities are to be developed, including the question of how and when exactly a review by the compliance committee is triggered.<sup>127</sup>

## 2.10 Increasing short-term ambition

### 2.10.1 Technical examination processes

In Durban, developing countries had agreed to embark on the negotiation process for the Paris Agreement under the condition that a second stream of negotiations was initiated with the aim to increase the short-term (pre-2020) ambition of mitigation activities under the Kyoto Protocol, particularly by developed countries. Developing countries had hoped that WS2 of the ADP would put pressure on developed countries to ratify their Cancún pledges and their second commitment period Kyoto obligations swiftly, and to ramp them up even further. However, it quickly became apparent that the previously agreed emission reductions were hard-wired and developed countries were reluctant to increase their obligations any further. Instead, the focus of the negotiations under WS2 shifted towards identifying policy options and technical solutions for implementation, rather than strengthening of headline targets. Furthermore, the process put a focus on non-Party actors as agents of increased mitigation ambition. The hope had been that promoting action 'on the ground' could lead to over-achievement of the pledges, thus closing the ambition gap in actual terms.<sup>128</sup>

Precisely because of this shift in focus, WS2 had been a ray of light in an otherwise dim conference in Lima. Parties had engaged in constructive discussions in the form of Technical Expert Meetings and agreed to extend this technical examination process until 2020. In 2015, the negotiation process continued in the same constructive spirit. The various intersessional meetings of the ADP made substantial progress and the Parties arrived in Paris with a very well prepared set of draft conclusions on the matter. Hence, little conflict emerged from the negotiations under WS2 in Paris.

In Paris, the Parties agreed to house the technical examination process (TEP) under the joint auspices of SBI and SBSTA and to strengthen it by, *inter alia*, requesting the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) to engage in the process and enhance their facilitative efforts. Also, the Parties encouraged the Green Climate Fund (GCF) as an operating entity of the Financial Mechanism to engage in the process and to provide information with respect to its contribution to the implementation of policies and measures identified in the TEP. The most important result of the Paris decisions is a very strong mandate for the Secretariat to organise the process and disseminate its results. The Secretariat shall:

- organise focused technical expert meetings representing best practices that are replicable and scalable
- maintain a technical paper on mitigation benefits and wider sustainable development co-benefits of the presented mitigation activities, as well as options to support their implementation and
- prepare on an annual basis a summary for policy-makers with information on specific policies and practices and options for support for implementation. The summary for policy-makers is to be published two months ahead of each COP.<sup>129</sup>

This mandate will contribute to good practice and lessons learned, as well as opportunities to implement successful policies and make practices much more digestible for those interested in implementing similar measures. It will also probably increase the visibility of successful mitigation initiatives beyond the international climate policy community.

Only two issues were discussed somewhat more controversially: (1) whether or not a paragraph regarding enhanced provisions of financial support should enter the decision text, and (2) whether or not a TEP should also be established with respect to adaptation. Developed countries were reluctant to include both. On (1), developed countries did not accept that they should 'scale up their level of financial support, with a concrete roadmap to achieve the goal of jointly providing US\$100 billion annually by 2020', as included in an earlier negotiation draft text. Instead, the Parties only agreed to conduct a facilitative dialogue at the next COP to identify opportunities for enhanced financial support. For (2), developed countries hesitated to establish another institution under the UNFCCC, notably because WS2 was originally designated only to mitigation. Ultimately, developed countries conceded and an adaptation TEP was established (see also section 2.6).

### 2.10.2 Lima–Paris Action Agenda

The Lima–Paris Action Agenda was initiated one year before Paris, at COP 20 in Lima. With this initiative, Peru and France as the presidencies of two successive COPs

<sup>126</sup> *Ibid.* paras 102 ff.

<sup>127</sup> Paris Agreement art 15 FCCC/CP/2015/10/Add.1 (29 January 2016).

<sup>128</sup> See also Ott and others (2014): Climate policy (n 60).

<sup>129</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) paras 109 ff.

pursued the aim to link the myriad of activities by non-state actors with the diplomatic process. This proved to be successful and found its culmination in two developments at COP 21 in Paris: first, India announced the formation of an International Solar Alliance involving more than 120 countries. Secondly, a group around Bill Gates announced a 'Breakthrough Energy Coalition' that will invest billions of dollars in 'patient, flexible risk capital' to bring riskier new technologies to market. All in all, around 700 major cities, regions, companies and investors from all continents promised to help to implement the Paris Agreement and accelerate the transformative changes needed to meet the climate change challenge.<sup>130</sup> The Non-State Actor Zone for Climate Action (NAZCA) portal, maintained by the UNFCCC Secretariat, gathers initiatives and activities from several hundred civil society actors.<sup>131</sup>

In Paris, the Parties initiated a facilitative dialogue that will assess progress in the pre-2020 implementation at the next COP. Each COP from 2016–20 will furthermore be coupled with a high-level event.<sup>132</sup> Two 'high-level champions' will be appointed for overlapping two-year terms.

The champions are supposed to raise the ambition, to facilitate high-level engagement in the process and provide guidance to the Secretariat on behalf of the COP presidencies. The first champion is yet to be appointed by the French COP presidency.

These decisions help to create opportunities to communicate new initiatives with high visibility. While it is hard to tell whether or not the possibility to showcase initiatives actually contributes to an increased level of ambition, it is still a welcome form of recognition and brings the positive dynamics happening on the ground closer to the international multilateral negotiation process. In Paris, the Lima–Paris Action Agenda (LPAA) was still somewhat detached from the core negotiations. The housing of the TEPs under SBI/SBSTA may contribute to a further integration of non-Party actors and initiatives with the UNFCCC negotiations.

Part II of this article, which will evaluate the Paris outcome and look forward to what has to be done, will follow in the next issue of *Environmental Law & Management*.

<sup>130</sup> L'Appel de Paris (Paris Pledge for Action) <http://newsroom.unfccc.int/unfccc-newsroom/paris-pledge/>.

<sup>131</sup> NAZCA: Non-State Actor Zone for Climate Action <http://climateaction.unfccc.int/aboutlpaa.aspx>.

<sup>132</sup> Decision 1/CP.21: Adoption of the Paris Agreement (n 23) para 120.