

*Wolfgang Obergassel, Christof Arens, Lukas Hermwille, Nicolas Kreibich,
Florian Mersmann, Hermann E. Ott, Hanna Wang-Helmreich*

Global Climate

*Originally published in:
Yearbook of International Environmental
Law, vol. 26.2015 (2017), pp. 169-181
DOI: 10.1093/yiel/yvwo06*

*This is a pre-copyedited, author-produced version
of an article accepted for publication in Yearbook
of International Environmental Law following
peer review. The version of record, vol. 26, pp.
169-181, is available online at:
<https://doi.org/10.1093/yiel/yvwo06>*

*Wolfgang Obergassel a,**
Christof Arens a
Lukas Hermwille a
Nicolas Kreibich a
Florian Mersmann a
Hermann E. Ott a
Hanna Wang-Helmreich a

Global Climate

a Wuppertal Institut für Klima, Umwelt, Energie gGmbH,
Wuppertal, Deutschland

* Corresponding author:
Wolfgang Obergassel
Wuppertal Institut für Klima, Umwelt, Energie gGmbH
Döppersberg 19
42103 Wuppertal
Germany
E-mail: wolfgang.obergassel@wupperinst.org
Phone: +49 202 2492-149
Fax: +49 202 2492-108

This is the author's version of a work that was accepted for publication. Changes resulting from the publishing process, such as editing, corrections and structural formatting, may not be reflected in this document. Changes may have been made to this work since it was submitted for publication. A definitive version was subsequently published in the Journal cited above.

II. AIR AND ATMOSPHERE

3. Global Climate

(1) Introduction

On 12 December 2015, the 21st Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the “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. This article summarises and analyses the main contents of the Paris Agreement.

(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 steps to be taken in the next years until the agreement enters into force (Decision 1/CP.21, Advance Version, FCCC/CP/2015/10/Add.1, 29 January 2016). The ‘natural’ legal form of the Paris Agreement would have taken the shape of a protocol like the Kyoto Protocol, as provided for in Article 17 of the UNFCCC. This, however, would have forced the US administration to submit the protocol to the Senate for ratification – and given current domestic US politics Senate ratification would have been impossible to achieve. The Parties in Paris thus 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 whether the Paris Agreement is a treaty and whether it has to be submitted to the Senate for ratification.

In public international law, a treaty is defined by Art. 2.1 of the 1969 Vienna Convention on the Law of Treaties as meaning “an international agreement concluded between States in written form and governed by international law”. The Paris Agreement was certainly concluded between states and in written form, 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.

Inside the US legal system, the executive may conclude “treaties” and “international agreements other than treaties”. The former need a two-thirds majority in the Senate for ratification, whereas a president may conclude “international agreements other than treaties” on his own in three cases: pursuant to a treaty authorized 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 (Foreign Affairs Manual - Chapter 700 TREATIES AND OTHER INTERNATIONAL AGREEMENTS, <http://www.state.gov/e/oes/rls/rpts/175/1319.htm>). Since the Paris Agreement has been adopted pursuant to the UNFCCC, which has been ratified by the Senate, and does not impose new substantive obligations upon the USA (as will be detailed in the following), it may be considered an “international agreement other than a treaty” under US law and thus not require the approval of the Senate.

(3) Differentiation: An Agreement Applicable to All

While the Durban mandate was to negotiate a new climate agreement “applicable to all”, the negotiations continued to be as dominated by disagreements over the respective roles of the so-called “developed” countries (listed in Annex I of the UNFCCC) and “developing” countries as they have always been. 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. In particular the group of like-minded developing countries (LMDCs), which includes China, India, other Asian countries, oil-exporting Arab countries such as Saudi Arabia and leftist Latin American countries such as Bolivia, strongly resisted any explicit or implicit dissolution of the traditional distinction between the Annexes.

The 2013 conference in Warsaw largely resolved this issue by creating the concept of Intended Nationally Determined Contributions (INDCs). Using the term “contributions” instead of “commitments” accommodated the position of the LMDCs that there should be no binding commitments for developing countries – as well as the US desire to avoid commitments. On the other side, developed countries prevented creating any differentiation between themselves and non-Annex I countries regarding the legal nature of participation in the new agreement

Differentiation between the two blocks is still present in the new agreement, but in much more attenuated form than previously. Most provisions establish common obligations for all countries, but require developed countries to continue taking the lead while expecting developing countries to step up over time, as will be laid out in detail in the following sections.

(4) Purpose of the Agreement

In 2010, at COP16 in Cancún, Parties had agreed to keep global temperature increase below 2 °C compared to 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, small island developing states (SIDS) and the least developed countries (LDCs) had long 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 long pushed for strengthening the limit to 1.5 °C, but until Paris the push for 1.5 °C had found little favour with the large emitters – the ones who would need to undertake the necessary emission reductions.

Art. 2.1 of the final agreement includes as objective to hold the increase in the global average temperature to “well below 2 °C above pre-industrial levels” and adds an aspirational goal “to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels”. In addition, the 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 these objectives are set in the context of sustainable development and efforts to eradicate poverty. The latter is an acknowledgement of developing countries development concerns, which need to be taken into account in efforts to combat climate change.

(5) Individual Efforts

On countries' contributions, in particular the LMDCs demanded that industrialised countries should adopt legally binding economy-wide emission targets without any conditions attached while mitigation contributions by developing countries should continue to be voluntary, diverse in nature and conditional on the provision of support by industrialised countries. On the other side, developed countries demanded that all major economies should adopt economy-wide targets. The USA 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.

Art. 4 of the final agreement commits each Party to “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.” The Paris Agreement thus establishes legally binding obligations to notify a contribution and to take domestic measures in pursuit of achieving the contribution, but it does not establish an obligation for countries to actually achieve their contributions.

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 encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances.” (Art. 4.3) 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.” (Art. 4.5)

Further guidance on features of contributions is to be developed in the coming years, as is further guidance information requirements for the submission of contributions (Decision 1/CP.21, paras 26-28).

(6) Global and Individual Mitigation Ambition

On mitigation, 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 more concrete goal. The 2015 G7 meeting had 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 IPCC recommendation of 40 to 70 % reductions by 2050 compared to 2010” (Leaders’ Declaration G7 Summit Germany, 7-8 June 2015, http://www.international.gc.ca/g8/g7_germany_declaration-g7_allemande_declaration.aspx?lang=eng). In the climate negotiations, SIDS and the LDCs called for global emission reductions of at least 70-90% by 2050. By contrast, in particular Arab and other oil exporting countries opposed including any language on decarbonisation or emission neutrality.

In the last negotiation hours Parties agreed on compromise language 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.” (Art. 4.1)

Since almost all of the INDCs had been communicated before COP21, the projected impact on emissions was well known before the conference started – and it falls far short of what is

needed to keep temperature increase below the agreed limit. The Parties acknowledge this shortfall from the agreed temperature limit in the decision adopting the agreement, which “notes with concern” that the contributions do not fall within least-cost 2 °C scenarios, which envisage emissions of around 40 gigatonnes in 2030, but instead lead to a projected level of 55 gigatonnes (Decision 1/CP.21, para 17).

The effectiveness of the Paris Agreement in limiting global warming therefore depends on the quick strengthening of national contributions (see section 10).

(7) 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 ten per cent of the global GHG emissions. The focus of the negotiations in Paris was on the role REDD+ would have post-2020: Would REDD+ be explicitly mentioned in the agreement text, and if yes, what message would the respective section convey? The final agreement does contain an article (Art. 5) that is exclusively devoted to REDD+, but it does not install a new REDD+ mechanism. Instead, it builds on the Warsaw Framework for REDD+ established by a series of COP decisions in 2013 and has rather weak wording. Parties “are encouraged to take action to implement and support [...] the existing [REDD+] framework”. 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 (Decision 1/CP.21, para 54).

(8) Cooperative Mechanisms

While the EU and others pushed strongly for the inclusion of emission trading mechanisms in the Paris Agreement, leftist Latin American governments strongly resisted the inclusion of such 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 established in Art. 6.4, which is to “promote the mitigation of greenhouse gas emissions while fostering sustainable development”. While building on the experiences of the flexible mechanisms of the Kyoto Protocol, 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”, 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. Detailed modalities and procedures are to be developed in the next years.

Moreover, the Paris Agreement allows Parties to conduct “cooperative approaches.” Under these, mitigation outcomes can be “internationally transferred” and “used” against nationally determined contributions. UNFCCC oversight is not foreseen. Instead, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement is to develop dedicated guidance (Art. 6.2f).

Finally, to accommodate the countries that are critical of market mechanisms the Agreement also defines a “framework for non-market approaches to sustainable development” (Art. 6.9). Here as well modalities and procedures are to be developed in the next years.

(9) 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 behind mitigation. The agreement recognises 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” (Art. 7.2). Parties explicitly recognize that the “current need for adaptation is significant and that greater levels of mitigation can reduce the need for additional adaptation efforts” (Art. 7.4), as well as the associated costs. The explicit link to the temperature goal is important as it acknowledges that global needs for adaptation highly depend on the success of mitigation activities.

All Parties are requested to compile information on adaptation priorities, implementation and support needs in an adaptation communication which is to be recorded in a public registry maintained by the secretariat of the UNFCCC and updated periodically. Crucially, national adaptation communications will be part of the five-yearly global stocktake and contribution cycle (see section 12), thus offering opportunities to review the overall progress made in achieving the global goal on adaptation and to spiral up adaptation action and support.

(10) Loss and Damage

Loss and damage refers to adverse effects of climate change which cannot be adapted to. The concept has been a contentious issue of the climate change negotiations for many years. While developed countries have been afraid of liability claims and therefore tried to keep the issue on a low profile, developing countries, in particular LDCs as well as other particularly vulnerable countries, have been fighting strongly for its recognition as an independent third pillar of climate policy, complementary to mitigation and adaptation. A first step was made with the installation of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) in 2013, but the question was whether loss and damage would be a part of the Paris Agreement. After intense negotiations, Art. 8 of the Paris Agreement was dedicated to loss and damage. With this, developing countries have achieved the formal recognition and strengthening of the concept. However, the US, with the support of other developed countries, managed to include a paragraph in the accompanying decision that rules out claims of compensation and liability in the context of loss and damage (Decision 1/CP.21, para 51).

Art. 8 of the Paris Agreement underscores the relevance of dealing with loss and damage and lists a total of 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 Warsaw Mechanism for Loss and Damage (WIM) is to operate under the governing body of the new agreement. It further states that the WIM “may be enhanced and strengthened” in the future and continued, following a review in 2016, as envisaged in the COP decision adopting the agreement (Decision 1/CP.21, paras 47ff).

(11) Means of Implementation

For developing countries to effectively implement their nationally determined contributions, industrialised countries will have to offer assistance in various forms, including finance, technology development and transfer, and capacity building. The basis for this obligation

reaches back as far as the original text of the Convention (UNFCCC Art. 4). Bearing in mind that especially finance and technology 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 support at almost every session.

(A) Finance

On finance, a major point of contention was the demand of developed countries to broaden the donor base beyond the traditional industrialised countries, Developing countries for their part demanded that industrialised countries should provide a clear roadmap for how they intended to fulfil the pledge to scale up climate finance to USD 100 billion annually by 2020 they made at COP15 in Copenhagen, as well as firm commitments to increase the level of funding after 2020. They also demanded establishment of an iterative finance cycle to regularly evaluate and upscale the provision of finance by developed countries.

The final agreement in Art. 9 merely 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." (Art. 9.1) The Agreement also encourages other Parties to "provide or continue to provide such support voluntarily". 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.

In the decision adopting the agreement, Parties decided that, "developed countries intend to continue their existing collective mobilization goal through 2025 [...]; prior to 2025 the [Conference of the Parties meeting as Parties to the Agreement] shall set a new collective quantified goal from a floor of USD 100 billion per year..." (Decision 1/CP.21, para 53).

While this language is again non-binding, with the second half of the paragraph it is now clear that the promised USD 100 billion per year cannot be the ceiling of finance commitment, but rather have to be a floor to scale up from before 2025. However, 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 USD 100 billion pledge, and decides to conduct a facilitative dialogue at COP 22 in 2016 to assess progress and identify opportunities to enhance support (ibid. paras 114f).

(B) Technology

Art. 10 of the Agreement establishes a "technology framework" in order to provide guidance to the Convention's Technology Mechanism, which will now also serve the Paris Agreement. The technology framework also serves to pursue the long-term vision of all Parties set out in paragraph Art. 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."

The technology framework is to be further defined in the next years. 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 (Decision 1/CP.21, para 67).

Another success of developing countries is the establishment of a clear link between technology and finance. As set out in Art. 10.5 of the Agreement, 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. This link to the Financial Mechanism had been a matter of debate between developing and developed countries for a long time.

(C) Capacity Building

Capacity building had in the past been a low-profile element of the UN climate regime's support structure. Consistent progress had been made over the last 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 recognizes 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" of capacity-building in developing countries and to further enhance capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention." (Decision 1/CP.21, para 71) The Subsidiary Body for Implementation (SBI) is tasked to develop terms of reference for the newly-established body.

(12) Three Elements for Increasing Ambition over Time

Since the achievement of the contributions is not mandatory and their ambition does not match the agreed temperature limit (see sections 4 and 5), 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.

(A) Global Stocktake and Contribution Cycle

One of the central questions of the negotiation process was whether or not Parties' contributions should be assessed internationally before adoption. In particular the LMDCs 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. A related question was the frequency of contribution cycles. Many INDCs have 2030 as 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 next years.

Agreement was made possible by broadening the scope of the cycle to include not only mitigation but also adaptation and provision of support. This meets the demand of the LMDCs that mitigation ambition and the provision of support need to be considered in tandem. Parties thus agreed that contributions shall be communicated every five years. A "global stocktake" of the implementation of the Agreement is to take place in 2023 and every five years

thereafter. The outcome of the stocktake is to “inform” Parties in updating and enhancing their actions and support (Art. 14). Furthermore, Parties agreed that each new contribution will “represent a progression beyond the Party’s then current nationally determined contribution” (Art. 4.3). This is the core of a new and innovative mechanism: compulsory strengthening of contributions every five years.

To jumpstart the five-year cycle, the accompanying COP decision provides for a “facilitative dialogue among Parties in 2018 to take stock of the collective efforts (...) and to inform the preparation of nationally determined contributions” (Decision 1/CP.21, para 20).

(B) Transparency Framework

So far, reporting and review provisions have differed substantially between developed and developing countries. Developed countries 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. By contrast, many developing countries highlighted their low technical capacity and demanded to keep a clear differentiation between developed and developing countries.

The final agreement makes no fundamental distinction between developed and developing countries and provides that all Parties shall account for their contributions (Art. 4.13). The agreement also establishes an “enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties’ different capacities” (Art. 13.1). The aim of the framework for transparency of action is “to provide a clear understanding” of climate action including mitigation and adaptation, and to track progress. The aim of the framework for transparency of support is “to provide clarity on support provided and received”, and to as much as possible provide an overview of aggregate financial support. The transparency framework also is to inform the global stocktake (Art. 13.5f).

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” (Art. 13.3). 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 (Decision 1/CP.21., paras 85-89).

The information provided by Parties will be subject to a technical expert review. In addition, Parties shall 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 (Art. 13.11-13.13).

(C) Facilitative Compliance Mechanism

Finally, Art. 15 of the Agreement establishes a “mechanism to facilitate implementation of and promote compliance with” its provisions. The mandate of the compliance committee is described with the same language as the transparency framework, namely it shall 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”. Detailed modalities are to be developed, including the question how and when exactly a review by the compliance committee is triggered.

(13) Increasing Short-term Ambition

(A) 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 near-term (pre-2020) ambition of mitigation activities, particularly by developed countries. However, it quickly became apparent that the previously agreed emission reduction targets were hard-wired. Instead, the focus of the negotiations under Workstream 2 (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 has been that promoting action “on the ground” could lead to overachievement of the pledges, thus closing the ambition gap in actual terms.

In 2014, Parties had engaged in constructive discussions in the form of technical expert meetings and agreed to extend this technical examination process (TEP) until 2020. In Paris, Parties agreed to give a very strong mandate to the UNFCCC Secretariat to organize the process and disseminate its results. The Secretariat shall organize focussed technical expert meetings; 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 (Decision 1/CP.21, paras 109f).

Parties also agreed to establish a second TEP with respect to adaptation. 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 organize regular technical expert meetings (TEMs) and to annually prepare a technical paper (Decision 1/CP.21, paras 124ff).

(B) Lima - Paris Action Agenda

The Lima-Paris Action Agenda was initiated one year before Paris, at COP20 in Lima. With this initiative, Peru and France as the presidencies of two successive COPs pursued the aim to link the myriad of activities by non-state actors with the diplomatic process. All in all, around 700 major cities, regions, companies and investors from all continents promised to help implement the Paris Agreement and accelerate the transformative changes needed to meet the climate change challenge (L’Appel de Paris (Paris Pledge for Action)):

<http://newsroom.unfccc.int/unfccc-newsroom/paris-pledge/>).

In Paris, the Parties initiated a facilitative dialogue that will assess progress in the pre-2020 implementation at the next COP. Each COP from 2016-2020 will furthermore be coupled with a high-level event. 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 (Decision 1/CP.21, para 120f).

(14) Outlook

After 25 years of UN climate diplomacy, the world's governments have for the first time in history negotiated a treaty which envisages climate action by all nations. This concludes the decades-long struggle on the participation of the US and of developing countries in the climate regime and bridges the deep schism, the dichotomous division of the world into "industrialized" and "non-industrialized" states.

Direction is provided by the long-term goal to keep global mean temperature rise "well below 2 °C". The temperature limit is thus not only enshrined in international law, but also strengthened compared to the previous formulation from Cancún. Furthermore, the agreement contains the aim "to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels". Anchoring the 1.5 °C limit in the agreement is a negotiating victory of the most vulnerable countries, small island states and least developed countries that came as a surprise to most.

Moreover, Paris marks a significant step forward in further operationalizing the 2 °C limit. Parties agreed that, firstly, greenhouse gas emissions need to peak "as soon as possible", and, secondly, that "a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century" (Art. 4). Given that it will probably not be possible to reduce emissions from agriculture and some industrial processes to zero, the available sink capacity will be needed to compensate for emissions from these sources, which means that all emissions that can be reduced to zero need to be reduced to zero. The long-term goal as formulated in the Paris Agreement is thus synonymous with a call to end fossil fuel use before the end of the century, much earlier even in developed countries.

At the same time, the emission reductions countries have pledged under the Paris Agreement are widely out of step with its global targets. Furthermore, the Paris Agreement does not establish a legally binding obligation for countries to actually achieve their contributions. Instead, it relies on the instruments of 'naming and shaming' to ensure implementation. This is the price that needed to be paid to get the USA and the LMDCs on board.

The next years will show whether the world community is willing to seriously tackle the challenges of a global transformation. The turn-around from the fossil-based development path is still possible, but requires immediate implementation and the strengthening of national contributions already from 2018.

Wolfgang Obergassel, Christof Arens, Lukas Hermwille, Nico Kreibich, Florian Mersmann,
Hermann E. Ott, and Hanna Wang-Helmreich
Wuppertal Institute for Climate, Environment and Energy