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Setting Sails for Troubled Waters. An Assessment of the Marrakech Climate Conference

Imprint

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1 Overall Situation

From 7 to 18 November 2016, the twenty-second Conference of the Parties (COP22) to the United Nations Framework Convention on Climate Change (UNFCCC) and the twelfth meeting of the Conference of the Parties to the Kyoto Protocol (CMP12) took place in Marrakech. Due to the early entry into force of the Paris Agreement, Marrakech also hosted the first Conference of the Parties serving as Meeting of the Parties to the Paris Agreement (CMA1).

The rapid ratification of the Paris Agreement by the US – which President Obama had signed prior to the election to be on the safe side – and China (which had agreed on a joint approach with the US), had sped up the global ratification process tremendously. The Agreement entered into force already on 4 November 2016, in time for the start of the Marrakech conference. Nobody had expected this one year before in Paris – the entry into force of the Kyoto Protocol, by comparison, had taken eight years. Many hailed the rapid entry into force as further proof of the commitment of the world community to finally tackle the climate problem.

However, such optimistic perspectives were dealt a heavy blow on the third day of the conference, when the results of the US presidential election arrived on the screens in Marrakech. The election of Donald Trump came as a shock to many and cast a considerable shadow over the further proceedings. Trump had in the past called climate change a “hoax” invented by China, and announced to “cancel” the Paris Agreement and to dismantle US climate policy.

Still, over the course of the conference all other Parties signalled that they were continuing to take the Paris Agreement seriously and were not going to be deterred by election results in the United States of America. This is reflected in the final declaration of the conference, the Marrakech Action Proclamation (MAP). In the very first paragraph, the Proclamation signals “a shift towards a new era of implementation and action on climate and sustainable development.”¹

Apart from these rhetorical signals there were also more tangible indications that the majority of countries remains committed to the Paris Agreement. Notable in this context are, for example, the long-term decarbonisation strategies presented by Canada, Germany, Mexico and the USA in Marrakech (in the US case presented by the outgoing Obama administration). In addition, 22 countries, numerous cities, regions and companies established a “2050 pathways platform” and announced their intention to develop such strategies. African countries further fleshed out the Africa Renewable Energy Initiative (AREI), which plans to achieve 10GW of additional renewable generation capacity by 2020 and 300GW by 2030.

A further highlight was the declaration of the Climate Vulnerable Forum (CVF), an association of 48 countries that are most vulnerable to the impacts of climate change. This includes the small islands states and the least developed countries. All member countries announced their intention to shift to 100% renewable energy as soon as

¹ 'Marrakech Action Proclamation for Our Climate and Sustainable Development', 2016, http://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/marrakech_action_proclamation.pdf.

possible.² While the share of global emissions of these countries is relatively small, this announcement of the world's poorest countries overturns the traditional assumption that ambitious climate action is incompatible with economic development and poverty alleviation.

Marrakech also continued the trend of the growing importance of non-state and sub-national actors (municipalities, provinces, federal states). The Marrakech Action Proclamation emphasises their role prominently. In addition, at the initiative of the so-called high-level champions Laurence Tubiana (France) und Hakima El Haite (Morocco), the Marrakech Partnership for Global Climate Action was established to better structure such contributions.

Overall, the Paris Agreement seems to be fairly resilient to the shock of the US election. The transformation dynamic continues to be there. In the immediate future, it will be important if and how this dynamic may be further channelled by the UNFCCC and the Paris Agreement without (or maybe even against) the US.

The following article starts by discussing developments regarding the implementation of the Paris Agreement, in particular the detailed “rulebook” and cooperative mechanisms. Next, the article discusses developments in the various avenues for raising climate ambition that have been put in place by the Paris conference: the 2018 facilitative dialogue, the engagement of non-state and sub-national actors, and the elaboration of mid-century climate strategies. Subsequently, the article discusses other Marrakech developments, in particular on issues of climate finance and adaptation, as well as recent developments that have an impact on the UNFCCC, in particular developing alliances, developments in the International Civil Aviation Organisation (ICAO) and under the Montreal Protocol, and possible repercussions of the US presidential election.

2 Negotiation Issues in Marrakech

2.1 Implementing the Paris Agreement

2.1.1 The Paris Rulebook

The Paris Agreement provides basic obligations for parties, creates new procedures and vests institutions with new authority. In order to make the Paris Agreement operational, these generic provisions must, however, be translated into detailed rules: a “rulebook” must be written.

The rapid entry into force of the Paris Agreement posed some procedural challenges in this regard, as the “rulebook” was supposed to be adopted at CMA1, which was envisaged to take place in late 2018. Because CMA1 already convened in Marrakech, however, it had not been possible to prepare these decisions. A solution was found by not finishing but only suspending CMA1, allowing it to be continued in a second phase in 2017 and to be terminated by the end of 2018 (phase 3). At the same time, this decision marks the most significant progress made in Marrakech on implementing the Paris Agreement: the Parties adopted a detailed work programme for the “fi-

² Climate Vulnerable Forum, 'The Climate Vulnerable Forum Vision', from: High Level Meeting – 18 November 2016, Marrakech, (2016), <http://www.thevcf.org/wp-content/uploads/2016/11/CVF-Vision-For-Adoption.pdf>.

ne print” of the Agreement as well as a clear timetable. (Preliminary) decisions on substance were not taken in Marrakech. However, this had not been expected and would have contravened the governing principle of “*nothing is agreed until everything is agreed*”.

While not taking substantive decisions on the Paris Agreement, Parties exchanged views on key issues of its implementation. One such issue is accounting, the rules on how parties are to account their actual performance against their pledges, the so-called nationally determined contributions (NDCs). In Paris, the Parties had agreed that all countries must account for their NDCs in accordance with guidance to be developed (Art. 4.13). In Marrakech, the content and nature of this guidance was discussed together with features of NDCs and the information to be provided to facilitate clarity, transparency and understanding of NDCs. So far, there have been no binding rules on the kind of features that NDCs need to include and what information countries need to provide. As a result, there is a huge variety of types of NDCs – different types of emission targets, other targets and policies and measures – and very different levels of clarity of the NDCs.

In these discussions, many developing countries stressed their need for flexibility and called for on guidance for “factoring-in” differentiation between developing and developed countries. In order to move discussions forward, parties agreed on a call for submissions and decided to have a roundtable in May 2017.³

Transparency is another key issue to be covered by the rulebook of the Paris Agreement. This topic is about the information parties must provide in order to assess individual and collective progress of climate action and support. Parties exchanged views on how to operationalize the “enhanced transparency framework for action and support” established by Article 13 of the Paris Agreement. In Paris, Parties had agreed to develop modalities, procedures and guidelines (MPGs). One key question in Marrakech was how to design these and provide parties with flexibility and take into account Parties’ different capacities when developing the MPGs while ensuring transparency is provided. Here as well developing countries called for clear differentiation of requirements for developing and developed countries, which developed countries sought to minimise.

In light of the progress still needed for finalizing the MPGs, Parties agreed on a call for submissions allowing countries to submit their views on the transparency framework by February 2017. The topics identified in the submissions are then to be discussed in an inter-sessional workshop in March to inform the next APA session in May 2017⁴. In this workshop, parties will discuss the issue of reporting in conjunction with the question of how to operationalize the technical expert review of parties’

³ UNFCCC, ‘Items 3 to 8 of the Agenda - Draft Conclusions Proposed by the Co-Chairs. Ad Hoc Working Group on the Paris Agreement Second Part of the First Session. Marrakech, 7–14 November 2016 - FCCC/APA/2016/L.4’, 14 November 2016, paras 9-10.

⁴ UNFCCC, ‘Notification: Ad Hoc Working Group on the Paris Agreement Inter-Sessional Workshop on Agenda Item 5: Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement, MDA/MTS/TISU’, 20 January 2017.

achievements in implementing their NDCs and the multilateral consideration of progress.⁵

2.1.2 Cooperative Mechanisms (Art.6)

Article 6 of the Paris Agreement comprises three approaches for countries to cooperate with each other: “cooperative approaches” under Art. 6.2, a new mechanism to promote mitigation and sustainable development (“sustainable development mechanism”, Art. 6.4 – 6.7), and a framework for non-market approaches (Art. 6.8 and 6.9). Article 6.1 contains a chapeau with overarching principles such as voluntary participation, a requirement for all Art. 6 mechanisms to contribute to raising mitigation ambition as well as to promote sustainable development and environmental integrity.

Prior to the Marrakech COP, Parties had the chance to inject their ideas and views in the process via a call for submissions by 30 September, which laid open sharp differences in opinions on how Art. 6 should work.⁶ At the COP in Marrakech, Parties started discussing possible ways of operationalizing the different mechanisms and how to proceed with the negotiations. This covered basic principles such as environmental integrity and sustainable development, as well as the interlinkages between the three Art. 6 mechanisms.

It was as early as this that the diverging views surfaced, with Ecuador demanding that all mechanisms should report under the platform of the non-market mechanism under Art. 6.8 / 6.9. Brazil, by contrast, advocated using Art. 6.4 for mitigation projects building on the CDM, and Art. 6.2 functioning as an accounting framework. Others underlined the need to move beyond the project-by-project approach known from CDM and JI.

Parties also held initial discussions on what the governance for Art. 6.2 should cover, how to reach overall mitigation, how to ensure that measures are additional to business as usual, how to relate the transfers of emissions reductions to the (I)NDCs and how and which adjustments would need to be made accordingly. One widely shared view was that the latter needs further technical work and does not suggest itself for debate at such an early stage.

In the concluding decision⁷, Parties are invited to a new round of submissions by 17 March 2017. Furthermore, the UNFCCC Secretariat is to organize a roundtable discussion among Parties based on the submissions, in conjunction with SBSTA 46 (May 2017), where negotiations will be continued.

Operationalizing Art. 6 is going to take huge efforts: the sheer number of highly diverse NDC types makes them hardly comparable, posing enormous challenges in

⁵ UNFCCC, ‘Items 3 to 8 of the Agenda - Draft Conclusions Proposed by the Co-Chairs. Ad Hoc Working Group on the Paris Agreement Second Part of the First Session. Marrakech, 7–14 November 2016 - FCCC/APA/2016/L.4’, para 15f.

⁶ Wolfgang Obergassel, ‘Shaping the Paris Mechanisms. A Summary of Submissions on Article 6 of the Paris Agreement’ (Wuppertal: Wuppertal Institute for Climate, Environment and Energy, 2016), <http://www.carbon-mechanisms.de/en/2016/shaping-the-paris-mechanisms/>.

⁷ UNFCCC, ‘Guidance on Cooperative Approaches Referred to in Article 6, Paragraph 2, of the Paris Agreement, Draft Conclusions Proposed by the Chair, FCCC/SBSTA/2016/L.28, 12 November 2016’, 2016, <http://unfccc.int/resource/docs/2016/sbsta/eng/l28.pdf>.

terms of accounting for the transferred outcomes. This is only one of several major obstacles for both the negotiations ahead as well as for implementing measures on the ground. The same applies to risks of double counting as well as the precondition that Art. 6 mechanisms are to contribute to an overall raising of mitigation ambition.

Art. 6: Accounting for International Transfers of Mitigation Outcomes

There are strong linkages between the discussions on accounting for NDCs, features of NDCs and the information to be provided by Parties on the one hand, and the question of how to account for internationally transferred mitigation outcomes (ITMOs) exchanged among Parties under Art. 6.2 of the Paris Agreement and used for achieving individual NDCs on the other.

While the potential demand for ITMOs from national governments might be limited,⁸ robust accounting for any transfers is key for ensuring that the environmental integrity of the Paris Agreement is safeguarded. However, the diversity of parties' NDCs poses significant challenges to robust accounting: In order to avoid emission reductions to be counted more than once (double counting), the mitigation outcomes transferred to and used by the importing country must be accounted for by the exporting country by making "corresponding adjustments" (Decision 1/CP.21, para 36), for instance by deducting the transferred amount from the national emissions budget (net accounting). If the parties involved in the transfer process have different types of NDCs (e.g. economy-wide GHG target vs. sectoral non-GHG target) or if information on countries' NDCs is insufficient, properly accounting for these transfers might not be possible.⁹

Overarching questions have dominated the first round of discussions on Art. 6. Resolving these will require considerable creativity and negotiation time. When coming closer to formulate concrete modalities and procedures, Parties should not only strive at a framework characterized by robustness and environmental integrity. One element that should be considered is how to ensure that the Art. 6 mechanisms do not only contribute to mitigation in an isolated way, but that they actually unleash or contribute to transformational changes in the economies they take place in.¹⁰

2.2 Raising Ambition

2.2.1 The 2018 Facilitative Dialogue and the Global Stocktake

2018 will be the next important moment for international climate policy, not only because of the planned adoption of the Paris rulebook, but also because the so-called "facilitative dialogue" is scheduled for that year. This latter process is meant to be similar to the global stocktake that countries under the Paris Agreement will conduct

⁸ From the 147 Parties that have submitted their INDCs in advance of the Paris conference, 66 are planning and 20 are considering to use international market mechanisms. However, the vast majority intend to be sellers in the carbon market. For more details see: Wolfgang Obergassel and Markus Gornik, 'Update on Role of Market Mechanisms in Intended Nationally Determined Contributions', JIKO Policy Brief (Wuppertal: Wuppertal Institute for Climate, Environment and Energy, 2015).

⁹ For a discussion on accounting challenges and potential solutions see: Nicolas Kreibich and Wolfgang Obergassel, 'Carbon Markets After Paris - How to Account for the Transfer of Mitigation Results?', JIKO Policy Paper, (2016), <http://www.carbon-mechanisms.de/en/publications/details/?jiko%5Bpubuid%5D=131&cHash=ed81ec1a196649472c70989842b1889f>.

¹⁰ Lukas Hermwille, Wolfgang Obergassel, and Christof Arens, 'The Transformative Potential of Emissions Trading', *Carbon Management* 6, no. 5–6 (2016): 261–72, doi:10.1080/17583004.2016.1151552.

every five years, starting 2023, in order to assess and strengthen individual and global progress through countries' NDC's towards the Agreement's goal: limiting global mean temperature increase to well below 2°C and pursuing best efforts to stay even below 1.5°C. The 2018 dialogue will be informed by a special report of the IPCC on the 1.5°C limit, to be published in 2018.

However, the exact nature of the facilitative dialogue had not been agreed upon in Paris - it was not clear which negotiation space would host it, and guidance was lacking under which principles countries would assess their progress. It was reasonably clear, though, that the dialogue's scope will be limited to countries' mitigation efforts, whereas the stocktakes will also include progress on adaptation and financial, technical and capacity support provided and received.

With only two years until 2018, Parties were hard-pressed to develop the modalities for the dialogue. But their development would also influence the modalities of the global stocktake, due to the comparable nature of both processes. Consultations on this agenda item were therefore not progressing fast nor far in Marrakesh.

The resulting decision of the COP¹¹ therefore effectively postponed any decision to COP 23. The presidents of COP 22 and 23 are requested to consult with Parties on how to organise the dialogue over the course of 2017, and to report back on the results at the coming COP. The decision fails to lay out a concrete roadmap, or how the consultations shall be shaped.

As for the global stocktake, many Parties agreed that the stocktake should comprise a technical/analytical phase followed by a political one. With regards to the outcome of the global stocktake, many developing countries hold that the process is to further enhance international cooperation and climate financing, while others, including the EU, pointed at raising ambition and driving climate action.¹² In order to move discussions further, the APA invited parties to submit their views on these and other issues by April 2017.¹³

2.2.2 Engaging Non-state and Sub-National Actors

Roughly since 2010, the world has seen a strong uptake of transnational governance initiatives alongside the UNFCCC. The spectrum of such initiatives is extremely diverse both in their forms of governance – from informal networks to (private) standard setting – as well as with regard to the types of actors involved – private corporations, business associations, civil society groups, but also municipal and other subnational authorities. To date, the majority of these initiatives originate from the global North but many include actors from developing countries.¹⁴

¹¹ UNFCCC, 'Decision 1/CP.22, Preparations for the Entry into Force of the Paris Agreement and the First Session of the Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement, FCCC/CP/2016/10/Add.1', 31 January 2017, para 16.

¹² IISD, 'Summary of the Marrakech Climate Change Conference: 7-19 November 2016', *Earth Negotiations Bulletin: A Reporting Service for Environment and Development Negotiations* 12, no. 689 (2016), <http://www.iisd.ca/climate/cop22/enb/>.

¹³ UNFCCC, 'Items 3 to 8 of the Agenda - Draft Conclusions Proposed by the Co-Chairs. Ad Hoc Working Group on the Paris Agreement Second Part of the First Session. Marrakech, 7-14 November 2016 - FCCC/APA/2016/L.4'.

¹⁴ Sander Chan et al., 'Effective and Geographically Balanced? An Output-Based Assessment of Non-State Climate Actions', *Climate Policy* 0, no. 0 (16 November 2016): 1-12, doi:10.1080/14693062.2016.1248343.

The Paris Agreement has explicitly acknowledged the contributions of non-state and subnational actors. Given the party-driven nature of the intergovernmental negotiation process, non-state and subnational actors have previously hardly played a role within the core negotiations. Contributions have been limited to the margins of the annual COPs. Only in recent years this has started to change. At COP 19 in Warsaw, Parties agreed to convene a series of issue-specific Technical Expert Meetings (TEMs) under Workstream 2 of the Ad-hoc Working Group on the Durban Platform (ADP), which was tasked with elaborating ways to increase ambition before 2020. The series of TEMS was complemented by high-level events of the so-called Lima-Paris Action Agenda (LPAA), which provided a stage to showcase particularly successful initiatives and announce new ones.¹⁵

Although the mandate of the ADP ended in Paris, Parties agreed to continue the series of TEMS, now dubbed “technical examination process” (TEP), under the joint auspices of the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (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, Parties encouraged the Green Climate Fund (GCF) as one of the operating entities 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. Building on the Lima-Paris Action Agenda, Parties have also agreed to convene high-level events in conjunction with each COP between 2016–2020, and to appoint two high-level champions that shall facilitate high-level engagement.¹⁶

Driven by two very committed first ‘climate champions’ – Laurence Tubiana, who had secured the Paris success as lead of the French COP Presidency, and Hakima El Haite of Morocco – the structure of the TEPs was developed further. For example, a dedicated website was launched which summarizes the results of TEPs in an accessible way.¹⁷ Their work culminated in the “Marrakech Partnership for Global Climate Action” adopted at COP22. Its key features are:

¹⁵ Wolfgang Obergassel et al., ‘Phoenix from the Ashes: An Analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change – Part I’, *Environmental Law and Management* 27 (2015): 243–62; Wolfgang Obergassel et al., ‘Phoenix from the Ashes: An Analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change – Part II’, *Environmental Law and Management* 28 (2016): 3–12.

¹⁶ Obergassel et al., ‘Phoenix from the Ashes: An Analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change – Part I’; Obergassel et al., ‘Phoenix from the Ashes: An Analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change – Part II’.

¹⁷ UNFCCC, ‘climateaction2020.unfccc.int’, 2016, <http://climateaction2020.unfccc.int/>.

- a more focussed mandate for the TEMs to be “focused on international collaboration and dialogue among Parties and non-Party Stakeholders”;¹⁸
- the establishment of regional thematic meetings with support of the UNFCCC’s Regional Collaboration Centres in Bangkok (Thailand), Bogotá (Colombia), Kampala (Uganda), Lomé (Togo), and St. George (Grenada); and
- an annual engagement cycle that takes advantage of the full year and not only of the annual COP and formal intersessional meetings.¹⁹

Also, COP22 in Marrakech for the first time was accompanied by a parallel large scale technological solutions conference hosted by the Government of Morocco and co-organized by the World Business Council for Sustainable Development (WBCSD), the UN Sustainable Development Solutions Network (SDSN) and the ICLEI-Local Governments for Sustainability (ICLEI)²⁰.

2.2.3 Long-Term Strategies

The Paris Agreement stipulates that “all Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies“.²¹ In Marrakech, a “2050 pathways platform” was founded which is supposed to support countries seeking to develop long-term, deep decarbonisation strategies and build coalitions of cities, states, and companies engaged in long-term low-carbon planning. At its announcement the platform comprised 22 states, 15 major cities, 17 states, regions and other subnational authorities, as well as 190 businesses, which all have committed to develop such long-term strategies.²² Four countries published their final mid-century strategies in Marrakech: the United States, Mexico, Canada and Germany.^{23,24}

All of the 4 countries had formulated mitigation goals for 2050 before, and none of them increased these goals in their long-term strategies. What is new, though, is a more detailed description of the pathways the countries intend to pursue toward these goals.²⁵ Germany, for example, has provided a sectoral breakdown of its 80-95% below 1990 levels mid-century goal. What previously was only indicatively outlined in various scenarios has now been enshrined in the form of politically agreed sector-specific mitigation goals.²⁶

Whether or not the four long-term strategies are in line with the 1.5/2 °C limit of the Paris Agreement is not entirely clear. Only the German long-term strategy explicitly

¹⁸ Hakima El Haite and Laurence Tubiana, ‘Marrakech Partnership for Global Climate Action’ (UNFCCC, 2016), 5, https://unfccc.int/files/paris_agreement/application/pdf/marrakech_partnership_for_global_climate_action.pdf.

¹⁹ El Haite and Tubiana, ‘Marrakech Partnership for Global Climate Action’.

²⁰ Government of Morocco et al., ‘COP22 Low-Emissions Solutions Conference’, 2016, <http://www.lowemissions.solutions/>.

²¹ UNFCCC, ‘Paris Agreement’ (Bonn: United Nations Convention on Climate Change (UNFCCC), 2016), http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf, Art. 4.19.

²² UNFCCC Newsroom, ‘High-Level Climate Champions Launch 2050 Pathways Platform Support for Long-Term Low GHG Emission Development Strategies’, *UNFCCC*, 17 November 2016, <http://newsroom.unfccc.int/unfccc-newsroom/high-level-climate-champions-launch-2050-pathways-platform/>.

²³ UNFCCC, ‘Communication of Long-Term Strategies’, 2017, http://unfccc.int/focus/long-term_strategies/items/9971.php.

²⁴ In the meantime, France and Benin also published strategies.

²⁵ Taryn Fransen, ‘How Do New 2050 Climate Strategies from Canada, Mexico and the US Stack Up?’, *World Resources Institute*, 18 November 2018, <http://www.wri.org/blog/2016/11/how-do-new-2050-climate-strategies-canada-mexico-and-us-stack>.

²⁶ Bundesregierung der Bundesrepublik Deutschland, ‘Klimaschutzplan 2050: Klimaschutzpolitische Grundsätze Und Ziele Der Bundesregierung’ (Berlin: BMUB, November 2016), www.bmub.bund.de/N53483/.

indicates the intent to achieve GHG neutrality by the middle of the century. However, its mitigation goal, particularly if only the lower boundary of -80 to -95 percent below 1990 is realized, does not really align with that ambition. Still, all four strategies leave the door open for increased ambition. The German strategy is explicitly structured as a “learning process”. This learning shall be facilitated by involvement of the scientific community and a regular public dialogue process, and shall inform regular updates of the strategy “in accordance with the Paris Agreement”.²⁷

While the substance of the long-term strategies still does not represent adequate emission reduction in line with the goals of the Paris Agreement, the process is highly important to provide long-term signals for the private sector, helping to avoid stranded investments and structural breakdowns later-on in the transformation process.

2.3 Ongoing Work

2.3.1 Climate Finance

The provision of financial support from industrialised to developing countries continues to be a bone of contention. However, the industrialised countries have apparently drawn their lessons from the fiasco they suffered in Paris from the assessment of their financial contributions. In the run-up to the Paris conference, a report by the OECD and the Climate Policy Initiative had attested that industrialised countries had made strong progress on the way to mobilising 100 billion US\$ annually by 2020, as they had pledged at the 2009 Copenhagen conference. However, this report had been sharply criticised by developing countries due to strong methodological discrepancies, which made adding up individual provisions of countries highly questionable.

In Marrakech, industrialised countries presented a new “roadmap” for meeting the 100 billion target, which is much more differentiated than the document presented before the Paris COP. It apparently also finds more agreement among developing countries, though many lament the obvious imbalance between resources for mitigation and adaptation.

However, there continues to be the question of how global climate finance will be accounted and assessed in the future. The CMA still has a lot of work ahead in this respect. There were initial discussions in Marrakesh but with little result. Many of the finance topics, including guidance to the Financial Mechanism, the LDC Fund and Special Climate Change Fund, as well as setting a new collective finance goal, continue to be “orphan issues”, i.e. issues with no specific agenda item under the CMA.

2.3.2 Adaptation

Adaptation financing continues to be an extremely important issue, in particular for developing countries. In Marrakech, Parties argued until the very last moment about whether and how the Adaptation Fund, which was established under the Kyoto Protocol, could be transferred to the Paris Agreement. Since the Fund is financed in part

²⁷ Bundesrepublik Deutschland, ‘Climate Action Plan 2050: Principles and Goals of the German Government’s Climate Policy – Executive Summary’, Climate Change Long-term Strategy (Berlin: BMUB, November 2016), 6, http://unfccc.int/files/focus/long-term_strategies/application/pdf/161114_climate_action_plan_2050_en_bf.pdf.

by a levy on the Kyoto Protocol's Clean Development Mechanism (CDM)), some industrialised countries raised formal objections against such a transferral. Conversely, concentrating funding for adaptation under the umbrella of the GCF raised fears of developing countries that larger, more economically incentivised action targeting both mitigation and adaptation would push aside funding of small, local adaptation projects, which the Adaptation Fund is focusing on. This discussion substantially darkened the mood of poorer countries in Marrakech. At the last minute, however, Parties decided that the Adaptation Fund should also serve the Paris Agreement.²⁸

On a more positive note, the Adaptation Fund exceeded its fundraising target of 80 million USD for the year by 1 million USD, thus ensuring the Fund's future for the time being.

2.3.3 Loss and Damage

Adverse climate impacts that cannot be adapted to are recognised in the Paris Agreement as a third column to climate action besides mitigation and adaptation. In Marrakesh, small but critical steps were taken on the issue. After the first review of the Warsaw International Mechanism (WIM) to address loss and damage associated with impacts of climate change, Parties agreed on more rigorous periodic review of the WIM in 2019. This review may become important because the WIM is to serve the Paris Agreement after 2020. Further reviews are to be conducted on a five-year cycle, potentially in parallel to the global stocktakes. Moreover, Parties approved the five-year rolling work plan starting 2017 for the Executive Committee of the WIM. Topics in the work plan include displacement, migration, and comprehensive risk management.²⁹

3 Parallel Tracks

Internationally coordinated policies on climate change do not only take place under the umbrella of the UNFCCC, but in a multitude of fora inside and outside of the UN system. Among them are the following, showing different degrees of success.

3.1 International Civil Aviation Organisation

In the Paris Agreement, a provision on emissions arising from international aviation was dropped at the last moment. There is thus no provision for dealing with this important source of greenhouse gases: they account for about two per cent of overall emissions today, but emissions are projected to increase by around 300 per cent until mid-century. Curbing emissions from aviation is therefore essential to fulfilling the Paris Agreement's provision to limit temperature rise to 1.5°C/2°C. The responsibility to deal with the issue was delegated to the International Civil Aviation Organisation (ICAO), which in general is dominated by aviation business interests.

However, international pressure to take action was mounting after the adoption of the Paris Agreement. ICAO finally, at its 39th session in October 2016, adopted a

²⁸ UNFCCC, 'Decision 1/CMA.1, Matters Relating to the Implementation of the Paris Agreement, FCCC/PA/CMA/2016/3/Add.1', 31 January 2017, <http://unfccc.int/resource/docs/2016/cma1/eng/03a01.pdf>.

²⁹ UNFCCC, 'Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, Draft conclusions proposed by the Chairs, Recommendation of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, FCCC/SB/2016/L.8, 14 November 2016', <http://unfccc.int/resource/docs/2016/sb/eng/l08.pdf>.

global market-based measure (GMBM) known as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).³⁰ This mechanism is the first adopted by an entire industry sector to curb carbon dioxide (CO₂) emissions from international activities. Participation is voluntary until 2027, after which global coverage of international aviation emissions is aspired to.

The final document states that “ICAO and its member States with relevant organizations will work together to strive to achieve a collective medium term global aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level”. The document also acknowledges, however, that the current aim of increasing fuel efficiency by two per cent per year will not suffice to reach this goal. It should also be pointed out that even reaching the goal of keeping ‘net carbon emissions’ (which allows offsetting) stable after 2020 will not yield the required contribution to reach the goal of the Paris Agreement of keeping temperatures well below 2°C. Like the Paris Agreement, the ICAO mechanism contains some procedure for the strengthening of ambition. It remains to be seen whether pressure by civil society and some governments will be strong enough to push for more ambitious measures.

3.2 Montreal Protocol

The Montreal Protocol on Substances that Deplete the Ozone Layer (1987) is probably the most successful treaty in the history of environmental diplomacy. It succeeded in averting the destruction of the Earth’s ozone layer by phasing-out completely substances like chlorofluorocarbons (CFCs), which were used in refrigerators, air condition, spray cans and inhalers. It is anticipated that by mid-century the ozone hole will be closed. In the course of phasing-out ozone depleting substances, however, some of the alternative substances used, called hydrofluorocarbons (HFCs), had an immense global warming effect of several thousand times that of CO₂ and thus severely aggravated the climate crisis.

Although the Montreal Protocol originally was only designed to deal with ozone depleting substances, the Parties at the 28th Meeting of the Parties took an unprecedented step and enlarged the area of their competence: In Kigali, Rwanda, on 15 October 2016 they reached consensus on an agreement to gradually phase down HFCs.³¹ Assisted by a very effective decision-making procedure that allows for majority voting (but is very rarely used) and a pervasive spirit of solidarity among the ‘ozone family’, the amended Montreal Protocol provides for a gradual, differentiated phasing-out of these chemicals. While developed countries have frozen their HFCs consumption last year and are now aiming at reducing HFCs by 10% by 2019, most developing countries will be freezing their consumption in 2024 and strive to achieve a 10% reduction in 2029.³²

³⁰ ICAO, ‘Resolution A39-3, Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection – Global Market-Based Measure (MBM) Scheme’, October 2016, http://www.icao.int/Meetings/a39/Documents/Resolutions/a39_res_prov_en.pdf.

³¹ For the IISD report see <http://www.iisd.ca/ozone/resumed-oweg38-mop28/>.

³² The phase down schedule is documented here: http://www.unep.org/ozonaction/Portals/105/documents/7809-e-Factsheet_Kigali_Amendment_to_MP.pdf.

The final agreement means that between 2020 and 2050, 70 billion tonnes of CO₂ equivalent, comparable to the emissions of nearly 500 million cars, will be prevented from entering the atmosphere. Taken together, this avoids a rise of global temperatures in the range of 0.5°C, rendering it a more effective climate protection tool than the Paris Agreement. The power of the Montreal Protocol has been called ‘disruptive innovation’ – exactly the kind of progress that is needed to stop the climate crisis and that is lacking so far in the rather glacial speed of diplomacy under the UNFCCC.³³

3.3 Climate Vulnerable Forum

Another example for parallel progressive climate action is the Climate Vulnerable Forum, a group of almost fifty countries from Africa, Asia, the Caribbean, Latin America and the Pacific that was established shortly before the failed Copenhagen climate summit in 2009.³⁴ The forum has a formal structure with a Secretariat and a rotating chairmanship (currently Ethiopia), and is active inside as well as outside of the formal negotiation processes of the United Nations.

The CVF focuses on highlighting concerns, issues and challenges faced by vulnerable countries, building trust among stakeholders and breaking down divides, engages in co-operative action at international conferences through consensus building and position convergence on international policies and shares good practices on climate change policy. Its overall goal is to “contribute to a truly effective, inclusive and responsible global climate change governance regime”.

In Marrakech at COP22, the CVF was active as the core of the ‘High Ambition Coalition’ that closed ranks between many developing and key industrialised countries like the EU and the USA. Moreover, a High Level Meeting of the CVF at the conference adopted the “Climate Vulnerable Forum Vision” that calls for measures to accelerate climate action and commits all member countries to shift to 100% renewable energy as soon as possible.³⁵ In short: the Climate Vulnerable Forum represents a good example for the achievements possible for a climate club of committed countries.

4 The Impact of the United States Election³⁶

4.1 A Commitment to “Refocusing” US Environmental Policy

On 8 November 2016, Donald Trump was elected to become the 45th President of the United States of America. In his campaign, Trump had repeatedly expressed his intention to cancel the Paris Agreement, key environmental regulations, and to revive the coal industry. What is more, Trump’s election was accompanied by a victory of the Republican Party in the House and Senate of the US Congress. A vast number of

³³ Rajendra Shende: Disruptive innovation at Kigali to save the environment: <https://in.news.yahoo.com/disruptive-innovation-kigali-save-environment-043803426.html>, 20 Oct. 2016.

³⁴ Climate Vulnerable Forum, <http://www.thecvf.org/web/climate-vulnerable-forum/>.

³⁵ Climate Vulnerable Forum, ‘Climate Vulnerable Forum Vision, CVF2016/1 | Marrakech High Level Meeting – 18 November 2016, ANNEX 6: CVF VISION’, accessed 1 March 2017, <http://www.thecvf.org/wp-content/uploads/2016/11/CVF-Vision-For-Adoption.pdf>.

³⁶ This section is largely based on Lukas Hermwille and Wolfgang Obergassel, ‘Writings on the Wall: What the US Elections Mean for International Climate Policy’ (Wuppertal: Wuppertal Institute for Climate, Environment and Energy, 2016), <https://epub.wupperinst.org/frontdoor/index/index/docId/6596>.

Republicans rejects ambitious climate policies and some even negate the existence of anthropogenic climate change.

Resulting fears about the future direction of US policy were quickly proven right by the new president's choice of personnel and first steps after his inauguration. Among others, President Trump appointed Exxon CEO Rex Tillerson as new Secretary of State, outspoken climate sceptic Myron Ebell to guide the transition of the Environment Protection Agency (EPA), and Oklahoma Attorney General Scott Pruitt, who had launched 14 lawsuits against the EPA, as the agency's administrator.³⁷ Immediately upon assuming office on 20 January, the new administration posted an "America First Energy Plan" reiterating Trump's previous commitments to "eliminating harmful and unnecessary policies such as the Climate Action Plan", to further support the exploitation of shale oil and gas, and to revive the coal industry. The EPA is to be "refocused" on "its essential mission of protecting our air and water."³⁸

4.2 Potential Consequences for National US Policy

Unable to pass climate legislation in Congress, President Obama had pursued a climate strategy primarily relying on the President's executive powers based on existing legislation. The Obama administration was thus able to circumvent the congressional gridlock, but the relatively weak legal status of these measures together with the strong majority of the Republican Party in Congress will make it relatively easy for President Trump to roll-back climate policies at the national level.³⁹

However, key policies such as tax credits for wind and solar power were enacted by Congress with strong bipartisan support. Also, the Trump administration will not have much influence on state legislation. Many states in the US, including California and some states on the East coast, have rather progressive legislation. In fact, it may well be the case that progressive states will expand their climate policy in the absence of ambitious federal policies, as was the case during the presidency of George W. Bush. Furthermore, President Trump will not be able to reverse the global trend of decreasing prices and technological advancements made in renewable energy technologies and battery storage.

Still, a reversal of federal US energy policy and a return to oil, gas and coal as a matter of priority would certainly slow down the decline of energy-related emissions in the US. Moreover, such a roll-back of energy policy would further entrench existing and create new path dependencies that will render more difficult a later transformation toward a sustainable energy system based on renewable energy. As a result, cumulative emissions would be higher than without such a policy reversal, and cumulative emissions are what ultimately counts in the global climate system.

Finally, the decarbonisation challenge is much broader than electricity, which accounts for about 30% of US emissions. So far, neither the federal level nor states, ex-

³⁷ Valeria Volcovici, 'Trump Administration Tells EPA to Cut Climate Page from Website: Sources | Reuters', 25 January 2017, <http://www.reuters.com/article/us-usa-trump-epa-climatechange-idUSKBN15906G>.

³⁸ White House Website, 'An America First Energy Plan | Whitehouse.gov', 20 January 2017, <https://www.whitehouse.gov/america-first-energy>.

³⁹ David Roberts and Brad Plumer, 'Most People Are Wildly Underestimating What Trump's Win Will Mean for the Environment - Vox', 14 November 2016, <http://www.vox.com/science-and-health/2016/11/14/13582562/trump-gop-climate-environmental-policy>.

cept California, have meaningfully tackled other sectors. At the very least, the Trump administration means another four years of neglect at the federal level.⁴⁰

4.3 Conditions for a Withdrawal from the Paris Agreement

While President Trump had committed to “cancel” the Paris Agreement during his election campaign, as of the time of writing there has been no announcement on the new administration’s approach to the Paris Agreement.

In principle, any country may withdraw from the Paris Agreement according to the modalities outlined in its Article 28. However, a Party can only notify its withdrawal three years after the Agreement entered into force for that Party. After the notification it would take another year for the withdrawal to take effect. Thus, the earliest possible date for withdrawal to take effect is 4 November 2018.

A faster way for Trump would be to withdraw not only from the Paris Agreement but also from the United Nation’s Framework Convention on Climate Change (UNFCCC). According to Article 25.2 of the Convention the United States could declare their withdrawal at any time. The decision would take effect only one year later and would also entail the withdrawal from the Paris Agreement, which is a dependent treaty of the UNFCCC. Whether or not the President can actually withdraw from the UNFCCC without consent from the US Senate is, however, disputed. In contrast to the Paris Agreement, the UNFCCC was ratified by the Senate.⁴¹

This legal distinction is also important for the more distant future. Any successor to Trump could immediately re-ratify the Paris Agreement but not the UNFCCC. Re-entering the UNFCCC would require a new ratification process in the US Senate. Given that a 2/3 vote is required for the ratification of international treaties, this process would impose a much greater, potentially insurmountable, barrier and would probably exclude the US from international climate policy under the United Nations for much longer than four years.

It remains to be seen whether or not President-elect Trump will actually keep his campaign promises. If the US actually terminates international cooperation on climate change, other states may stop to cooperate on fields which are considered to be more important by President-elect Trump. Particularly withdrawing from the UNFCCC, which was negotiated and ratified under the Republican Presidency of George H. W. Bush, would signify that the US no longer acts in good faith in international negotiations.

4.4 Scenarios for the International Climate Negotiations

President Trump could probably damage international climate policy most by not withdrawing from the Paris Agreement or using the four years until the withdrawal takes effect to block progress on its implementation.

⁴⁰ Brad Plumer, ‘Here’s What Optimistic Liberals Get Wrong about Trump and Climate Change - Vox’, 4 January 2017, <http://www.vox.com/energy-and-environment/2017/1/4/14116592/trump-climate-change-optimism-meh>.

⁴¹ Climate Home, ‘January 20, 2018: The Day US Could Leave the Paris Agreement’, *Climate Home - Climate Change News*, 9 November 2016, <http://www.climatechangenews.com/2016/11/09/january-20-2018-the-day-us-could-leave-the-paris-agreement/>.

Even more important, though, may be the reaction of China, the EU, and other powerful players to the end of US climate policy as we knew it. There are three conceivable scenarios:

1 | **The Paris Agreement falls apart.** If the US actually withdraw from the Paris Agreement, other important countries could follow suit. This would most likely result in the Paris Agreement becoming irrelevant before it had the chance to actually take effect and would most likely end any serious multilateral efforts under the auspices of the United Nations.

2 | **The Paris Agreement continues as a largely ineffective instrument.** The adoption of the Paris Agreement was made possible partly by leaving a number of detailed questions to be dealt with at later sessions. This pertains for example to the transparency mechanism. The Agreement does not formulate legally binding obligations for Parties to actually achieve their nationally determined contributions. Instead, Parties are to be disciplined through said transparency mechanism by a ‘naming and shaming’ approach. Under President Obama, the United States had been a promoter of robust transparency rules. Without this leadership, rules, modalities and procedures of the transparency mechanisms may well be watered down to the extent that it becomes difficult to adequately track progress and to hold accountable those countries that do not implement their NDCs effectively.

The implementation of the Paris Agreement could also be held back by a lack of financial means. Under President Obama, the US had pledged to contribute USD 3 billion to the Green Climate Fund and actually transferred USD 1 billion. The remainder of the sum, however, will most likely not be paid as Donald Trump pledged during his campaign to “cancel billions in payments to UN climate change programs”.⁴² Industrialized countries have collectively pledged USD 10.3 billion to the Green Climate Fund as means to support the implementation of the Paris Agreement in developing countries. Without further contributions from the US, the Fund would face a serious capitalization deficit. In fact, the same issue applies to all other international financial institutions such as the GEF, the World Bank or the regional development banks.

3 | **Some countries advance cooperation “now more than ever”.** The US withdrawing from the Paris Agreement may create some new perspectives for international climate policy. The Paris Agreement and its legal character was tailored to the special circumstances in the United States. It does not create legally binding obligations for countries’ to actually achieve their pledges. This feature allowed President Obama to ratify the Agreement by executive order and without the advice and consent of the Senate. If the US now withdraw from the Paris Agreement, there may be room to strengthen its degree of legal compulsion. A group of ambitious countries could drive the implementation of the Paris Agreement and push for strong transparency and compliance mechanisms. In this scenario, countries would intensify their domestic efforts and increase their financial contributions in order to compensate at least part of the deficit caused by the prospective retreat of the United States.

There is currently no indication that the first scenario will come to pass. Not one country has declared that is going to follow the United States. To the contrary, even

⁴² Karl Mathiesen, ‘Obama Sends \$500m to UN Climate Fund | Climate Home - Climate Change News’, 17 January 2017, <http://www.climatechangenews.com/2017/01/17/obama-signs-over-500m-to-un-climate-fund/>.

traditionally recalcitrant countries such as China, India and Japan quickly announced that they would stay true to Paris. China has in the meantime repeatedly reaffirmed its commitment and warned that all signatories should stick to the Agreement.⁴³ The resolve to carry on is also reflected in the so-called Marrakech Action Proclamation (MAP) that all countries adopted in Marrakech. In the MAP, Parties restate their commitment to the Paris Agreement and its goals and “signal a shift towards a new era of implementation and action on climate and sustainable development.”⁴⁴ However, Scenario 3, going beyond the ambition of the Paris Agreement, probably also does not have a very high likelihood of playing out.

The most likely future is therefore that a variant of scenario 2 becomes reality. The Paris Agreement will most likely prevail because at its core it protects and supports the national interests of its member states. The climate protection contributions are determined nationally and therefore reflect national interests. And increasing numbers of countries are realizing that reducing fossil fuel use and transforming their economies is actually in their interest. In particular developing countries are moving more and more aggressively on curbing fossil fuel use to reduce the intolerable levels of local air pollution, capitalise on the falling technology costs of renewables and position themselves for future technology markets.

4.5 Options for Dealing with the United States

If a sufficient number of Parties musters the political will to move ahead without or even against the US, they have a number of options at their disposal, depending on whether or not the US decides to obstruct progress or not. The first and foremost option is to muster support for ambitious climate policy inside the Paris Agreement itself in order to form an alliance against possible attacks. The Paris Agreement could even be improved and amended by a three-fourth vote of the Parties. However, the rules of procedure of the UNFCCC to date do not allow for majority voting. For that reason it is practically impossible to procedurally advance a draft decision to the point at which the mentioned decision making rule could actually apply. As long as the United States are a Party to the Paris Agreement they could therefore block any amendment from the outset.

In addition, while amendments would not need to be ratified by all Parties to enter into force, they would be applicable only to those that did ratify. Nonetheless, despite these limitations a number of options are feasible:

- **Further incorporate non-state actors.** In recent years there has been a groundswell of transnational climate initiatives and climate action by sub-national entities and non-state actors of all sorts. The Paris Agreement explicitly acknowledges the role of these actors. However, to date there are hardly any avenues for such actors to engage in the intergovernmental process. The Paris Agreement could be amended, for example, to enable progressive US states to bypass the federal government and engage directly with the international community, contribute their part to the Paris Agreement and cooperate directly with other (nation) states.

⁴³ Ed King, 'Xi Warns Trump against Quitting UN Climate Deal | Climate Home - Climate Change News', 17 January 2017, <http://www.climatechangenews.com/2017/01/17/xi-warns-trump-against-quitting-un-climate-deal/>.

⁴⁴ 'Marrakech Action Proclamation for Our Climate and Sustainable Development'.

If the United States under President Trump decide to just ignore and not actively sabotage the international process, such an amendment might even be agreed upon with the US, since it would not have any direct consequences for the federal level.

- **Development of trade measures.** If the United States actually withdraws from the Paris Agreement or even the Convention, even more drastic measures may be thought of. As it currently stands, the Paris Agreement does not contain any provisions to deal with non-Parties. In principle, though, it could be amended to create such provisions. The Montreal Protocol on Substances that Deplete the Ozone Layer provides a precedent: it prohibits trade of ozone depleting substances with countries that are not Parties to the Protocol.

For climate change so-called carbon border tax adjustments have been discussed. Carbon border tax adjustments are tariffs that reflect the embedded emissions of goods and services imported from countries with lesser or no climate policies in place. To date, there has not been much appetite for such trade measures both because they would have adverse effects on global trade in general and because they would also harm the country that imposes them. This position could change, though, if Donald Trump realizes another of his campaign promises: to cancel international trade agreements and to protect US industries by imposing tariffs on imports. If Trump himself incites a trade war and conflicts escalate in other policy fields, carbon border tax adjustments may become a viable political option.

- **Clubs of frontrunner countries.** If effective climate protection proves to be impossible to organize under the Paris Agreement, more ambitious countries could establish a parallel forum or fora on their own, in which they cooperate on more advanced climate action.⁴⁵ If the US actively blocks the international negotiations under the UNFCCC or countries in response to shifted US priorities only manage to agree on the lowest common denominator, such alliances of ambitious countries could provide a last resort to advance serious collaboration to combat climate change.

5 Conclusions

5.1 Paris Implementation on Track – For Now

The Paris Agreement was a diplomatic breakthrough. Now, only one year later, the election of Donald Trump looms large over the international climate negotiations. Nonetheless, the overall mood in Marrakech was positive after the initial ‘Trump bump’ and Parties worked constructively. The COP adopted a detailed work programme for the ‘fine print’ of the Agreement as well as a clear timetable committing Parties to finish this work in 2018.

The further negotiations will now have an important advantage compared to the Kyoto negotiations: As the Agreement has entered into force, there is no risk that ratifi-

⁴⁵ For an assessment of the options see the as yet unpublished paper by Hermann E. Ott, Steffen Bauer, Clara Brandi, Florian Mersmann and Lutz Weischer: Climate Alliances après Paris. The Potential of Pioneer Climate Alliances to Contribute to Stronger Mitigation and Transformation: <https://hermann-e-ott.de/cms/climate-alliances-after-trump/>.

cation by important countries will need to be 'bought' by concessions in the fine print.

Further negotiations are nonetheless not going to be easy. In particular the controversy on traditional differentiation between industrialised and developing countries is far from having been laid to rest. It is now coming back at the technical level and with a much higher level of detail in issues such as the kind of information countries should provide on their NDCs and how NDC implementation should be monitored and reviewed internationally.

Clarity needs to be achieved particularly quickly on the modalities for the 2018 facilitative dialogue. The Paris conference set out 2018 as next political moment to examine and hopefully increase the collective level of ambition. Countries' pledges are currently far away from where they need to be to keep below the 1.5/2°C limit. Civil society is already beginning to build pressure for this moment of public awareness. The IPCC's decision to accept the UNFCCC's request to provide a special report on the 1.5°C limit in 2018 as well as the Marrakech decision to adopt the Paris rulebook in 2018 will serve to further galvanise attention.

However, Marrakech failed to lay out a concrete roadmap for how the facilitative dialogue shall be shaped and instead postponed the decision to the next COP. This postponement will not make it easier for countries to prepare their reports for the dialogue, as there will only be one year left before 2018.

Some countries have decided to stay ahead of the wave, however, and make progressive moves towards early re-assessment of their NDC commitments. The declaration by the Climate Vulnerable Forum does not only contain a commitment to 100% renewable energy, but also a promise that these Parties want to re-assess and strengthen their contributions as quickly as possible. Argentina already started this re-assessment process.

There also is new momentum in the development of long-term strategies. The G20 meeting in 2017 could decide that all G20 members, which are the world's largest emitters, should submit their strategies by 2018, which would further mobilise political attention.

This political momentum is underpinned by the accelerating dynamics of climate-friendly solutions, which is shifting the conventional wisdom on the costs and benefits of climate action. Mainly driven by domestic concerns, China alone added 34GW of solar PV capacity in 2016, adding as much capacity in a single year as had been installed globally in 2010 and nearly doubling its own installed capacity. Chinese coal consumption has fallen three years in a row⁴⁶. The peak of Chinese GHG emissions may thus be much closer than the year 2030 pledged by the Chinese government.

5.2 Impacts of the New US Administration

Future progress under the UNFCCC will strongly depend on what stance the Trump administration will take. Whether or not the new administration will formally with-

⁴⁶ Climate Home, 'China Coal Use Fell Again in 2016, Solar Capacity Rose 82%', *Climate Home - Climate Change News*, 28 February 2017, <http://www.climatechangenews.com/2017/02/28/china-coal-use-fell-again-in-2016-solar-capacity-increased-82/>.

draw from the Agreement or even the Convention remains to be seen. Certainly, however, the US will cease to be a progressive leader. They could even become an obstructionist in the worst case.

A lot depends on the reaction of other states. All efforts should be made to keep the United States from withdrawing from the Paris Agreement. Other heads of state and government should make climate change a top priority and demand that the United States deliver on their commitments. As Germany takes over the Presidency of the G20 process in 2017, the German government is in an ideal situation to take a leading role.

If, however, the United States is adamant about its withdrawal or even obstructs any progress on the implementation of the Paris Agreement, a number of options exist to deal with the situation. Collaboration with sub-national authorities and non-state actors in the United States should be increased. If possible, they should be incorporated in the UNFCCC process more directly. If effective climate action proves to be impossible within the framework set by the Paris Agreement, alliances of frontrunner countries should move ahead and cooperate in other fora in parallel to the UNFCCC. To compensate potential competitiveness constraints of such a “minilateral” approach, carbon border tax adjustments could be taken into account.

The first reactions to the election of Donald Trump indicates that there is an increasing understanding of climate change as a transformation challenge that transcends a mere environmental problem. The Paris Agreement provides a promising framework to manage this transformation constructively. Losing the United States as a progressive partner does not change the nature of the challenge. While the challenge becomes greater if the United States do not reduce their emissions as pledged, they will ultimately be left on the wayside and give away their lead on technological and economic development.

5.3 Non-State and Sub-National Actors and the Technical Examination Process

The UNFCCC has in recent years come to clearly recognize that many complementary governance initiatives are progressing in parallel to the UNFCCC, leading to an increasingly polycentric climate governance system. However, the mandate of the Technical Examination Process only covers the period from 2016 till 2020. Given the increasing importance of non-party actors and the ever growing number of transnational climate initiatives, the COP should decide to establish the TEP permanently alongside the Paris Agreement.

Moreover, the current institutional set-up is focussed on “orchestrating” the diverse transnational governance initiatives, that is, to “enlist and support” those initiatives in pursuit of the UNFCCC’s and the Paris Agreement’s governance goals.⁴⁷ Yet, if advances in transnational governance crowd out ambition at the national level, there is a risk that these efforts are nullified. It is therefore not only necessary to think about how to orchestrate and foster transnational governance, but also to feed back those

⁴⁷ cf. Kenneth W. Abbott et al., *International Organizations as Orchestrators* (Cambridge; New York: Cambridge University Press, 2015), 5.

advances into the intergovernmental negotiation process in a way that helps amplify national ambition.

This could be achieved by incorporating an evaluation of transnational initiatives in the global stocktake under the Paris Agreement and more explicitly in the process of National Communications that countries are required to submit periodically under the UNFCCC. Furthermore, lessons learned from transnational governance initiatives could provide inputs to the expert reviews of national contributions under the Paris Agreement's transparency mechanism. Explicitly, the "review shall also identify areas of improvement for the Party".⁴⁸ This task could be facilitated by and through the TEP. Reviewers could make specific recommendations for each country drawing on the 'policy menu', the portfolio of good practices developed and maintained in the TEP.

One step further even would be to link the TEP to the compliance mechanism of the Paris Agreement. Article 15.2 establishes a compliance committee that is "facilitative in nature and function[s] in a manner that is transparent, non-adversarial and non-punitive".⁴⁹ Formulating recommendations or requirements based on experiences based on the results of the TEP could strike a balance between the non-punitive and non-adversarial nature of the compliance committee yet maintain some form of compulsion.⁵⁰

5.4 Parallel Tracks and Alliances

Alongside the UNFCCC and its subsidiary treaties (Kyoto Protocol and Paris Agreement), other parallel venues for advancing co-operation on climate policy will gain more importance. The Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer have demonstrated that decisive action on greenhouse gases is possible by agreeing that HFCs will be gradually phased-out completely. And the countries assembled in the Climate Vulnerable Forum have shown that a relatively small number of countries that do not even belong to the major emitters can show leadership and resolve. By contrast, the failure of ICAO to take appropriate measures demonstrates that parallel tracks are not necessarily more successful than the UNFCCC.

Should the US under Trump decide to obstruct the international negotiation process significantly, alliances of frontrunner states that cooperate within and outside the UNFCCC and the Paris Agreement and strengthen their efforts will be more important than ever. Some such alliances entered the limelight in Marrakech already. This includes the "high ambition coalition" with its statement directly after the US election, the Climate Vulnerable Forum with its "Marrakech Vision", and the "2050 pathways platform" of countries that intend to develop long-term strategies. For the years to come, establishing pioneering alliances inside and outside of the Paris

⁴⁸ UNFCCC, 'Paris Agreement', Art. 13.12.

⁴⁹ Ibid., Art. 15.2.

⁵⁰ See also Lukas Hermwille, 'Making Initiatives Resonate: How Can Non-State Initiatives Help to Increase National Contributions under the UNFCCC?' (Berlin Conference on Global Environmental Change – Transformative Global Climate Governance 'après Paris', Berlin: Wuppertal Institute, 2016), https://epub.wupperinst.org/files/6368/6368_Hermwille.pdf.

Agreement will be a vital tool for the advancement of ambitious international co-operation on climate change.