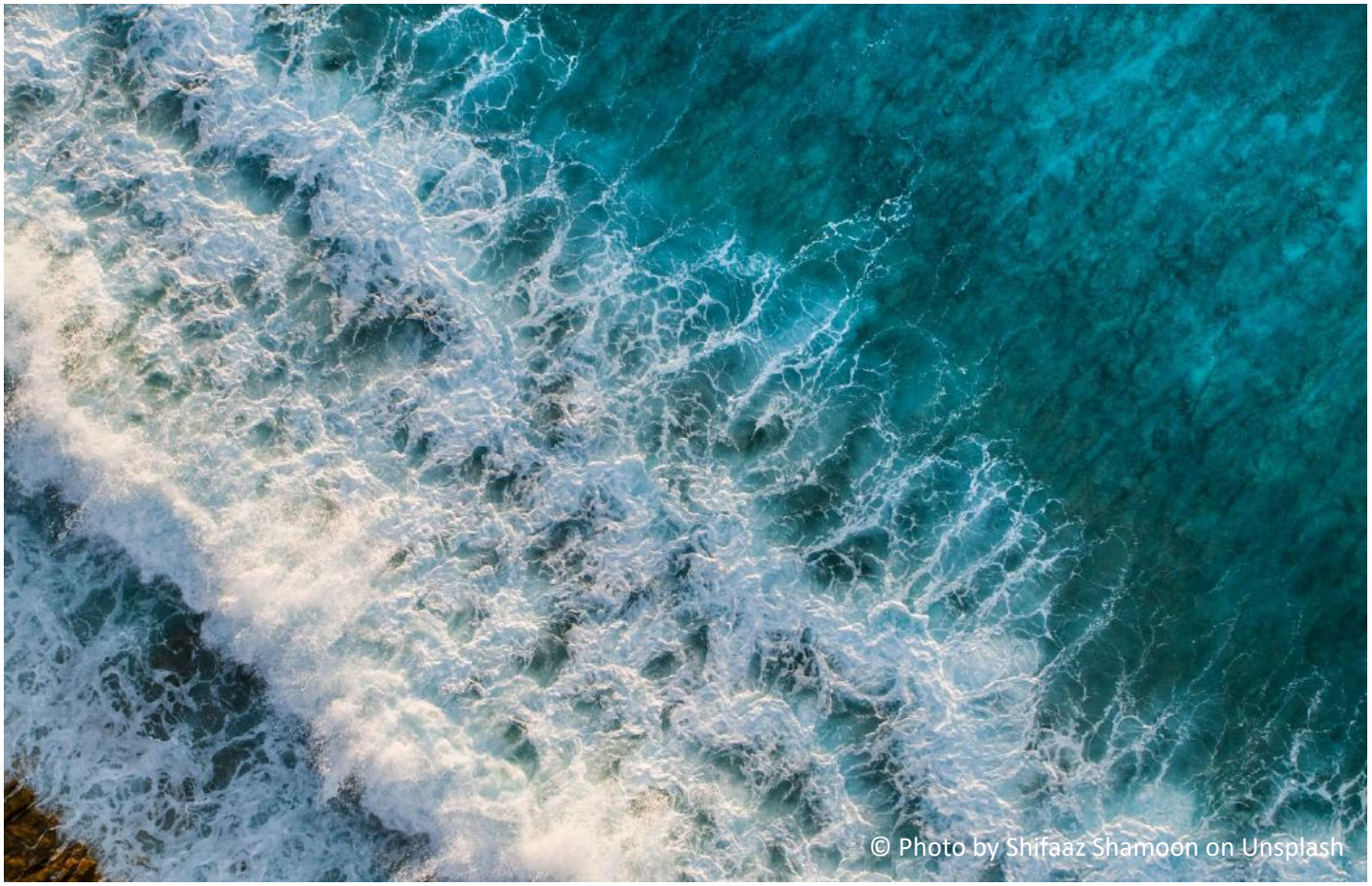

T7 Task Force Climate and Environment

POLICY BRIEF

TOWARDS AN INCLUSIVE CLIMATE ALLIANCE WITH A BALANCE OF CARROTS AND STICKS

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Think7

G7 GERMANY 2022

Executive summary

As G7 countries generate 25% of world greenhouse gas emissions, an open and cooperative G7 climate alliance can accelerate international climate policy in a transformative and inclusive manner. Building upon a proposal of the German Government (2021), we propose the following design elements for such an alliance:

1. **Membership conditions that benefit all members and are sufficiently ambitious to enable a pathway to genuine 'net zero'**

Reaching 'net zero' emissions globally by mid-century is key to enable limiting global warming to 1.5°C – the core objective of the Paris Agreement. The alliance must adopt membership conditions that keep the aim of 1.5°C alive. These include:

- **a differentiated carbon price with a common floor, i.e., an effective price set in accordance with criteria that reflect different economic capacities, with a floor at 50 € in 2025 and 100 € in 2030.**
- **common energy sector policies consistent with a pathway to genuine net zero, including a 2024 removal of fossil fuel subsidies, a 2030 phase-out date for coal-fired electricity generation for OECD members that join the alliance and a commitment to immediately end the new development of upstream coal, oil and gas supply infrastructure;**
- **a joint effort sharing mechanism to achieve emission reductions based on Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).**

2. **Apply a 'carrot and stick' approach based on Article 6 and a differentiated CBAM to encourage alliance participation**

'Carrots' should be designed as an open means to incentivize decarbonization outside of the alliance and encourage participation in the alliance. We recommend using international carbon markets under Article 6 of the Paris Agreement as a carrot, providing an additional financial incentive to non-members of the alliance for low carbon development. A differentiated carbon-border adjustment mechanism (CBAM) is the crucial 'stick' to avoid carbon leakage, with differentiation based on development status and clear exemptions for Least Developed Countries (LDCs). Additional carrots should include differentiated carbon border levy refunds as well as targeted industry and energy partnerships.

3. **Use a ratcheting mechanism to raise ambition**

A roadmap to ratchet-up the ambition of measures within and beyond the alliance is essential. Such roadmap should align with five-year NDC update cycles under the Paris Agreement, adjustable to align with national and global net zero targets and set clear milestones for expansion regarding sectors (from heavy industry and energy to land use) as well as countries (from G7 to G20 and beyond). Ensuring institutional continuity of the alliance requires a legally binding agreement that is independent from annually changing G7 presidencies and governed by a secretariat hosted by one or more volunteering member states, with a slim administration and explicit inclusion of a wide range of civil society representatives.

Challenge

The Intergovernmental Panel on Climate Change (IPCC 2022a) has identified a "brief and rapidly closing window of opportunity" for addressing global climate change. The G7 – the world's largest advanced economies – bear high historical responsibilities for greenhouse gas emissions and thus need to act as frontrunners to address this climate change problem In its latest report, the IPCC (2022b) features an entire chapter on climate clubs - and calls for more global cooperation to achieve the necessary transformative change. This follows on from the German government's proposed "international climate alliance geared towards close collaboration" with the aim of accelerating the implementation of the Paris Climate Agreement (German Government 2021). Building on the initial idea of a 'climate club', which was coined by Nordhaus (2015) and involves an exclusive coalition of countries that agree on a joint set of carbon prices and apply a carbon border adjustment mechanism (CBAM) to reap benefits in form of 'club goods' while preventing carbon leakage, this policy brief provides the design elements of an inclusive climate alliance to overcome challenges associated with this original idea.

A CBAM may be incompatible with regulations under the World Trade Organization (WTO) as well as free trade agreements and can deteriorate the terms of trade of non-member countries, including Least Developed Countries (LDCs) (Brandi 2021). Hence, there is a perception among non EU members that the EU CBAM—the first concrete proposal for a border adjustment—will be an exclusive, unilateral measure to shut off access to the EU market. The EU CBAM might then lead to retaliation rather than cooperation. Lastly, CBAMs face several measurement and circumvention problems that can cause high transaction costs and reduce their effectiveness (e.g., Felbermayr and Peterson 2020).

Moreover, carbon pricing alone will be insufficient to achieve the transformation required for rapid global decarbonization, especially regarding harnessing of the long-term innovation needed. Carbon pricing within a club is furthermore only realistic among countries with national or regional carbon market schemes with similar characteristics. This means that it currently can neither include the United States (at federal level), nor emerging economies which are major emitters but whose carbon prices are at best an order of magnitude below those of the EU. At the same time, agreeing on stringent non-price measures such as technology mandates across sectors at the scale and speed required is challenging due to more immediate and high transitional risks implying the stranding of assets in hard-to-abate sectors – especially if countries were to move alone.

In the following, we outline design elements that the G7 should use to build an open and cooperative climate alliance. These include: defining membership conditions that benefit all participants (***design element 1***); deploying a 'carrot and stick' approach, which is, on the one hand, designed to avoid carbon leakage and unintended negative impacts for LDCs as well as small island developing states (SIDS) and, on the other hand, to incentivize non-members to ultimately join the alliance and decarbonize their economies (***design element 2***); and raising ambitions through a ratcheting up mechanism (***design element 3***).

Proposals

Design element 1: Define conditions for participation in the alliance that benefit all members and are sufficiently ambitious

Limiting global warming below 1.5°C– the core objective of the Paris Agreement – needs to be at the heart of the proposed international climate alliance (e.g., Stua et al. 2022). First and foremost, achieving this objective accrues cost savings to all members of the alliance due to prevention of exorbitant, often irreversible social and economic damages for G7 economies as well as the rest of the world (e.g., Waidelich et al. 2021). Hence, the alliance should define conditions that are sufficiently ambitious to avoid temperature overshoot. These entry requirements should at least include the following price- and non-price based measures.

1) A differentiated carbon price with a common floor

Harmonized carbon pricing implies large cost savings to reach the temperature targets of the Paris Agreement and avoids carbon leakage among alliance members (Böhringer et al. 2021). To be viable, the effective carbon price should reflect different economic capacities and be determined through a set of agreed criteria (e.g., level of GDP, maturity of domestic carbon pricing mechanism, abatement costs in the country etc.). This should build on existing carbon market schemes and support their eventual integration. As a common basis, a joint price floor needs to be agreed upon that is sufficiently high enough to achieve a transformative impact. A full implementation of the climate alliance on the G7 level with a carbon price floor of 50 € in 2025 and 100 € in 2030 as suggested as median value of modelling studies in IPCC (2018) to reach a 1.5°C consistent pathway would directly achieve annual emission reductions of about 6 billion t CO_2 in 2030. The alliance should start with a focused sectoral coverage (energy sectors and heavy industry) and account for the removal of fossil-fuel subsidies that act as a 'negative' carbon price and can be directly translated into a carbon price equivalent (Böhm and Peterson 2021).

2) Common energy sector policies consistent with a pathway to genuine 'net zero'

Limiting global warming to 1.5°C requires global net zero emissions by 2050 with the energy sector being of decisive importance (IEA 2021). Alliance members need a joint understanding of the approach to achieve net zero emissions at the territorial (for member countries) and at the organizational level (e.g., for corporate and financial actors). Such an understanding must be based on frontloading emission reductions, a credible approach to accounting of trade-embodied or value chain-related emissions, as well as cautious use of negative emission technologies (Fankhauser et al. 2022; Tilsted et al. 2021). Common energy sector policies are needed to put the alliance on the path towards these net zero targets, while reconciling energy security with climate objectives. These policies must – at a minimum level - include a 2024 phase out for all fossil fuel subsidies, a 2030 phase-out date for coal-fired electricity generation for OECD-members that join the alliance, and a commitment to end public support for new development of upstream coal, oil and gas supply infrastructure in line with IEA (2021). This may sound difficult in the aftermath of the Ukraine invasion but is

critically important given the decades-long lifetime of new infrastructure. Moreover, aligned energy efficiency standards, energy-related methane reduction as well as jointly coordinated measures to achieve a *just* energy transition, e.g., through redistributive carbon pricing and fiscal policy reform need to be undertaken.

3) A joint effort sharing mechanism to achieve emission reductions

Lastly, we recommend the establishment of a joint effort sharing mechanism as constitutive element of climate alliance membership. Such mechanism should be based upon the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) and balance the highly emitting alliance members' burdens with their respective capacities. The mechanism can mirror and internationalize the effort sharing mechanism of the European Union and accelerate decarbonization while more equitably distributing burdens across members (Stua 2017). This could incentivize especially highly emitting G20 economies with lower levels of GDP to join.

Design element 2: Use a 'carrot and stick' approach based on Article 6, a differentiated CBAM, and targeted industry and energy partnerships

In the context of climate clubs, carrots have typically been referred to as benefits that are exclusively available for club members (Nordhaus 2015; Das 2015). In this logic, sticks are penalties for non-members. Given the economic and legal challenges of an exclusive climate club, we recommend using both carrots and sticks in an inclusive, fair and differentiated manner with the objective of incentivizing non-member trade partners to decarbonize their economies and ultimately join the climate alliance.

Firstly, we suggest using the benefits from the transboundary linking of carbon markets under Article 6 of the Paris Agreement as carrots (Stua et al. 2022, Müller and Michaelowa 2019). Under this framework, alliance members can achieve target compliance by offering international carbon finance as carrots to assist non-members to decarbonize their economies, building on stringent baselines and additionality determination in order to achieve environmental integrity. Applying an 'ambition coefficient' to sectoral baselines in project host countries ensures alignment with the net zero objective (Michaelowa et al. 2021). Clear roadmaps for LDCs – anchored in bilateral agreements under Article 6.2 – should facilitate their 'leapfrogging' of carbon-intensive development paths and enable their integration in the alliance over time. Credits purchased from non-members should be fully fungible and usable against all carbon pricing instruments applied in the alliance.

Second, we recommend establishing a CBAM stick that differentiates among exporting countries in an inclusive, WTO compatible, transparent, and fair manner. The principles of CBDR-RC and of Special but Differentiated Treatment (SDT) can offer guidance (Venzke & Vidigal 2022). The basis for differentiation should relate to the development status of the exporter and the existence of a "development, financial [or] trade need" (WTO Appellate Body 2004: para 161). It should further determine both the carbon price to be paid when accessing the market as well as the redistribution of CBAM revenues for climate financing in exporting countries. In line with the SDT principle, LDCs should be exempted from paying border adjustments, or at least receive a full refund of any CBAM revenues, earmarked for mitigation or adaptation measures.

Countries can also be allowed to use Article 6 emissions credits for their CBAM obligations. The approach of implementing such differentiated CBAM can provide space for using a partial refund of CBAM levies as additional carrot as non-members align with the alliances' entry requirements on carbon pricing and energy sector policies.

Third, the alliance should use industry and energy partnerships (e.g., for green hydrogen) as additional carrots for non-member countries that seek transformation to low-carbon economies. With renewable electricity being sufficiently cost-competitive in most parts of the world, these partnerships must be designed in a way that specifically reduces institutional and infrastructural-technical barriers of renewable energy technology roll-out and is contingent on reduction of fossil energy use, e.g., in the power and industry sectors. Two recent bilateral examples show the feasibility and transformative impact of such partnerships: the Just Energy Transition Partnership with South Africa (UK Presidency 2021), and the Leadership Group for Industry Transition launched by the governments of Sweden and India (LeadIT 2022).

Design element 3: Raise ambition through a ratcheting-up mechanism

The climate alliance needs to provide a strategy for its members to ratchet up its ambition (e.g., Stua et al. 2022). This ratcheting-up mechanism should align with established five-year NDC update cycles under the Paris Agreement as well as national and global pathways towards genuine net zero by 2050. On the way to net zero emissions, alliance members need to set a clear path for increasing the joint carbon price over time. Also, an extension of carbon pricing to all GHG-intensive sectors, especially land use, is needed to meet the level of ambition required in a step-wise manner. Lastly, within the alliance, an ambition increase is needed for non-price based elements on the way to achieving energy security through renewable energy sources and independence from fossil fuels at the latest by 2035. Beyond the alliance, milestones for the strategic cooperation with non-members through 'carrots and sticks' are needed, based on needs and mitigation potential. Finally, expansion of membership towards all G20 countries – that together account for about 80% of global GHG emissions – should be achieved within 15 years.

Implementation

The international climate alliance envisaged by the German G7 presidency can – if well designed - transform the international climate policy regime. A first step needs to be a 2022 update of the G7 NDCs to align them with the 1.5°C pathway, a fossil fuel subsidy phaseout plan, and a G7 statement to implement minimum carbon prices of 50 € by 2025 and 100 € by 2030. Whether the alliance becomes a successful and effective instrument depends on its capacity to balance internal ambition with inclusiveness beyond the G7. In addition to negotiating the membership conditions, an open dialogue with non-members from the very start in 2022, especially with G20 partners, is of decisive importance.

Furthermore, the establishment of suitable governance structures to achieve successful implementation is crucial. We propose a legally binding agreement among G7 countries that works towards implementing the

design elements outlined above. This would entail a hybrid governance architecture combining a top-down and bottom-up approach through participation of non-state actors (Jacobs 2016; Stua 2017). The governance structure has to be independent from the annually changing G7 Presidency in order to ensure the institutional continuity of the alliance over time. We recommend establishing a secretariat hosted by one or more volunteering member states, with a slim administration and broad and diverse inclusion of civil society representatives.

A carbon price floor decision would be unprecedented on the G7 level. The coal power phase out as well as the fossil fuel upstream investment ban would facilitate further emission reductions from 2030 onwards, and would be more akin to previous G7 decisions, like the stop of export finance for coal power plants. It would also build on the Powering Past Coal Coalition orchestrated by the UK. The 2024 fossil fuel subsidy removal would finally implement past G7 summit pledges made routinely since 2009.

The current critical geopolitical and economic situation after the invasion of Ukraine by Russia warrants a swift and bold response from the G7. This response embodied in the climate alliance should prioritize achieving energy security through decentralized renewable energy sources and independence from fossil fuels imported from autocratic regimes like Russia – and rally more countries and people together in the fight against climate change.

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