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CAN A CLIMATE CLUB ACCELERATE INDUSTRIAL DECARBONISATION?

TOWARDS MORE INTERNATIONAL COOPERATION IN THE DECARBONISATION OF HEAVY INDUSTRY

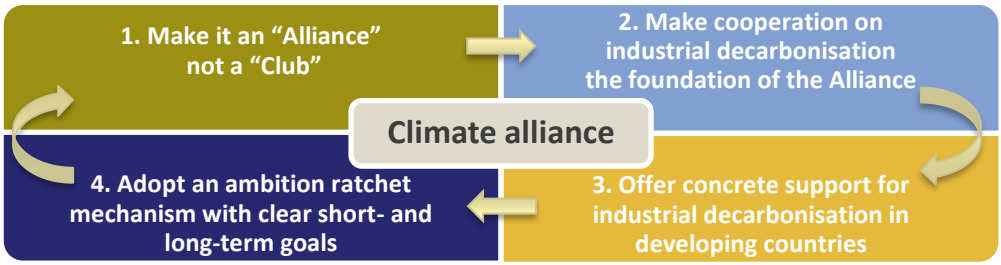
DOMIEN VANGENECHTEN AND JOHANNA LEHNE

Industrial sectors such as steel, cement and chemicals account for 17-20% of global greenhouse gas emissions. As a result of their trade-exposed nature, they have, to date, largely been exempt from the most serious climate change efforts. Policymakers have been reluctant to introduce policies that could affect their competitiveness and risk carbon leakage.

However, as we head into a new phase of Paris Agreement implementation, industry decarbonisation has moved up the international policy agenda. In this context, the idea of establishing "climate clubs" between ambitious countries has recently re-emerged. Proponents see it as a solution to accelerate industrial decarbonisation while addressing the trade and competitiveness concerns that have long held back policy efforts in this space.

This brief focuses on the politics of climate clubs. It assesses the case for establishing a club, evaluates propositions for how to design clubs and sets out four recommendations for how best to ensure that a "club approach" helps accelerate cooperation on global industrial decarbonisation rather than becoming a source of additional tension.

Figure 1. Four recommendations for a 'climate alliance' to accelerate global industrial transition



The Re-emergence of Climate Clubs

Nobel Prize winner William Nordhaus first popularised the idea of forming a climate club in 2015.[1] The idea is deceptively simple: a group of countries agree to joint emissions reduction goals and coordinate tariffs on imports from those outside the club to incentivise more countries to join and sign up to more ambitious climate action.

Proposals to establish climate clubs along these lines have cropped up repeatedly in academic literature[2] but there have been few practical attempts to make this a reality, until recently. Over the last year, calls to explore forming climate clubs have gathered momentum. The OECD[3], the IMF[4], the WTO[5] among others have put forward proposals supporting clubs or global carbon pricing.

The most serious proposal to date has come from the German government. In August 2021, several German ministries published a white paper calling for an "alliance for climate, competitiveness and industry."[6] The paper sketches out an initiative to overcome the risk of carbon leakage through close cooperation on industrial decarbonisation, coordinating carbon leakage measures and jointly creating lead markets for low carbon products. The ambition to create a club was subsequently reiterated in the new government's coalition agreement[7] and has since become a central priority for the 2022 German presidency of the G7.[8]

[1] Nordhaus, W. (2015). **Climate Clubs: Overcoming Free-Riding in International Climate Policy**

[2] See for example: Leal-Arcas, R., & Filis, A. (2021) **International cooperation on Climate Change Mitigation: The Role of Climate Clubs;** Victor. D. (2015) **The Case for Climate Clubs**; Van den Bergh et al. (2020) **A dual-track transition to global carbon pricing**; Hovi, J. et al. (2016) **Climate change mitigation: a role for climate clubs?**; Pihl, H. (2019) **A Climate Club as a complementary design to the UN Paris Agreement**

[3] Parry, I., Black, S., & Roaf, J. (2021) **Proposal for an International Carbon Price Floor Among Large Emitters**

[4] Fleming, S., & Giles, C. (2021) **OECD seeks global plan for carbon prices to avoid trade wars**.

[5] WTO (2021) **DDG Paugam: WTO rules no barrier to ambitious environmental policies**

[6] BMF, AA, BMWi, BMU, BMZ (2021) **Steps towards an alliance for climate, competitiveness and industry**

[7] See (2021) **KOALITIONSVERTRAG ZWISCHEN SPD, BÜNDNIS 90/DIE GRÜNEN UND FDP**

[8] G7 (2022) **Policy Priorities for Germany's G7 Presidency in 2022**

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As the German government starts to define what this means for their G7 agenda, this brief unpacks some of the key questions on how this could work in practice: What exactly is a climate club? Do we really need one? How does it relate to parallel tools such as carbon border adjustment mechanisms (CBAMs)? What are the potential benefits and risks?

What is a climate club?

The term "climate club" has been used to refer to a confusingly wide range of approaches. Some proposals are narrowly defined as "carbon clubs" focused on constructing a coalition of countries around a common target carbon price with tariffs applied to exports into the club. Others are conceived much more broadly with cooperation on a set of global governance issues relevant for the decarbonisation of various sectors. This section first looks at the objectives behind climate club proposals and analyses three different conceptions of a club.

Objectives of climate clubs

While different proposals for forming a climate club rest on different objectives, they are generally trying to do one or more of the following three things:

1. Increase ambition in the global climate regime

One of the key drivers behind climate club proposals has been a growing frustration with the UNFCCC regime.[9] Critics argue that the emphasis on universal participation and consensus-based decision-making is not able to provide a fast or bold enough answer to the threat of climate change. This was also the motivation behind Nordhaus' original proposal for a climate club.[10] He argued that the UNFCCC faces a free rider problem, as a result of its lack of an enforcement mechanism. By contrast, the climate club would adopt a top-down approach with sanctions for those outside the group to incentivise more ambitious climate action.

Nordhaus' depiction of UNFCCC processes has faced considerable criticism on the basis that it fails to recognise the complexity of the international climate regime among other things.[11] Subsequent proponents of climate club approaches have tended to adopt softer language – suggesting that clubs may be needed in addition, rather than as an alternative, to the current climate regime.[12] The central premise, however, that something additional is needed to accelerate climate action is broadly shared.

[9] Vidal, J. (2021) **It could have been worse, but our leaders failed us at Cop26. That's the truth of it**. The Guardian. November 13, 2021.

[10] Nordhaus, W. (2015). **Climate Clubs: Overcoming Free-Riding in International Climate Policy**

[11] Burke, T. (2021) **A carbon club?**

[12] Leal-Arcas, R., & Filis, A. (2021) **International cooperation on Climate Change Mitigation: The Role of Climate Clubs**

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This sentiment has only strengthened in the wake of mixed outcomes at COP26. UNFCCC negotiations fell short of ensuring new immediate action in many areas, but managed to outline a forward process, the Glasgow Climate Pact, for accelerating climate ambition.[13] However, with countries like Australia already signalling that they will not submit enhanced climate pledges for COP27,[14] calls for additional ways to speed up climate action have gained momentum.[15] In this context, the idea of a climate club has been positioned as a potential complementary piece of international climate architecture – allowing ambitious countries to coordinate and move forward in a specific area without requiring broad agreement.[16]

2. Mitigate carbon leakage risks

The second key objective behind climate club proposals is tackling carbon leakage risks: industrial production or investment shifting from a country with stringent climate policies to a country with less stringent climate policies. The logic is that, in particular, for traded carbon-intensive goods, climate policy increases costs for producers who risk being undercut by foreign competition, as a result of a climate policy asymmetry.

There is an ongoing debate over how seriously one should take this risk. While fears over carbon leakage, backed-up by ex-ante economic assessments,[17] have long dominated discussions over policy efforts to decarbonise heavy industry, the evidence that carbon leakage has taken place has remained scarce at best. [18] This lack of evidence, however, is not surprising, for two reasons: first, countries with carbon pricing schemes have put in place measures to exempt or protect trade-exposed sectors, including via free allowances. Second, carbon prices around the world have been low for most of the last 15 years, decreasing the risk of carbon leakage in the first place.

Two things have shifted recently to increase concerns over carbon leakage. First, carbon prices are increasing in line with rising climate ambition in key jurisdictions.[19] In the EU, carbon prices have risen above €80/tCO2, levels at which imports of industrial materials from countries with no carbon price could become significantly more competitive.[20] Second, it is increasingly clear that the current system of carbon leakage protection, the free allocation of emissions allowances, is no longer viable in the context of deep

[13] UNFCCC (2021) **The Glasgow Climate Pact – Key Outcomes from COP26**

[14] Martin, S. (2021) **Barnaby Joyce says Nationals did not sign Cop26 pact and Australia is 'happy with targets'**

[15] Goldhau, A., & Tagliapietra, S. (2022) **How an open climate club can generate carbon dividends for the poor**

[16] Falkner, R., Nasiritousi, N., & Reischl, G. (2021) **Climate clubs: politically feasible and desirable?**

[17] Böhringer, C., Carbone, J., & Rutherford, T. (2018) **Embodied Carbon Tariffs**

[18] Verde, S. (2020) **The impact of the EU emissions trading system on competitiveness and carbon leakage: the econometric evidence**

[19] ICAP. (2021). **Emissions Trading Worldwide: Status Report 2021**.

[20] At these prices, total carbon costs could amount to ~160% of gross value added (GVA) for cement; ~37% for iron and steel industry; or ~40% inorganic basic chemicals. E3G calculations based on Bolscher, H. et al. (2013) **Carbon Leakage Evidence Project: Fachtsheets for selected sectors** and **European Commission (2009) C(2009)10251 final**

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decarbonisation. These measures have muted carbon price signals for industrial sectors, dampening incentives to shift to cleaner production processes.[21]

As a result, policymakers have been on the search for alternative leakage prevention measures. Climate clubs have been proposed as one viable alternative, alongside CBAMs, excise duties and carbon product requirements.[22] Climate club proponents argue that clubs are well-suited to mitigating leakage risks while avoiding the political risks associated with a country unilaterally applying CBAMs.[23] By introducing carbon tariffs or CBAMs as a coalition, countries are less likely to face retaliatory measures, especially if the club involves major economies such as the US, EU and Canada.

Carbon Leakage vs. Emissions Offshoring

Often conflated with carbon leakage, **emissions offshoring** is a broader trend whereby carbon-intensive production shifts from higher-income to lower-income countries as a result of deindustrialisation in higher-income countries, growth in trade flows and the expansion of globalised supply chains.[24] Ultimately, the concern with both emissions offshoring and carbon leakage is that emissions simply shift from one location to another rather than decreasing in aggregate. However, the two forms of leakage differ considerably in terms of their impact and whether they can theoretically be addressed by climate policy.

The case and policy solutions for tackling emissions offshoring are much less clear than they are for carbon leakage. As a symptom of global trade, this is not a problem that can be tackled through climate policy design. Moreover, while there is a growing consensus that industrialised countries should start to account and take responsibility for their trade-embodied emissions,[25] it is not evident what the desired end goal should be. Less trade in carbon-intensive goods and more re-shoring of carbon-intensive production to higher-income countries could risk undermining growth and well-being in developing economies. **A better approach might be for higher-income countries to take on more responsibility for investments in cleaner production and infrastructure in producer countries.**

[21] Brzeziński, K., & Śniegocki, A. (2021) **Climate Contribution and its role in European industrial decarbonisation**

[22] Lehne, J., & Sartor, O. (2020) **Navigating the politics of Border Carbon Adjustments**

[23] Bierbrauer, K. et al (2021) **A CO2-Border Adjustment Mechanism as a Building Block of a Climate Club**

[24] Sato, M.. & Burke, J. **What is carbon leakage? Clarifying misconceptions for a better mitigation effort**

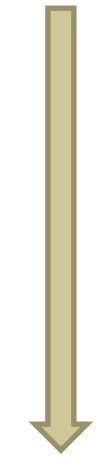
[25] CarbonBrief (2017) **Mapped : The world's largest CO2 importers and exporters**

3. Enhance international coordination on industrial decarbonisation

A third intent behind a recent sub-set of climate club proposals is to increase international cooperation on industrial decarbonisation.[26] There is a growing body of academic literature pointing to the need for well-coordinated international efforts in this space.[27] The global nature of industrial sectors and their supply chains limits the effectiveness of national measures. International alignment on standards for net-zero products and harmonised methodologies for reporting on the emissions-intensity of production processes would, for example, improve transparency, ensure a level playing field and, ultimately, facilitate the greening of industrial supply chains globally.

Proponents of climate club approaches argue that clubs could create space for more cooperative and aligned approaches on a whole range of issues pertinent to industrial decarbonisation (Table 1).

Table 1. Main functions of global governance for industrial decarbonisation



Knowledge & Learning	> Policy learning > Sharing best practices > Supply and value chain coordination
Guidance & Signal	> Agreement on decarbonisation objectives > Development of decarbonisation roadmaps
Transparency & Accountability	> Common monitoring, reporting and verification standards; common metrics and methodologies > Reporting for compliance > Scrutiny by international organisations
Means of implementation	> (joint) Financing of technologies and projects > Technology transfer > R&D coordination
Setting rules and creating markets	> More granular targets and objectives based on overall objectives > Various forms of obligations and standards *(e.g. carbon pricing, product requirements, procurement targets)*

Source: E3G elaboration on Oberthür et al. (2021)

While the potential for international coordination on industrial decarbonisation has historically been underexploited, there has been a recent proliferation of platforms providing opportunities for cooperation in this space. Figure 2 shows a non-exhaustive picture of the emerging ecosystem of initiatives.

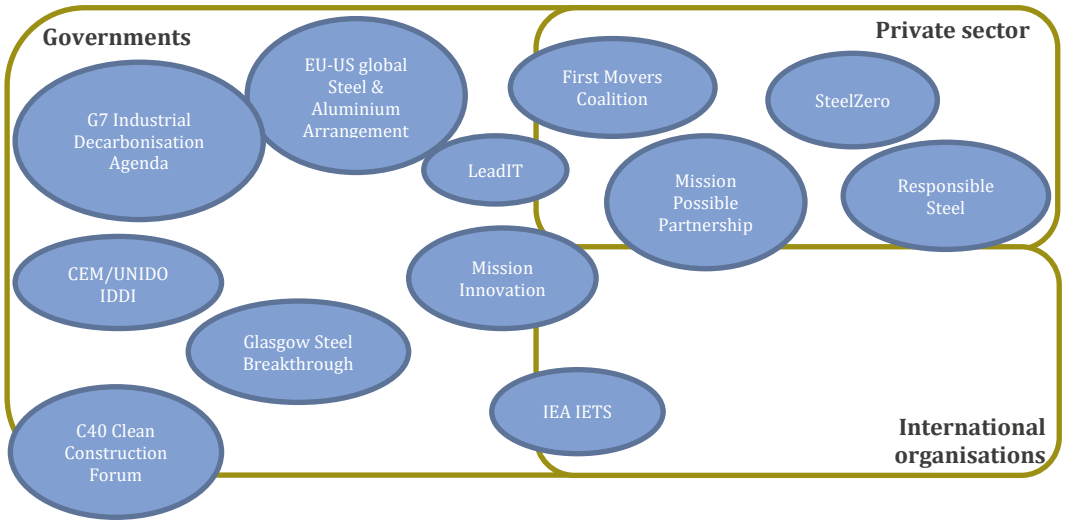
These initiatives have provided opportunities for cooperation on roadmaps for industrial decarbonisation (LeadIT and Mission Possible Partnership), procurement (SteelZero, First Movers Coalition, Industrial Deep Decarbonisation Initiative [IDDI]), and innovation (Mission Innovation), among other things. Announcements from a number of these

[26] See for example Koester, S., Hart, D., & Sly, G. (2021) **Unworkable Solution: Carbon Border Adjustment Mechanisms and Global Climate Innovation;**

[27] Oberthür et al. (2021), **Global governance for the decarbonisation of energy-intensive industries: great potential underexploited**

initiatives at COP26 have helped build a sense of momentum for accelerated industrial decarbonisation.[28]

Figure 2. Emerging ecosystem of cooperative initiatives and platforms on industrial decarbonisation



Source: E3G

There are, however, still important gaps to be filled if these initiatives are going to generate sufficient momentum. Crucially, we still lack dedicated spaces for:

- **Addressing carbon leakage concerns and wider trade questions**. To avoid conflicts and address competitiveness concerns, common approaches need to be developed on how to deal with carbon in traded goods, including exploring principles and coordination on carbon tariffs and CBAMs.[29]
- **Agreement on green industrial subsidies.** Decarbonising industry will be costly, and several countries are putting in place packages to support the early-stage commercialisation of zero emissions technologies.[30] Without agreement and shared principles on the types and amounts of acceptable support, these efforts risk being derailed through trade disputes and accusations of protectionism.
- **Co-innovation and technology diffusion.** Most planned capacity expansions in industrial sectors in the coming decade are set to occur in developing economies.[31] These can either lock-in carbon-intensive pathways for decades or

[28] At COP26, as part of the IDDI, for example, the UK, India, Germany, UAE and Canada announced a procurement pledge, essentially stating "if you make low-carbon steel and concrete, we'll buy it." – UNIDO (2021) **World's largest steel and concrete buyers make game-changing push for greener solutions**

[29] Cosbey, A. (2021). **Principles and Best Practice in Border Carbon Adjustment: a modest proposal**

[30] E.g. France: S. Morland (2021) **Factbox: Macron's 30 billion euro "France 2030" investment plan**; Germany: Appunn, K. (2022) **Germany to launch emergency programme for "huge, gigantic" 2030 emissions target task**

[31] E.g. Steel: Agora Energiewende (2021). **Global Steel Transformation Tracker**; Cement: Koncept Analytics (2021) **Global Cement Market: insights & forecasts**

kick-start a green industrial revolution. If we wait for breakthrough technologies to reach maturity and commercial scale in developed markets before they get introduced to developing countries, we will end up firmly on the former pathway. An international technology and investment accelerator is needed to enable the uptake of key technologies in developing country markets.[32]

> **Financing the industrial transition in developing and emerging economies.** Limited climate and public finances have been provided for the decarbonisation of heavy industry sectors in developing countries to date. Multilateral development banks are starting to introduce specific funds for industrial decarbonisation but require additional funding, and donor interest, for these to take off.[33]

A typology of climate clubs

Having explored the broad objectives behind proposals to form climate clubs, this section explores three conceptions of climate clubs, assessing how well they meet the objectives set out above and highlighting where they differ and build on each other.

1. Nordhaus-style Climate Club

First popularised by Nobel Prize winner William Nordhaus in 2015, the idea behind the "classic" climate club is deceptively simple. To overcome first mover risks and entice "free-riders" and "climate laggards" to move along with them, ambitious countries agree to adopt a common carbon price and introduce sanctions against non-participants. The carbon price ensures that ambitious climate targets are achieved by the members of the club. External sanctions take the form of either carbon duties, to protect against the risk of carbon leakage, or uniform penalty tariffs high enough to entice non-participants to join the club.[34]

Nordhaus' proposal has faced criticism on several counts. Critics have questioned the political feasibility of countries agreeing on, and successfully pursuing, a common carbon price. There has been pushback on Nordhaus' free rider argument on the basis that it fails to recognise the complexity of the international climate regime[35] and runs contrary to the principle of common but differentiated responsibilities (CBDR).[36] His proposal to circumvent the UNFCCC is seen as setting a dangerous precedent and encouraging exclusive over inclusive approaches to climate action. Finally, the narrow focus on carbon pricing has been questioned. While it provides a theoretical solution for

[32] Engström, M. (2022) **Put co-innovation at the heart of EU green external relations**

[33] The World Bank's Climate Investment Fund, with participation from regional MDBs, has a new industrial decarbonisation fund looking for donor replenishment. Gerres, T. et al (2021) **How G7 countries can help change the global landscape**.

[34] Nordhaus, W. (2015). **Climate Clubs: Overcoming Free-Riding in International Climate Policy**

[35] Burke, T. (2021) **A carbon club?**

[36] Leal-Arcas, R., & Filis, A. (2021) **International cooperation on Climate Change Mitigation: The Role of Climate Clubs**

carbon leakage, it fails to recognise the complex challenge presented by industrial decarbonisation.[37]

2. Coordination on tariffs without reference carbon prices

While inspired by the Nordhaus-style climate club outlined above, proposals that fall into this second category go beyond the narrow approach of an explicit reference carbon price combined with a carbon tariff. Under these proposals, a group of countries agree to align and strengthen domestic emissions reduction targets and coordinate tariffs on imports from those outside the club to mitigate the risk of carbon leakage. The main distinction is that each country can choose its own approach to meeting those targets, whether via carbon pricing or regulation.[38]

Proposals along these lines overcome some of the fundamental criticisms of the Nordhaus-style climate club. A key improvement is that they allow for more flexibility in how countries coordinate and, therefore, also on which countries can participate. Adopting explicit carbon pricing might not be the most effective or suitable tool in all economies or for all sectors. [39] Nor is it currently deemed politically feasible in certain large emitting countries, including the US.[40]

However, this flexibility comes with a need to agree on several key elements: how to assess the carbon price implicit in non-price-based policies, common methodologies for measuring the carbon content of traded goods and transparency on the functioning of members' carbon pricing and regulatory regimes.[41] Meeting these conditions is not without its political challenges. This slightly broader conception of a climate club, therefore, still runs into many of the same challenges as Nordhaus' proposal: political feasibility, undermining CBDR, the risk of accusations of exclusivity and protectionism.

3. The German proposal for a 'cooperative climate alliance'

Possibly the broadest conception of a climate club to date is the German government proposal to establish an "open and cooperative international climate club" to push for more ambitious climate policies in the purview of its G7 Presidency.[42] While the specific parameters of what the German government has in mind are still in development, some design elements were already articulated in the August 2021 white paper. [43]

[37] Grubb et al. (2021) **Induced innovation in energy technologies and systems: a review of evidence and potential implications for CO2 mitigation**

[38] See for example: Tagliapietra, S., & Wolff, G. (2021) **Conditions are ideal for a new climate club**

[39] Green, J. (2021) **Does carbon pricing reduce emissions? A review of ex-post analyses**

[40] Tucker, T., & Meyer, T. (2021) **A Green Steel Deal: Toward Pro-Jobs, Pro-Climate Transatlantic Cooperation on Carbon Border Measures**

[41] Tagliapietra, S., & Wolff, G. (2021) **Conditions are ideal for a new climate club**;

[42] G7 (2022) **Policy Priorities for Germany's G7 Presidency in 2022**

[43] BMF, AA, BMWi, BMU, BMZ (2021) **Steps towards an alliance for climate, competitiveness and industry–building blocks of a cooperative and open climate club**

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At its core, this proposal retains some of the same features as the types of climate club assessed above: coordination among a set of countries on climate policies to achieve a jointly agreed emissions reduction target and coordination on measures to protect against carbon leakage, e.g. joint CBAMs. Like the second type of club described above, this proposal allows for flexibility in how countries achieve their targets. The white paper highlights the importance of striving towards similar *implicit* prices for emissions and proposes establishing a common carbon price floor. In the G7 Priorities set out by the German government, the language on common carbon pricing is even more toned down: "reaching agreement on uniform standards for the emission and pricing of CO_2."[44]

Where this proposal differs from previous conceptions is in its much more inclusive framing. From the start, there has been a strong emphasis on the fact that this initiative is "open to all countries" and that it seeks to go beyond G7 partners. There is also a clear emphasis on the need to support developing countries through financial support, transfer of knowledge and technology.

The proposal also adds additional elements around which it suggests countries cooperate to accelerate industrial decarbonisation: the creation of lead markets for zero-carbon products, setting up a global supply chain for green hydrogen, climate finance to accelerate the transition and exploring how trade policy can play a supportive role in reaching climate targets. By adding elements beyond carbon pricing and CBAMs, the German proposal establishes a broader space for cooperation around which international partners are more likely to find areas of agreement and where individual countries can more easily be sold on the benefits of involvement in such an alliance.

This proposal, in theory, side-steps several of the issues faced by the Nordhaus-style club: It positions itself as a complementary tool to UNFCCC processes, with a strong emphasis on helping to implement the Paris Agreement. It goes beyond explicit carbon pricing as the central coordination tool. It emphasises inclusivity and support for developing countries in recognition of CBDR.

However, several risks and challenges remain:

- First, this is still a proposal in development. Inclusivity and openness will need to be demonstrated and not just signalled.
- Second, the German government has been using the terms club and alliance almost interchangeably. Many countries remain sceptical of the idea of a "club", as it is associated with exclusive access and protectionism almost by definition. This runs the risk of increasing tensions with potential partner countries.
- Third, the central critique of political feasibility remains. Getting agreement from key countries on a high level of climate ambition, on methodologies and a

[44] G7 (2022) **Policy Priorities for Germany's G7 Presidency in 2022**

framework to monitor adherence with targets and milestones and a joint approach to managing the risk of carbon leakage is a high hurdle to overcome.

- Fourth, while there is a huge benefit to the alliance being framed in as inclusive way, there is a potential trade-off between climate ambition and inclusivity that will have to be managed. The broader the membership, the more challenging it will likely be to garner wide agreement on ambition and measures.
- Finally, there are unresolved questions around the WTO compatibility of a group of countries levying carbon tariffs or border adjustments against non-members.[45] In order for this feature of the club to work, the WTO would have to recognise the legality of such measures based on their climate motivation, rendering retaliatory actions illegal. Discussions around the WTO compatibility of the EU CBAM have revealed the myriad challenges of getting the legality of such a measure right. Despite broadly ticking a lot of the boxes required for a WTO-compatible measure, the EU CBAM is still expected to be subject to retaliatory legal action by countries most affected by the measure.[46]

To CBAM or to Climate Club or both?

One of the key drivers behind recent climate club proposals has been the desire to mitigate the political risks attached to countries unilaterally implementing CBAMs. This is also a key motivation behind the German proposal. German policymakers have raised concerns that the CBAM could be detrimental for Germany's export-oriented industrial sectors, which would be hit hard by any retaliatory trade measures. On the back of these concerns, the climate club is sometimes pitched as an alternative that should be pursued in place of an EU-level CBAM.[47]

There are a couple arguments that speak in favour of a climate club, as envisioned in the German proposal, theoretically being a more powerful tool than the EU CBAM. While the CBAM proposal mainly aims to provide an answer to carbon leakage concerns, a climate club, if successful, stands a better chance of finding long term solutions for competitiveness and trade concerns. In contrast to the CBAM, a climate club could include developing countries, facilitating the decarbonisation of heavy industry internationally.[48] It also offers greater flexibility for coordination with jurisdictions less able to introduce carbon pricing. Moreover,

[45] Koester, S., Hart, D., & Sly, G. (2021) **Unworkable Solution: Carbon Border Adjustment Mechanisms and Global Climate Innovation**

[46] Brooks, C (2021) **Trade experts positive on EU's CBAM, despite risk of rich nation-poor nation rift.** IHS Markit. July 21, 2021.

[47] Kurmayer, N. (2022) **Scholz walks EU tightrope in push for 'international climate club'**. Euractiv. January 21, 2022.

[48] Clark, A., Dennison, S., & Engström, M. (2021) **Climate of cooperation: How the EU can help deliver a green grand bargain**

by potentially drawing in a wider pool of countries, a climate club would be in a better position to resist pushback from trade partners and, with larger market-pull power, would be better able to incentivise climate action internationally.

While these arguments highlight the benefits of a climate club, they do not establish clearly why a climate club should be pursued in place of an EU CBAM. Many of these benefits could be gained by seeking to form a climate club in parallel to the EU CBAM. There is nothing in the design of the climate club that precludes individual members of the club already having set border tariffs or implemented CBAMs.

These two approaches could in fact be mutually reinforcing. Driving forward discussions around a climate club could help mitigate the political tensions surrounding the EU CBAM while striving for a long-term cooperative solution on carbon leakage that could eventually negate the need for unilateral CBAMs. In the meantime, implementing the EU CBAM could, in theory, act as an incentive to bring trade partners to the table.

However, this approach of parallel tracks will only work if the EU CBAM is designed and communicated in such a way that it retains its climate credentials, avoids being hijacked by protectionist interests during negotiations, and carefully manages trade partner concerns. If the process provokes too much tension it could still limit the chance for cooperation around a climate club.

A way forward – recommendations for a 'climate alliance' to accelerate the global industrial transition

This section outlines four key recommendations to overcome the risks and challenges the German vision of a climate club is likely to face.

1) Make it an "alliance" not a "club"

The classic climate "club" idea is associated with exclusivity and protectionism. To clearly set this new initiative apart and signal a more flexible approach, it should be explicitly rebranded as an "alliance." This will signal early on that the initiative aims to both show and catalyse leadership on industrial transition and create space for cooperation and coordination:

- **The initiative will need to adopt a flexible "open architecture" approach,** allowing countries to demonstrate ambition based on clear, achievable and stringent standards. Membership of the alliance should not be predicated on adoption of carbon pricing measures but instead allow countries to coordinate

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across different approaches towards delivering on ambitious decarbonisation goals.

- **Pursue inclusive and balanced membership**. While there are clear benefits to using the G7 as an initial testing space for exploring ideas and getting buy-in from an initial group of countries before taking the initiative to a larger group of countries, the initiative should strive towards a broad and inclusive, geographically balanced membership. This is important for both the initiative's effectiveness – as many major industrial producers and growth markets are outside this group – but also to avoid the initiative being seen as a "G7 thing", or an approach that is overly protectionist or "anti-China".
- **The alliance should take a stepwise approach towards membership** to the alliance would signal openness beyond rich, industrialised countries. Prospective members should be able to choose between different levels of ambition and commitments, depending on their development level, with the aim of converging on ambition levels in the longer term.

Crucially, G7 members will need to reinforce their credibility by demonstrating their own ambition through clear decarbonisation milestones and timelines. Prospective members should fulfil their commitments to the Glasgow Climate Pact on enhancing their 2030 Nationally Determined Contributions and commit to a decarbonisation timeline in line with the IEA roadmap[49] for the G7 to achieve net-zero power by 2035 and net-zero emissions by 2050. G7 members also need to do their faire share to meet the $100bn climate finance target and commit to an ambitious post-2025 goal.

2) Make cooperation on industrial decarbonisation the foundation of the Alliance

The alliance should be a dedicated space for dialogue and coordination on industrial decarbonisation and trade policy towards ensuring a climate-aligned level playing field for industrial decarbonisation. Critically, this means going well beyond cooperating on carbon pricing only, to establish a shared set of rules and guidelines to eliminate unfair practices and define a shared arena for competition. Key dialogue tracks for the initiative should include:

- **Lead market creation** –The alliance should aim to expand the membership of initiatives launched in recent years, including the CEM IDDI, ensuring ambitious interim green procurement targets among its members and laying the groundwork for joint development of methodologies for measuring and tracking carbon emissions and standards for green industrial products.

[49] IEA (2021) **Net Zero by 2050: A Roadmap for the Global Energy Sector**

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- **Tackling carbon leakage** - common approaches need to be developed on how to deal with carbon in traded goods, including exploring common principles and coordination on carbon leakage measures, including CBAMs. This track needs to recognise that not all countries will adopt explicit carbon prices and should establish a process for agreeing common definitions and methodologies for determining equivalent levels of climate policy ambition, including acceptable differences between countries in different development stages. This could build on existing work done by the World Bank[50] and the OECD,[51] as well as CSO-led initiatives such as Climate Action Tracker.[52]
- **Establishing a 'peace clause' on green industrial subsidies** - Developing a shared set of principles for green industrial subsidies and agreeing permissible forms of direct state support will be important to avoid future trade tensions and give political cover for pursuing ambitious green innovation and industrial policies.

Critically, especially given the longer time frame anticipated for forming a climate alliance, this process should not be seen as an alternative to the EU CBAM in the interim. It should be pursued as an essential parallel track to manage the political tensions around it while striving for a long-term cooperative solution.

3) Offer concrete support for industrial decarbonisation in developing countries

To get developing countries and LDCs on board, the alliance should commit to financial, technical, and political support for these countries by:

- **Launching an international technology and investment accelerator** to enable the deployment and uptake of cleaner industrial production processes in developing country markets with more limited access to low-cost capital. Patents for certain key green technologies could, for example, be treated as 'alliance goods'[53], only shared with members that commit to ambitious targets and committed developing countries.
- **Creating the financial foundations for the mobilisation of trillions** on the basis of the five key principles for infrastructure development that have been endorsed by G7 leaders.[54] The alliance should seek to scale up transition finance for emerging industrial producers and developing countries, contributing to the trillions in climate and energy transition finance needed to keep the 1.5°C temperature goal alive.

[50] World Bank Group (2016). **Networked Carbon Markets: Mitigation Action Assessment Protocol**

[51] OECD (2013). **Climate and Carbon: Aligning Prices and Policies**

[52] **https://climateactiontracker.org/methodology/comparability-of-effort/**

[53] Leal-Arcas, R., & Filis, A. (2021) **International cooperation on Climate Change Mitigation: The Role of Climate Clubs**

[54] G7 (2021) **G7 LEADERS STATEMENT: PARTNERSHIP FOR INFRASTRUCTURE AND INVESTMENT**

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4) Establish an ambition ratchet mechanism with short- and long-term goals.

An ambition ratchet mechanism should be at the core of the alliance. Members should subscribe to decarbonisation timelines, including milestones for industrial carbon product requirements and phasing out carbon-intensive production processes. Moreover, getting the sequencing of the initiative right will be important, both in terms of the aims of the alliance and its membership

- **The long-term goal (10/15 years)** should be the convergence within the group towards adopting common ambitious industrial product requirements covering a large share of domestic markets and production capacities. While the ratchet-mechanism can be tailored to the needs and circumstances of different groups of members, it should be designed to ensure all members' ambition increases over time and conventional carbon-intensive products and production processes are progressively phased out. Harmonisation of (implicit) carbon price levels across parts of the alliance membership should also be seen as a longer-term objective.
- **In the shorter term, immediate goals over the next year** should focus on developing harmonised methodologies and standards for "lower carbon" or "near-zero emissions" industrial materials; furthering and complementing international commitments such as IDDI; as well as setting up dedicated tracks to shape the international technology and investment accelerator for developing countries and initiate a trade and competitiveness dialogue.

When setting long- and short-term targets, the alliance can consider complementary with the 5-year Paris Agreement ratchet mechanism, and how targets set within the alliance may enable countries to enhance their NDCs in the next Paris ambition cycle.

About E3G

E3G is an independent European climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action.

E3G builds broad-based coalitions to deliver a safe climate, working closely with like-minded partners in government, politics, civil society, science, the media, public interest foundations and elsewhere to leverage change. More information is available at **www.e3g.org**