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A new era for multilateral climate ambition: Bridging the gap between theory, discourse and the potential impact of the 'G7' climate club

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Statutory declaration

I hereby declare that I have composed the present thesis autonomously and without use of any other than the cited sources or means. I have indicated parts that were taken out of published or unpublished work correctly and in a verifiable manner through a quotation. I further assure that I have not presented this thesis to any other institute or university for evaluation and that it has not been published before.

Eske Eilts, Nice, 16.07.2023

Abstract

The climate club model offers a vital tool to address cooperative governance in the climate-trade nexus. In 2022, the G7 under the German presidency announced the formation of a Climate Club aimed to be launched at COP 28. This research thesis seeks to analyse the potential impact of this Climate Club (CC). A three-step analytical framework is conducted to evaluate underlying narratives and purposes of the club by utilisation of a discourse review and six expert interviews. The CC gains importance in the increasingly tensed playing field of climate-trade policies in the past two years. The findings reveal that the impact of the discourse context *on* the CC is decisive for the impact *of* the CC itself. Implications suggest that the CC finds itself as a piece of a multilateral puzzle, forming an indirect multi-level climate club landscape enabling catalytic co-opetition. The inclusive design of the CC could enable open dialogue to improve procedural justice in the climate regime as well as to overcome trade tensions. Yet, it could dilute the club's scope and ambition or sublimate a purpose of trade diplomacy instrumentalization for strategic autonomy. The weight of this will be dependent on how the CC deals with other initiatives on the spectrum across global North and South governance demands.

Keywords: climate club, cooperative climate governance, climate-trade nexus, trade diplomacy, strategic autonomy, procedural justice

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List of Abbreviations

ASEAN = Association of Southeast Asian Nations

CBAM = Carbon Border Adjustment Mechanism

CBDRRC = Common but differentiated responsibilities and respective capacities

CC = The Climate Club (proposed by the G7 under Germany's presidency)

COP = Conference of the Parties (here from the UNFCCC)

CRMA = EU Critical Raw Material Act

ETS = Emission Trading System

FTA = Free Trade Agreement

GATT = General Agreement on Tariffs and Trade

GCA = Global Climate Alliance (proposed by the G20 under India's presidency)

GSA = Global Arrangement on Sustainable Steel and Aluminium

GHG = Greenhouse Gases

IR = International Relations

IRA = US Inflation Reduction Act

NDCs = Nationally Determined Contributions

NZIA = EU Net Zero Industry Act

R&D = Research and Development

UNFCCC = United Nations Framework Convention on Climate Change

WTO = World Trade Organization

Introduction

Decades of climate action relying on international agreements have resulted in low success of climate change mitigation at the scale and paste required. The need for a game-changer within the climate regime becomes increasingly clear with each new round of United Nations Framework Convention on Climate Change (UNFCCC) negotiations and conferences (Butu et al., 2022; Nordhaus, 2015; von Luepke et al., 2022). The formation of the UNFCCC at the Rio Earth Summit in 1992 has been the foundation for global cooperation on climate change. It offers a globally legitimate platform and system to advance coordination on climate ambition and is of highest importance for global efforts to reduce greenhouse gas (GHG) emissions and global warming (UNFCCC, 2023; Morgan and Northrop, 2017). The yearly Conferences of the Parties (COPs) reach its 28th round of negotiations in November 2023 in Dubai to search for consensus on how to move forward in international climate responses.

However, a UNFCCC report from 2022 made the global community aware that, even if all Nationally Determined Contributions (NDCs) as measures to combat climate change by 193 individual countries would be implemented strictly, global GHG emissions would still rise by more than 10 per cent until 2030 from 2010 onwards (UNFCCC, 2022). The voluntary nature of NDCs and the difficulty of consensus reaching in the international institutional structure of the UN lead to challenges in achieving both, ambitious enough targets to reach the 1.5° C goal and compliance on those ambitions (Morgan and Northrop, 2017). Thus, forms of cooperative climate governance are urgently required to add to the UNFCCC apparatuses (von Luepke et al., 2022).

In 2018, William Nordhaus received the Nobel prize for his proposal of a climate club for overcoming the lack of compliance in the international climate regime (Nordhaus 2015). Under his club theory, a smaller ‘group of the willing’ should come together to as a so called climate club to form higher climate commitments. Significantly, he proposed the inclusion of trade sanctions to enforce compliance. By “putting together the climate regime with the international trading system via the creation of climate clubs”, the theory precisely matched the rising intersection of the climate-trade nexus (Leal-Arcas, 2021, p. 31).

The climate-trade nexus describes the interlinkages between these factors in pointing out both, the negative effects of the climate crisis on economies and supply chains, as well as the impact of economies of scale and international trade on rising GHG emissions and climate change

thereof (Birkbeck, 2021). Due to these incompatibility concerns, positive synergies between trade and climate are crucial; in fact, the apparent interlinkage of both systems offers a tangible area of policy in which trade can be a transformative tool to address climate change (Bollyky and Mavroidis, 2019; Velut, 2022; Leal-Acras, 2021).

The importance of integrating exemptions in trade for environmental needs has been acknowledged in international law of the General Agreement on Tariffs and Trade (GATT) of the World Trade Organisation (WTO) under Article XX (b) and (g) since 1979 (Balogh and Mizik, 2021). However, other provisions of the GATT increase the complexity between climate and trade policies such as by reducing protectionist regulations or preventing the favouring of nations in trade (Bollyky and Mavroidis, 2019). For instance, relevant initiatives such as the EU´s Carbon Border Adjustment Mechanism (CBAM) or the US Inflation Reduction Act (IRA) are topical in relation to climate measures contested under global rules of trade (Jakob & Mehling, 2023).

Playing into an already tension-laden landscape of trade between major market powers, the EU, the US and China, the rise of climate related-policy initiatives by major economies increase implications for trade and international cooperation in recent years (Behsudi, 2023). The means of achieving a shared vision on such cooperation is still absent (Birkbeck, 2021). Some authors argue, international regulatory cooperation in trade has not been sufficiently addressed by the WTO, providing a gap for action especially when adding the need for climate governance under the UNFCCC to enable regulation beyond the narrative for the tensions between the largest market powers (Bollyky and Mavroidis, 2019; Balogh and Mizik, 2021). The climate club model, thus, could provide a relevant model for bridging cooperative governance across the climate-trade nexus. The club approach mainly existed as an academic policy discussion until preceding into more applied adjustments to the model within the past two years, making it a timely and emerging field of research with open questions on the real-world fit and execution of such a club (Leal-Arcas, 2022; Stern et al., 2022; Szulecki et al., 2022).

In 2022, a high-level climate club was announced to be established by the G7 under the German presidency. The G7 framed an invite to interested states with high climate ambitions to join forces in achieving faster climate change mitigation with the help of international cooperation (Auswärtiges Amt, 2022). The impact of its steps is yet to be understood as the precise governance of the Climate Club will be coordinated throughout 2023 with the aim to be launched at COP 28. The Climate Club proposed under the German G7 presidency (in the following referred to as CC), indicates three pillars of focus in its Terms of Reference: (1)

Advancing ambitious and transparent climate change mitigation policies, (2) Transforming industries, particularly high emitting industries such as the steel and cement sector, and (3) Boosting international climate cooperation and partnerships (G7 Germany, 2022). Furthermore, the CC frames itself based on the objectives of an 'open and inclusive' climate club, proving contradictory to the contested exclusive nature of the Nordhaus climate club model including trade penalties. The meaning of this shift is a development that requires understanding within the wider array of climate policy developments and trade tensions which became part of international relations in recent years. Furthermore, Pirlot (2022) points out the lack of research aiming to understand narratives behind the emergence of climate policies, while Overland and Sadaqat Huda (2022) criticise the lack of climate club literature based on the perception of international relations (IR). This provides an open questions for both, the comprehension of the role of a climate club and the emerging Climate Club and its impact on cooperative climate governance. Therefore, the research aim for this thesis emerged to provide an analysis of the potential impact of the G7 Climate Club within the climate-trade nexus. Consequently, the following research question was chosen:

What is the potential impact of the G7 Climate Club?

Subsequently, the following sub-questions were identified to assist approaching the research aim:

Which factors influence the impact of the G7 Climate Club?

Which purpose could the G7 Climate Club fulfil under the changing international climate-trade policy landscape?

To what extent is the G7 Climate Club model able to ensure effectiveness of the Club goals alongside inclusive governance?

To respond to these questions, a narrative review and discourse analysis of literature and semi-structured interviews were conducted under a three-step analytical framework which the thesis will consist of in chapters one to three.

Methodology

Research design

The research design for this thesis has incorporated an exploratory and qualitative approach, which is appropriate for a novel research topic which little is known about (Cassell et al., 2017). This applies to the case of the G7 Climate Club; the initiative is new and still in its construction phase. Therefore, the research design proclaimed flexibility to adapt the research objective to potential developments in the policy field and integrate emerging information.

The research took on the method of a discourse analysis and narrative review applied to interview data and literature. Golden-Biddle and Locke (1997) frame the purpose of a narrative review to determine and compel a story around which the writing is structured. Thereby, the technique to approach the research was chosen under Bryman's (2012, p. 101) suggestion to understand the research topic as inadequate: "The existing literature on the phenomenon of interest has overlooked ways of looking at it that can greatly improve our understanding of it; alternative perspectives or frameworks can then be introduced." This further gives the frame of interpretative research suitable for narrative reviews which aims to enrich human discourse by generating understanding rather than by accumulating knowledge. Narrative reviews are closely related with discourse analyses in which discursive categories related to the subject of research frame the way the research object, the CC in this case, can be comprehended. This method allows for the identification of underlying themes, patterns, and narratives within the data (Bryman, 2012).

Under this theoretical basis of narrative and discourse analysis, the data gathering and analytical framework were chosen followingly.

Data gathering

Firstly, an analysis of the documents, such as research reports supporting the formation of the CC was undertaken. The 'Terms of Reference for the Climate Club' from the communication from the German G7 Presidency in December 2022 provided the main object of analysis as the

only official document for the CC available (G7 Germany, 2022). The literature narrative review followed the purpose to identify assumptions underlying cooperative governance options of the CC and to explore the theoretical framework of the climate club theory to enable an in-depth analysis of the proposed initiative.

Secondly, qualitative interviews were conducted to gain an in-depth exploration. By conducting semi-structured interviews, this study aimed to capture rich and nuanced insights from individuals who were directly involved in the process of the formation of the CC, or were able to provide an expert opinion. Qualitative interviewing was chosen due to its flexibility in being less structured than quantitative interviewing. This proved useful to the research, because the exclusivity to insights into the CC prior to its launch required a step-by-step comprehension of the full picture. Thus, the interviews followed a semi-structure, however also allowed for their purpose and questions to be refined for building upon the new gained knowledge throughout the process (Bryman, 2012). The selection of interview candidates was thus also dependent on the procedurally defined information gaps. First, individuals directly involved in the process of the formation of the CC were aimed to be contacted. From there, a snow-ball method revealed further suitable interview partner. Six expert interviews with people from governmental institutions working related to the Climate Club and independent think-tanks were conducted (Table 1).

#No	Type	Institution	Role	Date
#1	Research Institute (the Netherlands)	Clingendael Institute	Head of Unit	17.03.2023
#2	Government (Germany)	German Federal Chancellery	Senior Policy Officer	24.03.2023
#3	Research Institute (Germany)	Kiel Institut für Weltwirtschaft	Senior Researcher	29.03.2023
#4	Government (European Union)	European External Action Service	Former Climate Ambassador European External Action Service	31.03.2023
#5	Government (Germany)	German Ministry for Economy and Climate Protection	Anonymised informant	19.04.2023

#6	Government (Chile)	Chilean Embassy to Berlin	Anonymised informants	19.06.2023

Table 1: List of interviewees

Three-step analytical framework

The research design will follow a three-step analytical framework inspired by Pirlot (2021) and Luepke et al. (2022) who aimed to assess carbon border adjustment mechanisms and forms of cooperative climate governance, but will be adjusted to the objectives of this study. The steps will be informed by the qualitative data form empirical research and subsequent expert interviews.

Step 1:

The literature review will introduce the assumptions and narratives behind the purposes of increasing climate change mitigation ambition and under different functions for cooperative climate governance by applying the narrative review to the literature review process. For an understanding of the term 'narrative' or 'discourse', this research will lean on Pirlot (2021) by implying "the combination of facts and events that policymakers and legal scholars—as storytellers—put forward to explain the problems" that the Club aims to address.

Step 2:

The three Pillars of the CC will be analysed and tested for the different narratives connected to them. The Terms of Reference for the CC will form the basis of this analysis in bringing together the qualitative data from the discourses addressed in the interviews with the assumptions based on the literature narrative review. Relevant contexts will be added, particularly including recent climate policy developments to explore the current landscape of the climate-trade nexus by the help of research and media reports.

Step 3:

Finally, the meaning and implications of the in-depth analysis in step two will be synthesised. Step three will bring the analysis together in viewing the provided story from a club theory lens

and from a real-world IR lens. This will help to filter out challenges faced by the G7 Climate Club to illustrate its means of effectiveness and derive recommendations.

Limitations

The novelty of the research object and the fast changing policy landscape present in current international discourse limits an absolute picture of analysis. The thesis proclaims vagueness in order to fulfil a synthesis of larger events at play which are relevant to draw into the analysis, it is thus not possible to allow in-depth and complex views on each element raised within the scope of the research. The mixed analysis-discussion approach in step two is intended to enable a holistic and comprehensive view before implications are derived by the author in step three. Both steps are by default speculative and interpretative due to the element of subjectivity in narrative and discourse reviews.

Time restriction of interviews required questions leading into inducted directions by the researcher. The data collection approach was accumulative and built on top of respective new information. Thus, data did not provide the aim to conduct comparative analysis or coding of information but to dive deep into discourse analysis instead. Additionally, due to confidentiality of the research object, full transparency by informants particularly from the public sector could have been limited at times.

Chapter 1: Literature review

In the following, the prominent narratives and theoretical assumptions limiting environmental agreements will be described, while adding the theoretical framework and understanding of climate club theory. Von Luepke et al. (2022) outlined three cooperation structures complementary to international climate governance, which the authors respectively assign to such underlying assumptions: cross-sectoral multilateral governance; sector-specific multilateral cooperation; and bilateral partnerships (Figure 1). The following synthesis will represent the authors' debate while adding relevant narratives where appropriate to illustrate the literature framework behind contemporary developments. The underlying elements of climate club theory will serve as the lens for each structure. This research will ultimately assess the theories' applicability to a changing landscape of global politics and test the potential impact of the CC, which is represented in all three types of governance.

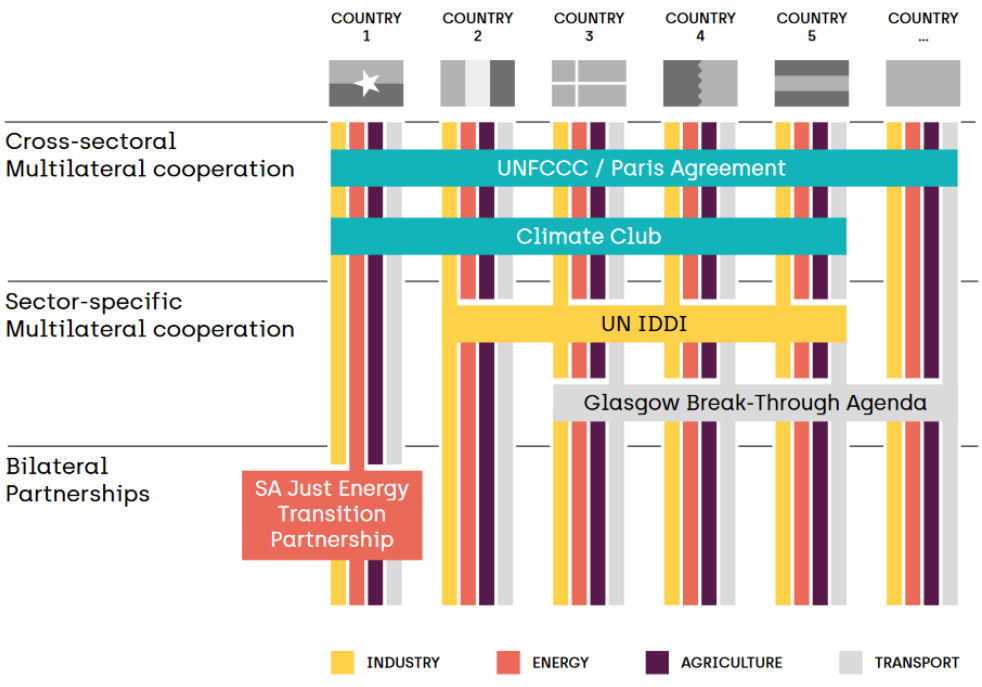

Figure 1: Illustration of different structures of international climate cooperation (Von Luepke et al. 2022).

1.1 Cross-sectoral multilateral governance and free-riding

The first of three cooperation structures mentioned by von Luepke et al. (2022) is cross-sectoral multilateral governance. This idea links to the necessity for economic incentives for collaborative action in mini-lateral settings. Although representing the climate regime under the UNFCCC, this form of governance is exemplified in the climate club model as put forward by Nordhaus (2015). The underlying assumption linked to this is the logic of free-riding (Paroussos et al., 2019; von Luepke et al., 2022).

The free-riding incentive in climate governance

Free riding can best be explained with the prisoner's dilemma prominent from game-theoretic literature. This describes how, assuming there are two partner, if both players cooperate, both would receive benefits. However, the first-movers advantage is enabling an even higher benefit to the partner who is defecting an agreed deal first, leaving the other player with less (Tuomela, 1988). Concerning international environmental agreements, this is commonly linked to the 'tragedy of the commons' (Hardin, 1968), which views the environment and thus climate protection as a common good with public or open access. To exemplify this with free riding, if country A and B reduce emissions, since emissions are cross-boundary, country C could still gain the benefits of less emissions if it continues with business-as-usual behaviour. Thus, the advantage to emit GHGs emissions and collect the benefit of economic development is higher than the incentive to reduce emissions, allowing to free-ride on the mitigation ambition of others (Hovi et al., 2016). Although Hale (2020, p. 73) argues "the chief barrier to cooperation is not the threat of free riding but the lack of incentive to act in the first place", the outcome of the assumption is the same in centring the fact that the cost of reducing emissions is higher than the direct economic benefit of it. To conclude, under this assumption the issue in achieving climate goals is the absence of a benefit because of the lack of a level playing field between abatement costs and the business-as-usual. A change in incentives is thus needed to break with carbon lock-in of the international system (Seto et al., 2016).

To overcome the discrepancy for free riding incentives makes the basis of global climate cooperation, although has not been successfully addressed in the current climate regime (Keohane and Victor, 2016; Butu et al., 2022). The need for a punishment or reward has been a common response to provide a benefit and incentivise collaboration in economic game theory (Barrett, 2003). This has been integrated into club theory, which stems from this branch of

economics (Buchanan, 1965). The main feature of the theory is the creation of a club good which is exclusively accessible for members of a coalition. Benefits via a club good or the avoidance of penalties should overcome the benefit or incentive to free-ride, which is particularly high for emission reduction effects which provide a public cross-border good. The climate club model aims to create advantages in reducing emissions and complying with targets (Hovi et al., 2016).

The climate club model

There are different club types to distinguish. First, the Buchanan club is the main economic theory of clubs on which Nordhaus bases his climate club model upon. It provides strong incentives via benefits from club membership with excludable club goods. Under this assumption, the benefit of the club is high when the club remains small. So growing club membership is not advancing the club (Buchanan 1965; Sandler 2015; Obergassel et al. 2019). In *climate* club theory, however, this equation may not add up. As the ultimate goal for a climate club is the global reduction of GHG emissions, an exclusive club could be detrimental to international means of climate policy or diplomacy and thus faces the challenge of being non-rivalrous (Overland and Sadaqat Huda, 2022; Stern et al., 2022).

Furthermore, the Buchanan club assumes a mainly homogenous group of members for which coercive penalties for non-members are easy to pursue. For climate governance, the reality provides the need to umbrella a diverse set of heterogonous actors within the club. The implication is that penalties can easily backfire within the landscape of heterogeneous bi-and multilateral relations. Thus a cooperative model is required to bridge a multitude of interests, constraints and domestic policy landscapes (Falkner et al., 2022; Stern et al., 2022).

Considering the limitations of the Buchanan club model for climate cooperation, it is crucial to introduce other types of clubs. A second club type has been coined as voluntary clubs. They are characterised by club members who join the coalition despite the lack of maximising self-interest directly. Defined by Prakash and Potoski (2007), this is much more relevant in applying to public club goods and positive outputs, such as environmental certifications. Thus, the membership fee is simply compliant execution of the agreed upon targets. Club goods are still necessary to provide a form of incentive, however may not be self-increasing over time. (Obergassel et al., 2019).

As a third club type, ’pseudo’ clubs are recognisable by limited exclusion and open-access club goods. Consequently, enforcement mechanisms to comply with the club goals are low, leading

to free riding by non-members as well as club members themselves. Yet, the low requirements and lack of punishment would usually lead to higher participation rates from a heterogeneous group of players (Obergassel et al., 2019).

The Nordhaus climate club and CBAM's

To overcome free-riding, the Nordhaus (2015) club model includes a few characteristics to overcome the free-riding equilibrium summarised by Leal-Arcas (2021) as: "1. Most big GHG emitters need to be members of the club, 2. Membership benefits are a must and they should outweigh the obligations, 3. The club would need to be related to sanctions for noncompliance." The third provision has been the most meaningful yet most contested in international relations and trade law. Although engraining change within the scope of trade penalties has catalysing effects to reach impact within global economies; such a measure is closer to the Buchanan club and bears the risk of worsening diplomatic relations or leading to retaliation or escalation of counteracting sanctions and is contested under WTO law (Leal-Arcas, 2021; Overland & Sadaqat Huda, 2022).

Notably, Nordhaus (2015) links the climate club model to a carbon price. This makes the model in theory similar to the model of carbon border adjustment mechanisms (CBAMs), as Overland & Sadaqat Huda (2022) have expanded on. A directive establishing a CBAM will be implemented by the EU in October 2023. The CBAM will externalise the EU's emission trading system (ETS) with putting a price on the embedded carbon content of EU imports for the sectors cement, iron, steel, aluminium, fertilisers, electricity and hydrogen (European Commission, 2021). The CBAM is based on the assumption of carbon leakage. Carbon leakage is defined as the relocation of emission intensive industries or companies to countries with less stringent climate policies and commonly lower opportunity costs. In other words, the EU's own carbon tax system is disadvantageous for international competitiveness and causes polluting companies to shift production to third countries (OECD, 2015). Thus, carbon leakage is closely concerned with the issue of free-riding, as emissions are not consensually reduced across borders.

Additionally, the CBAM keeps the option open for exporters to either pay the emission fee at the EU's borders, or to pay a domestic carbon price comparable to the EU's own carbon tax in the country of production. This has the effect of promoting carbon taxes in third countries. Essentially, this establishes an EU CBAM area, resembling a self-expanding climate club with a domino effect, similar to the rationale of the climate club theory (Overland & Sadaqat Huda, 2022). Some authorities such as China judge the CBAM as a WTO violation for executing contested fees on the applying products. Additionally, the reality provides that a common or

equivalent carbon price is far from being established in the majority of economies, particularly the US. Emerging economies are expected to be less impacted by the measure, however, they may be more sensitive to changes in international trade. Overland and Sadaqat Huda (2022, p. 9) summarise these observations: “Both a climate club and a CBAM would have important implications for IR because of their potential to exacerbate pre-existing tensions between developed and newly industrialised countries, as well as to cause political discord within countries.”. Thus, criticisms and risks for diplomacy are found comparable in clubs and CBAMs.

Despite the close link between the theories, the EU and, until recently, also scholars have kept the two models mostly separate in theoretical branches. Yet, Overland & Sadaqat Huda (2022) point out that for both concepts 70 per cent of publications stem from literature in economics mostly concerned with game-theoretic models. Despite the authors’ suggestion that real-world implications are decisive for the success, failure or future research of the models, only about 7 per cent of literature on them was proven to be covered by the school of IR.

1.2 Sectoral alliances and catalytic cooperation

The second type of cooperation for international climate governance is distinguishing itself from the former in its sectoral specification, which von Luepke et al. (2022) summarise under the name of sectoral alliances. The underlying assumption assigned to this by the authors is the idea of catalytic cooperation.

The need for climate clubs in the industry sector's co-opetition

Opposed to club theory which is mainly based on incentives in international competition, the initial and primary driver behind catalytic cooperation is understood to be emerging from domestic factors (Hale 2020). This challenges, or at least adds to the free-riding assumption baseline with questioning the theory to be 'prisoner of the wrong dilemma', highlighting the importance of domestic distributive conflict as force in shaping ambitious climate policies (Aklin & Mildenberger, 2020). Empirical evidence such as defection of the US from the Kyoto Protocol and the Paris Agreement exemplifies that domestic power constellations were decisive on those decisions, nevertheless also did not negatively impact the EU´s domestic ambition. Disincentives and breaking points to success should thus be reconsidered when seeking solutions such as climate clubs, as so far "global collective action models are blind to these important forces." (Aklin & Mildenberger, 2020, p. 23). The assumption logically also reflects domestic costs of decarbonisation, which are engrained in the abatement costs in sectors respectively (von Luepke et al., 2022). To overcome these costs, sectoral cooperation is required to enable a level playing field across actors.

The economic competitiveness of green technology in the industry sectors to date is challenged by the incumbent regime of the business-as-usual scenario and continuous availability of cheap fossil energy. Thus, energy intensive industries have higher operating costs and require higher investment than the business-as-usual production chains (Muslemani et al., 2021, Obergassel et al., 2019). The trade-exposure of and long investment cycles for these industries require international coordination. Therefore, agreements on standards such as for 'green steel', or the investment of a first-moving country are crucial to encourage or trigger a production shift in domestic and international markets which are still occupied by incumbent high-emitting regime actors (Muslemani et al., 2021). A form of competition could emerge with first-movers enacting policies, catalysing competition alongside cooperation opportunities; ultimately creating a field for co-opetition (Esty & Geradin, 2000).

So far, the UNFCCC and the Paris Agreement's NDCs have fallen short in translating net zero emission targets nor strategies to sectors specifically (Obergassel et al. 2019; Stern et al., 2022). Thus, a growing body of literature is calling for a sectoral approach to climate clubs, repeatedly emphasising the need to cooperate in high-emitting industries such as steel (Hermwille et al., 2022; Martini & Görlach, 2022; Michaelowa et al., 2022; Obergassel et al., 2019). Nordhaus (2021) added to his first analysis of the climate club model the need for technological advancements to reduce mitigation costs besides imposing fees with trade sanctions. Nevertheless, he presumes the necessity of trade sanctions to increase the effectiveness of technological decarbonisation, which could become victim to free-riding otherwise. Crucially, this shows the need for different club measures to emerge together.

Decarbonisation of the steel industry and implications

The decarbonisation of the industry sector is one of the most crucial leverage points in achieving climate neutrality (Figure 2). Particularly steel, aluminium and cement count as the highest emitting industries, as well as the hardest to abate, with the iron and steel industry accounting for 7 per cent of global GHG emissions alone (IEA, 2020). At the same time, the role of the steel industry in international trade and politics is bigger than many understand (MaAnshan 2016). This makes this sector highly politicised and increases the challenge to implement internationally viable climate policies which would target the industrial sector across jurisdictions and across corporations(Adikara & Sri Herianingrum, 2018). The globalised steel market strives for competitiveness and has undergone phases of state intervention in the rise of China's steel industry and impacted the global markets (Wang et al., 2016).

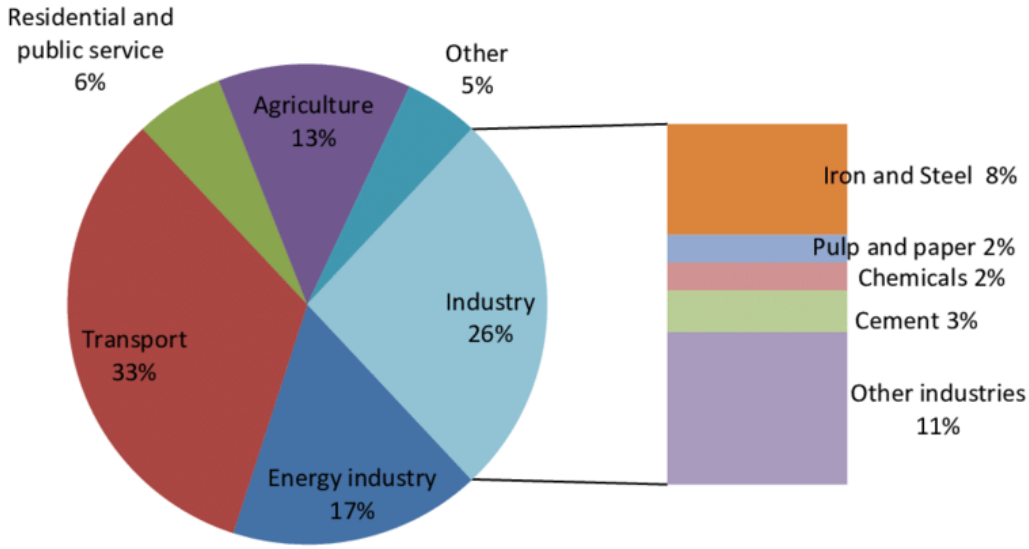

Figure 2: World CO2 emissions by sector. (Johansson, 2014; data source IEA, 2012; IEA, 2010).

Notably, industries, and the energy and steel sector in particular, are seen as the backbone of economic growth in the creation of industrialised economies. It is no surprise that the steel industry is a strategic tool for the 'development' of economies globally (Adelman, 2000; Cheng 1990). It is of reason for industrialised countries to abate their high emissions in industry and to innovate sectors such as steel, cement, or aluminium. For emerging and developing economies, however, the development of the steel sector is a crucial indicator and back engine of wealth generation. Even more crucial is to reconcile this industry with climate targets. Following, the economic difficulty lies in the capacity to decarbonise industries while relying on their uptake for economic development (Jakob & Steckel, 2014). This makes technological capacity building in these sectors vital for North-South, South-North and South-South climate cooperation (Tan et al., 2021).

1.3 Bilateral partnerships and climate justice

The third type of international cooperation for climate governance can be summarised as bilateral climate partnerships (Zou & Ockenden, 2016). Von Luepke et al. (2022, p. 4) describe it as "a unilateral flow of support and related resources from industrialized to developing countries, which needs reform to enable more mutual partnerships and deep collaboration among participating countries". The theoretical assumptions related to this form of governance are net-zero transitions on the basis of an "equal footing between industrialized countries, developing countries and emerging economies". The narratives behind the dichotomy between the global North and South is deeply engrained in the history of climate negotiations and the UNFCCC processes and is critical to the analysis of governance approaches (Sengupta, 2023).

The emerging agenda of climate justice in the climate regime

The relation between industrialisation and development have been briefly outlined above. The need for climate change mitigation and emission reduction has unavoidably negative implications for industrialisation. Particularly developing economies have perceived the push for climate action from already developed nations with scepticism, considering their need for industrialisation to uplift from poverty and unbalanced trade partnerships (Sengupta, 2023). Climate justice requires to be centred at the heart of the narrative linked to climate partnerships therefore. The term encompasses the injustice of most vulnerable and often poorest states bearing the highest burden of climate disaster while having contributed the least to it (Newell et al., 2021). Countries in the so-called global North have been able to benefit from polluting activities with vast economic development and thus carry a historic responsibility for negative impacts by climate change, while the need to drastically reduce emissions denies opportunities for such means of development (Jakob & Steckel, 2014).

The UNFCCC acknowledged this in the early years of its existence under the framing of 'common but differentiated responsibilities and respective capabilities' (CBDRRC) under Article 3(1) of the Convention (UNFCCC, 2022). Furthermore, the architecture of the Convention under operationalisation of the Kyoto Protocol in 1997 defines specific Annexes. Developed and emerging economies were grouped into Annex 1, with the implication for legal obligations of emission reductions and the requirement for developed nations to offer financial and technological support to non-Annex 1 countries, consisting of developing economies (Hurrell & Sengupta, 2012). India held a particular role in these debates since the strong

presence of former prime minister Indira Gandhi meaningfully framing global equity and justice concerns with the need for transfer of finance, technology and knowledge (Gupta & Asher, 1998). Yet, despite historical agreement on the Framework, the US revoked its agreement of any treaty which obliged stricter mitigation commitments for developing countries, represented in the words of the US' climate negotiator at the time: 'If equity's in, we're out' (Pickering et al., 2012, p.423). The rooting of this position lies within the rapid growth predicted in economies like China and India (Sengupta, 2023). Crucially, the Paris Agreement in 2015 "has effectively sidelined equity and environmental justice considerations as a guiding principle for multilateral cooperation" (Clemencon, 2016, p. 4), by establishing a system of 'nationally determined contributions' (NDCs) in which all countries are obliged to submit their emissions mitigation ambitions under UNFCCC Article 4 as opposed to principles of CBDRRC and the Annex structure (UNFCCC, 2022).

The emergence of rising powers in the multilateral world order brings other effects besides their uncertain role in climate governance beyond Annex 1 and non-Annex 1 definitions. Global governance and its legitimacy has been built on international institutions, agreements and dynamics from the post-world war two order, over 70 years ago. It thus is an interesting debate in the studies of international relations between the need to maintain legitimacy for global peace and safety and the rise in questioning of this international order by both 'new' and 'old' actors (Brandi, 2019; Bull, 1984; Hedley, 2012; Leal-Arcas, 2021; Sengupta, 2023). This is a needed consideration in the analysis of global governance structures in the making as part of an increasingly multi-polar world in which countries (re)position themselves (Brandi, 2019). The question of climate justice is increasingly addressing these questions while challenging lack of inclusiveness of LDCs in climate minilateralism (Leal-Acras, 2021). Thus, the importance of procedural justice in levelling the playing field in terms of power inequalities at the international level should be addressed by climate governance in particular (Newell et al., 2021; Sapiains et al., 2021). The trade-climate nexus and subsequent economic tools for decarbonisation require to pursue procedural "climate justice through non climate means" (Newell et al., 2021, p. 13), such as trade and investment multilateralism.

Procedural justice: inclusion and exclusion in climate club membership

The provision of CBDRRC as well as questions on procedural justice translates into considerations for climate club membership. Climate club theory indicates the need of 'pivotal' players as countries with high GHG emission abatement potential and a considerable share of global GDP as most important members for high effectiveness of a climate club (Hovi et al.,

2016). The membership of these countries has high potential to attract more members to the club and therewith increase global emission reduction over time. While it has been outlined above that wide participation is of particular service for a club aiming for climate action, the incentive structure needed to achieve serious action is limited by the paradox of cooperation. The paradox as established by Barrett (1994) assumes that a small coalition of willing actors increases club stability. Multiple tests of this theory reaffirm Barrett's suggestion. Although arguments are valid that the cost of non-compliance and non-membership of the club increases with the size of the club (Nordhaus 2021), stability decreases nevertheless. All five model tests by Lessmann et al. (2014) indicate that stable coalitions are likely to be small and less ambitious, as the opposite increases internal instability. (Leal-Arcas, 2021) adds that a 'magic number' of pivotal players could be sufficient in achieving highest possible returns. This number represents the three major emitters; the US, the EU and China accounting for about 49 per cent of global GHG emissions. However, the fact that cooperation between some countries is unrealistic in international relations, notably between the US and China, multiple clubs could become a viable extension to the conventional climate club approach. Multiple clubs can promote more emission abatement, more cooperation among countries overall, and increasing coalition stability (Hagen & Eisenack, 2019; Lessmann et al., 2014). The increase of emissions with the détente of one member could be offset by the incentives of another coalition. The results of Lessmann et al. (2014) indicate two climate clubs as a viable scenario to achieve lower emissions than with only one coalition.

Not enough studies exist on asymmetric and heterogenous membership structures in clubs, yet, it can be pointed out that conflict of interest could increase putting reliable compliance at risk. Considering legitimacy needs for cooperative governance as well as the different types of climate club design, the tension between inclusion and exclusion for club success crystalises. Notably, near-global treaty participation in the climate regime lacked success (Leal-Acras, 2021). The most vulnerable countries to climate change naturally obtain of incentives to join a club for climate action. Yet, the substance of the club matters if this induces restrictions on industrialisation for developing or emerging economies. Not surprisingly, side-payments as part of some climate club models have been considered for use of incentives and means for mitigation or adaptation in members countries. However, Lessmann et al. (2014) suggests that transfers can be neutral or even detrimental to stable coalitions, as large amounts of wealth flows could get distributed under bargaining influence more than on merits of needs.

Chapter 2: Analysis

This chapter will analyse the three pillars of the climate club introduced by the G7 (in the following referred to as CC). The context of narratives behind the pillars will be evaluated in order to understand which factors limit or advance the potential impact of the CC.

2.1 Substance and development of the G7 Climate Club

The CC was introduced by the German presidency of the G7 in 2022. The idea already emerged in Chancellor Scholz' time as Minister of Finance. When he assumed office, *"There was a strong willingness to bring a positive agenda to the G7 Summit in Elmau and align the G7 behind a Common Agenda, which is the Climate Club"* (Interviewee #2). The Climate Club is a focal point of the German Chancellor's international climate change strategy and became important during the G7 presidency to carry a positive message amidst the Russian aggression on Ukraine (Interviewee #2).

Although the concept and scope of the established club is not re-assembling the climate club as theorised by Nordhaus, it builds upon the climate club theory which has subsequently emerged from the literature until recently. The Nordhaus model became strongly relativised; the term climate club became more independent from the economist theory (Interviewee #3). Yet, elements of club theory are integral parts of the functioning and potential effectiveness of the CC.

A first statement of the Climate Club was published after the Elmau Summit in June 2022. Just before the end of the German G7 presidency in December, the Terms of References outlining the scope and substance of the to be built Climate Club were announced. The communication by Chancellor Olaf Scholz has emphasised the club as 'open and inclusive' for it to be an invitation to all G20 member states beyond the G7 and to all other countries who are willing to contribute to ambitious climate policies. The Terms of References draw out a "high-ambition intergovernmental forum for discussion and serve as an enabling framework for increased cooperation, improved coordination and potential collective action" (G7 Germany, 2022). The club commitment in exchange for

membership in the CC is the alignment with and implementation of the Paris Agreement and its Nationally Determined Contributions towards limiting climate change to 1.5° temperature rise. Furthermore, members are asked to actively contribute to the club objectives and promote them under the scope of accelerating industry sector decarbonisation transformation pathways (G7 Germany, 2022).

The aspects for climate change mitigation ambition and the ambition to cooperate on decarbonisation with the aim to avoid carbon leakage align with club commitments dilemma as usually drawn out by club models (Hovi et al., 2016). The scope of the club specifying on the decarbonisation of industry sectors, starting with the most difficult sectors for emission cuts, namely steel and cement seems to follow the advice of previous communications and policy briefs such as from the Ecologic Institute (Martini & Görlach, 2022) or the Think 7 policy brief (Michaelowa et al., 2022; Interviewee #3). In recent years, scholars have repeatedly argued the need for a more sectoral approach to climate club formation (Obergassel et al. 2019 and Hermwille et al. 2022), showing scientific soundness of the new governance path of the CC. However, interviewee #4 also noted the difficulties in reaching consensus among the G7 on which areas of climate work to include in the club, creating a still quite *'fluffy'* Terms of Reference for the club thus far: *"It wants to be many things to many people."* (Interviewee #4). Notably, the three pillars reproduce the suggestions of the independent report to the G7, commissioned by the German Federal Ministry of Finance to the London School of Economics (Stern et al., 2022), although the order of the suggested Pillars altered and maintained vagueness for the design of the club once members join. Eventually, three pillars draw out the substance of the CC (Table 2). These Pillars will be further explained and analysed in the following respective sections.

	Climate Club Objectives
Pillar 1	***Advancing ambitious and transparent climate change mitigation policies***
	Knowledge exchange of assessment and best practices of mitigation policies and risks of carbon leakage.
	Strengthening emission measurement and reporting.
Pillar 2	***Transforming industries***
	Define and align near zero GHG emissions materials standards and sectoral strategies.
	Create a lead market and default business case for green industrial production standards, including guiding investment and goals of market share for near zero materials.
	Create a high-political forum by supporting and building upon existing initiatives.
Pillar 3	***Boosting international climate cooperation and partnerships***
	Enhance multi- and bilateral cooperation for Pillar 1 and 2.
	Enabling the environment for industry decarbonisation in emerging economies and developing countries on a voluntary basis by matchmaking of funding and capacity building instruments.

Table 2: Summary of the Pillars of the G7 Climate Club Terms of Reference (own illustration, source: G7 Germany, 2022).

To conceptualise the process of the CC, interviewee #5 explained the different phases of the club. The kick-off phase started with the establishment of the club by the G7. At this moment, the club is in the construction phase which aims to transfer the idea into a legitimate structure under an OECD secretariat and a taskforce consisting of current CC members. Here, a working programme and the governance structure are being discussed (Interviewee #6). Because the club was never planned as sole G7 initiative, it is continuing to widen membership until its planned launch at COP 28. Afterwards, the CC shall move into the implementation phase. The precise meaning of that will be established under coordination with the members. The aim is to establish a high-level forum to take place regularly (Interviewee #5).

The members of the CC so far, as of June 2023, are the G7 countries Germany, France, Italy, the United Kingdom, the United States, Canada, and Japan, as well as the European Commission as founding members. Since the publishing of the Terms and Reference in December 2022, Germany took the co-chairing position and leadership of the Taskforce Climate Club in the Federal Ministry of Economic and Climate. Chile has been announced as the second co-chair of the CC. Since then twenty-five countries have agreed to join the coalition (Figure 3): Argentina, Australia, Austria, Canada, Chile, Colombia, Costa Rica, Denmark, EU, France, Germany, Indonesia, Italy, Japan, Kenya, Korea, Luxembourg, Netherlands, Norway, Singapore, Switzerland, Ukraine, the United Kingdom, the United States of America, Uruguay (Interviewee #5, status 11.07.2023). According to interview information, about thirty-three countries have been in the conversation for joining the club so far (Interviewee #2).

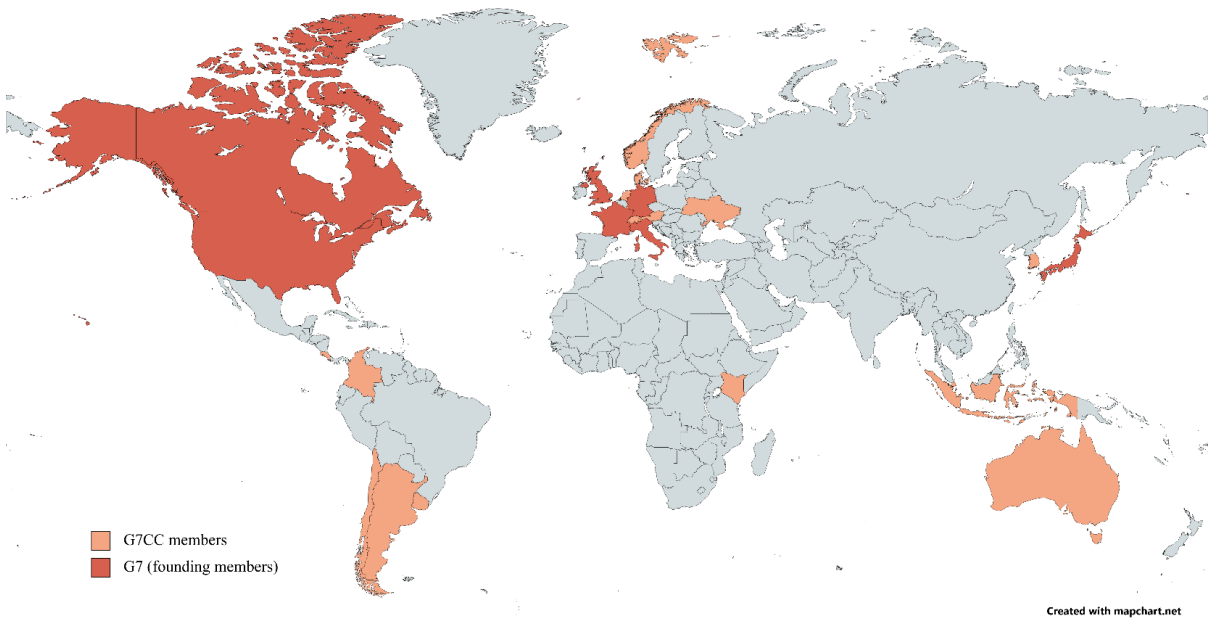

Figure 3: Map of members of the Climate Club (status 11.07.2023)
(own illustration, based on requested information from interviewee #5, created with mapchart.net)

2.2 Pillar One: Addressing carbon leakage

Pillar one brief explanation

The objectives under Pillar one are advancing ambitious and transparent climate change mitigation. Under this Pillar it is possible to find few indicators of what would be a club good under classic climate club theory. That is, the club good on R&D ambition in exchanging best practice and foresee analysis of mitigation policy impacts. That is also, providing a platform for dialogue to act on the measurement and reporting of sectoral emissions and on avoiding carbon leakage (G7 Germany, 2022).

The CBAM challenge

Interviewee #5 from the German Ministry for Climate Protection indicated that the first attempt of designing the Climate Club was more connected to the CBAM: *"In the original conception of the Climate Club, as it was developed in advance by the German side and as it was introduced in the G7, the Climate Club was very strongly linked to CBAM."*. Interviewee #4 further indicated this in Pillar one, *"when you read the text, the text is interesting, as much for what it doesn't say, as well as much as what it says"*. The mention of "*price-based* and non-price-based climate change mitigation instruments" and the link to a "*strategic* dialogue on industrial *carbon leakage* mitigation" lead to the remaining relation to the CBAM, which itself is not mentioned. Notably, the formation of the CC can hardly be divided from the connections of the concepts as was explored by Overland and Huda Sadaqat (2022). The close ties between climate clubs and CBAMS has been carried into the scientific advisory board of the German Federal Ministry of Economics for a consultation on the EU's proposal on the CBAM, and further into Olaf Scholz' Ministry of Finance in 2021 (Interviewee #3). The delicate link between the subsequently emerging Climate Club under the G7 and the CBAM would continue to be present, for better or worse.

To elucidate the complication to include the CBAM under the CC narrative and impact, it is necessary to recap that Nordhaus (2015) has early on predicted that a singular club linked to carbon pricing is mainly of advantage for the EU. This is due to their front-riding position of established carbon pricing mechanisms. On the contrary, *"the US base*

their policies on subsidies and is not able to do carbon pricing because of the Supreme Court's decision." (Interviewee #1). Internal policy strongly influences the ability or willingness of a state to implement carbon pricing, as for instance in the US, strong political backlash could be expected. This links to Aklin's and Mildenberger's (2020) paper investigating the domestic conditions allowing for effective climate coalitions. As a result, *"the original idea, that we would have a common CO2 price is already dead with the US. Because if we don't have the US in, we can forget it."* (Interview #3). The exemption of CBAM fees for jurisdictions with their own carbon tax system is particularly a thorn in the eye for the US who then appear to face disadvantages under the 'most favoured nation principle' in the EU's trade (Obergassel et al., 2019, Szulecki et al., 2022). Or to frame it differently: *"CBAM as climate club would be… let's say almost everything, except the US."* (Interviewee #1).

The impact of the CBAM on the Climate Club

The omnipresence of the EU's CBAM proposal and its WTO controversiality provided challenges in negotiating the EU's policy link to a Climate Club to be carried by all G7 members, leading to failed attempts of Climate Club discussions at first (Interviewee #2, #5). This is strongly symbolised by interviewee #5: *"I would never stand up now in the G7 or in any other format and proactively draw the link to CBAM. That would be an immediate failure, because CBAM is simply a toxic issue for our trading partners."*. This creates a critical contestation between the two viewpoints of the CBAM's role and impact on the CC.

However, the substance to discuss carbon leakage remains and makes the connection from the antecedent dialogue visible: The EU's trilogue agreement on the CBAM encourages "setting up a climate club to promote global implementation of ambitious climate action and to help countries advance towards a global carbon-pricing framework." (EPRS, 2023). The EU's openness to the CC could link to the need to overcome diplomatic trade-offs connected to the CBAM. Besides WTO concerns, major geopolitical shifts, including the war on Ukraine contributed to resentment towards the use of trade penalties (Interviewee #4). Thus, the CC's objectives seems to aim *"to get there through cooperation, not through penalties."* (Interviewee #3) and to set *"a more positive agenda"* by being based on action in industry sectors (Interviewee #5). This, again, links

well with the narrative of Olaf Scholz' presidency in the G7 which required a positive message to be forwarded into the world (Interviewee #2). As the geopolitical grounds were shaking in Europe, the clear position to be a leader with open arms for cooperation by the means of a climate club may proof tactically valuable and the European Commission is an official founding member of the CC alongside the G7.

Indeed, even if the direct link is denounced, it remains *"a delicate and political question of what sort of benefits can Climate Club members get with regard to carbon border adjustment measures?"* (Interviewee #4). Providing that the US is particularly affected and reacted by the EU's CBAM, the Climate Club could be understood as means to keep the US in conversation; in essence, the CC can provide particular benefits to the US when the CBAM and its carbon pricing element, as well as other trade measures appear seclusive (Interviewee #3). According to interviewee #5 directly involved in the CC process, it is not excluded that the club could be positioned as *"a forum, in which disputes can be discussed, which can also be regarding trade law."* In this context, some potential club members may still hope for advantages in relation to the CBAM, although it is clear it is not content of the CC (Interviewee #5). As CBAM is an impactful aspect in climate negotiations, it may drive some interest to the CC. The club could then be of particular interest to counteract downfalls of CBAM criticisms themselves. This position is recognised: "A climate club can play an important role in the smooth implementation of climate policy instruments having an impact on international trade, such as the EU's CBAM, the United States' Inflation Reduction Act (IRA) and the Green Deal industrial plan" (EPRS, 2023). Henceforth, the CBAM could have some indirect positive influence on possible membership engagement in the CC and offers opportunities for the CC to align with the EU's Green Deal external diplomacy, yet, the CBAM will not be a direct topic of the CC.

The Climate Club as part of the multilateral puzzle

Finally, from a theoretical point of view, the two concepts are achieving a similar outcome. As different to Nordhaus and CBAM reasoning, regulatory standards illustrate a strong club good in the CC. If the goal of the CBAM is to achieve lower emissions through trade penalties on the GHG content of products, a successful CC would make the CBAM redundant with achieving common near zero GHG emissions standards on

materials in the applying sectors from the outset (Interviewee #3, #4, #5). Economically, standards for the same category of products as the CBAM would establish the same mitigation costs for trading partner, yet, without the additional tariff cost of a carbon price (von Luepke et al., 2022). *"The CBAM puts a price tag on emissions, whereas the Climate Club is a fora where you can prevent that costs will be put on certain things."* (Interviewee #2). One expert interviewee explicitly illustrated how *"the Climate Club could spare a CBAM, because then everyone would basically reach a level-playing field and there would be basically no competition distortion anymore and you would only need the CBAM as threat scenario for those, who stayed outside the club"* (Interviewee #3). Of course, this is theoretical and looks much different in the real-world situation that could unfold. The CBAM will be relevant as much as the CC (Interviewee #4, #5). The CC has the leverage to attract countries without carbon price mechanisms to commit to decarbonisation for levelling the playing field for sectoral transformation (Luepke et al. 2022). Thus, both measures are not necessarily exclusive of each other, but can work together in achieving climate commitment by the diverse landscape of actors in the multilateral system. Thus, the two measures are unavoidably coming together in their impact, forming an indirect multi-level club which one can be part of either through green standardisation or through the introduction of carbon pricing as will be elaborated in Chapter 3. Both would apply to club theory in incentivising climate action. Both would incentivise investments into decarbonisation, changing the equilibrium of abatement costs and loosen carbon lock-in subsequently. In this respect, both measures represent the polycentric nature of international climate cooperation in a new era of multilateral governance requiring a flexible plurilateral approach (Kumar et al., 2022, EPRS, 2023). Thus, the CC and CBAM can be viewed as pieces in a larger puzzle, as both club co-chairs Chile and Germany understand it (Interviewee #2,#5,#6), although the CC also aspires to have a facilitating role between different multilateral approaches, Interviewee #2 describes an umbrella function.

2.3 Pillar Two: Strategic industry decarbonisation

Pillar two brief explanation

The second Pillar of the Terms of References points to the ambition of transforming industries. Linking this to the classic Nordhaus club model, *"trade politics was exchanged with industry politics."* (Interviewee #5). This also explains the new incentive under the CC. The club is not leaning towards negative incentives of trade penalties as the Nordhaus club and also the CBAM would do; instead, positive incentives are taken in an ambition to decarbonise industry sectors. Thus, the CC aims to align "methodologies, standards, sectoral strategies and milestones and expanding markets for green industrial products", including the option to work towards methodologies for accounting hydrogen GHG emissions relevant to these sectors (G7 Germany, 2022). The Terms of Reference state the goal for the 'green' standards to become the lead market from 2030 onwards and become the "default business case" for decarbonised industrial production over time. The club members are ought to promote these lead markets and "endeavour to deploy relevant policy measures and instruments, including considering comparable goals for a certain share of low and near zero GHG emission materials in a given year" (G7 Germany, 2022). This indicates not only strong ambition of the club, but presents a substance of action. According to the climate club literature, ambitious targets, paired with transparent reporting, as apparent under Pillar one, are able to set strong signals to other countries (Obergassel et al., 2019). If members are to commit to transforming their industries into green industries, emissions abatement would be increasingly risk-free, as Pillar two would guide and trigger further investment into these industries and R&D respectively (Interviewee #5).

The playing-field of trade tensions on its impact on the CC

During the past years, tensions over trade increased. Interestingly, climate and technology become subject to this. The global pandemic and Russia's war on Ukraine have changed geopolitical narratives and triggered major trading powers to rethink their economic resilience towards pursuing strategic autonomy. This is intertwined with the complexity of global supply chains which impact GHG emissions (Tagliapietra & Veugelers, 2023). Subsequently, the climate-trade nexus narrative is shifting in emphasising the concern over loss of competition and increasing protectionism in free world trade. In fact, rising concerns over competitiveness are part of issues in current trade diplomacy. As introduced with the example of emerging

powers like China in the context of the steel industry market power in the Chapter 1, the WTO dispute settlement had to deal with increasing fractions of steel trade complaints. It is relevant to point out, that this escalated to deteriorating the relationship between the EU and US when the Trump administration triggered a trade contest of increasing tariffs on steel and aluminium imports, paired with a decreasing willingness to resolve disputes on a political WTO level (Behsudi, 2023). The CBAM has triggered the US for reasons explained in Chapter 2.2; while further on, the launch of the US Inflation Reduction Act (IRA) has been of concern to the EU's competitiveness with US-based production in sectors which receive subsidies under the IRA (Tagliapietra & Veugelers, 2023). Besides these developments, it is to note that the US and EU have established the EU-US Global Arrangement on Sustainable Steel and Aluminium (GSA) in 2021 (Behsudi, 2023). The cooperative project between the partners aims to avoid tariffs on steel and aluminium products and has removed extra quotas imposed by the Trump administration. The GSA puts an emphasises on discussing standards and regulations of the steel and aluminium industries. This indicates similar bilateral objectives to Pillar two of the CC on the one hand, and reflects the necessity for action and the potential political leverage in opening a multilateral dialogues in these sectors on the other hand.

To illustrate the international interest in steel sector initiatives and thus in the CC, it is elementary that there is no current political alignment on the definition of green steel, making it necessary to accumulate political capital (Stern et al., 2022). Demand for a club can be estimated high, consequently. Theoretically, once standards are set, they could be implemented. Once green steel would be become the default business case and a level-playing field is provided, long processes of technical adjustment could be avoided (Interviewee #5). Some coalition initiatives such as the Breakthrough Agenda, which was formed at COP 26, exist to trigger such sectoral climate actions. However, the coalition struggled to maintain political momentum and welcomes the high-level political forum which the CC could offer (Interviewee #2). Hence, the stakes are high to set standards within a group of actors and also the WTO has acknowledged the gap and the need to work on regulatory standards (Interviewee #5), as competitiveness concerns and trade frictions could be directly addressed by joint decarbonisation targets and standards (Obergassel et al., 2019). The incentive to join the CC focussing on the politicised sector is illustrated under a similar narrative by both the EU's and Germany's perspectives in the interviews:

*"**Who** will decide the steel standards, **who** will be part of the wave, **who** will be part of the partnership?" (Interviewee #4.)*

*"**Who** defines the global standards for green steel? **Who** does that? **Where** does it take place?" (Interviewee #5)*

The political momentum for co-opetition (Esty & Geradin, 2000) is symbolised in the search for these standards. There are different directions these standards could emerge from, leading to a competitive advantage or disadvantage, making the CC particularly valuable for steel-producing countries:

*"It's important to be among the **first movers** in the Climate Club, in the G7 since rules on what is green steel, there is very much the chance that **the rest of the world** would have to follow." (Interviewee #4).*

*"**Everybody** wants to be part of it. **Everybody** wants to prevent that someone does it unilaterally or that a small club does it. **Everyone** wants to be involved as much as possible." (Interviewee #5).*

There are two dimensions to this question, one is economic and will be analysed in the following, another one is political and will be evaluated subsequently.

Brief analysis of the steel market implications for the CC

The question arises of who would particularly benefit from industrial decarbonisation. The emergence of lead markets requires vast club membership and relies and catalytic cooperation henceforth (as outlined in section 4.2.2). The assumption that domestic factors such as costs of decarbonising economic sectors are crucial for driving cooperation can be tested with reviewing countries' potential motivation in decarbonising steel sectors. Thus, a brief review of steel markets in some countries could give indications on the implications for the CC rationale.

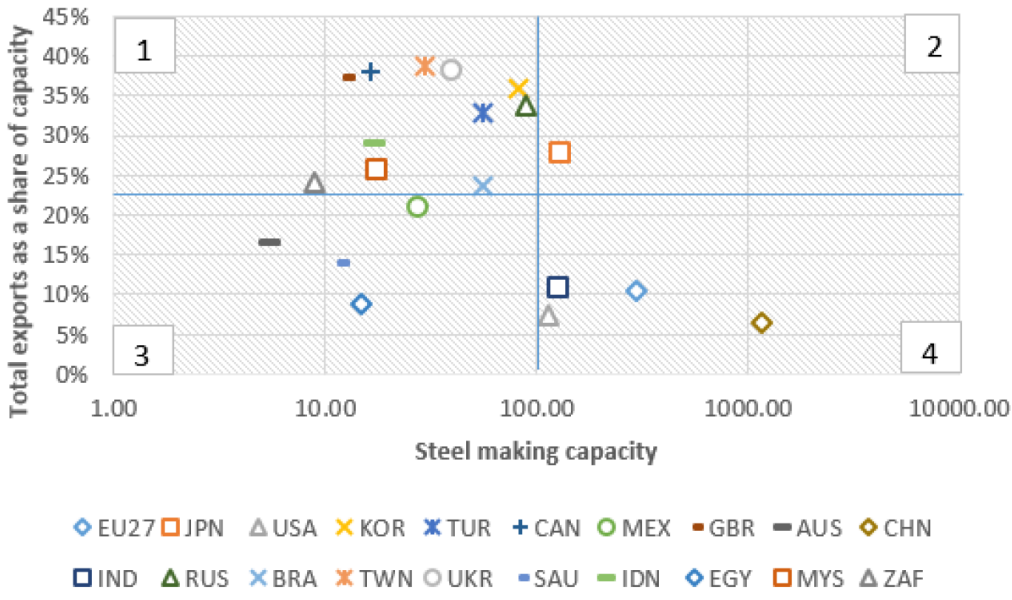

Figure 4:. Total exports as a share of total steelmaking capacity. (OECD, 2022)

Figure 4 indicates the orientation towards export markets or domestic markets of a countries' capacity in steel production. Overall, estimates considered global steelmaking capacity would increase in 2022 for the fourth year in a row (OECD, 2022). The figure indicates high interest in exports for most economies for a steelmaking capacity of 10 mmt2. Indonesia, Canada, and Great Britain as Climate Club countries are represented in the quadrant 1, indicating high export level as share of medium capacity. The EU and the US, however, find themselves as part of quadrant 4 alongside India and China as one of the nation's with the highest capacity and considerable low exports as share capacity. The US and the EU hold high potential in increasing exports, but, similar to India and China as leading producers in the sector, the use of steel for the domestic industries explains this. Japan is showing high level of both steelmaking capacity and export thereof as only economy in quadrant 2, despite a decrease of 21.6% in exports since the previous past years (OECD, 2022). Without any doubt, all G7 partners have high stakes in steel industries; the joint effort becomes a requirement and could ensure security on future steel exports.

Latin America is strongly promoting their (re)industrialisation, indicating higher demand in steel products for the coming years (OECD, 2022). Thus, the membership of a climate club which focuses on the steel sector could be interesting for those reasons. Chile, the co-chair of the CC, can prove a rising demand for green industries in Latin America even more, with an 84% rise in demand for electric vehicles according to car registrations (OECD, 2022).

Moreover, “in Chile, the steel sector is under pressure due to volatile steel prices, general investment scepticism and economic uncertainty.” (OECD, 2022, p. 39). Accordingly, a climate club for steel standards could be seen as a welcomed initiative to foster investment certainty and sectoral stability for Chile’s economy. Furthermore, reciprocal benefits could be an advantage. Since Chile is not a producer of automobiles (OECD, 2022), thus, the rising demand could be met by European producers which seek customers to maintain investment guarantees alike. Thus, the domestic factors leading to catalytic cooperation as outlined by Aklin & Mildenberger (2020), Hale (2020) and von Luepke et al. (2022) could be considered confirmed.

Catalytic cooperation and strategic autonomy

Additionally, another aspect leading to the high political momentum on catalytic cooperation could be identified. Chilean interviewees emphasized that steel sector exports play a minor role in terms of their entire economy (Interviewee #6). Instead, considering the number of countries joining the club, the motivation could be beyond the export potential in decarbonising the steel sector as primal focal point. Because the highest-emitting industries are concentrated among a limited number of (global North) companies and countries, merely a limited amount of members would be necessary for a successful climate club on steel decarbonisation (Obergassel et al., 2019). Although the global decarbonisation of the steel sector is undoubtedly of interest to all members, the growing size of the CC would not be of high necessity for a steel sector alliance from a theoretical point of view. Instead, the larger membership structure opens up the opportunity to include a diversity of activities and impacts of the CC. The Chilean interviewees pointed out that *“as part of the core Presidency of the task force we can actually push for the inclusion of new other kinds of industry and economic sectors. We hope to decarbonize our mining industry with hydrogen and to increase the use of renewable energy, which may be interesting to share with other members”* (Interviewee #6). Other (potential) members may emphasise including discussions on standards for sectors relevant to them (Interviewee #6). Henceforth, the club could bring together a multitude of environmental and climate aspects which some countries may aim to discuss in a multilateral fora. In light of a changing environmental regulation landscape, a discussion forum of the CC could be beneficial in providing transparency, such as opening up discussions which appear more Europe-based at this moment and increasing joint decision-making in the future of standard setting across markets. Conclusively, the CC could attempt to facilitate a dialogue open to the diverse reality of interests in the plurilateral trade system.

Out of these reasons, the CC could entail an element of external climate diplomacy beneficial to the EU and the CC may become bigger than the initial sectoral alliance approach foreseen. The domestic incentives for catalytic cooperation and the leverage for cross-sectoral impact of the CC could be emphasised further when understanding developments influencing international relations, trade and the necessity for decarbonisation altogether. The domestic incentive for strategic autonomy could be such an instance for driving catalytic cooperation in the case of the CC. Strategic autonomy has been of main concern for economies since the Covid-19 Pandemic highlighted the fragility of supply chains. Additionally, the quest for increasing autonomy and risk diversification from China is of particular priority to the US and of importance to the EU. And the Russian invasion of Ukraine has revealed the level of significance for diversifying supply chains and energy imports to the EU in particular (Behsudi, 2023; Tagliapietra & Veugelers, 2023). The transition to renewable energy technology, including the supply of hydrogen and raw materials is vital for the success of the Climate Club goal of decarbonising high-emitting industries (IEA, 2020). The quest to diversify these supply chains is particularly present in the EU's legislative proposals for the Critical Raw Materials Act (CRMA) and the Net-Zero Industry Act (NZIA) in 2023 as part of the EU's green growth strategy (Tagliapietra & Veugelers, 2023). Although the club approach of the CC argues distance from a Nordhaus club type based on trade politics with the switch to industry politics, trade strategy proves central to Pillar two. The addition of the strategic autonomy lens to the narrative of catalytic cooperation indicates a larger array of purposes behind the CC.

Such ties are evident with examples of the EU and Germany advancing their relations with some new CC members. Besides being a leading CC member, Chile is on a path to strengthening, renewing and greening their trade agreement with the EU (EEAS, 2023). Chile has the ability to become supplier of green electricity within the club (Interviewee #3), and has potential to *"become a big, stable, predictable partner of our raw material supply"* (Interviewee #4). This builds upon reciprocal benefits for both sides fostering a 'strategic partnership' for better access to raw materials and clean energy, as Chile is aiming to become a world's top leader of hydrogen and could benefit from European cooperation initiatives (Simon 2023). In another instance, Kenya was announced as the first country from the African continent to join the CC after a visit by Chancellor Scholz in May this year (Clement, 2023). In June, the EU sealed an Interim Economic Partnership Agreement (IEPA) as the first trade deal of the EU with and African nation since 2016 (European Commission, 2023). Notably, Kenya is Germany's most important economic partner in Africa and the EU is Kenya's biggest export destination, creating lucrative foreign relations for both, including future hydrogen exports

(Clement, 2023). Hence, for increasing trade partnerships, a club-type fora to discuss standards on steel, but eventually on mining or hydrogen prospects too, could be relevant for some of the CC partners. This could even be relevant when trade agreements are not in place yet and emphasises the potential use of the CC to tie closer relations. On the 11th July, Australia joined the club as most recent member after the trade minister attended meetings to discuss an Free Trade Agreement (FTA) between Australia and the EU (Blenkinsop, 2023). While the trade deal has not been sealed yet despite hopes on both sides, the CC membership could imply a substitutional function to bridge the absence of the FTA with a platform for multilateral dialogue on de-risking raw material supply from China. As club members would partly prepare a tie in standards and thus result in a strengthened relation among trading countries, it becomes difficult to distinguish the objectives of the CC and those connected to strategic autonomy. Instead, a time in age is symbolised in which forms of alignment in goals are increasingly crucial to foster bilateral relations among states (Bollyky & Mavroidis, 2019). Finally, it could be posed whether the Climate Club reveals a soft power tool for trade diplomacy in the quest for strategic autonomy and green growth.

2.4 Pillar Three: Procedural justice

Pillar three explanation

Boosting international climate cooperation and partnerships is the aim of Pillar three as outlined in the Terms of Reference for the CC. This Pillar is based on voluntary options for the club members to enhance supportive structures for enabling the goal of industry decarbonisation in emerging economies and developing countries. More precisely, the club could provide a platform to synergise cooperation and funding instruments, or, voluntarily for members to offer funding support to build capacities for the goals as another club incentive (G7 Germany, 2022).

Bilateralism and procedural justice

This Pillar resonates with climate governance as a tool of partnerships (Luepke et al., 2022). A unilateral flow of development-type funding streams is a popular models of bilateral partnerships. The CC, however, opens up a perspective of partnership based increasingly on reciprocal relations. Evidently also with the possible focus on other sectors such as mining and hydrogen as elaborated in the previous section, the Climate Club is able to be shaped by its members, creating a collaborative initiative which is not only set by G7 ideas but by the scope of being 'open' and 'inclusive', as emphasised throughout the promotion of the coalition (G7 Germany, 2023). Bringing the link to the missing high-level discussions on sectors which are more relevant for developing or emerging economies could be meaningful in enabling real chances for those countries' stability as energy exporters (Interviewee #3). Additionally, also the concept of just transitions is *"(...) under circumstances something that could be carried into the third Pillar by other Climate Club members"* (Interviewee #5). Thus, the CC may offer new ways to explore the concept of procedural governance as elaborated by Newell et al. (2021) within multilateral climate ambition.

Bilateral partnership models based on equal footing gain weight in contemporary climate governance needs and is articulated as an opportunity under Pillar three of the Terms and References. The 'open and inclusive' framing can be further explored under the rationale to avoid increasing competition between pivotal powers to negatively impact developments for other states. Instead, the CC offers *"not to be a club of industrial countries only, like seen with the IRA and the European responses, which are more something between the two largest industrial blocks in the world."* (Interviewee #2). The competition that is dramatically building between the US and EU should not "*lead to the fact that everyone else is out."* (Interviewee

#5). Contextually, this also refers to the US-EU GSA in which standards could be easily discussed between pivotal market powers without any sign of procedural justice for other countries affected by the matter. The proximity of the GSA and the CC in its objectives of discussing standards for lower emission production in the steel sector justify questions on the legitimacy of intention of the CC as long as an alternative for the same objective exists between the US and EU as hegemonic players in the global markets. The CC leaders emphasise that the Climate Club is not intending to sideline any existing arrangements, assuming no trade-off between similar forums (Interviewee #5, #6). In fact, the GSA indicated to aim opening up its bilateral structure to other countries, too (European Commission, 2021). The double-existence of similar initiatives, however, could irritate and requires coordination to build a storyline behind the emergence of a new order for agreeing on trade related challenges in international relations. The G7 communique of the Japanese presidency resembles the implications of the climate-trade nexus into cooperative spheres with emphasising the importance of respecting and aligning with the internationally agreed rules-based order of the WTO as a basis of any initiative (G7 Hiroshima Summit, 2023). The CC requires legitimacy to be a strong platform for action. Yet, when affirming to be driven by similar veins, the connection to narratives of traditional western or Bretton-Woods based institutions would undeniably become part of the storyline of the new 'open and inclusive' Climate Club. This is no surprise, but indicates the challenge to find new forms of governance within the climate regime.

To enable wide-reaching and inclusive consensus on standards, discussions such as appearing in the GSA could possibly be agreed upon by members of the CC in parallel (Interviewee #2). In this discourse perspective of governance, the club unfolds another purpose. Revising the statements regarding ***who*** will decide the steel standards, ***who*** will be part of the partnership, the question can be added on ***who*** will benefit from this. The informants from Chile emphasize the importance of the CC as a political platform. The presidency of Chile in the club is appreciated by the informants, who emphasize the utilisation of their position to represent developing countries and bring their contributions and concerns to the discussion table. Precisely these actions have been tried to be promoted by the Chilean presidency in the club with countries of the global South. It could be posed, that the CC appears to attempt a U-turn in counteracting growing distrust in climate and trade developments with the opportunity to invite states to open dialogues on standards or on matters of carbon leakage. Framing this within in a formal alliance to gain legitimacy is a strong point for potential success. The framing for a more positive agenda based on cooperation instead of penalties is decisive. In this perspective, the CC is closely linked to not only bridge climate diplomacy and improving trade frictions, but

also for increasingly enabling procedural justice in the climate governance landscape for cooperation beyond the classic pivotal players in club theory. This will have to further proof in the club's activities.

Strong favour of Germany's approach in such reciprocal climate governance based on the needs for development of sectors was recently voiced at the Summit for A New Global Financing Pact in June. Zambian President Hakainde Hichilema emphasised the need to mobilise resources which can be invested to grow economies of less developed countries (Hichilema, 2023). Value addition by investing in extraction of raw minerals to create opportunities for growth is a trivial element in achieving climate governance alongside development needs. This indicates that new ways of governance are welcomed by global South advocates. The novelty of the club is yet to confirm its stirring direction, however. In other news, the club is framed as an "emerging quasi-trade bloc alongside the rich world" (Flicking, 2023). For larger emerging industrial powers such as India, this could imply an opportunity "to rival China as a center for global manufacturing supply chains." (Flicking, 2023). Indeed, major ASEAN countries became part of the CC and the past G7 summit in Hiroshima has been strongly perceived as the 'anti-China club' according to Chinese media (Global Times, 2023). Similarly, the significantly German-led approach to the CC finds perceptions such as "the chancellor-club" (Bauchmüller, 2023). Despite efforts to overcome trade policy tensions and open up dialogues, the club is followed by connections to the CBAM, the US-EU GSA or industrial power subsidy race of a Bretton Wood type alliance. These policy developments *"could become something that will worsen the political tension because China will see this again, as a move against them."* (Interviewee #4). The impact of the Climate Club on the multilateral system is thus complex, and multilayered; and its ability to be transformative news for climate policy ties between nations is possible, although just as much as it is rooted in traditional grounds of power politics.

The race for subsidies and risks for global cooperation

Reality provides that the climate governance landscape for cooperation is impacted by initiatives such as the IRA. This becomes relevant to the CC when analysing different club design options. Investment options more accessible to some members of the club than to others is by default creating an injustice-laden landscape for abatement costs. The effect of the IRA is notable in the EU. The former European climate ambassador explains: *"The US has gone up with this IRA into something which we didn't want, namely, a subsidies race. A subsidies race that, on the surface of it may be good for climate action. On the other hand, we're now going to do things, in Europe, that we would never have done without the IRA."* (Interviewee #4). The

use of subsidies and public capital transfers bear the potential to level the playing field of the clean technology industries which are largely not competitive within the current business-as-usual setting (Interviewee #2). The policy challenge, however, is *"to create conditions and create an enabling environment"* across legislations, to avoid the loss of competitiveness in other places (Interviewee #2). However, this positive competition triggered as part of the climate-trade nexus could impose challenges for the cooperative structure of a climate club in form of the GSA or CC by disrupting the equal playing field between the higher biding nations. In May, Germany announced plans for an industrial electricity tariff as a form of subsidy to support its industry. Being aware of the limited financial strength by other members states in the EU-bloc, this could be competition-distorting. Therefore, Germany and the EU rely on a solution from the European Commission (BMWK, 2023). However, this issue reflects within an international scale, too. If Germany, as CC co-chair and initiator, is to join the race for subsidies (which both Germany and the EU will potentially eventually do to protect their industries), then this will also negatively impact those CC members which are less able to invest public capital. With the very heterogenous club membership, subsidies will always carry the risk to distort cooperation. Reviewing the multitude of climate-trade nexus developments which the CC sphere plays into, financial divergences could shape a fluent consecution of the Climate Club's activities. Or as interviewee #5 summarises it: *"I think there are many corners and ends, and I wouldn't say geopolitical, but there are international political works and dynamics that can have a massive influence on the discussion situation in the Climate Club."*

The challenge of climate finance and climate justice

Another impactful narrative concerned with Pillar three is the one of climate finance governance. While there is a great importance and a vast body of literature on climate finance and more current discussions on Loss and Damage, this section is going to solely reflect on the aspects relevant to the CC's Pillar three and the analysis of the club's position. In this sense, the stance of a non-member to the CC becomes interesting in reflecting this discourse. India's emissions are estimated to have exceeded the ones of the EU in the last year, making it third largest emitter after China and the US. Paired with its position as pivotal player for transforming green steel production on a global market scale (OECD, 2021), it is adequate to question why India is not part of the CC so far. Interviews revealed that India expressed interest in becoming a member of the CC but raised concerns about the need for additional financial resources and advantageous prospects representing narratives linked to 'trade and aid' and climate justice (Interviewee #4; Sengupta, 2023). There is a sense of understanding that India uses its position

as an official developing country under the pre-Paris Annex structure to push for a position in which they could receive exceptional treatment also under a climate club (Interviewee #2, #4).

Pillar three and its vague outlay is particularly interesting for members from the global South. The Chilean Interview partner also stated it to be of most value to them. Importantly, however, the CC does not foresee its own fund. Many instruments, programmes or projects exist from international banks and international institutions. Thus, the establishment of a "matchmaking platform" to navigate the funding landscape could be the first task that the CC would like to tackle and could be of high value for providing transparency and to comprehend the demand for finance and sources for increased support (Interviewee #5, #6). Most likely, *"the interim secretariat will try to create a map of the international funds, which will be at disposal to member countries."* (Interviewee #6). Tracing back to India's interest in increasing and institutionalising funding structures, momentum is represented as India hosts the G20 presidency in 2023. Or as Flicking (2023) frames it, "India can no longer afford to stand aloof from climate debates. Instead, it's working out how to shape them to its own ends". A vision of an alternative climate club structure, the Global Climate Alliance (GCA) has emerged from India's G20 presidency since.

The first draft concept of the GCA has been presented as "an independent research effort to evaluate how Global South countries can best ally with Global North countries to accelerate climate action" and "builds on the German G7 proposal of 2022 of an International Climate Club" (Collaborative GCA, 2023). Although the CC aimed to provide an umbrella forum to bridge multiple initiatives and developments for discussions on carbon leakage and climate and trade policy, in India's proposal the ambitions under the CC would be underneath an umbrella of the G20's GCA. Although a separate analysis of the GCA is not within the scope of the research, the proposed structure of the GCA indicated in Figure 5 is noteworthy.

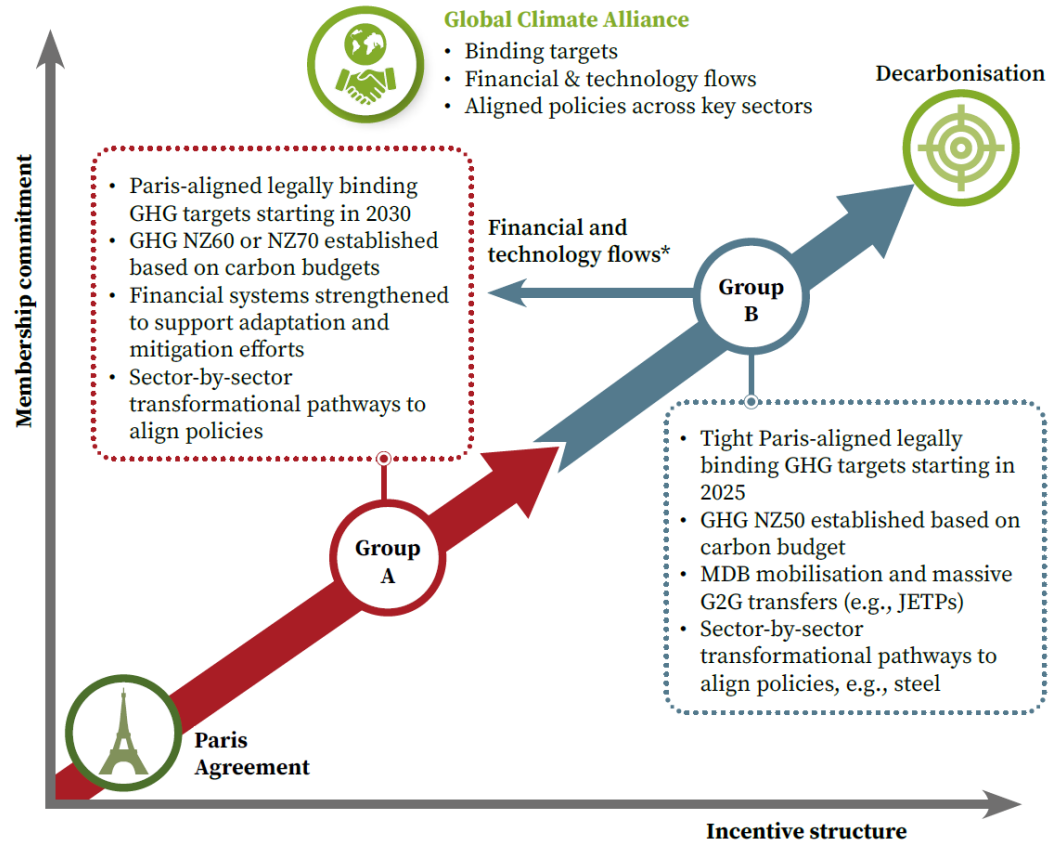

Figure 5: Proposed CBDR-Based Global Climate Alliance Framework (Collaborative GCA, 2023)

Appearing as an amendment to the structural proposal of the CC, the GCA is equally proposing an open and inclusive global alliance based on three pillars, with notably the third pillar being adjusted the most to "implement a comprehensive climate finance package that would result in trillions of dollars of incremental climate financing from the Global North to the Global South." (Collaborative GCA, 2023). This outlook majorly plays into the context of UNFCCC historic decisions as outlined in Chapter 1.3. While the CC is evidently based on post-Paris fundamentals of NDCs, the GCA resembles the narrative for CBDRRC principles and Annex structures, notably "Global North countries are expected to join Group B and Global South countries to join Group A." (Collaborative GCA, 2023). Nevertheless, this is precisely the narrative which the US has vehemently denied to agree to in the precedence of climate negotiations (Pickering et al., 2012), it could be assumed that this increases the challenge to find consensus on the design of the final Climate Club ready to launch at COP 28. Furthermore,

it illustrates tensions between preferred climate governance approaches of the global North and South which play into multilateral cooperation. Resolving restrictive climate finance Zig-Zag is necessary to enable the Climate Club to develop.

The suggestion to expand the CC with financial contributions would fit into club models which add side payments. However, this would be hard to reconcile with the CC's reasoning of solely matching existing funding opportunities. Being a sensitive topic, this demand is unlikely to be agreed upon under historic tensions between pre- and post-Paris perceptions on responsibilities, particularly played out by the US and India as drawn out in the literature review and explained by Sengupta (2023). Under club theory, the risk also appears that finance flows within a club will invite detrimental bargaining into the coalition, perhaps leading to distortion of actual needs for finance (Lessmann et al., 2015). Although direct finance might stay excluded, flows of capacity building would likely evolve under the future Climate Club, and a lot of work will be invested into improving present finance infrastructure.

Exclusion and inclusion?

Beyond diplomatic intentions, the 'open and inclusive' framing of the CC can also be linked to needs of procedural justice in climate ambitions. To offer a seat at the table and being able to voice diverse interests is required in climate governance (Brandi, 2019; Newell et al., 2021; Boran & Shockley, 2016). This would contribute a new lens to the climate club model, contrary to Nordhaus' and economic reasonings for club exclusivity. Out of reasons described above, it will be beneficial for smaller market powers to become part of the fast pasted climate-trade developments. Opportunities such as widening the scope of the club for standards to sectors relevant to developing or emerging economies, or expanding regulative transparency from the EU are proving this. Nevertheless, it is an appropriate reminder that the process on finding agreeable Terms of References for the club under a small group of G7 countries was already reported as challenge. Although the landscape of interests for the G7 should be well established among the partners now, interviewee #5 points out that the new interests and talks emerging under G7 plus a whole group of new countries is new terrain. This could bear the paradox of cooperation (Barrett, 1994) to infringe on club effectiveness if club size could weaken coalition stability. More club members and a subsequent wider sectoral scope could distract the necessary focussed attention on the steel sector and could risk significant political momentum. To further exemplify this, discussions on the agricultural sector could quickly employ as a stage to churn up discussions on European supply chain regulations and restrict productive conclusions on ambitious club objectives. Or as interviewee #4 puts is: "*Opening up something that is not yet*

well-defined, runs, of course, the risk of becoming a total talk show. I understand that we want this to be inclusive. But we got to make sure that if we do that, that the whole thing does not get watered down and in the end, nobody knows anymore what we are talking about.".

Additionally, an open clause provides that some activities of the CC may only involve a subset of members, allowing for members to move forward with higher ambition or activities without unanimity. While this enhances effectivity alongside inclusivity of the club also under consideration of CBDRRC, it increases the risk for free-riding. Free-riding is an elementary assumption for calling a climate club into force and thus should be subject to safeguarding. Therefore, the club's participation commitment can be considered vague, particularly because no penalty is provided for non-compliance in the first place (Interviewee #1). These are probably the biggest contributors to club instability provided by the CC model. The fulfilment of this risk would stand in stark contrast with the entire rationale for climate clubs and increasingly lead to the 'pseudo' club type described by Obergassel et al. (2019). Although pseudo clubs could still fulfil a purpose for dialogue, the difference to other multilateral initiatives, or the COP framework and the NDCs under the Paris Agreement would be reduced. The question can be rightfully posed: *"So what is the difference between Paris, where every country does what it wants anyway, and a small club where also every country does what it wants?"* (Interviewee #3). Overall, this could infringe the seriousness with which the club will be approached by its members. This point gains weight considering the multiple other fora for dialogue which members may already attend each year. Inactivity could become an issue in the long term and make membership in the club less valuable over time (Unger & Thielges, 2021), tempering hopes for the CC to become a fully fetched implementation forum.

Chapter 3: Implications

The research exemplifies the way multiple developments in international climate governance contribute to the wider narrative in which the CC emerged and continues to proceed. Rather than viewing events as separate, it becomes clear that the narrative for climate clubs themselves needs to be adjusted to a fast-changing policy landscape. The fact that the climate club approach has evolved from a mere literature branch in economic theory on penalties and incentives, to a more adjusted real-world demand of climate policy needs shows the rise in its applicability. It reveals that the newest high-level form of the Climate Club analysed here, is going beyond the classic climate club model in not only linking to the climate governance purpose of cross-sectoral governance but also sector-specific coalitions, as Luepke et al. (2022) already assumed. However, also the bilateral partnership purpose becomes deeply engrained in the discourse of Pillar three of the CC. While no existing projects were able to fulfil all three governance functions previously (Luepke et al., 2022), the CC bears the potential to offer a setting in which the shift to decarbonisation can be addressed under one umbrella to introduce, negotiate and litigate conflicts and benefits concerned with free-riding and carbon leakage under its three Pillars.

When aiming to assess the potential impact of the Climate Club, the derived insights help to understand to which extent the effect *of* the Climate Club is influenced by the impact *on* it, including the stories connected to it and which purposes it hence aims to address. Table 3 seeks to provide an overview of the associated discourses found in the analysis in Chapter 2. Based on this, the following paragraphs will depict the identified main implications more concretely.

	Pillar one	Pillar two	Pillar three
Objective	Advancing ambitious and transparent climate change mitigation policies	Transforming industries	Boosting international climate cooperation and partnerships
Associated club type	Voluntary club	Voluntary club Buchanan club	Pseudo club
Associated cooperative governance	Cross-sectoral multilateral governance	Sectoral alliance	Bilateral climate partnerships
Associated assumptions and narratives	Prisoner's dilemma, free-riding Carbon leakage, Impact of domestic factors Mitigation effectiveness	Prisoner's dilemma, Reciprocal partnerships Carbon lock-in, Abatement costs, Impact of domestic factors, Catalytic cooperation, Co-opetition, Strategic autonomy, Competitiveness, Level-playing field between industries, Pivotal players and market powers	Climate justice, Procedural justice Reciprocal partnerships, Climate finance, CBDRRC, Level-playing field between countries Open and inclusive
Associated purposes	Aligning policies Maintain dialogue open, Overcoming trade tensions, Discussing carbon leakage	Aligning standards, Maintain dialogue open, Overcoming trade tensions, Trade diplomacy for strategic autonomy and green growth, Keeping momentum, Stability for steel markets, Trigger investments	Aligning capacities Counteracting growing distrust, Reciprocal Partnerships Implementing procedural justice, Improving funding landscape
Associated policy initiative	CBAM	GSA, IRA	GCA, IRA
Associated challenges	Being too associated as directly linked to CBAM, Low compliance, does not address free-riding	Being seen as EU-US/ G7 alliance To lose climate mitigation focus over trade goals	Being seen as EU-US/ G7 alliance, GCA and CBDRRC demand, inclusivity to infringe on scope and objectives, distorted cooperation because of economic injustice,

Table 3: Overview of the associated discourses associated with the Climate Club in this research (own illustration)

3.1 The potential impact under the climate club story

The analysis gave insight into the current state of play in ambitions to level the playing field for competition and mitigation costs. The CBAM, the IRA, the, EU's Industry Act, the GSA, the GCA and the CC itself are prior examples on the new sense of urgency for providing and implementing climate solutions on a macroeconomic level. The CC is part of the playing field of these policy initiatives with each Pillar proving connections to an underlying context and narrative in the climate-trade regime. Rather than seeing the CC as an isolated coalition, it thus makes sense to understand the potential impact of the club in its entirety to overcome the polycentric nature of international climate cooperation (Kuman, 2022). It can be argued that the different policy measures, purposes and narratives viewed in the analysis come together, providing flexible plurilateral governance in forming an indirect multi-level club. Theoretically, it could be put that the facets and characteristics of the 'multi-level club' landscape can fulfil what one policy initiative alone could not address in strengthening climate club model purposes. Similarly, in this way more countries alias members can be covered by different initiatives. Figure 6 aims to explore such a multi-level club puzzle: For instance, the CC alone would fail to enforce club commitment. Those countries which are not members of the CC ambitions on setting higher standards would be, however, incentivised by the CBAMs 'penalty' to seek better policies. The CBAM is concerned with diplomatic risks, and fails to bring the US on board. No other high-level initiative assessed is able to promote climate diplomacy alike the CC, making it a significant connector in the club-puzzle. Additionally, in the sense of catalytic co-opetition, the IRA is able to trigger investment and higher ambition on standards in the short term, while the CBAM, the GSA, or the CC require a longer implementation stage. These would be a few strings of examples in understanding the integrated effect and impact of the segments with each other. The illustration of current dynamics triggering club effects in the climate-trade nexus in Figure 6 is indefinite. Other segments such as the EU's Industry or Raw Material Act could be added to the playing-field and their impact in the multilateral climate ambition puzzle could be explored in the future. While being explorative in nature, the visualisation affirms and expands Nordhaus' (2021) reasoning on the matter that technological advancements (here seen with the purpose of increasing standards) will be necessary along with penalties to reduce abatement costs and carbon-leakage (here seen with CBAM), vice-versa.

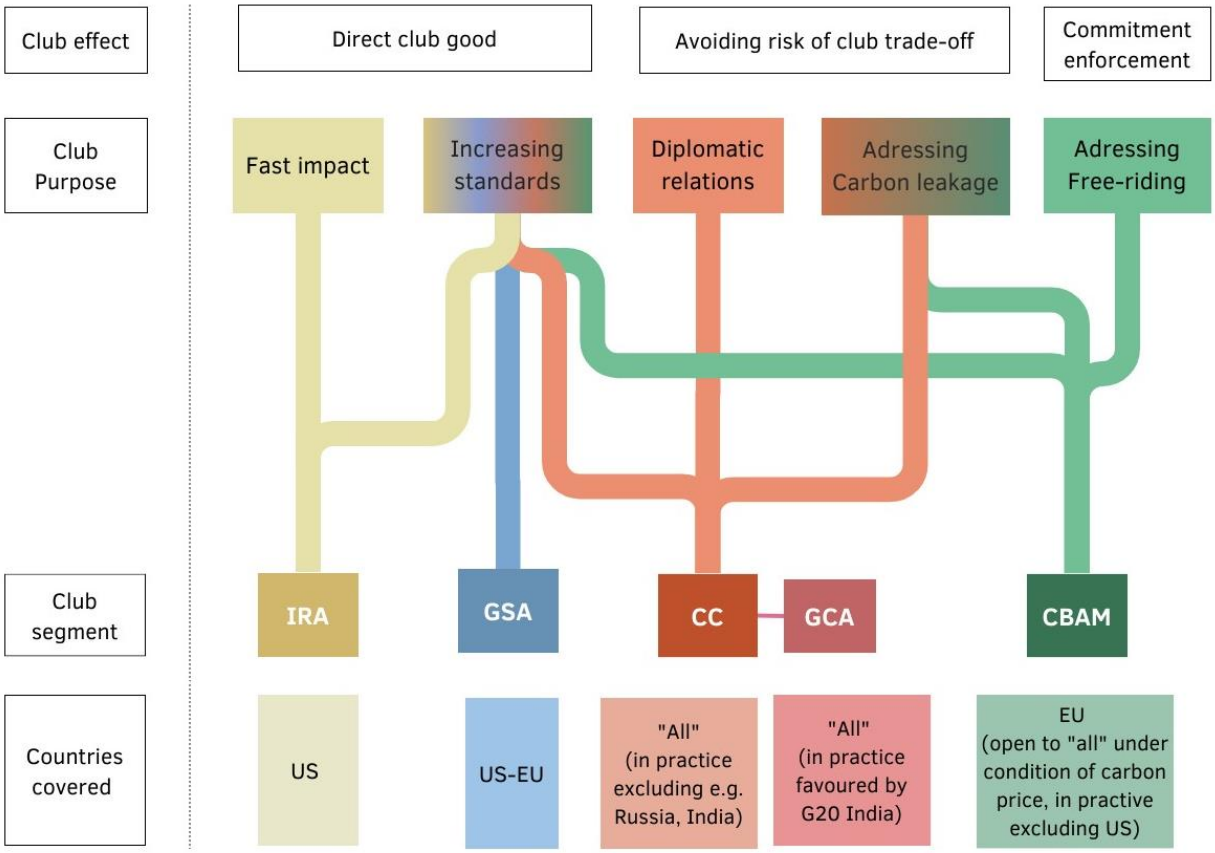

Figure 6: A sketch of an indirect multi-level club landscape (own illustration)

Moreover, although none of the policy and coalition initiatives precisely resemble the novel-price-winning vision of the Nordhaus club model, they prove the main assumption of the club approach right when seen as parts of a whole, triggering further ambition. This is not only embodied in the changing equilibrium of abatement costs which softens carbon lock-in subsequently, but also, and ironically, has the effect of reversing the prisoner's dilemma. Instead of benefitting from deflecting on climate action, the emitting country would benefit from participating in changing industrial activities. In order to keep industries, it becomes striking to increase the competitive advantage of jumping on the bandwagon for decarbonisation investment. This is particularly seen with the race of subsidies triggered by the IRA, but also with the CBAM and GSA triggering cooperative discussions on green standards with the CC. Implementing or becoming part of these efforts to decarbonise industries is the new first mover advantage of the prisoner's dilemma. Nevertheless, the multiple events are not necessarily favouring each other, as the research has shown; thus more nuanced implications adding

international developments will be added in the next section. Ultimately, both implications from the analysis advance climate club theory in clarifying the weight of the impact of developments in international relations (Overland & Sadaqat Huda, 2022), including those triggered by domestic factors (Aklin & Mildenberger, 2020) on club models.

3.2 The potential impact under the climate-trade nexus story

The investigation of the interview discourses and purpose narratives facilitated an understanding of the CC as a project responding to a world of increased trade barriers and restrictive competition. Instead, the Climate Club could be a tool for increasing transformative competition by means of cooperation. Or as Esty and Geradin (2000) adequately coin this phenomenon; "co-opetition". In this regard, the threat posed by increased trade competition under the CBAM, IRA and GSA, may play into the cards of attracting members for the CC. Another relevant result from the role of catalytic co-opetition in the CC is the importance of the quest for strategic autonomy (elaborated in Chapter 2.3). On the one hand, the purpose for strategic autonomy offers a window of opportunity which should stay relevant in the short and long term. Paired with the ongoing need to manage risks of carbon leakage, this increases the likelihood of committed cooperation in the CC.

The analysis discovers trade narratives as a vital part of the CC. Although the club is meant to retrieve from trade politics, it is deeply ingrained in a new era of trade tensions. The CC may entail an element of soft power for trade relations beneficial to CC members and particularly puts Germany and the EU in a better position of diplomatic climate leadership than following the announcement of the CBAM. Thus, the Climate Club may become bigger in its purpose for climate and trade diplomacy than the initial sectoral alliance approach foreseen. This may imply that the climate-trade nexus is not just about levelling the playing field for clean technologies or countries' competitiveness, but is highlighting the consideration of who will 'play the levelling-field'. This became clear in the popularity of joining the club under the question of who sets new standards for steel and other sectors, and who benefits of this. More importantly, indicated with Chile and Kenya as valuable trade partners and door-openers to expanding the Climate Club, the question can be raised which strengthened trade relations for critical raw materials and energy for the green tech market emerge from the Club. Considering the self-widening scope of the club with each member, such as the opportunity to expand to other

sectors, Germany as well as the EU stand in a new light to diversify green supply chains and to maintain competitiveness; they can 'play the levelling-field' with initiatives including the CC. It is clear that the CC will aim to discuss measures to avoid carbon leakage (Pillar one), discuss and align different sectors for decarbonisation (Pillar two), and improve the landscape for capacity support (Pillar three). Yet, the analysis raises whether the proceeding discussions held under the club and related trade negotiations could become subject to trade or green growth narratives more than the urgency of cutting emissions as soon as possible within the scope of the Paris Agreement until mid-century.

Additionally, under the rationale to avoid restrictive competition between pivotal powers, the CC has the potential to explore new ways of procedural governance from a climate justice narrative (Chapter 2.4) which unilateral policies such as CBAM and IRA or bilateral partnerships such as GSA are not able to achieve in their exclusive nature. The inclusive narrative of the CC, in the best case, implies that discussions surrounding the climate-trade nexus are not just based on the needs of the industrialised nations as typical leaders in the international order, but would achieve climate change mitigation while not neglecting the development needs of other countries. This is an important element of the club in opening the doors of procedural climate justice governance. However, the tension between global North and South governance in the representation of pre- and post-Paris approaches to CBDRRC is continuing to challenge the Bretton-Wood driven alliance. Similarly, the power-laden landscape of the international climate regime lead by pivotal industrial countries, carries the risk to distort cooperation, such as analysed in the case of subsidies or by keeping the ace in the sleeve with the possibility of setting standards among the EU and US within the GSA. The GSA and CC's pillar two, both put forward by leaders of the G7, do not aim to exclude each other's goals. Yet, it will reveal whether an unification of both initiatives' objectives would play out to increase the challenge for the CC to be perceived as a Bretton Wood-type institution. Thus, it will be vital for the interim secretariat under the OECD and IEA to strengthen the global framework of the CC.

On the other hand, and to add to the narrative of inclusion and procedural justice, the impact of the Climate Club could be challenged by the coalition paradox, if too many differentiating interests disperse the scope of the club. Ultimately, for instance under Pillar two, success of the club will be dependent on the standards which can be discussed and agreed on. While the inclusive nature of the club can approach more sectoral standard discussions from a lens of emerging and developing countries interests, increased bargaining potential under a larger

group bears the risk of watering down goals for these standards. Combined with the same occasion for the club's scope, such as for finance measures under Pillar three when adding demands from India's G20 presidency, this will likely have an impact on the discussions under the CC once it stands. Ultimately, these considerations indicate the risk of catapulting the 'coalition of the willing' back to the state of play similar to the UNFCCC negotiations and risking the repetition of carbon leakage, lock-in, and the prisoner's dilemma.

3.3 Recommendations

The implications explored in this section can offer a set of recommendations needed to ensure an effective impact of the Climate Club moving forward:

(1) National interests should stand after the club ambitions. While the tool for diplomacy has strong leverage for the club's effectiveness, the coalition should maintain the focus on achieving high ambitious standards, and avoid dilution of these by trade interests.

(2) The coalition should emphasize the grounds of procedural justice as part of the club and use the platform of funding-capacity matchmaking as planned accordingly, to increase the implementation potential of the forum beyond the form of dialogue.

(3) To avoid losing the scope of the club, clear rules for operating on subjects and a framework for working-relations to other policy developments would be crucial. This would help a clear diplomatic portray and rulebook of the club's aims.

(4) Due to the high risk of free-riding and bargaining effects for discussing standards among a heterogenous group of members in Pillar two, an additional private club good system, or compliance mechanism, should be discussed among the club members to avoid inactivity over time and ensure implementation globally.

Conclusion

The three-step analytical framework contributes to the comprehension of contemporary climate club developments and reflects the vast challenges and impacts in multilateral cooperation. The exercise of dissecting the Climate Club proposed under the German G7 (CC) presidency brings the tensions behind discourses in current international climate policies to the surface and explicates the importance of the CC approach within the network and multitude of climate governance forms.

The CC has emerged at a time when the CBAM already took on a role reminding of Nordhaus club theory. The CC however, goes beyond classic climate club theory and leans on recent researches and publications emphasising on the need for sectoral clubs and cooperative approaches in governance. Accordingly, the CC, formed under pressure to deliver next steps on climate action, is evidently uniting a wide set of purposes and thus draws in narratives from across the spectrum of climate governance needs. As interviewee #4 framed it: “It tries to be many things to many people”. Indeed, areas for work such as to streamline reporting measures under Pillar one, paired with ambitious targets to influence the sustainable market default such as in the steel and cement sector under Pillar two, and forms of cooperative and inclusive governance under Pillar three provide a variety of activities within the club.

Although the CC aimed to step back from trade politics with the absence of trade penalties as associated with the traditional Nordhaus model of climate clubs, the dissection of its potential impact is nevertheless related to climate AND trade diplomacy. Open dialogue appears as a centrepiece of the CC and it could benefit of the catalytic effect of co-opetition, triggered by the growing necessity to level the playing field for sustainable investment in hard to abate sectors. Particularly the IRA and the CBAM as policy developments affecting trade narratives in the climate-trade nexus require to be viewed as part of the CC context. Such developments may increase interest in membership of a CC based on high-level political action, as explicated under chapter 2.2 and 2.3. Further, the trade relations between key partners in the CC, such as between the EU, Chile, or Kenya, indicate the potential interest in expanding the CC to progress in strategic autonomy and diversification of supply chains for the green transition. In this sense, the CC fulfils the role to enhance cooperation at a time of increased competition. Yet, competition could be essential to drive membership and club activities forward, particularly when no penalty scheme exists within the CC’s framework, and when dialogue is not a

sufficient tool for implementing tangible climate change mitigation. While the quest for green market solutions and investment could benefit from trade co-effects, clear emission reduction targets need to stay central to the club's activities among its members to ensure due mitigation.

The inclusive approach of the G7 in opening up the CC to a wide and heterogenous group of members and Chile's ambition in actively doing so as co-chair could also be read as opportunity to overcome the divide in global North and South climate governance. As a large club membership is not estimated a requirement for fulfilling the steel and cement sector transition, other aspects of standard setting, applicable to a wider group of nations, could become discussed. With the growth in member states in the club, more interests such as the sectors more relevant to emerging economies can be integrated, opening a platform to voice a wider spectrum of interests than EU-US led climate debates. To clarify its intentions, the CC could benefit from resolving or addressing parallels to the EU-US Global Arrangements on Steel and Aluminium, considering that pivotal players incumbent of powerful market positions obtain influence on mitigation approaches. Although a broad and heterogeneous membership is crucial for achieving procedural justice in climate governance, the growing landscape of interests with each member could dilute the club's scope and efficiency, making goal setting an essential tool.

Furthermore, this reconciliation process to fulfil inclusive governance and to finalise the Climate Club's launch reveals likely to become challenging under a proposal from India's G20 Presidency for a 'Global Climate Alliance' including further demands on climate finance. Thus, the weight of the CC's governance priorities will be dependent on how the CC will address other initiatives across the spectrum of global North and South governance demands. The discourses connected to inclusion and exclusion indicate the complicated structure of the climate-trade nexus and the difficult role which the CC may find itself in.

The potential impact of the CC is set within the wider policy measures which may influence its success. Viewing the CC in light of discourses connected to the governance forms linked to its Pillars reveals that, beyond the sole activities of the Pillars, the CC also carries potential to utilise the momentum of trade tensions in the favour of climate-trade diplomacy and to face developments of procedural justice in the climate regime. Yet, the risk of being not more than a forum for discussion instead of the long needed implementing climate club prevails. The implications suggest that the CC finds itself as a piece of a multilateral puzzle for enabling catalytic co-opetition. Concludingly, this allowed insights into the complexity of club theory in its application to real-world political dynamics. The research ultimately approached a simplified overview of the mulit-level landscape in a new era of multilateral climate ambition.

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