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G20 Clean Development Innovative Mechanism: a proposal to leverage and accelerate Climate Change Mitigation Finance

Mecanismo Inovador de Desenvolvimento Limpo do G20: uma proposta para alavancar e acelerar o Financiamento da Mitigação da Mudança Global do Clima

Mecanismo innovador de Desarrollo Limpio del G20: una Propuesta para Impulsar y Acelerar el Financiamiento para la Mitigación del Cambio Climático

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ABSTRACT

Title: G20 Clean Development Innovative Mechanism: a proposal to leverage and accelerate Climate Change Mitigation Finance

This paper presents a proposal for a G20 Clean Development Innovative Mechanism (G20 CDIM), a strategic financial structure that aims to accelerate global mitigation efforts by injecting large amounts of financial resources through an economically structured financial solution based on science and diplomacy to enable the managing and financing of mitigation projects, the acceleration of the project pipeline and the increase in project size and ambition, given the critical growth of GHG stocks in the atmosphere. Its structure is based on three fundamental pillars: a) the Voluntary Target Plan; b) the establishment of an Investment Fund and c) the Platform for Intensive Mitigation. This is expected to raise the bar for effectively integrating voluntary commitment, financial strength and the volume of strategic project selection to boost mitigation on a large scale and through significant contributions to

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mitigation targets and sustainable development in an objective manner among major investors/shareholders.

Keywords: G20; Sustainable Development; Clean Development Innovative Mechanism; Climate Finance; Climate Change Mitigation.

RESUMEN

Título: Mecanismo innovador de desarrollo limpio del G20: una propuesta para impulsar y acelerar el financiamiento para la mitigación del cambio climático

En este documento se presenta una propuesta de Mecanismo Innovador de Desarrollo Limpio (MIDL) del G20, una estructura financiera estratégica que pretende acelerar los esfuerzos mundiales de mitigación inyectando grandes cantidades de recursos financieros a través de una solución financiera económicamente estructurada y basada en la ciencia y la diplomacia para permitir la tramitación y financiación de proyectos de mitigación, la aceleración de la cartera de proyectos y el aumento del tamaño y las ambiciones de los proyectos, dada la creciente criticidad de los stocks de GEI en la atmósfera. Su estructura se basa en tres pilares fundamentales: a) el Plan de Objetivos Voluntarios; b) la creación de un Fondo de Inversión y c) la Plataforma de Mitigación Intensiva. Se espera así elevar el listón para integrar eficazmente el compromiso voluntario, la solidez financiera y el volumen de selección de proyectos estratégicos para impulsar la mitigación a gran escala y mediante contribuciones significativas a los objetivos de mitigación y desarrollo sostenible de forma objetiva entre los principales inversores/accionistas.

Palabra Claves: G20; Desarrollo Sostenible; Mecanismo Innovador de Desarrollo Limpio; Financiamiento Climático; Mitigación del cambio climático.

*“There are many reasons to doubt and only one to believe.”
(Carlos Drummond de Andrade)*

INTRODUCTION

The climate crisis is one of the greatest threats facing humanity. The increase in global average temperature and the resulting impacts are challenging the response capacity of international institutions. In this context, the G20 CDIM is proposed as an innovative mechanism to increase the order of magnitude – compatible with the challenge of the volume of Greenhouse Gases (GHG) present in the atmosphere – of the resources allocated to financing the mitigation of global climate change, in the form of an integrated financial structure linked to the main global financial markets, present in the G20.

The objective of this article is to present the proposal for the creation of the G20 CDIM, which seeks to integrate the largest global emitters in a cooperative structure, based on three fundamental pillars. The article is structured as follows: Section 1 describes the physical problem of climate change; Section 2 analyzes the context and challenges of existing initiatives under the United Nations Framework Convention on Climate Change (hereinafter UNFCCC); Section 3 details the proposed structure of the G20 CDIM; and finally, the concluding remarks highlight the potential contributions of the mechanism. Provide a concise introduction that contextualizes the problem of climate change and the need to create a new mechanism within the G20.

SECTION 1: PHYSICAL PROBLEM OF CLIMATE CHANGE - Global mean temperature of the Earth's surface

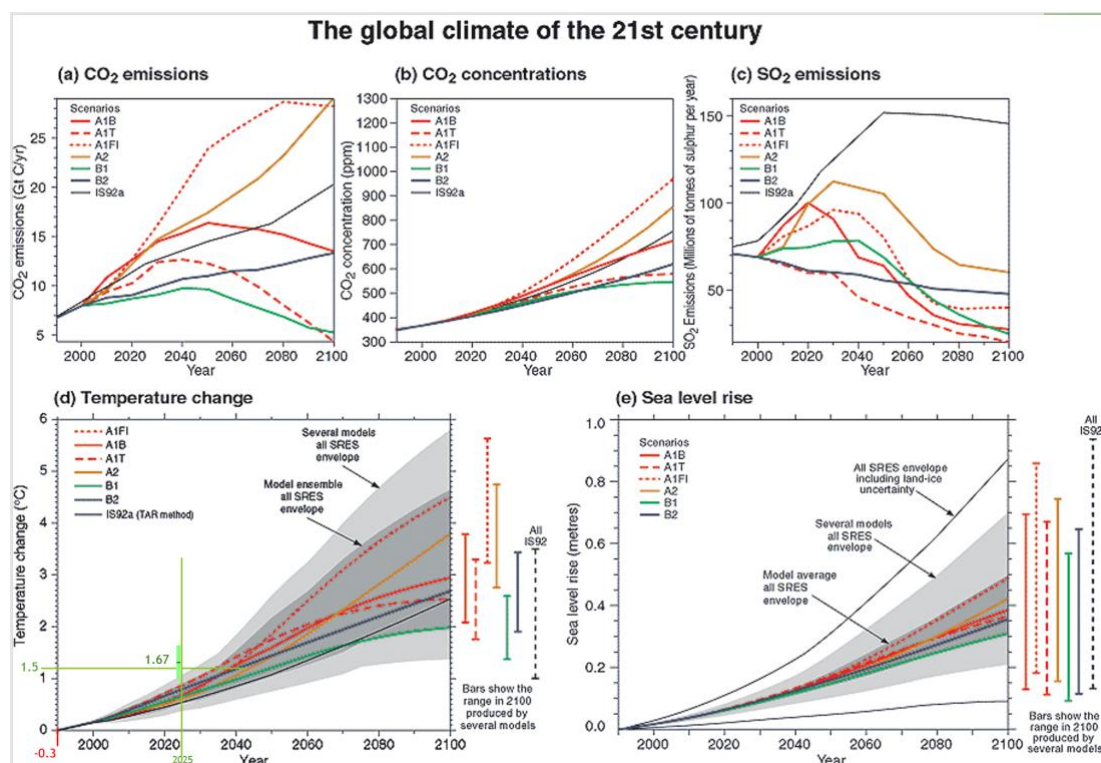
The immediate and urgent call for the G20 CDIM is underscored by the alarming rise in the Earth's global average surface temperature, which currently (July 2024) is set at a "12-month moving average of 1.67 ± 0.07 °C (3.01 ± 0.13 °F) above the 1850-1900 average"⁴. This temperature increase exceeds projections from previous assessments by the Intergovernmental Panel on Climate Change (IPCC), which have consistently underestimated the pace of warming by between 1.15 and 0.4 °C.

The lengthy process of preparing IPCC Assessment Reports, which typically lasts 6 to 8 years, limits the ability to respond rapidly to emerging climate change threats. The G20 CDIM recognizes the need for mechanisms that can adapt to real-time data and provide rapid and effective responses. The IPCC's systematic error in underestimating the high scenarios from the 3rd Assessment Report to the 5th Assessment Report can be seen by contrasting the numbers projected for 2020 in these reports with the actual temperature increase figure for 2020 in the 6th Assessment Report. These errors highlight the limitations of these reports' long-term climate change projections. This discrepancy calls for a reassessment of risk assessments and a shift toward more immediate and decisive action.

The current global average temperature highlights the critical need for accelerated and next-order action on climate change to prevent the climate change crisis from worsening further, posing serious risks to ecosystems, economies and communities around the world. In light of the accelerating impacts of climate change, there is an urgent need for rapid and effective action.

⁴ BERKLEY EARTH. Available at: <https://berkeleyearth.org/july-2024-temperature-update/>.

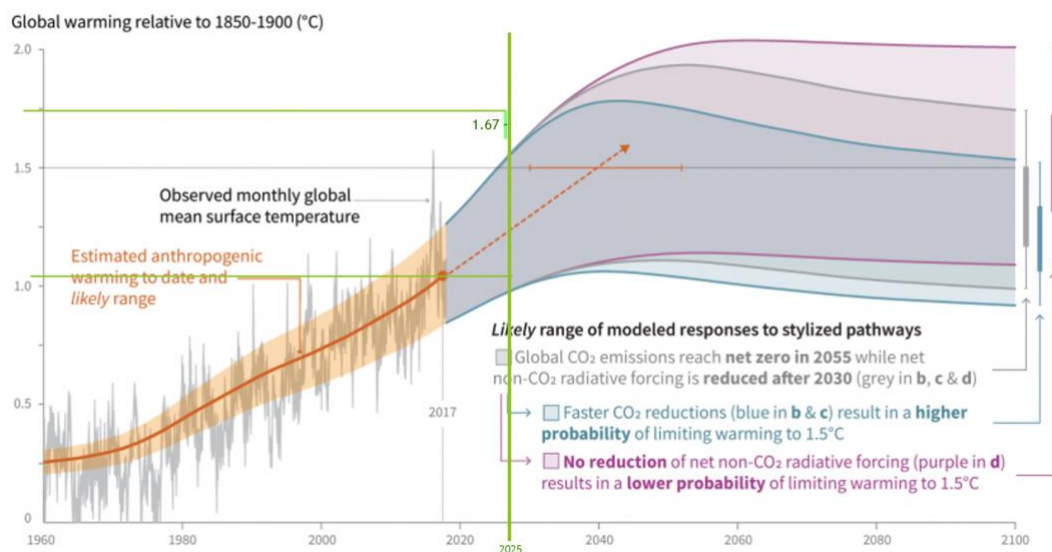
Figure 1: 2024 global mean surface temperature from the Berkeley Earth Measurements report compared with IPCC TAR emissions, concentration, and temperature scenarios



Source: IPCC TAR, 2001 overlaid by the authors with measured data for 2024 from “July 2024 Temperature Update”, published on 21 August 2024 by Robert Rohde. Available at Berkeley Earth.

Figure 2: 2024 global mean surface temperature from Berkeley Earth Measurements compared to IPCC Special Report 1.5 scenarios.

a) Observed global temperature change and modeled responses to stylized anthropogenic emission and forcing pathways



Source: IPCC, 2018 overlaid by the authors with data measured for 2024 by “July 2024 Temperature Update”, published on 21 August 2024 by Robert Rohde. Available at Berkeley Earth.

SECTION 2: CONTEXT AND CHALLENGES WITHIN THE UNFCCC: considerations, analyses and options for changing implementation actions from the G20 countries

The UNFCCC, together with the Kyoto Protocol and the Paris Agreement, form the backbone of global efforts to combat climate change. However, the speed, scale and effectiveness of these responses have been insufficient. G20 members are responsible for 87.8% of cumulative emissions, highlighting their importance in the global climate change agenda.

The lack of a binding compliance mechanism in the Paris Agreement and the differences in NDCs, as well as the lack of consensus in the UNFCCC negotiations due to the involvement of 198 Parties (197 States and 1 regional economic integration organization) and the conflictual environment, contribute to a lack of confidence in the commitments made and an insufficient volume of investment by economic agents.

In response to this, the G20 CDIM proposal aims to enable the rapid implementation of mitigation projects by leveraging resources for financing from the public and private sectors. The G20 CDIM also draws on the principles of the Coase Theorem⁵ and the Pareto Principle⁶ by focusing on the key actors with the greatest weight in international diplomacy and which account for 87.8%⁷ of global GHG emissions, in addition to the fact that reaching consensus among the Parties to the UNFCCC presents significant challenges, often leading to diluted agreements, or even due to conflicts of interest between Small Island Developing States (SIDS), Least Developed Countries (LDCs) and the Organization of the Petroleum Exporting Countries (OPEC). These conflicts often hinder the progress of global climate negotiations under the UNFCCC. Thus, the G20 CDIM seeks to overcome this issue by involving a smaller and more manageable group of stakeholders/decision-makers who can drive ambitious action to address climate change. By focusing on cooperative solutions within the G20 and other key actors, the G20 CDIM aims to promote unified action on emissions from all key actors.

The G20 CDIM proposal arises within a complex context of international climate change agreements and economic policies. This context is shaped by the historical evolution of climate governance structures and the urgent need to address global warming through innovative and cooperative mechanisms. As such, it seeks to integrate the most effective elements of past and current frameworks, while introducing new approaches to facilitate large-scale and impactful mitigation.

In summary, the G20 Innovative Clean Development Mechanism is a forward-looking initiative that builds on the lessons of past international climate change agreements, while addressing the current and future challenges posed by global warming. By leveraging the strengths of the G20, integrating robust financial mechanisms, and focusing on effective, science-based solutions, the G20 CDIM presents a robust solution to play a critical role in the global effort to mitigate global climate change and achieve sustainable development with projects at scale and that generate significant impacts on reducing emissions.

2.1 Inadvertent inaction in the current context: an additional context for G20 CDIM governance

The current landscape of international climate change governance is marked by significant challenges and shortcomings, which have inadvertently led to inaction and delayed responses to the urgent threat of global warming (MENDES; MIGUEZ, 2021). Understanding these dynamics is crucial to appreciating the need for and potential impact of the G20 CDIM.

⁵ The Coase Theorem postulates that cooperative solutions are more effective when fewer agents are involved.

⁶ The Pareto Principle, also known as the 80/20 rule, states that 80% of the consequences come from 20% of the causes.

⁷ FRIEDLINGSTEIN, P. et al., 2023.

The Kyoto Protocol, once a pioneering framework for binding international commitments to reduce greenhouse gas emissions, has unfortunately faced several major issues. The potential third commitment period of the Kyoto Protocol has been effectively frozen, mainly due to the lack of renewed targets from Annex B countries. This stagnation reflects a broader reluctance among major developed nations to commit to new binding targets, undermining the Protocol's role in driving global climate change action.

Furthermore, the Clean Development Mechanism (CDM), which represented one of the key innovations of the Kyoto Protocol, was halted by the CDM Executive Board. This halt was initiated largely due to concerns from the European Union, which significantly impacted the effectiveness of the mechanism. The EU's blocking of the CDM was justified on the grounds that no third commitment period had been agreed, nor was there agreement on Global Warming Potential (GWP) values for that period. This lack of consensus effectively paralyzed one of the key instruments⁸ of international cooperation on emissions reductions, illustrating the challenges of maintaining momentum in multilateral climate change agreements.

The Paris Agreement, while heralded as a landmark achievement in global climate change diplomacy, faces significant challenges that have led to widespread inaction and delays in implementing the measures needed to combat global warming. Nationally Determined Contributions (NDCs) under the Paris Agreement are intended to be the main drivers of action against global climate change. However, nationalism and a lack of adequate financing for developing countries have led to widespread non-compliance with the Agreement's "more ambitious" and "no-backsliding" long-term targets. This has resulted in global inaction in the present, with many countries postponing the implementation of necessary measures to an uncertain future, often targeting distant dates such as 2050 or the end of the century. A phenomenon of herd behavior has emerged, whereby inaction by important historical and current actors—particularly some large emitters—leads to a broader pattern of inaction by other countries. This collective inaction exacerbates global climate change and undermines the effectiveness of the Paris Agreement. The Paris Agreement's goal of keeping global average temperature rises to well below 2°C, and ideally below 1.5°C, looks increasingly distant and potentially unachievable on current trajectories.

The first report by the Intergovernmental Panel on Climate Change (IPCC) in 1990 estimated a global temperature increase of 1.8°C by 2030, a projection that closely aligns with current trends. This suggests that without significant and immediate intervention, the goals of the Paris Agreement may be unattainable. The lack of robust international cooperation further complicates efforts to achieve the goals of the Paris Agreement. The regulation of its Article 6.4, which establishes a mechanism for international cooperation in reducing emissions, has created significant hurdles to project implementation. These regulatory challenges hinder the timely and effective implementation of climate change mitigation projects.

In turn, Article 6.2 of that Agreement, which allows for the negotiation of ITMOs (Internationally Transferred Mitigation Outcomes), raises concerns about the potential for trading units that do not genuinely represent emissions reductions, which could undermine the integrity of global carbon markets and the overall effectiveness of the Paris Agreement. The concept of emissions avoidance, particularly through forest conservation, despite the fact that it does not represent actual emissions reductions but rather conservation of existing forests, plays a crucial role in climate change strategies for some countries, but also faces significant challenges, including the difficulty of ensuring that preserved forests are not eventually subject to deforestation or degradation and therefore represent actual anthropogenic greenhouse gas emissions.

⁸ Registered projects: 7839; Registered PoAs: 365; CERs issued for project activities: 2,376,988,028 and CERs issued for program of activities: 73,033,202. Available at: <cdm.unfccc.int>. Accessed on September 29, 2024.

The debate between REDD+⁹ credits and results-based payments, in addition to wildfires around the world, highlights the complexities of financing forest conservation efforts and investments. While credits can provide initial funding, they can lead to uncertainty about the actual emissions reductions achieved, since emissions reductions are compared to a historical baseline, and even increases in current emissions can lead to results-based payments when compared to a higher historical baseline. While results-based payments tie funding directly to measurable outcomes, they may lack the initial capital needed to get projects started (RODRIGUES; MENDES, 2019).

The current decade is often referred to as the “critical decade” for controlling global warming, due to the rapidly closing a window of opportunity to limit global temperature rise and avoid the worst impacts of climate change. Understanding the inventory of emissions is essential for effective climate change governance. Current global warming can currently be represented by two memories. The first level of memory reflects the cumulative emissions since the Industrial Revolution, which is represented by the current concentration of GHGs in the atmosphere. This concentration is the result of all historical emissions and is the main driver of global warming. The second level of memory reflects the current global mean surface temperature due to the increase in GHG concentrations. This temperature increase is a delayed response to past emissions, highlighting the long-term impact of historical greenhouse gas emissions. Current climate change governance frameworks often focus on the flow of emissions, treating it as a local pollution issue, which is an incomplete and erroneous approach, as a short-term impact distinct from the long-term impacts of global warming.

Focusing primarily on current emissions as a local pollution problem, risks underestimating the cumulative effects due to the long-time residence of most greenhouse gases in the atmosphere and the global nature of climate change. This narrow focus can lead to inadequate responses that fail to address the full scope of climate change. Effective climate change governance requires simultaneously controlling emissions, GHG concentrations and the rate of global temperature increase. This requires comprehensive global monitoring and reporting systems.

Annual inventories of selected greenhouse gases, across sectors and using consistent methodologies, are crucial for monitoring progress and identifying areas where further reductions are needed. Monitoring annual concentrations and growth rates of selected gases provides critical data for understanding the effectiveness of climate change policies and adjusting strategies as needed. Annual monitoring of global average temperature increases is essential for assessing the real impact of emissions and ensuring that global warming remains within the targets set by international agreements. Such monitoring and review among G20 members would only simplify the decision-making process for what happens under the UNFCCC.

The global community faces significant challenges in agreeing on how to share the burden of climate change action, leading to tensions between developed and developing countries. A focus on current emissions often results in calls for developing countries to shoulder a disproportionate share of the burden, despite their smaller historical contributions to global warming. The 1997 Brazilian proposal in response to the Berlin Mandate suggested a focus on historical responsibility in allocating the burden of climate action, emphasizing the ethical imperative for developed countries to lead the way in emissions reductions to mitigate global warming. The concept of dynamic historical responsibility highlights the need for fairness and equity in climate change governance, recognizing

⁹ REDD+ stands for ‘Reducing Emissions from Deforestation and Forest Degradation in Developing Countries’. The ‘+’ signifies additional climate-friendly forestry activities, namely sustainable forest management and conservation and enhancement of forest carbon stocks. Under the framework of these REDD+ activities, developing countries can receive results-based payments for emission reductions when they reduce deforestation. This serves as a major incentive for their efforts. The five REDD+ activities are: 1. Reducing emissions from deforestation; 2. Reducing emissions from forest degradation; 3. Conserving forest carbon stocks; 4. Sustainable forest management; and 5. Enhancing forest carbon stocks.

that countries most responsible for past emissions, as reviewed periodically, should bear the greatest responsibility for addressing the resulting climate change.

The challenges of inadvertent inaction within the current climate change governance framework highlight the urgent need for innovative mechanisms such as the G20 CDIM. By addressing the shortcomings of the Kyoto Protocol, Paris Agreement, UNFCCC and promoting a more equitable and effective approach to global climate change action, the G20 CDIM has the potential to overcome inertia and drive significant progress in the fight against climate change.

In light of the current scenario, it is increasingly evident that the global effort to combat climate change is heavily influenced by the historical contributions of major developed economies. From 1751 to 2022, cumulative carbon emissions data reveal that G20 countries are responsible for over 87.8% of the world's total emissions, underscoring their critical role in addressing the climate crisis.

Specifically, G20 countries listed in Annex I of the UNFCCC account for 61.51% of the world's cumulative emissions, reflecting their significant share of the historical burden. In contrast, G20 Non-Annex I countries contribute 26.25% to the global total, highlighting the growing importance of emerging economies in the current climate framework. The rest of the world combined accounts for just 12.24% of the world's total cumulative emissions in 2022 from the energy sector and cement production.

These figures, assessed and analyzed by CDIAC/ORNL¹⁰ in 2024 for fossil fuel and cement industry emissions from 1750 to 2020, and updated for 2022 (FRIEDLINGSTEIN, P. et al., 2023), emphasize the urgent need for a robust, fair, and equitable approach to global climate change governance. Given the disproportionate share of cumulative emissions from G20 countries, it is imperative that these nations, particularly those listed in Annex I of UNFCCC, lead the way in implementing effective mitigation strategies. The G20 Clean Development Innovative Mechanism (G20 CDIM) offers a promising way to catalyze such efforts, ensuring that both historical responsibilities and current capabilities are taken into account in the pursuit of sustainable development globally.

2.2 Possibilities of new compromises from negotiation with G20 countries

The current international climate framework, comprising the UNFCCC, its Kyoto Protocol and its Paris Agreement, provides a foundation for global action on climate change. However, to effectively address the accelerating global warming crisis, there are opportunities to restructure and strengthen these frameworks, particularly through the engagement of the G20 countries, which represent the world's largest economies and a significant share of global greenhouse gas emissions.

Table 1 below shows that G20 members are responsible for 87.8% of cumulative emissions in 2022. The vast majority of these cumulative emissions in G20 members are the responsibility of UNFCCC Annex I Parties (61.51%). It is worth noting that Non-Annex I Parties to the UNFCCC are responsible for 35.89% of global cumulative emissions for the period 1751-2022. It is also worth noting that the world's cumulative emissions are over 1.7 trillion GtCO₂, taking into account that these cumulative emissions come only from fossil fuels in the energy sector and the cement industry.

These figures were calculated for existing countries using the same approach of aggregation and disaggregation by country of historical emissions as was done in the Brazilian proposal for the

¹⁰ The Carbon Dioxide Information Analysis Center (CDIAC) at Oak Ridge National Laboratory acquires or compiles, quality assures, documents, archives, and distributes data and other information on carbon dioxide, other greenhouse gases, and climate change.

Berlin Mandate under the UNFCCC (BRAZIL, 1997). In the case of an existing country being part of a former larger country, the disaggregation was based on the share of each existing country in the year following the disaggregation in relation to the aggregated country in the previous years.

Table 1. Cumulative Annex I, G20 and world CO₂ emissions in 2022.

Cumulative Emissions						GtCO ₂
	Annex I	Non-Annex I	G20			World
			G20 Annex I	G20 Non-Annex I	G20 Total	
2022	1.091.329.646	612.055.369	1.048.903.767	447.700.031	1.496.603.798	1.705.343.774
Share	63,99%	35,89%	61,51%	26,25%	87,76%	100,00%

Source: For annual emissions by country from 1751 to 2020 (HEFNER, M.; MARLAND G., 2023) and for 2021 and 2022 (FRIEDLINGSTEIN, P. et al., 2023).

The following subsections present 3 options on how to restructure the institutional arrangements of the International Climate Change Regime to be able to deal with the creation of the Voluntary Mitigation Plan as an entry point to the G20 CDIM. It is worth mentioning that the three options presented below may not be mutually exclusive, understanding that the subset of participating countries may vary depending on the national political context over time (UNFCCC, Kyoto Protocol and Paris Agreement), allowing different governments to adhere to specific menus of objectives to support mitigation measures that will soon become concrete investments in solutions.

The core idea of the platform's governance is to create an agile framework that utilizes existing structures and bureaucracies, learning from lessons and good practices from previous experiences of international green finance structures, avoiding duplication of bureaucracies, processes and processing time, providing solid, responsive and customer-oriented solutions for good and impactful projects.

Option a) G20 Annex I countries as the current Annex B of the Kyoto Protocol and the creation of the New Annex C of the Kyoto Protocol containing non-Annex I G20 countries

The Kyoto Protocol established the basis for binding emission reduction commitments and market-based mechanisms to support global climate efforts. QELROs¹¹ represent the binding quantified emission reduction or limitation targets for Annex I countries under the Kyoto Protocol listed in Annex B of the Protocol. These targets were a pioneering step in formalizing national commitments to reduce greenhouse gas emissions, using comparable metrics and common rules defined by Annex B countries for commitment periods. The Kyoto Protocol introduced three main mechanisms – Emissions Trading (ET) and Joint Implementation (JI) among Annex B countries, Clean Development Mechanism (CDM) among non-Annex I and Annex B countries – to reduce international implementation costs and facilitate the achievement of national emission reduction/limitation targets through international cooperation. Emissions trading under the Kyoto Protocol established a market-based approach to achieving emissions reductions by allowing Annex B countries with comparable units of surplus emissions reductions to sell them to countries struggling to meet their targets. This international cooperation mechanism has contributed to achieving cost-effective global climate change outcomes. The JI has enabled developed (Annex B) countries to invest in emissions reduction projects in other Annex B countries (i.e. Economies in Transition from Centrally Planned to Market Economies). CDM has provided an innovative opportunity for developing countries that do not have QELROs to participate in the international movement to achieve emissions reductions while contributing to their sustainable development. Therefore, investments in developing countries for resources from Annex B countries could generate comparable units of emissions reductions that could be acquired and used by developed (Annex B) countries to

¹¹ QELROs – Quantified Emissions Limitations and Reductions Objectives.

further contribute to achieving their QELROs. Furthermore, the CDM as a voluntary mechanism generated the first international initiative to undertake unilateral investments by economic agents from developing countries to reduce their emissions with their own investment resources, while creating capacity to absorb and develop new low-carbon technologies. The CDM contributed to South-North emission reduction cooperation to facilitate the achievement of the full Annex B mitigation targets. The second KP Commitment Period established QELROs by Annex B countries until 2020 and in 2024 the True-up Period (compliance and assessment of the achievement of the targets set for Annex B countries) is taking place.

To improve international climate change mitigation cooperation, further integration of G20 countries into the governance structure could involve listing G20 countries as a new “Annex C” for Non-Annex I countries and maintaining G20 Annex I countries as a new “Annex B” under the Kyoto Protocol for a third and subsequent commitment periods. This differentiation within the G20 would allow for tailored commitments based on national circumstances, thereby increasing the effectiveness, ethics and equity of global climate action. Therefore, the current international rules of the Kyoto Protocol could be maintained, providing predictability to economic actors, financial institutions and private investors who have already dedicated time and resources to generating emission reduction units, while improving the total demand from new QELROs from G20 Annex B countries as well as from new QELROs from G20 Annex C countries. This approach can create the right incentives for a smooth transition for new eligible Emissions Trading and Joint Implementation members in Annex B countries and further enhance CDM mitigation efforts in non-Annex C countries. These G20 QELROS would be the basis for the Voluntary Targets Plan described in section 3 below.

Option b) G20 Agreement to set and monitor achievement of New, G20-Exclusive, comparable Mitigation Targets in addition to their NDCs under the Paris Agreement

Nationally Determined Contributions (NDCs) are the main vehicle through which countries outline their country-driven climate commitments under the Paris Agreement adopted in 2015. These contributions are intended to become progressively more ambitious over time, reflecting the highest possible efforts of each country. However, there is no definition of NDCs under the text of the Paris Agreement ratified by over 190 countries. This lack of clear comparability of international regulation of NDCs has created perverse incentives for country leaders to promise to act rather than creating positive incentives for economic actors to invest in real projects and policies, leading to a lack of confidence among private actors and investors at the international level that they would achieve comparable mitigation results. Therefore, due to the legal nature of NDCs being entirely self nationally determined, global cooperation tends to be more difficult to motivate economic actors to invest. The lack of comparability raises questions about the effectiveness of mitigation outcomes across the range of climate change actions listed in current NDCs. Furthermore, the obstacles created by the lack of clarity about how individual NDC achievements can actually be compared question the efficiency of the use of global economic and human resources.

Article 6 of the Paris Agreement provides the initial basis for voluntary cooperation approaches among countries in implementing their NDCs, including through the transfer of mitigation results (6.2 and 6.4) and for non-market approaches (6.8). However, the absence of a binding compliance mechanism in the Paris Agreement and the lack of comparability regulation of NDCs and the current barriers of Article 6 regulation (MIGUEZ; MENDES, 2023) represent a significant drawback, potentially hampering the implementation and accountability of these NDCs.

Therefore, addressing such disadvantages could be implemented by creating new, voluntary, G20-only Comparable Mitigation Targets without the need to amend the Paris Agreement, which would serve as their NDCs under the Paris Agreement, which could drive ambitious action within this critical group. It should be remembered that the development of NDCs by other countries represents a high cost and effort for a modest result. Therefore, the structure of the Paris Agreement

could be further improved by implementing the G20 Innovative Clean Development Mechanism. The new mitigation targets of the G20 NDCs would be the basis for the Voluntary Target Plan of the CDIM Mechanism.

Option c) G20 countries as Annex III to the Convention

One potential restructuring approach is to establish G20 countries as members of a new list of “Annex III” countries under the United Nations Framework Convention on Climate Change (UNFCCC). This annex would recognize the unique economic and emissions profiles of G20 members, creating a platform for these nations to take enhanced mitigation actions in line with their national circumstances, capabilities, and historical responsibilities for contributing to global warming. The advantage of this option is associated with the universal nature of the UNFCCC. Furthermore, since its entry into force, there has never been a withdrawal by a Party that had initially ratified it. Despite this fact, with the UNFCCC, as with the Paris Agreement, there is also the absence of a binding compliance mechanism¹², the implementation of compliance with the G20 Voluntary Targets Plan could also be further improved through the implementation of the G20 Innovative Clean Development Mechanism. Under this option, G20 countries will have commitments inscribed under the new Annex III of the UNFCCC, taking into account the different national circumstances of Annex I and Non-Annex I Parties to the Convention. The new G20 mitigation targets inscribed in a possible new Annex III of the Convention would be the basis for the CDIM Mechanism’s Voluntary Targets Plan.

SECTION 3: G20 CDIM STRUCTURE: an innovative proposal

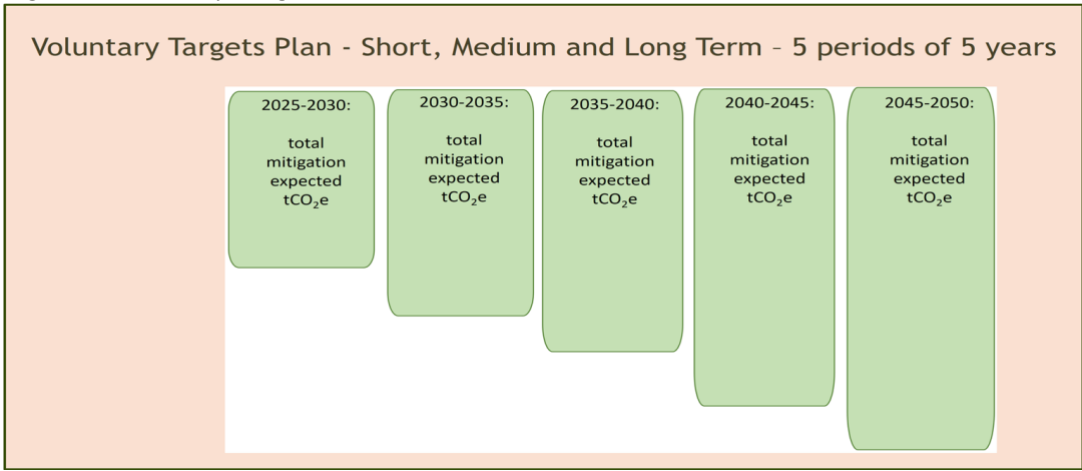
Throughout this section, we present in detail the G20 CDIM proposal, which is based on three fundamental pillars: a) Voluntary Targets Plan. The plan aims to establish additional and progressive mitigation targets for G20 countries, reviewed every five years. These targets are designed to align national efforts with the global goal of limiting warming below 2°C; b) Investment Fund. The fund will be structured to obtain a Triple A credit rating, attracting investments from a wide range of sources. The fund will use guarantees from G20 countries and multilateral institutions to ensure stability and credibility; and c) Platform for Intensive Mitigation. This platform will serve as the operational hub for evaluating and financing mitigation projects. It will be responsible for selecting projects based on cost-effectiveness and financial return criteria, ensuring that resources are allocated efficiently.

3.1 Voluntary Targets Plan

As we approach the middle of the critical decade 2020-2030, the global community faces an unprecedented challenge in controlling global warming. The G20 Clean Development Mechanism (G20 CDIM) recognizes that this period is crucial for defining the trajectory towards a sustainable future. The Voluntary Targeting Framework lays the foundation for progressive, verifiable, comparable and equitable climate action among G20 countries as well as future potential new members.

¹² Despite the existence of Article 13 of the Convention, this article has never been regulated.

Figure 3: Voluntary Targets Plan – Five Five-Year Periods.

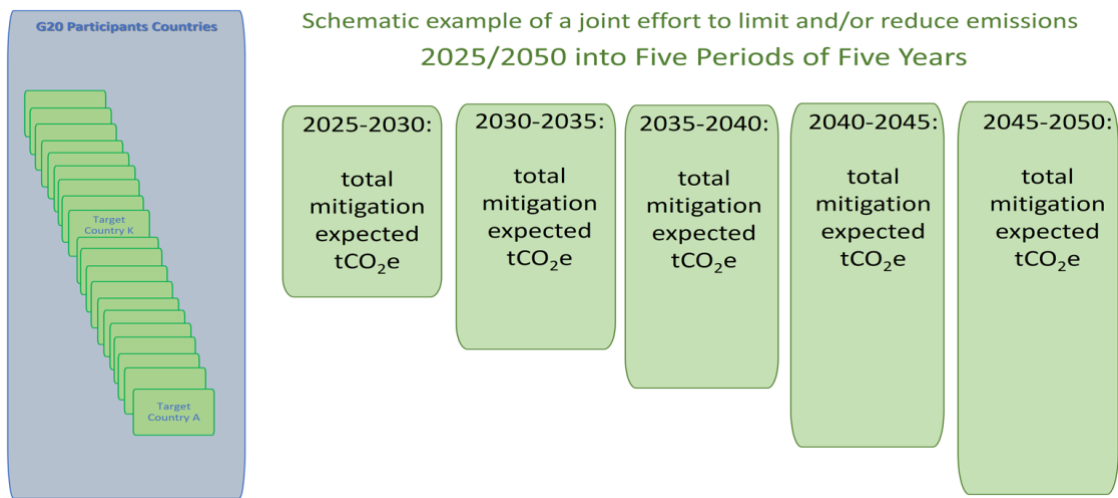


Source: Prepared by the authors.

The first pillar is to establish the G20 Targets (CDIM Participating Countries). The G20 countries, as the main participants in the CDIM, have a significant responsibility in the global effort to mitigate climate change. Together, they are responsible for more than 80% of global greenhouse gas (GHG) emissions, rapidly approaching 88% of historical cumulative emissions. Therefore, setting clear, ambitious and realistic targets is essential. To effectively address climate change, G20 countries will jointly set voluntary national targets that encompass additional mitigation targets. These targets will be aligned with the overarching goal of limiting global warming to well below 2°C, with efforts to reach the 1.5°C limit.

To ensure that the targets remain relevant and adaptable to changing circumstances, the G20 CDIM will require participating countries to revisit the targets set for the initial five periods and potentially revise their targets every five years. This periodic review will allow for adjustments based on technological advances, economic developments and the latest scientific findings. Each five-year period (for the years between 2025, 2030, 2035, 2040, 2045 and 2050) will serve as a checkpoint to assess progress, refine strategies and jointly set new voluntary national targets, progressively and even towards negative emissions if necessary.

Figure 4: Illustrative plan of five progressive voluntary targets for 2025-2050.



Source: Prepared by the authors.

The Voluntary Targeting Plan emphasizes the need for progressive mitigation, where emissions reduction efforts will be intensified over time. Participating countries will be encouraged

to adopt economy-wide targets, focusing on greenhouse gas-emitting sectors such as energy, transport, manufacturing, agriculture, livestock and land use, land-use change and forestry for the main greenhouse gas (e.g. as in the Kyoto Protocol), but taking into account the primary importance of CO₂ in causing global warming.

To ensure transparency and accountability, all G20 member countries will be required to submit comprehensive national GHG inventories annually. These inventories will detail emissions across all sectors and major greenhouse gases, providing a clear picture of each country's progress towards its voluntary mitigation targets. The submitted inventories will be made publicly available, promoting transparency and allowing independent verification of progress. To maintain the integrity of the Voluntary Target Plan, the submitted GHG inventories will be verified by two independent entities from different regions of the world. These entities will be selected based on their expertise and impartiality, ensuring that the verification process is robust and reliable. The Platform for Intensive Mitigation, established under the G20 CDIM, will bear the costs associated with the verification process, ensuring that financial constraints do not impede the accuracy and reliability of the assessments.

The targets set out in the Voluntary Target Plan will be closely linked to the total emissions of G20 countries, taking into account a dynamic and fair share of historical target responsibility based on cumulative emissions. Given that G20 nations are responsible for the majority of global emissions, their collective actions will have a profound impact on the trajectory of global climate change. The plan will assess how aggregate targets contribute to global emissions reductions, ensuring that G20 efforts are sufficient to achieve international climate change goals.

While G20 countries are central to the CDIM, the mechanism will also seek to include additional participants from the rest of the world (non-G20 participants). The inclusion of new participants will be governed by specific criteria to maintain the effectiveness and integrity of the Voluntary Target Plan. To ensure that the G20 CDIM continues to be a significant driver of global emissions reductions, the inclusion of new participants will be based on a criterion that maintains the collective share of the G20+ with new participants from the rest of the world at 88% of global emissions.

The total G20+ membership with the inclusion of new participants will be reviewed every five years, in line with the frequency of the Voluntary Target Plan. This will ensure that the inclusion of new participants does not dilute the impact of the mechanism on global emissions. Potential new participants will be assessed based on their emission levels, economic capabilities and willingness to commit to the Voluntary Target Plan. Countries with significant emissions will be prioritized to maintain a balance in global emissions shares. The G20+ CDIM will also consider the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) when including new participants, ensuring that the burden of emissions reductions is shared fairly among all parties.

The Voluntary Targeting Framework is a critical component of the G20 Innovative Clean Development Mechanism, setting the stage for effective and equitable climate action during the critical decade 2020-2030. By setting clear targets, ensuring regular review and verification, and including new participants under dynamic and rigorous criteria, the G20 CDIM aims to drive substantial progress in global mitigation efforts. The active participation of G20 countries, combined with the periodic inclusion of additional participants from the rest of the world triggered by the threshold set above, will be essential to achieving global climate goals and ensuring a sustainable future for all.

3.2 The G20 CDIM Investment Fund

Establishing a robust and resilient financial framework is essential for the G20 CDIM to be able to respond financially to the mitigation challenge. The G20 CDIM Investment Fund is designed to secure and allocate financial resources efficiently and effectively. This section details the mechanisms for establishing a Triple A Fund¹³, leveraging financial markets, and establishing sound governance practices, all of which are essential to maintaining the credibility and impact of the Fund.

The CDIM Investment Fund will be established with the objective of achieving and maintaining a Triple A credit rating, ensuring that it is perceived as a low-risk and highly reliable investment by global financial markets, and thereby securing resources at the lowest cost in the market and in a volume of resources compatible with the needs of projects to be implemented. This rating will also be essential to attract and secure capital from a wide range of institutional investors, including sovereign wealth funds, central banks and private sector participants.

The initial capitalization of the Triple-A Fund will be built with the support of a combination of: (i) liquid assets; (ii) Letters of Guarantee from G20 countries; and (iii) other assets. The Letters of Guarantee from AAA G20 Countries will be issued by G20 countries and will comprise the first class of quotas, ensuring the initial credibility and stability of the Fund. For G20 countries that do not have an AAA rating, the guarantees will be supplemented by guarantees contracted with multilateral institutions with a Triple-A rating, such as the World Bank, the Inter-American Development Bank (IDB) and the International Monetary Fund (IMF), among others MDBs. This approach will ensure broad participation while maintaining the Fund's overall credit rating.

3.2.1 Supplementary Funds (Non-G20 Countries and other actors) and Definition of Rules of Participation

To expand the financial base and ensure global inclusion, the G20 CDIM Investment Fund will also incorporate contributions from non-G20 countries and other actors. These contributions, while not directly affecting the Triple A rating, will provide additional financial resources and encourage broader international cooperation. These Supplementary Funds or Contributions from non-G20 countries and other actors will be accepted based on clearly defined participation rules in the different quota categories of the fund, ensuring that these funds are managed with the same rigor and transparency as those of G20 nations. Criteria for participation will include minimum financial contributions, adherence to the G20 CDIM financial management principles, and a commitment to the Fund's objectives of global climate change mitigation and sustainable development.

Maintaining the Fund's Triple-A rating will require ongoing monitoring of both the Fund's financial condition and the rating of its investment portfolio, liquidity management and capital. Regular assessments will be conducted to ensure continued compliance with the Triple-A standards.

The Fund's investment portfolio will be structured to prioritize low-risk, high-impact projects that contribute to mitigation as selected by the Mitigation Intensive Platform. Investments will be diversified across different emission sources, targeting the highest possible greenhouse gas emissions reductions and across regions to mitigate risk and ensure stable returns.

¹³ Triple A or AAA is the risk rating, and represents the lowest risk rating that an institution or project can receive, indicating that it is extremely financially reliable, which is positively reflected in its cost of raising funds in the market. This rating is granted by independent rating agencies, such as S&P Global, Fitch and Moody's, and assesses the ability of a company, government, project or other group to pay its debts and/or meet its financial commitments, representing the better the rating or rating from the agency, and therefore also the lower cost of raising funds, whether in the financial system or in the capital market.

Last but not least, the Fund will implement rigorous liquidity management practices, ensuring that it has sufficient liquid assets to meet short-term obligations while optimizing long-term returns. This will involve a mix of cash reserves, short-term government securities and other highly liquid instruments.

To maximize the impact of the G20 CDIM Investment Fund, it will be crucial to access international financial and capital markets to raise additional resources and incentivize market-based mitigation efforts. The Fund will actively seek to raise additional resources from global financial and capital markets, leveraging its Triple-A rating to attract capital on favorable terms and volumes. The Fund may issue green bonds, climate change mitigation bonds or sustainability-linked bonds, attracting investors interested in environmental, social and governance (ESG) goals specifically related to combating climate change. These bonds will be structured to provide competitive returns while supporting the Fund's mitigation projects. Partnerships with private sector entities will be encouraged, offering opportunities for co-investment in high-impact projects.

The G20 CDIM Investment Fund will explore innovative fundraising mechanisms, including the issuance of Climate Change Tokens¹⁴ (CCTs). These tokens will represent a new form of investment directly linked to the Fund's mitigation objectives. CCTs will be digital tokens issued on a secure and transparent blockchain platform. They will be linked to specific mitigation outcomes, such as a reduction in GHG emissions, and will be available for purchase by institutional and retail investors. Investors in CCTs will be able to trade these tokens on digital exchanges, providing liquidity and a potential return on investment based on the success of the underlying mitigation projects.

3.2.2 Market Purchase of Mitigation Units in Terms of CCT/tCO₂e

To further integrate financial markets with mitigation efforts, the Fund will introduce Decarbonization Units, which can be purchased in terms of CCT per metric ton of CO₂ equivalent (tCO₂e) reduced. These units will quantify the reduction in CO₂ emissions achieved by specific projects financed by the G20 CDIM Investment Fund. Each unit will correspond to a verified reduction of tCO₂e. The sale of Mitigation Units will create a dynamic marketplace, establishing a market-driven incentive for companies and governments to invest in GHG mitigation projects, aligning financial returns with climate change impact.

Effective governance will be essential to the success of the CDIM Investment Fund. The governance structure will be designed to ensure that the Fund operates transparently, efficiently and in line with best practices in the financial markets. The Fund's governance will reflect the diverse interests of G20 countries, with each member country having representation on the Fund's board. This will ensure that the Fund's strategy and investments align with the collective goals of the G20, while taking into account the unique circumstances of each member.

To maintain the integrity and credibility of the Fund, independent oversight will be established. This will include regular audits, compliance checks and the involvement of independent experts in decision-making processes. The governance structure will also include mechanisms for engagement with a broader range of stakeholders, including non-G20 countries, private sector partners and civil society organizations. This will ensure that the Fund's activities are informed by a wide range of perspectives and contribute to global climate mitigation goals.

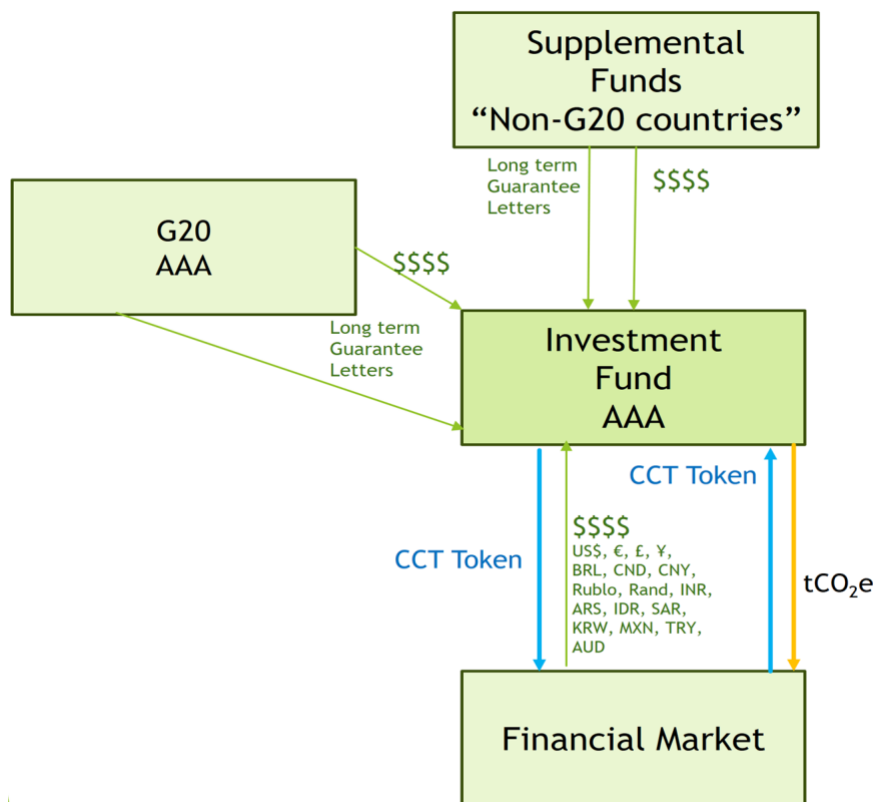
The governance structure will include a robust risk management strategy, with a focus on identifying and mitigating financial, operational and reputational risks. This will be crucial to

¹⁴ Tokens are digital assets that represent goods, services, rights, or values on a blockchain network. They can be used for a variety of purposes, such as payment, rewards, or to guarantee participation in an ecosystem.

maintaining the Fund's Triple A rating. The Fund will adhere to the highest standards of transparency and accountability, including regular public reporting on its financial performance, investment decisions and progress towards mitigation goals.

The governance of the G20 CDIM Investment Fund will be guided by best practices in financial markets, including principles of good corporate governance, ethical investment and responsible stewardship of resources.

Figure 5: Illustrative Diagram of the G20 CDIM Investment Fund



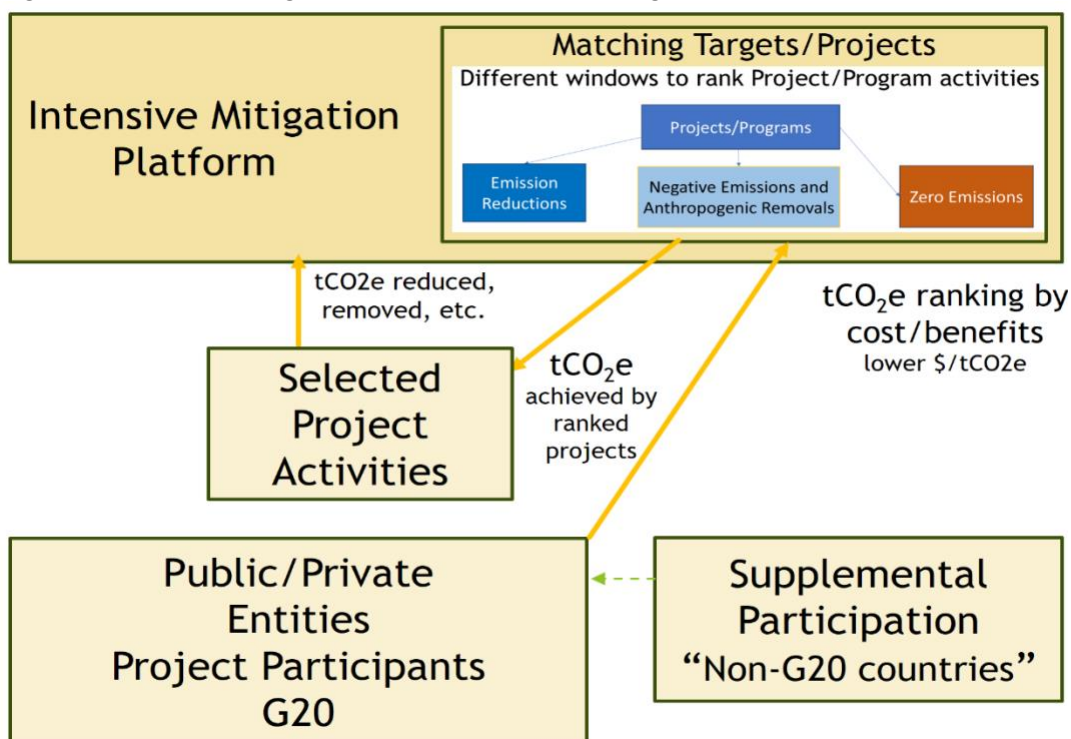
Source: Prepared by the authors.

3.3 G20 CDIM Intensive Mitigation Platform

This subsection details the governance structure, operation and criteria for project selection, ensuring that the Platform operates with transparency, efficiency and adherence to the highest standards of financial and environmental integrity.

The G20 CDIM Platform for Intensive Mitigation serves as the operational hub for matching, assessing and financing projects that contribute to the global mitigation targets set under the G20 Innovative Clean Development Mechanism (G20 CDIM). It is the “operational brain” that would enable the pipeline of effective and impactful projects to move forward, once the financing bottleneck has been addressed by Pillar II and its investment fund.

Figure 6: Illustrative diagram of the G20 Intensive Mitigation Platform



Source: Prepared by the authors.

The G20 CDIM Intensive Mitigation Platform will operate on a structured timeline, with each operational period lasting five years. This periodicity aligns with the broader objectives of the G20 CDIM and allows for regular reassessment of progress, adjustment to changing circumstances and the setting of new targets as needed. The Platform's activities will be divided into five distinct periods, spanning the years 2025 to 2050. Each period will have specific mitigation targets, aligned with the voluntary targets of the G20 participating countries and the overall objective of achieving significant reductions in global greenhouse gas emissions by 2050.

The governance of the G20 CDIM Intensive Mitigation Platform will be structured to ensure broad representation and expertise, with a focus on transparency, accountability and efficiency. The governance body will consist of 10 voting members and 10 alternate members, each nominated by a G20 country, with half of the voting members from Annex I and half from Non-Annex I and alternate members. These members will be responsible for key decisions, including project selection, resource allocation and strategic direction. To bring in additional expertise and ensure alignment with global financial and development goals, non-voting observers from regional development banks¹⁵ will be invited to participate in the governance of the Platform.

The G20 CDIM Platform will operate as a hub for identifying, assessing and financing mitigation projects within G20 countries and, where applicable, in consortia with non-G20 countries.

¹⁵ These include: (i) African Development Bank (AfDB); (ii) Asian Development Bank (ADB); (iii) European Investment Bank (EIB); (iv) Inter-American Development Bank Group (IDBG); (v) Latin American Development Bank Group (CAF); (vi) World Bank Group (WBG); (vii); Asian Infrastructure and Investment Bank (AIIB); and (viii) New Development Bank (NDB).

The Platform will work in collaboration with G20 countries to ensure that national projects are aligned with the aggregate objectives defined in the Voluntary Targets Plan. This matching process will be essential to ensure that individual projects effectively contribute to the overall mitigation objectives. The maturity of the Project will be essential, and its pipeline date will be the expected financial close date, avoiding including in the pipeline of that year projects that are not mature enough to be considered “bankable”, meaning that, for example, a project that is expected to have a financial close in 2028 will be considered as pipeline for that year only. This is expected to focus on efforts on projects that are closer to being implemented. Rules to avoid opportunistic behavior should be established, for example, the project that did not perform in the pipeline year should be considered for investment in the following year or two.

Ranking viable and mature projects will be a critical function of the Platform, ensuring that resources are allocated to the most effective and efficient mitigation initiatives. The selection of the best projects will be based on a number of criteria. First, projects will be ranked primarily based on their cost-effectiveness in mitigating greenhouse gas emissions. This metric will be calculated in terms of dollars per ton of CO₂ equivalent (\$/tCO₂e) mitigated (reduced or removed). Second, within the top-ranked projects, further selection will prioritize those that offer the best internal rate of return (IRR). This approach ensures that projects not only contribute to mitigation but also provide a sustainable financial return. Additionally, projects can be prioritized based on their ability to secure a mix of capital and financing, thereby improving their position in the project pipeline. This flexibility will allow for more effective capital allocation and project implementation.

The Platform will use market-based mechanisms to allocate resources efficiently, ensuring that the most promising projects receive the necessary funding. Matching available resources to the best projects will be done through the purchase of tCO₂e by the G20 CDIM Investment Fund. The Fund will purchase emissions reductions in terms of tCO₂e from selected projects, providing a direct financial incentive to achieve mitigation targets.

The G20 CDIM Investment Fund may also create incentives through conditionalities in token bidding: the Platform may introduce incentives into the bidding process for Climate Change Tokens (CCTs), such as adjustments to payment periods, grace periods and interest rates, to encourage financial institutions to apply these mechanisms to new financing proposals. Alternatively, the Fund may apply the Dutch Auction (Descending Price Auction). A Dutch auction mechanism will be used, where the auctioneer starts with a high price and gradually reduces it until a bid is made. This approach will help uncover the true market value of mitigation projects and ensure competitive pricing.

Project selection will follow a rigorous process to ensure that only the most effective and viable initiatives are funded or purchased by the Platform. Projects must demonstrate a clear baseline against which emissions reductions or removals will be measured. This baseline will be critical to validating the effectiveness of the project. Projects targeting net-zero emissions will have their baseline set at marginal emissions reductions, emphasizing the need for innovation and technological advancement. Projects will be validated for compliance with the rules and methodologies defined by the Platform and validation will be carried out by an independent operational entity accredited by the Platform. Validation will verify compliance with the selection rules, IRR, baselines, methodology for estimating emissions reductions by the project and monitoring methodology. A robust monitoring framework will be established to track the progress and impact of funded projects, ensuring compliance with the Platform’s objectives and standards. Each project will require an approved monitoring plan, detailing the methods and frequency of data collection, reporting and verification. This plan will be essential to ensure that projects remain on track and achieve their intended results. The verification report will be certified by the Platform that will make tCO₂e available for acquisition by the Fund.

The credibility of the CDIM Platform depends on the accurate validation and verification of the emissions reductions achieved by the financed projects. Independent third-party entities, known as Designated Operational Entities (DOEs), will be responsible for validating and verifying the emissions reductions or removals claimed by the projects. These entities will be selected and paid by the Platform, ensuring impartiality and transparency.

Public and private sector entities within G20 countries will be eligible to submit projects for funding through the G20 CDIM Intensive Mitigation Platform. Governments and public institutions will be encouraged to propose large-scale, high-impact projects that align with national mitigation goals. Private companies and consortia will be encouraged to develop innovative, market-driven solutions that contribute to overall mitigation goals. To promote global participation, the Platform will allow non-G20 countries to co-participate in projects led by G20 public or private entities. Non-G20 countries may participate in projects as co-investors or partners, provided they meet the Platform's criteria and standards. Consortia may include non-G20 institutions or entities, but must be led by a G20 public or private entity.

Project selection will be guided by specific criteria designed to maximize the effectiveness and financial viability of mitigation efforts. Projects will be ranked based on their cost-effectiveness in reducing emissions, measured in dollars per ton of CO₂ equivalent (Best Indicators \$/tCO₂e). In addition, projects offering the highest internal rate of return (IRR) will be prioritized, ensuring that investments are financially sustainable and attractive to investors (Best IRR).

Co-financing agreement could be signed with regional and national development banks to combine funds with their existing projects with a clear mitigation impact, leveraging their project envelopes for relevant mitigation projects. These funds would be delivered through their regular financing structures to avoid additional bureaucracy for clients and countries. In return, the banks would commit to aligning part of their project indicators with the platform and to broaden their institutional ambitions by increasing the share of mitigation projects in their portfolios.

A complementary agreement with these banks could be made to support project preparation facilities, providing support with success fee-based capital structures or credit to provide additional financial resources for these projects in the preparation phase. Additionally, the platform would operate with three distinct windows, allowing competition between projects categorized by typology or area of activity, which would facilitate the comparison and selection of the best initiatives.

A first type of project is a common emissions reduction activity that aims to reduce annual emissions flows from fossil fuel combustion in the power sector and the industrial sector, and emissions from the cement industry. In addition, emission reductions in other greenhouse gases, e.g. methane, such as landfill emission reductions, or nitrous oxide, such as chemical industry emission reductions, can also be accepted in this window.

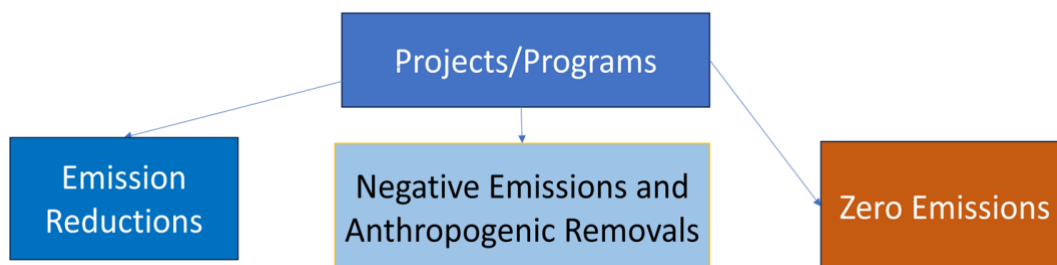
The second type of projects are activities that aim to reduce carbon stocks in the atmosphere, such as deforestation and reforestation. According to data published by the FAO and organized by the World Bank (WORLDBANK, 2024), between 1990 and 2021, the G20 countries collectively lost 156,000 km² of forest area. However, the world lost 10 times more forests in the same period (1.5 million km²). Thus, even losing this amount, the G20 economies increased their share of global forests by 3%, going from 67% in 1990 to 70% in 2021, increasing their relative importance in this area as well. In addition, projects that aim to achieve negative emissions can be hosted in this window, such as RCCS (Renewable Carbon Capture and Storage).

Finally, a third window will welcome all types of zero-emission projects, such as hydropower, wind power, solar power, biofuels, nuclear power or CCS projects. These projects have non-relevant total emissions during their operation, close to zero.

The idea of separating the projects entering the platform into 3 windows is to apply the selection criteria of best cost benefits and IRR to these 3 categories that will necessarily have different economic and baseline assessment methodologies. Instead of emissions reductions, removals or technologies competing with each other, each class of different technologies will have its own path to seek financing and implementation.

Figure 7: Diagram of the different financing windows of the G20 Intensive Mitigation Platform

Different windows to rank Project/Program activities



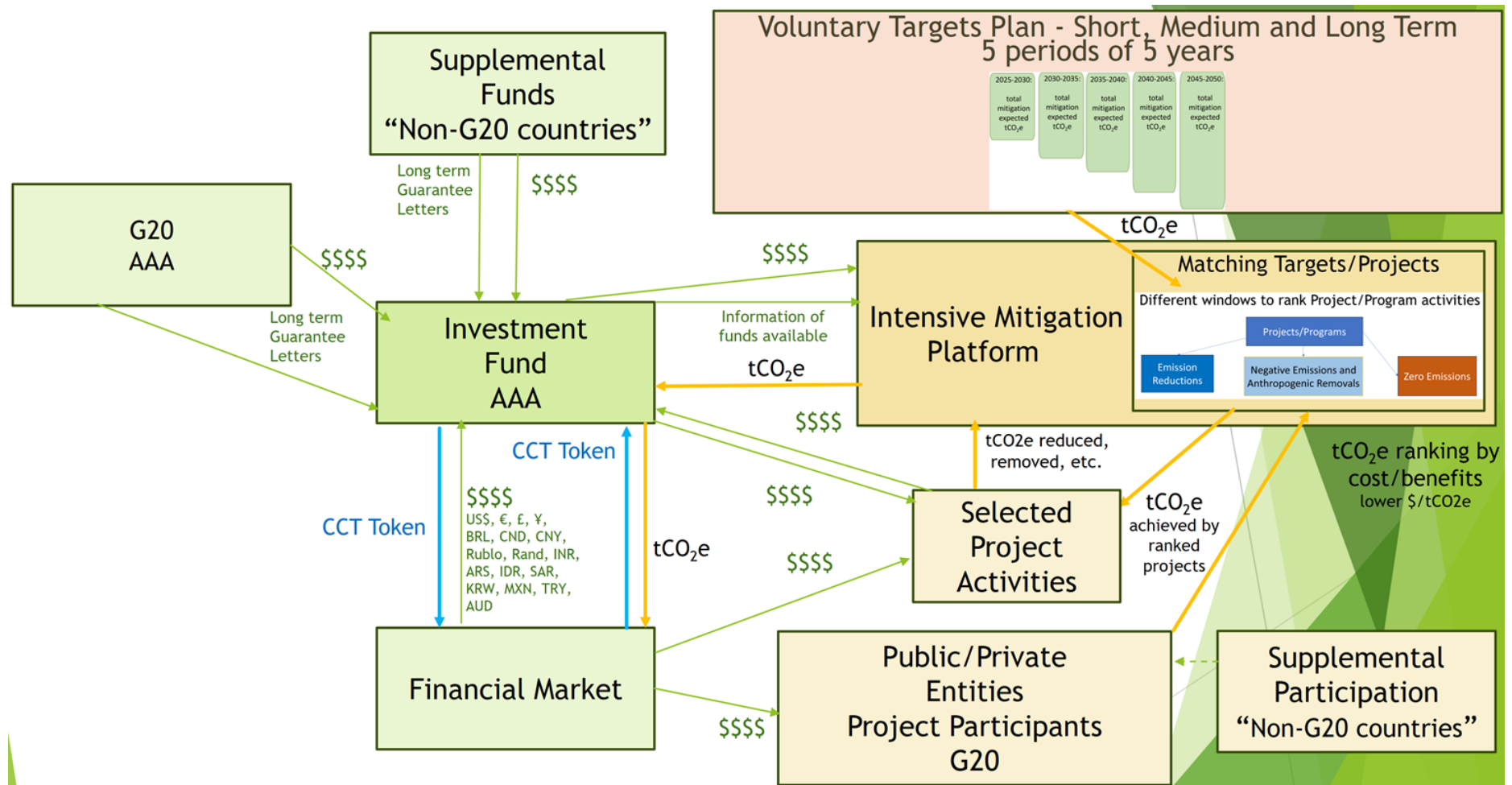
Source: Prepared by the authors.

Safeguard arrangements will be made and implemented to prevent misuse of funds, incorrect implementation or failure to achieve emission reductions. This includes strict oversight of projects involving non-renewable biomass projects, avoiding or preventing other questionable practices. The platform may also establish, outsource or use partners for on-site inspection of project operation and implementation in accordance with the rules approved for the G20 CDIM.

The core idea of the platform governance is to create an agile framework that uses existing structures and bureaucracies, learning from lessons learned and good practices from previous experiences of international green finance structures, avoiding duplication of bureaucracies, processes and processing time, providing solid, responsive and customer-oriented solutions for good and impactful projects.

The G20 CDIM Intensive Mitigation Platform is the cornerstone of the G20 Innovative Clean Development Mechanism, facilitating the identification and assessment of projects and seeking financing for the best candidate projects that will accelerate and advance global mitigation efforts. By establishing clear governance structures, leveraging market-based mechanisms, and implementing rigorous selection and monitoring criteria, the Platform will ensure that investments are directed to the most impactful and sustainable projects. Through the coordinated and joint efforts of G20 countries, development banks, and private sector partners, the G20 CDIM Intensive Mitigation Platform will play a key role in the global fight against climate change, paving the way for a sustainable, low-carbon future.

Figure 8: G20 Innovative Clean Development Mechanism Key Diagram



Source: Prepared by the authors.

FINAL CONSIDERATIONS

The proposed G20 CDIM framework offers an innovative and pragmatic approach to accelerating greenhouse gas mitigation efforts by scaling up investments to meet the challenge of climate change. By leveraging the resources and influence of G20 members, the mechanism could drive a new wave of investment in sustainable infrastructure, increasing employment and income levels while contributing to global mitigation goals. Although it needs further refinement and details, this proposal represents a significant potential contribution to international efforts to combat climate change.

The G20 CDIM proposal is a way to enhance action to combat climate change, which is essential to catalyze a more robust and coordinated response to the current crisis, characterized by its urgency. By proposing a mechanism that unites the world's major economies in a joint effort, the G20 CDIM would generate an increase in the efficiency of mitigation projects and demonstrate the G20's leadership capacity in addressing global challenges.

It is essential that G20 countries assume their historical responsibilities and national capacities to lead global mitigation. This discussion is vital to ensure the necessary support for the successful implementation of the mechanism, since the role of national states forms the basis for private sector action. The political sustainability of the implementation and approval of the G20 CDIM will depend on broad debate and social pressure, as well as the engagement of relevant interest groups. Private social investment and the debate on corporate social responsibility mobilized by the private sector alone have not generated the necessary action to address climate change.

The prospects for sustainable development and additional economic benefits are also important aspects to consider. The G20 CDIM can catalyze significant investment in infrastructure, promote the transition to low-carbon economies and create employment opportunities in sustainable sectors, thus contributing to resilient and inclusive economic growth.

The G20 CDIM proposal is an important contribution to global efforts to mitigate greenhouse gas emissions. By addressing the limitations of existing mechanisms and proposing practical and effective solutions, the G20 CDIM positions itself as a model for international cooperation in combating climate change. The success of this mechanism can serve as an example for other multilateral efforts, encouraging more ambitious and effective cooperative actions in the future. This is especially relevant when considering the ethical dimension and historical responsibility of the G20 countries listed in Annex I of UNFCCC — both because of their role in increasing the Earth's average temperature since the Industrial Revolution and because of the size of these countries' economies, technical capacity, and available human and material resources.

REFERENCES

- BRAZIL. (1997) **Proposed Elements of a Protocol to the United Nations Framework Convention on Climate Change, presented by Brazil in Response to the Berlin Mandate.** Available at: <https://unfccc.int/resource/docs/1997/agbm/misc01a03.pdf>
- COASE, R. H. (1960) **The Problem of Social Cost.** In: Journal of Law and Economics, Vol. 3 (Oct., 1960), pp. 1-44. The University of Chicago Press. Available at: <https://www.jstor.org/stable/724810?origin=JSTOR-pdf>
- ECOIA (2025) **Aliança net zero suspende atividades após saída da BlackRock.** 2025. Available at: <https://www.uol.com.br/ecoia/ultimas-noticias/2025/01/13/alianca-net-zero-suspende-atividades-apos-saida-da-blackrock.htm>
- FRIEDLINGSTEIN, P. et al. (2023) **Global Carbon Budget 2023.** Earth Syst. Sci. Data, 15, 5301–5369, 2023. Available at: <https://doi.org/10.5194/essd-15-5301-2023>.
- HEFNER, M.; MARLAND G. (2024) **Global, Regional, and National Fossil-fuel CO₂ Emissions: 1751-2020.** CDIAC-FF, Research Institute for Environment, Energy, and Economics, Appalachian State University. Available at: <https://ricee.appstate.edu/projects-programs/cdiac/>
- IPCC. (1990a) **First Assessment Report.** (FAR) WMO/UNEP, 1990a. Disponível em: https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_I_full_report.pdf
- IPCC. (1990b) **First Assessment Report. The Physical Science Basis.** Contribution of Working Group I to the First Assessment Report. WMO/UNEP, 1990b. Available at: https://archive.ipcc.ch/ipccreports/sar/wg_I/ipcc_sar_wg_I_full_report.pdf
- IPCC. (1990c) **First Assessment Report. The Physical Science Basis. Contribution of Working Group III to the First Assessment Report.** WMO/UNEP, 1990c. Available at: https://archive.ipcc.ch/ipccreports/sar/wg_III/ipcc_sar_wg_III_full_report.pdf
- IPCC. (1995) **Second Assessment Report - Climate Change 1995.** A report of the Intergovernmental Panel on Climate Change. Geneva: WMO/UNEP, 1995. Available at: https://archive.ipcc.ch/ipccreports/sar/wg_I/ipcc_sar_wg_I_full_report.pdf
- IPCC. (2001a) **Third Assessment Report - Climate Change 2001- and the Synthesis Report.** Geneva: IPCC, 2001a. Available at: <https://www.grida.no/publications/267>
- IPCC. (2001b) **Third Assessment Report. Climate Change 2001: Working Group I: The Scientific Basis.** Geneva: IPCC, 2001b. Available at: <https://archive.ipcc.ch/ipccreports/tar/wg1/index.php?idp=0>
- IPCC. (2001c) **Third Assessment Report. Climate Change 2001: Working Group I: The Scientific Basis. Summary for Policymakers.** Geneva: IPCC, 2001c. Available at: <https://archive.ipcc.ch/ipccreports/tar/wg1/index.php?idp=5>
- IPCC. (2006) **Guidelines for National Greenhouse Gas Inventories.** Geneva: WMO/UNEP, 2006. Available at: <https://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html>
- IPCC. (2007) **Fourth Assessment Report of the Intergovernmental Panel on Climate Change** IPCC, Geneva, 2007. Available at: https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html
- IPCC. (2013a) **Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change** [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp, 2013. Available at: <https://archive.ipcc.ch/report/ar5/wg1/>
- IPCC. (2013b) IPCC. **Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental**

Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2013. Available at: https://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf

IPCC. (2018) **Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty** [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-24. Available at: <https://doi.org/10.1017/9781009157940.001>.

IPCC. (2019) **Guidelines for National Greenhouse Gas Inventories**. Revised. Geneva: WMO/UNEP, 2019. Available at: <https://www.ipcc-nggip.iges.or.jp/public/2019rf/index.html>

IPCC. (2023) **Sixth Assessment Report of the Intergovernmental Panel on Climate Change**, Geneva. Available at: <https://www.ipcc.ch/report/ar6/syr/>

MENDES, T.; MIGUEZ, J. (2021) **Acordo de Paris: Riscos e Implicações do Consenso Inadvertido pela Inação**. POLÍTICA DEMOCRÁTICA, v. 59, p. 7-290, 2021. Available at: <https://drive.google.com/file/d/19GJiMVfbPbaZYJCPZhtBMiv-X9ZoQYHd/view>

MIGUEZ, J.; MENDES, T.; MANJATE, T. (2023) **Debt-for-REDD+ Swaps” Supported by the Amazon Fund of Economic and Social Development Bank of Brazil (BNDES): Reducing Deforestation and Debt Exposure in Developing Countries**. The International Political Science Association – IPSA, Politics in the Age of Transboundary Crises: Vulnerability and Resilience. 27th World Congress of Political Science, 15-19 July 2023 – Buenos Aires, Argentina, GS05.02 Politics of Climate Change and Energy. Available at: <https://www.ipsa.org/sites/default/files/page/WC2023/Program/wc2023ipsa-program.pdf>

MIGUEZ, J.; MENDES, T. (2023) **Paris’ Article 6 Deadlock: Climate Change, from Globalization to Nationalism**. In: Routledge Handbook of Applied Climate Change Ethics. BROWN, D.; GWIAZDON, K.; WESTRA, L. (eds). Routledge, NY. Ch. 29 Part IV. P. 320-330. Available at: <https://doi.org/10.4324/9781003039860>.

KYOTO PROTOCOL. (1997). **Text of Kyoto Protocol**. Available at: <https://unfccc.int/resource/docs/convkp/kpeng.pdf>

PARIS AGREEMENT. (2015). **Text of the Paris Agreement**. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

RODRIGUES, R.; MENDES, T. (2019) **From the Citizen’s Constitution to REDD+: Domestic and International Policy Instruments Intersecting Climate Change and Forestry in Brazil From 1988 to 2018**. Revista Brasileira de Políticas Públicas e Internacionais – RPPI, 2019-11-13 Journal Article. DOI: [10.22478/ufpb.2525-5584.2019v4n2.47942](https://doi.org/10.22478/ufpb.2525-5584.2019v4n2.47942)

ROHDE, R. (2024) **July 2024 Temperature Update**. Berkeley Earth. Posted on August 21, 2024. Available at: <https://berkeleyearth.org/july-2024-temperature-update/>

UNFCCC (1992). United Nations Framework Convention on Climate Change. **Text of the Convention**. Available at: <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

WORLD BANK. (2024) **Forest area (sq. km); Food and Agriculture Organization, electronic files and web site**. Available at: https://data.worldbank.org/indicator/AG.LND.FRST.K2?most_recent_value_desc=true

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