

Developing a collective framework for operationalising Article 2.1(c): lessons from six case studies

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About the independent Global Stocktake (iGST) and the Finance Working Group (FWG)

The Independent Global Stocktake (iGST) is a consortium of civil society actors working together to support the Global Stocktake (GST), the formal process established under the Paris Agreement to periodically take stock of collective progress toward its long-term goals.

The iGST aligns the independent community – from modelers and analysts, to campaigners and advocates – so we can push together for a robust GST that empowers countries to take greater climate action.

The Finance Working Group (FWG) is an open partnership bringing together expert perspectives from the global North and South on the progress made towards financing climate action. Considering the provision of support to developing countries to mitigate and adapt to climate change and the consistency of finance flows with climate objectives, the FWG aims to support the UNFCCC GST process and to independently benchmark the official GST. The group is co-chaired by Charlene Watson of ODI and Raju Chhetri of the Prakriti Resources Centre.

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Responsibility for errors, interpretations, or omissions is solely the authors.



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+ Executive summary



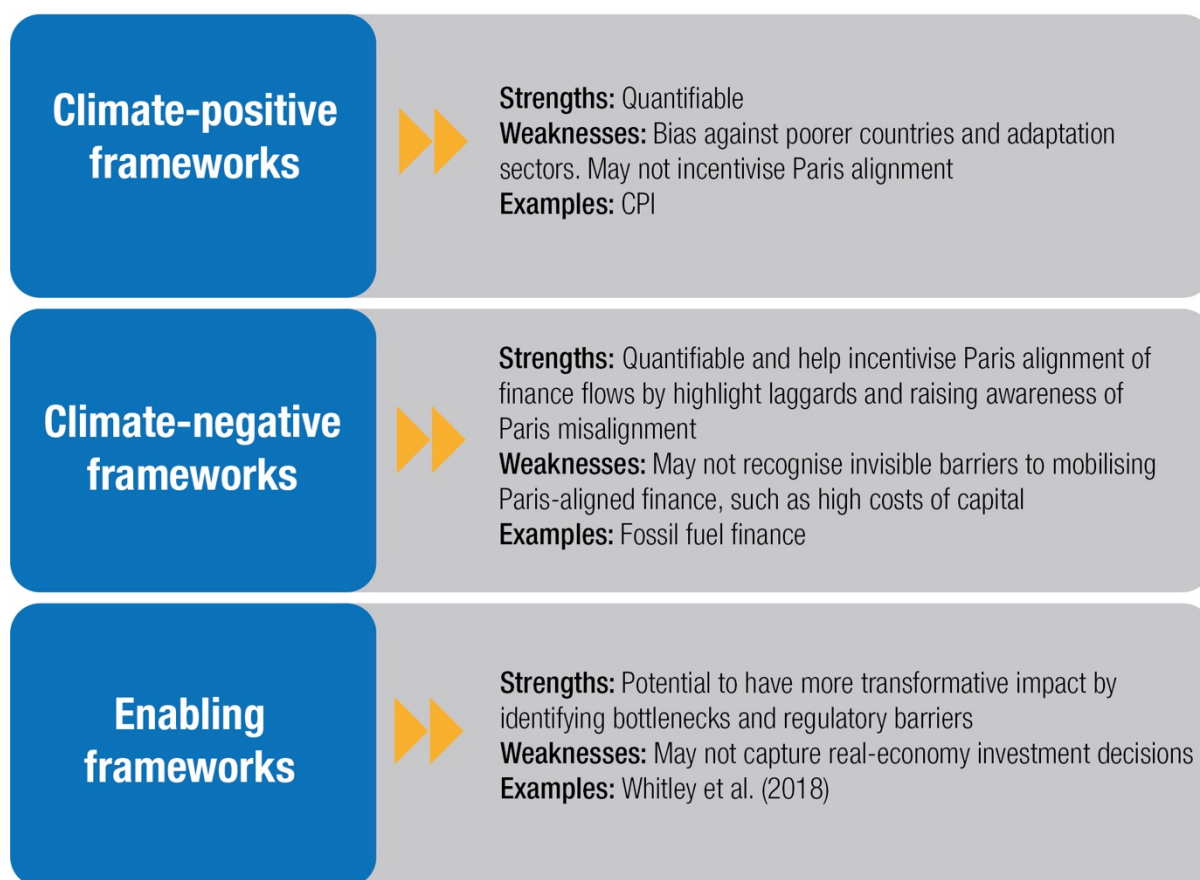
Under Article 2.1(c), the third long-term goal of the Paris Agreement seeks to align all finance flows with a low-emission, climate-resilient development pathway. It is therefore central to the pursuit of the first two long-term goals to limit global warming to 1.5°C and well below 2°C above pre-industrial levels, and increasing the ability to adapt to climate change, as agreed under Articles 2.1(a) and 2.1(b). Despite its centrality, Article 2.1(c) of the Agreement and the CMA¹ provide limited information and little guidance on how to achieve this goal. This approach should in theory incentivise Parties to take ownership of reporting against Article 2.1(c) in a way that is tailored toward supporting their national low-emissions, climate-resilient (Paris-aligned) development pathways. But in practice, countries struggle to assess their complex finance flows if they do not have adequate guidance and support, or because they fear that Article 2.1(c) may undermine national policy-making. This presents a risk to the timely and equitable progress towards the climate consistency of finance flows, and therefore also of the Paris Agreement’s long-term mitigation and adaptation goals.

Reaching a shared but also Party-driven understanding of what Paris-aligned finance flows are is vital as we enter the final year of the official Global Stocktake of collective progress against the Paris Goals. By reviewing existing frameworks and drawing together lessons from six case studies that assess the Paris alignment of finance flows in Belize, Colombia, Germany, Indonesia, Rwanda and Switzerland, this synthesis paper identifies five options that can be used to develop a flexible and systematic framework. A flexible framework would help Parties make informed decisions on practical actions for Article 2.1(c)’s context-specific implementation in a way that delivers collective and equitable progress.

¹ The CMA stands for the ‘Conference of the Parties serving as the meeting of the Parties to the Paris Agreement’. It oversees the implementation of the Paris Agreement and takes decisions to promote its effective implementation.



Figure 1: Overview of frameworks for assessing progress against Article 2.1(c)



To date, there are three groups of frameworks (Figure 1). The first are ‘climate-positive’ frameworks used to track public and private finance flows that support Paris-aligned development pathways above those made under Article 9 of the Paris Agreement. These are quantifiable, but much debate persists over what counts as Paris aligned (for example, Pauw et al., 2022). Furthermore, climate-positive approaches may not consider country-specific Paris-aligned pathways, especially in poorer countries or in adaptation sectors where data availability remains an issue. The second are ‘climate-negative’ frameworks, which incentivise the alignment of finance flows by identifying Paris misalignment. However, similar to climate-positive frameworks, these do not necessarily identify less visible barriers to mobilising climate finance, such as high costs of capital or lack of access to finance. A final set of ‘enabling frameworks’ considers whether conditions (for example, regulatory environments) are conducive to attracting Paris-aligned capital. This approach requires a more qualitative assessment of the actors in public and private finance. By identifying barriers and bottlenecks to realigning finance flows, this approach can potentially have a more transformative impact. However, it does not necessarily capture the direct effects of policies and actions on real-economy investment decisions.

The series of country case studies on Article 2.1(c) primarily relied on an enabling framework adapted from Whitley et al. (2018). Where data were available and accessible, they also used climate-positive or -negative frameworks to assess real-economy changes in the Paris realignment of finance flows. The authors of the case studies highlighted several practical difficulties in applying these frameworks, including:




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- lack of data and where data was available, a bias towards government action and mitigation measures
- difficulty judging the credibility of voluntary or market-led Paris-alignment initiatives or government plans and pledges
- difficulty applying frameworks in less developed financial market settings, or where cross-border finance flows were concerned
- difficulty assessing the Paris alignment of fiscal policy mechanisms and public finance instruments.

These issues can be overcome by considering five options in the design of nationally led enabling frameworks, such as those proposed by Whitley et al. (2018). Intergrating these would improve the application and usability of enabling policy frameworks, especially in emerging markets and developing economies, and thereby accelerate national-level reporting against Article 2.1(c) in this crucial year for the official Global Stocktake (GST):

- To address policy implementation gaps and ensure that climate ambition leads to real-world impact, the Paris alignment of **strategies and targets** should be assessed based on the presence of intermediate goals, disaggregation by sector or sub-sector, and whether they are legally binding. Increasingly available credibility criteria, such as those developed by the High Level Expert Group on Net Zero (HLEG) and UN Environment Programme – Finance Initiative (UNEP-FI), should also be applied in future stocktakes, not just to assess the climate ambition of government, but also of private actors and voluntary initiatives.
- A common, one-dimensional standard or approach for assessing the Paris alignment of **financial policies and regulations** is not possible, given the disparity between countries' financial market development, central bank mandates and systematic vulnerability to climate change. Existing standards, such as those proposed by the TCFD, proved difficult to apply in emerging markets and developing economies. Therefore, they need to be designed in an interoperable way that recognises their limitations, for example, when it comes to enacting prudential policies in less developed financial markets. More research is required to better understand where central banks and financial supervisors can adopt a more supportive role in driving the Paris alignment of finance flows under their core mandates.
- By documenting the multitude of innovative **fiscal policy mechanisms** that (dis)incentivise behaviour in a Paris-aligned way in different countries around the world, future stocktakes will open up significant opportunities for cross-learning. Although it is still not known whether all of these mechanisms are effective in supporting their respective country's Paris-aligned development pathway, linking fiscal revenue and expenditure flows can clarify these effects and highlight inconsistencies. For example, revenues from carbon taxes are used to subsidise high-emission transportation (in Germany) versus conservation efforts (in Belize).
- The lack of up-to-date and disaggregated data remains a considerable barrier to tracking the Paris alignment of **public and private finance flows**. Future stocktakes should highlight these data gaps and suggest non-partisan or apolitical bodies and



institutions to supervise and fill them, such as central banks and financial supervisors. Until official measurement, reporting and verification (MRV) systems are established, unofficial estimates provided by researchers should continue to be used in upcoming stocktakes, and to cross-check the alignment of existing systems. Where cross-border finance flows are concerned, Paris alignment should always be perceived in accordance with the development pathway of the country of deployment.

- As part of future stocktakes, a sufficiently resourced, independent arbiter should be set up to assess the Paris alignment of country-level, regional or global **voluntary initiatives** and sustainable finance standards.

All of these recommendations cannot be enacted in time for the completion of the first GST. Developing interoperable global standards to assess the Paris alignment of financial policies and regulations may even take decades. However, if the first GST can be used to assess progress against Article 2.1(c) in a more systematic way along the lines of some of the suggestions above, it could start accelerating country-driven shifts in finance flows, and thereby ensure collective progress not just on the long-term finance goal, but also the mitigation and adaptation goals.



+ 1. Introduction




In addition to long-term mitigation and adaptation goals, Article 2.1(c) of the Paris Agreement calls on countries to make ‘finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’. Despite its centrality in the Paris Agreement, much confusion remains about the scope and implications of this goal (Zamarioli et al., 2021). To date, the Conference of the Parties, serving as the meeting of the Parties to the Paris Agreement (CAM), has not proposed an overarching framework or official guidance to define what the ‘Paris alignment’ of finance flows means and implies in practice.

The lack of clarity surrounding Article 2.1(c) is a result of careful negotiations around its scope and understanding, which vary according to different Party and non-Party stakeholders (UNFCCC SCF, 2022a). Flexible interpretation of what Paris-aligned finance flows entails allows signatories to map their own finance flows against domestic low-emission, climate-resilient (Paris-aligned) development pathways, mostly defined in their respective Nationally Determined Contributions (NDCs).² It also recognises the unique financial and economic context of every country. This Party-driven approach to understanding and submitting information³ on 2.1(c) is therefore, in theory, intended to encourage countries to take ownership of applying the collective goal to their national setting.

In practice, this flexible approach also entails risks. While solutions for Article 2.1(c) need to be adequate for national contexts, they should also ensure some level of global comparability to guarantee timely and equitable progress towards the climate consistency of finance flows (Zamarioli et al., 2021). Finance flows are notoriously difficult to trace and assess, involving a wide range of diverging quantitative and qualitative approaches (see, for example, Cochran and Pauthier, 2019), meaning that countries may not be able to use this flexible approach to their advantage if no guidance is issued. Lack of a common understanding of what the collective goal entails or how to measure it can therefore threaten Article 2.1(c)’s implementation in practice (Watson, 2022). Recent evidence suggests that this risk manifests itself in practice: almost all Parties noted the absence of an agreed definition or common understanding of the scope of Article 2.1(c) in their submissions to the UN Framework Convention on Climate Change (UNFCCC) CMA’s request for views regarding its implementation (UNFCCC SCF, 2022c). Parties also

² Nationally Determined Contributions (NDCs) embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive Nationally Determined Contributions (NDCs) that it intends to achieve. Increasingly ambitious NDCs are to be submitted every five years to the UNFCCC secretariat, starting in 2020.

³ Until reporting tools for common tabular formats are developed, Parties are not required to report regular progress against Article 2.1(c). However, they are required to submit information to the biennial transparency report (UNFCCC CMA, 2021).



identified a global framework under which the consistency of finance flows could be determined and assessed as a potential element for the implementation of Article 2.1(c) (ibid.).

It is vital that we drive a shared but also Party-driven understanding of what Paris-aligned finance flows are as we enter the official Global Stocktake (GST) of collective progress against the goals of the Paris Agreement, including Article 2.1(c) (Box 1). Pressure is also building on the UNFCCC regime to reach mutual agreement on the process for tracking Article 2.1(c) at 28th session of the Conference of the Parties (COP28), as evidenced in paragraph 68 of CMA 4's cover decision text (UNFCCC, 2022).

This paper does not suggest a common view or recommendations on the scope and implications of the goal set out in Article 2.1(c). However, by reviewing existing 2.1(c) frameworks⁴ and drawing together lessons from six case studies⁵ that assessed the Paris alignment of finance flows in different country settings, it identifies five options for further developing a flexible and systematic framework. Based on these design options, a flexible framework could be designed to ensure that any formal guidance can be used by all Parties to understand Article 2.1(c). This can help Parties make informed decisions on practical actions for Article 2.1(c)'s context-specific implementation in a way that delivers collective and equitable progress.

Box 1: The official Global Stocktake (GST) (Srouji et al., 2022)

Established under Article 14, the Paris Agreement's Global Stocktake (GST) is a two-year process that is designed 'to assess the collective progress towards achieving the purpose of [the Paris] Agreement and its long-term goals'. By gathering information and data on the implementation of the Paris Agreement, it evaluates progress on the world's efforts to slash greenhouse gas emissions (Article 2.1(a)), build resilience to climate impacts (Article 2.1(b)), and align financial flows with the scale and scope needed to tackle the climate crisis (Article 2.1(c)). The GST will also evaluate progress on the mobilisation and provision of support, such as the climate finance developed countries mobilise to support developing countries with mitigation and adaptation under Article 9.

The current GST kicked off in 2021 at COP26 in Glasgow and will culminate in 2023 at COP28 in Dubai. It involves three phases, beginning with information collection and synthesis. This informs the technical assessment, including three technical dialogues held six months apart, which will produce a summary report that captures the outputs of the discussions on the three thematic areas of the GST. The third and final step of the GST will culminate at COP28, when the outputs are considered at high-level events to identify opportunities and challenges. These will inform a summary of key political messages that are referenced in a COP decision and/or declaration and formalise the guidance countries adopt in order to inform their future climate action and support. The GST is not designed to provide a one-off assessment, but a living tool that continually informs countries in updating and enhancing their climate actions and support through their Nationally Determined Contributions (NDCs), which will next be updated in 2025.

⁴ This relied on a desk review of literature, as well as key informant interviews (KIs).

⁵ That is, of Belize (Catzim, 2022); Colombia (Lopez Carbajal et al., 2021); Germany (Hoffmann et al., 2022); Indonesia (Halimanjaya et al., 2022); Rwanda (Samo et al., 2022); and Switzerland (Bingler et al., 2021).



+ 2. Background and existing lenses for assessing Article 2.1(c)



2.1. Background to Article 2.1(c)


Although considered a precondition for achieving the widely cited mitigation (2.1(a)) and adaptation (2.1(b)) goals, Article 2.1(c) is by comparison underdiscussed. The background to being labelled the ‘forgotten goal’ of the Paris Agreement (Thwaites et al., 2018) rests on the evolution of the text of the Paris Agreement, and in particular, in negotiating the balance between Article 2.1(c) and Article 9 (Zamarioli et al., 2021). Although both can be perceived as ‘climate finance’, Article 9 represents the established commitment of developed countries to support developing countries with public and private sources of climate finance (Pauw et al., 2016). Contrasting this, the consolidating interpretation of Article 2.1(c) is that it applies to the Paris alignment of the financial system in its entirety, encompassing the climate consistency of all domestic and global investments with the climate goals (UNFCCC SCF, 2018; Zamarioli et al., 2021). Although no official guidance has been issued on how to assess the Paris alignment of the broader financial system, there is a relatively nascent but growing set of voluntary frameworks, lenses and approaches to guide practitioners and governments. We review these approaches under three groupings: ‘climate-positive’, ‘climate-negative’ and ‘enabling’ perspectives.

2.2. Climate-positive lenses

The first and most common group of approaches simply acknowledges the distinction between ‘climate finance’ under Article 9 versus that of Article 2.1(c) of the Paris Agreement. Under this definition, Paris alignment of finance under Article 2.1(c) refers to flows beyond those of developed countries under Article 9 of the agreement. This broadens the scope of Article 2.1(c) to two categories, namely, the Paris alignment of: (i) domestic public contributions by both developed and developing countries; and (ii) private sector contributions, including all cross-border finance flows (including between developed countries).

There are several ways in which these contributions can be framed, for example, by estimating near- to mid-term investment needs or finance gaps for public and private investors, as reported in the updated NDCs of most countries (see, for example, Pauw et al., 2021). Current climate finance contributions (as opposed to future needs) can also be framed, for example, by source, financial instrument, use and sectors (see, for example, Buchner et al., 2021).

The strength of climate-positive finance is that it is quantifiable and therefore widely reported in key figures. For example, Buchner et al. (2021) report that global flows of climate finance totalled \$632 billion in 2019/2020, while the latest Biannual Assessment (BA) of UNFCCC’s Standing Committee on Finance (SCF) estimates global climate finance flows at \$803 billion in the same period (UNFCCC SCF, 2022b). Gradually, standardised methodological standards are being developed for certain financial



instruments or sectors. For example, the Climate Bonds Initiative's (CBI's) Climate Bonds Standard is widely considered the global benchmark for assessing green bond issuances, which totalled \$523 in 2021 (CBI, 2023).

Climate-positive frameworks are also increasingly being developed by governments and financial supervisors in the form of green or sustainable finance taxonomies (currently, 32) or green budget tagging practices (currently, 47) (UNFCCC SCF, 2022a). These use country-specific eligibility lists or principles of climate-related economic activities to label Paris-aligned public and private finance flows. Similar activity-level taxonomies and classification lists are used by development finance institutions (DFIs) and multilateral development banks (MDBs), such as the European Development Finance Institutions' (EDFIs') harmonised Paris-alignment approach, although the extent to which these align with the country of deployment's Paris-aligned pathway is not always clear.

Divergence of what counts as 'Paris aligned' exists between countries, between global and national standards, and between global standards themselves. Future targets and commitments such as net zero target setting, transition plans or scenario analyses may vary, as do accounting methodologies for assessing the impact of actions and policies on those future trajectories. Despite the growing convergence on greenhouse gas (GHG) accounting methods and scenarios for assessing finance aligned with the long-term mitigation goal using climate-positive methods, there is much less evidence of the degree to which financial actors align their investment mandates with climate resilience goals linked to Article 2.1(b) (UNFCCC SCF, 2022a). Furthermore, some actions and policies continue to face data and tracking challenges, and therefore risk being under-reported using a climate-positive lens, including adaptation or energy efficiency investments, or private finance, especially from unregulated entities or individuals, households or micro, small and medium-sized enterprises (MSMEs). In particular, approaches, methods and tools for aligning finance with climate resilience goals remain at an early stage of development (Watson, 2021; Mullan and Ranger, 2022).

Another drawback and potential blind spot of climate-positive perspectives is that they may neglect 'climate-consistent' finance flows that do not directly or immediately contribute to low-emission, climate-resilient development pathways. For instance, green taxonomies risk excluding necessary investment that can support the overall transition to such pathways, but that are currently considered high-emission sectors or activities owing to slow technological innovation. Financing may also be needed to wind down high-emission activities, such as coal phase-out policies and subsidies (UNFCCC SCF, 2022a). Therefore, a climate-positive perspective may need to be complemented by approaches that cover climate-neutral or 'do-no-harm' classifications. Existing taxonomies are also suffering from mitigation bias. Although countries and regions such as Papua New Guinea, Bangladesh, China and the European Union (EU) are developing taxonomies with an adaptation objective, most have focused on developing criteria for mitigation first (for example, Singapore, South Africa, Colombia or Mongolia).

There are further issues with climate-positive approaches specifically for countries with less developed financial sectors. First, climate-positive assessments often require complex methodological approaches, institutional and human capacities, and context-specific climate-related data that is not available in these settings. Second, the relationship



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between climate finance under 2.1(c) and Article 9 of the Paris Agreement still requires further clarification (Zamarioli et al., 2021). Both articles are autonomous, but also complementary. For example, a frequently cited issue is that of access to concessional climate-related finance, which poorer countries require to finance their ambitions. Commitments made by developed countries under Article 9 could therefore provide the financial support, technology transfer, or capacity-building required to implement initiatives aimed at climate-consistency under Article 2.1(c). Conversely, the Organisation for Economic Co-operation and Development's (OECD's) Development Assistance Committee (DAC) recently committed to implementing Article 2.1(c) and aligning overseas development assistance (ODA) with net zero GHG emissions and climate-resilient development (OECD, 2021). However, this needs to be done in a way that does not substitute for or diminish existing obligations under Article 9, an issue that has been cited by many Parties in their submissions (UNFCCC SCF, 2022c).


2.3 Climate-negative lenses

Climate-negative or 'transformational' perspectives capture Paris-misaligned finance flows in addition to climate-positive (Paris-aligned) investment (Pauw et al., 2021). Paris-misaligned finance flows are potentially easier to quantify than Paris-aligned finance flows, as they focus on finance towards a specific subset of high-emission intensive economic sectors and activities. The SCF's Biennial Assessment makes several global estimates of misalignment in 2019/2020, including fossil fuel investments in the energy sector (\$782 billion), fossil fuel subsidies (\$472 billion), investments with deforestation risks (\$38.3 billion) or fixed capital assets in sectors linked to fossil fuel systems (\$32 trillion) (UNFCCC SCF, 2022b). Such finance flows can be distinguished using relatively simple indicators, such as Scope 1–3 GHG emissions, portfolio carbon footprints, carbon intensity or exposure to carbon-related assets, and climate-related physical or transition risks. An example of this is the Energy Supply Banking Ratio (ESBR), which captures the investments in low-carbon energy projects and companies compared to fossil fuels (Bloomberg NEF, 2023a).

Similar to approaches measuring climate-positive investment, assessments of climate-negative finance flows have suffered from a mitigation bias, as it is easier to identify high-emission than maladaptive activities. Although the rapid rollout of the TCFD's climate-related financial disclosure frameworks has raised awareness and understanding of exposure to climate-related risks, its focus on transition risks has reinforced the bias toward mitigation. There is less oversight and fewer reporting methodologies for physical risk assessment, although these are becoming increasingly available (UNEP FI, 2023).

Challenges also persist for certain methodologies for assessing mitigation, such as estimating Scope 3 emissions in the value chain.

Climate-negative perspectives help identify and raise awareness of Paris-misaligned finance flows, incentivising actors to shift finance flows towards Paris-aligned development pathways and thereby achieve transformational outcomes. However, financial alignment approaches, such as 'do no harm' approaches to new investments or rebalancing existing portfolio holdings away from GHG-intensive towards more climate-neutral or -positive companies, may not actively contribute towards decarbonisation



objectives if ownership of bonds or shares of the original climate-misaligned asset simply changes (UNFCCC SCF, 2022a). While there has been evidence of divestment strategies leading to corporate GHG emission reductions, others have warned of continued carbon-intensive financing from other sources, especially in secondary financial markets and from non-listed or private equity actors subject to fewer oversight and disclosure regulations (Broccardo et al., 2020; Mormann, 2020; Rohleder et al., 2022).

Paris-aligned real-economy changes may also fail to materialise when financial actors mitigate physical risks in their portfolios by insuring them, or adjusting portfolios away from assets with high exposure to those risks, as this does not necessarily contribute to lower emissions or greater resilience outcomes (Ameli et al., 2020; Caldecott, 2020; UNEP, 2022). There is also a risk that climate-related risk disclosures could shift investment away from poorer and more vulnerable countries that are already at high risk from climate impacts, leading to exclusion (Volz et al., 2020). Given the risk of such inadvertent impacts, the pursuit of Article 2.1(c) must be conducted with equity and justice in mind (Watson, 2022).

This raises a more fundamental issue with both climate-positive and climate-negative approaches, which is that while they may provide a useful indicator of where a country stands in terms of its (mis)alignment,⁶ they do not necessarily indicate the changes that need to be made to mobilise or shift alignment of finance flows. Invisible hurdles for shifting and mobilising climate finance include regulatory barriers, higher costs of capital for Paris-aligned investments, or where climate-related risks and other externalities are not priced into financial markets in a penalising (for example, carbon tax) or supporting (for example, green subsidies) way.

2.4 Enabling lenses

The final set of approaches primarily considers the ‘enabling environment’ for the Paris alignment of finance flows. This recognises the need for assessing often invisible barriers to attracting capital, expanding regulation that fixes market imperfections and sets directions, providing financial instruments, and creating the right incentives for realigning both public and private investment with the goals of the Paris Agreement (Zamarioli et al., 2021: 3). Examples of enabling conditions include reducing the cost of capital, increasing access to capital, or engaging in the promotion of sustainable activities by counterparties (Caldecott et al., 2022). By identifying barriers and bottlenecks to mobilising and shifting finance flows in a Paris-aligned way, these frameworks potentially have a more transformative impact than other approaches.

For the most part, assessing Paris-aligned enabling environments relies on the qualitative assessment of public and private stakeholder actions, policies and instruments in a particular setting. Therefore, it is considered a more ‘actor-specific’ approach (UNFCCC SCF, 2022a: 5) that assesses enabling environments by capturing relevant information from public and private actors, as well as regulatory authorities and market operations such as stock exchanges and financial centres. For example, governments can advance

⁶ Although few comprehensive national-level aggregate measures that cover both public and private (mis)aligned finance are available. To date, PACTA country assessments and the French Budget Vert provide some of the most comprehensive figures, but even these are not complete.



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Paris-aligned initiatives that clarify climate consistency by creating classification systems, taxonomies or improving access to financially relevant climate information for investments. Policy-makers can also focus more actively on the Paris alignment of finance flows, providing financial incentives and advancing the macro- and micro-regulation of the financial sector.

One of the most widely used enabling frameworks distinguishes four policy levers: (i) financial policy and regulation; (ii) fiscal policy levers; (iii) public finance instruments; and (iv) information instruments (Table 1) (Whitley et al., 2018). The framework has been applied to individual countries (see next section) as well as being used to aid comparison between countries (see, for example, Pauw et al., 2021; UNFCCC SCF, 2022a).

Table 1: Overview and examples of policy levers

Policy levers	Examples
Financial policy and regulation	Mandatory TCFD-aligned disclosure requirements, transition finance frameworks, regulatory frameworks, green taxonomies, mandatory environmental, social and governance (ESG) standards, priority sector lending and monetary policy interventions
Fiscal policy levers	Fossil fuel subsidies, carbon pricing, feed-in tariffs, aviation levies, financial support for green buildings, cap-and-trade systems for carbon emissions, tax reductions for electric vehicles (EVs) or subsidies for charging infrastructure
Public finance instruments	Investment grants for climate-proofing buildings, guarantees for climate-friendly technology development, interest-free loans for the development of innovative energy technologies, investment funds and agencies, climate tagging public budgets, leasing programmes for solar panels, climate funds for small-scale renewable energy projects, technology funds, green funds or banks, climate budget tagging (CBT)
Information instruments	Transparency initiatives, awareness campaigns, long-term plans, corporate strategies, certification and labelling, green bond guidelines, environmental information disclosures, low-carbon labels, measuring, reporting and verification (MRV) systems

Sources: Whitley et al. (2018); Pauw et al. (2021)

Despite its qualitative focus, there are elements of enabling frameworks that can be assessed quantitatively, such as the share of bond issuances that meet official green bond standards. Other comparative approaches include assessing whether long-term low emission development strategies (LTS) support Article 2.1(c) (Pauw et al., 2021), tracking the number of green finance policies and regulations issued, or documenting membership of finance actors in climate finance initiatives. For example, using the Green Finance Platform, a growing number of 648 green finance policies and regulatory measures were captured in 2021, including the revised EU sustainability reporting standards, sustainable finance taxonomies or green budget tagging practices (UNFCCC SCF, 2022a). Among

other well-known initiatives, Table 2 shows that in 2022, more than 3,000 entities with a combined market capitalisation of \$29 trillion indicated a type of support for TCFD voluntary guidelines and metrics (UNFCCC SCF, 2022a).

Table 2: Examples of public and private voluntary green finance initiatives

Type	Initiative	Brief description	Coverage
Private	Task Force on Climate-related Financial Disclosures (TCFD)	Voluntary climate-related risk disclosure guidelines and metrics.	3,113 public and private entities with a market capitalisation of \$29 trillion
Private	Science Based Targets initiative (SBTi)	Science-based targets to reduce emissions, for example, consistent with 1.5°C temperature rise.	2,253 companies
Private	Climate Action 100+ Net Zero Company Benchmark	Company performance against emission reductions, climate change governance and disclosure.	166 major emitting companies
Private	Divest–Invest Global Movement	Reports financial institutions with fossil fuel divestment policies.	1,527 public and private financial institutions
Private	Transition Pathway Initiative	Assesses banks’ Paris alignment using IEA scenarios.	132 financial institutions and 599 companies
Public/ Private	Paris Agreement Capital Transition Assessment (PACTA)	Voluntary tool that calculates extent to which equity, bond or lending portfolios are aligned with various climate scenarios.	Several countries have voluntarily adopted PACTA
Public/ Private	GFANZ ⁷	Race to Net Zero aimed to mobilise actors outside governments.	550+ members from 50 countries
Public	Coalition of Finance Ministers for Climate Action	Alignment of public finance, financial policy and regulation, and fiscal levers with Paris Agreement.	72 countries

⁷ GFANZ consists of various smaller alliances, including the Net Zero Asset Owner Alliance (NZAOA), the Net Zero Asset Managers Initiative (NZAM), Paris Aligned Investment Initiative (PAII), Net Zero Insurance Alliance (NZIA), Net Zero Banking Alliance (NZBA), Net Zero Financial Service Providers Alliance (NZFSPA) and the Net Zero Investment Consultants Initiative (NZICI).




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Public	Network for Greening the Financial System (NGFS)	Central banks and supervisors exchange experiences, share best practices, contribute to the development of environment and climate-risk management in the financial sector, and mainstream finance to support the transition toward a sustainable economy.	121 members and 19 observers
Public	Alliance for Financial Inclusion (AFI)	AFI provides a platform for financial regulators and policy-makers to provide policy leadership and regulatory guidance related to green finance. It created the Inclusive Green Finance Working Group in 2019, producing the Sharm El Sheikh Accord on Inclusive Green Finance, which the entire AFI membership endorses.	61 members from 54 countries (particularly focused in emerging markets and developing economies)
Public	Basel Committee on Banking Supervision (BCBS)	Published a set of 12 principles for managing and supervising climate-related financial risks.	45 central banks and supervisors from 22 jurisdictions
Public	International Platform on Sustainable Finance (IPSF)	Key network of policy-makers that share best practices and compare sustainable finance approaches and tools with a view of making them more comparable and interoperable.	18 member countries and the EU, representing 55% of global gross domestic product (GDP) and emissions
Public	Mission Innovation Initiative	Global initiative to catalyse action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible to all.	23 countries and the European Commission
Public	Clean Energy Ministerial	High-level global forum to promote policies and programmes that advance clean energy technology, share best practices and lessons learned, and encourage a clean energy transition.	29 governments and 22 participants

Source: Adapted from UNFCCC SCF (2022a)

As with other approaches, enabling approaches have their drawbacks. Many actors, even those responsible for creating an enabling environment, operate at a number of steps removed from real-economy activities. They therefore have a less direct effect on real-economy investment decisions relevant to banks, corporations or governments (UNFCCC SCF, 2022a). More comparative approaches that assess the membership of finance actors in voluntary initiatives often include non-prescriptive commitments or principles. Ultimately, achieving the goal of aligning finance flows with the Paris Agreement depends



on real-economy actions that reduce emissions and build climate resilience, while focusing on enabling conditions may not yield those real-term impacts unless complemented with climate-positive or -negative approaches. This has raised ‘greenwashing’ concerns, especially as metrics and indicators for measuring real-term impact on mitigation and adaptation are not yet harmonised (UNFCCC SCF, 2022a). As with other approaches, weaknesses have been identified with the geographical scope of private and public green finance initiatives. For example, of the 272 signatories of the Net Zero Asset Managers Initiative (NZAM), only one is from Africa and over 65% were based in Europe and North America, suggesting a greater need to deepen inclusivity and participation in these networks (UNFCCC SCF, 2022a).

2.5 Background to the independent Global Stocktake (iGST)

To improve understanding of how Article 2.1(c) can be operationalised in a range of different country settings, the Finance Working Group (FWG) of the independent Global Stocktake (iGST) commissioned six 2.1(c) case studies (Box 2). These were completed between 2021 and 2022 in Belize, Colombia, Germany, Indonesia, Rwanda and Switzerland, representing a sample of countries of varying size, economic structure and financial sector development.

Box 2: The independent Global Stocktake (iGST) and the Finance Working Group

The Independent Global Stocktake (iGST) is a consortium of civil society actors working together to support the Global Stocktake (GST), the formal process established under the Paris Agreement to periodically take stock of collective progress toward its long term goals.

The iGST aligns the independent community – from modelers and analysts, to campaigners and advocates – to push together for a robust GST that empowers countries to take greater climate action. See: www.climateworks.org/independent-global-stocktake/

The Finance Working Group (FWG) is an open partnership bringing together expert perspectives from the global North and South on the progress made towards financing climate action. Considering the provision of support to developing countries to mitigate and adapt to climate change and the consistency of finance flows with climate objectives, the FWG aims to support the UNFCCC GST process.

The studies were led by in-country researchers who collected primary data (through key informant interviews) and analysed secondary data sources to assess domestic finance flows against the individual country’s low-emission, climate-resilient development pathway. All case study authors used a variation of the four-pillar enabling framework cited above (Whitley et al., 2018) (see Table 1). In addition, they also considered overall plans and strategies, such as the ambition of NDCs. However, across the country case studies, the enabling framework was applied to varying degrees of detail depending on the availability of information and the relevance of certain levers. Alongside an enabling framework, case study authors applied a mix of climate-positive and climate-negative



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approaches, especially when assessing the Paris alignment of private finance flows (Table 3).

The case study authors cited several practical issues in operationalising these frameworks. As the Whitley et al. (2018) framework is itself biased toward government action, assessments were similarly concentrated on public finance stakeholders, such as ministries of finance or central banks. Another factor contributing to this bias was the greater accessibility that case study authors had to government stakeholders, expert interviews or necessary data to inform the analysis compared to private sources. This was in part linked to the public finance backgrounds and existing networks of the case study authors. However, further barriers to accessing information from private finance actors included its commercial sensitivity, associated reputational risks and limited capacity to engage with external research, although many private actors interviewed for the case studies were very generous with their time and transparency.

Similar to issues cited in previous assessments of Article 2.1(c), access to and availability of data were fairly limited, especially for private and adaptation finance flows. Furthermore, quantitative assessments struggled to put figures against fiscal contributions such as tax exemptions, subsidised interest rates or in-kind benefits. Section 3 analyses these issues in greater depth and provides five options for developing a guidance framework for understanding and operationalising Article 2.1(c) in a systematic way, and in a way that balances both country-specific and collective progress.



Table 3: Summary assessment of Article 2.1(c) case studies in Belize, Colombia, Germany, Indonesia, Rwanda and Switzerland

Lever	Category assessed	Belize	Colombia	Germany	Indonesia	Rwanda	Switzerland
Overall strategies and targets	Net-zero target defined	Carbon sink					
	Legally-binding net zero target						
	Government tracks climate alignment of finance flows	Under development		Under development			
	Climate alignment of Covid-19 recovery package						
	National sustainable finance strategy	NIPS					
	International cooperation	CCCCC	NGFS			V20	
	Other activities						
Financial policy and regulation	Macroprudential regulation			ESRB scenario analyses			Being planned
	Microprudential regulation			CSRD/SFDR			PACTA-based stress tests
	Standardised disclosure templates for climate risks, impacts and analysis principles	MRV system		for example, PAIs	Green taxonomy		



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	Green-supporting factors			Subject to EU taxonomy negotiations		Subsidised loans by BRD	Strict principle of market neutrality
	Brown-penalising factors						
	Climate alignment of central bank monetary and non-monetary portfolios			ECB yes / Bundesbank no			SNB does not release data
	Accounting standards include climate-related risk						
	Financial market levies reflect climate components						
	Plans and strategies	BNCCO					
Fiscal policy	Taxes and levies	No import duty for fossil fuels	Carbon tax & GRS	ETS		EVs zero-rated	Carbon & aviation levy
	Price support or controls		Fossil subsidies fuel	Committed to phasing out fossil fuel subsidies	Fossil subsidies fuel	Electricity subsidy supports thermal plants	Fossil subsidies fuel
	Carbon pricing	Forest Carbon Partnership Facility	Carbon tax & voluntary carbon market	ETS		Environmental fees & voluntary carbon market	Link to ETS
	Other	Tourist levy funds PACT					Compensation for fuel importers
Public finance	Grants and international finance	SIF		Provides fair share	Climate Funds Update (CFU)		SDC



	Public budget and spending	MRV system	MRV system	Being developed under EU taxonomy	Climate Budget Tagging (CBT)		PACTA
	Debt (including green bonds)						
	Public climate finance institution	PACT national trust	Colombia in Peace Fund			FONERWA	Technology Fund
	Development finance institutions (DFIs) and export credit agency	PPPs (BWL and BEL)		EIB yes, KfW no	PT SMI and IIF	BNR	SIFEM
	Public pension funds			EIOPA showed high carbon footprint			Canton-level
	Insurance	CCRIF & DRM	Colombian Adaptation Fund			NAIS	
Information instruments	Sector-specific strategies	Various:		Various		Various	Various
	Certification and labelling	Energy efficiency		CSRD		For housing	
	Taxonomy		Planned	EU taxonomy being developed	Mandatory		Planning to adopt EU taxonomy
	Other	Awareness campaigns		ESAP			

Sources: authors' own analysis based on Bingler et al. (2021); Catzim (2022); Halimanjaya et al. (2022); Hoffmann et al. (2022); Lopez Carbajal et al. (2021); and Samo et al. (2022)



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Notes: Red (Paris misaligned); yellow (progress in right direction, but not sufficient); green (Paris aligned); grey (no information available).

Not all case studies used this exact table or assessed each category using a traffic light system. Where necessary to ensure comparability, the authors themselves made the assessment using data and information provided in the case studies.

Categories not included in table because of lack of data/information: 'NDC explicitly mentions Article 2.1(c)'; 'Public company-level climate and financial data repository' (information instruments); 'Climate-aligned project-investor matchmaking hub' (information instruments); 'Awareness campaigns' (information instruments); 'Export credit agency' (public finance); 'Fiduciary duty considers climate risks/impacts'.

Acronyms: BEL – Belize Electricity Limited; BNCCO – Belize National Climate Change Office; BNR – National Bank of Rwanda; BRD - Development Bank of Rwanda; BWS – Belize Water Service; CCCCC – Caribbean Community Climate Change Centre; CCRIF - Caribbean Catastrophe Risk Insurance Facility; CSRD - Corporate Sustainability Reporting Directive; DRM – Disaster Risk Management; ECB – European Central Banks; EIB – European Investment Bank; EIOPA – European Insurance and Occupational Pensions Authority; ESAP - European Single Access Point; ESRB - European Systemic Risk Board; ETS – Emissions Trading System; EVs – Electric Vehicles; FONERWA – The National Fund for Environment; GRS – General Royalties System; KfW - Kreditanstalt für Wiederaufbau; NAIS - National Agricultural Insurance Scheme; NGFS – Network for Greening the Financial System; NIPS – National Investment Policy and Strategy; MRV – Measuring, Reporting and Verification; PACT – Protected Areas Conservation Trust; PACTA - Paris Agreement Capital Transition Assessment (2° Investing Initiative); PAIs - Principle Adverse Impacts; PPP – Public Private Partnership; PT IIF - PT Infrastructure Finance Facility; PT SMI - PT Sarana Multi Infrastructure; SDC - Swiss Agency for Development and Cooperation; SFDR - Sustainability Finance Disclosure Regulation; SIF – Social Investment Fund; SIFEM – Swiss Investment Fund for Emerging Markets; SNB – Swiss National Bank; V20 – Vulnerable 20 Group.



+ 3. Analysis



3.1 Overall strategies and targets

As highlighted in the previous section, enabling frameworks do not necessarily capture the real-world impact that climate-positive or -negative frameworks do. This issue was highlighted in the case studies in the form of a ‘policy implementation’ gap between pledged commitments and action, both by public and private entities (see, for example, Halimanjaya et al., 2022; Hoffmann et al., 2022). In practice, authors struggled to assess the credibility of well-intentioned policies, ambitions and plans that had not yet been implemented. Most used a traffic light system to assess the Paris alignment of such plans, often green-lighting climate ambition set out in long-term national plans (for example, as outlined in the NDCs) or corporate strategies. However, this approach risks sending positive signals to actors who have not yet translated such ambition into action and therefore into changes in the real economy.

Given the recent flurry of pledges and commitments made by private actors, the spotlight has fallen on corporate net-zero plans. The Swiss and Indonesian case studies cited evidence of investors and corporations with climate-related strategies and policy commitments, such as coal divestment or NDPE (no deforestation, peat, or exploitation) policies, that did not translate these pledges to measurable climate action. For example, in Switzerland, more than 50% of listed equity and 70% of corporate bond investors with coal divestment policies still had coal exposures at the time of writing (Bingler et al., 2021).

- To address the planning–implementation gap, actors should put in place more dynamic, intermediate goals instead of static, long-term targets (Noels and Jachnik, 2022). An example at the national level is the EU’s ‘Fit for 55’ package, which envisages a 55% reduction in GHG emissions by 2030 ahead of the aim of becoming carbon neutral by 2050. Furthermore, targets and strategies should be sufficiently disaggregated by sector or subsector and should be legally binding, specifying the consequences of not meeting those targets.
- Improved transparency on a mix of both forward- (for example, planned capital expenditure investments or transition plans) and backward-looking indicators of finance flows and capital stocks would also help provide a better assessment of where financial flows are today, and where they are heading. Although approaches and methodologies for identifying causality and real-economy impacts are still fairly limited (UNFCCC SCF, 2022a), credibility criteria are being developed to evaluate the ambition, measurement and reporting of net zero commitments– for example, by the High Level Expert Group on Net Zero (HLEG) and UNEP-FI’s impact analysis tools. These should be used to assess the credibility of climate ambition by governments, private financial institutions and corporations in future stocktakes.




3.2 Financial policy and regulation

The Whitley et al. (2018) framework is biased towards government action, as governments themselves are the actors who signed up to the Paris Agreement and therefore have the greatest responsibility for operationalising Article 2.1(c). As a result, its application was fairly limited in countries where governments had limited fiscal headroom or where policy and regulation were ineffective because financial sectors were underdeveloped or lacked financial depth, which can be the case particularly in poorer countries. A bias towards government actions may also penalise countries that have a political ethos or track record of being underregulated, such as the United States (Benjamin, 2021). This risks countries, particularly poorer ones, being assessed as misaligned due to the lack of ambitious policies, regulations or fiscal incentives. Climate mainstreaming requires complex methodological approaches, institutional and human capacities, and robust enabling policy and regulatory requirements (Bingler et al., 2021; UNFCCC SCF, 2022c). Even where ambitious policies exist, they may still be deemed ineffective if their enforcement is questioned. In Indonesia, one of the largest economies in the world, concerns were cited over the enforceability of ambitious financial regulation such as the financial supervisor's green taxonomy (Halimanjaya et al., 2022).

The different approaches to financial policy and regulation made it difficult to assess this lever in a consistent way across the six case study countries. For example, the assessment of prudential regulation designed to manage the impacts of climate-related risks on financial markets was not possible in financial markets with limited depth and concentration, such as those in Rwanda, Belize or Indonesia. This issue is likely to affect other countries where large parts of the population are still unable to access financial services, where the economy largely depends on informal microenterprises, or where few regulated financial institutions exist that would be subject to financial policy and regulation. It may also be a risk in lower- or upper middle-income contexts with 'missing markets' to promote green finance, such as a corporate bond market.

The varying degree to which the TCFD recommendations have been rolled out around the world reflects this issue. By mandating the disclosure of climate-related risks among regulated entities, central banks and financial supervisors raise awareness of the assets, sectors and activities that are highly exposed to such risks and thereby encourage divestment from Paris-misaligned assets. However, in countries where few such corporations and financial institutions exist, or where they represent a very small share of overall economic activity, such mandatory disclosures are not necessarily effective tools for encouraging the Paris alignment of finance flows. Even in large middle-income countries such as Indonesia, fewer than a handful of sufficiently capitalised commercial banks exist (Halimanjaya et al., 2022), limiting the leverage of TCFD-aligned prudential frameworks. In general, existing frameworks do not adequately capture the Paris alignment of finance to MSMEs, which form the backbone of most economies around the world.

Of the six case studies, only Germany and Switzerland reported progress on implementing climate-related risk disclosure requirements under micro-prudential regulatory tools. While these efforts were assessed as being Paris aligned in Germany and Switzerland, it is not certain whether disclosures led to climate-positive real-economy outcomes (UNFCCC



SCF, 2022a). The effectiveness of such mandatory disclosures is fairly limited within some corporate governance models, especially where there is a lack of ‘shareholder activism’ (Griffin and Jaffe, 2022). To date, there is no evidence that the integration of climate risks in investment decisions will lead to lower carbon emissions or greater climate resilience (Ameli et al., 2020; UNEP, 2022).

More active or even interventionist actions such as variable capital adequacy requirements, preferential interest rates or mandated quotas for investment in green sectors may therefore be perceived as representing greater Paris alignment. For example, central banks and financial supervisors in emerging and developing countries are more likely to introduce ‘unorthodox’ tools, instruments and policies such as priority sector lending (PSL) to protect economies against climate- and nature-related risks (D’Orazio and Thole, 2022; Volz et al., 2022). Under the mandate to support broader development objectives, central banks in emerging markets and developing economies already play a more active role in mitigating the systemic risks of climate change using measures beyond capital and exchange controls, although their efficacy is still unknown (ibid.). Financial regulators and supervisors may also justify the use of more active measures in countries that are more reliant on nature-based sectors (such as agriculture) or where the effects of climate change are especially high.

However, there is also scope for central banks to take more interventionist approaches to support the Paris alignment of finance flows under their core price control and financial stability mandates – for example, where climate change is affecting the prices of food and energy. Nonetheless, the Swiss case study highlighted that it may not always be possible for central banks to take a more active stance to support the Paris alignment of finance flows where it is perceived to threaten the independence or market neutrality of the regulator (see, for example, Bingler et al., 2021). The Swiss National Bank (SNB) assessed that the overall threats posed by climate risks to the country’s economic and financial stability were ‘moderate’ (Maechler and Moser, 2019).

- *Further research needs to consider the mandates of central banks and financial supervisors to introduce Paris-aligned policies and regulation, and assign responsibility to other actors where that mandate is not clear. These factors are highly dynamic and need to be reviewed over time as country circumstances change and markets become more developed (Dikau and Volz, 2021).*
- *A common, one-dimensional standard or approach for assessing the Paris alignment of financial policy and regulation is not possible across all 194 signatories to the Paris Agreement. Therefore, global standards for ‘Paris-aligned’ financial policy and regulation, such as TCFD, green bond standards, or SBTi, must be designed in a way that is interoperable. The interoperability of standards could be determined based on financial market development, central bank mandates, or different levels of climate risk exposure and systematic vulnerability to climate impacts.*



3.3 Fiscal policy


The case studies reveal the use of a wide variety of fiscal mechanisms and public finance instruments to incentivise Paris-aligned finance flows in accordance with the country's own Paris-aligned development pathway. These include fiscal policy levers such as taxes, levies, royalties, price supports and controls, public procurement and budget support, as well as public finance instruments such as grants, debt, equity, guarantees and insurance (Watson et al., 2020).

Every country had its own unique and innovative fiscal mechanisms to (dis)incentivise certain behaviour using taxes, conservation fees, tourist levies, subsidies and other price controls. For example, Rwanda raises fees from corporate environmental and social impact assessments (ESIAs) (Samo et al., 2022), while Switzerland adopts aviation levies (Bingler et al., 2021). Various tax and business incentives to encourage Paris-(mis)aligned finance were also identified, such as tax exemptions for large-scale renewables and zero-rating of solar panels, but also tax exemptions for fossil fuel producers and importers. These policies and actions are specific to the structure of the relevant national economy, its exposure to climate-related risks, and its priority sectors and investment needs.

The case studies also revealed a plethora of financial instruments to disburse finance, including green banks, specialised funds or changes to existing national development banks (NDBs). Where countries did not have dedicated green development banks in place, the mandate for channelling domestic and international climate funds was shared between different specialised grant-making, de-risking, lending or equity instruments. The case studies also revealed a variety of blended finance instruments, such as public-private partnerships to incentivise sustainable infrastructure (see, for example, Halimanjaya et al., 2022).

→ *The GST will reveal hundreds, possibly thousands more highly context-specific climate-relevant fiscal policy mechanisms and innovative ways of disbursing finance to support Paris alignment. A stocktake of these will open up significant opportunities for cross-learning between countries around the world.*

One of the complexities surrounding the assessment of the Paris alignment of fiscal policy and public finance is that many fiscal mechanisms (for example, carbon taxes) generate revenue for public spending. Finance flows may therefore be captured under both levers, even though they have potentially different effects on the incentives and behaviour of market actors such as investors, corporates or individuals. It is entirely possible for a fiscal policy mechanism to be consistent with Article 2.1(c) in the way it affects behaviour, yet to be inconsistent with Article 2.1(c) in the way that the fiscal revenue is spent. For example, a climate-consistent mandatory carbon tax could be used to finance climate-inconsistent fossil fuel investments or behaviour. Both Austria and Germany have tax allowances for car-driving commuters in place, even though they also tax carbon under the Emissions Trading System (ETS) (Spiegel, 2019). In general, the case study authors did not distinguish the effects of fiscal instruments from public finance tools, leading in theory to situations where Paris-misaligned public spending could be assessed according to a Paris-aligned fiscal incentive.



Nonetheless, in practice fiscal mechanisms designed to disincentivise Paris-misaligned behaviour tended to support public finance tools that did the same. For instance, the \$7.50 tourist levy in Belize aims to reduce environmentally damaging mass tourism, while raising capital for the country's successful national trust (Protected Areas Conservation Trust - PACT) and its numerous grants to conservation projects (Catzim, 2022). Like most fiscal mechanisms cited in the six case studies, it was therefore assessed as being Paris aligned with the country's low-carbon, climate-resilient development pathway.

- *Assessing fiscal mechanisms against their Paris alignment is a nascent area (see, for example, Watson, 2021). Interviews conducted for this paper suggested that more guidance and research is needed to understand how best to assess these fiscal mechanisms in terms of how they support investment needs, such as those identified in NDCs. The stocktake should be used as a starting point for this exercise, as it documents the unique mechanisms that countries use to incentivise and disincentivise behaviour in a Paris-aligned way. In documenting these efforts, attempts should be made to identify linkages between fiscal revenue and expenditure flows, except where it is not possible to do so (for example, when revenues flow into the general public budget).*
- *While research on the effectiveness of fiscal policy and public spending mechanisms continues to develop, the GST could adopt a climate-negative framework to highlight obvious Paris-misaligned fiscal policy mechanisms such as fossil fuel subsidies, as they are easier to identify.*

3.4. Public finance: data availability and real-world impact

Only limited disaggregated, up-to-date quantitative data was available for the six case study countries. Belize and Indonesia had measuring, reporting and verification (MRV) systems in operation,⁸ although they were still under development and at the time of writing and did not extend to private sector financial flows (Catzim, 2022; Halimanjaya et al., 2022). Relatively better access to quantitative sources existed in Colombia and Switzerland, where the MRV systems collected relevant data through the Colombian state regulator *Superintendencia Financiera de Colombia* (SFC) and the *Swiss Federal Office for the Environment* (FOEN). However, who was responsible for collecting and disclosing the necessary data and thereby ensuring greater transparency was not always clear. The Colombia case study suggests that the state regulator may be accountable, whereas the case studies for Switzerland, Indonesia or Belize assign responsibility for monitoring public and private climate finance flows or green budget tagging to government ministries (for example, ministries of finance or the environment).

Up-to-date disaggregated data on Paris-aligned finance flows were not always available, either because they did not exist or because they were proprietary and therefore difficult to access. This led some authors, for example, in case studies for Germany (Hoffmann et al., 2022) or Switzerland (Bingler et al., 2021), to create separate criteria related to data

⁸ In the Colombia and Indonesia cases, MRV or climate budget tagging (CBT) systems were categorised under the 'public finance' lever, whereas the Belize and Switzerland case studies considered these part of 'overall policies and strategies'.



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access and availability in their assessments. Finance flows were subsequently classified as 'red' (Paris misaligned) if no data was available.

→ *Paris-misaligned assessments based on restricted data availability help raise awareness among regulators, government ministries and the private sector to make financial systems more transparent and thereby enable Article 2.1(c) assessments and ultimately, progress. Future stocktakes should highlight data gaps and suggest non-partisan and preferably apolitical bodies and institutions to supervise and fill them. For example, central banks and financial supervisors could expand their existing reporting infrastructure to cover climate alignment of public and private finance flows.*


The authors faced ambiguity when assessing the Paris alignment of public and private actors in contexts where there were significant shares of cross-border finance flows into or from different jurisdictions. For example, Switzerland is a large base for global financial institutions whose activities (for example, fossil fuel investments) are considered misaligned with the country's own climate goals (Bingler et al., 2021). Conversely, 15% of Rwanda's public budget is financed through bilateral or multilateral grants (Samo et al., 2022).

Although some finance flows (for example, for fossil fuels) can be clearly assessed as being Paris misaligned, regardless of the country of origin or deployment, national-level differences in low-emission, climate-resilient development pathways exist. Therefore, what might be considered Paris aligned in Switzerland may not be relevant to Rwanda or Belize, especially due to the different balance of mitigation and adaptation investment needs. As a carbon sink, the stocktake of Belize's finance flows revealed few activities that supported mitigation efforts, such as carbon pricing.⁹ Citing low historical emissions, domestic economic development priorities, and energy and food security needs, the case studies of Rwanda and Belize highlighted the tension between global and national differences in the definition of Paris alignment, a problem that was difficult to resolve since large parts of their public budgets are financed through bilateral or multilateral grants (Samo et al., 2021; Catzim, 2022).

→ *Assessments of collective progress against the Paris Agreement need to adopt a consistent approach to cross-border finance flows to avoid double counting, or classifying finance flows as Paris aligned in one jurisdiction but not in the other. Alignment should always be perceived in accordance with the country of deployment's Paris-aligned development pathway. Where a country does not present its own Paris-aligned development pathway, alternatives can be used. Cross-border finance flows can be assessed against their contribution to global goals (Micale et al., 2020) or based on science. Furthermore, reporting on the alignment of cross-border finance flows should in future be done by those who have an obligation in accordance with subsequent UNFCCC decisions. This would provide clear guidance and remove the reporting burden from the poorer countries.*

Lack of data is a longstanding issue (UNFCCC SCF, 2022a) and it will take years to develop effective measuring, reporting and verification (MRV) systems, which are inextricably tied to the development of classifications, taxonomies and criteria for defining

⁹ However, Belize's policy can still in part be considered Paris misaligned, for example, given its tolerance of outstanding oil exploration licenses (Catzim, 2022: 12).



Paris alignment or misalignment. The advantage of these systems is that they can be adapted to the national context, while also ensuring cross-border comparability of Paris-aligned finance flows. However, as highlighted in Germany (Hoffmann et al., 2022) and Indonesia (Halimanjaya et al., 2022), where Article 2.1(c) is seen as being at odds with other national priorities (for example, energy or food security), official green taxonomies could still include Paris-misaligned finance flows and activities. Yet, there are unofficial estimates of green or Paris-aligned finance flows (for example, Buchner et al., 2021) that can help Parties make initial assessments and create a better understanding of Article 2.1(c) and develop official reporting systems.

→ *Unofficial assessments should be used to guide the first GST while country-level MRV systems are established and developed. They can also be used to highlight 'greenwashing' concerns once official systems are implemented. The relative lack of such systems also highlights the limitations of climate-positive or -negative frameworks for assessing the Paris alignment of finance flows, thereby necessitating enabling frameworks in the short-to-medium term.*

3.5 Information instruments

Some countries may also have an active and ambitious private or voluntary sector, where market-led initiatives such as voluntary sustainable finance standards that can steer the Paris alignment of private finance flows. The United States has seen ESG scoring companies represent 95% of its market capitalisation (OECD, 2020: 21). The case studies highlighted some examples of strong uptake of voluntary initiatives. Eighty (80)% of Swiss financial institutions took part in the voluntary PACTA assessment of climate-related risks in 2020 (Bingler et al., 2021). In Colombia, 23 asset owners or managers helped form the Colombian Climate Asset Disclosure Initiative, which supports voluntary disclosures (Lopez Carbajal et al., 2021). Several countries also cited voluntary, market-led carbon market mechanisms or sector-specific certification schemes, such as the Roundtable of Sustainable Palm Oil (RSPO) in Indonesia (Halimanjaya et al., 2022). Voluntary standards and initiatives can enjoy broad uptake and represent greater Paris alignment than basic mandatory regulatory standards. In these circumstances, a stronger focus on public actions and policies could therefore overlook positive voluntary Paris alignment.

On the other hand, voluntary initiatives also continue to face accusations of green- or ESG-washing (see, for example, Halimanjaya et al., 2022) linked to low standards, cherry-picking areas of risk or impact, insufficient transparency, and the aforementioned policy-implementation gap. Despite the wide coverage of ESG scores in the United States, anti-ESG sentiment has grown due to both methodological concerns and for ideological reasons. Furthermore, poorer or more vulnerable countries experience low data coverage, making it challenging for companies and investors to adopt voluntary standards such as TCFD, SBTi, GFANZ or Transition Pathway Initiative (TPI) (UNFCCC SCF, 2022a). However, as the scope and number of private initiatives continue to increase, so will the availability of data as more investors identify and report asset-level data in their portfolios.

→ *To assess the Paris alignment of voluntary initiatives, country-level uptake of national, regional or global voluntary initiatives should be included, provided that they*



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are considered credible and Paris aligned. To be effective, a sufficiently resourced independent arbiter would need to make these assessments.



+ 4. Conclusion and recommendations

Reaching a shared but also Party-driven understanding of what Paris-aligned finance flows are is vital in this final year of the first official Global Stocktake of collective progress against the Paris Goals. Climate-positive and climate-negative frameworks can help countries and global stakeholders such as the UNFCCC understand how finance flows are shifting in a Paris-aligned way. For example, climate finance flows continue to grow and, in 2022, global investments in clean power exceeded the amount spent on oil and gas for the first time (Bloomberg NEF, 2023b).

However, climate finance still represents less than one-third (31–32%) of overall needs, especially of developing countries (UNFCCC SCF, 2022b). To realign finance flows at the required pace, enabling and supportive environments need to be created that drive public and private finance flows in a climate-consistent way, using: (a) clear and binding targets; (b) financial policy and regulation that prices climate-related risks accordingly and actively supports Paris-aligned activities; (c) innovative fiscal policy and public spending mechanisms to support green investment; and (d) greater recognition of market-led initiatives.

Enabling and supportive environments to drive progress towards Article 2.1(c) around the world require more guidance and a framework that can track collective progress while recognising each Party's unique finance flows and systems. Drawing together lessons from the six case study countries that operationalised an enabling framework for assessing Article 2.1(c) revealed several options for designing such a framework to ensure that it respects country-specific contexts while ensuring equitable and collective progress. The options identified in this paper also support several focus areas for a potential global framework that have recently been identified by Parties, such as transparency, real-economy impact, lesson learning, and outlining public policy levers that governments have available with regard to private and public finance flows (UNFCCC SCF, 2022c):

- To address policy implementation gaps and ensure that climate ambition leads to real-world impact, the Paris alignment of **strategies and targets** should be assessed based on the presence of intermediate goals, disaggregation by sector or subsector, and whether they are legally binding. Increasingly available credibility criteria such as those developed by HLEG and UNEP FI should also be applied in future stocktakes, not just to assess the climate ambition of government, but of that private actors and voluntary initiatives as well.
- A common, one-dimensional standard or approach for assessing the Paris alignment of **financial policies and regulations** is not possible, given the disparity between countries' financial market development, central bank mandates and systematic vulnerability to climate change. Existing standards, such as those proposed by TCFD, have proved difficult to apply in emerging markets and developing economies. Therefore, they need to be designed in an interoperable way that recognises their



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limitations, for example, when it comes to enacting prudential policies in less developed financial markets. More research is required to better understand where central banks and financial supervisors can adopt a more supportive role in driving the Paris alignment of finance flows under their core mandates.

- By documenting the multitude of innovative **fiscal policy mechanisms** that (dis)incentivise behaviour in a Paris-aligned way in different countries around the world, future stocktakes will open up significant opportunities for cross-learning. While it is still not known whether all of these mechanisms are effective in supporting their respective country's Paris-aligned development pathway, linking fiscal revenue and expenditure flows can clarify the effects and highlight inconsistencies. For example, where revenues from carbon taxes are used to subsidise high-emission transportation (in Germany) versus conservation efforts (in Belize).
- The lack of up-to-date and disaggregated data remains a considerable barrier to tracking the Paris alignment of **public and private finance flows**. Future stocktakes should highlight these data gaps and suggest non-partisan or apolitical bodies and institutions to supervise and fill them, such as central banks and financial supervisors. Until official MRV systems are established, unofficial estimates provided by researchers should continue to be used in upcoming stocktakes and to cross-check the alignment of existing systems. Where cross-border finance flows are concerned, Paris alignment should always be perceived in accordance with the country of deployment's development pathway.
- As part of future stocktakes, a sufficiently resourced independent arbiter should be set up to assess the Paris alignment of country-level, regional or global **voluntary initiatives** and sustainable finance standards.

All of these recommendations cannot be enacted in time for the completion of the first GST. Developing interoperable global standards to assess the Paris alignment of financial policies and regulations may even take decades. However, if the first GST can be used to assess progress against Article 2.1(c) in a more systematic way along the lines of some of the suggestions above, it could start accelerating country-driven shifts in finance flows and thereby ensure collective progress, not just on the long-term finance goal, but also the mitigation and adaptation goals.



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