I4CE
INSTITUTE FOR CLIMATE ECONOMICS
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Thinking about the implications

How countries plan to finance their climate transition

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I4CE is a non-profit research organization that provides independent policy analysis on climate change mitigation and adaptation. The Institute promotes climate policies that are effective, efficient and socially fair. Our 40 experts engage with national and local governments, the European Union, international financial institutions, civil society organizations and the media.

Our work covers three key transitions – energy, agriculture, forest – and addresses six economic challenges: investment, public financing, development finance, financial regulation, carbon pricing and carbon certification.

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EXECUTIVE SUMMARY

The urgency of climate action is becoming ever more apparent, yet we remain far from securing the level of financing required for meaningful progress. The first Global Stocktake underscored a widening gap between the needs of developing countries and the support they receive, while advanced economies also struggle to finance their own ambitious climate targets.

Countries need detailed, nationally driven financing plans to enable an efficient, locally owned transition and to better coordinate—and scale up—scarce international resources. These plans are crucial for aligning public and private efforts, financing national priorities, preventing stranded assets, and embedding climate considerations within broader development strategies. They are guided by 4 core questions: How much to spend, where, and when? Who will invest, and who will finance these investments? What is needed for these payments to happen? And finally, what are the macroeconomic impacts of the transition?

This study reviews existing practices in 10 geographically and economically diverse countries to support the development of such financing plans, identifying good practices and areas for inspiration and improvement. It uses 45 progress indicators, structured around the questions above, to understand where countries are today in the process of developing such financing plans.

This first assessment shows that many milestones have already been reached on the way to ambitious financing plans: on average, 60% of our indicators are met in the surveyed countries. **However, significant gaps remain, with essential elements still absent or underdeveloped**.

Country-level estimates of financing needs remain generally inadequate. Even in countries where such estimates are provided, the sectoral/temporal detail is often too limited to serve as a basis for a real financing plan. Moreover, the closer the time horizon, the less information is provided on indicators related to transition planning, indicating a disconnect between more mature long-term visions and short-term actions that are comparatively more like flying blind.

The question of how the effort will be shared is still poorly addressed. Details of who will pay and through what channel are rarely provided, making it difficult to reflect on the public policies that should trigger these investments. Most countries lack clear frameworks or incentives to mobilize sufficient private finance, and financing options for public action are also underexplored, especially on the domestic resource mobilization side.

Finance will be at the forefront of international negotiations over the next two years., beginning with the New Collective Quantified Goal (NCQG) at COP29 in November 2024, followed by the next generation of NDCs at COP30 in November 2025, and the fourth International Conference on Financing for Development (FFD4) in June 2025. In this context, our preliminary findings emphasize the need to:

- Advance country-owned, bottom-up, and detailed identification of investment and financing needs, tailored to national circumstances and targets, and broken down over time.
- Pair this with a systematic review of available financing options, including domestic, international, public, and private sources.
- Apply these insights to long-term strategies but also incorporate them into short-term planning frameworks that guide national authorities' actions. This is a critical aspect further strengthened by governance approaches like the Integrated National Financing Frameworks proposed by the UN and OECD.

ACRONYMS

AFOLU	Agriculture, Forestry, and Other Land Use
CCFF	Climate Change Fiscal Framework
COP	Conference of the Parties (to the United Nations Framework Convention on Climate Change)
COP29	29th Conference of the Parties
CPI	Climate Policy Initiative
ESG	Environmental, Social, and Governance
EU	European Union
FFD4	Fourth International Conference on Financing for Development
GCF	Green Climate Fund
IADB	Inter-American Development Bank
IHLEG	Independent High-Level Expert Group on Climate Finance
INFF	Integrated National Financing Framework
LTS	Long-Term Strategies
MDBs	Multilateral Development Banks
MTFF	Medium-Term Fiscal Framework
NAP	National Adaptation Plans
NCQG	New Collective Quantified Goal
NDC	Nationally Determined Contribution
OECD	Organisation for Economic Co-operation and Development
PDBs	Public Development Banks
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

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INTRODUCTION

USD2.4 trillion is what the Independent High-Level Expert Group on Climate Finance estimates is needed every year by 2030, to invest in ajust energy transition, adaptation and resilience, loss and damage, and the conservation and restoration of nature, in developing countries alone (excluding China). According to the same report, this figure represent a fourfold increase from current levels. The official text adopted as an outcome to the first Global Stocktake, while emphasizing the role of finance as a "critical enabler for climate action", highlights a growing gap between the needs of developing countries and the actual support provided.

Finance will fortunately stay into the spotlight during the next years of international negotiations, as the New Collective Quantified Goal (NCQG) talks that just came to a close at COP29 this November will be followed by the update of the Addis Ababa Action Agenda objective at the fourth International Conference on Financing for Development (FFD4) takes plance in June 2025, and the next generation of NDCs at COP30 in November 2025.

Countries need detailed, nationally owned investment roadmaps (or financing plans) to drive an efficient transition. These financing plans not only optimize the use of available international resources but also align public and private efforts, finance national priorities, prevent stranded assets, and integrate climate change considerations into broader development strategies.

This study explores the practices of 10 countries relative to these financing plans through 45 indicators. With a wide diversity in size, geography or level of development, these countries give a relatively good idea of where frontrunners stand with respect to developing such financing plans. As for the indicators, they were adapted from I4CE's existing long-term strategy (LTS) Dashboard for Finance Ministers and cover the existence and scope of strategic documents, investment needs assessments, existing public policies and identified funding options for both public and private action.

While overall progress is encouraging, there is an urgent need for a more bottom-up, detailed identification of investment and financing needs, tailored to each country's specific circumstances, with particular emphasis on short-term spending requirements. Additionally, a systematic review of funding sources is essential to enable informed discussions on how to share the financing burden equitably.

BACKGROUND

WHY WE NEED COUNTRY-OWNED, BOTTOM-UP FINANCING PLANS, AND WHAT THEY SHOULD LOOK LIKE

Why: To support national action and global cooperation

Supporting national efforts

Most of the emission reductions countries need to achieve by 2030 require new investments: roads, cars, buildings, industries, infrastructures… Such profound changes cannot happen overnight. Investment targets should therefore take the form of a roadmap, spread over time and covering the whole economy: households, businesses, local authorities, government and public agencies.

Such roadmaps, or financing plans, should integrate short- and medium-term public expenditure targets into a more systemic view encompassing regulation, private action, domestic resources and international finance. This integrated perspective guarantees national development objectives related to energy and food security, to name a couple, will be given due attention, and makes room for discussions related to the just transition. It also prevents distorting deep decarbonization processes into a simple merit-order approach through *e.g.* abatement costs, which could lead to a disorderly transition and significant stranded asset costs.

Designing such plans facilitates a country-level consensus on what the transition should look like (I4CE, 2024). The necessary discussions they trigger with line Ministries, project promoters, and national and international investors and donors ensure an outcome that respects national needs, priorities and specificities. The capacity-building such discussions entail is also instrumental in piloting the transition further down the road.

Clear financing plans also lend credibility and convening power to national low-emission strategies. They act as a "reality check" on a country's ambition and demonstrate that the desired transition is feasible by explicitly linking long-term goals with sources of financing. They also deliver a clear signal to the private sector, as well as international partners, as to where public efforts should be supported and/or supplemented, how, and who is expected to step in.

Supporting international collaboration

Developing countries are claiming back their role at the centre of international cooperation through the ongoing reform of the international financial architecture, and the ongoing discussions on a new collective quantified goal on climate finance (NCQG). Credible financing plans are an essential instrument in this prospect: they help countries channel international climate finance (in its different forms: public/private, grants/loans/investments) to where it is needed most to complement existing funding sources. International climate finance can thus better serve a country's needs and priorities and achieve greater impact on climate and development.

Financing plans in developing countries could also support the outcome of ongoing NCQG negotiations, as they would bring clarity as to where financial support is most needed and most impactful for low-emissions and climate-resilient development, thereby supporting the implementation of the new goal agreed.

Robust financing plans are also key to guide public development banks' (PDBs) investments and activities where they would have most impact. Recent work by the Inter-American Development Bank, for instance, has shown how fundamental the identification of investment priorities, financing options, and clear project pipelines is in mobilising public and private funds for the implementation of national decarbonization objectives (see also **Box 1** below).

As multiple technical and financing partners often engage in one country, country platforms can help support the effective implementation of national financing plans, provided they are sufficiently developed and detailed. Such platforms, defined by the G20 as "voluntary country-level mechanisms, set out by governments and designed to foster collaboration among development partners, based on a shared strategic vision and priorities", offer a new means of coordinating the actions of several international partners in a country, to increase their impact. This in turn will facilitate the mobilization of both domestic and international finance, while ensuring its alignment with national priorities and climate goals.

BOX 1. THE CENTRAL ROLE OF PUBLIC DEVELOPMENT BANKS IN ALIGNING FINANCIAL FLOWS WITH THE PARIS AGREEMENT

PDBs play a pivotal role in aligning financial flows with the low-emissions, climate-resilient development pathways outlined in the Paris Agreement. As the financial arm of governments, PDBs are pivotal in translating strategies and financing plans into tangible actions. While there is no universally agreed definition of what constitutes "transformational" change, PDBs face the ambitious challenge of shifting entire systems, sectors, and value chains toward a sustainable economy. To meet this challenge, they must not only increase the public resources they channel but also "do more" and "do better" with those resources.

First, by committing to align their operations with the Paris Agreement, PDBs can minimize negative climate impacts across their activities while maximizing positive co-benefits and driving transformative change in the real economy. This requires the adoption of more systemic investment and engagement strategies to identify opportunities at every level and ensure these opportunities continuously inform country-level dialogues and programmatic work.

Second, PDBs can better leverage the unique mix of financial instruments at their disposal. They are already developing innovative tools designed to tackle the specific challenges faced by developing countries, such as high debt levels, limited access to liquidity, and the significant costs associated with extreme weather events. These new instruments can be deployed alongside traditional mechanisms (*e.g.* public policy loans, financial intermediation) to address development and climate needs in tandem. The ongoing reform of the international financial architecture should ensure these instruments deliver measurable climate action outcomes and serve as credible vehicles for scaling climate and development finance from the billions to the trillions.

Source: More and better finance: maximising positive climate impacts for a timely transition - I4CE (2024).

How: Address four core questions

What should a financing plan look like? While several frameworks explore this question (see **Box 2**), the specifics will depend on each country's unique needs, institutional context, and priorities. However, developing and implementing a comprehensive financing plan requires 4 core questions to be addressed, summarized in **Figure 1** below.

1. **How much is needed? Where and when?** A sound, highly detailed assessment of necessary investment is a cornerstone of any financing plan, which should:
   - Be backed by detailed country-specific decarbonization pathways, featuring detailed sectoral transformation roadmaps to allow for a high degree of disaggregation and avoid abstract discussions in the following phases;
   - Include the principal economic and emission sectors (energy, transport, industry, buildings…) to allow for intersectoral trade-offs and a good interaction with macroeconomic discussions (see **question 4** below).

2. **Who will invest, and who will actually finance these investments?** This crucial discussion is about building a nationwide political consensus on who should pay for the transition. It must be deeply rooted in a country's national circumstances and overall approach to national investment policies, and the answer will depend on each economic sector considered, as well as on the available public policies (it is thus an iterative process with question 3, rather these questions being tackled in a fixed and consecutive order). More precisely, discussions at this stage should come up with an overview of funding sources to match the needs identified in question 1, with a focus on balancing efforts between:
   - Public and private actors;
   - Companies and households;
   - Centralized and decentralized action and decision-making;
   - Different economic actors and channels: taxpayers, savers, investors, consumers.

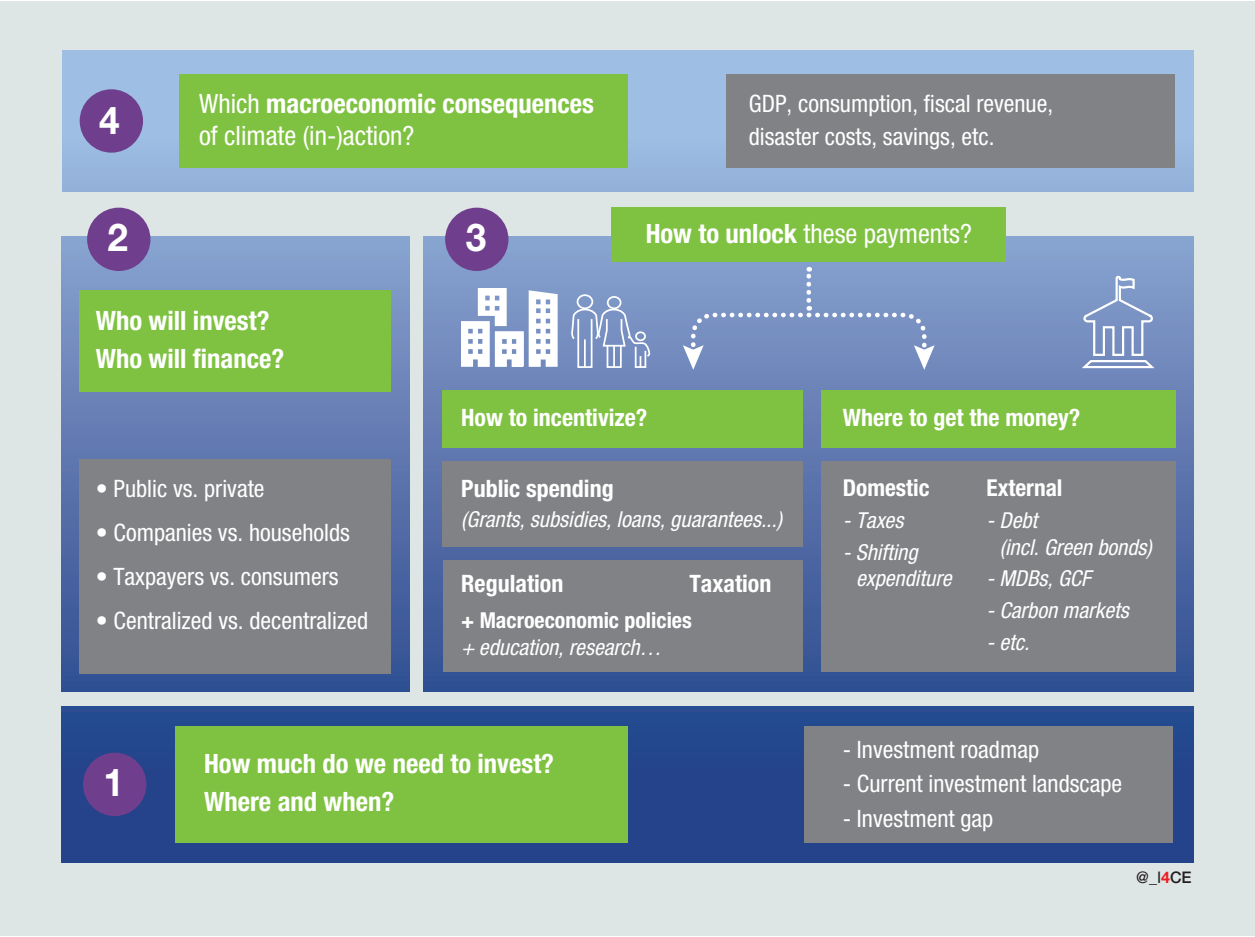
3. **What can the State do to unlock these investments and financing?** This third question is twofold:
   - **For the private sector**, the question is "how to incentivize investments?", as the amount of resources that can be mobilized is mostly linked to the willingness of actors to pay. Answers to this question can take the form of:
     - **Public spending** (grants, subsidies, loans, guarantees…) to overcome barriers to private investment;
     - **Regulation** (building codes, car standards, biofuel mandates, urban planning rules, etc.);
     - **Taxation** (fuel, patent, emissions, etc.);
     - **Wider macroeconomic policies** (monetary policy, green supporting factors, risk and insurance regulation, etc.);
     - **Other public policies** (capacity-building, education programs, research orientations, etc.).

- **For the public sector**, the question is "where will the money be found?" Options to bridge the financing gap can be:
  - **Domestic**: new taxes, redirecting expenditures;
  - **External**: debt raised on international markets, including green bonds; multilateral and bilateral donors; climate funds; innovative financial instruments such as carbon credits; etc.

4 How to account for the macroeconomic implications of the transition?

- This involves anticipating and mitigating the macroeconomic impacts of action or inaction. How might climate action – or the failure to act, whether through adaptation or mitigation – affect indicators such as GDP, savings, fiscal revenues, and consumption? What measures can be taken to address these impacts?

FIGURE 1. COMPONENTS OF A FINANCING PLAN



Source: Authors.

BOX 2. EXISTING FRAMEWORKS FOR THE DEVELOPMENT AND IMPLEMENTATION OF CLIMATE FINANCING STRATEGIES AND INVESTMENT PLANNING

Various guidelines and frameworks have been developed to support climate financing and investment planning, as well as to provide general recommendations to further enhance existing strategies and plans.

The UN Interagency Taskforce on Financing for Development proposes an Integrated National Financing Framework (INFF) consisting of 4 main blocks: 1/ assessments and diagnostics, 2/ design of the financing strategy, 3/ mechanisms for monitoring, review and accountability, and 4/ governance and coordination mechanisms. For a successful policy design and implementation, it emphasizes the role of good governance; high-level government coordination; and engagement with non-state actors. As such, it takes a broader approach than what we mean here by "financing plans", which mostly support the two first blocks of an INFF.

The Green Climate Fund (GCF) and the NDC Partnership, on their end, promote a Climate Investment Planning and Mobilization Framework that consists of 2 phases (investment planning / finance mobilization) and 3 main blocks within each phase (Phase 1: Investment planning capacity / Investment needs identification and prioritization / Financing strategy. Phase 2: Programming with financial partners / Funding proposal / Project implementation). It provides a step-by-step guide to developing a financing strategy, from a comprehensive review of existing institutional gaps delaying effective planning and implementation of climate investments, to how to deal with a group of very different funders. Its purpose is very similar to the financing plans approach developed here, yet its focus is more on processes and institutional settings. As with the INFF proposition, the scope of the GCF/NDC Partnership framework is broader than financing plans only.

The 2050 Pathways Platform and the Inter-American Development Bank also published in 2024 a review of national climate strategies for 5 Central and South American countries[1] + Germany, US, UK. This assessment specifically considers official documents labelled as a national finance strategy. Although the granularity of these similarly labelled documents varies, some common trends include:

- A diagnosis of the state of finance and its relationship to climate change in the country;
- Strategic axes to advance climate finance, often matched with individual measures;
- Missing elements around investment needs – identification, prioritization, or burden-sharing;
- Insufficient attention to economic and financial stability and competitiveness;
- Missing ex post evaluations of the impacts of financing strategies on climate finance.

In some cases, the missing elements can be found in other public documents; this is why the present review tries to encompass a wider information base. In some cases (*e.g.* needs assessment, cf. below), the information is just missing at the country level.

Other actors have put forward their own prioritization of the most important elements of a country-level climate finance strategy. For example, the OECD's Climate Change Expert Group, in a forthcoming paper, insists on the importance of granularity for: 1/ commitments; 2/ investment needs; and 3/ financing sources.

Compared to the above approaches, our understanding of climate financing plans puts emphasis on: 1/ starting with a highly granular assessment of both current and needed investments and possible sources of finance; 2/ considering the full range of possible sources of finance and the public finance implications of mobilizing private actors; 3/ reconciling different time horizons, from the 2050 LTS to the 3-year medium-term financial framework; 4/ maintaining a pragmatic and practical approach, to balance knowledge and institutional efforts with actual laws and action – and thus maintain the momentum over time.

1 Argentina, Belize, Chile, Colombia, Ecuador.

METHODOLOGY

10 COUNTRIES AND 45 INDICATORS

As a contribution to the dissemination of such planning exercises, we ran a first overview of country practices with respect to financing plans for the climate transition.

10 countries were selected to ensure:

- Geographical diversity (5 continents represented);
- Economic diversity (5 advanced and 5 emerging economies);
- Size diversity (7 G20 countries, and 3 small economies).

Although the climate ambition of these countries varies, a key criterion for their selection was the fact that they all had taken important steps forward on different aspects of climate transition planning.

These countries are listed in **Table 1** below.

TABLE 1. OVERVIEW OF THE COUNTRIES SURVEYED IN THIS STUDY

Country	Member of G20	GDP (bn USD 2023)	Emissions per capita (t CO_2e)	Mitigation commitment	NDC (pub. date)	LTS (pub. date)	NAP (pub. date)
Australia	Yes	1,742	22	Net zero (2050)	2022	2024	–
France	Yes	3,032	5	Net zero (2050)	2023	2020	2018
Republic of Korea	Yes	1,713	12	Net zero (2050)	2021	2020	2021
United Kingdom	Yes	3,345	6	Net zero (2050)	2022	2021	2023
United States of America	Yes	27,358	17	Net zero (2050)	2021	2021	N[2]
Bangladesh	No	446	1	22% reduction by 2030	2021	–	2022
Brazil	Yes	2,174	8	53% reduction by 2030	2020	–	2016
Chile	No	336	3	Net zero (2050)	2020	2021	2014
Rwanda	No	14	1	Net zero (2050)	2020	2022	–
South Africa	Yes	378	9	Net zero (2050)	2021	2020	2020

Developed countries Developing countries

Sources: WEO database, Climate Watch data, strategic documents (LTS, NDC and national action plans, NAPs).

The level of progress on financing plans was assessed against 45 indicators, aggregated into various categories to support further analysis (see full list in Annex).

The "building blocks" categories refer to a series of logical steps in developing a financial plan:

- **Climate strategy indicators** track major climate policy documents (LTSs, NDCs, NAPs), whether submitted to the UNFCCC or not, and evaluate the inclusion of mitigation and adaptation contributions across various time horizons. They also review the presence of multi-annual financing plans for the transition and the integration of climate priorities into national medium-term fiscal frameworks.
- **Climate investment needs** assess whether climate-related strategic documents include evaluations of investment needs.
- **Policies and public/private spending** documents government actions to engage different economic actors in financing the transition, such as through subsidies, regulations, fiscal tools, public reforms, and tracking of climate-related expenditure.
- **Funding options** present the instruments used by the public sector to finance the transition, including earmarked fiscal revenues, debt mechanisms, and international finance.
- **Macroeconomic impact assessments** examine whether strategic documents evaluate the transition's macroeconomic impact on 10 key indicators.

2 Climate adaptation and resilience plans are available for major federal agencies. Publication date is not specified.

The "knowledge vs. action" distinction tracks, on the one hand, a country's preparedness in terms of strategies, needs assessments, etc., and on the other hand, concrete implementation steps towards implanting the financing plan.

- "Knowledge" indicators comprise elements related to the development of climate strategies and plans across various time horizons, including costing assessments, spending tracking and impact evaluations.
- "Action" indicators focus on actual regulations and policies, public spending and funding (*e.g.* short-term spending frameworks), channels to mobilize private financing and the governance frameworks supporting financing plans.
- The indicators and associated categories are detailed in **Table 2** below.

TABLE 2. INDICATORS FOR THE ADVANCEMENT OF FINANCING PLANS, AND ASSOCIATED CATEGORIES

Indicator	Category 1: building blocks	Category 2: Knowledge vs. action
Has the NDC been updated for the second round?	Climate strategies	Knowledge
Are specific mitigation contributions explicitly stated in the updated NDC?	Climate strategies	Knowledge
Are specific adaptation contributions explicitly stated in the updated NDC?	Climate strategies	Knowledge
Has the LTS been developed and / or submitted?	Climate strategies	Knowledge
Are specific mitigation contributions for the year 2030 outlined in the LTS?	Climate strategies	Knowledge
Does the LTS include a target for achieving carbon neutrality?	Climate strategies	Knowledge
Does the LTS place emphasis on adaptation and resilience?	Climate strategies	Knowledge
Has a vulnerability assessment been conducted?	Climate strategies	Knowledge
Has the NAP been developed and / or submitted?	Climate strategies	Knowledge
Have the interventions outlined in the NAP been specified for each sector?	Climate strategies	Knowledge
Is there an integrated multi-annual financing plan in place to support the transition?	Climate strategies	Action
Is there a specific agency in charge of financial planning related to the transition?	Climate strategies	Action
Do the current medium-term fiscal frameworks MTFFs incorporate a climate component?	Climate strategies	Action
Does the NDC include an estimate of the overall climate investment needs?	Climate investment needs	Knowledge
Does the NDC provide an estimate of the investment needs specifically for mitigation efforts?	Climate investment needs	Knowledge
Does the NDC provide an estimate of the investment needs specifically for adaptation efforts?	Climate investment needs	Knowledge
Does the LTS include an estimate of the overall investment needs?	Climate investment needs	Knowledge
Does the NAP provide an estimate of the overall investment needs for adaptation initiatives?	Climate investment needs	Knowledge
Are any sectors excluded from the estimated climate investment needs in these plans?	Climate investment needs	Knowledge
Is the process of phasing out fossil-fuel subsidies being considered or initiated?	Policies and public/ private spending	Knowledge
Are specific support mechanisms in place to ensure the affordability of green technologies?	Policies and public/ private spending	Knowledge
Are risk-sharing or -transfer tools in place?	Policies and public/ private spending	Knowledge
Are there sector-specific regulations?	Policies and public/ private spending	Knowledge
Has a green or sustainable taxonomy been developed to classify environmentally sustainable economic activities?	Policies and public/ private spending	Knowledge

Table 2 continued >

Table 2 continued

Indicator	Category 1: building blocks	Category 2: Knowledge vs. action
Are there financial regulations in place to support climate action?	Policies and public/ private spending	Knowledge
Is there a direct carbon pricing mechanism, such as carbon taxes or emissions trading systems, in place?	Policies and public/ private spending	Knowledge
Are there any indirect carbon pricing mechanisms in place?	Policies and public/ private spending	Knowledge
As part of the public sector reforms, does the government have green or sustainable public procurement policies in place?	Policies and public/ private spending	Knowledge
As part of the public sector reforms, does the government have frameworks for climate-responsive public investment in place?	Policies and public/ private spending	Knowledge
Is green or climate budget tagging being implemented to track climate-related public spending?	Policies and public/ private spending	Action
Is there an estimate of the current level of public spending dedicated to the climate?	Policies and public/ private spending	Action
Is brown expenditure, or spending on activities that negatively impact the environment, being tracked?	Policies and public/ private spending	Action
Are there long-term projections for the amount of public spending required to meet climate investment needs?	Policies and public/ private spending	Action
Are there long-term projections for private investment that will need to be mobilized to support climate-related goals?	Policies and public/ private spending	Action
Are there estimates of the public and private spending needs broken down by sector to address climate-related objectives?	Policies and public/ private spending	Action
Are the revenues generated from direct carbon pricing earmarked for climate investments?	Funding options	Action
Are the revenues from other environmental taxes earmarked for climate investments?	Funding options	Action
Are the revenues from non-environmental taxes earmarked for climate investments?	Funding options	Action
Are carbon credits permitted?	Funding options	Action
Are sovereign, green or sustainable bonds being used to finance climate investments?	Funding options	Action
Are debt-for-nature or climate swaps being utilized?	Funding options	Action
Are governments providing export guarantees?	Funding options	Action
Do public development banks take climate investments into account and actively promote them?	Funding options	Action
Do governments depend on international climate finance to fulfill their climate investment needs?	Funding options	Action
Is there an assessment of the macroeconomic impacts of the transition?	Macroeconomic considerations	Knowledge

A final word on our methodology and significance of these first results:

This first assessment focused primarily on "common" national documents such LTS, NDCs, NAPs and MTFFs, completing the analysis with specific national documents and laws where relevant (a more complete list can be found in the 'Bibliography' section).

This should be considered an indicative, non-exhaustive list of where financing plans information could be found. It is not our intention here to specify a single national publication that should contain the information and decisions relating to financing the transition.

In the present context of highly dispersed, non-standardized information, we may have undervalued the performance of surveyed countries if the necessary information exists outside the limited set of documents reviewed here.

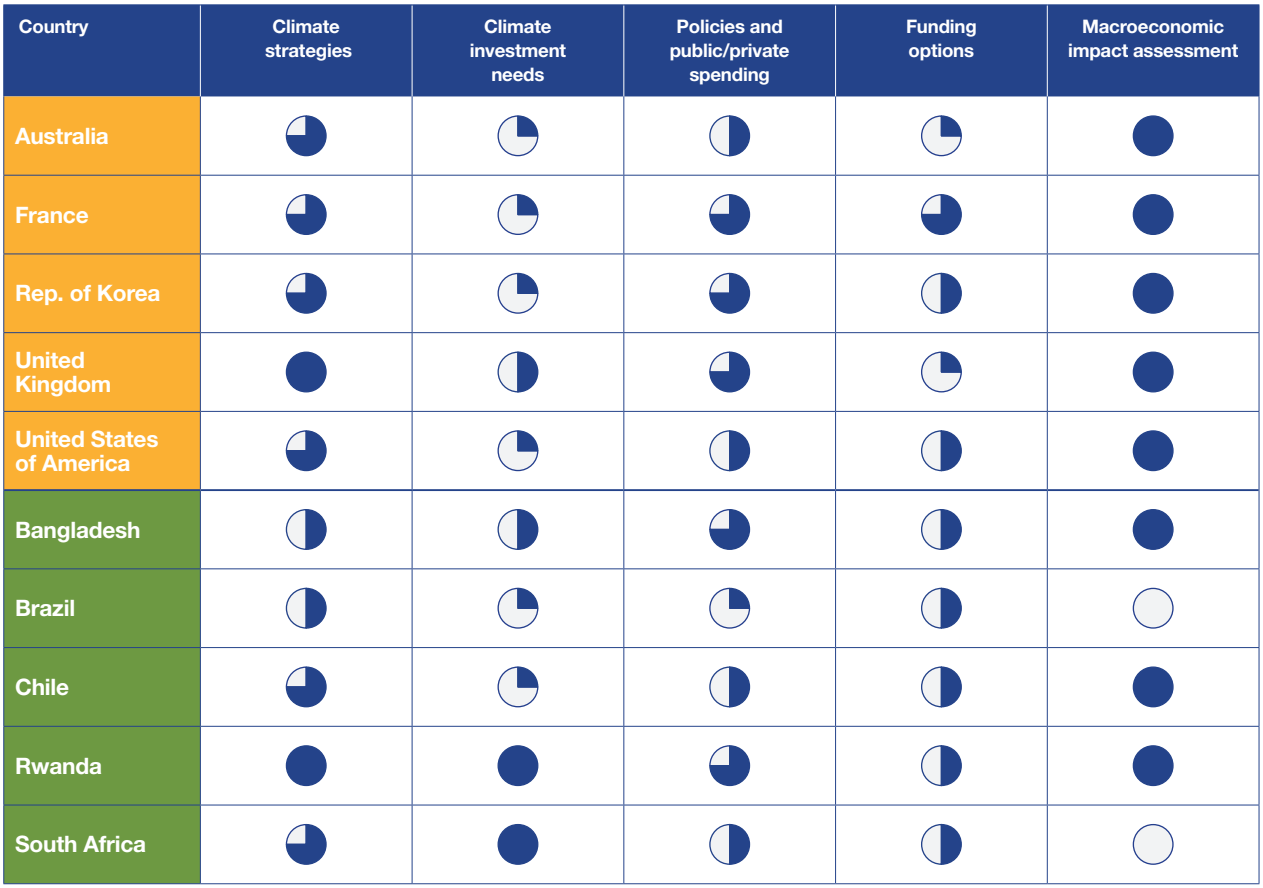
FIRST INSIGHTS

The overall trend is encouraging, yet serious gaps remain

Figure 2 below shows the overall progress against the financing plans indicators, following the "building blocks" categories described above.

Almost all countries have achieved significant milestones in developing their financing plans. The country average achievement over the 45 indicators is around 60%, with all except one having achieved at least 50% progress against the indicator.

FIGURE 2. OVERALL PROGRESS BY COUNTRY AND BUILDING BLOCKS: PERCENTAGE OF COMPLETED INDICATORS



"Climate strategy" is the category that has seen the most progress. Almost all countries have engaged in their LTSs to a carbon-neutrality target by 2050 and have developed NAPs with sectoral-focused interventions. NDCs have also been submitted everywhere, although only a few have covered adaptation. In nearly all countries, the ministry of finance or the treasury is the agency responsible for developing the financing plans for the transition.

Next comes the "policies and spending" category, which also shows very high progress rates. Fiscal policies have been extensively implemented, along with support to ensure affordability of green technologies, and financial / sector-specific regulations. However, this result should be qualified: some of the tools that contribute to the overall score of this first screening are in fact incompletely developed (*e.g.* climate budget tagging is implemented in 6 out of 10 countries, but mostly without taking into account negative climate expenditure).

Conversely, investment needs and funding options still need to be developed. Detailed investment needs are more often than not absent from official publications, such as the national LTS or NDC. Very detailed needs assessments exist in some countries, such as France's Landscape of Climate Finance; yet most of them, including France's, do not appear in official national publications. Less than 30% of surveyed countries mention such needs in their NDCs or NAPs, and only 6 out of 10 include them in their LTSs. Almost no country provides elements on how to share the climate finance burden among different economic actors (see **Table 3** below).

TABLE 3. HOW INTERNATIONAL AND NATIONAL BINDING TEXTS INFORM THE 4 CORE QUESTIONS

	LTS	NDC	NAP	MTFF	Other
Needs	6	3	4	-	-
Burden share	2	-	1	1	1
Policies to unlock investments	8	4	2	1	10
Macroeconomic impact assessment	7	-	-	-	4

Climate finance considerations all but disappear from shorter-term documents such as Medium-Term Financing Frameworks (MTFF), showing a very low operationalization of climate financing plans in the short to very short term.

This relative lack of information on investment needs raises concern for the development and communication of sound financing plans that could serve as the basis for both domestic action and international cooperation, even if this review of official documents does not reflect the full capacity available in the countries surveyed. The next two sections explore this in further detail.

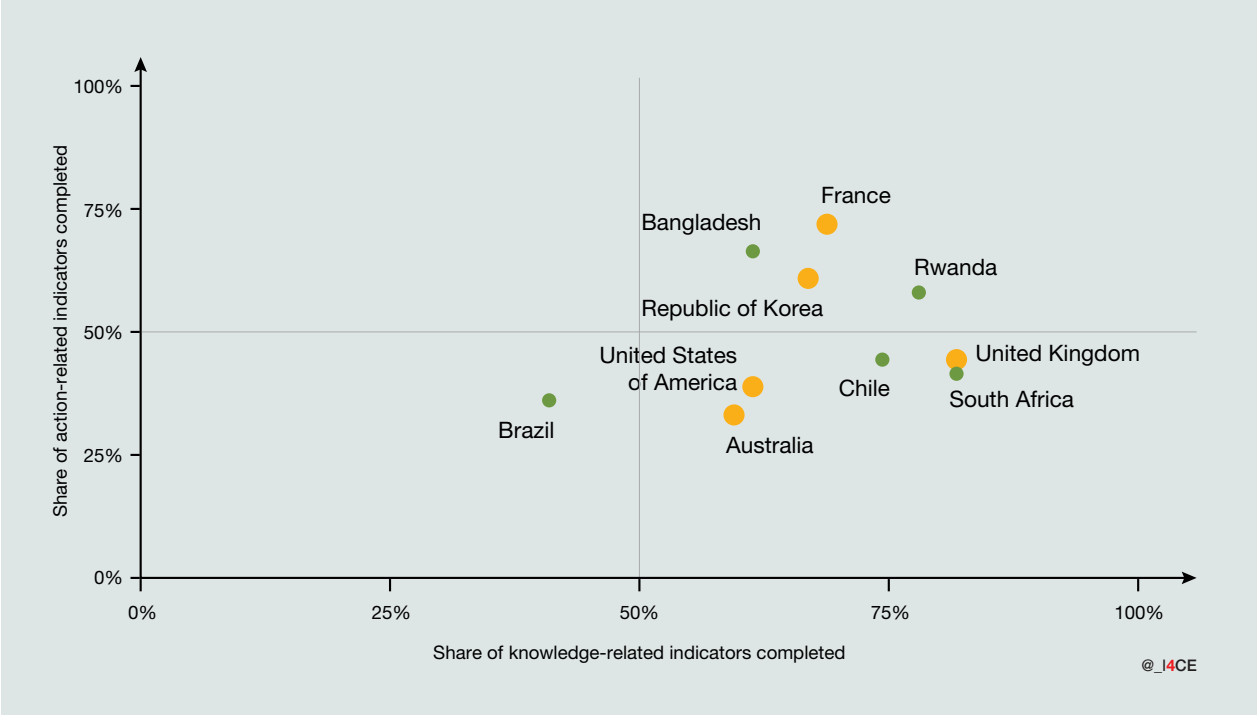
Countries display a balanced effort between building knowledge and plans, and implementing them

Financing the climate transition needs extensive action, which in turn requires resource-intensive planning. Finding the right balance between these two needs is difficult. On the one hand, acting without the right vision and planning leads to frustrated action and a waste of resources; on the other hand, too much capacity, too soon, can also lead to "paralysis by analysis" and/or turn countries away from ambitious frameworks with little short-term benefits (see *e.g.* I4CE, 2021 on the case of green budget tagging).

This is particularly the case in emerging economies, where adaptation challenges are often greater than in developed countries, but the administrative and economic resources to address them are scarcer.

- **Our survey shows a good balance between 'knowledge' and 'action' (see Figure 3), but this apparent homogeneity covers different approaches**. Emerging economies tend to provide more detailed financing needs, particularly in their NDCs, while the higher knowledge ratings for advanced economies often stem from more recently published and comprehensive LTSs. The sources of funding also vary: emerging economies rely more heavily on international finance and are the primary users of instruments like debt-for-nature or climate swaps, whereas advanced economies typically earmark carbon revenues and other environmental taxes to support the transition.

FIGURE 3. 'ACTION-ORIENTED' VS. 'KNOWLEDGE-ORIENTED' INDICATORS COMPLETED



Source: Authors.

Needs assessments could contain more detail about the sector and time horizon

Costing is a fundamental pillar of any climate financing plan. It is the necessary first step when designing a financing plan that is adapted to a country's targets and national circumstances. Exhaustive and granular information is necessary to organize inter-sectoral trade-offs, match funding gaps with funding options, and estimate the macroeconomic impacts of the transition.

While calculations of international investment needs exist, they suffer several limitations. The USD2.4 trillion figure mentioned in the Introduction is useful to set the scale of required changes and guide international action and awareness. However, due to the lack of country-based assessments to work from, the figure is highly uncertain and relies on a number of assumptions (see **Box 3**, p.17). As such, it is not sufficient to organize international cooperation or national action in detail or efficiently

NDCs and LTSs could be ideal vehicles to provide more information on the financial aspects of the transition. As both a vehicle for all Parties to report on their international commitments to the UNFCCC and as semi-standardized statements facilitating exchange and cooperation, these documents form an ideal basis for improving the transparency and visibility of, and ultimately engagement in, national mitigation and adaptation efforts. UN Climate Change Executive Secretary Simon Stiell called for the next generation of NDCs to be "investment plans for the future", converting economic blueprints into "shovel-ready projects". In addition, some form of legally binding short-term commitment at country level is a good guarantee that long-term objectives will indeed inform short-term decisions.

However, the set of indicators for "climate investment needs" shows the least progress as mentioned above (see **Figure 2**). Detailed investment needs are more often than not absent from LTSs or NDCs, and all but disappear from short-term documents such as the national MTFFs. This aligns with ongoing calls to incorporate more comprehensive financial elements in the future versions of strategic documents, by the UN, OECD, or other international institutions.

Beyond investment needs, Table 4 opposite offers a deeper look at how countries present their climate costings. It builds on the general considerations from p.11 and beyond by examining not only official documents (LTSs and NDCs) but also additional sources. "Low project-level disaggregation" refers to broad totals with no further breakdown, while "high project-level disaggregation" includes divisions by climate action categories (*e.g.* mitigation, adaptation), by sector, and potentially by individual projects. Time horizons range from a single aggregated figure to more detailed breakdowns by 2050, 2030, or 2025.

TABLE 4. AVAILABLE CLIMATE ACTION COSTINGS: TIME HORIZONS AND PROJECT DETAILS

Time-horizon detail \ Project Level Detail	Low	Medium	High
High		South Africa	France United Kingdom Bangladesh
Medium		Australia Chile	Rwanda
Low	Republic of Korea United States of America Brazil		

Only 4 out of 10 countries rank high on both project – and time – horizon levels of disaggregation for climate change action costing. Many countries are categorized as "low-low" on both dimensions: 3 out of 10 countries have no costing information in the documents we were able to review.

Emerging economies often surpass advanced economies in the level of detail provided in their costing estimates, particularly on a sectoral level. This may be due to their reliance on external financing and the need for detailed assessments to attract such support. For instance, Rwanda and Bangladesh not only outline their overall emission-reduction goals and required financing, but also distinguish between conditional and unconditional targets.

A majority of countries focus primarily on assessments of long-term climate investment needs, with limited visibility on short-term requirements. This shortcoming was already highlighted as missing MTFF information (**p.14**). While intuitively understandable (being ambitious is easier in both the long and short term), this "missing bridge" is a serious issue that puts into question the credibility of the whole roadmap – if the first step is missing, the whole path is compromised…

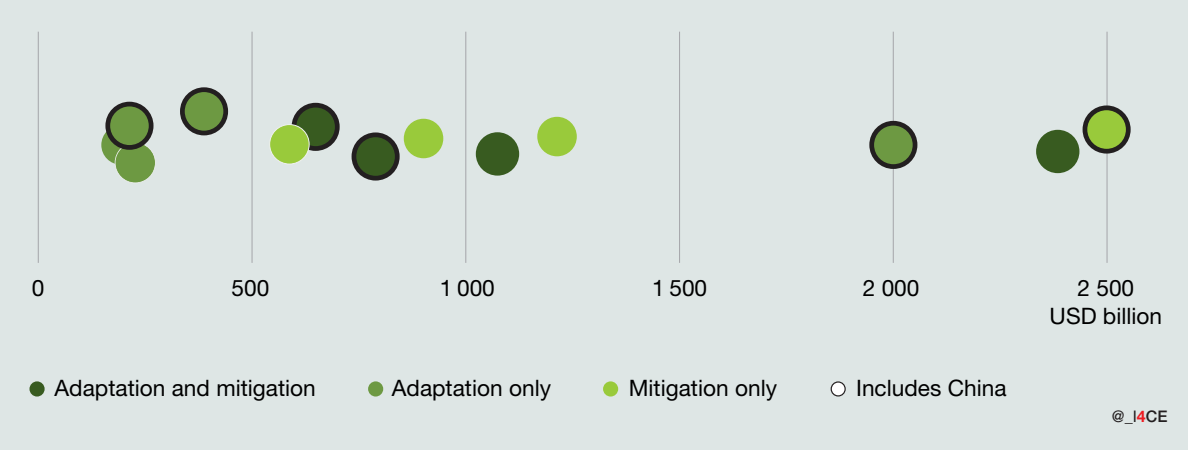
More granular needs assessments should start now. Improving both sector- and time- horizon disaggregation is obviously an ambitious objective given the amount of information each country needs to gather and organize. However, this information is necessary to support feasible financing plans. One option could be to start with an initial focus on sectors of high priority and/or low methodological complexity, then expand this assessment to new sectors as institutional capacity grows.

BOX 3. USD2.4 TRILLION FOR DEVELOPING COUNTRIES – GENESIS OF A LANDMARK FIGURE

Despite the consensus on the change of scale needed for investments and financing to meet global climate objectives, there are significant differences between the estimates put forward. Different coverage, methodological approaches and data challenges lead to very different estimations and create an uncertainty that substantially reduces the credibility of financial plans at the national level.

The Independent High-Level Expert Group on Climate Finance (IHLEG) estimates that around USD 2.4 trillion of investment per year would be necessary by 2030 for a "just energy transition, adaptation and resilience, loss and damage, and the conservation and restoration of nature", in Emerging and Developing Countries (EMDCs) – excluding China. The Climate Policy Initiative (CPI) estimates that global climate mitigation and adaptation finance needs between 5.9 and USD 12 trillion annually by 2030. The variation in estimates arises largely from differences in scope, with (among others) CPI focusing on climate-specific investments, while the IHLEG adopts a broader sustainable development framework. Yet, these methodological contrasts highlight the complexity in assessing financing needs, underscoring the challenge and importance of aligning various frameworks and targets.

FIGURE 4. SAMPLE ESTIMATES AND UNCERTAINTY RANGES OF ANNUAL CLIMATE FINANCE NEEDS IN DEVELOPING COUNTRIES BY 2030



Source: OECD 2024.

The IHLEG figure is actually derived from an earlier 2022 report by the London School of Economics (and the same lead authors), "Financing a big investment push in emerging markets and developing economies for sustainable, resilient and inclusive recovery and growth" (Bhattacharya *et al.*, 2022). The 2022 report outlines the total investment needs in four priority areas, interlinking climate and development targets:

- human capital (health and education);
- sustainable infrastructure & energy transition;
- adaptation and resilience;
- restoration of natural capital through sustainable Agriculture, Forestry, and Other Land Use (AFOLU) practices.
- This original report, published in the wake of the Covid pandemic, bases its investment needs calculations on three principles:
- restoring investment to its pre-pandemic levels, by raising investment by 2–3% of GDP in 2021-22;
- raising investment growth rates to the levels of the 2000–2010 period to restore convergence with advanced economies, by increasing investment by 2–3% of GDP from pre-pandemic levels;
- ensuring that the new investment trajectory meets development and climate objectives over the next three decades.
- The assumptions used in this 2022 report to estimate investment needs rely on 5 main sources, alongside many secondary contributions (see **Table 5** below):
- **a report on the G7 contribution to a "sustainable, resilient and inclusive economic recovery"** (Stern, 2021) provides general context elements;
- **the International Energy Agency Net Zero Roadmap** (IEA, 2021) feeds the sustainable infrastructure investment roadmap with elements related to the energy transition;
- **a former report by the same authors** (Bhattacharya *et al.* 2016) completes assumptions on infrastructure investment needs;
- **a Brookings Institution report** (Kharas and McArthur, 2019) provides the basis for agricultural spending and human capital investment needs;
- **a Systemiq report** (2021) informs the nature restoration and adaptation and resilience needs.

TABLE 5. INVESTMENT AND DEVELOPMENT SPENDING TARGETS

	Gross spending 2019		Spending target 2025		Spending target 2030	
	USD bn	% GDP	USD bn	% GDP	USD bn	% GDP
Human capital	1,470	7.0%	2,000	8.2%	3,065	9.5%
Sustainable infrastructure	730	3.5%	1,160	4.8%	1,840	5.7%
AFOLU	150	0.7%	355	1.4%	650	2.0%
Adaptation and resilience	35	0.2%	180	0.7%	325	1.0%
Total	**2,385**	**11.3%**	**3,695**	**15.1%**	**5,880**	**18.2%**

Source: Bhattacharya et al.*, 2022.*

Zooming in on infrastructure needs, the 2016 report from Bhattacharya *et al.* calculates a 2015 investment baseline for major countries, and projects investment requirements based on growth assumptions and investment plans and gaps across major economies and regions.

However, the authors acknowledge that: "Data on actual infrastructure investments are fragmentary and subject to definitional and data limitations […]. Most existing estimates are based on a handful of original studies. […] Simple macroeconomic modeling based on historical patterns of expenditure and physical stock accumulation has been the most common method for estimating current spending and anticipated needs." As a consequence and despite rigorous calculations, a "significant limitation of the robustness of the estimates is that few countries have consistent estimates or projections for infrastructure investments based on assessments of needs".

This very brief summary leads to two main conclusions:

- **first, policymakers and negotiators need to be careful when manipulating such landmark figures**, as they are necessarily complex constructions with many limitations, and should not be considered as definitive answers. While useful to provide orders of magnitude, they are not yet precise and trustworthy enough to guide specific country-level action or specific negotiations;
- **second, in the specific case of investment needs, the fragility of the figure is exacerbated by the scarcity and lack of consistency in country-based estimates**. This finding from 2016 still holds: the first evidence of this is the fact that the USD 2.4 trillion figure still uses the 2016 estimates; the second is our own review and the remaining gaps it identifies in terms of assessing investment needs.

Unresolved burden-sharing: who will pay and how?

"Who will invest, and who will finance" is another fundamental question when creating financing plans. Table 6 below explores this question by examining the level of disaggregation of the available information. "Disaggregation by actor type" tracks whether available funding sources distinguish between public and private actors, centralized and decentralized decision -making, households and firms, and domestic and international funding sources. "Disaggregation by means" tracks whether surveyed financing plans specify the financing instruments that are expected to channel the climate finance from funding sources to their final use: domestic sources (tax, redirection of expenditures) or external ones (grants, debt, guarantees, or other hybrid instruments) (see Box 4, p.20).

To date, no country has a plan detailing both the expected funding channels and the funding sources for national climate finance. While strategic documents often underscore the significant roles various economic actors could play, or the means that could be employed, they fall short of providing actual assessments of the contributions of the actors mentioned, or the instruments.

This lack of detail undermines the contribution of transition plans to both national action and international coordination. However, if the puzzle is not complete, many pieces are present, as explored further below.

TABLE 6. DISAGGREGATION OF FUNDING SOURCES BY ACTORS AND TYPE OF FUNDING

Details on actors (finance providers) \ Details on funding instruments (means)	Low	High
High	Republic of Korea South Africa Chile Brazil	
Low	United States of America United Kingdom	Australia Bangladesh France Rwanda

BOX 4. CATEGORIZING CLIMATE FINANCE PROJECTS, ACTORS AND INSTRUMENTS

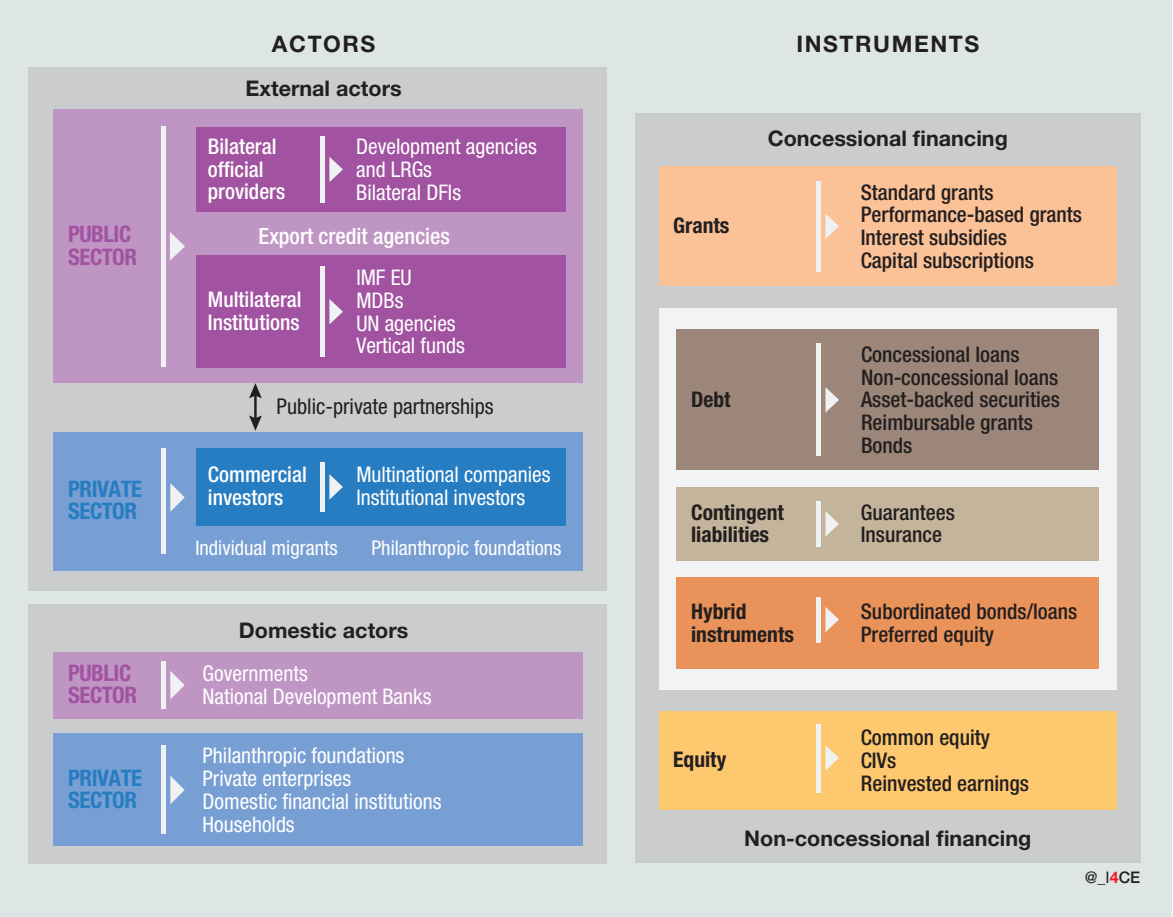
The number and diversity of financing instruments have increased substantially over the past decade with the multiplication of global challenges and associated agendas (climate, SDGs, debt, health, etc.). Different actors and instruments have different value-added, making them more suitable for given funding needs (depending on project specificities such as asset class, sector, geography, maturity, etc).

The financial instruments available to finance the transition can be broken down into four main categories: grants, debt, insurance and guarantees, and equity instruments, with multiple combinations and derivatives that lead to hybrid instruments (see **Figure 5** below). Broadly speaking, funding for the transition can come from either public or private actors. These two types of actors can channel funds locally (raising finance and investing it domestically) or internationally (public or private funds coming from countries different to where the funds are invested).

One key determinant of the added value of these instruments is the extent to which they are concessional. Concessional finance – mainly brought by international development institutions (grants, loans with below-market interest, guarantees, subordinated debt, etc. – is a criticial lever to fund some of the transformations needed at the local level (policy reform, capacity building, critical infrastructure, etc), either directly or by reducing the risk and making them more attractive for the private sector.

Building on the added value of different actors and instruments is essential to make the most of these resources. The results of this analysis should be reflected in the financing strategies developed by public actors, including international financial institutions and national governments. The on going reform of the global financial architecture provides an opportunity to clarify the contribution of different sources and channels to funding the transition in EMDCs, yet most of this work should actually be undertaken at the country level.

FIGURE 5. ACTORS AND INSTRUMENTS TO IMPLEMENT FINANCING PLANS



Note: This list of actors and instruments in this figure is not exhaustive.
Source: OECD, 2018.

Countries identify several public and private contributions to financing the transition

Figure 6 below presents a count of how many funding sources are explored in the reviewed documents, compared with our benchmark set of potential funding sources. The 'Public policies' column includes both spending-side measures, such as phasing out fossil fuel subsidies and reforming public procurement, as well as revenue-side policies like carbon pricing mechanisms. 'Private policies' cover sector-specific regulations, financial rules, and green taxonomies aimed at encouraging private investments.

Both public and private contributions to financing the climate transition are often referred to in strategic plans or organized through specific public policies. While quantitative estimates of the respective shares of public and private contributions are mostly unavailable (see previous section), most countries have made significant progress in communicating their public policies, whether aimed at direct public intervention or at organizing private sector efforts.

FIGURE 6. PUBLIC- AND PRIVATE-RELATED POLICIES IN EXISTING FINANCING PLANS

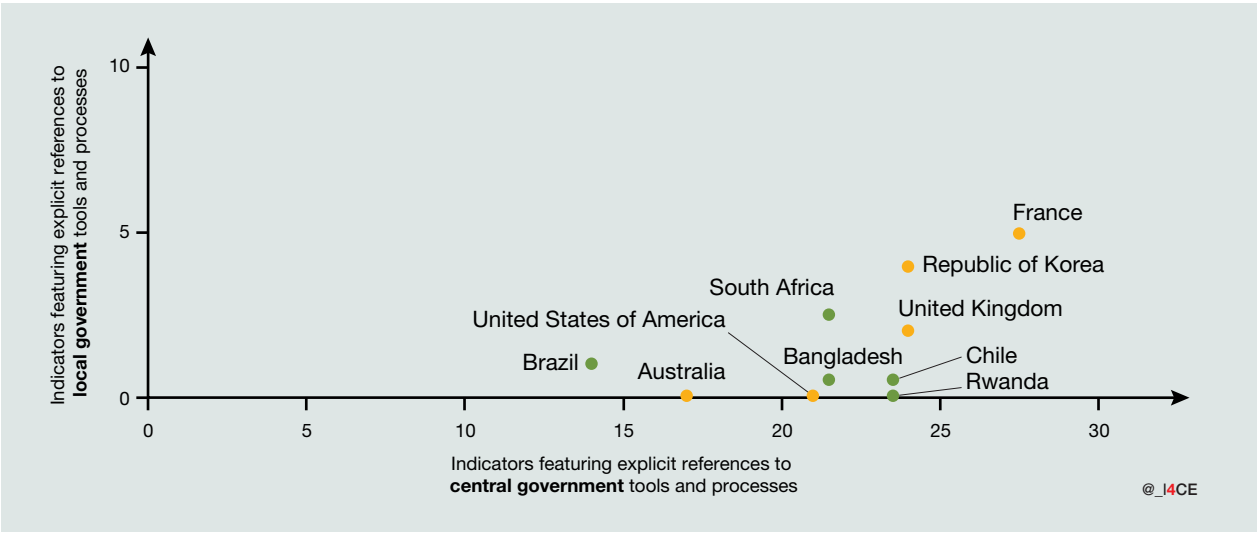
Policies and public / private spending	Public	Private
Australia		
France		
Republic of Korea		
United Kingdom		
United States of America		
Bangladesh		
Brazil		
Chile		
Rwanda		
South Africa		

Developed countries Developing countries

Low detail on decentralized action

Figure 7 below shows where decision-making is centralized or decentralized. It complements climate strategy documents with several other relevant national reports, to provide further context on this specific question.

FIGURE 7. CENTRALIZED VS. DECENTRALIZED CONTRIBUTIONS TO TRANSITION FINANCING PLANS



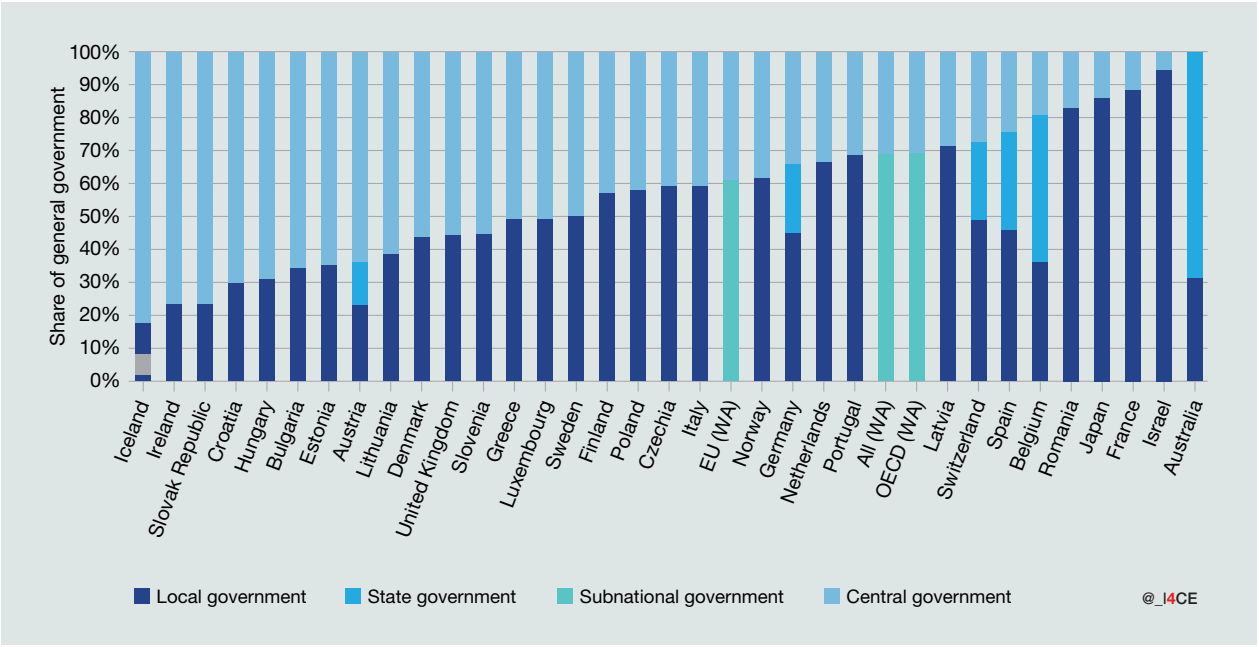
Source: Authors.

Local government/decentralized decision-making is all but absent from the strategic documents reviewed. 34 of our indicators are linked, at least in one country document, to a specific administrative level (central government, local government, or both). However, most of these mentions refer to central governments: only 12 indicators had at least one mention of decentralized decision, and for 10 of them, this was a single mention, by a single country. Most funding instruments also refer to central-level decision and implementation, with few or no mention of how the local-level transition will be financed.

At least two factors may bias this analysis: first, the documents reviewed are mostly used for international discussions and reporting, and tend to focus on national actions rather than subnational instruments. Second, some regional initiatives may be too recent to be included in published documents, (for example, France's 'Regional COPs' initiative promoted a shift in ownership of transition-related decisions, but occurred too recently to be included in national documents).

However, even with these caveats, there remains a clear tendency for climate finance decisions to be concentrated at the central government level. This represents a significant blind spot, particularly given the OECD's 2022 warning that subnational governments are responsible for around 69% of climate-related infrastructure investments (see **Figure 8** below). As the primary implementers of such investments, the capabilities, needs and constraints of subnational governments need to be more effectively integrated into national financing plans – in both discussions and outcomes.

FIGURE 8. CLIMATE-SIGNIFICANT PUBLIC INVESTMENT BY LEVEL OF GOVERNMENT IN OECD AND EU COUNTRIES, 2019



Note: Climate-significant public investment includes both adaptation and mitigation finance. WA = weighted averages.
Source: OECD, 2022.

Private sector involvement: large gap between stated ambitions and reported means

Table 7 tracks public policies aimed at mobilizing private investment, targeted at either firms or households. These measures are drawn from country strategy papers, supplemented by a limited number of government reports. The identified policies may support the affordability of the transition or take the form of risk-transfer/risk-sharing instruments.

TABLE 7. PUBLIC POLICIES TO SUPPORT THE TRANSITION IN THE PRIVATE SECTOR

		Companies	Households
Support to ensure affordability of green technologies	**Regulations**	ESG & climate risk disclosures, greenwashing, emissions reduction for firms, green labels	Green labels
	Financing tools	Tax reliefs, green bonds, Support related to energy bills	Tax reliefs, banks' initiatives, Support related to energy bills, subsidies, Cost-of-living support
	Others	Private sector mobilization, industry, export, technology adoption, employment	Private sector mobilization, just transition, buildings, farmers
Risk-transfer / -sharing tools		Insurance companies' programmes, banks, initiatives (guarantees & others), Other guarantees, guidance and support, de-risking tools	Insurance companies' programmes

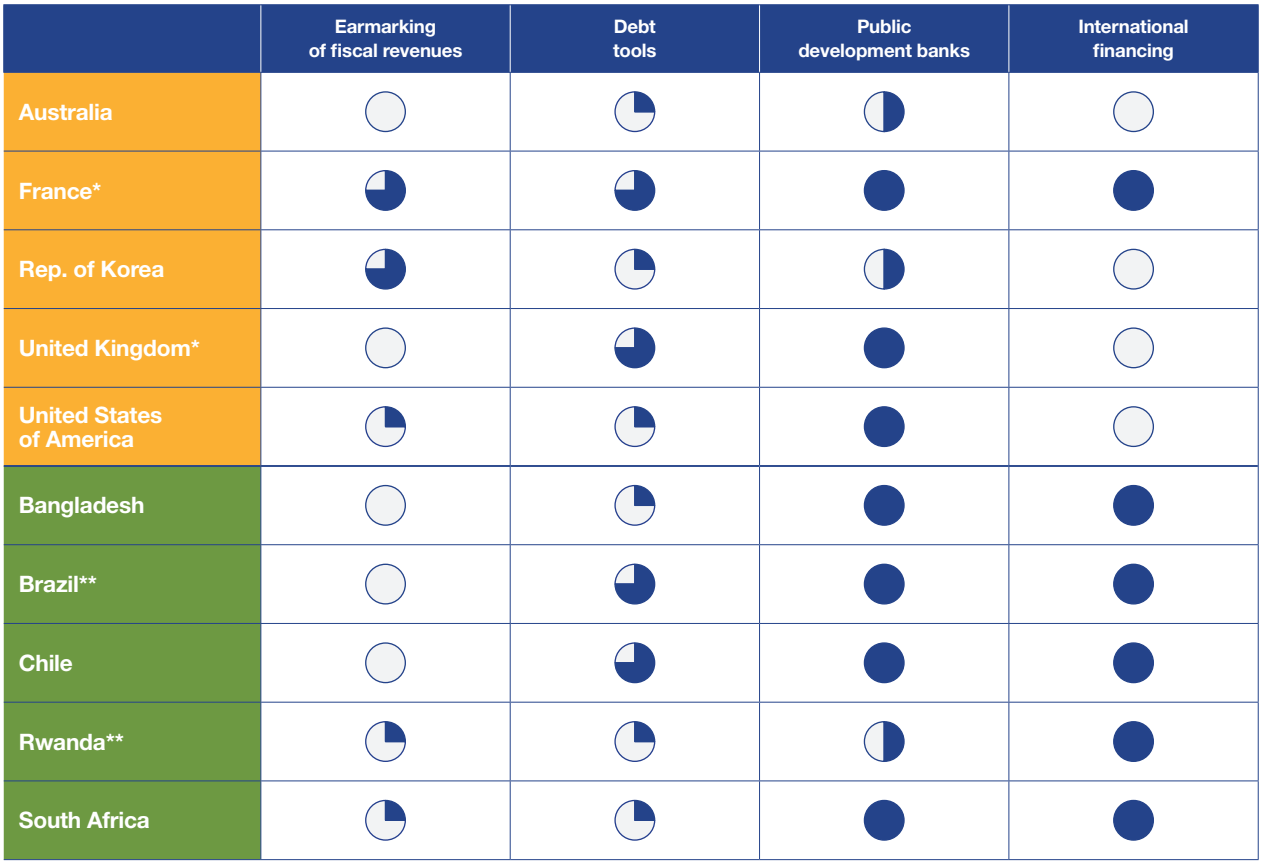
So far, no country is using more than half of the identified instruments to incentivize either firms or households to engage in the transition. As most of the strategic documents emphasize that the main burden of financing the transition will fall on the private sector, this finding calls into question the consistency between the ambition expressed and the means used to achieve it.

Advanced economies tend to outperform emerging countries in mobilizing investment at both the corporate and the household levels. On the corporate side, the most common forms of support are ESG and climate risk disclosure regulations, corporate green bond frameworks, and tax incentives. Household support is largely financial, focusing on cost-of-living assistance and energy bill relief (especially as fossil-fuel subsidies start to phase out), with an emphasis on ensuring a just transition. However, advanced economies report a greater reliance on such measures, while emerging economies mention such support infrequently, if at all.

Funding public action: better identification of domestic sources is needed

Figure 9 below outlines the funding options that governments are using or planning to use to support public efforts in the transition. The ideal mix of funding tools may vary depending on a country's specific circumstances and should align with the government's priorities and fiscal constraints. Domestic sources could include fiscal instruments, such as targeted environmental taxes with earmarked revenues, as well as non-environmental taxes and the redirection of existing expenditures[3]. External sources include debt instruments, such as debt-for-nature swaps, green bonds, and export guarantees, along with contributions from national public development banks and international climate finance.

FIGURE 9. FUNDING INSTRUMENTS FOR THE TRANSITION



*Direct pricing includes carbon taxes and emissions trading schemes.
**No direct pricing exists.

Domestic sources are the least discussed in the documents reviewed. In particular, there is very little mention of fiscal resources, whether from environmental taxes or more general taxes. This could be explained by the fact that the documents reviewed are primarily geared towards international reporting commitments and negotiations. Furthermore, emerging countries tend to rely more on external financing sources. However, it is still problematic as domestic sources currently represent more than 80% of all the resources dedicated to the climate transition, according to CPI's Global Landscape of Climate Finance 2023. The same report also mentions a "growing need to strategically scale concessional finance to remove persistent investment barriers and unlock capital at scale, particularly in EMDEs".

Few national public development banks in the countries assessed detail climate-related investments in their strategies and investment roadmaps, despite being potential major enablers of climate action and sustainable development. Further research is needed (and under way) to assess in more detail whether and how governments mandate their public development banks to implement climate-related investments.

3 Due to time and capacity constraints, this last element is not tracked here.

Macroeconomic impact assessments: encouraging advances, room for improvement

Figure 10 below tracks how the surveyed countries first develop, and then disclose, macroeconomic impact assessments for the effects of their transition plans. Such assessments are crucial as they connect the transition with its wider effects on the rest of the economy. Given its scale and cross-sectoral nature, climate action – or inaction – is indeed bound to have a far-reaching impact on most economic sectors and indicators. And since most of these polices are new and deeply grounded into national contexts, ex-ante and ex-post assessments are fundamental to design the policies as robustly and effectively possible, and then optimize them as time passes by and new information flows in.

FIGURE 10. MACROECONOMIC IMPACT ASSESSMENTS FOR NATIONAL CLIMATE ACTION

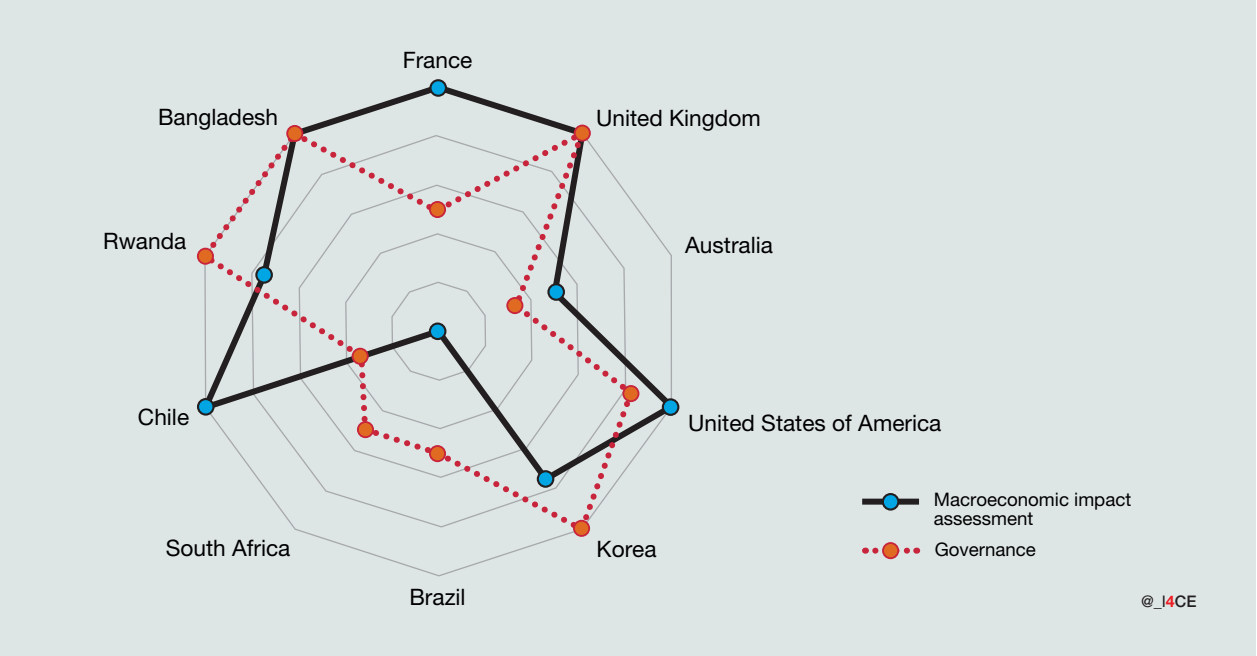
	How many of the 10 macroeconomic variables are being assessed?	Are the assessments derived from a modelling exercise?	Is the modelling exercise based on a governmental source?	Do the assessments consider the cost of inaction?
Australia	◔	●	○	○
France	◑	●	●	●
Rep. of Korea	◔	●	●	○
United Kingdom	◑	●	●	●
United States of America	◔	●	●	●
Bangladesh	◑	●	●	●
Brazil	○	○	○	○
Chile	◔	●	●	●
Rwanda	◔	●	●	○
South Africa	○	○	○	○

■ Developed countries ■ Developing countries

All countries develop macroeconomic impact assessments with country-specific models, however not all disclose their results. Additionally, the publication channel for these impact assessments varies a lot: they can be found in strategic documents such as LTSs, NAPs or MTFFs, as well as specific national plans or governmental reports. The key macroeconomic variables tracked throughout the reports reviewed always include GDP, inflation, employment, poverty, public finance, and trade. Several countries also produce assessments of the impacts of inaction to highlight the potential consequences of failing to implement effective strategies and policies.

Countries that publish macroeconomic impact assessments tend to exhibit higher governance standards, as reflected in the existence of specific government agencies, often in the ministries of finance, responsible for medium-term financial planning related to the transition and the inclusion of these impact assessments in the national fiscal frameworks (see **Figure 11** below).

FIGURE 11. LINKING GOVERNANCE SCHEMES AND IMPACT ASSESSMENTS



Source: Authors.

CONCLUSIONS & WAY FORWARD

Robust financing plans are essential to support both country-level actions and collective efforts to scale up financing responses to the climate challenge. This study examines existing practices in 10 geographically and economically diverse countries to inform the development of such financing strategies.

While all the countries surveyed show encouraging progress in developing such integrated plans, significant gaps remain, particularly in estimating investment needs and identifying financing options. Such elements, if they exist in the countries at all, are often missing from strategic documents, especially short-term ones such as medium-term financing frameworks.

While private sector involvement is recognized as crucial, most countries lack clear frameworks or incentives to mobilize sufficient private finance. Existing public policies often consider specific interventions or priorities, without a clear picture of the balance between public and private action and/or how well the envisaged policies actually lead to bridging the identified financing gaps.

Funding options for public action are also underexplored, especially on the domestic resource mobilization side. While external funding is often explored in the case of emerging economies, all countries would benefit from a more systematic mapping of how public spending to support the transition is financed, especially from domestic resources (which currently account for 90% of the resources going into climate action).

As a result, more work is needed, first to develop national estimates of financing needs and how to finance them, and second to correctly report and aggregate these estimates at the global level to ensure a just, efficient and timely climate transition. Without more detailed investment roadmaps and better coordination between public and private actors, meeting global climate finance needs will remain out of reach.

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