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A Policy Guide to Improving Access to Climate Finance for Transport

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Improving Access to Climate Finance for Transport Projects in Low- and Middle-Income Countries

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Abstract
This policy guide offers a comprehensive framework to improve access to climate finance for transport projects in low- and middle-income countries (LMICs). Transport is a critical sector for achieving global climate goals, yet it faces significant financing gaps and barriers, particularly in LMICs. The guide identifies key challenges, presents potential solutions and puts them into a step-by-step guide. By leveraging tools such as the Avoid-Shift-Improve (ASI) framework, collecting key resources and materials, and profiling climate finance mechanisms, the guide equips project sponsors and other relevant stakeholders with the knowledge to design impactful, bankable transport projects.

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Abbreviations and acronyms

°C	Degrees Celsius
ACCF	Africa Climate Change Fund
ADB	Asian Development Bank
ASI	Avoid-Shift-Improve
BRT	Bus rapid transit
CFP	National Climate Finance Platform
CO_2	Carbon dioxide
CTF	Clean Technology Fund
EUR	Euro
GCF	Green Climate Fund
GDP	Gross domestic product
GEF	Global Environment Facility
GIZ	German Agency for International Cooperation
CPI	Climate Policy Initiative
HVT	High Volume Transport
IKI	International Climate Initiative
IPCC	Intergovernmental Panel in Climate Change
ITF	International Transport Forum
LMICs	Low- and middle-income countries
NDC	Nationally Determined Contribution
NDF	Nordic Development Fund
NGO	Non-governmental organisation
NUMP	National Urban Mobility Plan
OECD	Organisation for Economic Co-operation and Development
PPF	Project Preparation Facility
PPP	Public-private partnership
SDG	Sustainable Development Goal
SLOCAT	SLOCAT Partnership on Sustainable, Low Carbon Transport
STAMP	National Sustainable Transport Action Master Plan
SUMP	Sustainable Urban Mobility Plan
TCAF	Transformative Carbon Asset Facility
TUMI	Transformative Urban Mobility Initiative
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar
WRI	World Resources Institute

Executive summary

This **Policy Guide to Improving Access to Climate Finance for Transport** provides actionable guidance for project sponsors in low- and middle-income countries (LMICs) to enhance their access to climate finance for transport projects. With the transport sector contributing significantly to national greenhouse gas emissions yet facing major investment gaps, urgent investment in sustainable and low carbon transport solutions is critical to align with the targets of the Paris Agreement on climate change. LMICs need to tackle numerous barriers to overcome the existing investment gaps, mobilise adequate financing and accelerate decarbonisation.

The policy guide outlines key solutions to barriers in accessing climate finance for transport in a variety of contexts: financial, institutional, informational and technological. The solutions shown in Section 3 are directly connected to material presented or referenced in Section 4 or through the appendices. A step-by-step guide accompanies project sponsors through the process, directing them to resources, case studies and other guiding materials with a view to enabling them to successfully access climate finance for transport.

The step-by-step guide is divided into four key steps: 1) securing the necessary enabling environment, 2) developing capacity on sustainable, low carbon transport, 3) developing capacity on climate finance and 4) designing suitable and impactful projects. Practical recommendations highlight specific actions for each of these steps, and resources with further guidance are provided.

The policy guide concludes with a solutions grid for concrete action on sustainable, low carbon transport. The Avoid-Shift-Improve framework provides an effective structure to outline potential transport projects and policies that LMICs can pursue through climate finance. The solutions grid is an initial tool to illustrate the large number of opportunities available to LMICs.

In addition, the appendices provide further resources, the results of consultation activities, profiles of climate finance mechanisms, and other materials to support stakeholders in navigating the complex landscape of climate finance. By implementing the policy guide's recommendations, LMICs can work towards attracting more climate finance, accelerate their transition to low carbon transport and contribute to global climate goals.

1 Introduction

Urgent climate action in low- and middle-income countries (LMICs) is needed to place transport on a low carbon pathway aligned with the goals of the Paris Agreement.

We need to drastically reduce emissions in the transport sector now. Transport was responsible for 15.9% of global greenhouse gas emissions in 2023, making it the second largest sector for emissions after the power industry. From 2010 to 2019, the transport sector experienced the fastest growth in carbon dioxide (CO_2) emissions among combustion sectors globally, rising 2% annually on average and 18% overall. Transport emissions recorded the strongest annual increase among all sectors in 2023, growing 3.7% from 2022.

More focus is needed on mitigating transport emissions in LMICs. Historically, high-income countries were the major emitters of transport greenhouse gas emissions. Although wealthy countries continue to have very high emission levels, in 2023 they were overtaken by low- and middle-income countries, which are now the primary source of national transport greenhouse gas emissions. Per capita transport greenhouse gas emissions in African and Asian countries are significantly lower than in high-income countries. In LMICs, per capita transport emissions are on average only one-fifth of the average levels recorded in high-income countries.[1]

The **current transport policies and measures announced or implemented through a range of national policy frameworks are insufficient to put transport on a decarbonisation pathway in line with the Paris Agreement's goal of keeping global warming within 1.5 degrees Celsius (°C)** (see Figure 1). The commitments outlined in countries' Nationally Determined Contributions (NDCs) towards reducing emissions submitted as of November 2024 would result in median global warming of 2.6°C by 2100.[2] This gap between global goals and countries' current ambitions and existing policies is critical, given that, under a business-as-usual scenario, **transport activity is projected to nearly double by 2050**.[3]

Without more ambitious policies, transport CO_2 emissions could grow 16-50% by 2050.[4]

Achieving low carbon transport pathways that limit global warming to 1.5°C (with no or limited overshoot) will require a **59% reduction in transport-related CO_2 emissions** by 2050, compared to 2020 levels.[5]

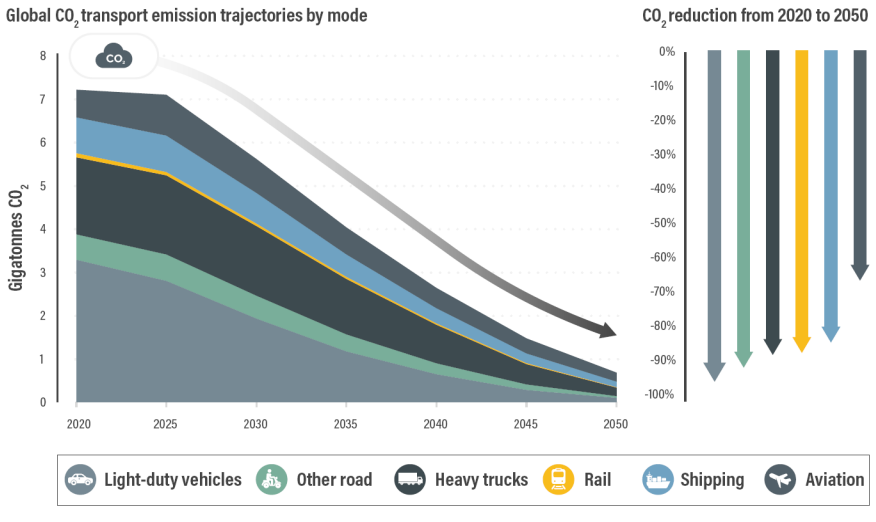


Figure 1: Global CO_2 transport emission trajectories by mode required to achieve the International Energy Agency's net zero emissions scenario[6]

Adding to the challenge, natural hazards are posing increasingly substantial threats to transport systems worldwide. Natural hazards cause an estimated USD 15 billion annually in direct damage to transport systems; of this, an estimated USD 8 billion occurs in LMICs, which experience the highest costs relative to their gross domestic product (GDP).[7]

Beyond physical damage, **transport disruptions resulting from natural hazards have severe impacts on societies and on economic development**. In LMICs, these disruptions lead to an estimated USD 107 billion in annual losses to businesses. Additionally, disruptions to transport networks have cascading social and economic consequences that are harder to quantify. Communities may lose access to food, education, jobs, recreation, health, and social and government services due to severed links. The inability of staff and customers to travel or receive supplies further exacerbates these issues. Such disruptions impact the resilience, well-being and prosperity of affected individuals and communities.[8]

Low- and middle-income countries play a pivotal role in reducing transport emissions.

Transport demand in LMICs is increasing drastically due to rapid urbanisation, economic growth, and population growth, with rising demand for both freight and passenger services expected across all transport modes, particularly in Africa and Asia.[9] The ever-increasing demand for motorised transport further deteriorates air quality and contributes to congestion and a host of other issues.

Different regions will have to contribute differently to the reduction of transport CO_2 emissions (see Figure 2). This differentiation will be crucial to accommodating the needed growth in connectivity and transport systems in LMICs. Despite the growing demand for transport, many African countries still have relatively low motorisation rates and high modal shares of public transport, walking and cycling.[10] This presents opportunities to leverage decarbonisation efforts faster by investing in safe walking and cycling infrastructure and in zero-emission public transport vehicles. In 2023, Africa contributed only 5% of global transport CO_2 emissions (excluding international shipping and aviation).[11]

To be aligned with the 1.5°C scenario with low overshoot, countries in Africa can increase their transport CO_2 emissions around 20% by 2030, more than any other region, as long as their emissions are at least 10% below 2020 levels by 2050.[12]

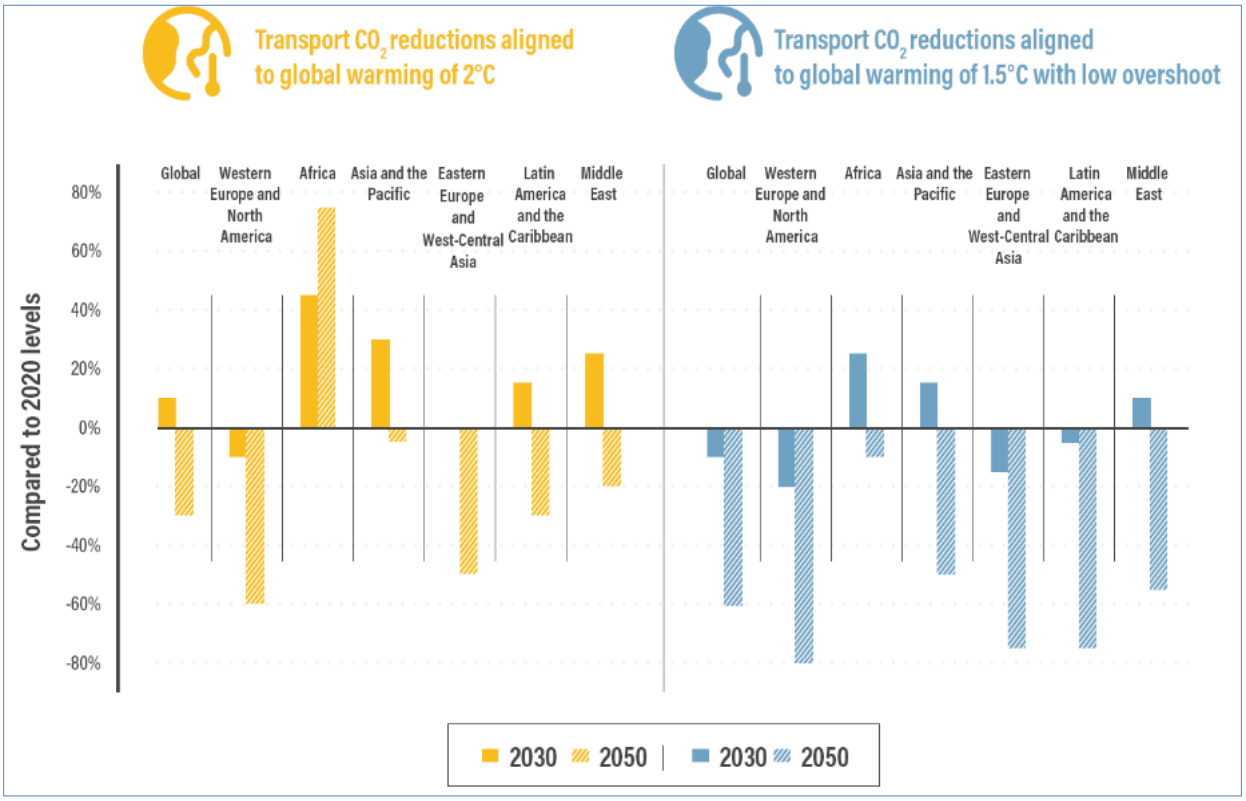


Figure 2: Regional transport decarbonisation pathways for 2030 and 2050, by scenario[13]

Asia was the largest emitter of transport-related CO_2 among all regions in 2023 and has accounted for nearly two-thirds of the global increase in transport CO_2 emissions since 2010.[14] The region has witnessed soaring private motorisation, with growth exceeding 200% in some countries between 2010 and 2019. In view of this, Asia would have to reduce its transport CO_2 emissions 50% below 2020 levels by 2050 to be aligned with the 1.5°C scenario with low overshoot.[15]

In parallel, fossil fuel dependence in road transport would have to decline drastically, from 95% in 2020 to 10% by 2050, with electricity becoming the dominant fuel in transport by the early 2040s.[16]

Climate finance is key to unlock climate actions in transport.

To address the rapidly closing window to keep global warming within 1.5°C, it is critical for project sponsors, policy makers, financial institutions and the private sector in LMICs to collaborate and take immediate action by investing in low carbon sustainable transport solutions.

At the same time, aligning financial flows with a pathway towards low greenhouse gas emissions and climate-resilient development is a key objective of the Paris Agreement. Financial support for the decarbonisation and sustainability of transport, particularly in LMICs, is a key enabler in this regard. Furthermore, low carbon transport pathways embrace a just transition that leaves no country behind in fossil fuel dependency and avoids an increase in the indebtedness of LMICs.[17]

The 2024 United Nations Climate Change Conference (COP29) held in Baku, Azerbaijan, was widely dubbed the "Finance COP" for its pivotal role in mobilising financial resources from developed countries to aid developing nations in their transition towards net-zero pathways. This effort largely centred on establishing the "New Collective Quantified Goal" (NCQG) on climate finance. Climate finance stands at the forefront of the climate change policy agenda, with the transport sector's continuously rising emissions drawing particular attention and making it a key priority of such financing.[18] A strong climate finance outcome at COP29 was seen as critical to bridging the investment gap in transport, while encouraging ambitious transport targets and actions in NDCs 3.0 to be submitted in 2025. Moreover, a new target for climate finance was acknowledged as paramount to sending a clear political signal to operationalise the transition away from fossil fuels, building on the agreement at last year's UN climate talks.

After two weeks of intense negotiations and years in the making, developed countries landed a last-minute deal to contribute USD 300 billion by 2035 to developing countries, set to kick in from 2026. This core goal is to form part of a wider collaborative effort by all actors to scale up financing from all public and private sources, amounting to at least USD 1.3 trillion per year by 2035.

Despite tripling climate finance to developing countries, from the previous goal of USD 100 billion annually, the agreed upon NCQG falls significantly short of meeting developing countries' calls for the trillions required while allowing developed countries to sidestep their responsibilities in committing long-promised public resources. As a result, the majority of the agreed-upon financing at COP29 will rely on private investment and alternative sources, both of which carry uncertainties regarding their realisation.

Though COP29 failed to live up to developing countries' expectations when it comes to climate finance and achieve progress on fossil fuel phaseout, it marked a key milestone for the operationalisation of carbon markets under Article 6 of the Paris Agreement. The adopted rules bring enhanced clarity for countries willing to trade mitigation units with other countries as well as with companies, while holding potential to yield USD 250 billion in savings from implementing NDCs and to unlock additional sources of financing for LMICs towards the NCQG.[19] The creation of a "dual layer registry system" under Article 6.2, on the other hand, will allow LMICs, lacking the means to create their own national registries, to participate in global carbon markets by making use of the registry provided by the UNFCCC Secretariat. If adequately implemented, Article 6 could play an important role in supporting the transition to sustainable, low carbon transport through the generation of tradable credits by transport-related emission reduction projects and their potential in mobilising investment in low carbon transport technologies and infrastructure.

Using this guide

In this guide, you will find actionable and evidence-based guidance and resources to improve access to climate finance for transport projects in LMICs.

- Are you a **project sponsor or a policy maker** looking at the high-level policy frameworks needed for climate finance? *You may be a government official from the finance / environment / transport / climate change ministry or another related government body.*
- Are you a **stakeholder in an LMIC financial institution** that is developing transport project proposals?
- Are you a **private sector investor** looking for clean transport solutions and areas in which to invest?

This guide will equip you to:

Better understand the critical barriers and constraints associated with accessing finance for transport.

Match available climate finance providers and instruments to a pipeline of projects.

Provide evidence-based solutions and recommendations for developing bankable climate finance projects in transport.

Structure of this guide

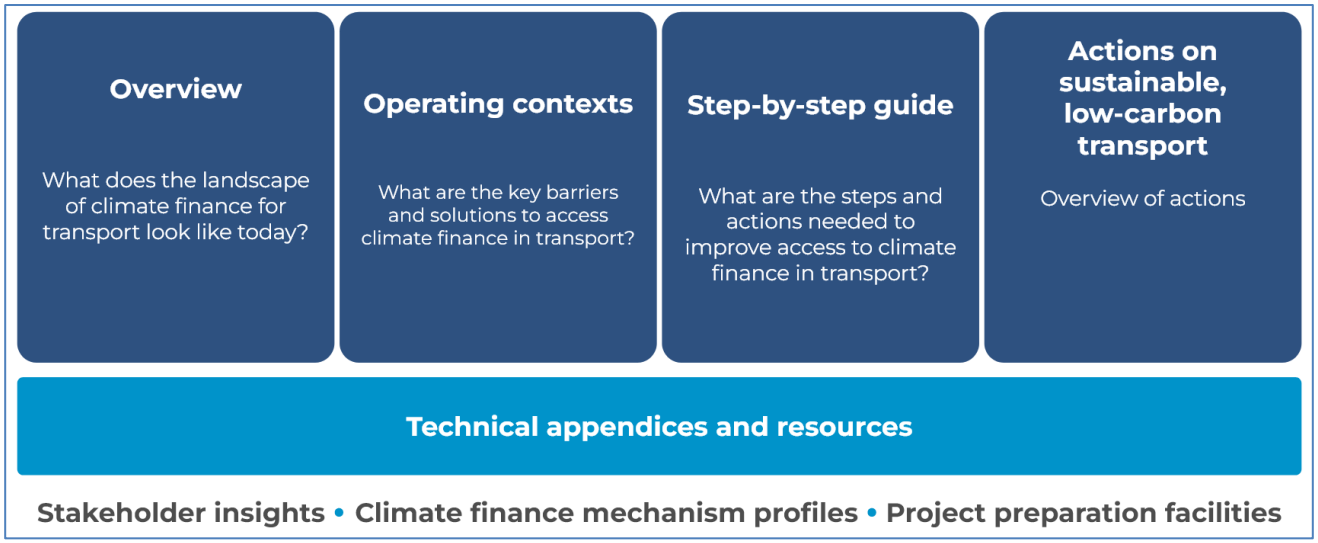


Figure 3: Policy guide structure

In particular, this policy guide includes the following features:

Section 2 highlights the state-of-play and urgency of climate finance for transport. It outlines existing investment levels and the gaps that need to be addressed.

Section 3 provides an overview of identified barriers and their respective solutions. This section is particularly valuable for stakeholders looking to resolve specific issues, with the solutions pointing to actions detailed in the step-by-step guide.

Section 4 offers a step-by-step guide aimed primarily at project sponsors but also with significant relevance for national and sub-national government entities. This section will be the most helpful for stakeholders looking for a comprehensive approach to securing access to climate finance for transport.

Section 5 features a sustainable transport solutions grid, presenting transport activities that can be supported by climate finance. This is especially useful for public and private investors seeking project ideas.

Sections 4 and **5** feature compilations of resources that provide detailed, technical guidance on the actions.

The **Appendices** provide further resources as well as information on the consultations, profiles for the major climate finance mechanisms and an overview of project preparation facilities.

Methodology

Case studies: This policy guide builds on evidence from an extensive review of literature and policy documents (e.g., academic, peer-reviewed papers, reports, policy briefs and official government documents) and on a comprehensive analysis of 14 cases covering different modes of transport and financial instruments, as well as on consultations with experts in the climate, finance and transport sectors from LMICs in South Asia, Africa and Latin America. For more on these cases, see Access to Climate Finance in Low- and Middle-Income Countries: Case Studies in the Transport Sector.

Desk research: The findings of the case studies were complemented by additional desk research. The visual grid is based largely on recent knowledge products on sustainable, low carbon transport. The compilation of funding instruments and their eligibility criteria is based on information from the NDC Partnerships Climate Funds Explorer and from the World Resource Institute's (WRI) Finance Opportunity Catalogue.[20]

Stakeholder consultation:

- A **survey** was conducted to gather expert insights on climate finance in transport. A summary of the consultation is available in Appendix 2. Stakeholder survey insights. A total of 19 stakeholders participated, including climate finance practitioners, policy makers, transport planners, and representatives from multilateral development banks and non-governmental organisations (NGOs), among others. Respondents came from nine different countries, including seven LMICs, with Kenya being the most represented country (in part because the questionnaire was linked closely with the stakeholder workshops).
- **Stakeholder workshops** were conducted between January and June 2024. They consisted of one virtual international stakeholder consultation and four multi-stakeholder workshops (in India, Kenya and Viet Nam). The findings are integrated into this policy guide. For further details, see Appendix 3. Climate finance workshop consultations.

Scope: This guide provides insights covering land transport, which includes public transport (bus rapid transit and any type of urban rail), railways and active mobility (walking and cycling). Inland water transport is also covered in the guide. Both passenger and freight transport are addressed.

2 Overview: Status of climate finance for transport

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate finance as financial resources, whether from public, private or alternative sources, aimed at supporting actions to mitigate and adapt to climate change. Global climate finance involves providing transnational funding to countries, particularly LMICs, to address the challenges posed by climate change.

A growing body of financing entities and instruments provide climate finance specifically for the transport sector. Although eligibility criteria may vary across them, **climate finance for mitigation in the transport** sector typically refers to resources allocated to activities that fall within the scope of the **Avoid-Shift-Improve (ASI) approach**. The A-S-I approach follows an implicit hierarchy, with appropriate and context-sensitive *Avoid* measures intended to be implemented first, followed by *Shift* measures and finally by *Improve* measures (see Section 5).

This prioritisation approach supports the reduction of environmental impacts, improves access to socio-economic opportunities, increases logistics efficiency, reduces congestion, improves air quality and increases road safety. Examples of relevant climate finance include investments targeting improved land-use practices and urban design to avoid or reduce unnecessary motorised trips; efforts to shift goods and passenger traffic towards more environmentally efficient modes (such as railways, walking and cycling); and, not least, measures to improve efficiency and performance, such as electrification.

For **adaptation and resilience**, climate finance activities focus on securing transport assets as well as strengthening the ability of infrastructure and transport systems to withstand, adapt and recover from extreme weather events and the impacts of a changing climate. In addition to efforts targeting the physical resilience of infrastructure assets, activities aimed at improving operational and organisational resilience (e.g., offering redundancy and diversity of mode choice for communities with differing income levels and geographies) are another example of adaptation and resilience-related climate finance.

Typically, climate finance provided by domestic or international public entities takes the form of grants (which are scarce) and loans (which make up the majority). In contrast, once private sector entities become involved, a broader suite of financing instruments is used (e.g., equity, blended finance, structured finance products, innovative bond structures, etc.).

Climate finance is recognised as the third pillar of the Paris Agreement. The International Institute for Environment and Development (IIED) views climate finance as supplementary to overseas development assistance (ODA), meaning that a country's climate finance contributions should exceed its declared ODA target. However, this approach is not observed in many countries. Historically, member countries of the Organisation for Economic Co-operation and Development (OECD) have committed to allocating 0.7% of their gross national income to ODA.[21]

Climate finance for transport is far from sufficient to close the investment gaps and to put transport on a sustainable, resilient, low carbon pathway.

What does the landscape of climate finance for transport look like today?

Global climate finance nearly doubled in the decade between 2010 and 2020, accounting for 1% of global GDP; however, it remains insufficient and inconsistent across regions.[22] Less than 3% of total global climate finance is directed to the least-developed countries.[23]

Mobilising climate finance for transport is more important than ever. On a positive note, financing for the sector has grown rapidly in recent years. Overall global spending on clean energy surpassed USD 2 trillion in 2024 – or twice the amount of investment in fossil fuels. Global investment in electric vehicles and transport electrification was around USD 270 billion.[24] The Climate Policy Initiative (CPI) estimates that the transport sector received a total of USD 336 billion annually in 2021/2022, up from USD 168 billion in 2019/2020. This accounted for around 29% of funds deployed in mitigation finance (see Figure 4).[25]

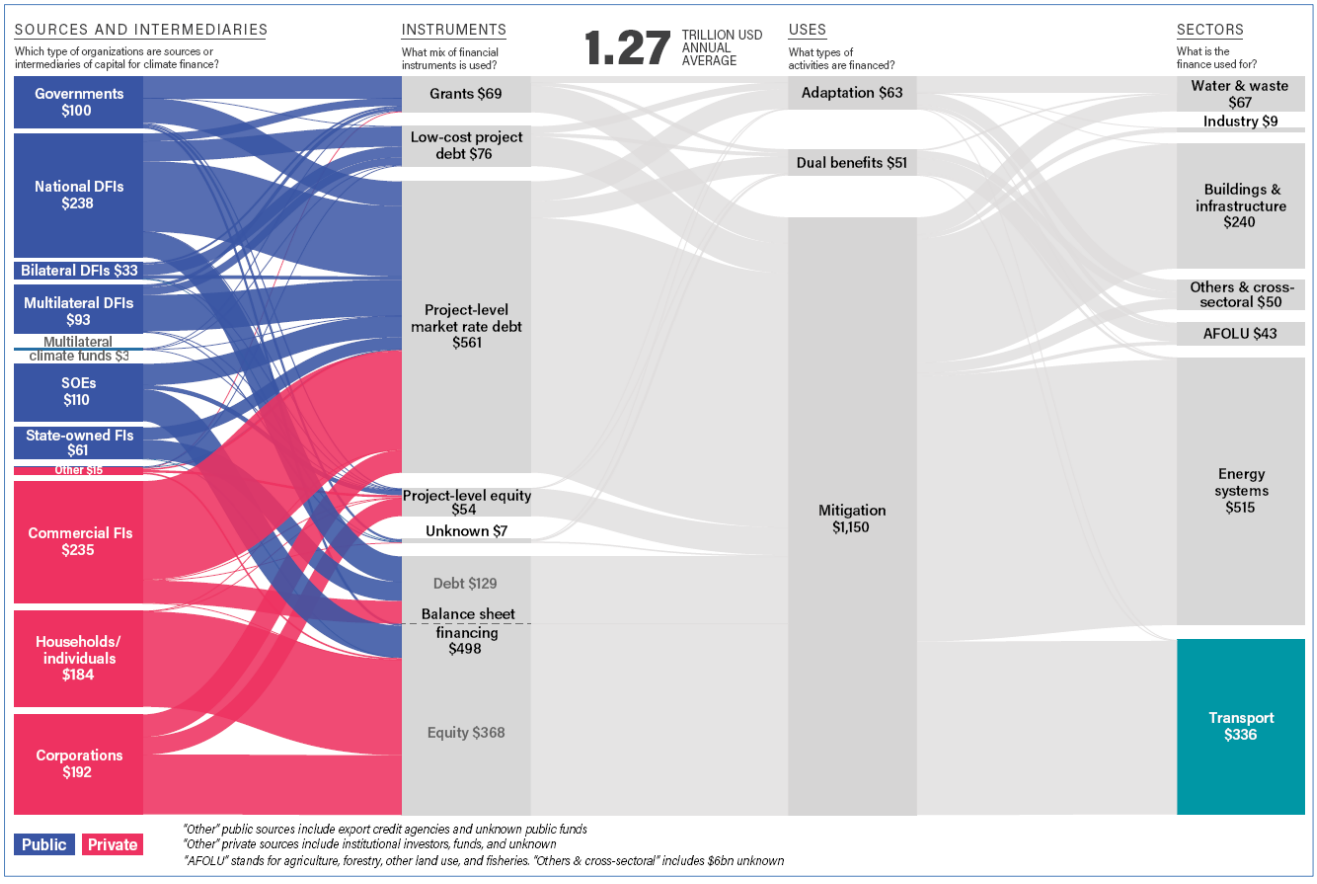


Figure 4: Sources of climate finance connected to the end use by sector[26]

Despite this growth, financing remains inadequate to meet current demands and to reach the communities and regions that need it the most. The transport sector, in particular, faces the biggest investment gap in absolute terms.[27] Different studies offer indications of the potential regional gaps: **The transport sector in the Global South requires at least USD 550 billion annually until 2050 to achieve net zero emissions by 2050.** However, current annual investment levels are only USD 15 billion, or around 2.7% of the required amount.

Sustainable, low carbon transport solutions are available, but they will cost an estimated USD 2.7 trillion annually between now and 2050, according to the CPI – seven times the amount currently spent on transport.[28] Among the key recipients of climate finance in transport will continue to be efforts targeting the scaling up of electric vehicles, the implementation of sustainable freight and logistics operations, and the facilitation of modal shifts across both passenger transport (to public transport, walking and cycling) as well as goods transport (to railways and inland water transport).[29]

A critical challenge for LMICs will be to secure access to the necessary resources to accelerate the transition to low carbon transport. With limited access to private investments, a majority of LMICs borrow at higher interest rates, exacerbating their already substantial debt burdens.[30] When discussing access to climate finance and transport decarbonisation in the context of LMICs, however, it is important to acknowledge the diversity within this category of countries. Though typically grouped within the LMIC category, China and India, for instance, stand out as unique cases, with their transport systems being at different stages of development and facing a different set of challenges. While China is one of the world's largest CO_2 emitters, it also positions itself as a frontrunner in terms of electric vehicles adoption and renewable energy deployment. Similarly, India's ambitious electric bus programme coupled with its high fuel quality standards signal the country's significant strides towards sustainable, low carbon transport. Recognising these nuances upfront is crucial to crafting policies and financing mechanisms that are tailored, equitable and impactful.

Current investment levels fall short of what is needed to limit global warming to 1.5 °C, with uneven distribution across regions.[31]

- High-income countries continue to access the majority of climate finance, leaving inadequate flows for LMICs.
- Less than 3% of the total global finance is directed towards the least-developed countries.[32]
- The pledged USD 100 billion per year from developed countries was fully met only in 2022.[33]

At the 2009 United Nations Climate Change Conference (COP 15) in Copenhagen, Denmark, developed countries pledged to mobilise **USD 100 billion per year** by 2020 for climate action. The timeline for the goal's achievement was later extended to 2025, but it was met for the first time only in 2022.[34] The USD 100 billion is a basis to enable more ambitious climate finance goals by LMICs.[35] A strong climate finance outcome at COP 29 in 2024 was widely seen as critical to equipping LMICs with the resources to address mounting climate impacts and encouraging all countries to raise their ambition in transport actions in the next round of NDCs.

However, with the newly agreed upon climate finance goal falling short both in terms of quantity and quality, critical challenges will remain for LMICs seeking to access and allocate finance to deliver on their climate commitments.[36] In particular, LMICs struggle to attract international climate investments for reasons such as[37]:

- macroeconomic and political instability, which raise risks for investors;
- high interest rates, which make it expensive to borrow;
- socio-economic challenges coupled with growing levels of debt, which make it difficult for LMICs to prioritise transport decarbonisation while raising questions about whether debts can be repaid;
- limited data, understanding, and technical capacity, which hamper the development of bankable projects and the implementation of an enabling regulatory framework for sustainable, low carbon transport.

The combination of these factors ultimately leads to a shortage of bankable projects in LMICs. Many projects tend to run into bottlenecks at early stages of implementation, cannot be considered for investments, or are deemed too small for investors and climate finance instruments.

- Significant investment gaps in transport infrastructure are projected for 2040, amounting to an estimated USD 0.8 trillion for Africa and USD 1.6 trillion for Asia.[39]
- This shortfall could be even greater when considering financing needs for workforce development, adaptation and costs associated with extreme weather events.[40]
- Out of the transport-specific climate finance investments, **rail and public transport receive USD 77.6 billion, accounting for 23%.**

Increasing private sector involvement is crucial.

For example, the Africa region received USD 4.2 billion in private climate finance in 2019/2020, representing 14% of the total global climate finance flows of USD 29.5 billion. However, African countries require USD 242.4 billion annually (USD 2.7 trillion in total) until 2030 to fully implement the actions outlined in their NDCs.[41] Mitigation activities alone are estimated at USD 1.14 trillion, with adaptation costs reaching USD 1.12 trillion.[42]

Expert insights

The majority of the consulted stakeholders chose public transport, active mobility and electric mobility as the most important transport modes to support through climate finance.

In contrast, aviation and water transport-related modes received fewer votes in the context of climate finance priorities.

For more stakeholder insights, see Appendix 2. Stakeholder survey insights.

The International Transport Workers' Federation advocates for a targeted approach to sustainable transport, including **integrated national master plans, national climate finance platforms, and adherence to just transition principles that involve genuine consultation with transport workers** in the ongoing negotiations for a new global finance agreement.[38]

3 Operating contexts: Key barriers and solutions to accessing climate finance for transport

This section maps out solutions to specific barriers in an indicative manner. It is not an exhaustive list of all barriers and solutions in the context of climate finance. The section links to the identified solutions to specific steps within the Section 4 and helps stakeholders to understand how to act.

Project sponsors and policy makers often encounter significant barriers – **financial**, **institutional**, **informational** and **technological** – that impede their ability to access climate finance effectively. However, the specific challenges will vary depending on a country's circumstances and available funding sources.

The project "Improving Access to Climate Finance for Transport Projects in Low- and Middle-Income Countries" identified that the major challenges revolve around the difficulty of securing adequate climate finance for transport and the capacity to effectively use available funds. These challenges are intertwined and compound one another.

Research identified the following five key barriers:

- Lack of enabling policy and regulatory framework
- Limited capacity for project preparation and implementation
- High upfront costs and long-life cycle
- High risk perception and low potential for returns
- Inadequate quantity and quality of climate finance and its complex nature.

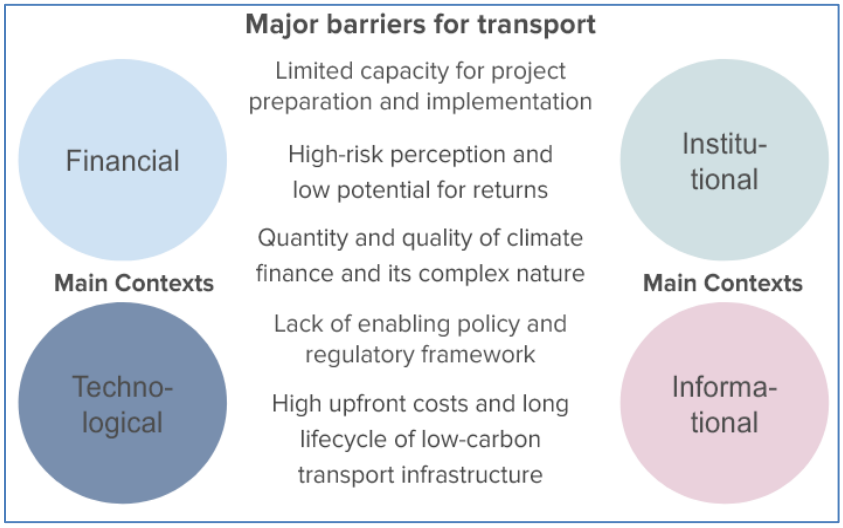


Figure 5: Key barriers to accessing climate finance and their operating context

These five key barriers are nested within financial, institutional, informational and technological contexts (see Figure 5). The key barriers can be broken down into detailed barriers and solutions framed within each of these areas of the operating context.[43]

The intention of this section is to highlight the barriers that are being encountered by a variety of stakeholders in the context of climate finance. Potential high-level solutions for the four contexts are provided. Being aware of these barriers and potential solutions will be beneficial for project sponsors, government officials and other interested stakeholders. The solutions point to specific actions of the step-by-step guide and other relevant material within the guide.

Financial context

Financial barriers include inadequate financing sources, difficulty in accessing suitable financing sources, and difficulty in identifying accompanying private investors and financeable projects. The long-term nature of transport infrastructure projects implies that the cost recovery is distributed across many years and is subject to future unpredictability and delays, which complicate investment decisions.[44]

Barriers	Solutions
Limited domestic and international financing options impede allocation of resources for transport projects.	**More and better guidance material** is needed for project sponsors to effectively identify suitable financing sources and where to deploy them. 🔎 *See all steps under **Section 4** and **Appendix 4. Climate finance mechanism profiles**.*
Insufficient understanding of available financing sources and of funders' and/or investors' requirements hinder access to climate finance for transport projects.	
Limited internal **resources and capacity to prepare for accessing climate finance** – often due to the technical and administrative complexities of funder requirements (i.e., supply-side issues) – is a major challenge for many LMICs.	
Insufficient financial incentives (i.e., financial support, subsidies, tax breaks for low carbon transport activities) for private sector investors may deter their participation.	**Private sector climate finance** needs to be mobilised by ensuring financially viable or revenue-generating projects.[45] **Blended financing** can grow private climate finance volumes. Climate policy should shift to promote and incentivise the **transition away from fossil fuel subsidies**. 🔎 *See **Section 4, Step 3: Make smart use of financial instruments** and **Attract private investments with de-risking instruments**.*
Many projects may not appear financially attractive to investors due to **uncertain revenue streams**, long payback periods, and perceived risks associated with impacts or creditworthiness of the ultimate payer.	
Certain transport projects are regarded as **public goods (i.e., serving society and thus not necessarily needing to produce direct monetary benefits)**, resulting in these projects facing greater financial barriers in accessing finance Implementing taxation and pricing mechanisms to address externalities is often considered challenging.	
Lenders and donors may perceive higher risks associated with financing projects in countries with **unstable currencies**, which can impact the availability and terms of climate finance.	
Local financiers may struggle to access foreign currencies for payments, and international lenders may struggle to access stable and affordable local currencies.	

Projects **lacking scalability** or having particular contextual requirements may face difficulties replicating success in different regions or countries.	**Long-term debt instruments** in the local financial markets are useful in scaling investments past initial small-scale pilot projects, which can be challenging without demonstrating strong creditworthiness. 🔎 *See **Section 4, Step 3: Make smart use of financial instruments**.*
High upfront costs and long life cycles of transport infrastructure projects (e.g., rail, public transport) – combined with the perception of high-risks and low potential returns associated with new technologies – may deter private investment.	**Very low discount rates** can enable more long-term projects.[46] **Transfer some of the risks** associated with the commercialisation and deployment of climate technology investment. 🔎 *See **Section 4, Step 3: Attract private investments with de-risking instruments**.*
Climate finance providers typically require detailed project plans, feasibility studies and financial models. Project sponsors in LMICs might **struggle to develop comprehensive proposals**, which can hinder their access to finance.	Stakeholders need to **understand the financial requirements, reporting obligations and overall criteria** necessary for accessing climate finance. 🔎 *See **Section 4, Step 3: Develop capacity on climate finance mechanisms.***
Projects with **complex contracts involving numerous stakeholders and extended payback periods** may face challenges. **Climate-related criteria**, such as emissions reduction targets, may add further complexity.	
The **complexity of project life-cycle assessments and auditable monitoring, review and validation (MRV) frameworks** as well as the participation of third-party auditors to meet the specific various requirements of respective climate finance mechanisms is a particular challenge for LMICs.	

Institutional context

Institutional barriers often relate to inadequate policy and regulatory frameworks and limited institutional and technical capacities to develop bankable project proposals, conduct feasibility studies, and implement and monitor projects. The lack of stable policy frameworks and clear signals increases investment risk, particularly in nascent markets lacking regulation and an enabling environment for private sector entry. Weak governance, organisational silos, and overlapping or unclear responsibilities of government authorities can impede access to financing and hinder project planning and implementation. Project sponsors in LMICs often lack sufficient understanding of climate-related risks and the technical capacity to develop bankable projects.[47]

Barriers	Solutions
Political leaders may not prioritise climate finance for transport projects due to **competing interests** or a **lack of awareness** of the importance of sustainable transport.	Develop robust **Long-Term Strategies and set clear priorities** to send strong policy signals to domestic and international stakeholders. 🔎 *See **Section 4, Step 1: Secure an enabling policy environment**.*
Existing institutional arrangements often **favour supporting current systems**, for example internal combustion engine vehicles over electric vehicles. These are exacerbated by fossil fuel subsidies and regulatory uncertainties that discourage investment in cleaner alternatives	Review current **regulations** (such as procurement procedures, tenor terms, etc.) and **standards** to allow more flexibility and introduction of new transport services. 🔎 *See **Section 4, Step 1: Secure the necessary enabling environments**.* Integrate wider **benefits** (such as air quality improvements, accessibility, safety, reduced travel time, congestion and job creation) into climate-related activities. 🔎 *See **Section 4, Step 2: Develop capacity on sustainable, low carbon transport**.*
Insufficient technical and institutional capacity may hinder effective planning, implementation and monitoring of climate finance for transport projects.	Multilateral development banks and development finance institutions can provide **technical assistance to support national and local governments in LMICs** to identify sources of finance, prepare robust project pipelines, enhance managerial and technical capacity for p roject implementation and facilitate monitoring and reporting. The application of transport assessments, such as HVT's Transport Decarbonisation Index (TDI), can support stakeholders in LMICs in the preparation of bankable projects aligned with the eligibility criteria and objectives of financing entities by equipping
Limited capacity for project preparation and implementation across government levels, alongside poor inter-departmental and inter-agency co-ordination may complicate the identification and execution of bankable transport projects.	

	them with a data-driven overview of their transport systems and supporting them in the identification of high-impact mitigation and adaptation policies for transport. 🔎 *See **Appendix 5. Project Preparation Facilities** and **Section 4, Step 3: Build capacity in accessing climate finance across various sources**.*
The **complexity of application processes** and **stringent eligibility criteria** (e.g., strict monitoring and reporting requirements) for climate finance might impede countries from accessing the funds for transport projects.	For climate finance seekers (i.e., national and sub-national governments), develop a **good understanding of the bankability and eligibility criteria** of funding proposals. For international finance institutions, develop **common standards and methodologies** that can ease several issues on the supply side. 🔎 *See **Appendix 4. Climate finance mechanism profiles**.*
Unfavourable policy and regulatory environments may **discourage private sector involvement**.	The **policy and institutional environment have to be strengthened and re-calibrated** to facilitate the transition to low- or zero-emission transport modes and systems in order to enable the design of comprehensive, multi-faceted transport projects. Adopting a multi-stakeholder approach is key to this end. 🔎 *See all actions under **Step 1: Secure the necessary enabling environments**.*
Specific projects may **negatively impact** the labour force, gender, employment patterns, wider communities and social well-being.	
Lack of transparency can lead to inefficiencies, cost overruns and delays. Investors are often concerned about the risk of mismanagement or corruption when funds lack transparency and accountability, which can deter them from allocating resources to transport projects.	Involve **project beneficiaries in the early stages** of the project design and closely monitor the delivery of activities and indicators identified at appraisal. 🔎 *See **Section 4, Step 1: Involve the relevant stakeholders and entities** and **Ensure a robust project preparation**.*
Political and policy instability within a country may create uncertainties, deterring climate financiers from investing.	Support cross-institutional integration with **upstream, midstream and downstream support**. Work with other regions to standardise policies, metrics and taxonomies. 🔎 *See **Improve pipeline development and project design**.*

Informational context

Informational barriers include a lack of understanding of the importance of sustainable transport measures, such as e-mobility or active mobility. International practices indicate that promoting awareness of electric vehicles and their benefits among customers and businesses, for instance, is positively linked to higher deployment.[48] Informational barriers often arise from a lack of data and the ability to measure, verify and communicate the impact of transport projects.

Barriers	Solutions
Lack of knowledge and awareness of transport measures may persist due to an underestimation of the importance of sustainable transport measures.	Learn from **case studies and evolve economic appraisals** to capture the impacts of sustainable transport projects. 🔎 *See **Step 2: Develop capacity on sustainable, low carbon transport** and the working paper **Access to Climate Finance in Low- and Middle-Income Countries: 14 Case Studies in the Transport Sector**.*
A lack of monitoring tools, as well as insufficient transparency and data on project outcomes or impacts, contributes to uncertainty among potential climate finance providers.	Improve data availability and quality through enhanced data collection and management systems. 🔎 *See **Step 4: Design suitable and impactful projects**.*
Inadequate monitoring and evaluation are available to assess the impacts of funded projects. The lack of accountability can lead to continued funding for ineffective projects, perpetuating a cycle of poor outcomes.	Gather **information from different actors** at both the national and sub-national levels, and harmonise information to present aggregate national results. **Benchmark from monitoring tools** being applied in LMICs. 🔎 *See **Gather good-quality data and monitor and evaluate impacts**.*

Technological context

Technological barriers, such as technical limitations of new and emerging technologies, are particularly evident in e-mobility projects. These markets and funding streams are relatively new, making returns from related projects less well-established. This is exacerbated by the scarcer availability of knowledge on technical issues, such as battery range and charging technology.

Barriers	Solutions
Technical limitations of new technologies – including issues with electric vehicle battery range, charging infrastructure limitations or the scalability of renewable energy solutions for public transport – limit their access to finance.	Scale already **proven technologies using financing approaches that are readily available**, known to work and already being deployed at scale. 🔎 *See **Step 2: Develop capacity on sustainable, low carbon transport**.* Secure **conducive regulatory frameworks** to facilitate high levels of use of transport infrastructure with a view to ensuring that high costs linked to initial investment as well as operation and maintenance are covered.
The limited availability of zero-emission vehicles in LMIC markets is a significant challenge. Import restrictions and the concentration of production in the Global North hinder the development of local markets. Uncertainties about the second-hand electric vehicle market add to this challenge.	Incentivise the **domestic production of electric vehicles and their related components**. Retrofitting of existing vehicles can also be an option. 🔎 *See **Step 2: Develop capacity on sustainable, low carbon transport** and **Section 5.***

4 Step-by-step guide: Ensuring better access to climate finance for transport

This step-by-step guide primarily targets project sponsors but also has significant relevance for national and sub-national governments in LMICs. It provides holistic, high-level recommendations that are supported by pointers to case studies, guidance documents and other relevant material. Not all steps need to be performed in this exact order, and in the case that certain requirements and activities are already well established, stakeholders can skip certain steps in the process.

Each step contains several activities, and stakeholders must identify which of these are most relevant for their specific circumstances. Implementing all of the recommended actions under each step will ensure better access to climate finance.

Step 1: Secure the necessary enabling environments

Embedding a transport project within an enabling regulatory framework is crucial to ensuring its alignment with climate plans (e.g., NDCs and Long-Term Strategies) while demonstrating to prospective funders that it is part of a well-governed and conducive ecosystem; this, in turn, reduces its perceived risks. The creation of an enabling policy and financial environment that supports climate action in transport is a preliminary but essential step for project sponsors to establish, in close dialogue with national and sub-national governments in LMICs. Safeguarding an ambitious regulatory framework is key to enhancing the appeal of projects for climate finance, securing access to financial incentives for the project's subsequent implementation (e.g., subsidies or tax breaks for electric vehicles) and ultimately ensuring its compliance with the high environmental standards typically required by climate finance providers.

Secure an enabling policy environment

Project sponsors can actively engage with national and regional policy makers to ensure that the respective governments create an enabling policy environment. This consists of the following key steps:

- **Set policies, regulations and binding transport targets** to send clear signals to the private sector and to reduce barriers to market entry. Ambitious policies for transport decarbonisation and sustainability demonstrate a commitment to global climate and sustainability agendas, while reducing the cost of low carbon solutions and helping to ensure compliance with the criteria of financing entities. These priorities can be translated into sectoral strategies and regulations, creating opportunities for climate finance-supported transport activities.[49]

  See examples in Table 1

Table 1: Examples of target setting in support of sustainable, low carbon transport

• Targets for transport greenhouse gas mitigation that are aligned to 1.5°C pathways (as shown in 1 Introduction) set in national policies, NDCs and other transport strategies.
• Targets for transport modes, such as aiming for 90% of bus sales to be plug-in hybrid, battery or fuel cell electric vehicles by 2035. For mode-specific milestones, see:

🔎 International Energy Agency's Net-Zero Roadmap

- Targets aligned to globally agreed outcomes, such as the Global Stocktake decision of COP28 in Dubai, United Arab Emirates, which calls on countries to (among others):
  - Accelerate the reduction of emissions from road transport via a range of pathways, including through development of infrastructure and rapid deployment of zero- and low-emission vehicles.
  - Transition away from fossil fuels in energy systems in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050.
  - Phase out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible.
- Vehicle emission performance standards or ideally a zero-emission phase-in target:
  🔎 International Council on Clean Transportation's guidance on zero-emission vehicle phase-in
- Zero-emission vehicle targets as set by global initiatives under the Accelerating to Zero Coalition, such as 30% zero-emission new truck and bus sales by 2030 and 100% zero-emission vehicles by 2040, per the Global Memorandum of Understanding on Zero-Emission Medium- and Heavy-Duty Vehicles.
- Mode share targets for passenger transport and freight transport (e.g., a certain percentage of domestic freight movement to be done via rail and inland waterways). For a good practice, see:
  🔎 India's National Rail Plan aims to raise the share of freight transported via rail to 45% by 2030.

- **Develop robust Long-Term Strategies outlining the vision towards sustainable, low carbon, resilient transport**. Ideally, these should feature pathways to net zero transport emissions by 2050.
  🔎 Learn from existing Long-Term Strategies in the UNFCCC's portal
  🔎 For good practices in transport, see the Long-Term Strategies of India, Lithuania, and Singapore, among others

- **Feature short- to medium-term actions on transport in NDCs.** In 2025, countries are requested to submit new NDCs to the UNFCCC, providing LMICs with an opportunity to outline their transport ambitions for 2030 and 2035. NDCs should include conditional targets and measures, specify the costs of proposed projects, and enable project sponsors to advance these activities while accessing climate finance. Several entities have developed guidance material for the incorporation of transport in the next round of NDCs.
  🔎 General guidance: Climate Action Tracker | German Agency for International Cooperation (GIZ) | International Transport Forum (ITF) | NDC Partnership | SLOCAT | WRI
  🔎 Mode-specific guidance: Global Network for Popular Transport on informal transport | PATH on active mobility | International Association of Public Transport (UITP) on public transport | International Union of Railways (UIC) on railways | UN-Habitat on urban mobility

- **Align investments with sustainable transport solutions as well as sustainability agendas.** Actions on low carbon transport have several synergies with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). Additionally, the role of the Sendai Framework for Disaster Risk Reduction should be reflected in the design of actions on resilient

transport.[50] Examples of sustainable transport solutions include the promotion of public transport, walking and cycling as well as the scaling up of e-mobility and the integration of renewable energy sources. This ensures that the full scope of Avoid-Shift-Improve is being implemented, as shown in Section 5. In this context, multilateral development banks have committed to aligning their activities with the goals of the Paris Agreement. Through a joint declaration, the banks outlined activities universally recognised as aligned with the Paris mitigation objectives.

🔎 Joint MDB Assessment Framework for Paris Alignment for Direct Investment Operations

🔎 Aligning investments with the Paris Agreement

- **Pursue cross-continental standardisation of policies, metrics, taxonomies and climate data disclosure standards** to enable larger regional markets, increase cross-national projects, and provide positive signals of transparency, stability and predictability to private investors to boost their confidence. For regional examples for Asia, see:

  🔎 ASEAN Fuel Economy Roadmap for the Transport Sector 2018-2025

  🔎 UNESCAP Manual for sustainable and energy efficiency of the freight transport sector

Secure an enabling financial environment

By engaging actively with governments, private actors, and other relevant stakeholders, project sponsors can help to bring about a conducive financial environment. Note that any institutional and regulatory reform often takes time and is best supported by a series of projects. Actionable steps to this end include:

- **Support the establishment of national climate funds or carbon pricing mechanisms to enable a transition to low carbon transport.** A government can scale up national funds for relevant activities through a national climate fund, reforms to subsidy schemes and the establishment of green growth frameworks. National climate funds allow governments to be supported by global funds such as the Green Climate Fund and the Global Environment Facility. Carbon pricing is seen as an effective way to incorporate the climate change-related costs into economic decision making and thus incentivise climate action.[51]

  🔎 OECD policy framework for green growth

  🔎 World Bank's State and Trends of Carbon Pricing 2023

  🔎 Examples of national climate funds: Kenya's Country Climate Change Fund, Rwanda Green Fund, Seychelles' conservation and climate adaptation fund

- **Establish national green taxonomies and standardise policies, metrics and taxonomies for private finance through regional mechanisms and frameworks.** These frameworks should complement those developed by international organisations to align with international best practice. As of 2023, South Africa is the only African country that has a taxonomy for green investments.[52]

  🔎 South Africa's Green Finance Taxonomy (see Table 6)

- **Develop innovative financing mechanisms** to further attract private investment (e.g., demand aggregation, a national payment security mechanism).

  🔎 India's Grand Challenge for scaling up electric buses

- **Consult transport workers, passengers and all relevant stakeholders** for integrated and long-term policy planning and development tools.[53]

  🔎 National Sustainable Transport Action Master Plans (STAMPS) and National Climate Finance Platforms (CFPs) (see Table 6)

- **Implement policy and regulatory frameworks for public-private partnerships (PPPs) to minimise risks for private partners and mitigate market barriers**.
  🔎 Green Karachi BRT project in Pakistan and Dar es Salaam BRT Phase 2 (see Table 2)
  🔎 World Bank guidance for PPPs in transport

- **Enhance co-ordination in the identification and appraisal of bankable projects** across government agencies (transport, climate, finance) and foster public-private dialogues. Diverse inputs are essential to develop an enabling environment tailored to each country's context. Co-ordination is also essential during the project design in Step 4: Design suitable and impactful projects.

🔎 **Expert insights on policy solutions**

More than 70% of survey respondents see the **creation of an enabling environment for climate investments as the most important policy solution**. However, attracting private investments with de-risking instruments and enhanced co-ordination across agencies, accountability and transparency is also seen as very important.

For more survey results, see *Appendix 2. Stakeholder survey insights*.

Table 2: Examples of bus rapid transit (BRT) in Pakistan and Tanzania

Green Karachi BRT project in Pakistan	Dar es Salaam BRT Phase 2
The Green BRT Karachi project required a complex financing structure involving loans and grants from multiple international sources. Designed to limit operational subsidies, the project aims to cover operation and maintenance costs through distance-based fares, advertising and concession rents. A financial model projected that revenue would cover operating costs under various scenarios, supporting the system's financial sustainability. To fully address maintenance needs, the government plans to raise the fuel levy tax for ongoing revenue support.	The Dar es Salaam BRT project used concessional loans with low interest rates, extended repayment schedules (over 20 years) and grace periods to support the long-term social and environmental benefits of these systems.[54] The project, costing USD 121 million, was financed mainly by loans from the African Development Bank and the Africa Growing Together Fund, along with government contributions. As a part of the project, walking and cycling have been integrated within the BRT infrastructure, allowing increased access to public transport.
Both the Dar es Salam and Karachi BRT projects employ a public-private partnership model wherein private operators are contractually responsible for key aspects of the BRT system, reducing public sector risks, enhancing operational efficiency and ensuring compliance through well-defined contractual obligations.	

Involve the relevant stakeholders and entities

- **Understand the roles of key stakeholders.** The working paper[55] identified opportunities to enhance access to climate finance for transport by defining the roles of various stakeholders, including project sponsors (both public and private), governments (national and sub-national), financial institutions (multilateral development banks, development finance institutions), the private sector, NGOs and research institutions.
  🔎 See Table 3

Table 3: Roles of major stakeholder groups and their areas of action

Project sponsors (public and private)	Governments (national, sub-national)	Governments, donors, and financial institutions	Private financial entities and other partners
• Identify opportunities for sustainable transport projects and initiatives that align with national and global climate and sustainability objectives (e.g., electric bus fleets, cycling infrastructure) • Assess the project's technical, economic and environmental viability to demonstrate alignment with climate finance criteria (e.g., greenhouse gas emissions reduction) • Engage in dialogue with government stakeholders, private actors and local communities to raise awareness of the project's business case, mobilise support and ensure that the project addresses local needs • Mobilise finance from both public and private sources	• Set policies, regulations, and binding transport targets • Enhance co-ordination across agencies (transport, climate, finance) and levels of government • De-risk to make transport projects more appealing to private investors	• Develop innovative financing mechanisms to further attract private investment (e.g., demand aggregation, a national payment security mechanism) • Build capacity among key stakeholders • Obtain data to account for project impacts • Mobilise private finance more effectively and provide technical assistance	• Provide additional finance by shifting investment portfolios towards climate-smart transport projects • Engage in data reporting with a common tracking framework • Facilitate public-private dialogues

- **Adopt a multi-stakeholder approach in the development of bankable projects.** By breaking down silos and fostering collaboration across sectors and disciplines (including government agencies, industry players and financing institutions), effective decision making and investment strategies can be better identified. For urban mobility, promising approaches in transport are the development of national urban mobility plans (NUMPs) and sustainable urban mobility plans (SUMPs).
  🔎 MobiliseYourCity NUMPs toolkit and SUMPs toolkit

- **If your project is targeting the informal transport sector, organise individual operators to collaborate with service partners to overcome barriers from accessing financing from traditional institutions such as local banks.** For more on the role of informal transport for climate action, see:
  🔎 VREF-WRI Connecting Informal Transport to the Climate Agenda: Key Opportunities for Action
  🔎 UN Development Programme's A Closer Look at Informal (Popular) Transportation: An Emerging Portrait

🔎 **Resources in support of Step 1 on enabling environments**

- The 2024 Yearbook of Global Climate Action provides an annual comprehensive review of climate action and highlights the role of public policy support in different best practice examples.
- The investor perspective on making NDCs investable identifies supporting policy and regulatory frameworks as critical for boosting investor confidence.
- The Climate Compatible Growth programme's Data-to-Deal (D2D) framework involves a series of flexible actions, tailored to individual circumstances, to help countries unlock investment potential for the climate transition.
- The Climate Investment Funds has laid out enablers to scale up climate finance.
- Research on the use of South Africa's Green Finance Taxonomy to redirect capital flows found that the lack of regulatory embedding was a major hinderance to implementation of the taxonomy.
- Analysis of the green bond market as a potential source of climate finance for developing countries found that the lack of appropriate institutional arrangements for green bond management was one of the factors barring the development of green bonds.

Step 2: Develop capacity on sustainable, low carbon transport

Following the creation of the enabling environments and the engagement of stakeholders, the next step is to raise capacity on sustainable, low carbon transport. LMICs often face gaps in institutional arrangements, expertise and mandates for the required roles to implement climate finance-backed projects.[56]

Acquire knowledge on sustainable, low carbon transport

- **Get familiar with the mitigation and adaptation potential of transport activities.** Various resources and organisations support capacity building on this topic with a focus on LMICs:
  🔎 HVT applied research programme; a specific example is the research on Low-Carbon Quick Wins: Integrating Short-Term Sustainable Transport Options in Climate Policy in Low-Income Countries
  🔎 ITF's Transport Climate Action Directory
  🔎 Sustainable Mobility for All and its Decision-Making Tools
  🔎 SLOCAT Transport, Climate and Sustainability Global Status Report

- Learn about **environmental regulations and standards for transport**.
  🔎 Transportpolicy.net is a knowledge source for fuel and vehicle regulation policies

- Understand the various *Avoid*, *Shift* and *Improve* **actions in support of sustainable, low carbon transport**. A large number of potential actions are available for a country to take.
  🔎 See the actions laid out in **Section 5**.

- **Deep-dive into the topic of transport electrification.** A key towards transport decarbonisation is to reduce the fossil fuel dependency of the transport sector. The electrification of transport has to be co-ordinated closely with the uptake of renewable energy. Studies show that a stronger presence of electric vehicles on the roads will greatly increase the popularity of renewable energy sources.[57]
  🔎 Sustainable Electric Mobility: Building Blocks and Policy Recommendations
  🔎 E-Mobility and Renewable Energy Integration: Working Paper Series
  🔎 The transition of public transport to renewable energy

Gather good-quality data and monitor and evaluate impacts

- **Adapt evaluation models and cost-benefit analyses** to assess projects and account for benefits such as improved air quality, accessibility, safety, reduced travel time, congestion and job creation. Securing these data will be crucial to demonstrating a project's eligibility with financing entities' requirements, while strengthening its business case and mobilising support among local communities.
  🔎 UNFCCC overview of Integrated Assessment Models and Energy-Environment-Economy models
  🔎 HVT project on Transport Decarbonisation Index
  🔎 SLOCAT-TUMI Evolving the Economic Appraisals for Land Transport Investments

- **Ensure close measurement, reporting and verification procedures of the activities and indicators that might be important for the project and financing through trainings and awareness raising.** Transparent reporting on the project's performance over time supports reporting obligations, boosts trust and credibility among current and prospective funders, and increases chances of accessing technical assistance and capacity building programmes. Stakeholders need to receive training on low carbon and climate-resilient metrics for transport and financing.
  🔎 GIZ Online course on Transport Data: From MRV to Action
  🔎 ITF GHG Emissions Accounting and Reporting for Transport

- **Incorporate gender-inclusive metrics and activities into the project design**. Adding gender-inclusive activities into project design enables alignment with priorities of climate finance instruments and multilateral development banks. See, for example:
  🔎 World Bank Group Gender Strategy 2024-2030

Raise awareness and address informational barriers of sustainable transport projects and initiatives

- **Gather data and information with a multi-stakeholder approach**, both at the national and sub-national level. Harmonise information to present an aggregate national result.
  🔎 Sri Lanka's Monitoring Reporting and Verification System and Colombia's Non-State and Subnational Action Guide (see Table 4)

- **Learn from case studies** to overcome the lack of knowledge, attention, financial planning and understanding of the benefits of active mobility and other sustainable transport measures.
  🔎 Access to Climate Finance in Low- and Middle-Income Countries: 14 Case Studies in the Transport Sector
  🔎 New Climate Finance for Transportation: Online Course
- **Bridge the information gap between the decarbonisation specificities of transport modes, and climate financiers.** This means bundling projects to meet greenhouse gas saving requirements and explicitly showing how a transport activity supports the decarbonisation process.
  🔎 See the example of railways
- **Provide public support for testing, demonstration and adoption of new technologies in new markets to distribute risk.** Support until a stage where the projects can compete with the embedded and mature, but less sustainable alternatives. Increased public support is even more critical for endogenous / locally developed climate technologies that require targeted efforts to spur innovation and support entrepreneurs in getting access to seed and early-stage-risk capital.[58]
  🔎 UNFCCC TEC Brief Enhancing Access to Climate Technology Financing

Table 4: Examples of monitoring and evaluation

Sri Lanka's Monitoring Reporting	Colombia's Non-State and Subnational Action Guide
Through the development of a monitoring, reporting and verification system for the transport sector, Sri Lanka was able to review the effects of transport policies on greenhouse gas emissions in the electric and hybrid vehicles sub-sector and, in turn, review and revise several transport sector policies and measures.	During the development of the Non-State and Subnational Action Guide, aimed at quantifying the aggregate impact of mitigation actions carried out by private sector and city-level actors, Colombia improved its protocols for registering mitigation actions in the country and harmonised the quantification of measures aimed at reducing greenhouse gases.[59]

Leverage technology solutions for better knowledge

- **Leverage data and technology solutions to address the issue of high upfront costs of low carbon technologies.** For example, in the informal transport sector, tracking operators' daily revenue can provide evidence of drivers' stable income and change the negative "high-risk" perceptions linked to informal transport that result in unfavourable payment and financing terms.
  🔎 Technology Needs Assessment project by the UN Environment Programme (UNEP) and the UNEP Copenhagen Climate Centre on behalf of the Global Environment Facility
- Make use of **technology transfer channels to deploy new technologies**. Studies show that a large deployment of existing technologies across buildings, the energy industry and transport could deliver two-thirds of the emissions reduction required by 2030. Technology transfer channels are often North-South but there is also South-South co-operation.
  🔎 World Bank's Technology Transfer and Innovation for Low-Carbon Development Resource

- **Understand the concept of total cost of ownership.** While zero-emission vehicles have high initial purchase costs, these are offset by lower maintenance and operational expenses. Conducting life-cycle or total cost of ownership assessments is essential for such projects.

  🔎 Electric Vehicles: Total Cost of Ownership Tool

🔎 **Resources in support of Step 2 on capacity on sustainable, low carbon transport:**

- Energypedia's guide on climate finance for sustainable transport highlights climate change mitigation transport interventions that climate finance can fund.
- The Working Group III contribution to the IPCC's Sixth Assessment Report on Mitigation of Climate Change provides a comprehensive outlook of different aspects of climate change mitigation, including the role of the transport sector. In addition, the Working Group II contribution to the IPCC's Sixth Assessment Report provides the most recent knowledge on adaptation to climate change, impacts and vulnerability.
- ITF's Transport Outlook 2023 models the impacts of different policy measures on global transport demand and greenhouse gas emissions to 2050.
- A 2017 study by GIZ helps to understand the levers of the role of climate finance for sustainable transport and how to make them work. It underscores the paramount nature of capacity building in sustainable transport planning methods.
- The State of Climate Action 2023 report by WRI offers a comprehensive roadmap of how to close the gap in climate action across sectors to limit global warming to 1.5°C.
- The Surface Transport Decarbonisation Index for LMICs in South Asia and Sub-Saharan Africa is a diagnostic toolkit developed to assess progress and barriers and enable evidence-based and targeted decisions on emissions reduction towards surface transport decarbonisation.
- A World Bank study outlines the financing of capital, operations and maintenance for all sustainable urban transport modes.

Step 3: Develop capacity on climate finance mechanisms

Almost in parallel with step 2, the capacity on how to access climate finance needs to be raised. This step is supposed to ensure clarity about the climate finance landscape and the best approaches for the concerning country. Once the capacity is developed, stakeholders should be able to develop financing strategies, identify priority projects and mobilise finance.

Build capacity in accessing climate finance across various sources

- **Raise capacity through a collaborative effort by project sponsors, governments, donors and financial institutions.** Given that project preparation takes place within a certain regulatory and institutional ecosystem, project sponsors must engage with governments and private entities, with the extent of collaboration varying based on the project approach.

🔎 Share with relevant stakeholders the New Climate Finance for Transportation – Online Course
🔎 SDG Investment Fair facilitated by UNDESA

- **Seek technical assistance through Project Preparation Facilities (PPFs)** to identify financing opportunities, project requirements and application procedures. PPFs can enhance capacity on important elements, such as the drafting of feasibility studies and the development of financing strategies. Many financial institutions provide grants, loans and technical assistance for all transport modes through PPFs. In many cases, stakeholders have established PPFs on the national level.
  🔎 See Appendix 5. Project Preparation Facilities
  🔎 An assessment of PPFs for Africa
  🔎 Project Preparation Resource Directory by CPI

- **Receive capacity-building support from multilateral development banks and development finance institutions** to prepare robust pipelines, enhance managerial and technical capacity for project implementation, and facilitate monitoring and reporting.
  🔎 Explore opportunities provided by multilateral development banks in your region: African Development Bank | Asian Development Bank | Asian Infrastructure Investment Bank | CAF – Development Bank of Latin America and the Caribbean | European Bank for Reconstruction and Development | European Investment Bank | Inter-American Development Bank | Islamic Development Bank | World Bank.

- **Better identify suitable financing sources and where to deploy them**. Being aware of the expected outcomes of each instrument as well as where and how these instruments are deployed by multilateral development banks and climate finance funds is crucial to successfully accessing climate finance.
  🔎 See Table 5

Table 5: Different types of instruments and their intended outcomes[60]

Instrument	Outcomes
Grants • Project design • Technical assistance • Early-stage conceptualisation	Helps to make projects commercially attractive.
Unfunded instruments and contingent liabilities • Guarantees • Insurance • First-loss facilities	Reduces various kinds of investment risks.
Co-investment • Public-private partnership • Blended finance	Reduces first-mover risk for private investors and makes it more attractive for private finance.
Concessionary instruments • Subordinated debt and equity	Prices at a rate that is attractive to private investors.

• Bonds	
Result-based incentives • Outcomes contracts • Funds and bonds	Increases the impact of a project, aiming to ensure that certain objectives are achieved.

Make smart use of financial instruments

- **Establish innovative financing mechanisms**, for instance, by separating bus ownership from bus operations with a view to lowering costs and facilitating the wider adoption of e-mobility. Other similar mechanisms include combining the use of grants and development loans to cushion initial costs, the use of guarantees to lower interest rates and mitigate risks, and the introduction of de-risking measures to mobilise private capital for innovation.
  🔎 In the case of green bonds, see the Climate Bonds Initiative' certification scheme with standards for low carbon transport

- **Leverage long-term debt instruments available in local financial markets to scale investments beyond initial pilot projects.** To address challenges in demonstrating creditworthiness, consider measures such as strategic partnerships or financial guarantees. Careful planning is essential to mitigate potential debt distress, particularly in LMICs, ensuring that investments remain sustainable and aligned with national fiscal policies.
  🔎 Understanding the Use of Long-term Finance in Developing Economies

- **Ensure financially viable or revenue-generating projects to mobilise private sector climate finance.** E-mobility activities, including buses, last-mile delivery, taxis, and motorcycles, are attracting growing interest from private finance. Start-ups in this sector in Sub-Saharan Africa often face significant capital expenses, such as setting up manufacturing facilities and building inventory. Operational, financing leases and other structured credit solutions are an option. Asset financing partners can alleviate the loan burden, enabling start-ups to allocate funds towards new technologies, additional staff and operational growth.[61]
  🔎 Factor analysis and assessment tool on Enhancing the Financial Sustainability and Commercial Viability of Bus Rapid Transits (BRTs) in Sub-Saharan Africa

- **Use blended financing to help grow private climate finance volumes.** National climate funds can be an important tool for blending climate finance.
  🔎 UNDP's Blending climate finance through national climate funds
  🔎 Opportunities through the Catalytic Climate Finance Facility

Table 6: Best practices on finance taxonomies and planning tools

South Africa's Green Finance Taxonomy[62]	Integrated and long-term policy planning and development tools
South Africa's taxonomy for environmentally sustainable economic activities is a tool to provide credibility on what classifies as a "green investment", encourage investment, and enable monitoring and transparent, relevant performance disclosures. It specifies technical screening criteria for different activities in the transport sector including commuter road, passenger rail and rail freight transport; infrastructure for low carbon transport; passenger cars, road commercial vehicles and road freight transport; and inland passenger and freight water transport. It also assesses the local manufacture of low carbon vehicles for different modes. More information here.	**National Sustainable Transport Action Master Plans (STAMPs)** are integrated long-term plans including 1) national mitigation and adaptation plans for aligning transport with the 1.5°C temperature goal; 2) specific plans for urban transport; and 3) an intermodal/multimodal plan, within the Avoid-Shift-Improve framework, covering passenger and freight transport and just transition principles[63] and their associated costs. **National Climate Finance Platforms (CFPs)** lay out a funding mechanism for the sustainable transport projects in STAMPs, ensuring that all projects on sustainable transport and the corresponding climate finance flows align with the integrated plans and the just transition principles outlined in STAMPs.[64]

Attract private investments with de-risking instruments

- **Explore opportunities provided through specific, tailored initiatives as well as through innovative finance mechanisms.** These initiatives can provide a certain level of funding, which minimises the burden of private investors.
  🔎 International Monetary Fund's Resilience and Sustainability Facility and UNDP's Moonshot Initiative (see Table 7)

- **Use grants or concessional financing with attractive terms to avoid increasing the countries' debt stress, close financial viability gaps and achieve project bankability**. Multilateral development banks and development finance institutions have the potential to use concessional funding and to offer guarantees and credit enhancements effectively. These measures can overcome barriers related to low creditworthiness, limited capacity and regulatory barriers.

- **Use non-financial guarantees, such as minimum revenue arrangements, to entice private partners to join a public-private partnership project**. These are just some of the available tools that support de-risking and risk mitigation support. For more examples, see:
  🔎 ITF's Mobilising Private Investment in Infrastructure

- **Apply various land value capture instruments** such as infrastructure levies, developer contributions and integrated "rail plus property" development approaches to fund major transport networks. For resources on land value capture, see:
  🔎 Global Compendium of LVC Policies
  🔎 Best practice example of Hong Kong's Mass Transit Railway

- **Provide comprehensive fiscal incentives for private finance.** In the case of Africa, the African Development Bank identified that only Ghana, Kenya, Mauritius, Morocco, Rwanda and Tunisia have implemented such fiscal incentives.[65] For transport, an option would be to provide import tax exemptions for electric vehicles and to restrict the import of old, unsafe and polluting vehicles.
  🔎 UNEP's Used Vehicles programme
  🔎 Good country practice of India's Faster Adoption and Manufacturing of Electric Vehicles (FAME)

Table 7: Example of innovative finance mechanisms

The International Monetary Fund's Resilience and Sustainability Facility is a USD 50 billion trust fund supporting LMICs in strengthening climate resilience. **UNDP's Moonshot Initiative** with governments and the private sector aims to mobilise USD 1 trillion for achieving the SDGs.[66] Transport activities touch upon several SDGs in support of equitable, healthy, green and resilient mobility.[67]	For e-mobility projects, leasing for batteries and vehicles and "as-a-service" models add flexibility and mitigate consumer costs and fleet operator ownership risks.[68]

🔎 **Resources in support of Step 3 on capacity on climate finance mechanisms:**

- The UNFCCC's Climate Finance Access and Mobilization Strategy for the East African Community (2022/23-2031/32) highlights strategic areas for collaborative action, including strengthening technical skills, enhancing enabling environments, and mobilising effective, innovative and appropriate additional finance for priority actions. Specific action points are provided under each strategic area.
- The status quo, challenges and policy perspectives on international climate finance are provided by this briefing of the European Parliament.
- This UNDP guide examines the meaning of "readiness" for climate finance at both the national and local levels.
- This overview of the content in the Climate Finance Toolkit by Changing Transport provides guidance on how to navigate the toolkit.
- GIZ's practical overview on accessing climate finance for sustainable transport highlights the sources of climate finance available for land transport climate change mitigation activities and how they can be accessed.
- The Economic Report on Africa 2020 discusses the infrastructure financing needs and the innovative financing opportunities for private sector sustainable development.
- World Bank publication guides through financing of low carbon transport solutions in LMICS.

Step 4: Design suitable and impactful projects

With the right tools and knowledge on climate finance and transport, the final step is to design and implement impactful projects. Climate finance for transport serves as a catalyst for systematic transformations within the sector. As outlined in previous chapters, the current funding volumes are insufficient to fully develop a country's transport sector, nor is that the primary aim of climate finance. Instead, in the transport sector, climate finance acts as a driver for creating new markets (e.g., transport electrification and shared mobility) and piloting innovative projects (e.g., the first public transport service or high-speed rail system) in a region. The project design in this step should make use of the pool of actions outlined in Section 5.

Develop bankable projects and improve project implementation

- **Develop a good understanding of the bankability and eligibility criteria of funding proposals**. The absence of common standards and coherent practices means that each fund and climate finance mechanism has its own application procedures and requirements.
  🔎 A good practice is the comprehensive guidance provided by the Green Climate Fund: GCF project cycle | GCF Programming Manual | GCF Appraisal Guidance | Sectoral guides – transport guidance | Investment criteria

- **Identify experts (local, regional or international) with experience in the chosen climate finance mechanism to support the application process.** Creating a roster of experts and potential support entities can streamline the project preparation process.
  🔎 TUEWAS Women database features women experts in transport and related sectors

- **Implement certain projects under a public-private partnership model to overcome financial barriers and transfer operational risks to the private sector. See, for example:**
  🔎 World Bank transport PPP toolkits and their Climate Toolkits for Infrastructure PPPs (with a roads toolkit)
  🔎 UNECE PPP and Infrastructure Evaluation and Rating System

- **Make a stronger economic case for sustainable, low carbon transport projects.** Incorporate socio-economic indicators (i.e., gender and community resilience) and align with the country's development needs and broader goals (i.e., improved access to jobs and opportunities).
  🔎 SLOCAT-TUMI Evolving the Economic Appraisals for Land Transport Investments

Improve pipeline development and project design

- **Engage with policy makers to secure improved policy alignment between NDCs, Long-Term Strategies and national policies. This will aid the incorporation of more transport projects in such plans.** This demonstrates a strong commitment to climate objectives and increases the chances of accessing climate finance.

  A study comparing actions in NDCs to national transport policies for Asia shows that transport actions featured in the NDCs account for only around 10% of the total climate mitigation and adaptation measures for transport set by countries in the region. Ensured policy alignment through inter-ministry and cross-sectoral collaboration can enable a higher degree of actions and better implementation of the NDC.

🔎 UNESCAP-HVT policy brief on this topic
🔎 This can be a feedback loop to Secure an enabling policy environment

- **Establish upstream, midstream and downstream support with partners.** Long-term engagement between countries and partners to address climate change is necessary to develop impactful projects. This engagement can help strengthen the policy and institutional environment and enable the design of comprehensive, multi-faceted transport projects. Individual transport projects tend to attract less climate finance than bigger projects that cover several modes of transport and areas of activity.[69]
  🔎 A good practice is the Global Electric Mobility Program, a collaboration across 40 countries and cities by UNEP, the European Bank for Reconstruction and Development, the UN Industrial Development Organization (UNIDO), the Development Bank of Southern Africa and UNDP
  🔎 The Global Climate Fund's comprehensive e-mobility programme in Asia and e-mobility programme for sustainable cities in Latin America and the Caribbean

- **Align project design with the strategy, principles, and, most importantly, eligibility requirements** of specific climate finance funds. This will be useful in understanding each respective fund's requirements and the necessary technical knowledge when preparing the project proposal.
  🔎 Check out the overview of climate funds in Appendix 4. Climate finance mechanism profiles

- **Strengthen low carbon transport projects by integrating adaptation and resilience components**. Adapting to a changing climate and extreme weather events is essential to protect assets and ensure long-term functionality. Every project should be designed to be climate-proof.
  🔎 HVT Policy guide: Climate-resilient transport
  🔎 Guide for transport industry
  🔎 Adaptation Community with resources and tools

- **Scale already proven technologies** using financing approaches that are readily available, known to work and already being deployed at scale.[70] Replicating successful climate finance-related transport projects from other regions and adjusting it to your regional context can work well.
  🔎 Explore the project portfolios of the different funds, such as the Global Climate Fund's transport portfolio.

Ensure a robust project preparation

- **Assess potential social, political and economic constraints during project planning.** Develop tailored strategies to mitigate these challenges, such as stakeholder engagement plans, risk alleviation plans or economic impact assessments.

- **Involve project beneficiaries, including under-represented populations, in the early stages of the project design.** Sustainable transport projects generate considerable benefits for society as a whole. Project sponsors should look beyond the direct beneficiaries and involve other stakeholders that may benefit from sustainable transport investment.
  🔎 International Institute for Sustainable Development (IISD) Case Study on Sustainable Infrastructure in Indonesia
  🔎 SLOCAT-TUMI Evolving the Economic Appraisals for Land Transport Investments

- **Prioritise proper planning and close monitoring of the implementation of all relevant activities and indicators identified at the initial award appraisal report.** This will be central to identifying issues, such as governments' limited experience in implementing projects, lack of political will, limited understanding of the funder's sustainability frameworks, procurement delays and late commencement of certain operations.

Three steps for determining whether an intervention is climate change relevant[71]

Before considering climate financing, the relevance of a project for climate change mitigation and/or adaptation can be quickly assessed through the following questions. These very basic, high-level questions allow stakeholders to understand the key features that a climate finance project should consider in advance.

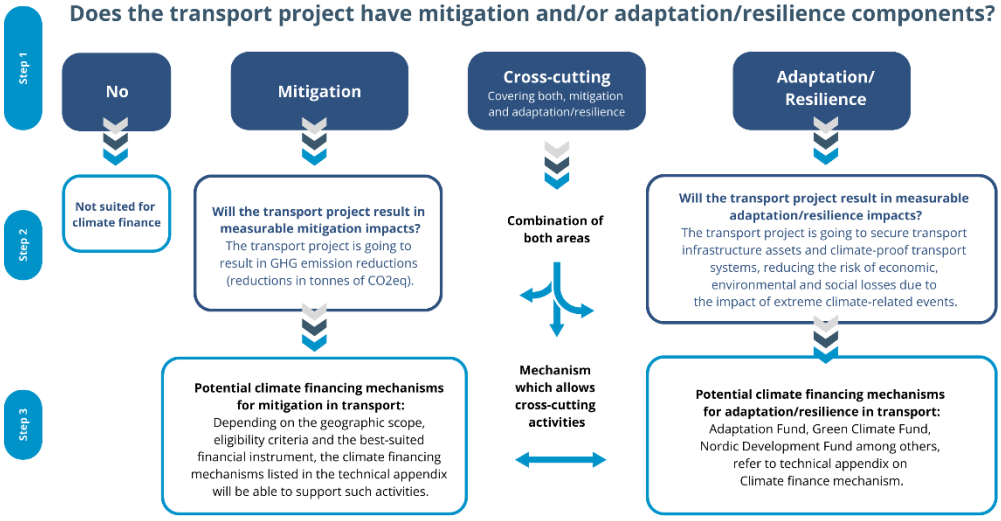


Figure 6: Approach to determine the climate change relevance of transport activity

🔎 Resources in support of Step 4 on project preparation

- The Project Preparation Facilities Network developed a Project Preparation Checklist to highlight information needs and any gaps in the project planning and preparation process.
- The NDC Partnership Climate Funds Explorer is a searchable database of open climate funds and related support for countries' mitigation and adaptation activities. The website also features other resources such as a good practice database and a climate toolbox, among others.
- The Practical Guide to Enhance Access to Climate Finance by the Commonwealth Secretariat is a training resource to help enhance the knowledge and capabilities of member countries to access climate finance, based on in-country experiences and examples from the Commonwealth Climate Finance Access Hub.
- This analysis of the vital role of project preparation to unlock finance for city projects features five case studies to showcase the role of project preparation facilities.

- The Regional Platforms for Climate Projects initiative identifies what it takes to successfully secure financing based on regional forums, illustrative project case studies, and matchmaking sessions between project owners and investors.
- The European Bank for Reconstruction and Development report on Effective policy options for green cities prescribes financial mechanisms and policy options that cities can adopt to achieve fiscal sustainability, through city case studies showcasing integrated urban mobility, integrated multi-modal transport, incentives to use public and active transport, pedestrianisation, car-free zones, etc.

5 Actions on sustainable, low carbon transport

Among the interconnected challenges to accessing climate finance, the opportunity lies in finding solutions for systemic transformation that cut across transport, sustainability and climate action. Applying "Avoid-Shift-Improve" (ASI) measures across passenger and freight transport through integrated, inter-modal and multi-dimensional approaches remains critical to deliver such cross-cutting solutions to improve access to climate finance in transport (see Figure 7).

The ASI framework has been central to transport decarbonisation and sustainability efforts for more than a decade. It calls for transport and mobility systems that, **while guaranteeing access to transport and mobility:**

- ***Avoid*** unnecessary motorised trips based on proximity and accessibility;
- ***Shift*** to less carbon-intensive modes – that is, from private vehicles to public transport, shared mobility, walking and cycling, water-based freight, electrified road-rail freight and cargo bikes for last-mile deliveries, among others; and
- ***Improve*** vehicle design, energy efficiency and clean energy sources for different types of freight and passenger vehicles.

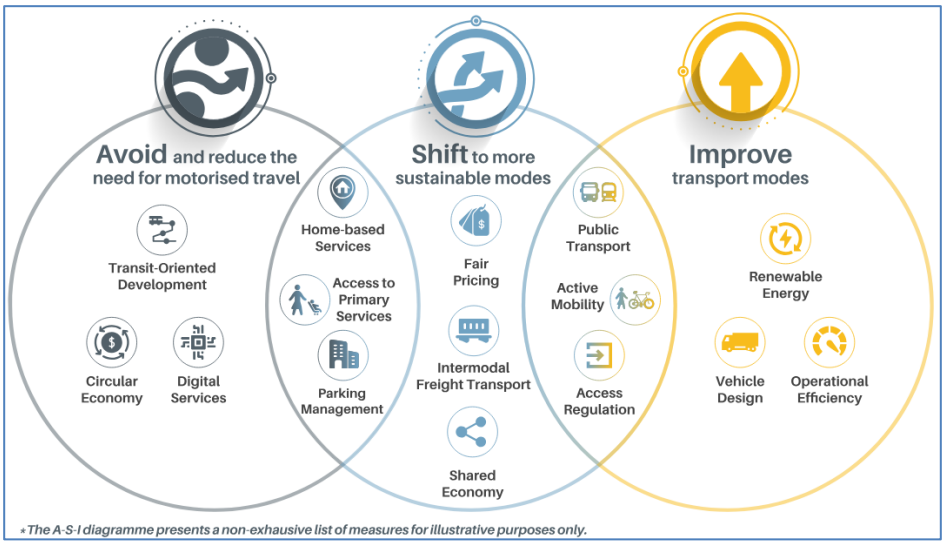


Figure 7: Avoid-Shift-Improve framework

These actions on sustainable, low carbon transport, captured in a solutions grid (see Table 8)[72], demonstrate how access to climate finance, institutional frameworks, technology advancements, and knowledge and information can be enhanced through the lens of the A-S-I framework.

Table 8: Solutions grid for climate finance in transport

	Tap into climate finance	Ensure institutional frameworks	Advance technologies	Foster knowledge and information
Avoid the need for motorised travel	• Phase out inefficient fossil fuel subsidies • Leverage carbon market mechanisms • Implement emission trading schemes covering transport • Remove fossil fuel-based finance structures • Pursue integrated planning, operations and finance • Implement pricing mechanisms in support of sustainable, low carbon transport	• Implement long-term strategies (goals and measures laid out until 2040/50) • Emphasise multi-stakeholder approaches in planning frameworks (NUMPs, SUMPs) • Adopt active mobility plans • Ensure co-ordination of ministries and sectors • Conduct comprehensive economic appraisals • Draft or revise national adaptation plans	• Secure access to high-speed internet • Support teleworking, work-from-home policies or regional distribution of offices • Support technologies and services that avoid commuting and travel • Implement early disaster and weather warning systems for transport services and networks	• Identify domestic information gaps • Conduct research on global case studies • Set up statistical institutes • Broaden assessments (towards equity, access) • Prepare emergency and disaster plans for operators, services and citizens
Shift to more environmentally friendly modes	• Introduce subsidy structure reforms in support of public transport • Secure fit-for-purpose financing tools • Ensure infrastructure planning with a people-centred approach • Implement CO_2-performance-based taxation • Implement fuel taxes • Introduce air quality	• Prioritise sustainable modes in institutional frameworks • Pursue transit-oriented development, potentially together with land value capture tools • Design and construct compact cities • Create conducive rail and inland waterways freight frameworks • Incentivise transport ministries to work with valuable counterparts (environment	• Shift to public transport through new technologies, new systems and new services • Shift to rail and inland water transport for freight through new technologies and new systems • Implement import levies for fuel-efficient and zero-emission vehicles • Deploy electrified collective transport (mini-buses and regular buses) • Adopt innovative service models (shared fleets)	• Adopt standards for measurement, evaluation and verification • Provide technical assistance • Ensure better data collection and analysis • Support academic research on sustainable transport • Collect data on informal transport services

	improvement policies • Integrate informal transport services (for people and goods) into planning • Implement mobility funds	ministries, multilateral development banks, etc.) • Differentiate road tolls (focusing on private vehicle use) on the basis of emissions of CO_2 or air pollutants • Design standards for climate-proof all-weather infrastructure	• Build resilient infrastructure systems	• Implement a notification system about safety issues for transport users and operators
Improve the efficiency of transport modes	• Create an enabling environment for private finance and private company participation • Incorporate transport activities in NDCs and Long-Term Strategies	• Phase out sales of vehicles with internal combustion engines • Gradually replace existing vehicle fleets with cleaner vehicles	• Support pilot projects and the adoption of new technologies (such as Intelligent Transport Systems, vehicle-to-grid systems, smart charging networks, etc.) • Incentivise the domestic production of electric vehicles and their related components • Adopt innovative business models for electric vehicles and their infrastructure • Develop and deploy electric vehicle charging infrastructure • Oversee the monitoring and evaluation of weather impacts on transport	• Make use of benchmarking tools • Support research and development

🔎 **Resources in support of implementing the Avoid-Shift-Improve framework**

- World Bank Guidance note on systematic, practical and comprehensive approaches to dealing with the problems of urban transport
- Low Emission Transport Sectoral Guide, which provides ASI-based, mutually reinforcing pathways for meeting the demand for mobility in developing countries while decoupling it from carbon emissions growth
- SLOCAT's Avoid-Shift-Improve Refocusing
- Infographic on Sustainable Urban Transport: Avoid-Shift-Improve (ASI), featuring ASI planning, regulatory, economic, information and investment instruments, and some application examples
- World Bank report on decarbonising urban transport for development, highlighting decarbonisation measures within the ASI framework

Appendices

The content on the following pages provides additional information to ease the understanding of climate finance for transport.

Appendix 1. Further resources

Working Paper on Access to Climate Finance in Low- and Middle-Income Countries: 14 Case Studies in the Transport Sector

This working paper explores the international climate finance landscape, emphasising financial opportunities for the transport sector and its sub-sectors. Drawing on several publicly available databases, it includes a review of the existing UNFCCC and non-UNFCCC climate finance windows and how countries, particularly LMICs in Africa, South Asia, and Latin America and the Caribbean, access the range of financial instruments offered by multilateral development banks and climate funds, donor governments and private investors. Read more.

New Climate Finance for Transportation – Online Course

This course examines case studies globally to understand how to access climate finance for transport. It reviews various climate finance options and how countries in Africa, South Asia, and Latin America and the Caribbean use financial resources from multilateral development banks, climate funds, donor governments and private investors. The course also highlights key lessons for securing funding for low carbon transport projects. Access the training here.

Stakeholder insights

This policy guide is based on stakeholder insights collected via a survey and through workshop consultations:

- A survey on climate finance in transport was conducted and received 19 responses from experts including policy makers, transport practitioners and multilateral development bank representatives. Experts highlighted financial, institutional, informational and technological barriers to accessing climate finance for sustainable transport projects in LMICs. They also identified key components for developing bankable projects and assessed the role of international financial institutions in improving access to climate finance. Read more.

- As part of the project, five virtual and in-person multi-stakeholder convenings, workshops and roundtables were held between January and June 2024. These events were designed to foster dialogue among public, private and development stakeholders and to contribute valuable insights to the case studies and research findings. The summary focuses on the solutions and lessons learned through the in-person workshops. Read more.

Climate finance mechanism profiles

A set of profiles of climate finance sources relevant to transport is accessible to LMICs in South Asia and Africa, outlining the key eligibility requirements and tools to support application. The information is compiled from the NDC Partnership's Climate Funds Explorer and WRI's Funding Eligibility Catalogue. Read more.

Overview of Project Preparation Facilities

This project has developed Project Preparation Facilities (PPFs), which can support transport sector project sponsors in low- and middle-income countries in the preparation of individual projects. The overview provides basic information about these PPFs and it is further complemented by the digital toolkit. Read more.

Other resources

Evolving the Economic Appraisals for Land Transport Investments

A policy paper developed by SLOCAT and the Transformative Urban Mobility Initiative (TUMI) aims to reveal the structural issues in economic appraisals for transport that hinder large-scale investments in public transport, walking and cycling and to explore solutions to reverse these trends. Read more.

Transport Decarbonisation Index

The project's main objective is to assist LMICs in Africa and South Asia in reducing greenhouse gas emissions in surface transport by providing a diagnostic toolkit called the Transport Decarbonisation Index (TDI). The TDI assesses a country's preparedness towards achieving net zero emissions by 2050, enabling comparisons with other nations and tracking long-term progress. Read more.

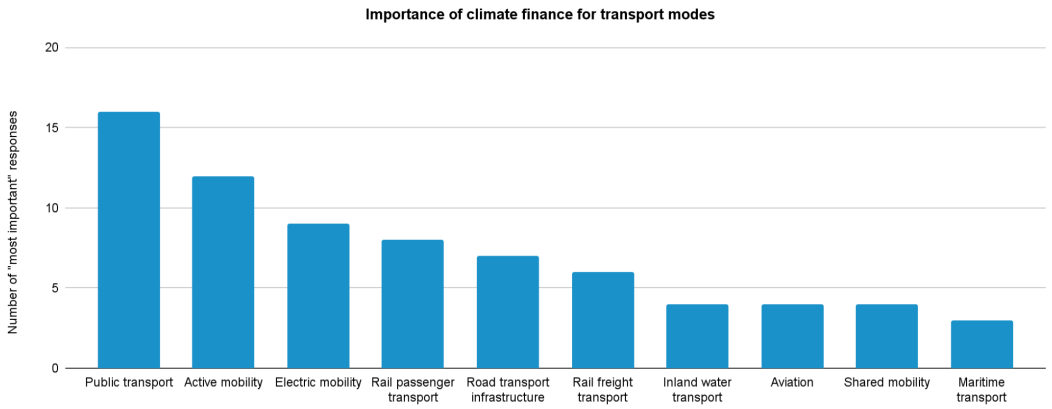
Appendix 2. Stakeholder survey insights

As part of the policy guide, a survey was shared with relevant stakeholders. The questions and answers below are based on a preliminary set of barriers and solutions, but the content has evolved since the initial iteration.

The stakeholders included climate finance practitioners, policy makers, transport practitioners, representatives from multilateral development banks, NGO representatives and others. The list was identified by SLOCAT and WRI through their partnership networks and list of experts. A total of 19 stakeholders submitted their answers. The respondents came from eight different countries: Brazil, Germany, India, Kenya, the Philippines, the United Kingdom, the United States and Viet Nam. Seven of them are LMICs, and Kenya was the country most represented. The questionnaire was also closely linked to the stakeholder workshops in Kenya, India and Viet Nam. Notably, the ranking results from the survey may be influenced by the countries, context and development priorities of survey respondents.

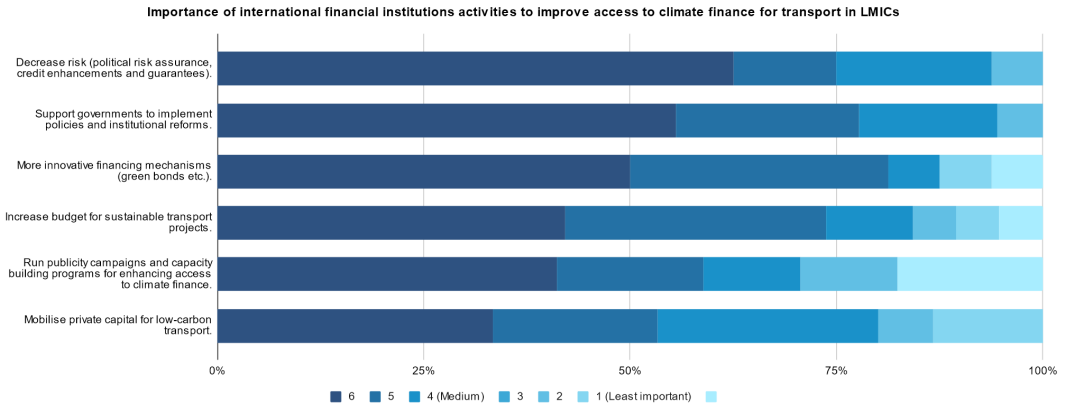
Which transport modes should be prioritised by climate finance?

According to the survey participants, public transport is seen as the most important transport mode for climate finance. Active mobility (walking and cycling), e-mobility, and rail passenger transport also ranked highly, reflecting a significant interest in sustainable and efficient transport options. Maritime transport and aviation received fewer “most important” ratings, suggesting that they are perceived as less critical in the context of climate finance priorities.



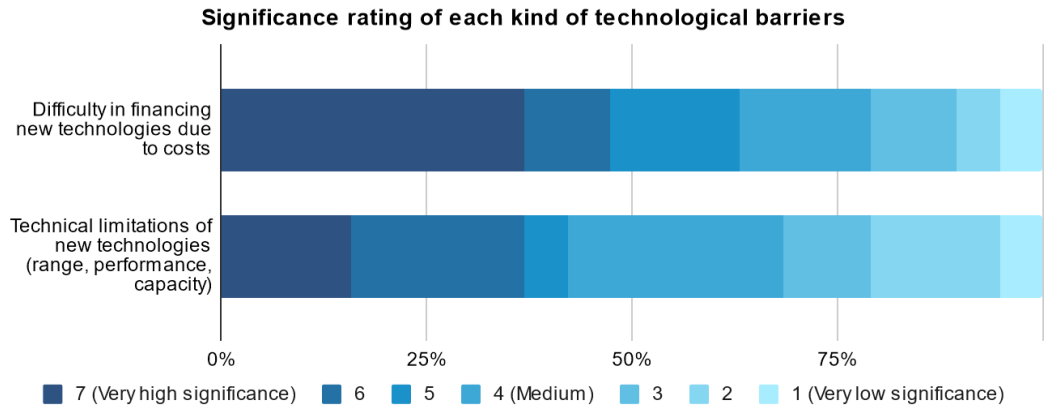
What are the most important activities by international financial institutions to improve access to climate finance for transport in LMICs?

The survey results indicate that the most important strategy for enhancing access to climate finance is to “decrease risk through political risk assurance, credit enhancements and guarantees”, followed closely by “support governments to implement policies and institutional reforms” and more innovative financing mechanisms.



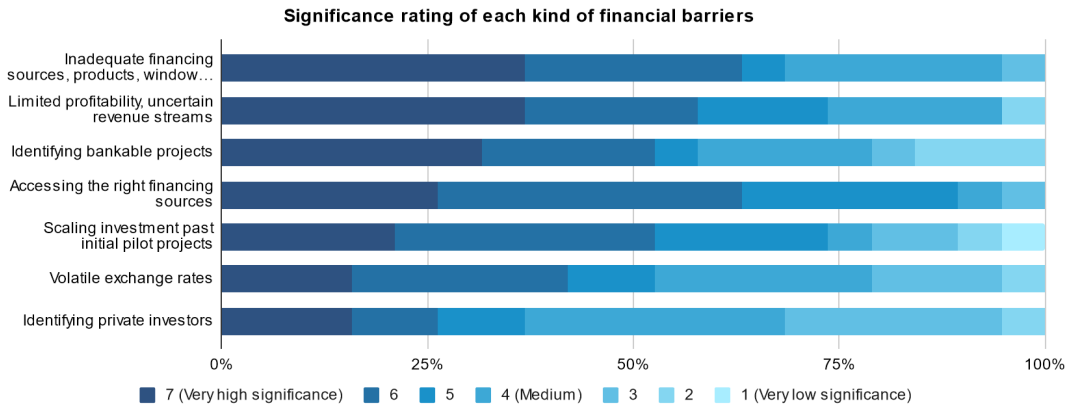
What are the key technological barriers?

The survey respondents point to the “difficulty in financing new technologies due to costs” as the largest barrier. Strictly seen, this issue is connected to finance, but it shows that costs associated with new technologies are a major burden for LMICs. In comparison, “technical limitations of new technologies (range, performance, capacity)” was also seen as a significant barrier, but with a broader range of ratings and fewer respondents assigning it the highest level of significance.



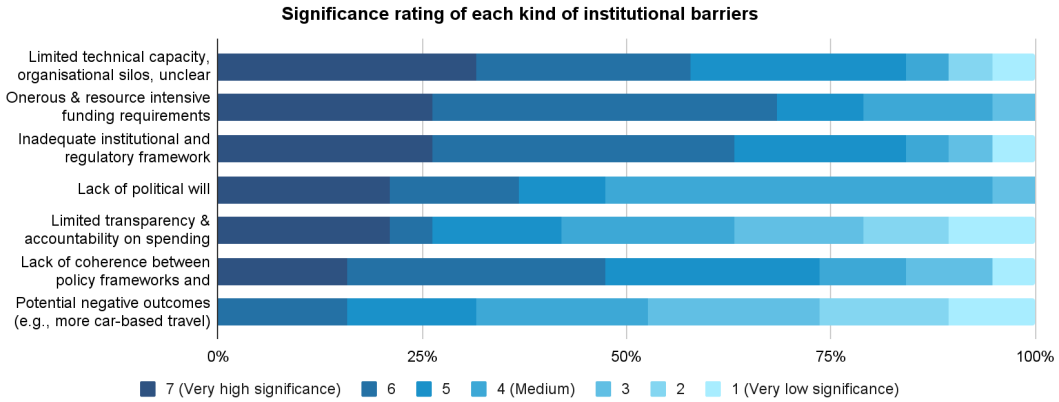
What are the key financial barriers?

The survey results show the perceived importance of the financial barriers mentioned above, according to respondents. Among the various barriers, “inadequate financing sources, products, windows, opportunities” and “limited profitability, uncertain revenue streams” were seen as the most significant barriers to accessing climate finance in the context of transport. Among the responses, 37.5% indicate to be of very high significance. These barriers are followed by “identifying bankable projects” and “accessing the right financing sources”, each also receiving high significance ratings. Concerns about “scaling investment past initial pilot projects” also rank high but with more varied significance ratings, indicating a moderate to high level of perceived importance. Finally, “identifying private investors” and “volatile exchange rates” are viewed as less significant, with a notable number of respondents rating its significance as medium or low.



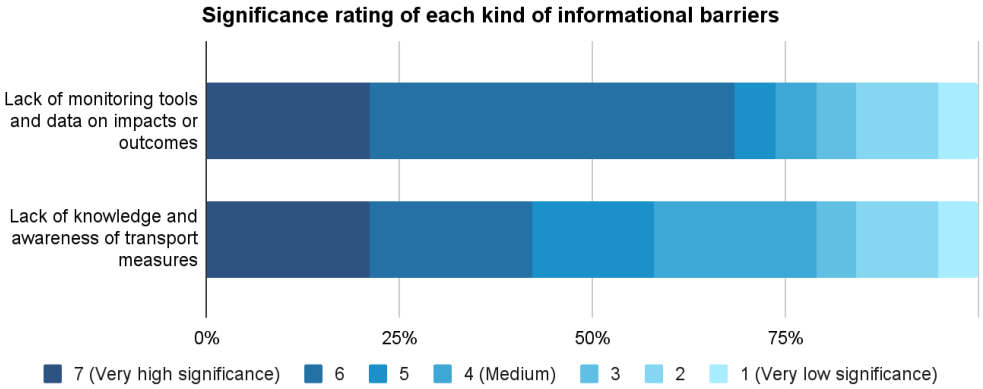
What are the key institutional barriers?

The analysis of the survey results on institutional barriers shows that the most significant barriers are “limited technical capacity, organisational silos, unclear mandates (recipient)”, “onerous & resource intensive funding requirements (funder)” and “inadequate institutional and regulatory framework”, with the majority of respondents rating them very high or high. “Lack of political will” and “limited transparency & accountability on spending” show varied significance ratings, suggesting moderate concern in these areas. “Lack of coherence between policy frameworks and budget frameworks” and “potential negative outcomes (e.g., more car-based travel)” are seen as less significant, with fewer respondents rating them very high.



What are the key informational barriers?

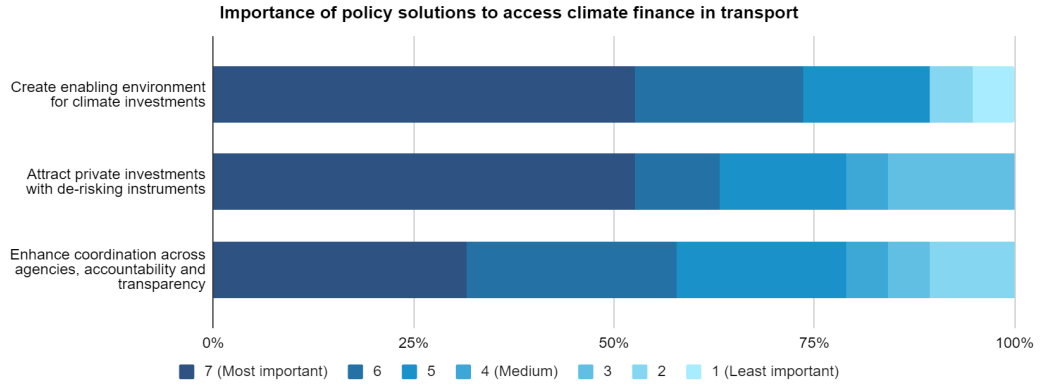
The results indicate that “lack of monitoring tools and data on impacts or outcomes” is perceived as a highly significant barrier, with 70% of respondents rating its significance as very high or high. In contrast, “lack of knowledge and awareness of transport measures” has a more varied perception of significance, with the ratings spread more evenly across the scale. While a notable portion of respondents also consider it highly



significant, the lower ratings suggest that it is not uniformly viewed as a major barrier.

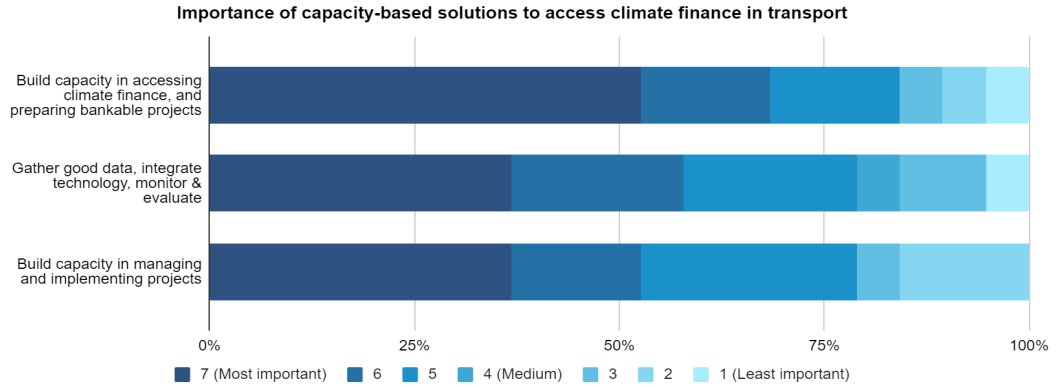
What are the most important policy solutions?

The survey results indicate that the most important policy solution for respondents is to "create an enabling environment for climate investments". This is closely followed by the need to "attract private investments with de-risking instruments". Overall, respondents see all the listed policy solutions as highly important.



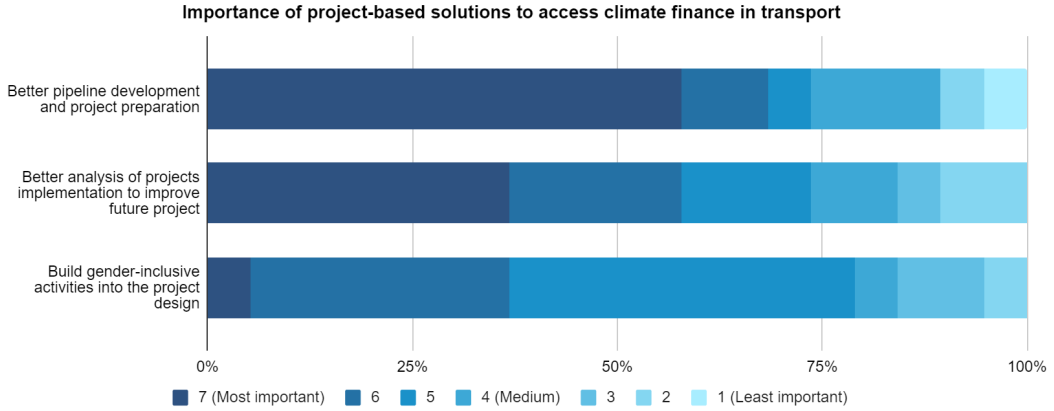
What are the key capacity-focused solutions?

The need to "build capacity in accessing climate finance and preparing bankable projects" is perceived as the most important solution by respondents, with 70% of them rating it as very important or most important. The two other solutions, to "build capacity in managing and implementing projects" and to "gather good data, integrate technology, monitor & evaluate" are both seen as important, with relatively close results.



What are the key project preparation-focused solutions?

According to respondents, the most important solution to access climate finance in transport is “better pipeline development and project preparation”, with more than 65% of respondents rating it as very important or most important. This is followed by “better analysis of project implementation to improve future projects”. Very few respondents see the need to “build gender-inclusive activities into the project design” as the most important project-based solution.



Appendix 3. Climate finance workshop consultations

As part of the ACF project Access to Climate Finance for Transport in Low- and Middle-Income Countries, we facilitated five virtual and in-person multi-stakeholder convenings, workshops and roundtables between January and June 2024. These events were designed to foster dialogue among public, private and development stakeholders and to contribute valuable insights to the case studies and research findings. General information about the workshops can be found in **Appendix D: Expert consultations** of the working paper.[73] Here is a synthesis of the key findings in support of solutions and lessons learned.

The consultations included the following:

1) Virtual international stakeholder consultation on 20 January
2) In-person workshop in Nairobi, Kenya on 29 May
3) In-person workshop in Hanoi, Viet Nam on 17-19 June
4) In-person workshop in Ho Chi Minh City, Viet Nam on 20 June
5) Virtual workshop with Indian stakeholders on 24 June

Below are the solutions and lessons learned from the three in-person workshops.

In-person workshop in Nairobi, Kenya on 29 May

The workshop facilitated the consultation of 25 stakeholders involved in financing and transport projects in Kenya. The main interest of national stakeholders was the development of the electric vehicle sector. Solutions and lessons learned:

- Emphasis on multi-stakeholder engagement to break down silos and on fostering collaboration across sectors and stakeholders (government, industry and financing institutions).
- Importance of packaging and institutional frameworks by developing a supportive legal framework for electric vehicle deployment. Packaging different demands and needs, e.g., power generation for electric vehicles, is seen as a good approach. Partnerships among infrastructure and energy providers will be enabled through this approach.
- In the context of LMICs, a supportive policy framework around the non-motorised transport policy added value to ensuring accessible low carbon transport.
- Capacity building efforts, including training programmes, have been effective in preparing stakeholders for the transition to e-mobility.
- Reforms and changes to practices by domestic financial institutions supported innovative projects, even with small volumes.
- The role of international collaboration and funding facilitate the transition to e-mobility through funding and knowledge sharing. Lessons were learned on leasing options and pooled finance from the India e-bus example.
- Awareness campaigns and pilot programmes engaging public transport operators and financial institutions have been instrumental in demonstrating the viability and bankability of e-mobility projects.

- Local manufacturing was recognised to ensure job creation, foster sustainable economic development and reduce dependency on imports.

In-person workshop in Hanoi, Viet Nam on 17-19 June

The focus of discussions was on the adoption of electric buses, which are a priority of the country. Potential solutions for successful climate finance mobilisation in transport projects:

- Securing favourable financing terms.
- Adopting new regulations and standards for low carbon transport technology.
- Using blended finance structures in low carbon transport projects.
- Capacity building and the role of international NGOs in fostering collaboration among financiers, government officials and transport businesses.

In-person workshop in Ho Chi Minh City, Viet Nam on 20 June

This workshop featured a diverse group of stakeholders including government agencies from Ho Chi Minh City, financial institutions and investment firms, development agencies, automobile associations, academia and private companies. Their key focus is on the electrification of buses, motorbikes and taxis.

After discussing pain points in accessing climate finance and collecting the main barriers for each of the stakeholder groups, the group identified the following successful approaches:

- Successful climate finance mobilisation by providing subsidies, introducing carbon credits and providing evidence of government investments' return on investment through comprehensive cost-benefit analysis.
- Public sector and private sector collaboration was employed in the development of charging standards with the UN Development Programme.
- Scaling up of activities can be ensured through technical assistance and guidelines on specific technical aspects, such as charging points and access to international funds.

Appendix 4. Climate finance mechanism profiles

A set of profiles of climate finance sources relevant to transport and accessible to LMICs in South Asia and Africa has been compiled, outlining the key eligibility requirements and tools to support application. The information is from the NDC Partnerships Climate Funds Explorer and from WRI's Financing Opportunity Catalogue.[74] For each climate finance fund, the main characteristics and requirements are listed based on information as of August 2024. The climate finance funds are presented in alphabetical order.

The overview covers:

- **Adaptation Fund**
- **Africa Climate Change Fund (ACCF)**
- **Asian Clean Energy Fund under the Clean Energy Financing Partnership Facility (CEFPF)**
- **Canadian Climate Fund for the Private Sector in Asia (I & II)**
- **Clean Technology Fund (CTF) under the Climate Investment Funds (CIF)**
- **Global Environment Facility (GEF)**
- **Green Bond Certification under the Climate Bonds Initiative**
- **Green Climate Fund (GCF)**
- **International Climate Initiative (IKI)**
- **InfraCo Africa – Sub Sahara Infrastructure Fund**
- **Mitigation Action Facility (NAMA)**
- **Nordic Development Fund (NDF)**
- **Transformative Carbon Asset Facility (TCAF)**

Adaptation Fund

The Adaptation Fund was created to finance adaptation projects and programmes in LMICs that are Non-Annex I country members to the Kyoto Protocol and that are particularly vulnerable to the negative impacts of climate change. Its investments focus mainly on enhancing community resilience through initiatives in food security, agriculture, water management and disaster risk reduction. The primary source of financing comes from the sale of Certified Emission Reductions (CERs). Two percent of the proceeds from CERs issued annually under Clean Development Mechanism (CDM) projects are allocated to the Adaptation Fund. Partial support is provided by contributions from governments and private donors.

Eligibility ● Non-Annex I country members of the Kyoto Protocol
Financial instruments ● Grants
Eligibility criteria ● Entities need to be accredited as an implementing entity. Implementing entities can be international (i.e., the World Bank), regional or national (i.e., a country's environment ministry). ● Only one national entity can be accredited per country. A list of currently accredited institutions can be found on the Adaptation Fund's website. ● The option exists of partnering with an institution that is already accredited. For example, implementing entities often partner with smaller local organisations to execute activities on the ground.
Relevant activities on transport ● Infrastructure development. ● Improving monitoring and forecasting, early-warning systems. ● Supporting capacity building, including institutional capacity, for preventive measures, planning, preparedness and management of disasters relating to climate change. ● Strengthening existing and, where needed, establishing new national and regional centres and information networks for rapid response to extreme weather events, using information technology as much as possible.

Africa Climate Change Fund (ACCF)

The Africa Climate Change Fund (ACCF) provides small grants to support the transition towards climate-resilient, low carbon development and to enhance access to climate finance. Over its first seven years, the ACCF has established itself as an effective climate financing mechanism, aiding climate finance preparatory activities and small-scale adaptation projects across Africa. It has supported projects implemented by the African Development Bank, regional initiatives, as well as efforts by civil society and public sector entities.

The ACCF seeks innovative and impactful proposals to help African countries transition to climate-resilient, low carbon development and improve access to climate finance. Priority is given to the following areas:

- Enabling direct access to climate finance (including developing high-quality, bankable projects aligned with African countries' Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), or related adaptation strategies);
- Identifying and strengthening national institutions to access the Green Climate Fund;
- Supporting small-scale or pilot adaptation initiatives that enhance community resilience.

Furthermore, proposals must align with the priorities of the African Development Bank and the development and climate-related objectives of the target country.

Eligibility
- African Development Bank Regional Member countries
- NGOs
- Regional institutions
- African funds
- Research institutions

Eligibility criteria
- African governments (including sub-national, local and municipal governments)
- African regional organisations (inter-governmental organisations, regional organisations from the public sector)
- UN agencies may be considered on a case-by case basis
- African Funds that are legally registered in an African country
- Non-governmental organisations and African research institutions registered in an African country and that have demonstrated credibility and track record

Financial instruments
Small grants: USD 250,000 to USD 1 million per grant

Requirements for co-financing
- Counterpart financing of at least 5% for external beneficiaries and 10% for Bank departments is strongly encouraged to demonstrate commitment and ownership by the project proponent.
- For external proponents, counterpart financing may be in the form of in-kind contributions.

Relevant activities on transport

- Urban transport modal change (e.g., urban public transport)
- Transport-oriented urban development (e.g., walking community development)
- Inter-urban transport (railway and waterway)
- Infrastructure for low carbon transport (e.g., charging stations for electric vehicles, hydrogen or biofuel fuelling stations).[75]

Asian Clean Energy Fund under the Clean Energy Financing Partnership Facility (CEFPF)[76]

The fund supports efforts of developing member countries towards reducing greenhouse gases through the use of renewable energy and energy efficiency technologies.

Eligibility

- Asian Development Bank (ADB) member countries that are LMICs

Eligibility criteria

- National governments of ADB developing member countries
- Priority is given to activities that will be implemented in co-operation with Japanese aid agencies, as part of the first pillar of the initiative entitled Enhanced Sustainable Development for Asia.

In addition, project proposals should:

- Be consistent with the country partnership strategy and results framework
- Be consistent with the objective of the ADB's Energy Efficiency Initiative
- Introduce innovative solutions
- Adopt a participatory approach
- Have high demonstration value in the sector
- Have good potential for replication and scalability in the country and/or region.

Financial instruments

- Grants
- In-kind contributions

Relevant activities on transport:[77]

- Any transport activities that:
  - Deploy new clean energy technology
  - Lower the barriers to adopting clean energy technologies
  - Increase access to modern forms of clean and efficient energy for the poor
  - Support technical capacity programmes for clean energy
  - Relate to biomass, biofuel, biogas

Canadian Climate Fund for the Private Sector in Asia (I & II)

The Canadian Climate Fund for the Private Sector in Asia II was established to encourage greater private sector involvement in climate change mitigation and adaptation in LMICs and upper-middle income small island developing states across Asia and the Pacific. The fund also aims to promote gender equality and the empowerment of women and girls within the projects it supports.[78]

Eligibility

- Most Asian Development Bank member countries that are LMICs

Eligibility criteria

The fund will invest in a combination of private sector-led climate mitigation and adaptation activities. Projects supported by the fund will contribute to increased gender-responsive economic development in eligible countries and will integrate gender equality outputs.

To the extent applicable, projects supported by the fund will maximise development benefits. These may include efforts to:

- Invigorate local economies
- Increase the number of incremental jobs in communities
- Benefit consumers
- Improve health benefits through reduced pollution
- Improve countries' competitiveness and sustainable development initiatives, including economic diversification.

Financial instruments

- Concessional loans

Relevant activities on transport[79]

- The fund will invest in a combination of private sector-led climate mitigation and adaptation activities focusing on sustainable transport.
- Transport-relevant activities could focus on:
  - Sustainable transport
  - Land-use management
  - Resilient infrastructure
  - Coastal protection
  - Disaster risk management
  - Renewable energy and energy efficiency
  - Cleaner fuel

Clean Technology Fund (CTF) under the Climate Investment Funds (CIF)

The Clean Technology Fund (CTF) is one of two multi-donor trust funds within the broader Climate Investment Funds (CIF). The CTF offers emerging economies scaled-up financing for the demonstration, deployment and transfer of low carbon technologies that have substantial potential for long-term reductions in greenhouse gas emissions.

As the only mitigation-focused multilateral fund built around the operational model of multilateral development banks, the CTF's collective approach is designed to leverage the key strengths of these institutions, including their capacity to attract substantial finance from both public and private sources. Notable features of the CTF include its ability to provide resources at scale, a strong focus on private sector engagement, the use of innovative financial instruments and a flexible, programmatic approach.[80] Transport represents 10% of the USD 5.5 billion allocated to the CTF Portfolio.[81]

Eligibility

- Recipient countries need to meet Official Development Assistance eligibility criteria according to the Organisation for Economic Co-operation's (OECD) Development Assistance Committee (DAC) guidelines.
- Have an active multilateral development bank country programme (for this purpose, an "active" programme means that such a bank has a lending programme and/or ongoing policy dialogue with the country).

Eligibility criteria

- Sectoral, sub-national, regional and national entities seeking funding for large-scale projects.
- Dedicated private sector programmes (DPSP) provide dedicated funding windows of the CTF that finance large-scale private sector projects in clean technology.

The CTF uses the following assessment criteria:

- Potential for greenhouse gas emissions savings
- Cost-effectiveness
- Demonstration potential at scale
- Development impact
- Implementation potential
- Additional costs and risk premium.

Financial instruments

- Grants
- Contingent grants
- Concessional loans
- Equity
- Guarantees

Requirements for co-financing

CTF investments should leverage additional financial resources, including from the private sector where feasible. Co-financing from the CTF may be provided through a variety of financing instruments utilised by the multilateral development banks for investment and development policy lending.

Transport-related activities: Rapid transit, efficient vehicles, modal shifts

Global Environment Facility (GEF)

The Global Environment Facility (GEF) is a multilateral family of funds, covering USD 25 billion in financing while mobilising USD 138 billion for country-driven projects.[82] The GEF supported 80 sustainable transport projects between 1998 and 2018 (GEF-2 to GEF-6), with USD 501 million provided by the GEF and USD 8.4 billion from partner co-financing. The projects focused on urban transport and activities that facilitated low carbon technologies, enhanced the efficiency of public transport and freight transport, promoted walking and cycling, and increased transport energy efficiency.[83]

Eligibility

- Countries that have ratified the UNFCCC and conform with the eligibility criteria decided by the Conference of the Parties of the UNFCCC.

Eligibility criteria

- National priority: The project must be driven by the country (rather than by an external partner) and be consistent with national priorities that support sustainable development. The GEF's funds are available to projects that are endorsed by governments in eligible countries.
- Incremental cost: The project must seek GEF financing only for the agreed incremental costs on measures to achieve global environmental benefits.
- Participation: The project must involve all relevant stakeholders in project design and implementation, following the Policy on Stakeholder Engagement and the respective guidelines. Find them here.
- Deployment of funds through a Partner Agency: to deploy its resources, the GEF works with Partners Agencies (GEF Implementing Agencies), which, for most activities, are the only institutions that can access GEF funding directly. However, countries can access funding from the GEF for some enabling activities such as completing Biennial Update Reports (BURs) and National Communications. GEF Partner Agencies comply with GEF's Fiduciary Standards and Environment and Social Safeguard Policies. There are currently 18 GEF Agencies including UN agencies, multilateral development banks, international financial institutions and NGOs.

Financial instruments

- Grants
- Concessional loans
- Equity
- Guarantees

Requirements for co-financing

- Public and private, domestic and international co-financing possible
- Guidelines specify the requirements

Transport-related activities

- Technology solutions for low carbon and energy-efficient transport technologies.
- Urban transport systems: Projects enhancing public transit and reducing emissions through improved mobility solutions.
- Integrated urban systems: Emphasis on comprehensive urban planning that aligns transport with sustainable city strategies.

- The most relevant funding opportunities for transport within the GEF are:
  - Climate Change Mitigation (CCM) Focal Area – Grant Funds, allocating between USD 1 million and USD 47 million
  - Net-Zero Nature Positive Accelerator (USD 130 million)
  - Greening Transportation Infrastructure Development (USD 129 million)
  - Non-Grant Instruments / Blended Finance Program with USD 15 million per project.

Green Bond Certification under the Climate Bonds Initiative

The Climate Bonds Standard and Certification Scheme is a labelling system for entities, assets and debt instruments. Rigorous scientific criteria ensure that certified investments in climate mitigation align with the 1.5°C warming limit set by the Paris Agreement. The scheme is used globally by bond issuers, governments, investors and financial markets to prioritise investments that genuinely contribute to addressing climate change.[84]

Eligibility
Any entities

Eligibility criteria
The criteria for low carbon transport are outlined in the sector criteria.
Automatically eligible:

- Most fully electric, hydrogen, or other zero-direct emissions transport – including private vehicles, passenger trains, urban subway/metro, trams, and their directly supporting infrastructure
- Electric charging and hydrogen fuelling infrastructure
- Public walking and bicycle infrastructure
- Some types of manufacturing facilities for components of the above.

Eligible as long as certain thresholds and other considerations are met (e.g., CO_2 thresholds):

- Zero-direct emissions (such as electric or hydrogen) freight rail, for which <25% of its freight is fossil fuels
- Hybrid private vehicles (not including trucks)
- Fossil-fuelled public transport – buses, trains
- Technology and infrastructure that allows for car sharing schemes, road charging systems, better use of public transport, and other such systems.

Transport-related activities

- Automatically eligible:
  - Most fully electric, hydrogen or other zero-direct emissions transport – including private vehicles, passenger trains, urban subway/metro, trams, and their directly supporting infrastructure
  - Electric charging and hydrogen fuelling infrastructure
  - Public walking and bicycle infrastructure
  - Some types of manufacturing facilities for components of the above.
- Eligible as long as certain thresholds and other considerations are met (e.g., CO_2 thresholds):

- Zero-direct emissions (such as electric or hydrogen) freight rail, for which <25% of its freight is fossil fuels
- Hybrid private vehicles (not including trucks)
- Fossil-fuelled public transport – buses, trains
- Technology and infrastructure that allows for car sharing schemes, road charging systems, better use of public transport, and other such systems.

Green Climate Fund (GCF)

The GCF is the world's largest climate fund, mandated to support low- and middle-income countries raise and realise their climate ambitions towards low-emissions, climate-resilient pathways. The GCF's mandate is to split resources equally between mitigation and adaptation in grant equivalent. Also, at least half of its adaptation resources must be invested in the most climate-vulnerable countries (small island developing states, least-developed countries and African countries). This way the GCF aims to leverage synergies and minimise potential trade-offs between adaptation and mitigation.

As of June 2024, the GCF has supported 21 transport projects with total GCF financing of USD 1.1 billion.[85] Since January 2024, the GCF has applied the "GCF-2 investment framework"[86] to projects. The GCF has laid out transport activities through a sectoral guide.[87]

Eligibility
Low- and middle-income countries participating in the UNFCCC

Eligibility criteria
Entities need to be accredited to the GCF as an "Accredited Entity". Alternatively, an entity needs to partner with an organisation that is already accredited.
GCF's high-level investment criteria are:[88]

1) **Impact potential** – potential to contribute to achievement of Fund's objectives and result areas
2) **Paradigm shift potential** – catalyse long-term impact beyond a one-off investment
3) **Sustainable development potential** – wider economic, environmental, social (gender), health benefits
4) **Recipient needs** – degree to which the project fits within the beneficiary country's existing policies, strategies and institutions
5) **Country ownership** – economic (and financial) soundness, as well as cost-effectiveness and leveraging of co-financing
6) **Efficiency and effectiveness** – vulnerability and financing needs of beneficiary country and extent to which the project targets vulnerable groups[89].

Tools and resources to support applications:[90]

- GCF Simplified Approval Process
- Project cycle: 10 stages of the GCF project cycle
- GCF Programming Manual
- GCF Appraisal Guidance
- Sectoral guides – transport guidance (see above)
- Investment criteria

Financial instruments ● Grants ● Contingent grants ● Concessional loans ● Equity ● Results-based finance ● Guarantees
Requirements for co-financing Not required but beneficial as the GCF takes co-financing as a criteria for potential efficiency and effectiveness of the proposed project.
Transport-related activities[91] ● Policies for accelerated shift to high-occupancy low-emission public transport ● Transit-oriented and mobility-based transport policy and planning ● Electric vehicles and e-mobility ● Low carbon transport and non-motorised transport ● Charging infrastructures and storage solutions for electric vehicle deployment ● New-generation integrated renewable energy-to-zero emission fuel for not-yet electrifiable uses.

International Climate Initiative (IKI)

The International Climate Initiative (IKI) is a cornerstone of Germany's climate financing and funding commitments under the UN Convention on Biological Diversity. The Initiative focuses on climate change mitigation, adaptation to climate impacts and the protection of biological diversity. The IKI aims to:[92]

- Promote a climate-friendly economy by assisting partner countries in developing economic structures that prevent climate-damaging greenhouse gas emissions.
- Support climate change adaptation measures through national programmes in selected partner countries that are especially vulnerable to climate impacts.
- Finance measures for the preservation and sustainable use of carbon reservoirs, including efforts to reduce emissions from deforestation and degradation (REDD).

The IKI supports two main funding pillars: thematic and country-specific selection procedures. Both procedures use idea competitions to select innovative projects, ensuring the implementation of the best ideas and promoting a diverse range of implementing partners. The IKI also offers small- and medium-sized grants for small-scale initiatives.

Eligibility criteria
The IKI Thematic selection procedure is aimed at non-governmental organisations, commercial enterprises, universities and research institutions from Germany and abroad, implementing organisations in Germany, institutions in co-operation countries (including national implementing organisations accredited at international or multilateral organisations) as well as international intergovernmental organisations and institutions, such as development banks or UN organisations and programmes.

- IKI Small Grants are aimed at non-governmental and non-profit organisations in developing and emerging countries, as well as national funding institutions.
- IKI Medium Grants are intended to support non-governmental and other non-profit organisations based in Germany to realise projects in developing and emerging countries.

Financial instruments

- Grants

Transport-related activities
Mitigation activities related to:

- Developing policies and regulations to drive sustainable transport practices
- Promoting electric vehicles and public transit
- Sustainable solutions for international air, sea and freight.

InfraCo Africa – Sub Sahara Infrastructure Fund

InfraCo Africa aims to alleviate poverty by leveraging private sector expertise and financing to develop infrastructure projects in Sub-Saharan Africa's poorest countries. By reducing the risks and costs associated with early-stage project development, InfraCo Africa ensures that projects are developed to the highest standards, transforming them from initial concepts into financeable investment opportunities.[93]

Eligibility

- Countries in Sub-Saharan Africa

Eligibility criteria
InfraCo Africa is currently looking for new projects to invest in and support through early-stage development. Projects must:

- be within sub-Saharan Africa
- have the potential to be commercially viable (with our support)
- have a positive developmental impact on the communities they serve
- need InfraCo Africa to bring something additional, something that no other party can bring to the project
- be developed in accordance with the InfraCO Africa Operating Policies and Procedures.

Financial instruments

- Grants
- Equity

Requirements for co-financing

Not specified, but InfraCo's mandate is to mobilise and not displace private sector investment. So it will not participate in a project if all investments could be attracted from other private or development finance institution investors.
Transport-related activities[94] ● Transport infrastructure development ● Activities that provide market enabling logistics services ● Projects that create new trade opportunities ● Examples are: rural mobility, electric motorcycles and maritime transport

Mitigation Action Facility (NAMA)

The Mitigation Action Facility, an agile, grant-based multi-donor fund, drives sectoral decarbonisation. Evolving from the NAMA Facility in 2023, it has become the go-to platform for providing technical support and climate finance for ambitious mitigation projects aimed at decarbonising key sectors of the economy and society.[95]

It continues to fund ambitious climate change mitigation projects aimed at implementing NDCs and Long-Term Strategies essential for achieving the goals of the Paris Agreement. The Facility focuses primarily on three key sectors: energy, transport and industry. The Mitigation Action Facility selects innovative projects with the potential to catalyse sector-wide transformational change.

Detailed information on transport projects through NAMA can be found in the Transport NAMA Handbook.

Eligibility ● Development Assistance Committee (DAC) List of Overseas Development Assistance (ODA) recipients
Eligibility criteria Ministries to submit project concepts and outlines with an Applicant Support Partner (ASP), a legal entity or a partnership of legal entities and ASPs. Applicants and ASPs must fulfil certain requirements: ● Experience in the country of implementation (at least 3 years) ● Experience in the respective sector (at least 5 years) ● Experience with project development and/or project management (at least 5 projects of similar funding size as the Detailed Preparation Phase (DPP) funding requested in the Project Outline) ● Experience in developing investment / climate finance policies and/or programmes (at least 5 projects) ● Experience in working with the public sector (at least 3 years) ● Annual turnover of at least EUR 1 million over the last 3 years and 10% of the requested funding volume for the DPP ● Upon approval for the DPP, the Applicant/ASP shall provide annual budgets and supporting financial statements (preferably audit reports) of the last three years, evidence of internal and external control and reporting structures and, if applicable, information on its procurement and contract award procedures. Qualified Applicants/ASPs will be contracted by the Facility Grant

Agent for the DPP based on a specific eligibility check.
Financial instruments ● Grants ● Concessional loans
Transport-related activities Under the Mitigation Action Facility, mitigation actions/measures are focused on driving decarbonisation in priority sectors, including energy, transport and industry.

Nordic Development Fund (NDF)

The objective of the NDF's operations is to facilitate climate change investments in low-income and lower-middle income countries for both mitigation and adaptation activities. The NDF provides financing in collaboration with bilateral and multilateral development institutions through co-financing arrangements. The Fund's operations reflect the Nordic countries' priorities in climate change and development.[96]

The NDF supports the Nordic Climate Facility and the Energy and Environment Partnership Trust Fund (EEP Africa), which fund projects with the potential to combat climate change and reduce poverty in low-income and lower-middle income countries. NDF financing is primarily allocated for technical assistance and investment projects.

Eligibility Lower-income countries and countries in fragile situations, including small island developing states[97]
Eligibility criteria • Eligible areas for NDF financing include climate change mitigation and adaptation activities. • As the NDF is a co-financing institution, NDF financing normally constitutes a part of the whole project or programme financing. • The NDF-financed component of the co-financed project or programme should be in line with the NDF's mandate and eligibility criteria.
Financial instruments ● Grants ● Concessional loans ● Equity
Requirements for co-financing The NDF is a co-financing institution.
Transport-related activities The NDF provides financing to transport projects mitigating climate change through: • Improvement of energy efficiency • Promotion of added renewable energy capacity and efficient smart electricity grids • Fossil-free transport system

Transformative Carbon Asset Facility (TCAF)

The Transformative Carbon Asset Facility (TCAF) assists low- and middle-income countries in implementing their emission reduction plans by collaborating to create new classes of carbon assets linked to reduced greenhouse gas emissions, including those achieved through policy actions. The facility measures and compensates for emission reductions in large-scale programmes across various sectors, such as renewable energy, transport, energy efficiency, solid waste management and low carbon cities.[98]

There are two streams, domestic and international support:

- Domestic: The TCAF will support countries in implementing market-based carbon pricing and sectoral mitigation measures within their emission-intensive sectors. The facility will leverage public finance to create favourable conditions for private sector investment in low carbon technologies, provide models for efficient and cost-effective mitigation at both global and large scales, and achieve lasting transformational impact.
- International: The TCAF's initiatives will contribute to the international processes established in Paris for developing standards and agreements related to future carbon crediting instruments and the transfer of mitigation assets. The facility will test various methods for the transparent transfer of "mitigation outcomes" between parties, ensuring rigorous accounting and transparency to uphold the environmental integrity of the assets.

Eligibility ● Borrowing countries of the International Bank for Reconstruction and Development ● Borrowing countries of the International Development Association
Eligibility criteria This fund supports developing countries.
Financial instruments ● Contingent grants ● Results-based finance
Requirements for co-financing TCAF funding can be used to leverage private financing.
Transport-related activities: • Sustainable (urban) programme targeting low carbon city planning. • Multi-sectoral approaches to reduce the carbon footprint of buildings, transport, water and/or energy sectors within a jurisdiction.

Appendix 5. Project Preparation Facilities

This project has developed an overview of Project Preparation Facilities (PPFs), which can support transport sector project sponsors in low- and middle-income countries in the preparation of individual projects. The digital toolkit provides information on the name and description of the PPF, the PPF amount, eligible regions and countries, financial instrument type, steps to access the financing, climate objective (mitigation and/or adaptation), sectors and themes, type of recipient, contact information and the official websites.

An abridged version of the digital climate finance toolkit is presented in the table below.

Name	Description	PPF amount	Eligible regions	Financial instrument(s)	Sectors and themes
Africa50	Develops a pipeline of investment-ready projects. Since inception, Africa50 Project Development has catalysed USD 370 million in third-party equity and quasi-equity commitments and has originated and screened 121 opportunities.	Unavailable	Africa	Loans, grants, technical assistance	Energy, infrastructure
Asian Infrastructure Investment Bank Project Preparation Special Fund (PPSF)	Established in June 2016, the PPSF is a multi-donor facility created to provide technical assistance grants to support the preparation of high-quality bankable projects for Asian Infrastructure Investment Bank Members, especially less-developed Members. Project preparation activities supported by these grants are critical to improve project quality and to ensure economic, environmental, and social sustainability and implementation readiness.	Unavailable	Asia-Pacific	Grants	Infrastructure
Asian Development Bank Asia Pacific Project Preparation Facility (AP3F)	The USD 78 million AP3F is a multi-donor trust fund aiming to increase the level of infrastructure development and enhance the quality of infrastructure in Asia and the Pacific. The AP3F's primary objective is to help developing member country governments and their public sector agencies prepare and structure infrastructure projects with private sector participation, including privatisation and public-private partnership modalities, and bring them to the global market.	Unavailable	Asia-Pacific	Loans, grants, technical assistance	Infrastructure
C40 Cities Finance Facility (CFF)	The CFF is a UNFCCC award-winning project preparation facility that focuses on three components: preparing climate-relevant infrastructure projects for financial readiness, linking projects to finance, and replicating and upscaling projects, proven approaches and instruments. The CFF	Unavailable	Global	Grants, technical assistance	Infrastructure

	focuses on the sectors of mobility, renewable energy, waste management, and nature-based solutions, providing benefits including employment opportunities, improving citizens' health and social equity.				
Catalytic Climate Finance Facility (CC Facility)	The CC Facility is focused on scaling sustainable climate finance by providing market acceleration services to early-stage and market-ready blended financial vehicles in under-financed sectors in developing countries. It is a partnership between the Climate Policy Initiative and Convergence.	Up to USD 500,000	Developing countries	Grants	All
Cities Development Initiative for Asia (CDIA)	The CDIA is a multi-donor trust fund managed by the Asian Development Bank (ADB). The CDIA PPF helps secondary cities in Asia and the Pacific prepare bankable and sustainable infrastructure investments.	USD 250,000	Asia-Pacific	Grants	Cities: transport, water, waste management, energy
City Climate Finance Gap Fund (Gap Fund)	The Gap Fund was operationalised by the World Bank and the European Investment Bank in September 2020.The Fund is capitalised at EUR 55 million, with a target capitalisation of at least EUR 100 million and the potential to unlock an estimated EUR 4 billion in investments.	Unavailable	Global	Grants, technical assistance	Numerous, including sustainable urban mobility
Development Finance Corporation (DFC)	The DFC determines the technical assistance, feasibility study, or training work to be provided, and the grant recipient selects an entity with relevant expertise and experience that will perform that work. In addition, the programme provides technical assistance for certain development credit activities requested by other agencies by using a competitively selected pool of contractors.	Unavailable	Global	Grants, technical assistance	All
Global Infrastructure Facility (GIF)	The GIF offers a range of design, preparation, appraisal, structuring and transaction support products that assist client governments throughout all phases of the project cycle, from the earliest concept to financial closing. This support features project readiness assessment activity, project definition activity and project preparation structuring activity.	Unavailable	Global	Grants, technical assistance	Infrastructure
Green Climate Fund Project Preparation Facility (GCF-PPF)	The GCF provides financial and technical assistance for the preparation of project and programme funding proposals through the PPF. The PPF is especially designed to support Direct Access Entities for projects in the micro and small-sized category. However, all Accredited Entities are eligible to apply.	Up to USD 1.5 million	Global	Grants, technical assistance	All

InfraCo Africa	InfraCo Africa receives funding – through the Private Infrastructure Development Group's publicly funded trust – from governments in the UK (Foreign, Commonwealth & Development Office), the Netherlands (Directorate-General for International Cooperation) and Switzerland (State Secretariat for Economic Affairs). InfraCo Africa was established in 2004 and has since successfully developed 29 projects through to financial close, of which 5 have fully exited. InfraCo Africa has 12 projects under development, 8 projects under construction and 7 operational assets.	Unavailable	Africa	Loans, grants, technical assistance	Infrastructure, Energy, Transport
InfraCo Asia	InfraCo Asia provides the funding and expertise needed to develop early-stage, higher-risk infrastructure projects into viable investment opportunities in South and South East Asia. InfraCo Asia deploys funding and expertise to de-risk the early-stage development of socially responsible and sustainable infrastructure projects that make a lasting impact on people and economies, in alignment with the UN's SDGs.	Unavailable	Asia-Pacific	Loans, grants, technical assistance	Infrastructure, Energy, Transport
NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF)	The NEPAD-IPPF is a Multi-Donor Special Fund hosted by the African Development Bank. It was established to support African countries, regional economic communities, specialised agencies and related institutions by providing grant resources for: 1) preparing high-quality and viable regional/continental infrastructure projects that will attract financing from public and private sources; 2) developing a consensus and partnership for project implementation; and 3) promoting infrastructure projects and programmes that enhance regional integration and trade	Unavailable	Africa	Grants, technical assistance	Infrastructure, Transport
Private Infrastructure Development Group (PIDG)	PIDG Technical Assistance supports the PIDG companies through providing grants for technical assistance and viability gap funding where needed to support projects that they develop and finance.	USD 500,000 (USD 2-10 million in the case of co-development and joint venture partner)	Africa, Asia-Pacific	Grants, technical assistance	Infrastructure, Energy, Transport
Public-Private Infrastructure	The PPIAF accepts grant proposals that are in line with its mandate to support governments in creating and strengthening a sound enabling environment for private participation in infrastructure through: framing	USD 400,000	Global	Grants, technical assistance	Infrastructure

Advisory Facility (PPIAF)	infrastructure development strategies; designing and implementing policy, regulatory and institutional reforms; organising stakeholder consultation workshops; building government institutional capacity; and designing and implementing pioneering projects.				
Urban Environmental Infrastructure Fund (UEIF)	The UEIF supports the ADB's response to the huge unmet needs of the region for both basic and economic infrastructure, being a core business area of operations under the Strategy 2020.	Unavailable	Asia-Pacific	Grants, technical assistance	Infrastructure
Urban Project Finance Initiative (UPFI)	The UPFI supports project promoters in the Southern and Eastern Mediterranean regions and the Western Balkans, helping them prepare and finance ambitious urban development projects, which aim to create jobs, reduce poverty and upgrade the urban fabric.	Up to EUR 500,000	Eastern Europe, Middle East and North Africa	Grants, technical assistance	Infrastructure, water, energy, transport

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