GFDT

Global Facility to Decarbonize Transport

Annual Report 2023

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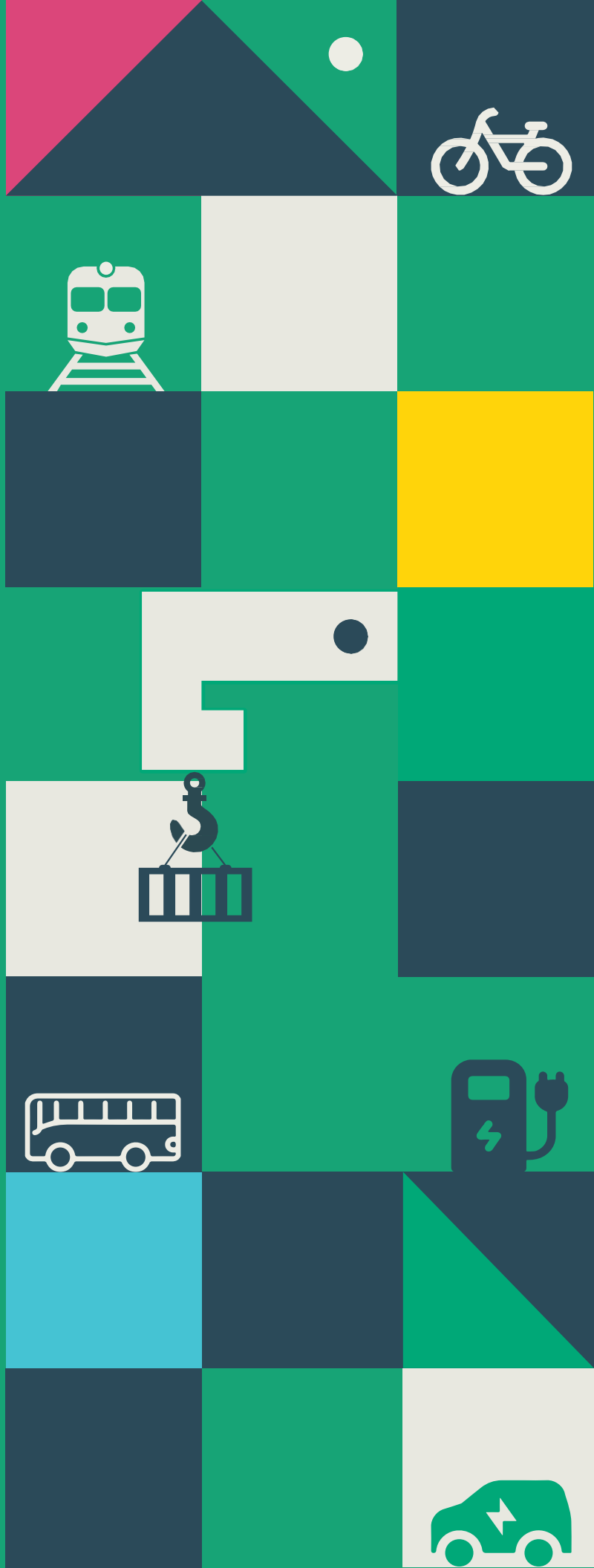

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1818 H Street NW, Washington D.C., 20433, USA. Telephone: 202-473-1000

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All dollars ($) refer to USD.

Abbreviations and Acronyms

BRT Bus Rapid Transit

CCB Climate Co-Benefit

DFI Development Finance Institution

e-2/3Ws Electric Two- and Three-Wheelers

ESG Environmental, Social, and Governance

EV Electric Vehicle

FY Fiscal Year

GDP Gross Domestic Product

GFDT Global Facility to Decarbonize Transport

GHG Greenhouse Gas

SPV Special Purpose Vehicle

tCO_2e Tonnes of Carbon Dioxide Equivalent

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Foreword

As the World Bank's Global Director for Transport, it is my honor to present the first annual report of the Global Facility to Decarbonize Transport (GFDT). This report arrives at a pivotal moment. With urbanization and motorization rising quickly in low and middle-income countries, transport emissions—which currently account for around 20% of total global greenhouse gas emissions—are projected to rise by 60% by 2050 in a business-as-usual scenario. Reversing this alarming trend will require bold action on two fronts: the development and deployment of innovative solutions, and a huge increase in financing.

At their best, well-functioning transport systems connect people, goods, and ideas, generating economic growth and unlocking human potential. Yet modern transport networks can also have severe negative consequences in the form of crash-related fatalities and injuries, poor air quality, and crippling congestion. By investing in solutions such as efficient public transport, low-emission vehicles, and non-motorized transport options such as walking and cycling, we can better realize transport's promise while minimizing its adverse impacts.

This is where GFDT's role is critical. Established in 2021 as a multi-donor trust fund managed by the World Bank, GFDT embodies the World Bank's commitment to achieving Paris Alignment in the global transport sector; that is, achieving net-zero carbon emissions by 2050. By pooling resources, creating and sharing knowledge, and funding critical work such as feasibility studies, capacity building, and pilot projects, GFDT lays the groundwork for the initiation of World Bank-financed transport decarbonization projects.

This strategic funding acts as a catalyst, unlocking large-scale green mobility investments that might not otherwise proceed. In doing so, GFDT empowers low and middle-income countries to develop and implement low-carbon transport solutions that are safe, inclusive, and resilient. And we are already seeing promising results; based on GFDT's first round of grant funding, we expect that every $1 provided in grants to World Bank task teams will catalyze an impressive $137 in World Bank financing for low or zero-emission transport projects.

I am pleased that GFDT is expanding its Partnership Council membership, with Spain joining GFDT at the end of 2023 alongside the governments of Germany, Luxembourg, the Netherlands, and the United Kingdom.

In this inaugural report, we outline our journey so far and the path ahead. GFDT is more than a fund; it is a vehicle for transformative change. As we embark on this journey, we invite you to join us in shaping a future where sustainable transport is a cornerstone of global development.

Nicolas Peltier-Thiberge

Global Director for Transport, World Bank

1 Who We Are & What We Do

Our Mission

The Global Facility to Decarbonize Transport (GFDT) is a multi-donor trust fund managed by the World Bank that provides funding and technical assistance to World Bank teams promoting low-carbon mobility in low and middle-income countries.

To accelerate innovation and investment in climate-smart mobility solutions, GFDT funds the following activities:

Pilot Projects

Innovative pilot projects with potential for significant climate benefits that serve as a proof-of-concept and could catalyze large scale transport investments.

Research and Analytics

Comprehensive research and analytical work to diagnose country-specific transport challenges and identify and prepare green mobility solutions and investments.

Capacity Enhancement

Activities designed to help officials modernize policies, institutions, and incentive structures to promote the transition to green mobility.

Our vision is a global transport sector that is net-zero by 2050, in line with the Paris Agreement goal.

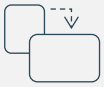
Our Approach

Our approach to transport decarbonization is based on the Avoid-Shift-Improve framework, widely adopted by the World Bank, United Nations, European Union, and other major institutions and governments as a model for reducing greenhouse gas (GHG) emissions in the transport sector.

GFDT has added Resilience to this framework, recognizing that climate change is already taking a heavy toll on transport infrastructure, particularly in low and middle-income countries.

Avoid

Avoiding the need for motorized transport, such as through urban design that encourages walking and cycling and through land-use planning that minimizes urban sprawl.



Shift

Shifting to less carbon-intensive modes of transport, such as walking, cycling, public transport, and electric vehicles.

Improve

Improving the energy efficiency of transport, both at the vehicle level such as through the adoption of electric vehicles, and at a network level such as through traffic optimization and public transport digitization.

Resilience

Making transport systems more resilient to climate change impacts such as hotter average temperatures and more-frequent severe weather events.

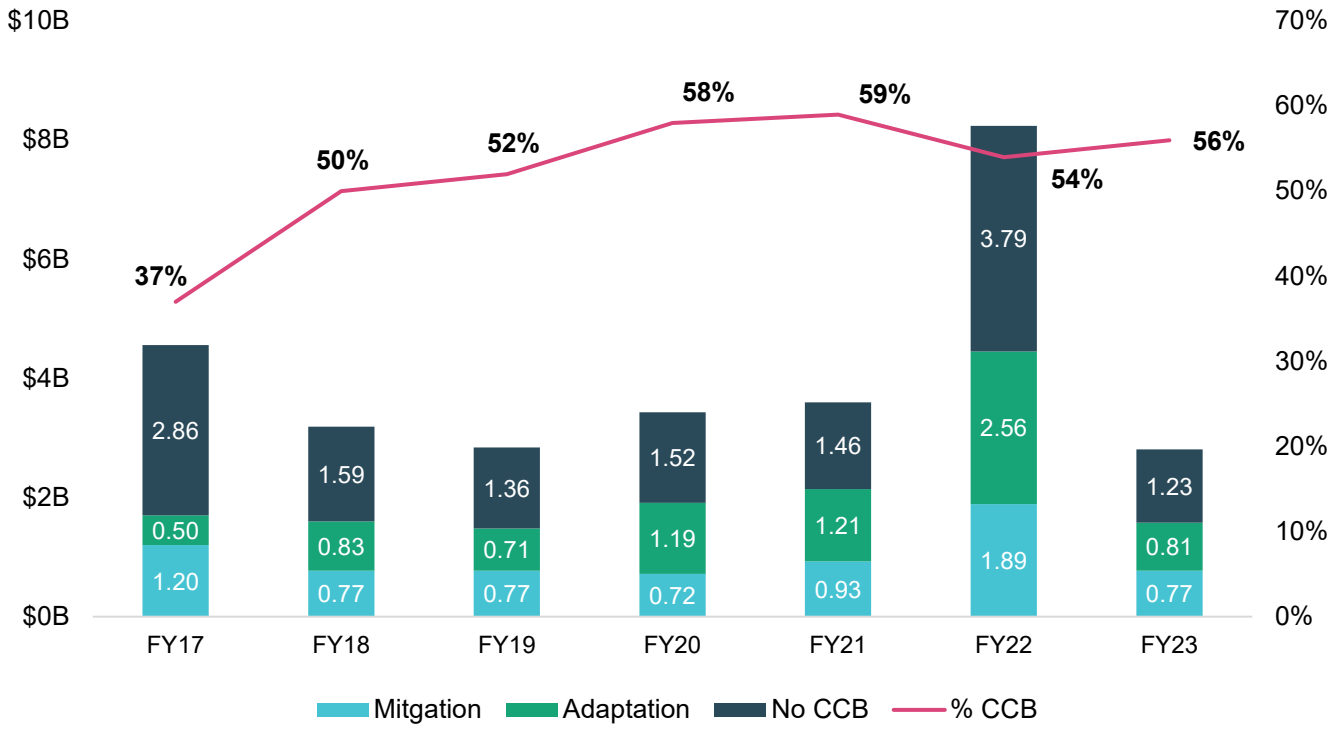
Catalyzing Investment

With transport financing commitments in Fiscal Year 2022 (July 2021 to June 2022) reaching US$8.3 billion, the World Bank is the largest financier of sustainable transport projects in low and middle-income countries.

In recent years, the World Bank's lending portfolio has shifted towards low-carbon mobility solutions—from 37% of all transport financing in Fiscal Year 2017 (FY17) to 56% in FY23. GFDT aims to accelerate this shift.

GFDT funds critical preparatory work such as economic and environmental assessments, technological feasibility studies, and proof-of-concept pilots designed to catalyze largescale green mobility investments. In doing so, GFDT is uniquely positioned to influence the World Bank's transport portfolio and has the potential to orient many billions of dollars toward transport decarbonization projects over the next decade.

Proportion of Climate Co-Benefits (CCB) in World Bank Transport Lending



Climate co-benefits is defined by the World Bank as financing that delivers positive climate benefits while furthering development objectives.

How We Work

GFDT puts out a call for funding proposals to World Bank teams each August. Proposals are reviewed each September, with disbursement of funds beginning each October.

Grant Selection

- Proposals are reviewed by a selection committee comprised of transport sector specialists.
- Proposals are selected based on GFDT's grant selection criteria, which includes:
  - Strong potential to catalyze a World Bank lending operation or transformative policy changes.
  - Implementation of the Avoid-Shift-Improve-Resilience framework, including promoting inclusive and safe mobility.
  - Acceleration of energy transitions in transport through the promotion of new energy vehicles, electrification, and other means.
  - Consistency with World Bank country engagements and strategy.
  - Ability to make simultaneous progress on both climate and other development priorities.

Grantee Monitoring

- Grantees provide regular progress reports to GFDT staff and partners, including at annual Partnership Council meetings.
- A comprehensive Results Framework is used ensure that grant-funded activities are meeting GFDT's overall objectives (see Appendix).

I've seen firsthand how our work can change a community through projects like Lima's Metropolitano Bus Rapid Transit system, which cuts through traffic snarls to reduce commute times from two hours to 30 minutes. It gives thousands of people better access to good jobs, helps small businesses thrive, and improves quality of life by cutting pollution and allowing people more time to do the things they love.

– Ajay Banga, World Bank President

Partnership Council

The GFDT Partnership Council meets at least once per year and plays a key role in shaping GFDT's work program, defining GFDT's priorities, and monitoring results.

As of December 31, 2023, five partners comprise the GFDT Partnership Council:

Federal Ministry
for Economic Cooperation
and Development

Germany Federal Ministry for Economic Cooperation and Development

THE GOVERNMENT
OF THE GRAND DUCHY OF LUXEMBOURG

Luxembourg Ministry of Mobility and Public Works

Ministry of Infrastructure
and Water Management

Netherlands Ministry of Infrastructure and Water Management

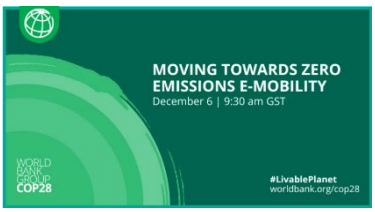
Department for
Energy Security
& Net Zero

United Kingdom Department for Energy Security and Net Zero

GOBIERNO
DE ESPAÑA
MINISTERIO
DE ECONOMÍA, COMERCIO
Y EMPRESA

Spain Ministry of Economy, Trade and Business

GFDT Timeline

2021	**November**	GFDT established at COP26 in Glasgow, Scotland, with the governments of Germany, Luxembourg, the Netherlands, and the United Kingdom joining as founding partners.
2022	**May**	Inaugural Partnership Council meeting.
	September	First call for grant proposals circulated to World Bank teams.
	October	Selection of first round of grantees ("2023 grantees").
		Disbursement of funds to first round of grantees begins.
2023	**March-April**	GFDT highlighted at the Transforming Transportation conference (March 14-15) and at the World Bank and IMF Spring Meetings (April 10-16) as an important new vehicle to boost financing for green mobility projects globally.
	May	Second Partnership Council meeting
		World Bank Transport Director Nicolas Peltier-Thiberge represents GFDT at the 2023 International Transport Forum Summit in Leipzig, Germany.  *"With the help of this new facility, we are working with developing countries to prepare for the electrification of thousands of buses, improve public transportation, and advance zero-emission mobility."*
	September	Second call for grant proposals circulated to World Bank teams.
	October	Selection of second round of grantees ("2024 grantees").
	November	Disbursement of funds to second round of grantees begins.
	December	GFDT featured at an event during Transport Day at the UN's COP28 summit in Dubai, U.A.E. The session, *Moving Towards Zero Emissions E-Mobility*, showcased successful partnerships such as the Zero-Emission Vehicle Transition Council, IFC's E-bus Toolkit, and GFDT's pioneering work catalyzing World Bank-financed e-mobility investments. 

2 2023 Results And Impact

Impact at a Glance

This annual report covers the period from September 1, 2022 to December 31, 2023. In this 16-month period, GFDT achieved the following:

13 countries
and 94 governmental entities engaged via advisory services, technical support, or capacity building.

7
flagship reports under preparation, in addition to numerous action plans, strategy documents, and policy recommendations published.

8
World Bank lending operations under preparation informed by GFDT-funded programs.

12
World Bank lending operations under implementation enhanced by GFDT-funded programs.

In addition, activities funded by GFDT during the reported period are expected to have the following impacts:

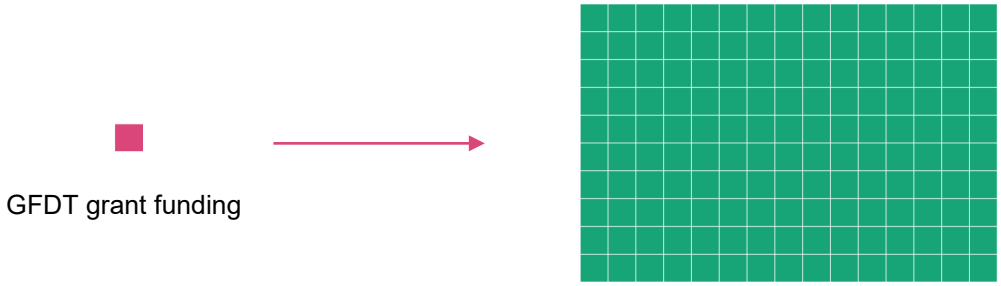
Savings of **~500 million** tCO_2e GHG emissions and mobilization of **$3.4 billion** of private capital expected over 20 years through the development of a GFDT-funded green mobility financing facility in Sub-Saharan Africa.

Savings of **>7 million** tCO_2e GHG emissions expected from GFDT-funded activities in India and Peru.

Mobilization of **$1.18 billion** in World Bank financing for green mobility projects expected by **July 2025.**

In the reporting period, GFDT allocated $3.2 million in grants, which is expected to catalyze **$480 million** in World Bank financing for green mobility projects. This financing is split between three lending operations under preparation: $200 million for supporting bus electrification in Ghana, $150 million for accelerating e-mobility in India, and $130 million for improving traffic management and enhancing sustainable transport in Lima, Peru.

Put another way, **each $1 disbursed by GFDT is expected to mobilize $150 in financing for transport decarbonization projects.**



GFDT grant funding

World Bank green mobility financing expected to be catalyzed by GFDT-funded activities

2023 Grantees

GFDT selected its first batch of grantees in late 2022. Work on these activities commenced in 2023.

Region	Activity	Grant amount
Africa	Establishing a Green Mobility Financing Facility in Sub-Saharan Africa	**$750,000**
	Identifying Opportunities for Resilient and Lower-Carbon Development in the Sahel	**$400,000**
	Electrifying Buses in Ghana	**$350,000**
East Asia and the Pacific	Catalyzing Sustainable Urban Mobility and Motorization Management in the Pacific Islands	**$350,000**
Latin America and the Caribbean	Informing Climate-Smart Transport Investments in Lima, Peru	**$250,000**
Middle East and North Africa	Decarbonizing and Digitizing Public Transport in Egypt	**$300,000**
South Asia	Accelerating e-Mobility in India	**$400,000**

3 2023 Grantee Highlights

Informing Climate-Smart Transport Investments in Lima

Context

- Lima, Peru, is expanding rapidly and is now one of Latin America's largest metropolitan areas by population.
- Yet crippling congestion in Peru's capital is a major contributor to the transport sector's high carbon footprint and costs Peru the equivalent of an estimated 1.8% of its GDP annually.
- Many roads lack proper signaling to protect vulnerable road users or manage speeds, and traffic data is not sufficiently analyzed or leveraged.

Goals

- Help identify and prioritize climate-smart urban transport investments in Lima by using innovative data analytics and robust appraisal methodologies.
- Reduce congestion and increase road safety by building the technical capacity of Lima's traffic management and transport planning agencies to optimize traffic flow.

Approach

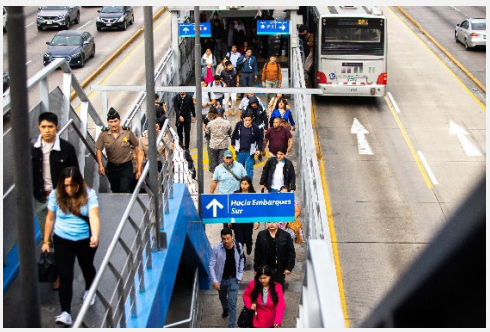
- Analysis of diverse sources of "big data"—including from navigation apps—to support traffic management and inform the prioritization of sustainable transport modes.
- Delivery of training programs to strengthen local capacity for data-driven and climate-smart transport planning and management.
- Production of technical "how-to" notes on prioritization and appraisal methodologies for climate-smart urban transport interventions.

Impact

- GFDT funding supported the use of innovative analytical tools to generate insights on urban mobility patterns in Lima, which is informing the first phase of a multi-phase World Bank transport investment operation in Lima (under preparation).
- The grant has also enabled the strengthening of technical capacity in traffic optimization, efficient and safe intersection design, prioritization of interventions to promote non-motorized transport modes, and the leveraging of innovative data and tools for sustainable mobility planning.

Outlook

- The multi-phase World Bank transport investment operation in Lima (under preparation) will amount to at least $540 million over 10 years.
- The first phase, titled *Lima Traffic Management and Sustainable Transport Project*, represents an investment of $150 million.



Establishing A Green Mobility Financing Facility in Africa

Context

- The vehicle stock in Sub-Saharan Africa is primarily an aged fleet running on low quality fuel standards. Deaths per capita from air pollution are 60% higher than the global average, while deaths and severe injuries per capita from road traffic crashes are 75% higher. Transport-related GHG emissions are currently low but growing rapidly.
- The region would benefit greatly from the adoption of low-carbon mobility solutions.

Goals

1. Support the development of a regional financing facility that helps unlock financial barriers that inhibit the uptake of cleaner vehicles.
2. Channel resources from DFIs, dedicated climate funds, and ESG investors, with the aim of making it more attractive for financiers to invest in low-carbon vehicles and transport projects and thereby decrease the cost of financing them.
3. Develop a market for low-carbon vehicles by bringing new actors such as fleet companies, vehicle and battery manufacturers, and new financing instruments into the marketplace.

Approach

- Develop a regional institutional 'facility' to scale up demand and attract donors, lenders, and other investors to provide blended financial resources to facilitate financing for clean vehicles.
- Work with regional banks to create a special purpose vehicle (SPV).
- Mobilize concessional resources from the World Bank and other DFIs, along with the private sector, to provide blended financing.
- Bring the necessary policies, incentives, and capacity to promote the adoption and competitive supply of low-carbon vehicles.

Impact

- Governments in the region expressed positive views of the concept during stakeholder consultations, in part due to a desire to be insulated from oil shocks.
- The facility will help countries in the region harmonize policies and investment programs to accelerate the uptake of electric vehicles.
- Financial entities, including development banks and donors operating in the region, have expressed interest in the project and are considering participation as financiers or as providers of technical assistance.

Outlook

- The market for public transport in the region is undeveloped yet has high growth potential. An estimated 8,000 city buses (BRT and other scheduled services) will be required in coming years, entailing approximately $5-6 billion in total upfront cost.
- Minibuses will also require substantial investment.
- The investment pipeline under preparation for 2/3 wheelers entails an estimated investment of $0.75-1.25 billion.

Accelerating e-Mobility in India

Context

- In India, buses and 2/3 wheelers account for 78% of passenger kilometers. Electrifying these vehicles will make a huge dent in GHG emissions.
- Yet significant upfront expenditure is required (US$18 billion by 2025), necessitating creative financing strategies to mitigate risks.
- Public transport agencies need to transform their institutional and funding approach. Procurement at scale can make EVs cost-competitive over their lifecycle.

Goals

- Unlocking commercial financing at scale for e-buses and e-2/3Ws.
- Promoting alternative business models that reduce upfront costs (e.g. battery swapping).
- Inform an e-bus investment project (supported by $150 million from the US Government and various philanthropies), which was formerly supported by the World Bank.

Approach

- Develop a payment security mechanism (PSM) and train local officials to support India's national e-bus program and the addition of 10,000 e-buses in the country by 2025.
- Integrate state- and city-wide e-2/3W purchase incentives within a digital financing platform.
- Share India's experience with other countries in the South Asia region and beyond.

Impact

- Acknowledgement at the highest levels of government (Prime Minister's Office) of the relevance of e-bus PSMs to unlock markets.
- Designation of the Ministry of Heavy Industry to work on PSM implementation.
- Launch of initial pilot on e-2/3Ws by the Small Industries Development Bank of India (SIDBI) to be scaled under SIDBI's EVOLVE (Electric Vehicle Operations and Lending for Vibrant Ecosystem) program.

Outlook

- The e-bus PSM, financed by the Government of India with support from the US Government and various philanthropies, is expected to launch in the fourth quarter of Fiscal Year 2024.
- SIDBI's EVOLVE program design is expected to be completed by June 2024.

4 Deep Dive

The Link Between Transport Decarbonization and The Paris Agreement

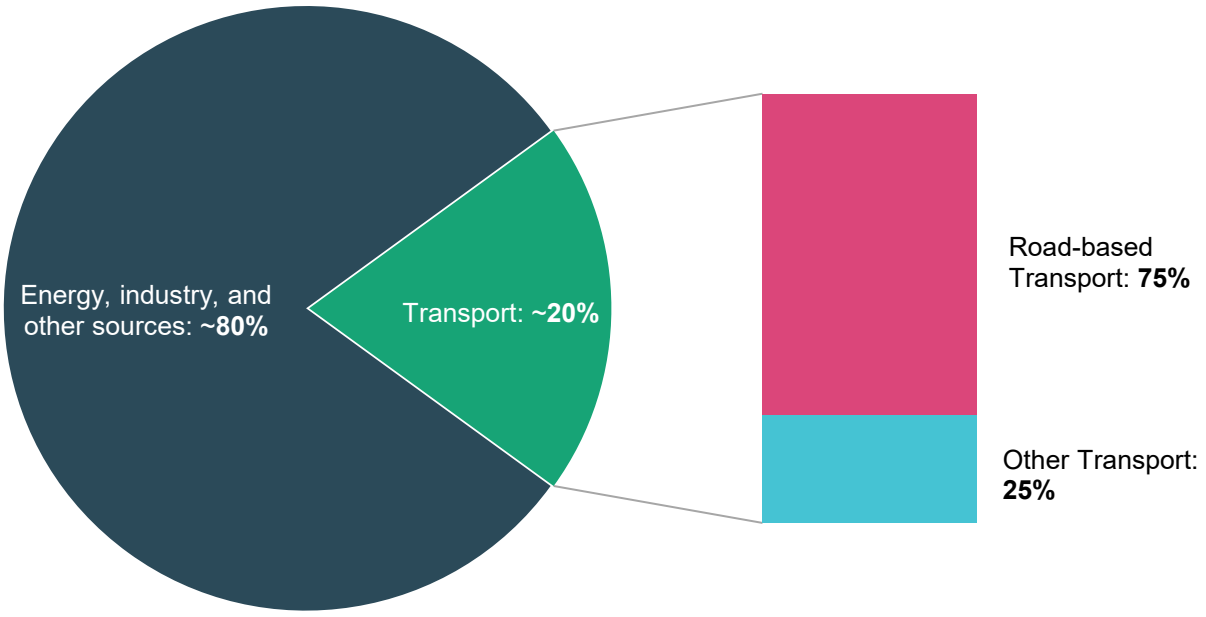
Transport is a Major Contributor to Climate Change

The Paris Agreement, adopted in December 2015, marked a pivotal moment in global efforts to combat climate change. By setting an ambitious goal to limit global warming to well below 2 degrees Celsius above pre-industrial levels—with a preferred target of 1.5 degrees—it established a clear mandate for reducing greenhouse gas (GHG) emissions worldwide. To reach this goal, many countries and institutions have stressed the importance of achieving net zero GHG emissions across all sectors by 2050, as this would create a realistic scenario whereby warming could be halted to well below 2 degrees.

Since the global transport sector is a major contributor to global greenhouse gas emissions—accounting for around 20% of the total in 2020—it is a critical area for decarbonization. Simply put, without reaching net zero emissions in the global transport sector by 2050, it is unlikely that the Paris Agreement target will be achieved, regardless of progress made in decarbonizing other sectors.

Transport emissions are not only one of the largest sources of global GHG emissions, they are also the fastest-growing, and are expected to increase from 8 to 18 gigatons per year by 2050 under a “business as usual” scenario. Transport emissions would need to drop from 8 to 5 gigatons per year by 2050 to be consistent with a 2-degree warming scenario, and to less than 2 gigatons per year to be aligned with the Paris Agreement target of 1.5 degrees.

Share of Global Emissions from Transport

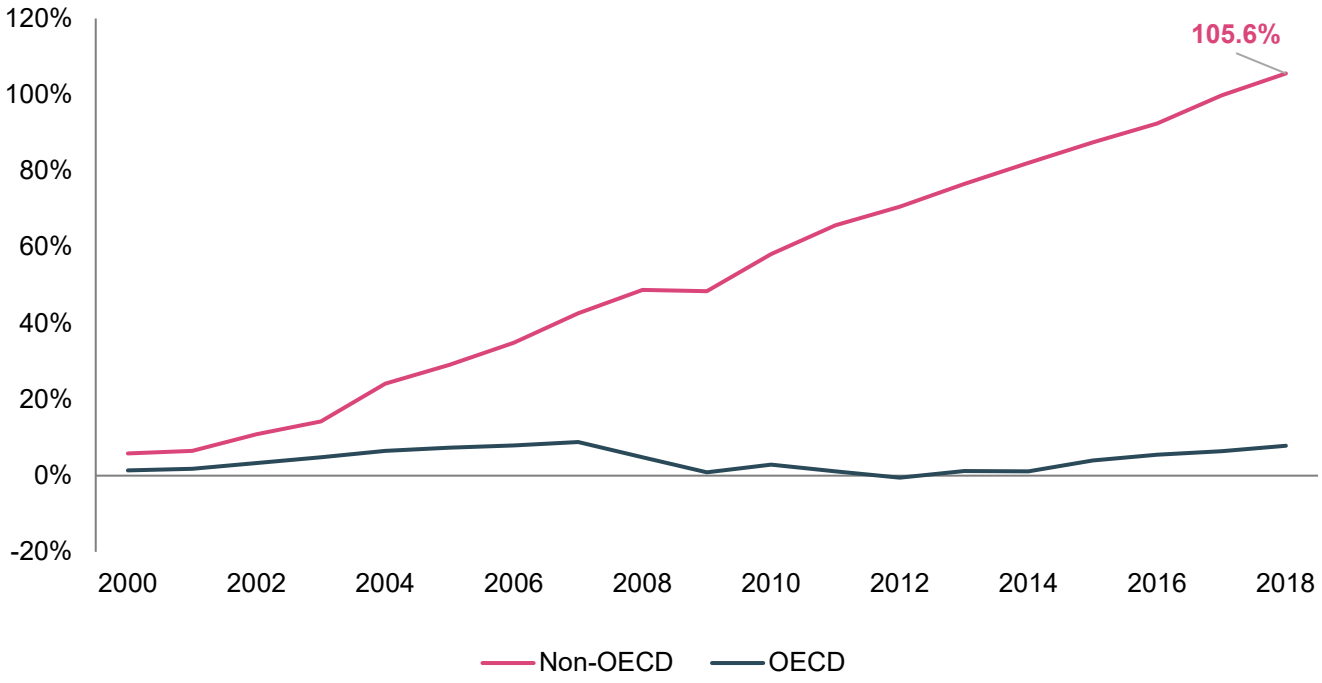


Transport Emissions Are Rising Fastest in Low and Middle-Income Countries

Over the last two decades, population growth and rapid urbanization has resulted in a huge increase in private vehicle use in low and middle-income countries. This trend has been exacerbated by a lack of reliable public transport options that would otherwise have provided a compelling alternative to private vehicles.

The ballooning number of vehicles in low and middle-income countries is driving the global increase in transport-related GHG emissions. In fact, almost all the growth in global transport emissions since 2000 has occurred in low and middle-income countries.

Growth in Transport Sector GHGs 2000-2018



Transport emissions on a per capita basis are still relatively low in most low and middle-income countries compared to high-income countries. Yet transport networks are expanding rapidly in these countries, with new transport infrastructure constantly being built.

It is vital that these new transport investments avoid high-carbon approaches, as “lock-in” effects will make it more difficult and expensive to shift to a low-carbon model later. For this reason, low and middle-income countries have a relatively narrow window of opportunity to steer clear of carbon-intensive transport solutions. In short, they must “build it right the first time” to stay on track to meet their Paris Agreement commitments.

The challenges of Paris-Alignment in the Transport Sector

To dramatically reduce global transport emissions by 2050 and align the sector with the Paris Agreement goals, several challenges need to be tackled simultaneously, such as boosting financing for green mobility projects, developing new technologies and enhancing their market viability, creating enabling policy environments and incentive structures, and overcoming the inertia of existing systems and transport-related behaviors. It is also important that solutions are equitable, take gender into consideration, and do not negatively impact disadvantaged communities.

Transport decarbonization efforts encompass a range of strategies, including electrifying vehicle fleets, expanding and improving the reliability of public transport systems, moving freight off trucks and onto less carbon-intensive transport modes such as trains and ships, and enhancing non-motorized urban mobility infrastructure such as bike lanes and pedestrian sidewalks. Yet much of this work needs to be scaled up significantly if the sector is to achieve meaningful progress toward the Paris Agreement goals.

Low and middle-income countries face the additional challenges of high investment costs and a lack of affordable financing options for project implementation. Consequently, support from development finance institutions such as the World Bank in the form of investment de-risking mechanisms and loan repayment guarantees will be critical to getting projects off the ground.

Decarbonizing Transport Supports Other Development Priorities

Decarbonizing transport not only addresses climate change but also contributes to other development priorities:

Road crashes kill around 1.19 million people every year, with over 90% of fatalities occurring in low and middle-income countries (WHO, 2023).

Air pollution—of which transport emissions are a major contributor—causes an estimated 3.7 million deaths in low and middle-income countries every year (WHO, 2019).

Disadvantaged communities living on city outskirts often face economic exclusion due to high costs of vehicle ownership and a lack of public transport or other low-cost transport options.

Promoting a shift away from carbon-intensive and polluting vehicles toward walking, cycling, public transport, and electric vehicles would make substantial progress in all three of these areas.

The Role of GFDT

By funding essential project preparation work such as feasibility studies, robust data analytics, site surveys, pilot projects, and economic and environmental assessments, GFDT unlocks prospects for green mobility investments that might not otherwise go ahead. Through generating financing for transport decarbonization projects such as Bus Rapid Transit systems, electric vehicle charging networks, and bike lane expansion, GFDT is playing a crucial role in the transition towards a more sustainable global transport sector.

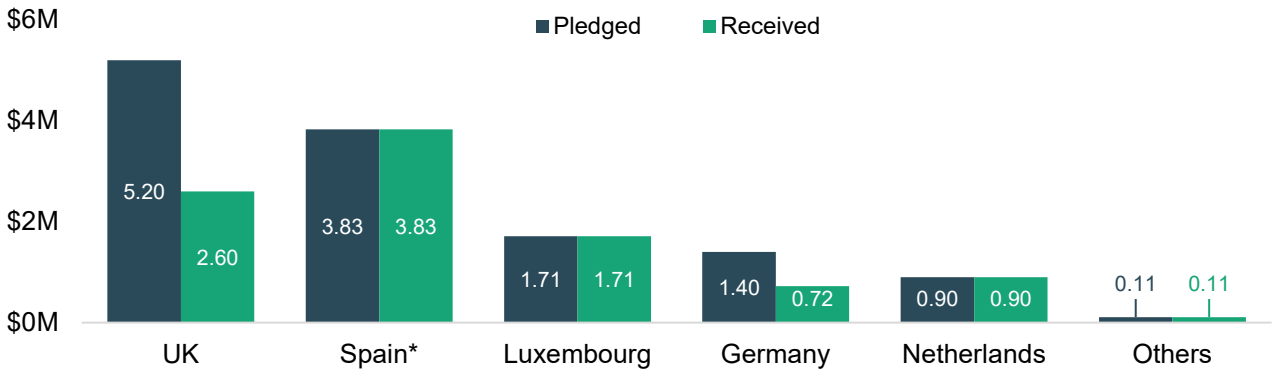
5 Finances

Financial Update

In the period from September 1, 2022 to December 31, 2023, GFDT received $13.16 million in pledged contributions, of which $9.86 million was received.

Contributions Pledged and Received

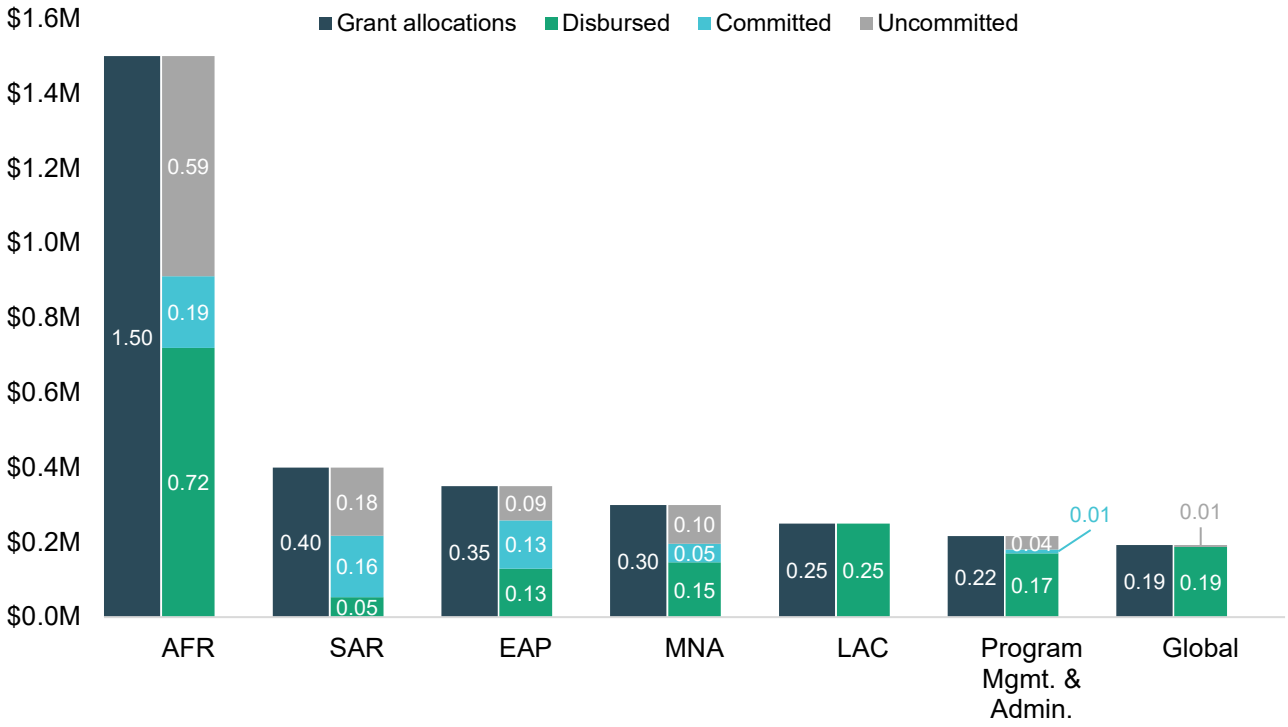
September 1, 2022 – December 31, 2023 ($ Millions)



**Spain's contribution was received on December 21, 2023, toward the end of the reporting period for this annual report.*

Disbursements

September 1, 2022 – December 31, 2023 ($ Millions)



- **Grant allocations:** GFDT funding allocated to grants.
- **Committed:** Funds contractually committed but not yet spent.
- **Disbursed:** Funds spent by GFDT-funded activity/ies.
- **Uncommitted:** Funds not yet spent or contractually committed.

6 Appendix: Results Framework

Results Framework

The below results pertain to the period from September 1, 2022 to December 31, 2023.

Outputs	
Number of countries that received capacity building support or technical assistance for policy formulation	13
Number of governmental entities (ministries, city administrations, transport authorities, etc.) receiving advisory services	94
Number of transformative/political flagship reports undertaken	7
Number of people engaged in stakeholder engagement formats/capacity development activities	326
Intermediate Outcomes	
Number of World Bank operations under preparation that benefitted from research and analytics supported by GFDT	8
Number of World Bank operations under implementation that benefitted from research and analytics supported by GFDT	12
Number of governmental entities (ministries, city administrations, transport authorities, etc.) implementing or applying recommended changes	2
Number of people with enhanced access to transport services	N/A
Total expected greenhouse gas emissions savings (tCO_2e)	N/A
Urban transport and rail projects that are disability-inclusive in their design	1
Operations compliant with WB's Gender Tag	N/A
Projects undertaking Climate and Disaster Risk Screening	3
Operations compliant with Transport Climate Mitigation / Adaptation requirement	N/A
Private capital mobilized ($M)	N/A
Co-financing ($M)	N/A
Outcomes	
Amount of World Bank lending volume mobilized ($M)	N/A
Number of countries in which policies or strategies promoting enhanced resilience of transport systems and increased ability to manage shocks and reduce vulnerability are recommended	N/A

Notes: N/A ("not applicable") appears next to indicators that only measure results of World Bank Board-approved lending operations. Since GFDT-funded activities did not lead to any World Bank Board-approved lending operations during the reporting period, these indicators are not applicable. These indicators also differ from the expected results on the Impact at a Glance infographic (page 14), since those results have longer timeframes and do not only pertain to World Bank Board-approved lending operations.

The methodologies used in the Results Framework is available to GFDT Partners via the Development Partner Center.

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