



INTERNATIONAL UNION
OF RAILWAYS

Rail NDC Template

The Importance of Reflecting Inland Transport Emissions in Nationally Determined Contributions (NDCs) under the Paris Agreement

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Fostering close cooperation links

with all actors in the rail
transport domain

Preparing and publishing
**Reports,
Specifications,
Guidelines, IRS**

The worldwide
organisation
for the promotion
of rail transport

200
members
on all 5 continents



Understanding the business needs

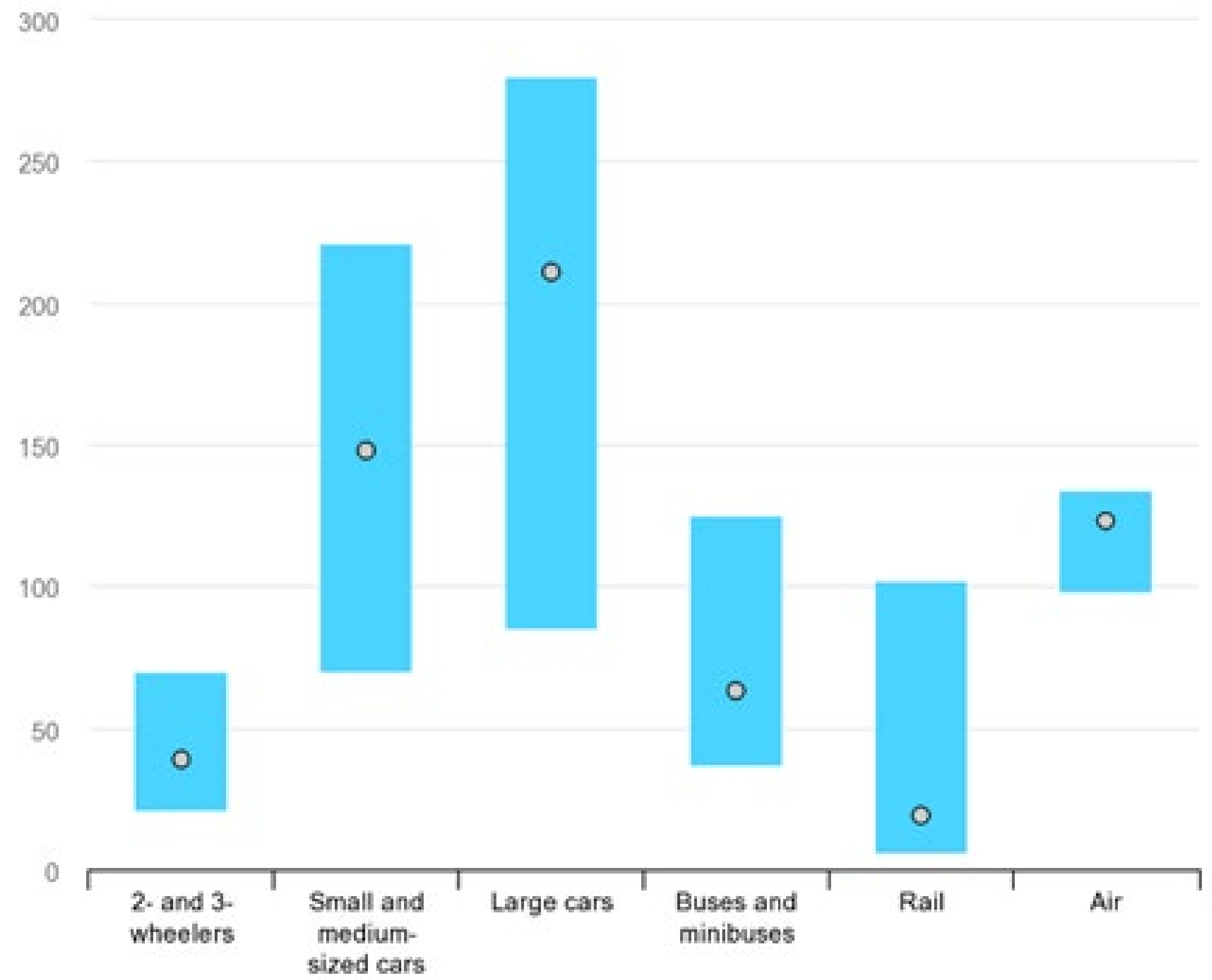
of the rail community

**Developing
innovation
programmes**
to identify solutions to
those needs



Lowest GHG and energy intensity of all modes

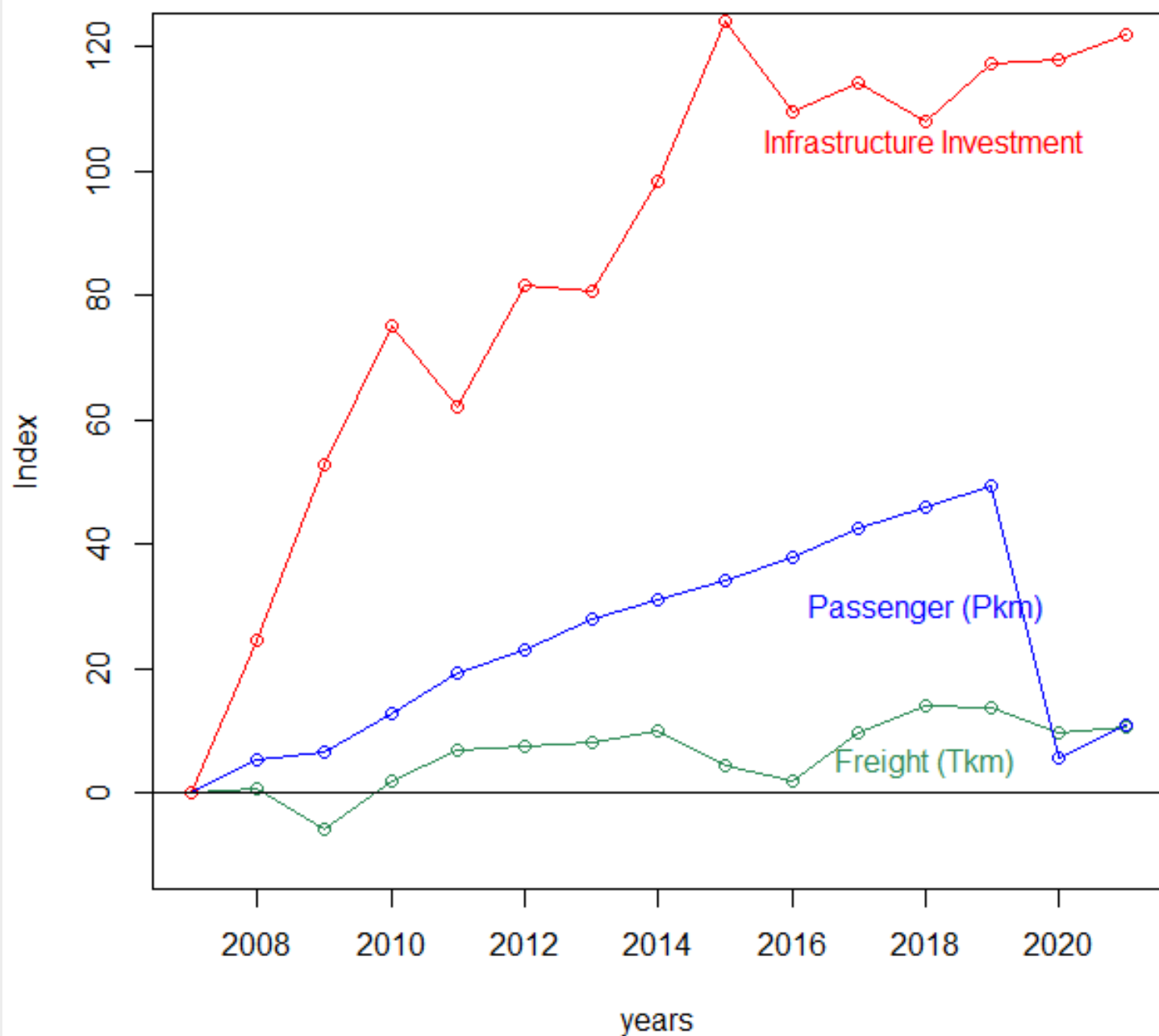
Global average of 22g CO₂-eq/passenger km



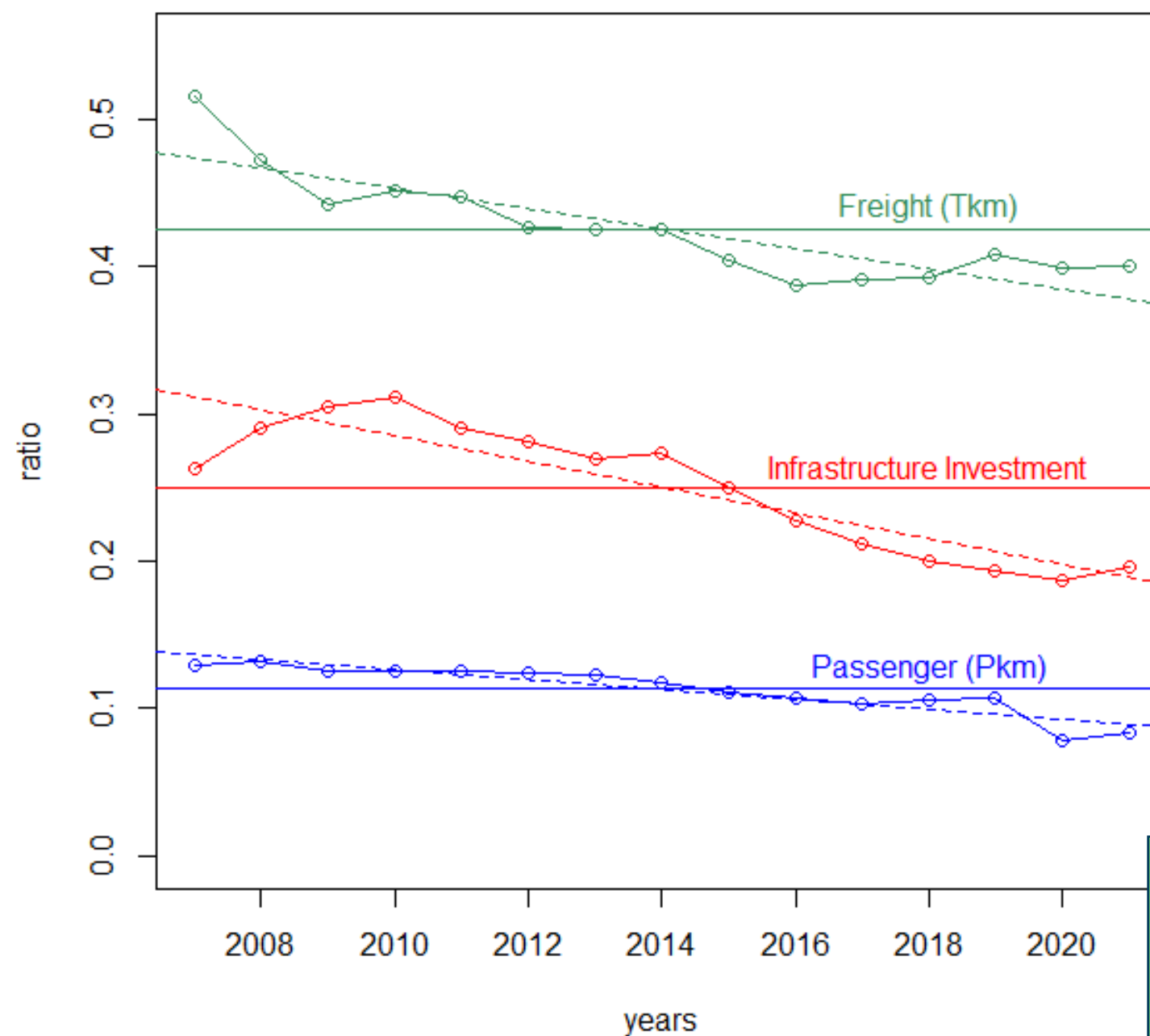
Source: IEA (2023), Rail, IEA, Paris <https://www.iea.org/reports/rail>, License: CC BY 4.0

Activity returning but with a shrinking share

(a) Rail TKM, PKM, Infrastructure Investment
Global Trend (2007-2021)



(b) Rail Modal Share
Global Trend (2007-2021)



Rail in NDCs: analysis and recommendations



UIC SUSTAINABILITY
Rail in Nationally Determined
Contributions (NDCs)
Analysis and recommendations
December 2023

1. Status	Does the NDC mention rail? Are there specific targets for the rail sector?
2. Leadership	Who oversees the NDC process? What about the rail agenda?
3. Duration	What is the timeframe for achieving targets for railway development?
4. Ambition	Is rail addressed in a mitigative and/or adaptive context?
5. Action	What kind of concrete action do they focus on?
6. Investment	Is funding in place to implement plans for railway development?
7. Evaluation	Is there a clear evaluation framework in place to track progress on rail targets?

Rail accounts for just 1% of transport emissions

Just 25% of NDCs feature Railways

Only 10% of NDCs have targets for Rail

Rail in NDCs: regional factsheets

NDCs ASIA PACIFIC FACTSHEET

1 **31.9% OF COUNTRIES MENTION RAIL**
 Most of these countries focus in mitigation measures with only 4 addressing adaptation. Five countries have specific targets and the most common timeframe for actions is 2030.

10 **OUT OF THE 15 COUNTRIES**
 are LICs and LMICs

2 **MAIN LINES OF ACTION**
 The distribution of NDC per type of action is balanced, with freight slightly ahead of passenger rail measures. This is the region with most mentions to electrification, which can further decarbonize rail transport in the region.

3 **EXAMPLE FROM BANGLADESH**
 The Bangladesh NDC is worth highlighting for its thorough inclusion of rail. It is one of the few countries to have specific modal shift targets of 10%, and an enhanced level of ambition of 25% achievable with the support of other countries.

4 **ADAPTATION IN VIET NAM**
 Although Viet Nam does not feature specific targets for rail in the current NDC, it provides details on the potential risk of rail infrastructure due to climate change, including an estimated economic loss of USD 2.3 - 2.6 million/day from climate-related disruptions.

5 **ENHANCING THE NEXT NDCs**
 According to the ATO analysis, Asia-wide, 42% of the rail economies have a dedicated rail policy. Yet, only a subset of these countries mention rail in their NDCs. Increasing the level of ambition for rail in Asia-Pacific is key to ensure decoupled economic growth from transport emissions.

NDCs MIDDLE EAST FACTSHEET

1 **6 OUT OF 14 COUNTRIES MENTION RAIL**
 All countries have rail measures under mitigation efforts, most of them through railway network expansion.

UAE and Jordan are the only countries with **SPECIFIC TARGETS**

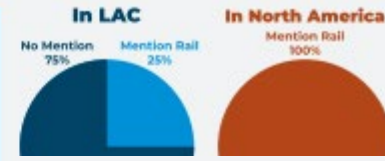
2 **BEST PRACTICE FROM TURKEY**
 Through the construction of 4690KM railway routes, the country expects to more than quadruple rail passenger share to 4.15% and double freight to 11.24%.

3 **EXAMPLE FROM UAE**
 When fully operational, Etihad Rail will be reducing carbon emissions from road transport by 21% by 2050, (8.2 million tonnes), with each train trip taking up to 300 trucks off the roads carrying the same load.

4 **ENHANCING THE NEXT NDCs**
 Countries in the region could benefit from including the extended plans for expansion of the GCC rail network, as well as further including adaptation measures for rail infrastructure in NDCs.

NDCs AMERICAS FACTSHEET

1 **34.7% OF COUNTRIES MENTION RAIL**
 For Latin America and the Caribbean (LAC), 25% of the countries mention rail while in North America, all three countries mention it. Only Colombia, Costa Rica and Venezuela have specific targets for the rail sector.



2 **REGIONAL CONTEXT**
 Network development is the most common measure found for countries in LAC that mention rail. Colombia is the only country to indicate financing needs to deliver rail targets. It is worth noting that the small island countries in the Caribbean do not have a railway network, which is reflected in their NDCs.

3 **RAIL AS A CLIMATE SOLUTION**
 All three countries acknowledged rails potential to be a climate solution in terms of mitigation, but none included specific targets and Mexico was the only country to mention both passenger and freight.

4 **ENHANCING THE NEXT NDCs**
 Countries in the region could benefit from further including adaptation measures in NDCs, as well as carrying over existing rail plans, like the high-speed lines in the US and Mexico, and extensive rail strategy in Canada, into the next cycle of NDCs.

NDCs AFRICA FACTSHEET

1 **HIGHEST REPRESENTATION OF RAIL IN NDCs**
 43.3% of countries in Africa mention rail in NDCs, higher than all other regions analysed. Most countries have rail under mitigation (19), with only 5 countries referring to adaptation and only 2 to both.

2 **MAIN LINES OF ACTION**
 Most countries presented plans to upgrade and expand the rail network, including rehabilitation of existing infrastructure, and building international high-speed rail connection. 10 countries mention promotion of modal shift to rail, with some even setting targets for expected emissions reductions.

3 **RAIL PROJECT INVESTMENTS**
 8 countries in the region have detailed the investment associated to rail projects, both conditional and unconditional. Nevertheless, only 5 countries present a reference to an evaluation framework which could support tracking progress towards the established goals.

4 **UGANDA'S BEST PRACTICES**
 Uganda's NDC stands out as it details a very specific and comprehensive inclusion of rail within its adaptation strategy, while also including a detailed mention of financing and funding strategies, conditional & unconditional, for their rail sector goals.

5 **ENHANCING THE NEXT NDCs**
 Although not mentioned in the current versions of NDCs, many countries in the region, including South Africa, Liberia, and Rwanda have advanced railway plans in national transport projects. These should be featured in the next cycle of NDCs, along with rail plans from African Union Vision 2063.

NDCs EUROPE FACTSHEET

1 **LEAST MENTIONS OF RAIL IN NDCs**
 This is due to the fact that all European Union countries share the same NDC document, which does not mention rail. As a result, 18 of the 27 EU countries that have extensive rail plans in national transport strategies, fail to be represented.

OUT OF 46 COUNTRIES IN EUROPE ONLY 2 MENTION RAIL IN NDCs

2 **ALBANIA AND MOLDOVA**
 Are the only 2 countries that mention rail measures in the NDC analysis for Europe. While Albania has a 30% modal shift target for transport over 300km, Moldova mostly focuses on the improving planning for climate-resilient infrastructure in transport.



3 **ENHANCING THE NEXT NDCs**
 Europe is one of the regions with the most rail activity, with the various ongoing projects for expansion of high-speed rail, revitalization of night trains, electrification of networks, among others. Including these projects in NDCs would further support rail as a climate solution.



NDCs for rail, public transport and active travel

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Get your NDC 3.0 ready!

Guidelines, tools and resources to increase transport ambition in the next generation of NDCs

The global emissions of the transport sector are heading in the wrong direction, accounting for the fastest-growing source of emissions around the world. We must change this trend now and the Intergovernmental Panel on Climate Change underlines that a pathway for transport which contributes to maintaining global temperature rise below 1.5°C is possible. Transport enables prosperity and livelihoods. In 2021, the sector contributed 7% (USD 6.8 trillion) of the global gross domestic product and employed 5.6% of the world's workforce (193 million people). **Therefore in this era of climate emergency, it is as important as ever that countries set more ambitious, robust and actionable targets and roadmaps for the decarbonisation, the adaptation to climate change impacts and the resilience of transport and mobility systems – in a just transition.**

RAIL NDC TEMPLATE

A guide to support countries in more ambitious Nationally Determined Contributions (NDCs) for rail.



UITP ADVANCING PUBLIC TRANSPORT | ANALYSIS REPORT

PUBLIC TRANSPORT NATIONAL DETERMINED CONTRIBUTIONS TEMPLATE

JUNE | 2024

UITP has created this template for national governments to use to guide and take action in order to strengthen their commitments towards public transport and active mobility in their Nationally Determined Contributions (NDC). Countries can use it to explore options, reflecting national priorities and addressing key implementation and financing needs to strengthen 2025 submissions.

get back on a global emissions trajectory aligned with limiting global heating to 1.5°C and how countries plan to tackle climate change in all sectors. Urban transport accounted for 8% of global CO₂ emissions and around 40% of global transport emissions in 2020. In the absence of interventions, motorised mobility in cities could surge 94% in the next 25 years. At the same time, half of the world's population lacks access to public transport. This means that emissions, air pollution, and energy demand from the urban transport sector will continue rising.

The COP28 Global Stocktake¹ (GST) recognises that we need deep, rapid, and sustained reductions in greenhouse gas emissions (GHG) in line with 1.5°C pathways across different sectors and that NDCs need to be significantly more ambitious. Each country's NDC should contain information on how the GST outcome has been reflected in their updates. It calls on Parties to transition away from fossil fuels to renewables and to accelerate emissions reductions from road transport through a range of pathways, including the development of infrastructure and rapid deployment of zero and low emission vehicles. Public transport is a fundamental pathway to reducing and accelerating emissions reductions in urban transport.

The UITP analysis report on "Public Transport & Nationally Determined Contributions"² shows that

INTRODUCTION

The next round of NDCs, with an implementation timeframe of 2035, are due to be submitted in advance of COP30 in Brazil. The previous round, in their totality, has shown that current efforts and plans are insufficient to reach the goals of the Paris Agreement. The 2025 NDC updates have a key role to play in determining whether the world can

1. ILO/UITP Transport, Climate and Sustainability Global Status Report - 3rd Edition
2. https://urbanlab.org/sites/default/files/2023/11/ghg_emissions_report_2023.pdf
3. <https://unfccc.int/reporting/global-visibility>
4. <https://www.uitp.org/eng/constant/uploads/2023/12/Analysis-report-for-COP28-1.pdf>

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The final frontier of urban logistics

NEW IDEAS FOR TACKLING THE LAST METRES

PATH Partnership for Active Travel and Health

ACTIVE TRAVEL NDC TEMPLATE

PATH has developed this Active Travel NDC Template to assist all national governments to be more ambitious and impactful for walking and cycling in their Nationally Determined Contributions.

Read more at [PathForWalkingCycling.com](https://www.pathforwalkingcycling.com)

RAIL NDC TEMPLATE

A guide to support countries in more ambitious Nationally Determined Contributions (NDCs) for rail.



3

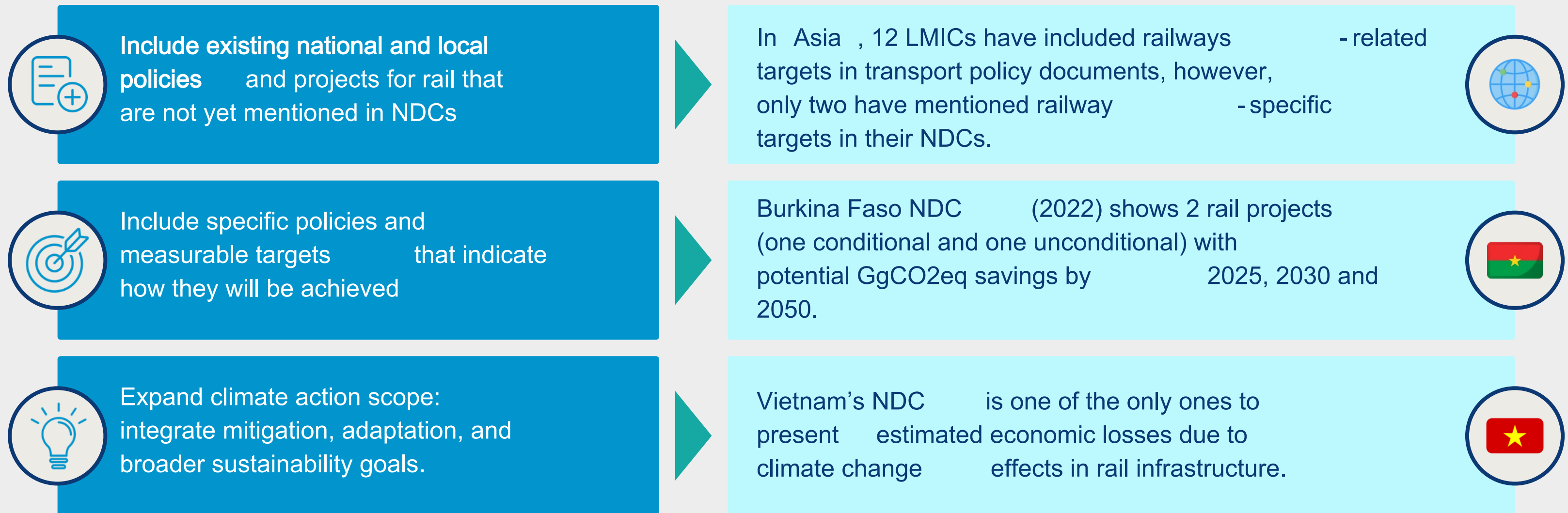
RAIL NDC TEMPLATE

I.	TO CLEARLY DEFINE OBJECTIVES	Specify quantifiable objectives related to the rail sector, which could include targets for rail network expansion, a modal shift, electrification, or emissions reductions
II.	TO FIND OPPORTUNITY TO BOOST AMBITION	Find the opportunities in rail to accelerate action and boost emissions savings while building future resilience so that your targets can be raised from the previous cycle.
III.	TO FILL GAPS FOR A COMPREHENSIVE APPROACH	Encompass comprehensive strategies, considering policies both push and pull measures to incentivize a modal shift. Include rail in both mitigation and the adaptation plan and consider both freight and passengers mobility.
IV.	TO CREATE POLICY COHESION	Ensure that rail sector goals, national and continental transport strategies and broader national climate and sustainability objectives align and cross reference. Action can be accelerated when national policies are cascaded and supported at the local level.
V.	TO MAKE TARGETS MEASUREABLE	Include specific, measurable, and time-bound targets related to rail sector performance, emissions reduction, and modal shift percentages. These should be regularly monitored and reported, with clearly identified stakeholders responsible for tracking progress.
VI.	TO BE CLEAR ON FUNDING AND FINANCING	Clearly indicate how rail investments will be financed. Where applicable, differentiate between conditional and unconditional funding to open opportunities for international collaboration on investment needed.



RAIL NDC TEMPLATE

Find opportunity to boost ambition



Set more ambitious goals in NDCs, addressing both the potential for mitigation and adaptation within a given national context.





RAIL NDC TEMPLATE

Measurable targets



Clear

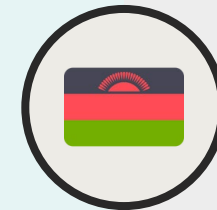
Measurable

Time-bound

- Malawi's NDC designates the Ministry of Transport and Public Works (MOTPW) and the Ministry of Local Government (MOLG) as the primary owners of actions, with Passenger Associations, Bus Operators Associations, City Councils, and private transport companies as key stakeholders.



- Burkina Faso's NDC includes the Accra-Ouagadougou rail interconnection project, which is estimated to save 748 Gg of CO₂e by 2050.



- Uganda: Uganda's NDC shows some differentiation, with short-term (2026), medium-term (2030), and long-term (2050) goals.



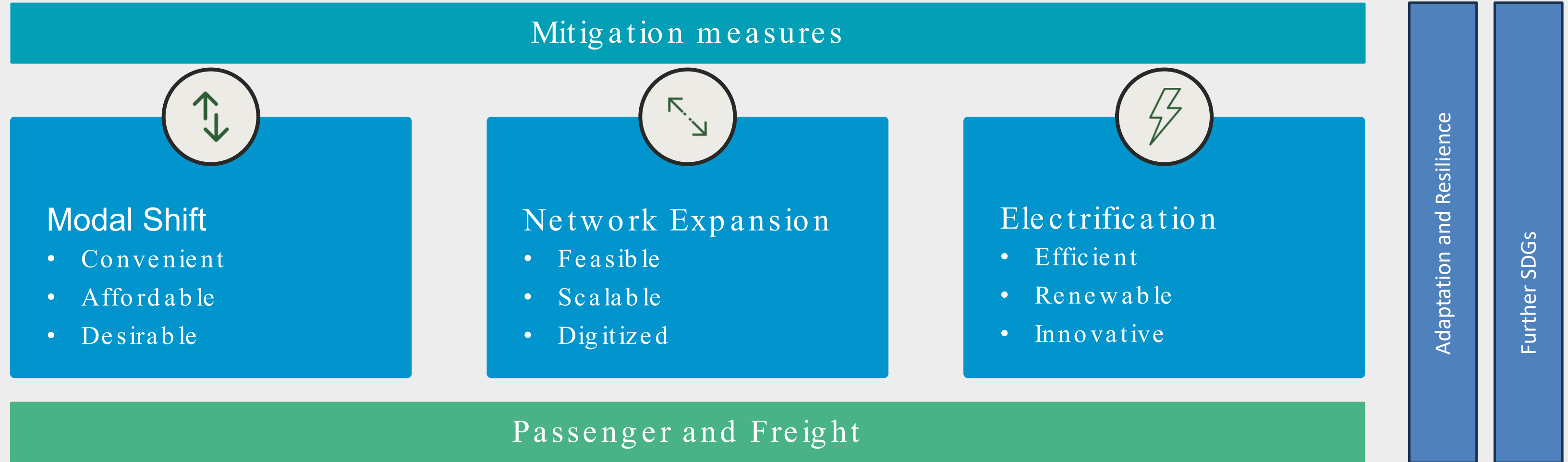
Include clear, measurable, and time-bound targets related to rail sector performance, emissions reduction, and modal shift percentages. These should be regularly monitored and reported, with clearly identified stakeholders responsible for tracking progress.



RAIL NDC TEMPLATE

A comprehensive approach

ACTION MATRIX



Encompass comprehensive strategies, considering policies and push and pull measures to enhance a modal shift, while expanding the rail network and/or increasing energy efficiency where appropriate.





RAIL NDC TEMPLATE

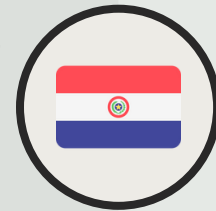
A comprehensive approach - Modal Shift

Make it

Convenient

- Integrated Transport and Land Use Planning.
- Technological Innovation

• Paraguay NDC highlights incorporation of passenger and freight rail transport strategies in territorial planning through Urban and Territorial Development Plans.



Affordable

- Subsidies and Incentives
- Regulatory Measures

• Moldova NDC refers to the “new (2019) Railway Transport Code”, establishes guidelines for state support in developing railway infrastructure, to boost investment and international freight competitiveness.



Desirable

- Public Awareness Campaigns

• Costa Rica's NDC highlights the impact of several SDGs related to the new Tren Eléctrico de Pasajeros in the Gran Área Metropolitana, while also addressing black carbon reduction and a just transition.





RAIL NDC TEMPLATE

A comprehensive approach - Network Expansion

Make it

Feasible

- Long -term Planning
- Investment priorities
- Turkey's NDC projects a railway investment of \$29 billion (2019 prices) by 2030, prioritizing the importance of railway sector to achieve sustainability targets.



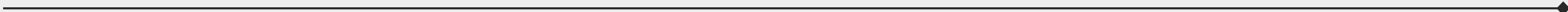
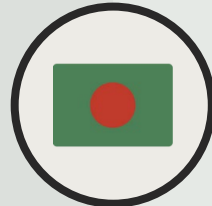
Scalable

- Building institutional capacity
- International standardization
- Tajikistan's NDC emphasizes goals to align all transport modes —including rail, road, air, and specialized services — with international standards.



Digitized

- Increased efficiency and capacity
- Seamless connectivity
- Bangladesh NDC sets goals for purchase of modern rolling stock and signaling system for railway, which will improve efficiency of rail services.





RAIL NDC TEMPLATE

A comprehensive approach - Electrification

Make it

Efficient

- Integrate Advanced Energy Efficient Technologies
- Modernization of rail operations
- Azerbaijan's NDC includes plans for electrifying railway lines and transitioning to an alternating current (AC) traction system, as part of the measures to reduce negative impacts from transport in the environment.



Renewable

- Prioritize Rail Electrification with Renewable Energy
- Myanmar's NDC proposes electric high speed railway networks powered by renewable energy as a means to reduce GHG emissions, subject to future bilateral or multilateral agreements.



Innovative

- Invest in Alternative Technologies
- Chile's NDC promotes shifting from private cars to bicycles or public transport and sets ambitious goals for using green hydrogen across various sectors, including transport.





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Thank you for your attention



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