Low-carbon Transport for Development

Trends and Recommendations for Islamic Development Bank Member Countries

IsDB

البنك الإسلامي للتنمية
Islamic Development Bank

Partnership on Sustainable
Low Carbon Transport

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Abbreviations and acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BAU	business as usual
BRT	bus rapid transport
CNG	compressed natural gas
CO	carbon monoxide
CO$_2$	carbon dioxide
DS	degree scenario
EDGAR	Emissions Database for Global Atmospheric Research
EV	electric vehicle
GDP	gross domestic product
Gg	gigagrams
GHG	greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GNI	gross national income
HDV	heavy-duty vehicle
ICE	internal combustion engine
IEA	International Energy Agency
INDC	Intended Nationally Determined Contribution
IsDB	Islamic Development Bank
LDV	light-duty vehicle
LPG	liquid petroleum gas
MC	member country
MENA	Middle East and North Africa
Mt	megatonnes
NAP	National Adaptation Plan
NAPA	National Adaptation Programmes of Action
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative
NO$_x$	nitrogen oxide
OECD	Organisation for Economic Co-operation and Development
OICA	Organisation Internationale des Constructeurs d'Automobiles
PM	particulate matter
PPM	parts per million
PPP	purchasing power parity
SDG	Sustainable Development Goal
SLoCaT	Partnership on Sustainable, Low Carbon Transport
SUMP	Sustainable Urban Mobility Plan
TDM	transport demand management
TraKB	Transport Knowledge Base
UIC	Union Internationale des Chemins de fer
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
WEF	World Economic Forum
WHO	World Health Organization
WRI CAIT	World Resources Institute Climate Analysis Indicators Tool

Foreword

The importance of transport to the global economy cannot be overemphasized. Mobility of people and goods remains vital for economic development and personal well-being of communities and nations. As the global human population increases, increased need for mobility investments is inevitable. Nevertheless, despite the importance of the transport sector, it remains one of the major emitters of greenhouse gases, accounting for approximately 25 per cent of global energy-related carbon dioxide emissions. In the context of sustainable development, low-carbon transport systems that meet wider social, economic and environmental needs are essential to help communities and cities achieve associated co-benefits in sectors including health, education, environment, economy and commerce.

In IsDB member countries, emissions from transport are projected to double between 2020 and 2050. Thus, urgent action is required to reverse this trend and to further increase the resilience of transport systems against the threats of climate change, especially in critically vulnerable IsDB member countries. To achieve this, we strongly believe that action is needed to accelerate the implementation of low-carbon transport options, especially in highly populated and rapidly urbanizing middle-income member countries.

This report on *Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries* presents a novel analysis of climate change impacts and opportunities in the transport sector in IsDB member countries. It includes targeted quantitative analyses and broad observations and recommendations on the current state of low-carbon transport, investment gaps and needs in these countries. And it provides an in-depth analysis of existing patterns and gaps in low-carbon transport investments, thus creating a starting point for making evidence-based decisions in the short term, and providing a foundation on which long-term policies and programmes can be built in IsDB member countries.

I believe IsDB's initiatives on low-carbon transport will undoubtedly complement concerted efforts towards achieving the global sustainable transport agenda by connecting people and communities to jobs, schools and health care, and in the delivery of goods and services to rural and urban communities; all of which help increase equal opportunities for all.

Investment in low-carbon transport need not translate into reduction in the overall quality of life in IsDB member countries, but rather showcases our determination to support our member countries in moving towards green development pathways in vital social and economic sectors.

Dr Bandar M.H. Hajjar
President, Islamic Development Bank

Acknowledgements

Executive summary

Islamic Development Bank member countries' challenges and needs

Islamic Development Bank (IsDB) member countries (MCs) face a number of challenges, including rapid urbanization, rising motorization rates, growing greenhouse gas emissions, climate change vulnerabilities, upstream capacity constraints and limited pipelines for infrastructure projects. Infrastructure stock in IsDB MCs is relatively low compared to population and increasing transport demand; therefore, more infrastructure for public transport, and especially urban rail systems, is a critical need.

In a business-as-usual scenario, transport emissions in IsDB MCs are projected to double between 2020 and 2050, and current mitigation ambition is insufficient in sub-regions/income groups with rapid growth. The majority of the projected growth in emissions among IsDB MCs up to 2050 is expected among those that are currently at lower emissions levels, and few IsDB MCs have developed long-term emissions reduction strategies.[1]

A diversity of transport conditions is observed within each IsDB sub-region and income group; thus, detailed policies must be defined around emerging groupings (e.g. the transport sector's share of carbon dioxide emissions is projected to increase most significantly in Southern Asia and Western Africa, and to decrease significantly in Western Asia). Therefore, a set of balanced transport and climate change solutions must consider specific country conditions complemented by sub-regional and income group characteristics.

At the same time, robust transport data are lacking for key indicators in many IsDB MCs; much potential analysis is thus constrained by data availability. There are few reliable data on passenger and freight transport activity (e.g. passenger- and ton-kilometres by mode and in total), and aggregated information on mode share in cities is not widely available in IsDB MCs.

Analysis of policy areas and responses

This report addresses the needs and challenges described through seven areas of analysis. A primary recommendation for each of these areas is given below, with supporting trends, best practices and recommended actions spelled out in more detail in the 'Conclusions and recommendations' section.

- **Transport drivers and demand**: The projected growth in motorization in IsDB MCs must be aggressively countered with a balanced set of measures to stabilize and reduce car ownership and use.

- **Transport emissions**: Rising emissions across IsDB sub-regions must be coupled with broad and balanced investments in low-carbon mobility options which bring significant and more equitable long-term, economy-wide benefits.

- **Transport mitigation (policy responses)**: To make a proportional contribution to Paris Agreement targets, more ambitious mitigation action is needed for transport in IsDB MCs.

- **Transport adaptation (policy responses)**: Adaptation and resilience measures must be mainstreamed in transport systems, as the infrastructure and services of most IsDB MCs are highly vulnerable to the impacts of climate change, especially in low-income countries and coastal/island states.

- **Urban transport**: Investments in urban mass transit in IsDB MCs must be accelerated to keep pace with the projected growth in urbanization.

- **Passenger and freight transport**: Sustainable freight transport requires further attention and investment in IsDB MCs, especially landlocked countries with high freight-to-passenger transport mode shares.

- **Road safety**: The number of road traffic accidents in IsDB MCs is rising at alarming rates, and bold and rapid action is needed to increase road safety measures.

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1   http://unfccc.int/focus/long-term_strategies/items/9971.php

General conclusions and areas for future work

The analysis in this report has yielded a number of general conclusions to support the specific recommendations:

- Priority issues require urgent action in several IsDB sub-regions (e.g. rail and green freight development in Central Asia, urban transport in Western Africa) and in highly populated and rapidly urbanizing middle-income countries, to be tailored to landlocked, coastal and island states.

- It is possible to design pathways for transport in developing countries to be both a driver for inclusive development and to offer benefits for climate change mitigation and adaptation.

- Integrated chain responses are needed to address challenges such as booming motorization (e.g. a shift to public transport, coupled with a shift to e-mobility and the associated necessary renewable power generation).

- Technical assistance is needed to strengthen data-collection processes and address data gaps in various sub-regions (ideally through concerted efforts among multilateral development banks and bilateral donors).

- IsDB is uniquely positioned to play a key role in helping MCs transition to a sustainable development pathway through increased provision of low-carbon transport.

The analysis also suggests several areas for future research and action to transform responses to transport and climate change among IsDB MCs:

- Expand analysis of transport adaptation actions in Nationally Determined Contributions (NDCs), National Adaptation Plans and National Adaptation Programmes of Action to identify gaps in peer country plans (e.g. extension of Gambia's recommendations to other sub-Saharan countries).

- Expand analysis of passenger and freight transport by selecting representative countries in each sub-region to determine an optimal mix of climate change mitigation and adaptation actions for each.

- Assess the steps involved in developing regional versions of the Global Macro Roadmap on Decarbonizing Transport[2] for IsDB sub-regions, and identify potential cooperating partners in countries with the highest emissions growth rates.

- Identify national and local transport 'climate champions' in MCs, and extend the impact of their efforts through engagement in global and regional networks related to urban transport (e.g. the Transport Decarbonisation Alliance).

- Facilitate the development of second-generation NDCs and long-term emissions-reduction strategies through joint action of transport and climate change divisions (in conjunction with the United Nations Framework Convention on Climate Change, the Partnership on Sustainable, Low Carbon Transport and other relevant groups).

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2 www.ppmc-transport.org/global-macro-roadmap/

Project background and overview

The Islamic Development Bank (IsDB) maintains a portfolio of projects in 57 member countries (MCs)[3] across the Middle East/North Africa (MENA) region, sub-Saharan Africa, Central, Southern and South-Eastern Asia, Southern Europe and Latin America. Total IsDB active commitments in the transport sector are in excess of US$8 billion, representing about 25 per cent of the active IsDB transport portfolio and distributed over more than 90 projects across more than 30 countries.

Total IsDB financing in the transport sector in 2016 alone amounted to US$1.7 billion out of a total of US$3.5 billion of infrastructure financing (i.e. 36 per cent and 75 per cent, respectively, of the bank's total project approvals in 2016). Nearly half (46 per cent) of approved IsDB transport financing was in the rail sector, 44 per cent was for roads, and 10 per cent was for urban mass-transit projects, with 50 per cent of financing for sub-Saharan African countries, 38 per cent for Central Asia and 12 per cent for the MENA region.[4]

In 2017, IsDB approved eight operations in eight countries with a total value of approximately US$1.3 billion. In contrast to recent years, 82 per cent of the approved transport financing was in the roads sub-sector, while the remaining 18 per cent was for the maritime/port sub-sector. The geographical distribution of these interventions was fairly balanced, with 36 per cent of the financing for sub-Saharan Africa, 25 per cent for Europe and Central Asia, 21 per cent for Asian MCs and 18 per cent for the MENA region.

Sustainable transport is crucial to achieving IsDB's development mandate in its MCs. More specifically, IsDB has a vision of human dignity for all and identifies the sustainable provision of economic and social infrastructure as one of five strategic pillars to achieve this. Sustainable transport is also a key driver of and contributor to the implementation of the global sustainable development agenda to which IsDB adheres.

Global agreements provide enabling conditions for sound legal and regulatory frameworks, capacity-building and knowledge-sharing, technological development, financing and investment, and mitigation and adaptation actions in the transport sector at the regional or global level.[5] Yet IsDB MCs face a number of obstacles that constrain the implementation of global agreements, including rapid urbanization, rising motorization rates, growing greenhouse gas (GHG) emissions, climate change vulnerabilities and other development challenges, such as upstream capacity constraints and limited pipelines for infrastructure projects.

Climate change is gaining in importance as a policy driver for the transport sector in IsDB MCs. This applies both to mitigation of and adaptation to climate change. IsDB is addressing the growing importance of this topic in its emerging transport and climate change policies. In addition, urban areas in IsDB MCs are characterized by growing transport-related challenges such as congestion, poor public transport infrastructure and air pollution. The lack of quality municipal public transport often leads citizens to switch to private cars or informal transport providers, and thus urban transport is dominated by unsustainable modes.

Many IsDB MCs are particularly vulnerable to observed and projected climate change impacts, due to their predominant location in equatorial and arid regions. Thus, IsDB-funded infrastructure in general and transport systems in particular should be designed with climate adaptation and resilience in mind, to increase sustainability and return on investment. In addition, many IsDB MCs are highly urbanized and/or rapidly urbanizing. For example, the MENA region is one of the most urbanized regions in the world. In 2010, 56 per cent of the region's population lived in cities, and this figure is expected to reach 68 per cent by 2050, with the majority of urban growth projected in secondary cities. Other IsDB sub-regions follow similar trends. Urbanization in IsDB regions is

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3   www.isdb.org/irj/portal/anonymous?NavigationTarget=navurl://9c2f799fdba05fd8b547aa0e2027b7c9
4   MDB Working Group on Sustainable Transport (forthcoming) Progress Report (2016–2017).
5   United Nations Centre for Regional Development (2017) 2030 Vision for Sustainable Transport in Asia: Aligning Government Policies with Sustainable Development Goals. Nagoya.

driven by economic development, migration to oil-rich countries, drought and conflict, with the relative importance of these factors varying by sub-region.[6]

The Partnership on Sustainable, Low Carbon Transport (SLoCaT)[7] promotes the integration of sustainable transport into global policies on sustainable development and climate change, and leverages action in support of the implementation of these global policies. Its thematic scope is land transport in developing countries, including freight and passenger transport and motorized and non-motorized transport. The policies proposed by SLoCaT are universal, but the geographical scope is mainly for developing countries, with current primary focus areas being Asia, Africa, Latin America and the Middle East.

This analysis is the result of a memorandum of agreement between IsDB and SLoCaT. A joint IsDB–SLoCaT project focusing on urban transport and climate change in IsDB MCs could help MCs achieve the targets and meet the reporting requirements of the global processes addressing these areas. A joint project would also facilitate the analysis of key data on transport and climate change in IsDB's 57 MCs, which account for more than a quarter of United Nations (UN) Member States.

The partnership between IsDB and SLoCaT is intended to:

- provide support to IsDB headquarters and in-country staff to develop policies on transport and climate change, as well as sustainable urban transport;

- build analysis of trends (i.e. add value to data compilation) and conduct gap analysis (e.g. identify opportunities for expanding key policies); and

- provide evidence-based policy recommendations to pre-empt potential project issues, with measures tailored to sub-regional and income group context.

The following sections in this report contain an analysis of transport and climate change in IsDB MCs by SLoCaT, which includes quantitative assessments based on available data. The analysis is followed by conclusions and recommendations. An annex to the main report contains tables with more detailed transport data on IsDB MCs.

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6 Schäfer, K. (2013) 'Urbanization and Urban Risks in the Arab Region'. Presentation for the 1st Arab Region Conference for Disaster Risk Reduction, 19–21 March, Aqaba, Jordan (www.preventionweb.net/files/31093_habitataqabaurbanresillience.pdf).

7 www.slocat.net

Country classification

The following analysis applies to the 57 IsDB MCs, income groups and/or sub-regions depending on data availability and quality, and the desired interpretation of outcomes. The **sub-regional grouping** of countries is based on the official UN classification of regions,[8] by which IsDB MCs are divided among five regions and 10 sub-regions (Table 1).

IsDB MCs are spread across four continents and several climate zones. The size and population of MCs is highly diverse. Some countries are landlocked, which can lead to economic disadvantages (e.g. no direct access to sea freight), while others are islands..

Table 1: Classification of MCs by region/sub-region

Region	Sub-region	Countries		
Asia	**Central Asia**	Kazakhstan* Kyrgyzstan* Tajikistan*	Turkmenistan* Uzbekistan*	
	South-Eastern Asia	Brunei Darussalam Indonesia Malaysia		
	Southern Asia	Afghanistan* Bangladesh Iran (Islamic Republic of)	Maldives Pakistan	
	Western Asia**	Azerbaijan* Bahrain Iraq Jordan Kuwait	Lebanon Oman Palestine Qatar Saudi Arabia	Syrian Arab Republic Turkey United Arab Emirates Yemen
Sub-Saharan Africa	**Eastern Africa**	Comoros Djibouti Mozambique	Somalia Uganda*	
	Central Africa[9]	Cameroon Chad* Gabon		
	Western Africa	Benin Burkina Faso* Côte d'Ivoire Gambia (Republic of the) Guinea	Guinea Bissau Mali* Mauritania Niger* Nigeria	Senegal Sierra Leone Togo
Northern Africa	**Northern Africa****	Algeria Egypt Libya	Morocco Sudan Tunisia	
Latin America	**South America**	Guyana Suriname		
Europe	**Southern Europe**	Albania		

* = landlocked countries
** These are official UN regions; the MENA region is an overlap of Northen Africa and Western Asia

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8   UN Stats, Geographic Regions (https://unstats.un.org/unsd/methodology/m49/).
9   In this report, 'Central Africa' is used to signify the 'Central Africa' region used by the UN when categorizing geographical sub-regions.

Income grouping follows the World Bank classification,[10] which uses gross national income (GNI) per capita in 2016 to set thresholds for low-income countries (GNI of US$1,005 or less); combined lower- and upper-middle-income countries (GNI between US$1,006 and US$12,235); and high-income countries (GNI of US$12,236 or more) (Table 2).

Sixty per cent of IsDB MCs are middle-income countries, 28 per cent are low-income countries, and 12 per cent are high-income countries. It is noticeable that 16 of the 31 low-income countries globally are IsDB MCs, while many IsDB MCs have graduated to middle-income status[11] in the past 10 years, including Bangladesh, Côte d'Ivoire, Kyrgyzstan, Mauritania, Nigeria, Pakistan, Senegal, Sudan, Tajikistan, Uzbekistan and Yemen. For more on emissions trends related to income groupings, see Figure 11 and the discussion in Section II.

Table 2: Classification of MCs by income level

Low-income countries (16 countries)		Middle-income countries (34 countries)		High-income countries (7 countries)
Afghanistan*	Mali*	Albania	Libya	Bahrain
Benin	Mozambique	Algeria	Malaysia	Brunei Darussalam
Burkina Faso*	Niger*	Azerbaijan*	Maldives	Kuwait
Chad*	Senegal	Bangladesh	Mauritania	Oman
Comoros	Sierra Leone	Cameroon	Morocco	Qatar
Gambia (Republic of the)	Somalia	Côte d'Ivoire	Nigeria	Saudi Arabia
Guinea	Togo	Djibouti	Pakistan	United Arab Emirates
Guinea Bissau	Uganda*	Egypt	Palestine	
		Gabon	Sudan	
		Guyana	Suriname	
		Indonesia	Syrian Arab Republic	
		Iran (Islamic Republic of)	Tajikistan*	
		Iraq	Tunisia	
		Jordan	Turkey	
		Kazakhstan*	Turkmenistan*	
		Kyrgyzstan*	Uzbekistan*	
		Lebanon	Yemen	

* = landlocked countries

10 World Bank, World Bank Country and Lending Groups (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

11 www.cgdev.org/blog/which-countries-have-graduated-each-income-group-and-when

Data availability

Prior to conducting the analysis of transport and climate change in IsDB MCs, an overall assessment of data was conducted by SLoCaT and other external partners and stakeholders to identify data gaps, clarify the availability of different types of transport data, and determine what kind of analysis was possible. A majority of the data sets are synthesized in the Transport Knowledge Base (TraKB)[12] developed by SLoCaT.

To better understand how much information can be accessed, an overview of the availability of data for IsDB MCs in major data sets was compiled. Table 3 shows total data availability for all years (and for the most recent year) of each data set. It is divided into infrastructure size and activity, vehicle stock, road safety, emissions, and performance assessments.

Table 3: Assessment of transport data availability in IsDB MCs

Theme	Topic	Coverage	Total data availability (% of all IsDB MCs)	Data availability for most recent year (%)
Infrastructure size and activity (Data from OECD, UIC, World Bank)	**Road network size**	1990–2015	48.00	3.50
	Road passenger activity (passenger-km)	1970–2015	6.56	1.75
	Share of paved roads	Most recent year	−	89.47
	Road freight activity (ton-km)	1970–2015	8.70	12.28
	Rail network size	1980–2016	36.75	21.05
	Rail passenger activity (passenger-km)	1980–2015	36.45	15.79
	Rail freight activity (ton-km)	1980–2016	39.17	12.28
	Share of electrified rail	1975–2013	0.00	0.00
	Aviation activity (passengers carried)	1970–2016	79.84	84.21
	Air freight carried (ton-km)	1970–2016	77.90	70.18
	Container port traffic	2000–2016	44.27	68.42
Vehicle stock (Data from OICA)	**Vehicle stock**	2005–2015	73.68	73.68
	Passenger vehicles	2005–2014	70.18	70.18
	Commercial vehicles	2005–2014	71.23	71.23
Road safety (Data from WHO)	**Road traffic fatalities**	2000–2013	99.00	100.00
	Road traffic fatalities by group	2013	−	52.63
	Road safety laws	2013	−	92.93
	Cost of fatalities	2010	−	89.47

(continued next page)

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12   The TraKB is available at www.slocat.net/sites/default/files/trakb_version_0-1_0.xlsx

Theme	Topic	Coverage	Total data availability (% of all IsDB MCs)	Data availability for most recent year (%)
Emissions (Data from EDGAR, GIZ, IEA, OECD, UNFCCC, WRI CAIT)	**Total economy-wide emissions**	1990–2013	96.42	94.74
	Transport emissions	1990–2013	72.08	70.18
	CO_2 emissions from international maritime bunkers	1971–2014	52.27	63.16
	CO_2 emissions from domestic navigation	1960–2014	51.93	70.18
	CO_2 emissions from international aviation	1971–2014	68.58	75.43
	CO_2 emissions from domestic aviation	1960–2014	51.93	70.18
	CO_2 emissions per km (LDVs only)	2005–2015	8.11	5.26
	Transport NO_x emissions	1970–2010	98.12	98.25
	Transport black carbon emissions	1970–2010	98.12	98.25
	Fuel economy for LDVs	2005–2015	6.14	7.02
	Share of biofuels in road transport energy consumption (%)	2000, 2005, 2010–2014	3.50	3.50
	Fuel quality and vehicle emission standards	Most recent year	–	92.98
	Diesel and gasoline sulphur levels	Most recent year	–	70.18
	Infrastructure investments	1995–2015	4.93	5.26
	Fuel prices (diesel and gasoline)	1991–2016	78.54	89.47
Performance assessments (Data from UNCTAD, World Bank, WEF)	**Logistics performance index**	2007–2016	88.07	91.23
	Liner shipping connectivity index	2004–2016	77.19	77.19
	Quality of infrastructure	2007–2017	68.25	66.66

I. Transport drivers and demand

Global growth in carbon dioxide (CO_2) emissions from transport has been driven by growth in demand and a corresponding growth in the levels of activity in various transport modes. A sound understanding of the present and future composition of transport demand around the world is, therefore, an essential starting point for examining the best low-carbon solutions for IsDB MCs.

Figure 1 illustrates the share of IsDB MCs relative to global values for major aspects related to socio-economic factors (population, gross domestic product (GDP)), vehicle stock, infrastructure (roads, railways, bus rapid transport (BRT), urban rail), emissions (CO_2, black carbon, NO_x), fatalities and fuel quality.[13]

Around a quarter (24 per cent) of the world's population and 22 per cent of its urban population live in IsDB MCs, but these countries contribute just 8 per cent of global GDP. They account for 9–11 per cent of road, rail and BRT

Figure 1: IsDB MCs' share of selected global indicators[14]
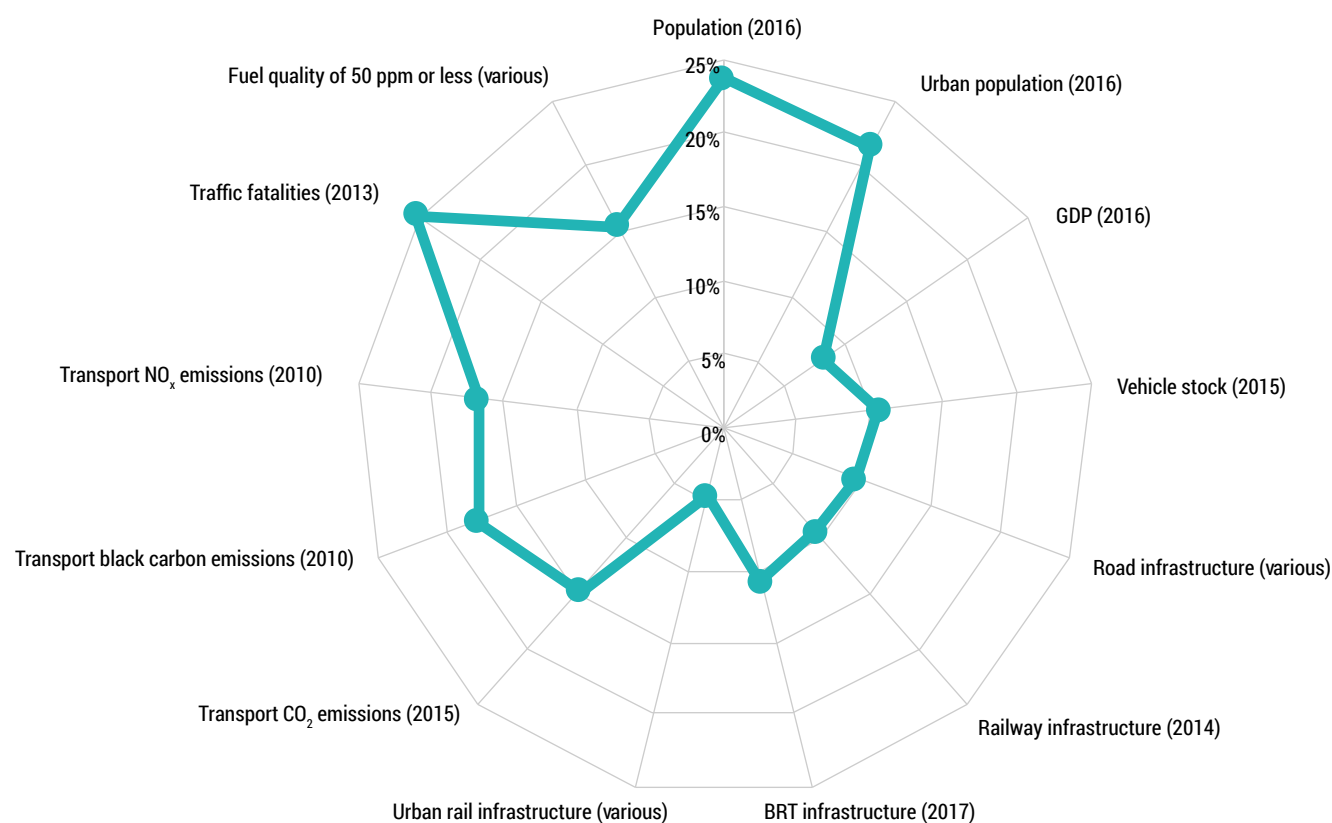
13   The reference table for the global indicators can be found under Reference Table 1 of Annex II.
14   SLoCaT calculations using UN Stats, World Bank, OICA, BRT Data, TraKB, IEA, EDGAR, WHO and UNEP.

infrastructure, but for only 5 per cent of urban rail systems.

Transport CO_2 emissions in IsDB MCs account for 15 per cent of the global total, well below a proportionate share for the size of their population; however, as shown in country factsheets (see Annex III), the large majority of emissions originate from road transport. While the vehicle stock in IsDB MCs accounts for 10 per cent of the global fleet, the high proportion of CO_2 emissions emanating from transport indicates the low fuel efficiency of vehicles. The fuel quality indicator shows that only 16 per cent of countries with fuel quality of 50ppm or less are IsDB MCs. Further, as more countries experience growing prosperity, the vehicle stock is likely to expand, and CO_2 emissions can be expected to increase.

The level of road traffic fatalities is the most notable aspect of the comparison, with 25 per cent of global road traffic fatalities occurring in IsDB MCs, slightly higher than would be expected based on population size. Road traffic fatalities are analysed further in Section VII of this report.

Global indicators also show that infrastructure stock in IsDB MCs is low compared to population and increasing transport demand. More infrastructure to accommodate the needs for public and mass transport, especially urban rail systems, is recommended.

Historically, growth in the demand for passenger and freight transport has been closely correlated with growth in population, urbanization, economic activity and trade. Transport is a key enabler of economic activity and trade, and higher incomes lead to higher demand for goods and services. Growth in per capita incomes in various countries and regions tends to lead to increased ownership and use of private vehicles, and this trend can continue for many years before eventually slowing.

Figure 2 analyses the anticipated changes in population, urban population, transport emissions and GDP by region between 2010 and 2050.[15]

The total population of IsDB MCs is projected to increase from 1.569 billion people in 2010 to 2.909 billion people by 2050. The distribution of the population in IsDB regions is projected to change rapidly over the next few decades: sub-Saharan Africa, for example, representing about a quarter of the total population of IsDB MCs in 2010, will grow faster than other regions and is expected to represent up to 26 per cent of the total population of IsDB MCs by 2050. The largest population share among IsDB MCs will remain in Asia, up from 62 per cent in 2010 to 65 per cent in 2050, but the concentration of the population will be different among Asian sub-regions, with Western Asia alone experiencing a boom from 14 per cent of the total IsDB MC population in 2010 to 26 per cent in 2050. The share of the population of IsDB MCs in Africa will increase from 37 per cent to 48 per cent of the total.

The population share of IsDB MCs in Western Africa is expected to increase rapidly by 2050, with a projected share of 26%, while those in Eastern Africa and Central Africa are expected to increase at relatively lower rates of 1–3 per cent. The population shares of South-Eastern and Southern Asia are expected to decrease by 4 per cent, with Central Asia and Northern Africa expected to decrease by 1 per cent.

Regarding the urban population, 727 million people lived in cities in IsDB countries in 2010. According to the UN, this figure is projected to reach 1.773 billion people by 2050. The urbanization rate will increase from 46 per cent in 2010 to 60 per cent in 2050, which clearly shows that urbanization will dominate population growth in the coming decades. The urban population in Western Africa will increase dramatically from 112 million people in 2010 (and 146 million in 2016) to 471 million people in 2050, which will make it the IsDB sub-region with the largest total urban population. Consequently, urban transport needs are expected to boom over this period, and greater efforts are needed to provide effective urban transport solutions.

A smaller but noticeable increase (less than 2 per cent) in the share of the urban population

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15　Reference Table 2 in Annex II gives detailed numbers on the visualized indicators.

Figure 2: Share of GDP, population, urban population and transport CO_2 emissions by IsDB sub-region[16]

Population share (2010 and 2050)

Population (2010) ● Population (2050)

Urban population share (2010 and 2050)

Urban population (2010) ● Urban population (2050)

Transport CO_2 share (2010 and 2050)

Transport CO_2 (2010) ● Transport CO_2 (2050)

GDP share (2010 and 2050)

GDP (2010) ● GDP (2050)
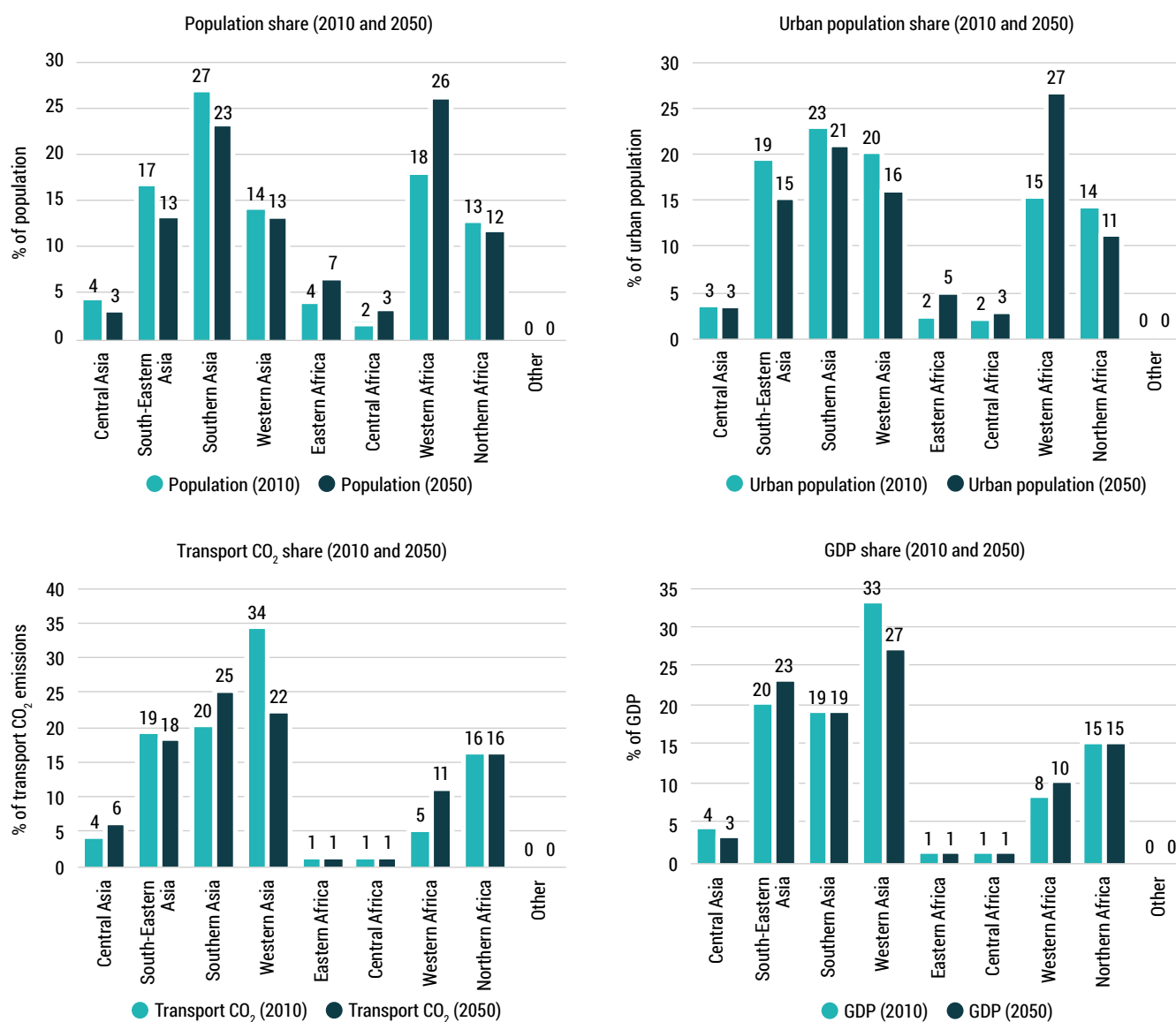
is expected in Eastern and Central Africa. In other sub-regions, urbanization is levelling off, and the relative share of the urban population is stable or decreasing slightly, with South-Eastern Asia expecting the largest decrease, of 4 per cent. A detailed breakdown by region and income group is provided in Figure 27 in Section V.

In terms of the regional distribution of CO_2 emissions from transport, the share is projected to increase most significantly in Western Africa (by 6 percentage points) and Southern Asia (by 5 percentage points). With Western Asia's share of total IsDB MC CO_2 emissions from transport decreasing from 35 per cent to 22 per

cent, Southern Asia is expected to become the largest emitter of CO_2 from transport among IsDB regions.

The distribution of GDP among IsDB regions is also expected to change over time, with the share of South-Eastern Asia and Western Africa projected to grow by 2–3 percentage points by 2050. With rapid economic development in these two regions, Western Asia's share of total GDP in IsDB MCs, though still dominant, will decrease by 6 percentage points by 2050, while the contribution of other sub-regions will remain largely constant.

16   Source: SLoCaT calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/), 2050-Calculator (www.2050.org.uk/calculators), UN Population Trends (www.un.org/en/development/desa/population/) and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

Figure 3: Motorization rates in IsDB MCs (2015)[17]

Motorization rate
(vehicles per 1,000 people)
- ○ 0−50
- 50−100
- 100−150
- 150−250
- 250−400
- 400−721
- No information

Latin America
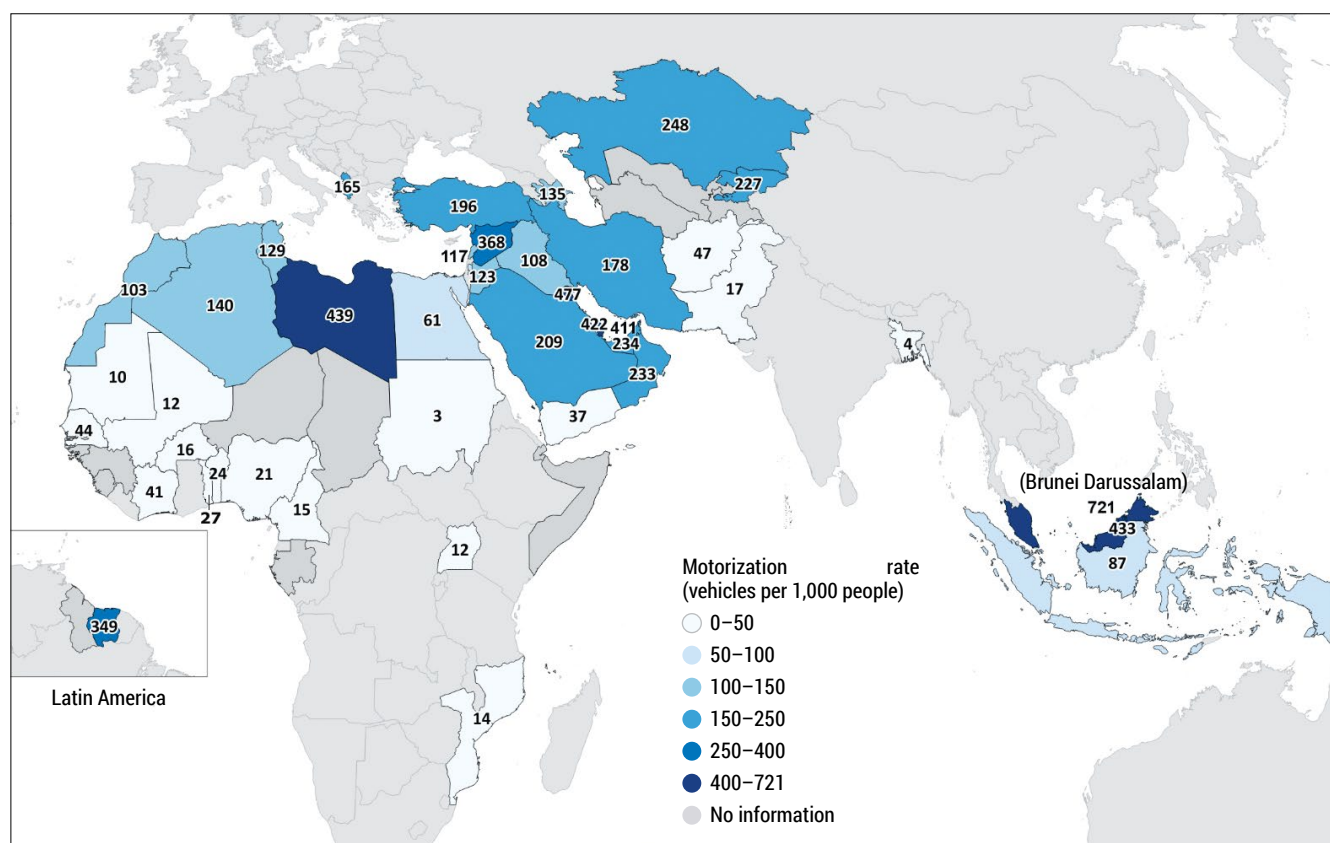
Population and GDP growth are projected to affect private motorization across IsDB sub-regions (Figure 3). Between 2005 and 2015, the average motorization rate in IsDB MCs grew from 47 to 76 vehicles per 1,000 people. While this is less than half of the global motorization rate of 173 vehicles per 1,000 people, the growth rate in IsDB MCs (61 per cent) is more than double the global growth rate of 27 per cent.[18] This reflects in particular the rapid graduation from low-income to middle-income status among a number of IsDB MCs[19] and the booming demographic changes in some MCs.

High motorization rates were recorded in 2015 in Brunei Darussalam, Libya and Malaysia, exceeding sub-regional averages and the IsDB average of 76 vehicles per 1,000 people. Countries in sub-Saharan Africa and Bangladesh have very low motorization rates. Motorization growth from 2005 to 2015 was primarily driven by Azerbaijan,

Table 4: IsDB MCs with a high motorization growth rate

Country	Income group	Motorization rate (vehicles per 1,000 people)	Growth rate (2005−2015)
Azerbaijan	Middle-income	135	94%
Brunei Darussalam	High-income	720	202%
Indonesia	Middle-income	87	118%
Kazakhstan	Middle-income	248	119%
Kyrgyzstan	Middle-income	227	168%

17   Map based on OICA (www.oica.net/category/vehicles-in-use/).

18   The reference table for motorization rates can be found under Reference Table 3 of Annex II.

19   IsDB MCs graduating from low- to middle-income status in the past 10 years include Bangladesh, Côte d'Ivoire, Kyrgyzstan, Mauritania, Nigeria, Pakistan, Senegal, Sudan, Tajikistan, Uzbekistan and Yemen (www.cgdev.org/blog/which-countries-have-graduated-each-income-group-and-when).

Table 5: Motorization rate and growth rate of selected non-IsDB MCs

Country	Income group	Motorization rate (vehicles per 1,000 people)	Growth rate (2005–2015)
Brazil	Middle-income	208	68%
China	Middle-income	116	388%
Ethiopia	Low-income	2	-7%
Germany	High-income	593	-2%
Haiti	Low-income	7	-5%
India	Middle-income	22	144%
Liberia	Low-income	14	-9%
Madagascar	Low-income	27	254%
Mexico	Middle-income	297	49%
Philippines	Middle-income	38	12%
Russia	Middle-income	357	64%
South Africa	Middle-income	174	23%
USA	High-income	826	2%

Brunei Darussalam, Indonesia, Kazakhstan and Kyrgyzstan (see Table 4), though some IsDB MCs showed a decrease in motorization rates, including Bahrain (-5 per cent), Lebanon (-11 per cent) and Qatar (-4 per cent).

Table 5 shows the motorization rate of selected other (non-isDB) countries across the various income groups and regions for benchmarking purposes. The IsDB MCs from Table 4 generally have a relatively high motorization growth rate compared with many middle-income countries (with the exception of China and India).

Figure 4: Average motorization growth rates by income group[20]

Figure 4 compares the growth of the average motorization rate in IsDB MCs against global averages by income group. The average rates in IsDB MCs are higher than the global average for their respective income groups. The growth rates in low- and middle-income IsDB MCs are slightly higher than the global averages, but a starker difference is seen among high-income countries: a 33 per cent growth in high-income IsDB MCs is considerably higher than the global growth rate among high-income countries of 14 per cent.[21]

Figure 5 illustrates motorization trends in relation to GDP growth by showing the projected growth rates of selected IsDB MCs from 2010 to 2030, based on available data from various sources.

Rapid motorization increases are projected across IsDB sub-regions and MCs, including Bangladesh (South-Eastern Asia), Kazakhstan (Central Asia), Maldives (Southern Asia) and Uzbekistan (Central Asia). Motorization rates will increase in these countries faster than the growth in GDP per capita. The motorization rate in Uzbekistan will accelerate from an estimated 1.9 vehicles per 1,000 people in 2010 to 145.95 vehicles per 1,000 people in 2030. The rapid expected growth in Uzbekistan is likely

20   OICA and UN statistics.
21   The country factsheets (see Annex III) give detailed information on the growth of each country's motorization rate between 2005 and 2015.

Figure 5: Projected motorization rates (2010–2030)[22] in comparison to GDP per capita
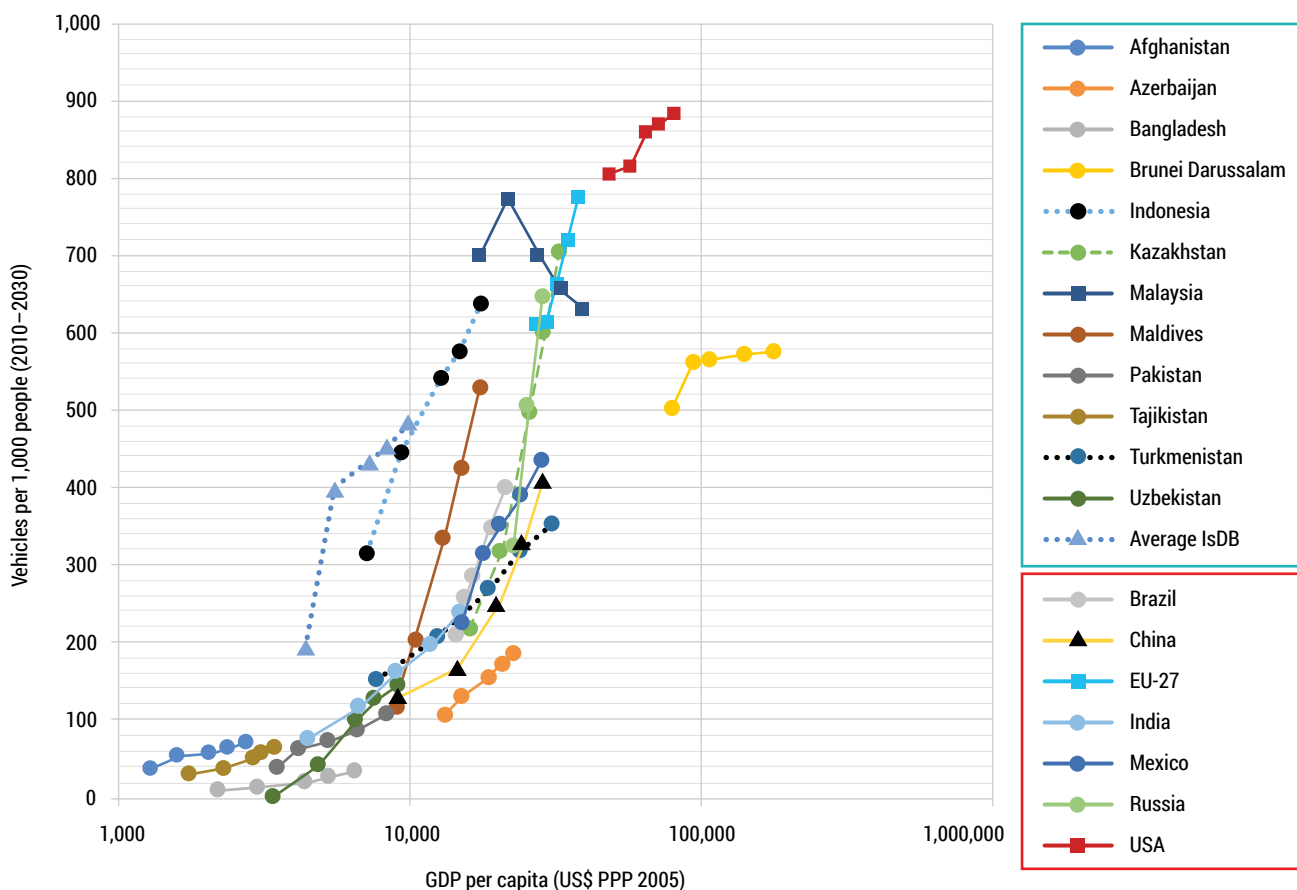
due to a very high dependency on road transport for passenger and freight transport and a very low motorization level in 2010.[23] For Maldives, growth of 315 per cent is projected, and the rate in Bangladesh might grow by 236 per cent. Kazakhstan, a landlocked country which is already above the current average global motorization rate of 173 vehicles per 1,000 people, will further expand its private vehicle fleet by 223 per cent up to 2030 under current projections.

The average growth rate for the IsDB MCs shown is projected to be 149 per cent up to 2030. By comparison, for the 27 Member States of the European Union, it is projected to be 26 per cent,

in Brazil and Mexico around 90 per cent, and in China and India over 200 per cent between 2010 and 2030.

Despite this alarming growth of motorization rates in IsDB MCs, some countries are tackling the issue and are engaged in reduction strategies. For example, Malaysia is expected to reduce its motorization rate by 10 per cent between 2015 and 2030 due to an ambitious National Land Public Transport Master Plan, with the goal of achieving a modal share of 40 per cent for public transport in urban areas through the expansion of light rail transit, metro and BRT systems.[24]

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22   Source: SLoCaT calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/) and 2050-Calculator (www.2050.org.uk/calculators).

23   More information on the growth of motorization in Uzbekistan can be found at ADB Transport Data (http://transportdata.net/country_profile/main?c=Uzbekistan&id=38).

24   Malaysia's National Land Public Transport Master Plan (www.spad.gov.my/sites/default/files/national-land-public-transport-master-plan-final-draft.pdf).

II. Transport emissions

Fuel combustion is the largest of human activities producing GHGs, accounting for 68 per cent of global GHG emissions in 2014, and the transport sector is the least diversified energy end-use sector. Oil is the predominant fuel used for passenger and freight transport by road, water and air, and accounts for nearly 95 per cent of global transport fuel combustion.[25]

Transport lags behind other energy sectors in its use of renewable energy. Globally, about 50 per cent of renewable energy is used in the residential, commercial and public sectors, while in Organisation for Economic Co-operation and Development (OECD) countries a similar proportion is used to generate electricity.[26] In 2015, transport only consumed between 3 and 4 per cent of renewable energy globally.[27]

This section will analyse the relative growth in CO_2 emissions from transport among IsDB MCs. Figure 6 compares the distribution of CO_2 emissions from transport by country in selected IsDB MCs in 2000, 2015 and 2050, based on a business-as-usual (BAU) scenario.

Between 2000 and 2015, the contributions of Iran and the United Arab Emirates to total transport CO_2 emissions in IsDB MCs decreased very slightly (by 1 percentage point), while the contributions of Saudi Arabia, Indonesia and Turkey increased slightly

(also by 1 percentage point). The contributions of all other countries remained largely constant.

A major shift is expected by 2050 among IsDB MCs: while 50 per cent of total CO_2 emissions from transport in IsDB MCs in 2015 were generated by just four countries, by 2050 the distribution of emissions will be more diversified, with half of

Figure 6: Share of CO_2 emissions from transport by country (2000, 2015 and 2050)[28]

Saudi Arabia · Iran (Islamic Republic of) · Indonesia · Turkey · Malaysia · Egypt · Algeria · Pakistan · United Arab Emirates · Iraq · Rest of IsDB MCs
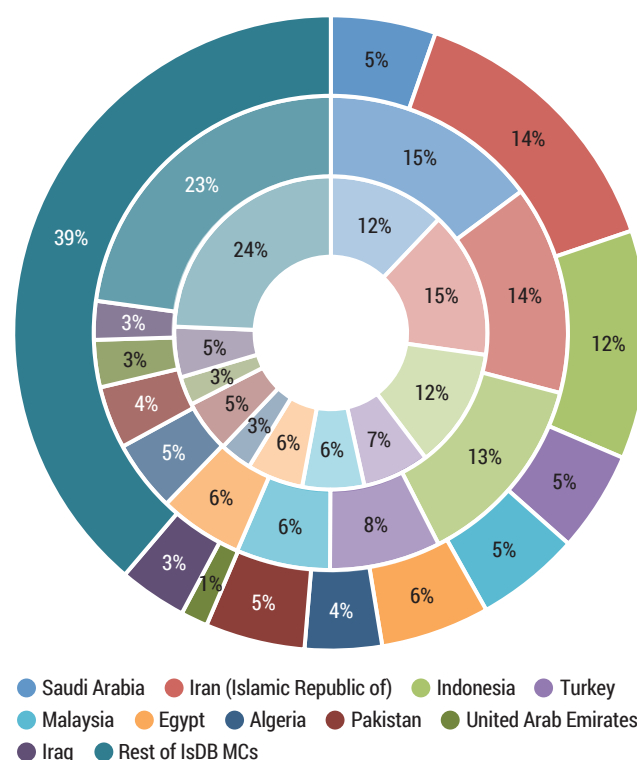
Notes: Inner ring = 2000 emissions share; Middle ring = 2015 emissions share; Outer ring = 2050 BAU emissions share. Not all totals add up to 100% due to rounding.

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25 BP (2007) Energy Outlook 2007. London (www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf).

26 SLoCaT analysis on renewable energy and transport (www.slocat.net/news/1567).

27 BP (2007) Energy Outlook 2007. London (www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf); IEA (2017) Renewables 2017. Paris (www.iea.org/publications/renewables2017/).

28 Source: Calculations using IEA data on CO_2 emissions from fuel combustion, and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

Figure 7: Historical and projected BAU transport CO_2 emissions by IsDB sub-region[29]

Legend: Central Asia · South-Eastern Asia · Southern Asia · Western Asia · Eastern Africa · Central Africa · Western Africa · Northern Africa · Southern Europe · South America
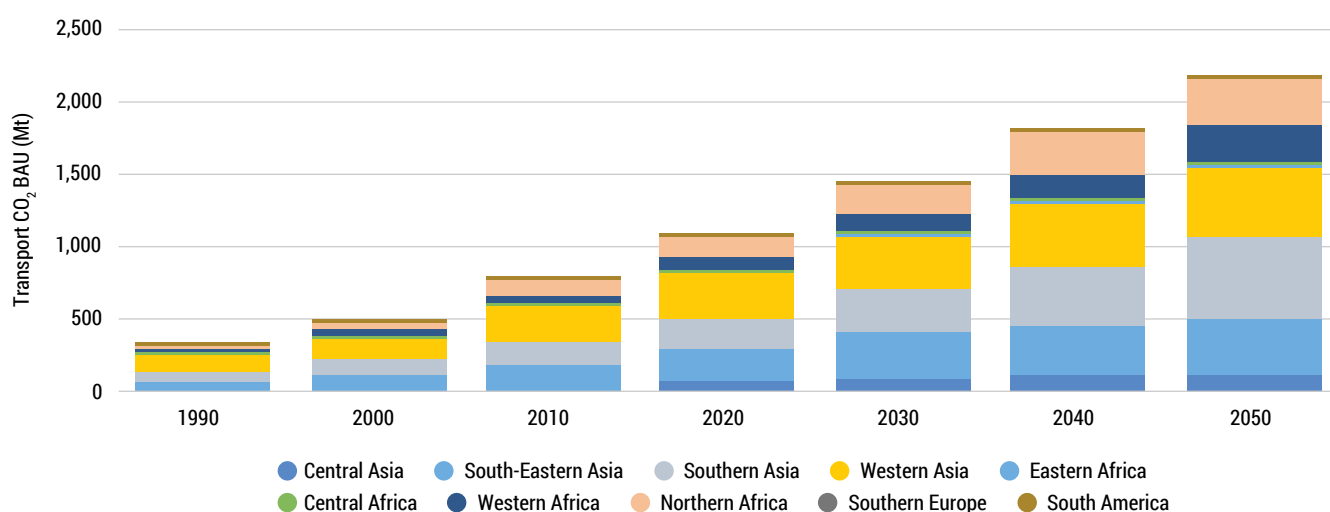
Figure 8: Historical and projected BAU transport CO_2 emissions by income group for IsDB MCs[30]

Legend: Low-income · Middle-income · High-income
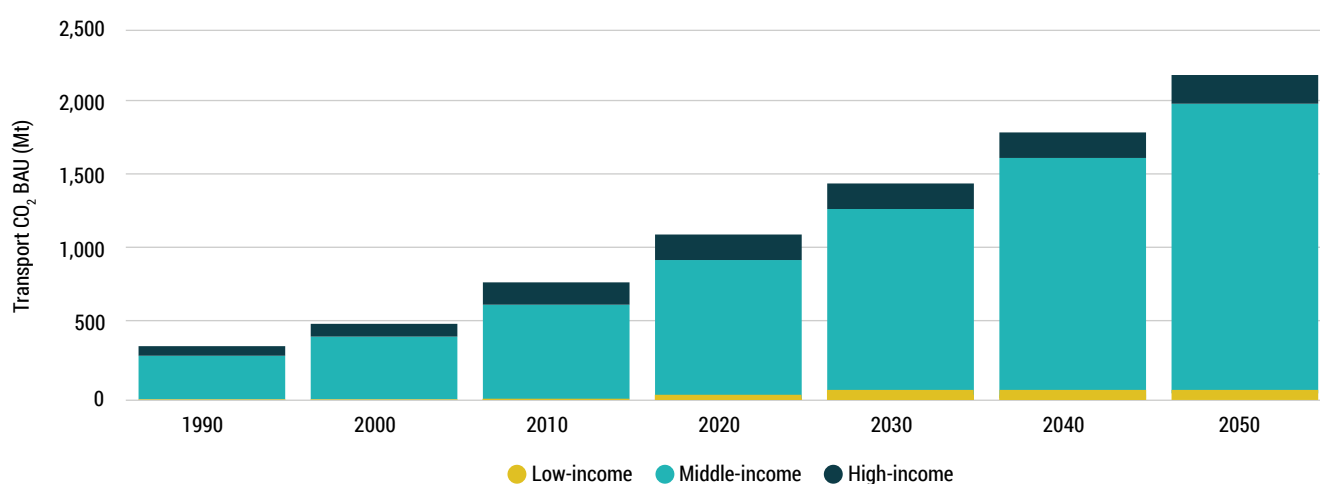
them generated by seven countries, and the share of smaller emitters increasing from 25 to 40 per cent of total emissions. Additional data and low emissions scenarios are required for a full analysis of other IsDB MCs, particularly in Africa.

Figure 7 shows the historical and projected BAU growth of transport CO_2 emissions by IsDB sub-region from 1990 to 2050, and Figure 8 breaks down this emissions growth by income group.

It is projected that transport CO_2 emissions in IsDB MCs will double between 2020 and 2050 under the BAU scenario. Emissions will increase most significantly in Western Africa and Southern Asia, and the main growth will be in middle-income countries.

In 2010, high-income countries accounted for close to half of global transport-sector emissions; by 2050 this share is projected to decrease to about 15 per cent under an average low-carbon scenario. The share of middle-income countries' 2050 transport emissions would increase to 66 per cent under a low-carbon scenario, mainly due to greater reductions in transport emissions in high-income countries than in middle-income countries. Under an average low-carbon scenario, transport emissions are expected to peak around 2030 in middle-income countries and are expected to continue to rise beyond 2050 in low-income countries.

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29   Source: Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

30   Ibid.

Figure 9: Country rankings by per capita emissions from transport[31]
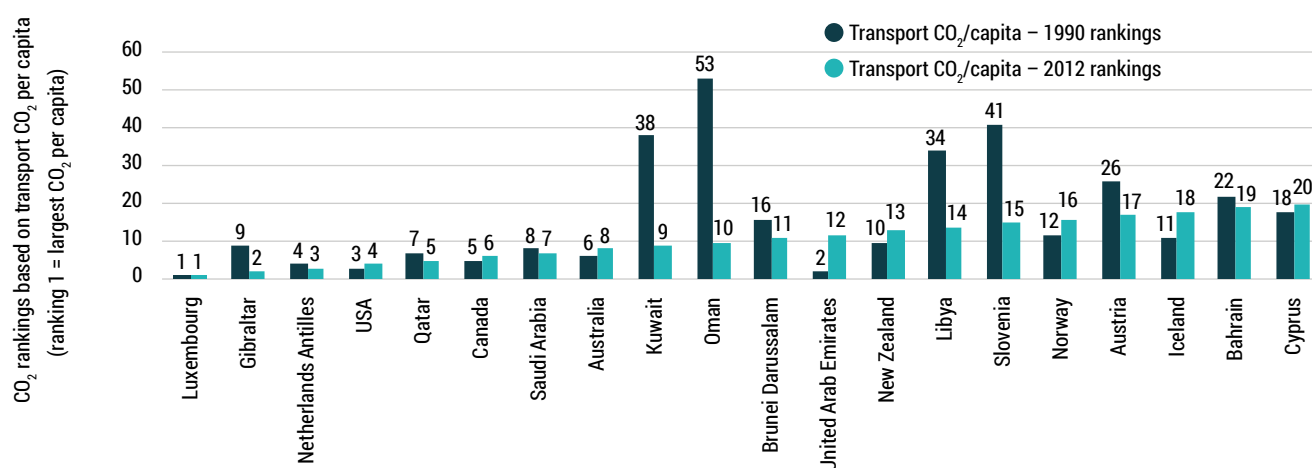
Differences among high- and middle-income countries could be explained by a number of factors. First, there may be a greater incentive in general for governments in developed countries to adopt low-carbon transport pathways, and thus, there are generally more mitigation studies for high-income countries, and on average the targets in these studies are more ambitious. Second, high-income countries are in general experiencing less growth than middle-income countries, and thus BAU projections are generally rising faster in middle-income countries.[32] Third, increased car ownership in highly populated middle-income countries is contributing to a rapid increase in transport emissions.

A ranking of per capita transport emissions between 1990 and 2012 demonstrates the increase in transport emissions among countries graduating to middle- and high-income status (including some IsDB MCs), which in the short term is commonly tied to rising automobile ownership and use (Figure 9).

In addition, countries which consistently kept gasoline prices above US$1/litre between 2000 and 2012[33] show clear reductions in the growth of transport emissions, and countries with gasoline prices above US$0.7/litre (e.g. many OECD countries) show only a marginal increase in the growth of transport emissions. However, countries that kept gasoline prices artificially low due to fuel subsidies saw transport CO_2 emissions grow rapidly between 2000 and 2012. This underscores the need for countries with higher rates of automobile ownership to accelerate and scale up low-carbon transport pathways, and to make progress in pricing carbon and phasing out fossil fuel subsidies to achieve climate goals.[34] The recent taxation of fuel in some IsDB MCs (especially within the Gulf Cooperation Council) is expected to slow down the emissions increases that have been observed in recent years.

Under the Paris Agreement, 80 per cent of all proven fossil fuel reserves will be made uneconomical by regulation or technological change; thus, investments in fossil fuels risk becoming stranded assets. This issue is particularly critical for IsDB MCs with heavy reliance on the petroleum industry. One countervailing example can be seen in Indonesia's fossil fuel subsidy reforms in 2015,[35] which resulted in savings of US$15.6 billion, or 10 per cent of the state budget. The savings were used to increase government resources for infrastructure, including the Ministry of Transportation's budget, which increased by 45 per cent, with a focus on transportation to

31   Source: SLoCaT, Analysis of Transport Emission Trends (www.ppmc-transport.org/slocat-analysis-of-transport-emission-trends/).

32   SLoCaT (forthcoming) Decarbonising Transport to Achieve Paris Agreement Targets. Bonn.

33   We consider the period 2000–2012 by considering fuel prices for 2000, 2008 and 2012.

34   SLoCaT, Analysis of Transport Emission Trends (www.ppmc-transport.org/slocat-analysis-of-transport-emission-trends/).

35   www.iisd.org/sites/default/files/publications/financing-development-with-fossil-fuel-subsidies-indonesia.pdf

remote areas.[36] This example demonstrates that IsDB MCs can unlock domestic resources through the removal of government subsidies for fossil fuels, which can contribute towards financing the massive upfront costs needed to build and maintain public transport schemes.

Figure 10 compares the projected transport CO_2 emissions of major emitters among IsDB MCs, with the red line indicating the average projected transport CO_2 emissions of IsDB MCs.

Indonesia is projected to become the largest transport CO_2 emitter among IsDB MCs by 2030,

Figure 10: Projections for largest transport CO_2 emitters among IsDB MCs by 2050[37]
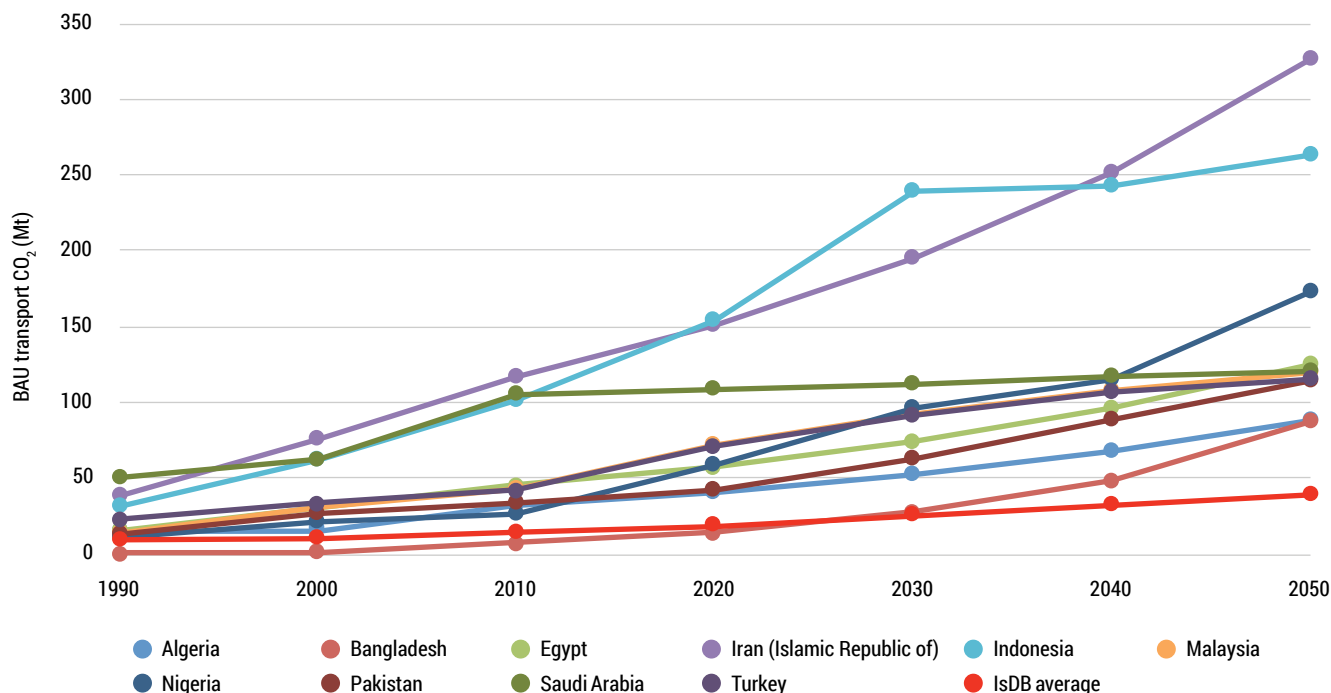
Figure 11: Comparison of selected countries' historical and projected transport CO_2 emissions growth[38]
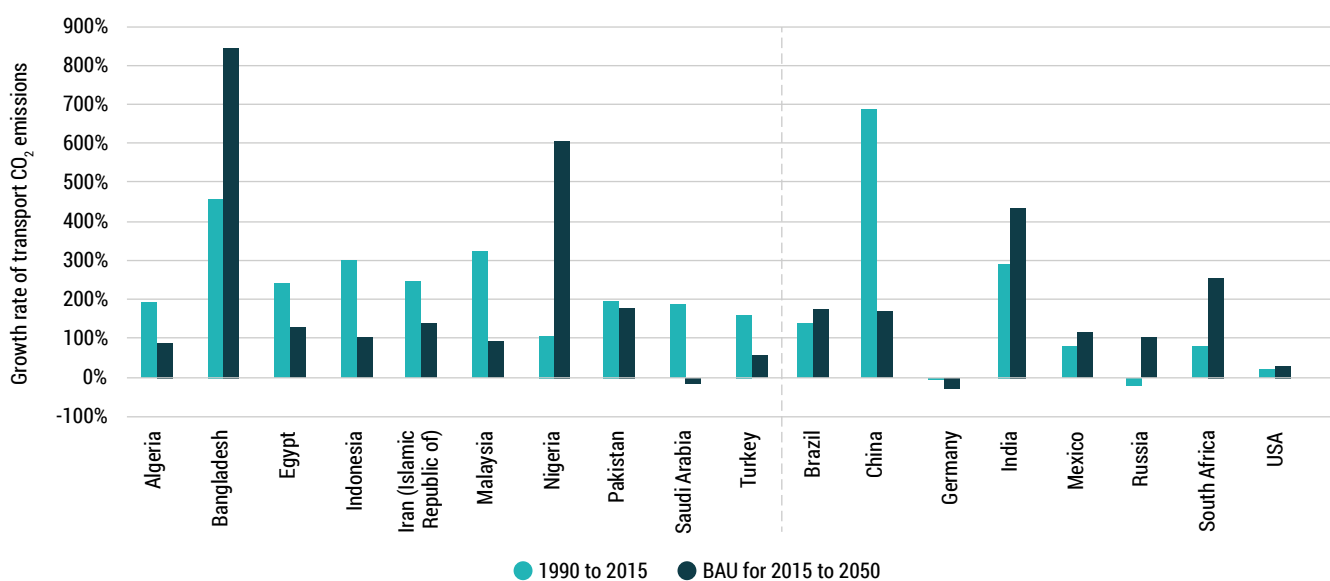
36   Pradiptyo, P., Susamto, A., Wirotomo, A., Adisasmita, A. and Beaton, C. (2016) Financing Development with Fossil Fuel Subsidies. Winnipeg: IISD (www.iisd.org/sites/default/files/publications/financing-development-with-fossil-fuelsubsidies-indonesia.pdf).

37   Source: Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

38   Source: IEA and SLoCaT Partnership calculations.

with Iran projected to take over as the largest emitter by 2040. Growth in transport emissions in Saudi Arabia will remain relatively constant from 2010, while Algeria, Egypt, Malaysia, Nigeria, Pakistan and Turkey will experience steady growth well above the IsDB average. Transport CO_2 emissions in Bangladesh are expected to increase steadily and exceed the IsDB average by 2030.

A comparison of historical growth rates (1990–2015) and future BAU growth rates (2015–2050), as shown in Figure 11, highlights that projected growth rates in the latter period are lower in the IsDB MCs shown except for Bangladesh and Nigeria.

The data for selected non-IsDB MCs included in Figure 11 reveal that historical growth rates have been modest and, in many cases, lower than for IsDB MCs.[39] However, projected future growth rates (except for China and Germany) imply a further increase in growth for the BAU scenario.

Figure 12 shows transport CO_2 emissions growth in IsDB MCs relative to GDP growth. The trend line shows a slight weakening of the coupling of transport CO_2 emissions and GDP after 2002. Before 2002, GDP and transport CO_2 emission developed in parallel with roughly the same growth rates (with a difference of about 2 per cent). After 2002, GDP grows more strongly than transport emissions, with the main period of decoupling from 2003 to 2006 and decoupling reaching 4 per cent in 2004. However, in 2008, 2009 and 2012, income growth and transport emissions coupled again and developed in parallel for IsDB MCs.

Examining how each of the income groups performs on decoupling, we can identify three different patterns. In high-income IsDB MCs, transport emissions have grown more rapidly than GDP since 2006 and are very closely linked, without any sign of decoupling. In middle-income countries, the economy decoupled from transport emissions after 2002. Low-income countries

Figure 12: Transport CO_2 emissions relative to GDP in IsDB MCs[40]
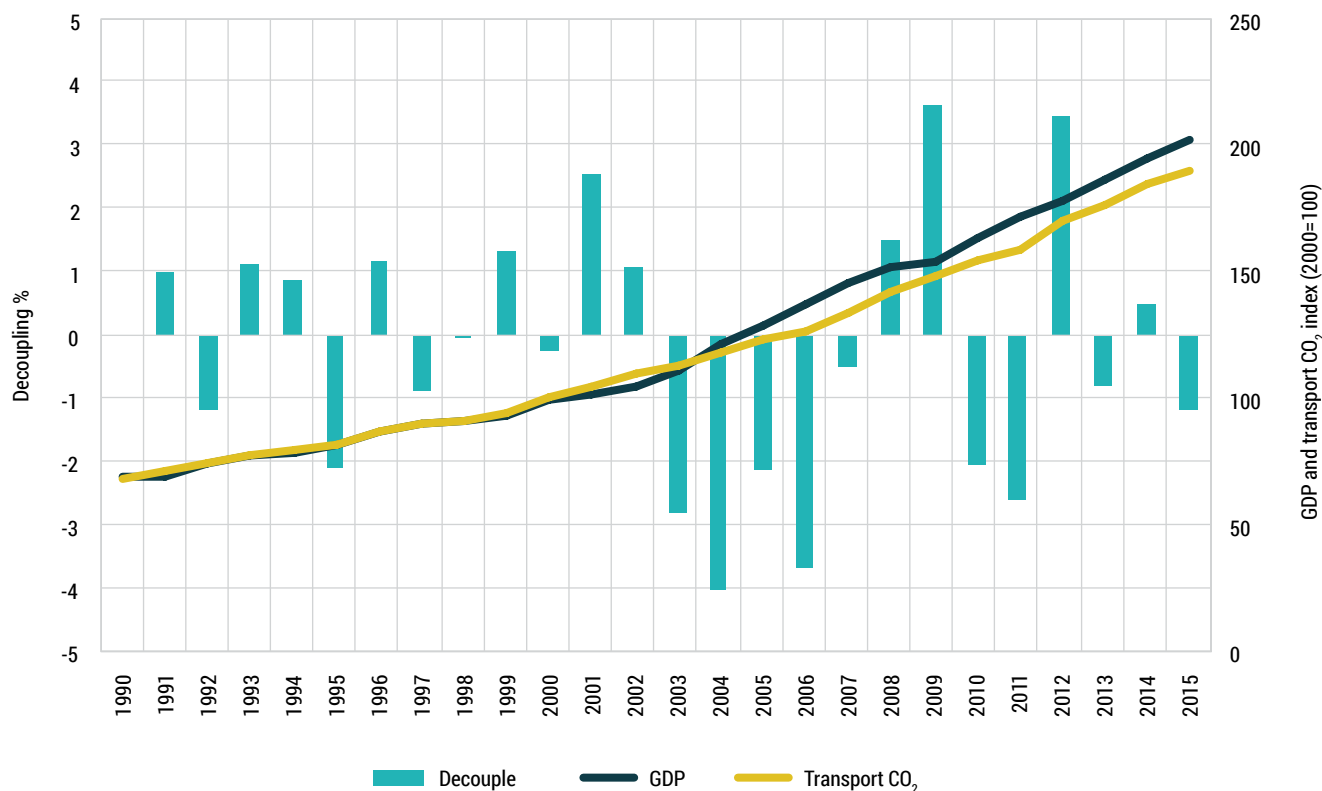
39   Further details by country are given in Reference Table 4.
40   Source: Own calculations using IEA data on CO_2 emissions from fuel combustion.

show a parallel development of CO_2 emissions and GDP, with the coupling of GDP and transport CO_2 emissions getting stronger from 2002 (Figures 13–15).

Figure 13: Decoupling of high-income countries

Decouple — GDP — Transport CO_2
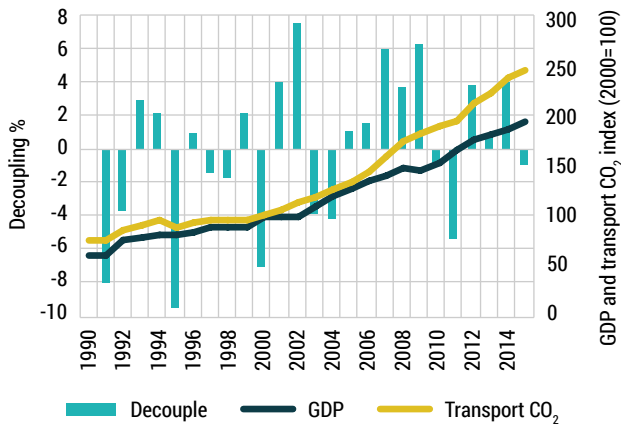
Figure 14: Decoupling of middle-income countries

Decouple — GDP — Transport CO_2
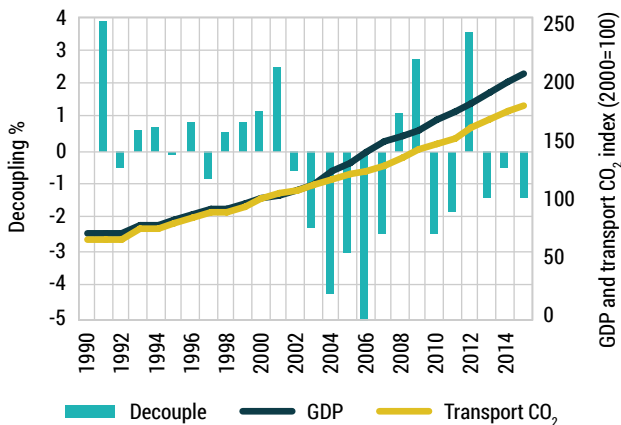
Figure 15: Decoupling of low-income countries

Decouple — GDP — Transport CO_2
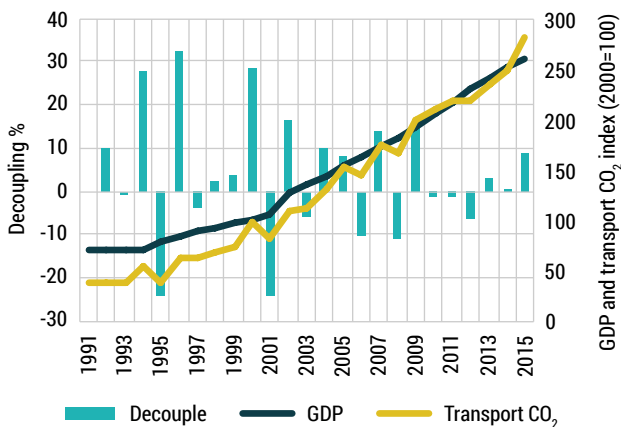
Oman, a high-income IsDB MC, has demonstrated growth in transport CO_2 emissions considerably above GDP growth levels since 2003. Its motorization rate grew by 45 per cent between 2005 and 2015, and the country lacks a railway system. In contrast, Uzbekistan has decoupled its economic growth from transport CO_2 emissions since 2003. The country has a large rail network, fuel-emissions standards, and fuel prices above global and IsDB averages (Figure 16).

Singapore is a prominent non-IsDB country that has decoupled GDP and transport CO_2 emissions[41] through an integrated and comprehensive Land Transport Master Plan that aims to increase the share of public transport and limit car ownership through a quota system.[42]

Figure 17 shows the growth of transport CO_2 emissions in low-, middle- and high-income countries. Examining the growth of transport emissions between 1990 and 2015 shows a difference between the global trend and IsDB MCs. While high-income countries globally had the lowest growth rate (29 per cent), high-income IsDB MCs recorded higher growth (221 per cent) than middle-income IsDB MCs. The increase in high-income IsDB MCs is, therefore, nearly 10 times higher than the global average of high-income countries, due in part to a strong increase in motorization and the dominance of the oil industry in high-income IsDB MCs, but most significantly because these countries are lagging behind in urban transport. Though some major urban areas in IsDB MCs are increasing levels of public transport use (e.g. the mode share in Dubai increased from 6 per cent in 2006 to 16 per cent in 2016),[43] most are still far behind comparable high-income economies. Thus, the global trend of decoupling in high-income countries is not currently being replicated in high-income IsDB MCs.

The increase in middle- and low-income IsDB MCs slightly exceeded the global average. For a regional comparison, middle-income countries in Latin America experienced transport CO_2 emissions

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41   Carbon Brief (www.carbonbrief.org/the-35-countries-cutting-the-link-between-economic-growth-and-emissions).

42   Ibid.

43   https://gulfnews.com/news/uae/transport/1-5m-rides-taken-on-public-transport-in-dubai-every-day-1.2069402

Figure 16: Decoupling of GDP and transport CO_2 emissions in Uzbekistan
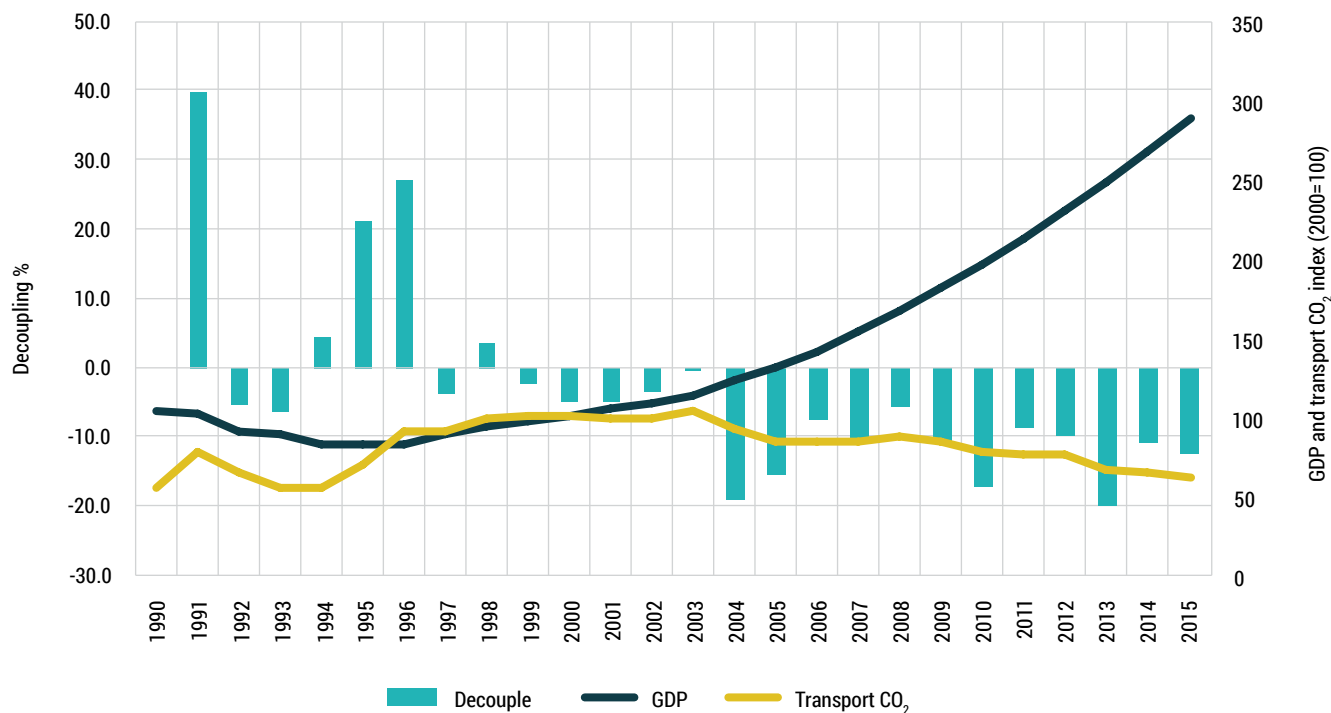
Figure 17: Growth of transport CO_2 emissions (1990–2015) by income level[44]
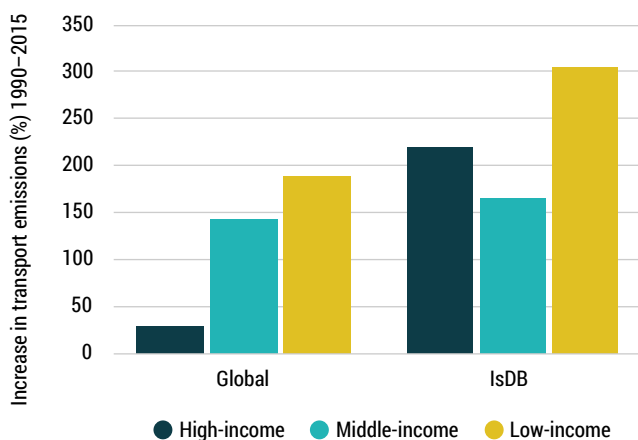
growth of 103 per cent between 1990 and 2015, significantly lower than the growth rate of 167 per cent for middle-income IsDB MCs in the same period. Possible contributing factors are that Latin America has over 1,700km of BRT systems with nearly 20 million passengers, and that Brazil alone has more BRT routes in operation (752km) than all IsDB MCs combined (501km).[45] Brazil has also kept its transport emissions low by increasing the use of biofuels in its transport energy mix.

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44   Source: SLoCaT calculations using IEA data on CO_2 emissions from fuel combustion.

45   Reference Table 10 has a detailed breakdown, based on data from https://brtdata.org/

III. Transport mitigation policy responses

Mitigating transport emissions is an imperative for effective climate action both globally and among IsDB MCs. This section examines Nationally Determined Contributions (NDCs) submitted by countries to the United Nations Framework Convention on Climate Change (UNFCCC), and then mitigation studies on IsDB MCs.

NDCs are an important platform for countries to indicate mitigation policy responses for transport and climate change. SLoCaT found that more than three quarters of the 160 NDCs representing 187 countries submitted as of August 2016 explicitly identify the transport sector as a mitigation source, and more than 63 per cent of Intended Nationally Determined Contributions (INDCs) propose mitigation measures for the transport sector.[46]

This section will analyse the transport mitigation responses articulated in the NDCs submitted by the IsDB MCs. As of March 2018, 55 of the 57 IsDB MCs had submitted NDCs to the UNFCCC,[47] while two countries (Libya and Syrian Arab Republic) had not.

Figure 18 shows how transport has been reflected in the NDCs submitted by IsDB MCs. Ten (18 per cent) of the 55 NDCs submitted by IsDB MCs refer to mitigation in the energy sector without a breakdown into transport and other sectors;

Figure 18: NDCs highlighting the transport sector as a mitigation source[48]
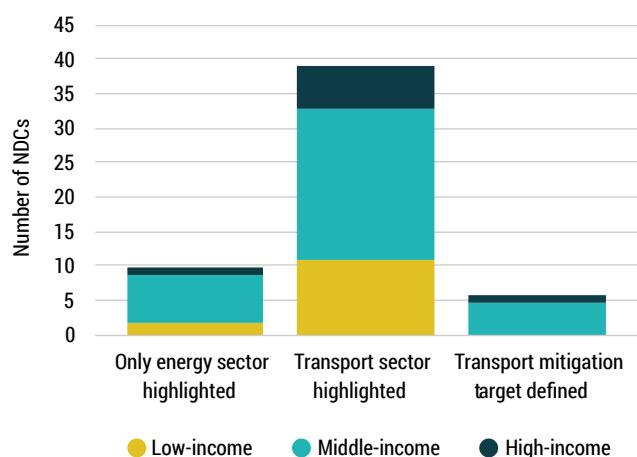
39 NDCs (71 per cent) highlight transport as a mitigation source; and six NDCs (11 per cent) contain specifically defined transport mitigation targets. The distribution pattern is relatively consistent with the overall pattern of all NDCs, where 75 per cent highlight transport as a mitigation source and 9 per cent of all NDCs have mitigation targets for transport.[49]

In terms of income groups, 78 per cent of low-income countries emphasize transport mitigation, while just 66 per cent of middle-income countries highlight the transport sector in their NDCs. All high-income countries except Oman highlight transport as a mitigation source; however, Oman includes low-carbon transport initiatives under its requests for capacity-building and technology transfer.

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46   SLoCaT Partnership NDC analysis (www.ppmc-transport.org/overview_indcs/).

47   The analysis does not make any further differentiation between INDCs and NDCs. Charts and content use 'NDC', which refers to both document types.

48   Source: SLoCaT NDC analysis (www.ppmc-transport.org/overview_indcs/).

49   Gota, S., Huizenga, C., Peet, K. and Kaar, G. (2016) Nationally-Determined Contributions (NDCs) Offer Opportunities for Ambitious Action on Transport and Climate Change. Bonn: SLoCaT Partnership (www.ppmc-transport.org/wp-content/uploads/2015/06/NDCs-Offer-Opportunities-for-Ambitious-Action-Updated-October-2016.pdf).

Table 6: Transport targets in NDCs of IsDB MCs

Country	Transport target
Bangladesh	24% reduction from 2030 BAU
Brunei Darussalam	Land transport: to reduce CO_2 from morning peak hour vehicle use by 40% by 2035
Burkina Faso	Unconditional target: 0.42% below BAU by 2030 Conditional target: 42% below BAU by 2030
Côte d'Ivoire	5.73% reduction from 2030 BAU
Gabon	20% reduction below BAU (1.6 Mt less)
Palestine	20% of trucks and buses using compressed natural gas (CNG) by 2040 25% shift from private cars to public buses by 2030

Table 6 shows that Bangladesh, Burkina Faso, Côte d'Ivoire and Gabon have set targets on transport emissions, while Brunei Darussalam has a transport emissions-reduction target specifically for land transport, and Palestine has targets specifically for trucks, buses and a modal shift from private cars to public buses.

Looking at economy-wide ambitions, among IsDB MCs only Gambia and Morocco have NDCs classified by the Climate Action Tracker as compatible with a 1.5 degree scenario (DS) Paris Agreement target. Morocco plans to halt GHG emissions growth in its conditional target and is on track to achieve a 2020 renewable energy target of 42 per cent of installed electricity production capacity from renewable sources. Gambia aims to reduce total GHG emissions by 45.4 per cent below BAU by 2030.[50]

Figure 19 shows a geographical overview of the IsDB counties which have included specific transport mitigation measures in their NDCs.[51]

Figure 19: Transport mitigation highlighted in NDCs of IsDB MCs[52]

Latin America

NDCs highlighting transport in mitigation source
- Transport highlighted
- Transport not highlighted
- No (I)NDC submitted (Libya and Syrian Arab Republic)
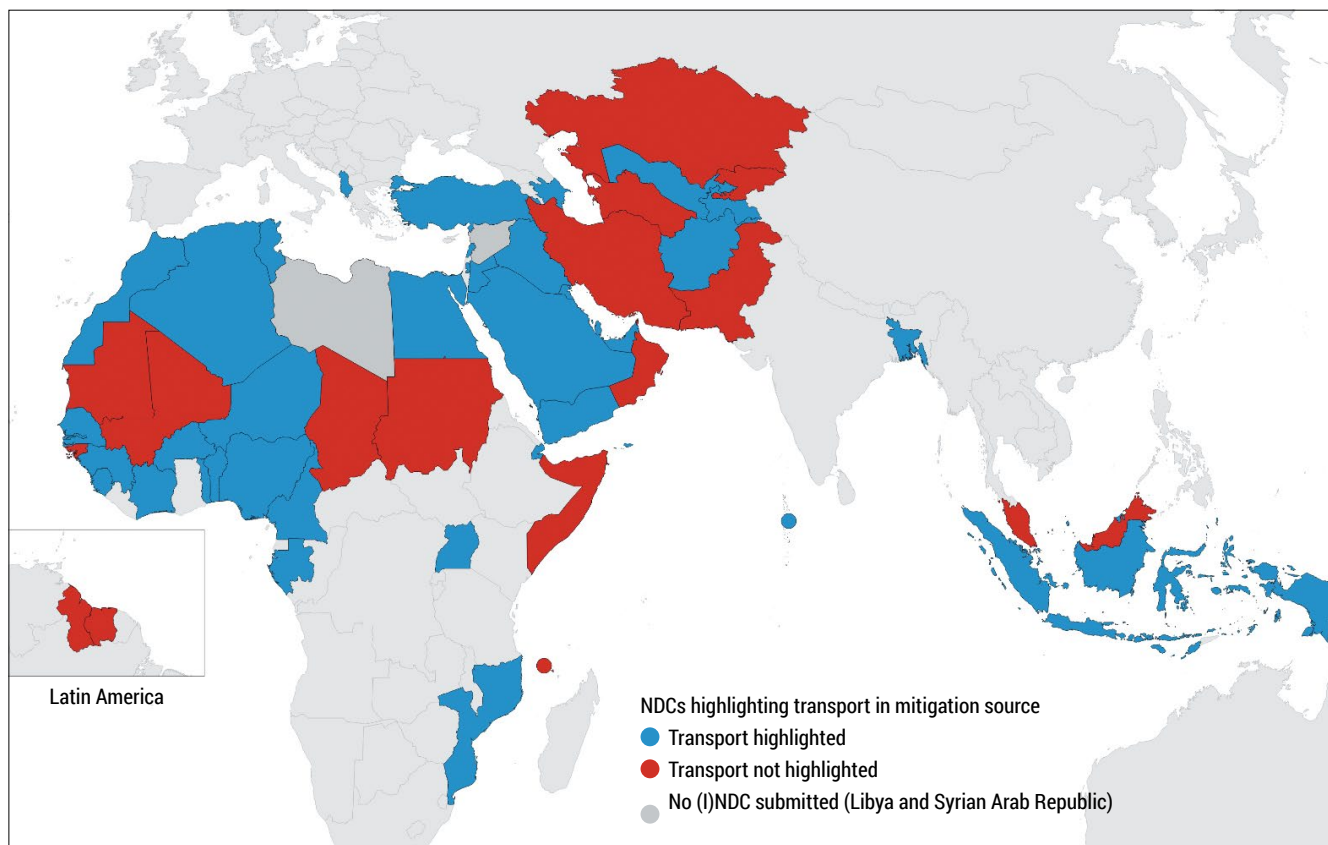
50   Climate Action Tracker, Assessment of Morocco's and Gambia's NDC (http://climateactiontracker.org/countries.html).
51   The reference table for the transport mitigation measures identified in NDCs submitted by IsDB MCs can be found under Table 5 of Annex II.
52   Source: SLoCaT NDC analysis (www.ppmc-transport.org/overview_indcs/).

Figure 20: Transport modes and sub-sectors represented in NDCs of IsDB MCs[53]
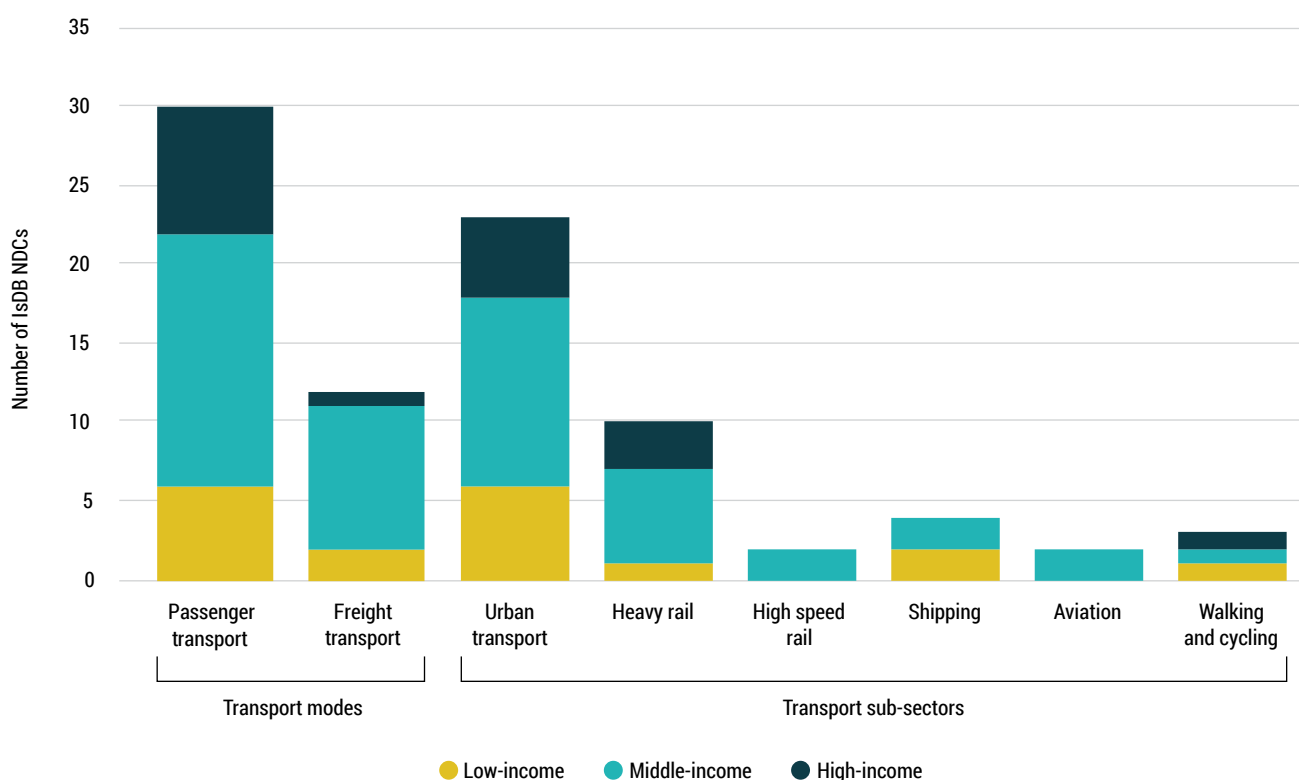
Almost all IsDB MCs in Western Asia, Southern Asia and Western Africa have included specific transport mitigation measures in their NDCs. Only a few IsDB MCs in Central Asia, South-Eastern Asia and Northern Africa have included specific examples of transport mitigation measures. There are notable gaps in the transport mitigation focus of NDCs submitted by IsDB MCs in Eastern Africa, Central Africa, South America and Southern Europe.

Figure 20 gives an overview of the transport modes and sub-sectors represented in the NDCs submitted by IsDB MCs. Passenger transport is reflected in 30 NDCs submitted by IsDB MCs, which is more than double the number of times freight transport is mentioned. Freight transport is also underrepresented in NDCs in general (only 21 per cent of all NDCs submitted globally include references to freight transport measures), especially by high-income countries.

Measures for urban transport are generally well represented in NDCs across all income groups. For example, Brunei Darussalam aims to increase the modal share of public transport to 22 per cent by 2035 by expanding its bus fleet, creating a national school bus system and increasing BRT systems and capacity. Bahrain indicated in its NDC that bus routes had been created across the country to increase the efficiency and attractiveness of public transport. Jordan aims to increase the total number of commuters using public transport to 25 per cent of all commuters by 2025. A metro system is also being built in Bangladesh. Gabon is investing in expanding public transport services, particularly to reduce congestion in Libreville. Sierra Leone and Togo also emphasized the need to promote public transport.

Mitigation measures for heavy rail transport are reflected in less than 20 per cent of IsDB MCs' NDCs, with more emphasis from middle-income countries. Bangladesh, Egypt, Pakistan and Turkey all indicated measures to increase the modal shift from road to rail transport. Pakistan included measures for modernization of rail services. The United Arab Emirates mentioned a federal freight rail network crossing the country which will be integrated into the larger regional network.

53   Source: SLoCaT NDC analysis (www.ppmc-transport.org/overview_indcs/).

Figure 21: Transport mitigation measures in NDCs of IsDB MCs[54]
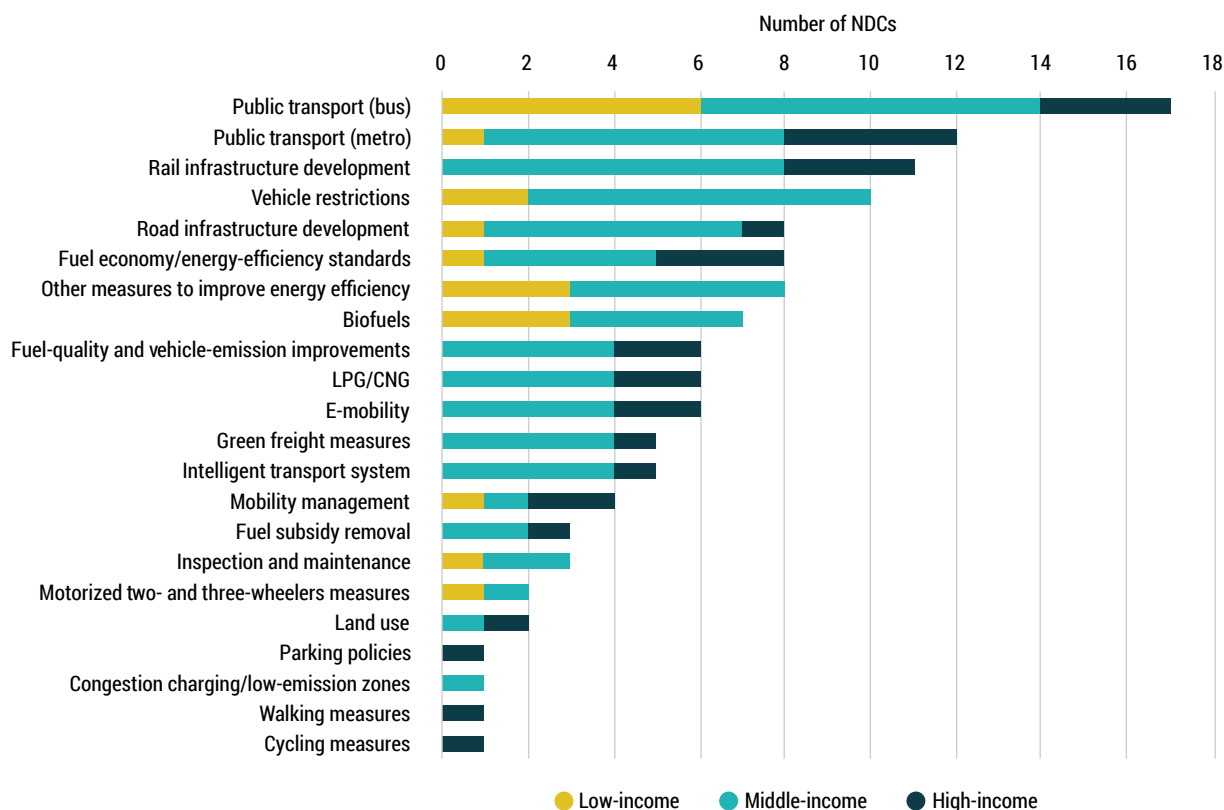
High-speed rail and aviation are underemphasized in NDCs, with Nigeria and Turkey the only two IsDB MCs mentioning the development of high-speed rail. Maldives and Turkey are the only two IsDB MCs indicating projects to reduce emissions from their airports and aviation industry.

While walking and cycling are important low-carbon mobility options, very few IsDB MCs cited examples of them. Brunei Darussalam will implement more integrated walking and cycling networks, and Togo will promote the use of bicycles and walking by increasing the number of paths and improving infrastructure.

Shipping and maritime transport is an underrepresented transport mode among the NDCs submitted by IsDB MCs. Turkey aims to ensure a balanced use of transport modes in freight and passenger transport by reducing the share of road transport and increasing the share of maritime and rail transport. It is also implementing special consumption tax exemptions for maritime transport.

Figure 21 gives a detailed breakdown of how different transport mitigation measures are being reflected in NDCs. The analysis shows that considerable attention has been paid to public transport measures for bus and metro, as well as general rail infrastructure development among high- and middle-income groups. Low-income countries paid most attention to fuel efficiency and biofuel measures (e.g. Burkina Faso promotes the use of alternative hydrocarbon biofuels and has set a target for bioethanol to replace 10 per cent of consumption and 5 per cent of diesel consumption in 2030) and vehicle restriction policies (e.g. Togo is limiting the age of imported vehicles to 5–7 years).

SLoCaT collects studies that include projections of mitigation potential and strategies on transport based on modelling efforts by national governments, academic institutions and other organizations.[55] This assessment provides an insight into opportunities to reduce transport emissions relative to the BAU scenario. Mitigation potential studies are available for Albania, Bangladesh, Brunei Darussalam, Kazakhstan,

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54   Source: SLoCaT NDC analysis (www.ppmc-transport.org/overview_indcs/).

55   For more information, see www.ppmc-transport.org/overview-of-transport-mitigation-potential-studies/

Figure 22: Mitigation potential by measure in IsDB MCs
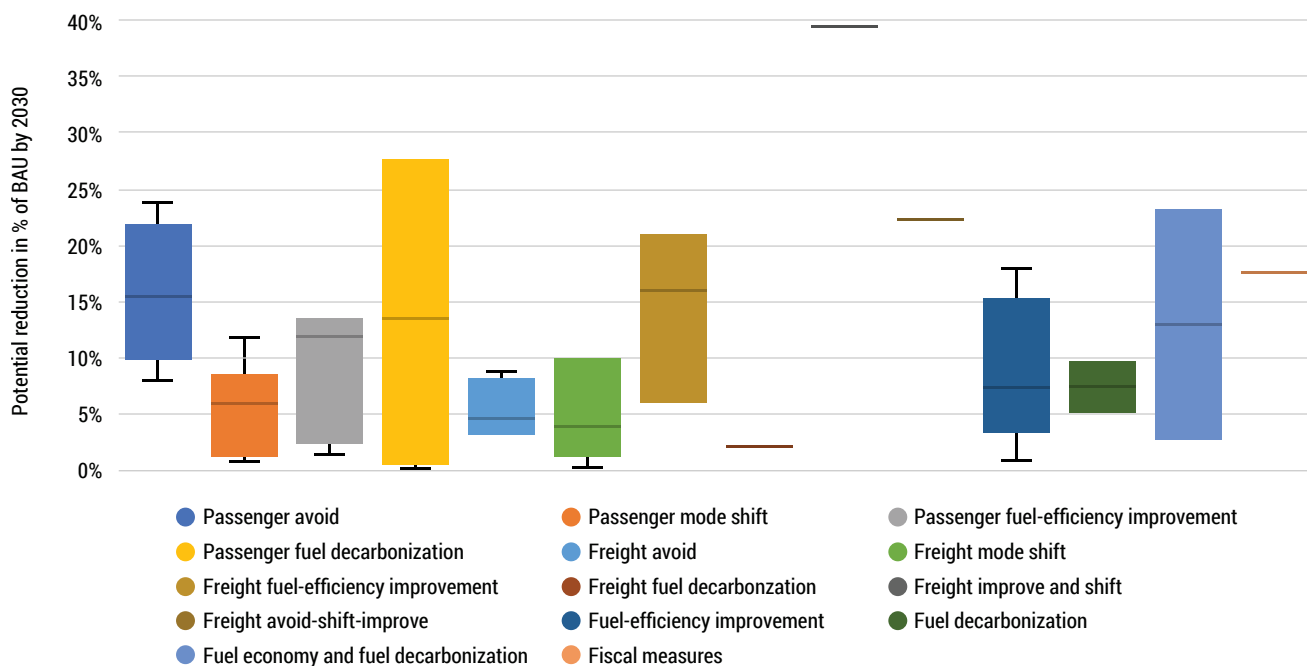
Notes: If there is only one line, there is only a single data point for this aspect. See Reference Table 6 (Annex II).

Malaysia and Nigeria among IsDB MCs. There is also a mitigation potential study for the Middle East region (covering 15 countries).

Figure 22 shows the mitigation potential of measures in the categories of passenger transport, freight, fuel and finance. It summarizes the 52 measures identified for the six countries mentioned above.

The highest mitigation potential belongs to a 'freight improve and shift' measure, which was modelled for Bangladesh and aims for a shift to zero-emission freight transport (the dark grey line on Figure 22). Multiple studies include measures on 'passenger transport fuel decarbonization', with mitigation potential ranging from 0.3 per cent to 28 per cent (the yellow bar on the figure). Further details of mitigation potential studies in IsDB MCs are given in Reference Table 6.

IV. Transport adaptation policy responses

Adaptation in the transport sector is necessary for both developed and developing countries, as transport systems worldwide are vulnerable to the increasing impacts of extreme weather, and rapid motorization increases the potential for catastrophic impacts. Crucially, sustainable transport systems must adapt to climate change to maintain reliability and ensure that the transport sector can contribute to economic and social development. Many sustainable transport solutions can combine increased mitigation potential and resilience as mutual benefits. For example, during the Great East Japan Earthquake in 2011, high-speed rail proved to be more resilient than conventional rail transport infrastructure.

Yet despite growing interest in climate adaptation, it has generally received less attention than mitigation in NDCs, although it is mentioned in an economy-wide scope in 160 INDCs submitted. The transport sector is mentioned in general terms among climate adaptation measures in

Figure 23: Human habitat vulnerability of IsDB MCs to climate disruptions[56]

Very low vulnerability
Low vulnerability
Medium vulnerability
High vulnerability
Very high vulnerability

Latin America
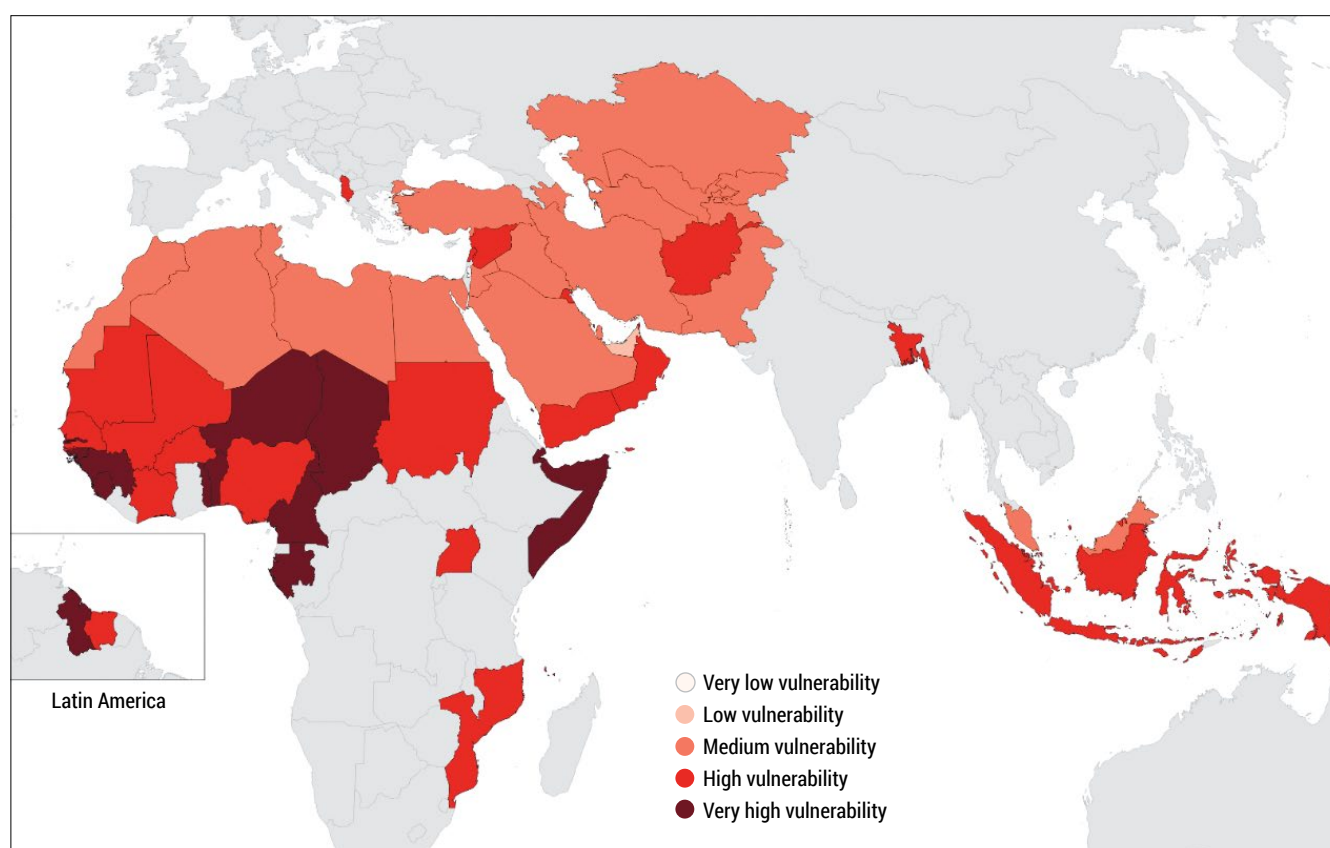
56   Based on the ND-GAIN Index (https://gain.nd.edu/).

16 per cent of INDCs, and 4 per cent of countries identify transport-specific adaptation strategies, mainly with a focus on vulnerability assessments and infrastructure resilience planning.

To show the urgency of climate adaptation, the findings of the Notre Dame Global Adaptation Initiative (ND-GAIN) were summarized for IsDB MCs. ND-GAIN evaluates a country's performance in two aspects: vulnerability and readiness. Vulnerability shows the country's exposure to the negative impacts of climate change; it considers the food, water, health, ecosystem services, human habitat and infrastructure sectors, with transport covered under human habitat. Readiness, on the other hand, shows a country's ability to use investments for adaptation measures. Figure 23 (previous page) shows the vulnerability of human habitat to climate disruptions for IsDB MCs.

The best score is achieved by the United Arab Emirates, whose human habitat vulnerability is not only the lowest among IsDB MCs, but among all countries in the ND-GAIN Index. Nineteen IsDB

MCs, mostly in Northern Africa and Central and Western Asia, face a medium level of vulnerability, while 23 countries, predominantly in sub-Saharan Africa, Southern Africa and South-Eastern Asia, have high vulnerability, and 13 countries have very high vulnerability to the negative impacts of climate change. Detailed scores are given in Reference Table 8. Palestine does not provide any information on vulnerability.

This analysis reveals that IsDB MCs in sub-Saharan Africa in particular show a marked gap between climate vulnerability and readiness in the transport sector, which can be addressed in part through more specific and robust adaptation measures in NDCs, National Adaptation Programmes of Action (NAPAs) and/or National Adaptation Plans (NAPs).

This section analyses how transport adaptation measures are being reflected in the 55 NDCs submitted by IsDB MCs. Figure 24 shows a geographical overview of the IsDB counties which have included specific transport adaptation measures in their NDCs.[57]

Figure 24: Transport adaptation highlighted in NDCs of IsDB MCs[58]

- 🔵 Transport highlighted
- 🔴 Transport not highlighted
- ⚪ No (I)NDC submitted (Libya and Syrian Arab Republic)

Latin America

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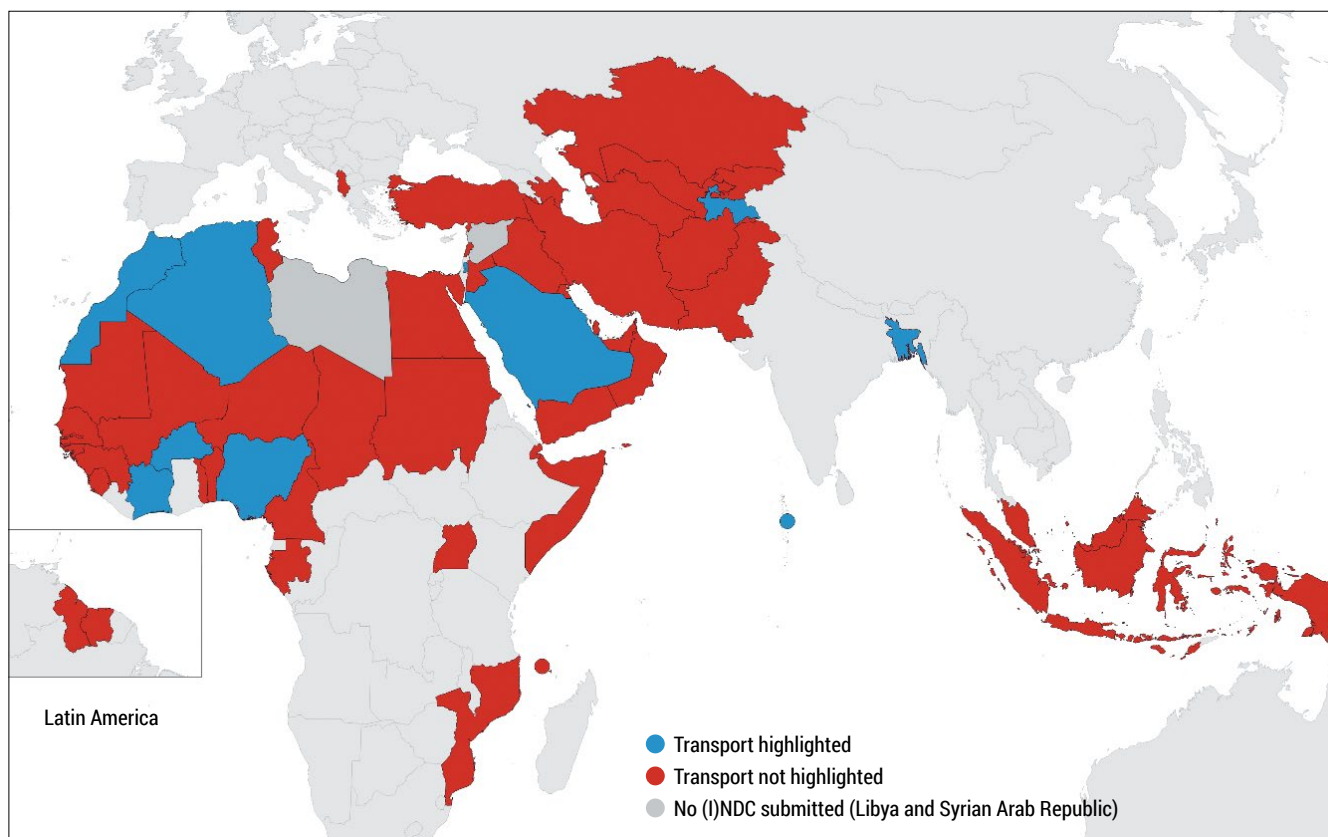
57   The reference table for the transport adaptation measures identified in NDCs submitted by IsDB MCs can be found under Table 7 of Annex II.
58   Source: SLoCaT NDC analysis (www.ppmc-transport.org/overview_indcs/).

Transport adaptation is not well represented in the NDCs of most IsDB MCs. Only 11 IsDB MCs have referred to adaptation measures related to transport to a limited degree. Moreover, most of the references only mention transport very generally and provide little, if any, specific project or policy examples. This lack of attention to transport adaptation measures suggests that IsDB MCs may not be fully aware of the potential threats to transport systems, or are yet to assess the policy measures needed to counter these threats.

Bangladesh, Gambia and Maldives are the only IsDB MCs that include specific measures for transport adaptation in their NDCs. Bangladesh is introducing a Climate-Resilient Infrastructure Development Plan with cooperation from its Inland Water Transport Authority and the Ministry of Road Transport and Bridges. Gambia has adopted a proposal to improve the resilience of road networks under a changing climate. The resilience and capacity of Maldives' Malé commercial port, which handles more than 90 per cent of the country's imported cargo, will be increased. The commercial port will be relocated to further reduce the impacts of high winds and seas on its operations.

It should be noted that many other IsDB MCs (especially low-income countries and coastal/island states) are particularly vulnerable to the risks of climate change, but no policy measures for adaptation in the transport sector have yet been incorporated into their NDCs.

In addition, NAPs were submitted by four IsDB MCs (Burkina Faso, Cameroon, Palestine and Sudan), with the first two including transport measures in their plans. Five of the 19 NAPAs produced by IsDB MCs include transport adaptation measures. The inclusion of transport adaptation in NDCs, NAPAs and NAPs in IsDB MCs is summarized in Figure 25.

For example, Burkina Faso has indicated in its NAP the need to pass and enforce laws and regulations, where applicable, on the construction

Figure 25: Transport adaptation in NDCs, NAPAs and NAPs[59]
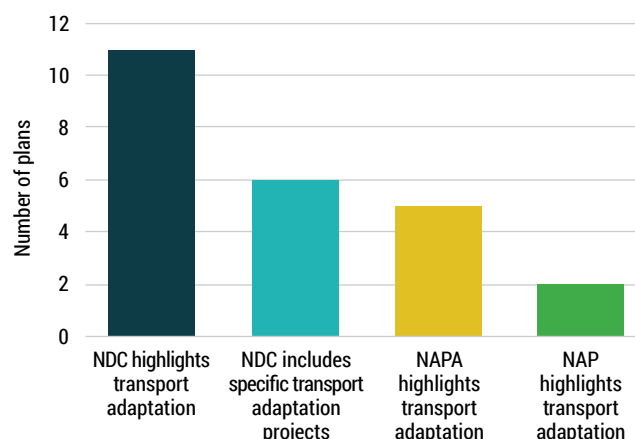
of hydraulic, road and settlement infrastructure; space occupancy in urban and rural environments, especially in flood zones; and to promote public transport to control energy consumption. In its NAP, Cameroon discourages non-resilient housing practices and the construction of roads that are unsuitable for climate change. It will also develop, extend and rehabilitate its network of tarred roads (more than 3,500km to be built and 2,000km to be rehabilitated by 2020), provide at least 1,000km of railway tracks and develop the deep-water port of Kribi.

A regular survey by the World Economic Forum (WEF) is intended to compare economic competitiveness among countries, but the results also provide indirect insights into the general level of infrastructure resilience, based on the assumption that higher-quality infrastructure is also more resilient. The WEF's Global Competitiveness Index evaluates the quality of roads, railways, ports and airports on a scale of 1 (lowest) to 7 (highest),[60] which are shown for IsDB MCs in Figure 26.

These results show that the aviation sector receives the best score in nearly all IsDB sub-regions and income groups, while the railway sector has the lowest quality among transport sub-sectors in IsDB MCs, with railways receiving a medium score only in South-Eastern Asia. Western Asia is best positioned in terms of

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59   Source: SLoCaT TraKB.

60   WEF, Global Competitiveness Index 2016/2017. Quality of infrastructure is defined through the WEF's Executive Opinion Survey, in which over 10,000 business executives are asked to evaluate certain aspects of a country, with results weighted on a scale from 1 (lowest) to 7 (highest).

Figure 26: Quality of transport infrastructure by IsDB sub-region and income group
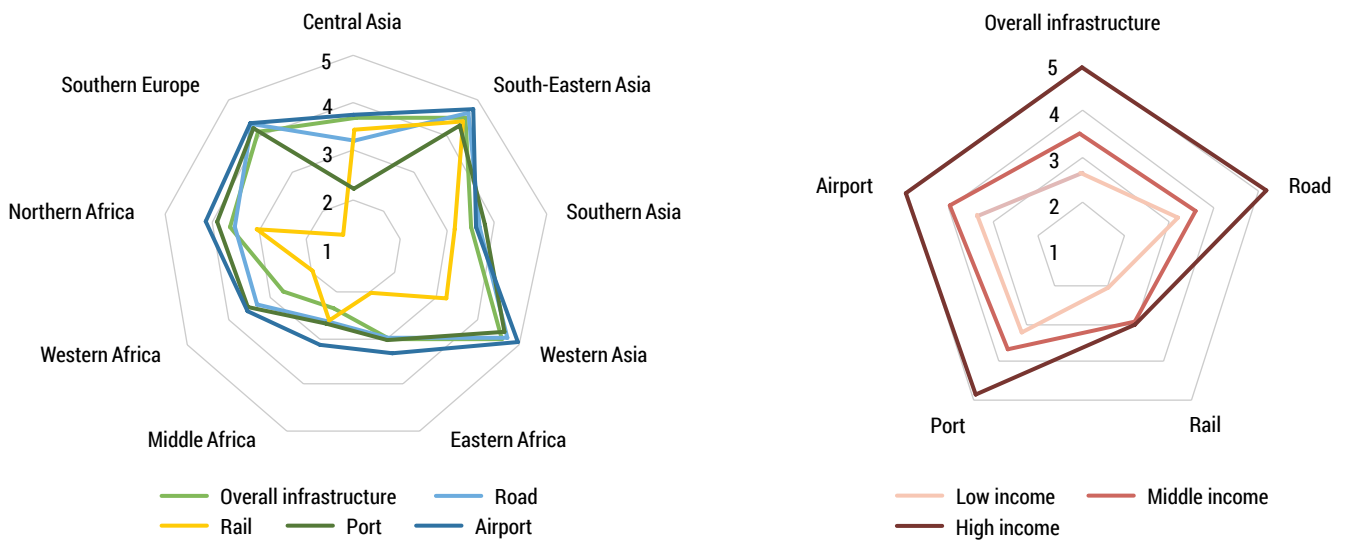
infrastructure quality, which is roughly correlated with higher resilience. High-income countries have the highest scores among IsDB income groups in all areas except for rail, in which they are roughly equal to those of middle-income countries.

V. Urban transport

Given the projected trend of increasing urbanization, action on GHG emissions by cities will greatly influence the overall success of future climate action. The provision of inclusive, safe, clean and efficient access for all to jobs, markets, services and social life is a key element of the development of urban transport. This will require an increase in low-carbon infrastructure and services for both passenger and freight transport.

The urban population of IsDB MCs was 863 million people in 2016 and is projected by the UN to more than double to 1.773 billion people by 2050 (Figure 27). The largest urban population growth between 1990 and 2050 will take place in Eastern Africa (930 per cent), followed by Western Africa (890 per cent), Southern Asia (324 per cent) and South-Eastern Asia (313 per cent).

In 2017, eight of the world's 37 megacities (defined as urban areas with more than 10 million people) were located in IsDB MCs, including Jakarta (2nd largest), Karachi (6th), Dhaka (15th), Cairo (17th), Tehran (22nd), Istanbul (23rd), Lagos (24th) and Lahore (32nd). While Jakarta is the largest urban area in an IsDB MC, with a population of 31.8 million people (9,600 per square kilometre), Dhaka remains the densest, with 45,700 residents per square kilometre.[61]

Increasing urbanization will increase pressure on urban transport systems. Efficient modes of transport for urban citizens to gain mobility and access jobs, education and other services are bicycles, buses and urban railways (trams and metro systems). The

Figure 27: Growth of the urban population by region[62]

Legend: Central Asia, South-Eastern Asia, Southern Asia, Western Asia, Eastern Africa, Central Africa, Western Africa, Northern Africa, Southern Europe, South America

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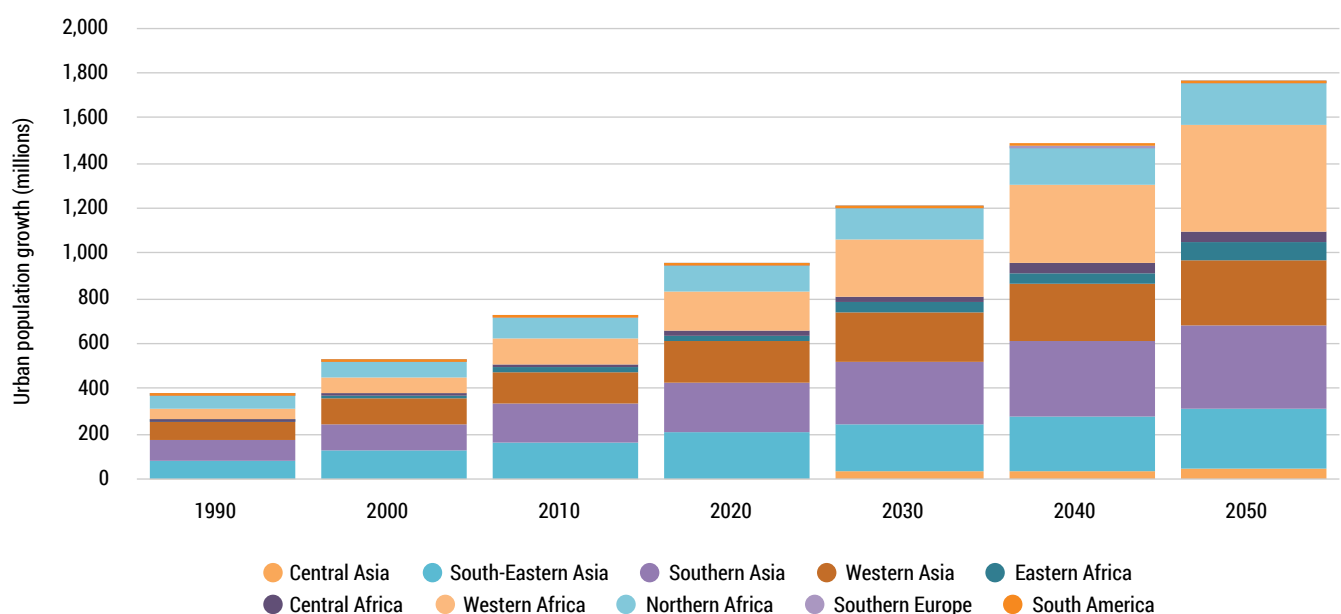
61   Wendell Cox Consultancy (2018) Demographia World Urban Areas, 14th annual edition: 201804. Belleville, IL (http://demographia.com/db-worldua.pdf).

62   UN DESA (https://esa.un.org/unpd/wpp/).

Table 7: Overview of urban rail systems planned or under construction in IsDB MCs

Country	City	Start of construction	Expected opening
Light rail			
Algeria	Annaba	2015	2019
Algeria	Batna	2015	2019
Algeria	Mostaganem	2015	2019
Algeria	Ouargla	2015	2019
Algeria	Setif	2015	2019
Egypt	Cairo	2018	2022
Indonesia	Palembang	2016	2018
Nigeria	Lagos	2009	2018–2022
Qatar	Lusail	2014	2020
Metro			
Bangladesh	Dhaka	2016	2019
Côte d'Ivoire	Abidjan	2017	2023
Indonesia	Jakarta	2013	2019
Iran (Islamic Republic of)	Ahvaz	2004	2018
Iran (Islamic Republic of)	Karaj	2006	2018
Iran (Islamic Republic of)	Kermanshah	2011	2022
Iran (Islamic Republic of)	Qom	2009	2019
Nigeria	Lagos	2009	2018
Pakistan	Lahore	2015	2018
Qatar	Doha	2012	2019
Saudi Arabia	Riyadh	2014	2019
Uzbekistan	Tashkent	2017	2021
United Arab Emirates	Dubai	2017	2020

Source: Overview provided by IsDB, with information on Lusail[63] and Abidjan[64] from Wikipedia.

expected increase in urban populations in IsDB MCs between now and 2050 poses urban planners with a key challenge, and also an opportunity to enable the transformation of cities by creating a better quality of life in higher-density, mixed land-use cities.

A number of light rail and metro systems are currently under construction in IsDB MCs. Algeria

has several tram projects in progress, and Egypt plans to expand Cairo's metro system with light rail. Indonesia and Iran are in the process of developing metro systems in several cities. Table 7 gives an overview of urban rail projects being constructed or about to begin construction in the near future.

Many NDCs include content on the intention to develop or expand bus and/or urban rail systems. The NDCs submitted by Bangladesh, Egypt and Turkey express the intention to develop both public bus systems and urban rail.

Figure 28 shows the current size of urban railways and BRT systems in IsDB MCs.[65] Countries highlighted in yellow indicate NDCs with references to urban rail, while those in light blue indicate countries that mentioned bus/BRT systems in their NDCs.

Urban rail and BRT systems exist in a small number of IsDB MCs, spread across the high- and middle-income countries in various regions. Kuala Lumpur and Cairo are the only cities in IsDB MCs with extensive metro systems, the former with a network of 135 stations on seven lines spanning 208km.

Iran has the most cities with BRT systems, with three systems operating a total length of 165km and serving more than 2,135,000 passengers per day. The BRT system in Jakarta, with a total length of 207km, has 370,000 passengers per day on average.

Most important is the finding that there are no BRT systems in low-income countries. BRT is a cost-efficient way to realize high-capacity mass transit. The recently opened BRT system in Dar es Salaam, Tanzania, offers a good example of a BRT system in a low-income country.[66] BRT and urban rail can be complementary in an integrated urban transport system, but only Iran, Malaysia and Turkey operation both modes of public transport.

Sustainable Urban Mobility Plans (SUMPs) encourage a shift towards more sustainable

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63   https://en.wikipedia.org/wiki/Lusail_LRT
64   https://en.wikipedia.org/wiki/Abidjan_Metro
65   The reference tables for urban rail and BRT systems in IsDB MCs can be found under Tables 9 and 10 of Annex II.
66   Based on BRTData.org (http://brtdata.org/), Japan Subway Association (www.jametro.or.jp/world/list.html), Metrobits (http://mic-ro.com/metro/) and others. Further information on urban transport systems in MENA countries can be found in the UITP MENA Transport Report (https://mena.uitp.org/sites/default/files/MENA%20CTE_MENA%20Transport%20Report%202016.pdf).

Figure 28: Size of urban rail and BRT systems on a national scale[67]

Urban rail

Mozambique

Size of networks per city (km): ○ 0–25 ○ 25–50 ● 50–75 ● 75–100 ● More than 100
● NDC expresses interest in urban rail ● NDC expresses interest in bus

BRT systems
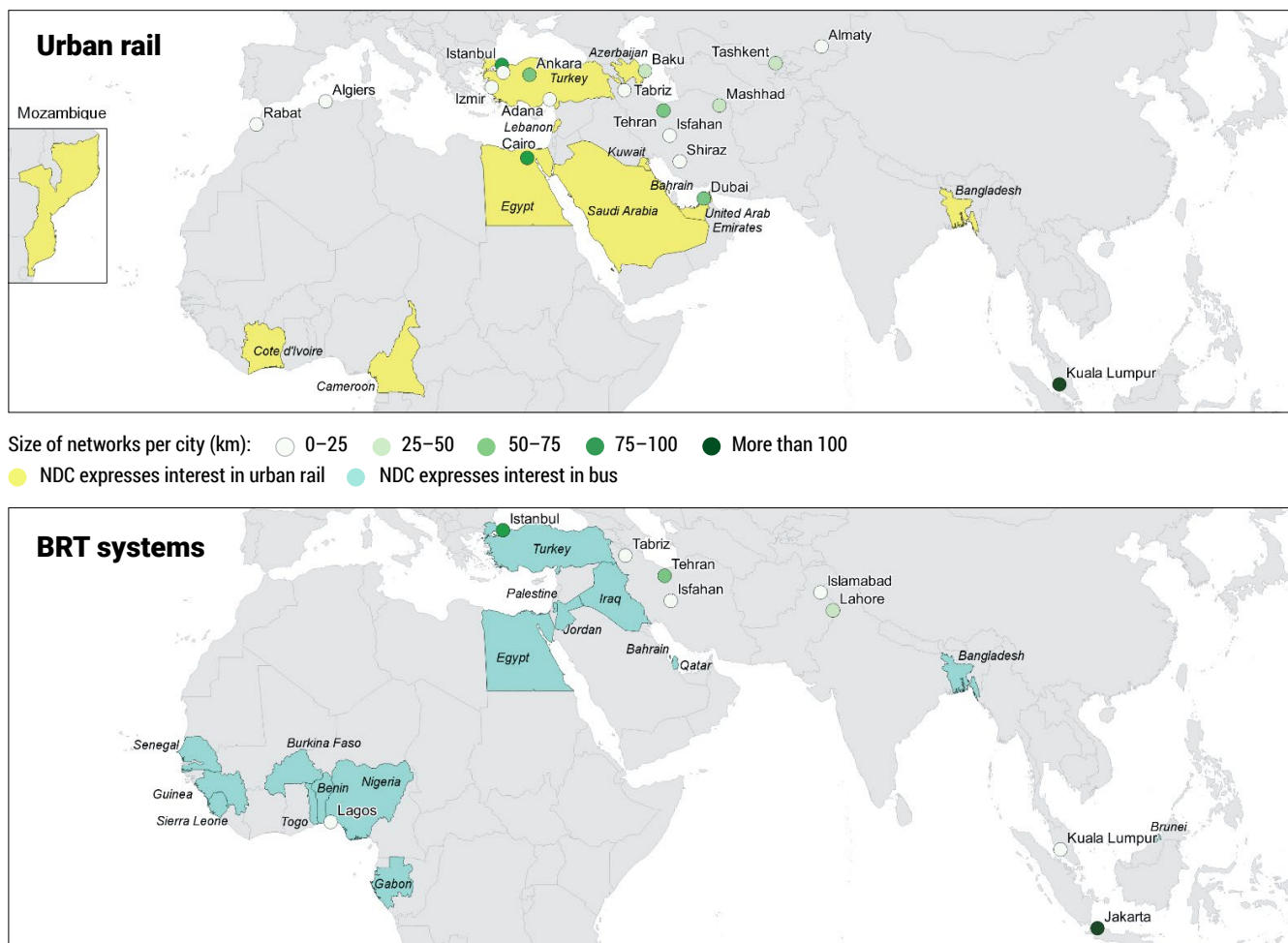
Figure 29. IsDB MCs with Sustainable Urban Mobility Plans[69]

● Cities with SUMPs

modes of transport[68] and support the integration and balanced development of all modes to meet the basic mobility needs of all users.

Figure 29 shows the cities in IsDB MCs with SUMPs. This figure demonstrates that the SUMPs completed to date in IsDB MCs are concentrated in middle-income countries (with a strong concentration in North Africa), are limited in high-income countries (only Qatar, Saudi Arabia and United Arab Emirates) and are entirely absent in low-income countries. Thus, there is significant potential to expand this essential resource and achieve decarbonization in urban transport.

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67   Citiscope (nd), New bus rapid transit system earns Dar es Salaam 2018 Sustainable Transit Award (http://archive.citiscope.org/story/2017/new-bus-rapid-transit-system-earns-dar-es-salaam-2018-sustainable-transit-award).

68   https://en.wikipedia.org/wiki/Sustainable_transport

69   Source: GIZ's overview on SUMPs (www.google.com/maps/d/u/0/viewer?mid=1PnE9ux2r3BhcFGv2M_AZ1pD7SwU&ll=31.206121759472843%2C93.11869559982422&z=2).

VI. Passenger and freight transport

Transport decarbonization requires proportional attention to passenger and freight transport. Though freight transport contributes roughly 40 per cent of emissions from the global transport sector, it is often underemphasized in low-carbon transport planning and investment decisions.

Figure 30 gives a comparison of relative passenger and freight transport activity (with the size of each bubble indicating GDP per capita) for the 13 IsDB MCs that have available data for both passenger transport (passenger-km) and freight transport (ton-km).

Brunei Darussalam, as a high-income country, shows very high passenger transport activity relative to freight, and Bangladesh and Indonesia are also dominated by passenger transport, though to a lesser degree. Malaysia shows a good balance between passenger and freight activity.

Figure 30: Comparison of passenger and freight activity for selected IsDB MCs (2010)[70]

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70   Source: Own calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/), 2050-Calculator (www.2050.org.uk/calculators), UN Population Trends (www.un.org/esa/population/) and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

Figure 31: Comparison of passenger and freight activity for selected non-IsDB benchmarking countries (2010)[71]
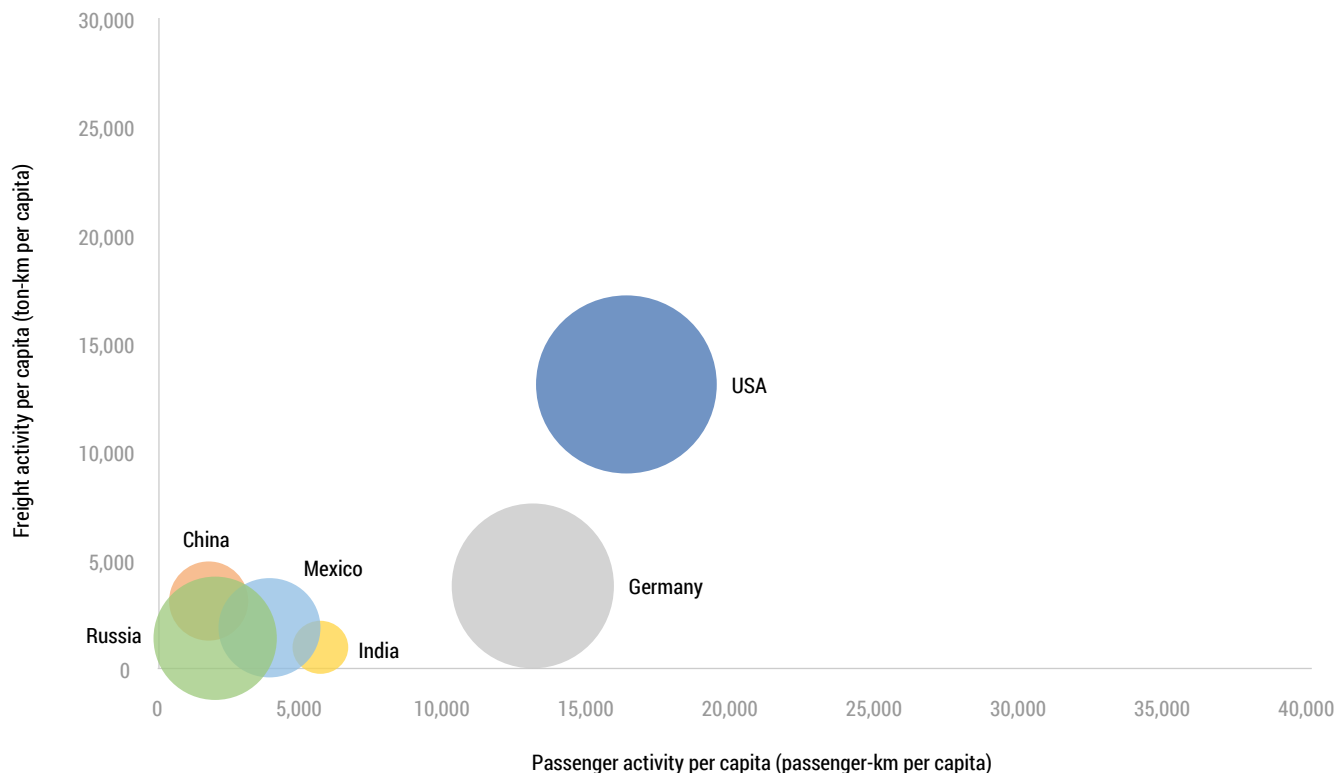
Figure 32: Rail freight activity relative to GDP[72]

71   Source: Own calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/), 2050-Calculator (www.2050.org.uk/calculators), UN Population Trends (www.un.org/esa/population/) and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

72   Based on World Bank data.

Figure 33: Passenger and freight mode share (2010)[73]
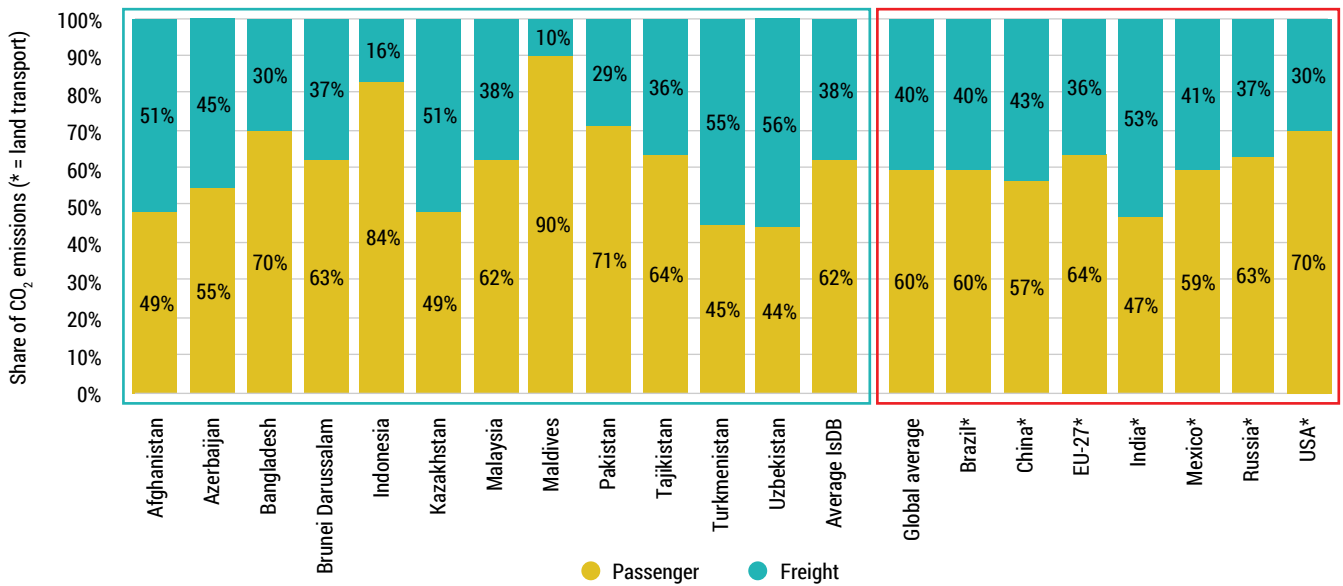
Kazakhstan is dominated by freight transport activity, which is more than double the size of any other IsDB MC in the figure (and even higher than any of the selected non-IsDB MCs in Figure 31). This is because Kazakhstan, as a landlocked country, relies heavily on freight activity and is home to major freight routes connecting Europe and Asia. Turkmenistan, another landlocked Central Asian country, has a higher level of activity in freight and passenger transport than countries with comparable GDP per capita. The situation in selected non-IsDB MCs is plotted in Figure 31 to provide additional data points for benchmarking.

A comparison of rail freight activity can be made by calculating freight ton-km relative to per capita GDP. Figure 32 shows that most IsDB MCs (with the exception of Kazakhstan) have relatively low levels of rail freight activity per unit of GDP in comparison with countries, such as Brazil, China, Germany, India, Mexico, Russia and the USA.

As shown in Figure 26, the quality of rail infrastructure is relatively poor in most IsDB sub-regions. Improvements to infrastructure can increase rail freight volumes and, over time, help to increase the ratio of rail freight to road freight transport. More comprehensive data are required for a more detailed analysis of road and rail freight.

Figure 33 shows the breakdown of transport CO_2 emissions into passenger transport (yellow) and freight transport (light blue). In Maldives, a small island developing state, passenger transport accounts for 90 per cent of domestic transport emissions, and in Indonesia it accounts for 84 per cent. Globally passenger transport accounts for an average of 60 per cent of transport CO_2 emissions, while freight transport accounts for 40 per cent, which is very similar to the average in IsDB MCs of 62 per cent and 38 per cent, respectively.

Freight accounts for a higher share of transport CO_2 emissions in most of the landlocked countries in Central Asia. Their average is above the global and IsDB MC averages. Since data are limited for this topic (e.g. MENA and sub-Saharan Africa are not represented), additional data collection is needed in the future to provide a clearer picture of passenger and freight transport across all IsDB MCs.

In the future, it can be expected that passenger and freight transport activity will increase further. Projections for the future development of per capita passenger transport relative to per capita GDP in countries with available data are shown in Figure 34. The development is drawn in five-year steps, starting in 2010 and ending in 2050.

73 Source: Own calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/), 2050-Calculator (www.2050.org.uk/calculators), UN Population Trends (www.un.org/esa/population/) and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

Figure 34: Projections for passenger transport relative to per capita GDP (2010–2050)[74]

Legend:
- Afghanistan
- Azerbaijan
- Bangladesh
- Brunei Darussalam
- Indonesia
- Kazakhstan
- Malaysia
- Maldives
- Nigeria
- Pakistan
- Tajikistan
- Turkmenistan
- Uzbekistan
- Brazil
- China
- EU-27
- India
- Mexico
- Russia
- USA

Y-axis: Passenger-kilometres of travel per capita (km/year/capita)

X-axis: GDP per capita US$ PPP (2005)
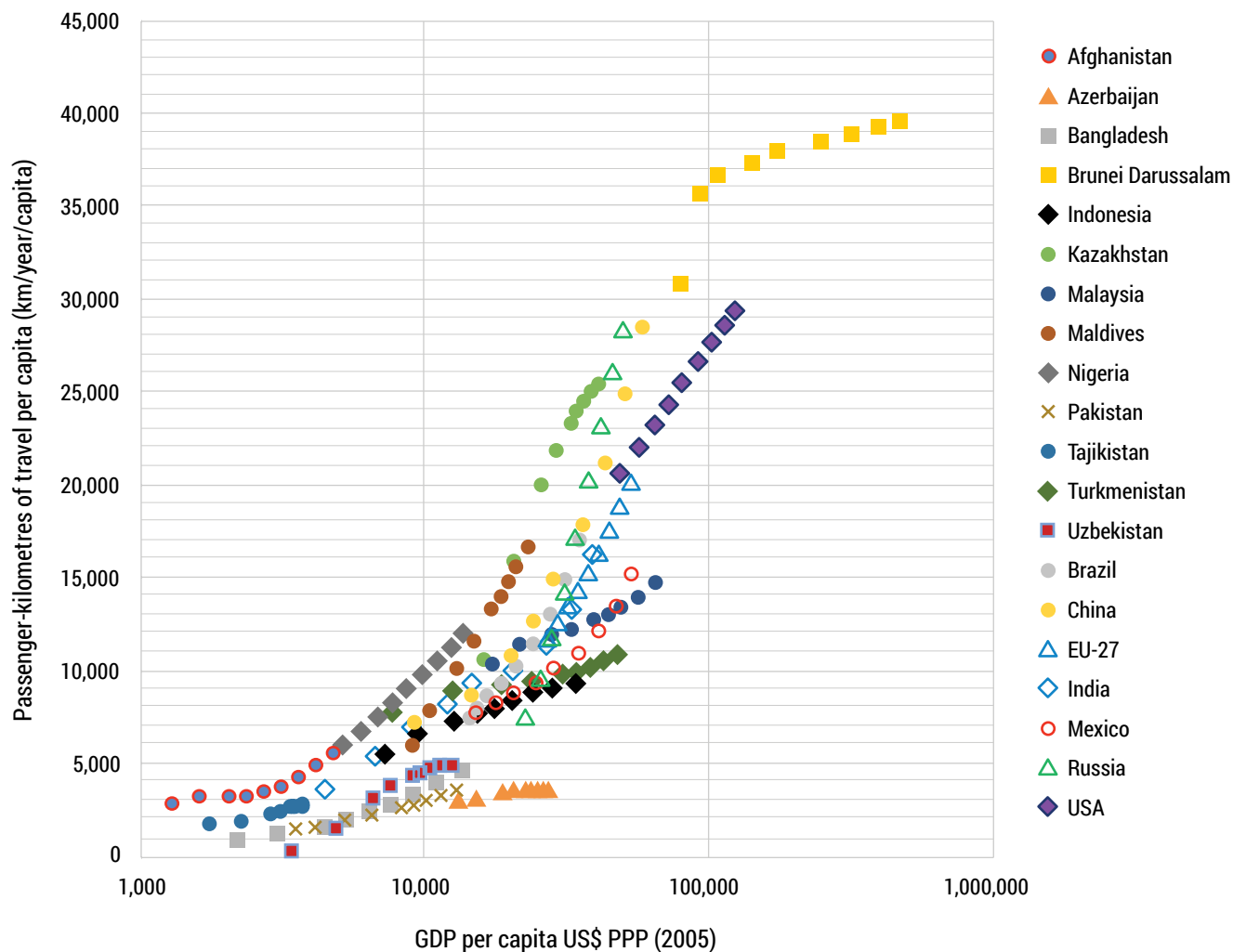
Similar to the other findings, Brunei Darussalam stands out in terms of passenger-kilometres per capita, though its growth rate of 28 per cent is well below the average of 76 per cent between 2010 and 2050.

Among non-IsDB MCs, China, India and Russia show more rapid growth (302 per cent, 355 per cent and 278 per cent, respectively). It can be assumed that the growth in China will be made possible through the major expansion of high-speed rail between urban areas and public transport within cities.

74 Source: Own calculations using ADB-Better Transport Data Project (www.adb.org/projects/45105-005/main), Study of Long-Term Transport Action Plan for ASEAN region (http://cleanairasia.org/study-of-long-term-transport-action-plan-for-asean-region-lpa-project/), 2050-Calculator (www.2050.org.uk/calculators), UN Population Trends (www.un.org/esa/population/) and Implications of 2DS and 1.5DS for Land Transport Carbon Emissions in 2050 (www.ppmc-transport.org/implications-of-2ds-and-1-5ds-for-land-transport-carbon-emissions-in-2050/).

VII. Road safety

Climate action in transport has wide-ranging co-benefits for sustainable development. Eight of the 17 Sustainable Development Goals (SDGs) adopted by world leaders in 2015 have a strong link to transport. SDG target 3.6 aims to halve the number of global deaths and injuries from road traffic accidents by 2020. While the number of road traffic deaths has plateaued globally, it is continuing on a generally upward trend in IsDB MCs, as shown in Figure 35.[75]

The analysis shows that the number of road traffic fatalities in IsDB MCs increased by more than 50,000 in a little over a decade. While a significant majority of IsDB MCs have recorded a growing number of road traffic fatalities over this period, the number of fatalities has decreased in five IsDB MCs – Brunei Darussalam (-39 per cent), Guyana (-33 per cent), Suriname (-15 per cent), Turkey (-9 per cent) and Albania (-5 per cent) – though not enough to counter a substantial increase in other MCs.

While middle-income countries are the locus for nearly 80 per cent of road traffic fatalities in IsDB MCs, fatalities in low-income countries account for nearly 20 per cent of the total, and the number increased by nearly 50 per cent between 2000 and 2013. Thus, IsDB MCs are generally not on the right path to meet SDG target 3.6, and urgent action is needed to address this troubling trend.

Figure 35: Road traffic fatalities in IsDB MCs by income group (2000–2013)[76]

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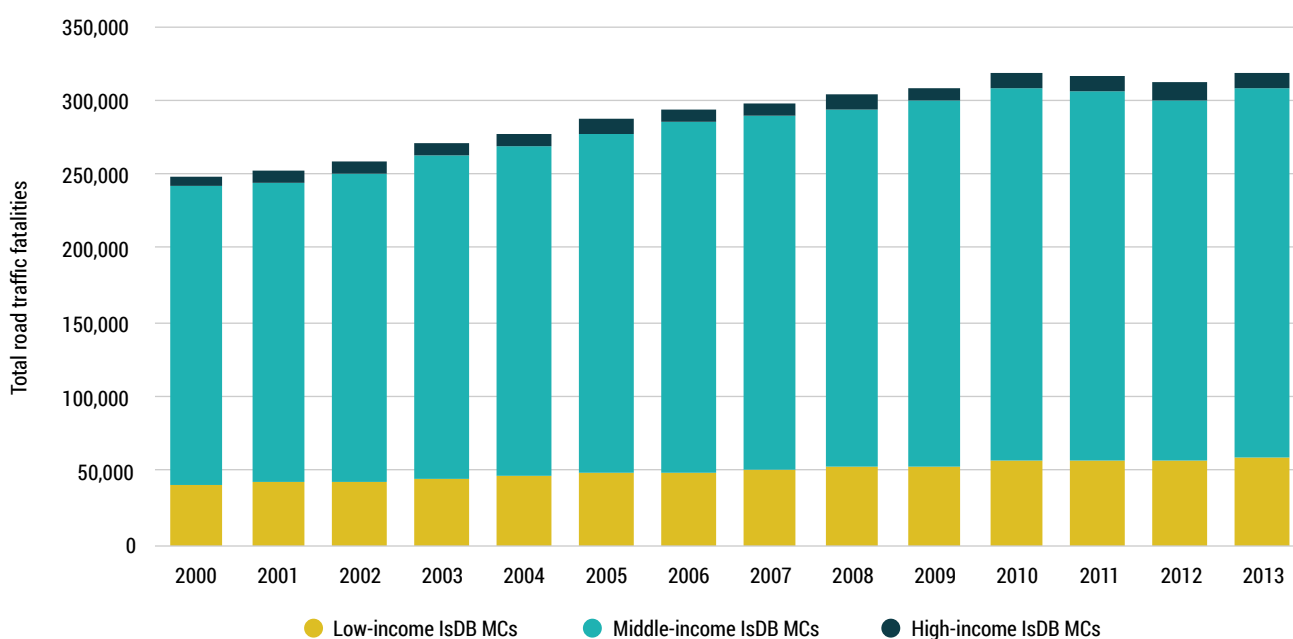
75   The reference table for road safety indicators for IsDB MCs can be found under Table 11 of Annex II.
76   WHO, through UN Stats (https://unstats.un.org/sdgs/indicators/database/?indicator=3.6.1).

Figure 36: Road traffic fatalities by user group[77]

Low-income countries

27%
27%
3%
30%
13%

Middle-income countries

40%
13%
3%
29%
15%

High-income countries

63%
2%
2%
27%
6%

- ● Drivers/passengers of four-wheeled vehicles
- ● Cyclists
- ● Other/unspecified road users
- ● Drivers/passengers of motorized 2- or 3-wheelers
- ● Pedestrians
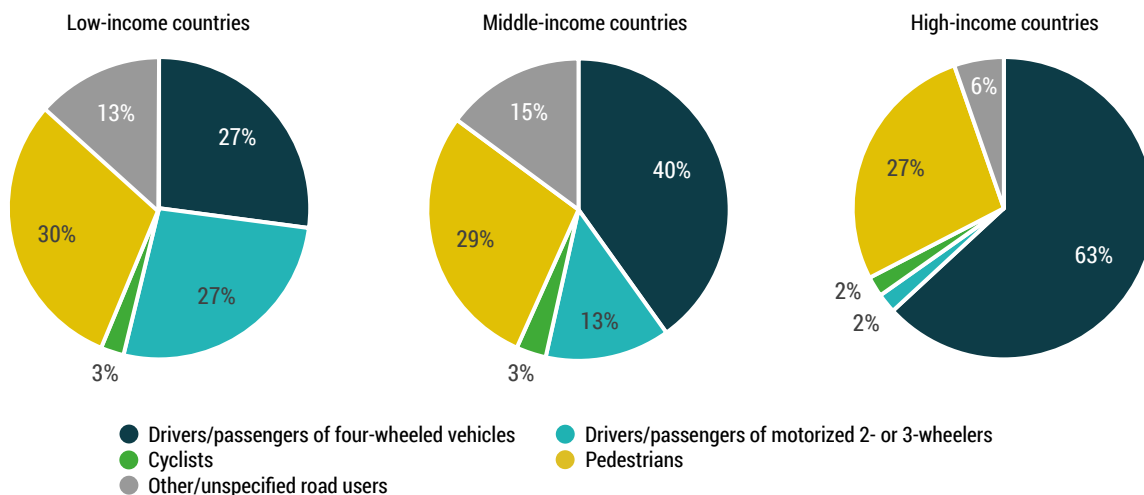
Figure 36 shows the proportion of road traffic fatalities by mode of transport for the three income groups.

This analysis shows that users who are not driving or riding in an automobile are more vulnerable to road traffic fatalities in low- and middle-income countries than in high-income countries (in part due to higher usage of motorized two- and three-wheelers in these countries). It also shows that nearly one in every three road traffic deaths involves a pedestrian, and that cyclist deaths are relatively rare, which may be due to the low incidence of cycling in the countries of study.

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77 WHO, through UN Stats (https://unstats.un.org/sdgs/indicators/database/?indicator=3.6.1).

Assessments of policy responses

The results of the analysis of transport and climate change data for IsDB MCs outline historical and future trends, opportunities and overall challenges; thus, there is also a clear need to identify appropriate policy responses to implement low-carbon transport measures and achieve the ambitious goals of global agreements on sustainable development and climate change.

A policy responses matrix was developed to provide **broad guidance** on which major transport measures can accelerate action on sustainable transport among IsDB sub-regions and income groups. These nine categories are based on the policy responses in the forthcoming Transport and Climate Change Global Status Report, covering primary elements of Avoid-Shift-Improve measures. The matrix indicates relevance on a scale of high (= dark blue) to low (= light blue) based on the criteria of urbanization, motorization and GHG emissions growth, using available data.[78]

Transport demand-management measures, including congestion-charging zones, vehicle restriction policies and implementation of SUMPs, are especially relevant in countries with high rates of urbanization, motorization and CO_2 growth, and in high-income countries in which high rates of motorization and congestion generally outweigh issues of limited mobility. SUMPs are relevant for all income groups and are especially relevant in sub-regions with high projected urbanization rates (Table 8).

Among **urban transport measures**, investment in urban rail will complement the economic development and rapid population growth in middle- and high-income countries and in regions with projected growth in urbanization rates. BRT, as a relatively low-cost and affordable public transport service, can best address the transport needs of low-income countries, especially in Western Africa, where urban populations are expected to rise rapidly by 2050 (Table 9).

Among **railway measures**, investment in high-speed rail is most relevant for higher-income countries, especially in Asia. Middle-income countries can also benefit from high-speed rail

High relevance	Medium relevance	Low relevance	Insufficient data

Table 8: Transport demand-management measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Congestion charging zones	Low	Medium	Medium	High	Low	Low	Low	Medium	Medium	Low	Low	Medium	High
Vehicle restriction policies	Medium	Medium	Medium	High	Low	Low	Medium	High	Medium	Low	Low	High	High
SUMPs	Medium	Medium	High	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium	High	High
Overall	Medium	Medium	Medium	High	Low	Low	Medium	Medium	Medium	Low	Low	Medium	High

Table 9: Urban transport measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
BRT investments	Medium	Medium	Medium	Medium	Medium	Medium	High	Medium	Medium	Low	High	Medium	Low
Urban rail investments	Medium	Medium	Medium	High	Medium	Low	Medium	Medium	Low	Medium	Low	High	High
Overall	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	High	High

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78   Details are provided in Annex I.

Table 10: Railway measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
High-speed rail investments													
Railway electrification													
Overall													

Table 11: Walking and cycling measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Cycling infrastructure investments													
Pedestrian infrastructure investments													
Overall													

Table 12: Shared mobility measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Bike-sharing investments													
Car-sharing investments													
Overall													

connecting urban centres. The first high-speed rail service is supposed to open at the end of 2018 in Morocco.[79] An assessment of the relevance of investments in rail freight and railway electrification is challenging in many sub-regions due to a lack of data (Table 10).

Investments to expand and to increase the safety of **cycling and walking infrastructure** for current users of these modes of transport are relevant for IsDB MCs across income groups and regions. Cycling and walking are emission-free modes of transport that can avoid motorized journeys, especially in urban areas; thus, it is important to improve and expand cycling/walking infrastructure in concert with other investments, to increase safety, decrease travel costs and reduce urban congestion (Table 11).

Among **shared mobility measures**, affordable, low-carbon transport services such as bike-sharing systems are most relevant in high-income countries with dense urban populations and more prolific use of electronic payments, and mobile apps provide opportunities to introduce and expand car-sharing services (Table 12).

Stricter **fuel economy** and vehicle-emissions standards are critical to curbing the relatively high GHG emissions in middle-income countries in Eastern, Southern and Western Asia, as well as Western and Northern Africa. The analysis shows that the growth in transport CO_2 emissions is led by middle-income countries; therefore, improvements in vehicle emissions can have significant mitigation impacts (Table 13).

More ambitious **e-mobility targets**, to expand fleets of electric vehicles (EVs) and the corresponding charging infrastructure, are most suitable for high-income countries and for countries with increasing motorization. IsDB should also focus on assisting MCs to adopt targets to phase out internal combustion engines (ICEs), in particular in

79   Barrow, K. (2018) 'ONCF prepares for launch of high-speed services', Railway Journal, 12 March (www.railjournal.com/index.php/high-speed/oncf-prepares-for-launch-of-high-speed-services.html?channel=523).

Table 13: Fuel economy measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Fuel economy standards													
Vehicle emissions standards													
Overall													

Table 14: E-mobility measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
EV charging infrastructure targets													
EV targets													
ICE phase-out targets													
Overall													

Table 15: Renewable energy measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Transport renewable energy targets													
Biofuel targets													
Overall													

Table 16: Freight and logistics measures

Categories	Central Asia	S.E. Asia	S. Asia	W. Asia	E. Africa	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Rail freight investments													
Green urban freight investments													
Overall													

middle-income countries, where motorization and emissions are poised for rapid growth (Table 14).

The potential of EV expansion to reduce GHG emissions in IsDB MCs will be greatly complemented by targets to increase the share of **renewable energy** used in the transport sector in sub-regions with high motorization rates and sufficient energy-generation capacity, and to shift to biofuels for transport, especially in middle-income countries, and sub-regions that are less urbanized (Table 15).

In general, IsDB MCs should strive to shift **freight and logistics** to rail to increase efficiency (based on appropriate guidelines in the Global Green Freight Action Plan),[80] and expand electrification to reduce CO_2 emissions. Green urban freight investments are most relevant among higher-income countries and in sub-regions (Table 16).

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80   www.globalgreenfreight.org/action-plan

Conclusions and recommendations

This study represents a novel analysis of climate change impacts and opportunities in the transport sector among IsDB MCs. It creates added value by providing a foundation on which to build long-term policies and programmes among IsDB sub-regions.

BAU transport emissions in IsDB MCs are projected to double between 2020 and 2050, and urgent action is required to reverse this trend and to increase the resilience of transport systems in vulnerable IsDB sub-regions. Strong action is needed to accelerate the implementation of low-carbon transport options in some IsDB regions, especially highly populated and rapidly urbanizing middle-income countries.

A number of primary recommended responses have been identified based on the seven sections of analysis in this report. While different transport development pathways are emerging among IsDB MCs, with many currently following an unsustainable path, other IsDB MCs are making progress in transitioning to low-carbon transport and setting positive examples for others to emulate.

IsDB is uniquely positioned to play a key role in addressing this urgent agenda of helping countries transition to a sustainable pathway. The seven broad recommendations given here provide a starting point for IsDB MCs to accelerate their short-term implementation action and medium-term planning and policymaking, to achieve a long-term, low-carbon transformation of the transport sector.

Projected growth in motorization in IsDB MCs must be aggressively countered with a balanced set of measures to **stabilize and reduce car ownership and use**.

- Rising motorization tends to follow GDP growth, promising greater convenience and mobility but also giving rise to congestion, reduced air quality and inequitable access.

- Motorization has grown in the majority of IsDB MCs, with high-income countries showing rates above global averages and generally growing faster than other developing regions.

- Unlike most developing countries, Malaysia shows a projected decrease in motorization rates by 2050, which can serve as an example for other IsDB MCs (Figure 5).

- IsDB should take further steps to invest in programmes and projects to 'avoid' unnecessary journeys, 'shift' journeys to more efficient means where possible, and 'improve' the efficiency of motorized journeys where it is not feasible to avoid or shift them.

Growing emissions across IsDB sub-regions must be coupled with **broad and balanced investments in low-carbon mobility options** that bring significant and more equitable long-term, economy-wide benefits.

- The economic trajectory of countries reaching middle-income levels generates risks of increased motorization, growing emissions and rising numbers of road traffic fatalities.

- Increased GDP does not need to imply increased emissions, and IsDB MCs such as Uzbekistan are successfully decoupling economic and emissions growth (Figure 16).

- Economic growth can fund action to make sustainable low-carbon mobility affordable for all, and ensure broader access to economic, social and cultural opportunities.

- IsDB should work closely with countries on sustainable transport solutions that facilitate strong economic development (e.g. multimodal transport infrastructure, green freight in shipping and logistics) while keeping emissions at a more sustainable level.

More ambitious mitigation action is needed in IsDB MCs for transport to make a proportional contribution to the Paris Agreement targets.

- Sustainable transport will be essential for countries to deliver on their NDCs, yet there is room for IsDB MCs to expand the scope, ambition and quantified reduction targets

for transport within NDCs, based on existing examples and levels of ambition.

- Some IsDB MCs have defined detailed transport strategies and have set quantified transport-specific reduction targets (Table 6), including Bangladesh, Brunei Darussalam, Burkina Faso, Côte d'Ivoire, Gabon and Palestine, but others are lacking.

- A balanced set of transport demand-management strategies and investments in efficient alternatives to personal automobile travel can reduce vehicle use in countries with high levels of vehicle ownership, and lower emissions trajectories in rapidly motorizing countries.

- IsDB should support the development of transport in NDCs and long-term emissions reduction strategies along with the expansion of national-level mitigation potential studies to fill gaps among MCs.

Adaptation and resilience measures must be mainstreamed in transport systems, as the infrastructure and services of most IsDB MCs are highly vulnerable to the impacts of climate change, especially in low-income countries and coastal/island states.

- Transport adaptation is generally underrepresented in the NDCs, NAPs and NAPAs of IsDB MCs, with the exception of a few detailed and ambitious submissions (Figure 25).

- Several IsDB MCs have proposed specific transport adaptation measures in NDCs, NAPs and NAPAs (e.g. Bangladesh, Burkina Faso, Cameroon, Gambia and Maldives), which should be used to guide others in similar sub-regions and income groups.

- IsDB MCs can expand the inclusion of transport adaptation measures in new/revised submissions, in cooperation with 'trailblazer' countries in varied geographies (e.g. inland deserts, island states).

- IsDB should support the mainstreaming of transport system resilience through lending, capacity-building and policy dialogue (see Annex I), to improve resilience, enhance mitigation potential and yield long-term returns on investments in low-carbon transport

Investments in urban mass transit must be accelerated in IsDB MCs to keep pace with projected growth in urbanization.

- IsDB MCs must focus on addressing urban transport challenges while there is still time, especially in sub-regions where urbanization growth is most dramatic (e.g. Western Africa), by expanding recent projects such as an electrified regional express train in Senegal.

- IsDB MCs include clear leaders in urban rail and BRT development. For example, metro rail is growing in IsDB sub-regions, with new systems opening in the past decade in Algeria, Iran, Kazakhstan, Morocco and Turkey (Reference Table 9), and more than 500km of BRT are currently in operation in six IsDB MCs. Public transport ridership is increasing in many cities (e.g. mode share in Dubai increased from 6 per cent in 2006 to 16 per cent in 2016), and expanded systems are needed to address growing urbanization and demand (Reference Table 10).

- IsDB can cooperate in existing/planned megacities to increase the use of clean transport, such as by converting public bus/taxi fleets to electric/hybrid and developing urban rail/BRT (e.g. Saudi Arabia is planning a US$500 billion megacity to run on 100 per cent renewable energy).[81]

- IsDB should prioritize lending for urban rail and BRT systems to countries that specify urban transport measures in NDCs, and should work with MCs to create national-level enabling legislation for urban mobility and to expand the creation of city-level SUMPs.

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81 https://cnnmon.ie/2lefx31

Sustainable freight transport requires further attention and investment in IsDB MCs, especially landlocked countries with high freight (vs. passenger) transport mode shares.

● Freight transport/shipping is generally underrepresented in NDCs among IsDB MCs, especially among high-income countries (Figure 20). Steps must be taken to address freight emissions, which are alarmingly high and dominated by road freight.

● Two thirds of freight volume travels by road in Bangladesh, which is being countered by an emerging green freight plan,[82] and Turkey's NDC aims to reduce the share of freight and passenger road transport and increase the share of maritime and rail transport (Reference Table 5).

● Economic growth is generally coupled with stronger demand for intra-regional trade and, thus, for freight transport. It is therefore necessary to counter the dominance of road freight, to decouple freight growth from GDP growth and to improve freight infrastructure to promote more sustainable freight transport.

● IsDB should accelerate short-term lending and technical assistance for projects related to sustainable freight and programmes to reduce emissions (especially in freight-heavy sub-regions) and should encourage MCs to increase their focus on freight in NDCs and other national plans through policy dialogue and capacity-building.

The number of road traffic accidents in IsDB MCs is rising at alarming rates, and **bold and rapid action is needed to increase road safety measures** (Figures 35 and 36).

● The number of road traffic fatalities in IsDB MCs has increased by more than 50,000 in a little over a decade, reaching a level that is disproportionally high for the size of its population.

● The number of road traffic fatalities decreased in five IsDB MCs between 2000 and 2013 (Brunei Darussalam (-39 per cent), Guyana (-33 per cent), Suriname (-15 per cent), Turkey (-9 per cent) and Albania (-5 per cent)), but this still falls well short of the 50 per cent reduction targeted under SDG 3.6.

● IsDB can increase capacity-building and technical assistance for behavioural and technological solutions to reverse this trend, and can support MCs to move towards 'Vision Zero' and other strategies to reduce road fatalities.

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82 http://cleanairasia.org/wp-content/uploads/2015/12/Advancing-Green-Freight-in-Bangladesh-A-Background-Paper.pdf

Annex I: Summary of recommended actions and policy responses

Based on the observations and analysis from the previous sections, the following table lists a discrete set of potential actions (generally ranked from higher to lower priority, based on average score of policy measures) organized by the three modalities of policy dialogue, technical assistance/capacity-building and lending/financing. These actions can be further tailored to sub-regions or income groups based on the Policy Responses Matrix on the following page.

Table A1: Potential actions

Objective	Policy dialogue	Technical assistance/ capacity-building	Lending/financing
1. **Increase access/ equity of low-carbon transport with GDP growth**	• Encourage phase-out of fossil-fuel subsidies and implementation of transport carbon-pricing measures • Encourage greater attention to road safety measures/incentives	• Support development of SUMPs to increase safe, equitable and inclusive transport options (e.g. through cooperation with GIZ and MobiliseYourCity Partnership)	• Fund implementation/expansion of bike-sharing to promote equity • Fund improvements to sustainable freight systems (urban, rail, inland waterways) to address demand
2. **Increase investments in low-carbon urban public transport**	• Highlight positive political impact of high-profile sustainable transport projects and champions	• Facilitate sharing of good practice on urban rail/BRT among countries where implemented and where proposed in NDCs	• Fund implementation of urban rail and BRT, prioritizing megacities and countries with rapid urbanization
3. **Address projected growth in vehicle ownership and use**	• Gauge interest in piloting transportation demand-management (TDM) measures to reduce congestion • Encourage ambitious targets to phase out ICEs/phase in EVs	• Conduct training on best practices in TDM (e.g. congestion charging, vehicle restrictions) • Support implementation of vehicle restrictions, as represented in NDCs of several IsDB MCs	• Fund TDM-enabling technologies, where appropriate • Fund implementation of EV charging infrastructure (in concert with investments in renewable energy generation systems)
4. **Increase transport mitigation ambition and implementation**	• Encourage participation of IsDB MCs, cities and companies in the Transport Decarbonisation Alliance • Seek information on transport measures included in NDCs to identify gaps and opportunities	• Conduct workshops to increase ambition and balance of transport measures proposed in NDCs • Support development of additional mitigation potential studies to fill current gaps among IsDB regions	• Accelerate implementation of policy measures in Tables 8–16 in sub-regions and income groups with highest projected emissions growth
5. **Mainstream resilience measures in transport infrastructure/ services**	• Encourage completion of NAPs and NAPAs with strong transport components where not submitted • Encourage MC participation in annual NAP Expo[83] with a focus on transport measures	• Conduct training to incorporate specific transport-resilience measures in NDCs, NAPs and NAPAs (to be done in conjunction with NDC mitigation training)	• Incorporate appropriate resilience measures into all lending on transport infrastructure/vehicles • Seek opportunities to retrofit existing infrastructure to increase adaptive capacity of transport

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83   https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans

Table A2: Policy Responses Matrix (see also discussion in 'Assessments of policy responses' section)
Key: 3 = high, 2 = medium, 1 = low priority.

1. Transport demand management

IsDB categories	W. Asia	S. Asia	N. Africa	S.E. Asia	W. Africa	S. America	Central Asia	E. Africa	Central Africa	S. Europe	High-income	Middle-income	Low-income
Congestion-charging zones	3	2	2	2	1	2	1	1	1	1	3	2	1
Vehicle-restriction policies	3	2	3	2	2	2	2	1	1	1	3	3	1
SUMPs	3	3	2	2	3	2	2	2	2	2	3	3	3
Overall	**3.0**	**2.3**	**2.3**	**2.0**	**2.0**	**2.0**	**1.7**	**1.3**	**1.3**	**1.3**	**3.0**	**2.7**	**1.7**

2. Urban public transport

IsDB categories	W. Africa	W. Asia	S.E. Asia	S. Asia	E. Africa	N. Africa	Central Africa	Central Asia	S. America	S. Europe	Low-income	Middle-income	High-income
BRT investments	3	2	2	2	2	2	2	2	2	2	3	2	2
Urban rail investments	3	3	2	2	2	2	1	1	1	1	2	3	3
Overall	**3.0**	**2.5**	**2.0**	**2.0**	**2.0**	**2.0**	**1.5**	**1.5**	**1.5**	**1.5**	**2.5**	**2.5**	**2.5**

3. Railways

IsDB categories	S.E. Asia	S. Asia	W. Asia	Central Asia	N. Africa	S. Europe	E. Africa	Central Africa	W. Africa	S. America	High-income	Middle-income	Low-income
High-speed rail investments	3	3	3	2	2	2	1	1	1	1	3	2	1
Railway electrification	?	?	?	?	?	?	?	?	?	?	3	2	1
Overall	**3.0**	**3.0**	**3.0**	**2.0**	**2.0**	**2.0**	**1.0**	**1.0**	**1.0**	**1.0**	**3.0**	**2.0**	**1.0**

4. Walking and cycling

IsDB categories	S.E. Asia	S. Asia	N. Africa	S. America	S. Europe	Central Asia	W. Asia	E. Africa	Central Africa	W. Africa	High-income	Middle-income	Low-income
Cycling infrastructure investments	3	3	3	3	3	2	3	2	2	2	3	2	1
Pedestrian infrastructure investments	3	3	3	3	3	2	3	2	2	2	3	2	1
Overall	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**	**2.0**	**3.0**	**2.0**	**2.0**	**2.0**	**3.0**	**2.0**	**1.0**

5. Shared mobility

IsDB categories	W. Asia	Central Asia	S.E. Asia	S. Asia	E. Africa	Central Africa	N. Africa	S. America	S. Europe	W. Africa	High-income	Middle-income	Low-income
Bike-sharing investments	3	2	2	2	2	2	2	2	2	1	3	2	1
Car-sharing investments	3	2	2	2	2	2	2	2	2	1	3	2	1
Overall	**3.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**1.0**	**3.0**	**2.0**	**1.0**

6. Fuel economy

IsDB categories	W. Asia	W. Africa	N. Africa	S.E. Asia	S. Asia	E. Africa	Central Africa	S. America	S. Europe	Central Asia	Middle-income	Low-income	High-income
Fuel-economy standards	3	2	2	2	2	2	2	2	2	2	3	2	2
Vehicle-emissions standards	3	3	3	3	3	2	2	2	2	1	3	2	1
Overall	**3.0**	**2.5**	**2.5**	**2.5**	**2.5**	**2.0**	**2.0**	**2.0**	**2.0**	**1.5**	**3.0**	**2.0**	**1.5**

7. E-mobility

IsDB categories	S.E. Asia	W. Asia	S. Asia	W. Africa	S. America	N. Africa	Central Asia	E. Africa	Central Africa	S. Europe	High-income	Middle-income	Low-income
EV-charging infrastructure targets	3	3	3	3	2	2	2	2	2	1	3	2	1
EV targets	3	3	3	3	2	2	2	2	2	1	3	2	1
ICE phase-out targets	3	3	2	2	3	2	2	2	2	2	2	3	2
Overall	**3.0**	**3.0**	**2.7**	**2.7**	**2.3**	**2.0**	**2.0**	**2.0**	**2.0**	**1.3**	**2.7**	**2.3**	**1.3**

8. Renewable energy in transport

IsDB categories	S.E. Asia	W. Asia	S. Asia	W. Africa	S. America	Central Asia	E. Africa	Central Africa	N. Africa	S. Europe	Middle-income	High-income	Low-income
Transport renewable energy targets	3	3	3	3	2	2	2	2	2	1	2	3	1
Biofuel targets	3	3	2	2	3	2	2	2	2	2	3	2	2
Overall	**3.0**	**3.0**	**2.5**	**2.5**	**2.5**	**2.0**	**2.0**	**2.0**	**2.0**	**1.5**	**2.5**	**2.5**	**1.5**

9. Freight and logistics

IsDB categories	E. Africa	Central Asia	S.E. Asia	S. Asia	W. Asia	Central Africa	W. Africa	N. Africa	S. America	S. Europe	Low-income	Middle-income	High-income
Rail freight investments	?	3	2	2	?	?	?	?	?	?	1	3	2
Urban freight investments	3	1	1	1	2	1	1	1	1	1	1	3	3
Overall	**3.0**	**2.0**	**1.5**	**1.5**	**2.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**3.0**	**2.5**

Annex II: Reference tables

Reference Table 1: Global transport indicators in IsDB MCs

Indicator	Units	Global	IsDB MCs	IsDB MCs as a percentage of global
Population (2016)	People	7,435,088,667	1,768,942,953	24%
Urban population (2016)	People	4,001,094,749	863,864,331	22%
GDP (2016)	Constant 2010 US$	74,908,668,025,095	6,248,745,610,368	8%
Vehicle stock (2015)	Vehicles	1,270,343,304	132,695,013	10%
Road infrastructure (various)	km	36,762,775	3,537,474	10%
Railway infrastructure (2014)	km	993,150	93,499	9%
BRT infrastructure (2017)	km	4,708	501	11%
Urban rail infrastructure (various)	km	13,248	622	5%
Transport CO_2 emissions (2015)	Mt	6,483	959	15%
Transport black carbon emissions (2010)	Gg	808	145	18%
Transport NO_x emissions (2010)	Gg	33,125	5,589	17%
Traffic fatalities (2013)	People	1,255,538	319,934	25%
Fuel quality of 50ppm or less (various)	Countries	58	9	16%

Reference Table 2: Development of main indicators 2010−2050

Sub-region	Population size (2010)	Population size (2050)	Urban population (2010)	Urban population (2050)	GDP PPP (2010)	GDP PPP (2050)	Transport CO_2 emissions (2010)	Transport CO_2 emissions (2050)
Central Asia	63,156,447	94,431,359	24,950,647	46,416,703	505	2,648	32	130
South-Eastern Asia	271,025,074	363,816,626	140,507,662	264,391,345	2,640	17,393	147	386
Southern Asia	426,444,473	664,925,266	169,136,245	378,504,658	2,426	14,290	162	545
Western Asia	217,090,486	376,505,688	145,888,538	278,970,344	4,254	20,370	273	480
Eastern Africa	71,730,599	212,095,286	16,767,717	80,074,365	82	1,027	5	28
Central Africa	33,497,907	86,969,326	14,534,955	49,448,696	102	944	5	19
Western Africa	278,814,374	747,906,467	112,364,801	471,719,959	1,025	7,802	42	246
Northern Africa	203,829,916	358,923,353	100,360,982	201,021,811	1,980	11,667	124	347
Southern Europe	2,940,525	2,663,591	1,643,203	2,345,476	27	114	2	4
South America	1,272,659	1,470,305	570,271	759,336	11	45	1	3
Total	1,569,802,460	2,909,707,267	726,725,021	1,773,652,693	13,053	76,301	792	2,188

Reference Table 3: Motorization rates in IsDB MCs (vehicles per 1,000 inhabitants)

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth from 2005 to 2015
Afghanistan	36	37	38	40	41	43	45	48	49	48	47	28%
Albania	89	101	107	119	123	142	139	140	141	155	165	84%
Algeria	88	92	97	102	108	110	112	121	126	131	140	59%
Azerbaijan	70	80	89	97	103	107	114	123	133	142	135	94%
Bahrain	442	462	493	530	564	554	595	638	707	778	422	-5%
Bangladesh	3	3	3	3	3	4	4	4	4	4	4	31%
Benin	20	19	20	22	22	22	22	23	23	23	24	22%
Brunei Darussalam	238	243	259	279	284	293	317	340	421	500	721	202%
Burkina Faso	9	9	10	11	11	11	11	11	11	11	16	80%
Cameroon	13	13	13	14	14	14	14	15	15	15	15	13%
Chad	–	–	–	–	–	–	–	–	–	–	–	–
Comoros	–	–	–	–	–	–	–	–	–	–	–	–
Côte d'Ivoire	33	34	35	37	37	38	39	39	40	40	41	22%
Djibouti	–	–	–	–	–	–	–	–	–	–	–	–
Egypt	41	37	40	43	48	52	52	53	54	56	61	48%
Gabon	–	–	–	–	–	–	–	–	–	–	–	–
Gambia (Republic of the)	–	–	–	–	–	–	–	–	–	–	–	–
Guinea	–	–	–	–	–	–	–	–	–	–	–	–
Guinea Bissau	–	–	–	–	–	–	–	–	–	–	–	–
Guyana	–	–	–	–	–	–	–	–	–	–	–	–
Indonesia	40	47	55	59	61	65	68	72	76	82	87	118%
Iran (Islamic Republic of)	105	108	111	115	119	123	137	151	164	170	178	70%
Iraq	81	81	83	83	83	87	97	102	103	105	108	34%
Jordan	91	97	103	108	114	112	124	123	122	121	123	35%
Kazakhstan	113	136	165	190	197	219	235	251	263	276	248	119%
Kuwait	424	428	436	437	443	453	465	472	474	479	477	12%
Kyrgyzstan	85	95	104	121	137	157	172	190	202	216	227	168%
Lebanon	131	126	126	129	129	126	121	117	116	116	117	-11%
Libya	255	297	301	302	302	344	360	379	400	421	439	72%
Malaysia	289	303	317	333	348	365	381	397	398	405	433	50%
Maldives	–	–	–	–	–	–	–	–	–	–	–	–
Mali	9	9	9	10	10	10	10	11	11	11	12	36%
Mauritania	9	10	10	10	10	10	10	9	10	10	10	4%
Morocco	65	69	72	76	81	85	89	93	96	99	103	58%
Mozambique	8	9	10	9	12	13	13	13	14	14	14	75%

(continued next page)

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth from 2005 to 2015
Niger	–	–	–	–	–	–	–	–	–	–	–	–
Nigeria	13	20	20	19	19	19	20	20	20	20	21	65%
Oman	161	197	199	221	215	224	229	234	232	232	233	45%
Pakistan	11	12	12	12	13	13	14	14	15	16	17	49%
Palestine	66	56	37	44	55	54	63	72	77	85	87	32%
Qatar	429	373	387	449	421	410	410	412	403	404	411	-4%
Saudi Arabia	150	152	158	163	169	178	187	196	199	203	209	40%
Senegal	34	34	34	37	37	37	40	42	43	43	44	30%
Sierra Leone	–	–	–	–	–	–	–	–	–	–	–	–
Somalia	–	–	–	–	–	–	–	–	–	–	–	–
Sudan	3	3	3	3	3	3	3	3	3	3	3	3%
Suriname	191	200	224	248	270	292	301	312	323	331	349	82%
Syrian Arab Republic	196	197	203	208	217	232	253	279	300	334	368	88%
Tajikistan	–	–	–	–	–	–	–	–	–	–	–	–
Togo	26	25	26	25	24	24	24	24	25	26	27	3%
Tunisia	96	98	102	113	116	118	118	117	121	125	129	33%
Turkey	124	132	139	145	149	156	164	172	180	187	196	58%
Turkmenistan	–	–	–	–	–	–	–	–	–	–	–	–
Uganda	8	8	10	10	11	11	11	11	11	12	12	53%
United Arab Emirates	189	167	179	204	186	174	180	189	203	216	234	24%
Uzbekistan	–	–	–	–	–	–	–	–	–	–	–	–
Yemen	30	30	31	31	32	32	33	34	35	36	37	26%

Reference Table 4: Historical transport CO_2 emissions (1990=100)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Afghanistan	100	–	–	–	–	–	–	–	–	–	–	–	–
Albania	100	75	58	72	89	89	87	69	104	197	207	217	249
Algeria	100	107	106	107	98	96	95	95	98	104	107	108	122
Azerbaijan	100	77	65	60	52	54	44	52	48	25	38	42	47
Bahrain	100	101	113	117	119	124	126	133	140	145	153	160	179
Bangladesh	100	110	126	130	132	160	176	199	204	186	181	227	231
Benin	100	76	71	71	71	71	294	400	441	500	541	582	688
Brunei Darussalam	100	109	118	124	131	142	153	158	149	147	147	153	160
Burkina Faso	100	–	–	–	–	–	–	–	–	–	–	–	–
Cameroon	100	–	–	–	–	–	–	–	–	–	–	–	–
Chad	100	–	–	–	–	–	–	–	–	–	–	–	–
Comoros	100	–	–	–	–	–	–	–	–	–	–	–	–
Côte d'Ivoire	100	99	96	92	92	103	105	116	102	119	108	106	118
Djibouti	100	–	–	–	–	–	–	–	–	–	–	–	–
Egypt	100	105	109	113	124	131	139	149	165	176	181	174	180
Gabon	100	122	116	122	97	106	109	119	128	122	100	113	122
Gambia (Republic of the)	100	–	–	–	–	–	–	–	–	–	–	–	–
Guinea	100	–	–	–	–	–	–	–	–	–	–	–	–
Guinea Bissau	100	–	–	–	–	–	–	–	–	–	–	–	–
Guyana	100	100	100	100	100	102	127	131	148	154	160	155	150
Indonesia	100	111	118	126	141	153	170	188	184	183	195	207	211
Iran (Islamic Republic of)	100	108	113	127	145	142	153	156	163	182	195	205	221
Iraq	100	84	107	113	114	114	111	109	111	111	121	132	128
Jordan	100	93	98	101	101	110	112	118	119	122	132	136	138
Kazakhstan	100	125	110	91	63	64	57	49	55	40	65	57	63
Kuwait	100	67	160	168	177	188	192	200	206	212	212	216	229
Kyrgyzstan	100	77	45	26	8	19	20	21	20	19	14	15	13
Lebanon	100	125	174	203	190	225	233	224	240	228	215	201	202
Libya	100	101	102	120	143	154	170	163	161	177	180	186	189
Malaysia	100	108	115	120	132	141	161	185	173	209	221	240	246
Maldives	100	–	–	–	–	–	–	–	–	–	–	–	–
Mali	100	–	–	–	–	–	–	–	–	–	–	–	–
Mauritania	100	93	95	105	120	115	123	125	120	125	125	123	148
Morocco	100	111	123	134	145	154	164	176	187	199	210	221	231
Mozambique	100	82	113	139	115	120	133	136	138	138	139	138	149
Niger	100	–	–	–	–	–	–	–	–	–	–	–	–
Nigeria	100	130	159	137	110	127	146	186	153	167	186	226	234
Oman	100	107	116	124	126	130	135	144	148	151	156	171	167
Pakistan	100	104	117	134	141	147	174	178	190	200	197	196	198
Palestine	100	–	–	–	–	–	–	–	–	–	–	–	–
Qatar	100	101	107	114	121	134	143	160	168	156	165	178	197
Saudi Arabia	100	104	110	116	124	110	115	117	117	118	123	127	134
Senegal	100	103	108	104	101	107	116	126	140	151	160	160	175
Sierra Leone	100	–	–	–	–	–	–	–	–	–	–	–	–
Somalia	100	–	–	–	–	–	–	–	–	–	–	–	–
Sudan	100	79	79	52	75	70	67	79	75	61	67	86	99
Suriname	100	–	–	–	–	–	–	–	–	–	–	–	–
Syrian Arab Republic	100	105	99	104	104	104	122	124	128	111	117	111	120
Tajikistan	100	100	51	40	27	25	19	19	16	8	5	12	16
Togo	100	74	63	40	74	91	153	100	112	135	100	67	112
Tunisia	100	103	106	119	124	129	133	141	145	154	162	166	170
Turkey	100	95	97	116	113	126	133	123	114	120	125	120	126
Turkmenistan	100	90	70	72	43	41	46	27	33	42	66	67	74
Uganda	100	–	–	–	–	–	–	–	–	–	–	–	–
United Arab Emirates	100	103	105	112	111	116	117	117	117	120	132	144	166
Uzbekistan	100	140	116	106	105	127	164	166	179	183	181	179	180
Yemen	100	128	135	110	111	99	94	94	102	112	110	121	106

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Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	–	–	152	–	–	–	–	–	–	–	–	–	–
Albania	269	324	334	270	296	321	324	314	330	317	345	348	338
Algeria	138	139	153	162	175	185	193	201	207	228	237	275	294
Azerbaijan	51	61	68	78	61	77	68	80	93	103	118	122	113
Bahrain	195	213	250	261	284	311	306	315	296	318	330	340	350
Bangladesh	235	272	302	316	323	360	380	440	513	519	490	530	557
Benin	806	824	906	1153	1429	1441	1653	1865	1918	2006	2141	2285	2706
Brunei Darussalam	167	176	173	187	205	205	204	215	233	244	242	246	255
Burkina Faso	–	–	–	–	–	–	–	–	–	–	–	–	–
Cameroon	–	–	–	–	–	–	–	–	–	–	–	–	–
Chad	–	–	–	–	–	–	–	–	–	–	–	–	–
Comoros	–	–	–	–	–	–	–	–	–	–	–	–	–
Côte d'Ivoire	87	96	103	108	108	131	133	126	129	200	221	244	269
Djibouti	–	–	–	–	–	–	–	–	–	–	–	–	–
Egypt	190	194	191	207	229	242	259	278	289	315	253	242	341
Gabon	109	116	116	116	131	134	125	197	225	234	263	258	250
Gambia (Republic of the)	–	–	–	–	–	–	–	–	–	–	–	–	–
Guinea	–	–	–	–	–	–	–	–	–	–	–	–	–
Guinea Bissau	–	–	–	–	–	–	–	–	–	–	–	–	–
Guyana	150	150	–	–	–	–	–	–	–	–	–	–	–
Indonesia	215	220	219	209	219	241	276	315	341	380	404	418	400
Iran (Islamic Republic of)	234	248	268	284	282	294	320	298	299	311	322	354	349
Iraq	99	111	120	119	119	114	117	128	152	164	163	133	116
Jordan	140	161	178	175	186	170	189	191	195	252	260	258	286
Kazakhstan	60	64	66	73	84	96	86	91	93	101	95	95	103
Kuwait	249	265	287	326	337	371	413	441	411	441	452	463	447
Kyrgyzstan	16	20	18	19	29	33	38	33	46	65	65	38	45
Lebanon	215	216	218	210	165	239	275	272	273	288	273	294	301
Libya	192	200	206	206	188	215	250	293	220	271	284	304	288
Malaysia	262	281	280	268	285	300	294	303	307	307	402	450	422
Maldives	–	–	–	–	–	–	–	–	–	–	–	–	–
Mali	–	–	–	–	–	–	–	–	–	–	–	–	–
Mauritania	163	173	170	175	203	210	238	243	253	263	–	–	–
Morocco	241	252	262	270	287	314	333	350	370	376	388	394	409
Mozambique	184	185	170	184	228	223	251	277	320	311	338	361	410
Niger	–	–	–	–	–	–	–	–	–	–	–	–	–
Nigeria	247	252	244	205	178	214	200	234	210	216	204	181	209
Oman	185	193	218	244	367	436	439	486	564	640	707	741	780
Pakistan	209	225	210	213	251	245	249	255	265	271	277	289	296
Palestine	–	–	–	–	–	–	–	–	–	–	–	–	–
Qatar	229	256	322	384	393	550	731	714	688	723	799	963	1020
Saudi Arabia	139	146	153	166	185	199	206	213	223	244	252	266	288
Senegal	193	208	200	212	278	299	267	282	301	288	319	335	356
Sierra Leone	–	–	–	–	–	–	–	–	–	–	–	–	–
Somalia	–	–	–	–	–	–	–	–	–	–	–	–	–
Sudan	96	106	124	150	164	194	198	223	221	213	207	200	199
Suriname	–	–	–	–	–	–	–	–	–	–	–	–	–
Syrian Arab Republic	108	143	188	200	209	210	177	170	162	116	100	91	88
Tajikistan	14	18	16	22	36	34	33	37	40	121	127	214	315
Togo	163	149	142	135	149	202	449	372	344	293	300	309	349
Tunisia	176	177	184	183	193	187	229	276	257	255	243	254	269
Turkey	126	128	133	150	170	160	159	156	158	183	205	219	260
Turkmenistan	83	84	88	88	93	97	74	84	102	106	113	120	120
Uganda	–	–	–	–	–	–	–	–	–	–	–	–	–
United Arab Emirates	185	187	201	212	218	232	233	240	246	274	291	327	274
Uzbekistan	188	166	153	152	152	157	153	140	139	137	121	117	112
Yemen	125	130	139	129	118	126	203	178	166	137	207	184	77

Reference Table 5: Transport mitigation measures identified in NDCs of IsDB MCs

Country	NDC transport mitigation measures
Afghanistan	More efficient vehicles, clean fuels and alternative fuel
Algeria	Increased share of liquefied petroleum gas and natural gas in fuel consumption between 2021 and 2030
Azerbaijan	Use of environmentally friendly forms of transport; enhancement of the use of EVs for public transport; electrification of railway lines and the transition to alternative current system in traction; improvement and expansion of the scope of intelligent transport management systems; development of metro transport and increase in number of metro stations; elimination of traffic jams through construction of road junctions and underground and surface pedestrian crossings
Bahrain	Ministry of Transportation and Communications continues to find ways to mitigate emissions from land transportation. It will continue to reduce traffic time for each vehicle by improving the transportation network. Bus routes were created across the country to increase the efficiency and attractiveness of public transport. Future projects include the Gulf Cooperation Council Railway Project and the Bahrain Light Rail Project, which may contribute to the reduction of personal vehicle use and emissions.
Bangladesh	Modal shift from road to rail delivered through a range of measures, including underground metro systems and BRT systems in urban areas. Co-benefits will include reduced congestion, improved air quality and improved traffic safety. Reduced congestion and improved running of traffic will be achieved by a number of measures, including building of expressways to relieve congestion and public transport measures.
Brunei Darussalam	Increase share of public transport to 22% by 2035 by expanding the bus fleet, creating a national school bus system and increasing BRT systems and capacity; implement more integrated walking and cycling networks, better parking policies and land management, and intelligent transport systems to measure traffic demand; develop fuel economy regulations; and introduce more hybrid and electric vehicles
Burkina Faso	Faster improvement in vehicles (a 30% reduction in fuel consumption by 2025 instead of 20% by 2030), and the use of alternative hydrocarbon biofuels; bioethanol production units substitute 10% of consumption in 2030 and 5% of diesel consumption in 2030
Cameroon	Limit mobility constraints and develop low-carbon transport offerings; promote an integrated approach to the sector and the development of low-carbon transport through a national transport infrastructure scheme; integrate climate in territorial planning documents to limit distances and propose efficient transport policies; support state and local authorities in the development of public transit and inter- and intra-city low-carbon development plans (e.g. tramways in Yaounde and Douala); and encourage the purchase of low-emission vehicles and scrapping of high-emission vehicles through standards, incentives or obligations
Côte d'Ivoire	Integrate climate in territorial planning documents to limit travel distances; propose efficient transport policies; advance the development of urban transport plans (e.g. an urban train in the district of Abidjan); and facilitate the purchase of low-emission vehicles and scrapping of high-emission vehicles through standards, incentives or obligations
Djibouti	Construct a 752km railway line between Djibouti City and Addis Ababa; set up a maintenance service for two-wheel vehicles and raise awareness about their use; and eliminate the importation of 10,000 old cars that produce excessive pollution
Egypt	Increase the mode share of rail/buses/microbuses/river passes; improve road transport efficiency; switch from road to river transport; and switch from road to rail transport
Gabon	Infrastructure investments (with many planned routes); public transport services (e.g. congestion reduction in Libreville); and restrictions on importation of vehicles more than three years old
Gambia (Republic of the)	Reduce fuel consumption through efficiency standards
Guinea	Improve the quality of the transport fleet, the promotion of public transport, and the implementation of efficiency standards in building design
Iran (Islamic Republic of)	Strategic planning for the use of low-carbon fuels
Iraq	Modal shift to mass transport; modernization of railways; increase fuel consumption efficiency; and improve fuel quality
Jordan	Launch the Ministry of Transport's long-term national transport strategy in 2014 with sustainable transport as a key strategy; increase the total number of commuters using public transport as a percentage of the total number to 25% by 2025; reduce all emissions from the transport sector (i.e. CO_2, CO, PMx); reduce fuel consumption through implementation of the transport strategy; reduce vehicle kilometres at the national level and in densely populated areas by type of vehicle (i.e. car, HGV, LGV); implement a national BRT system; implement the railway system, which would be a cornerstone of the planned multimodal network and would play a major role in the transport of goods within the country and the surrounding region; and adopt and implement policies related to fleet characteristics to enhance efficiency and reduce emissions
Kazakhstan	Development of sustainable transport (no specific measures identified in NDC)
Kuwait	Railway project to link ports to achieve integrated and sustainable development for transporting goods and passengers in Kuwait and abroad

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Country	NDC transport mitigation measures
Lebanon	Restructuring of transport is planned through a number of large infrastructure initiatives aiming to revive the role of public transport and achieve a significant share of fuel-efficient vehicles
Mali	Replace more than one third of fossil fuels (with renewables) for electricity and transport by 2030
Mauritania	Acquisition of hybrid and electric means of mass transport; and introduction of a black carbon reduction plan
Morocco	Project of urban mobility in the municipality of Maputo
Mozambique	National Transport Master Plan and National Implementation Plan on environmental improvement in the transport sector are being developed
Nigeria	Transport shift from car to bus; new investments in rail transport; high-speed rail network; increase the efficiency of existing vehicles and the transport system (urban transport); road pricing; reform of subsidies; and introduction of fuel-efficiency standards and the use of liquefied petroleum gas or CNG for buses and taxis.
Oman	Low-carbon transport initiatives
Pakistan	Improvement of urban public transport systems, especially BRT in Lahore, Rawalpindi-Islamabad and Multan, and urban rail transport (Orange Line) in Lahore; awareness-raising and provision of incentives for efficient vehicle operations; upgrading and modernization of rail services; and upgrading and development of efficient public transport systems
Palestine	Increase use of hybrid/CNG/electric vehicles; encourage use of public transport, in addition to BRT; improve the efficiency of road vehicles by updating the vehicle fleet; disposing of old vehicles and promoting and encouraging the use of efficient vehicles; reduce traffic jams; use multi-modal transport patterns; and control the technical condition of vehicles and periodic maintenance to improve fuel efficiency and reduce emissions
Qatar	Introduce public transportation to reduce the demand for private vehicles and direct the nation towards the use of the public transportation and expressway programmes that would enhance traffic flow and divert it outside cities. A local roads and drainage programme is expected to enhance the drinking water, wastewater and treated sewage effluent networks. Vehicles Inspection Services regulate the emissions of vehicles. Qatar continues to improve emissions standards for new motor vehicles, in accordance with regional and global emission standards.
Saudi Arabia	Introduction of efficiency standards in the transportation sector; encourage actions that promote the development and use of mass transport systems in urban areas; take the necessary actions to expedite the development of the metro system in Riyadh; and support and expedite the planning and development of metro systems in Jeddah and Dammam
Senegal	Implement a BRT pilot in Dakar/Guédiawaye
Sierra Leone	Develop and enforce regulations on regular maintenance of vehicles and vehicle emissions testing; formulate transport plans; improve and promote use of public transport (e.g. road, rail and water) for passengers and freight to reduce traffic congestion and GHG emissions; and diversify economic growth through a strengthened transport sub-sector (particularly infrastructure) to reduce regional and global emissions and build a stable economy.
Tajikistan	Modernize industry and transport
Togo	Planned actions are designed to reduce fossil fuel consumption by improving the road network, promoting public transport, limiting the age of imported vehicles to 5–7 years and promoting active transport (bicycles, walking and developing bike paths)
Tunisia	Around 20 energy-efficiency actions have been included, covering the entire industrial, building, transport and agricultural sectors
Turkey	Ensure balanced utilization of transport modes in freight and passenger transport by reducing the share of road transport and increasing the share of maritime and rail transport; implement sustainable transport approaches in urban areas; promote alternative fuels and clean vehicles; reduce fuel consumption and emissions of road transport with the National Intelligent Transport Systems Strategy Document (2014–2023) and Action Plan (2014–2016); complete high-speed railway projects; expand urban railway systems; achieve fuel savings through tunnel projects; scrap old vehicles; implement green port and green airport projects to ensure energy efficiency; and implement special consumption tax exemptions for maritime transport
United Arab Emirates	Introduce a new fuel-pricing policy, which will put the country in line with global prices and aims to support the national economy, lower fuel consumption and protect the environment; a federal freight rail network crossing the country and eventually integrated into the GCC network; the Emirate of Abu Dhabi has also set targets to shift 25% of government vehicle fleets to CNG; and the Emirate of Dubai has invested in a multi-billion-dollar light rail and metro system, which will continue to add new lines
Uzbekistan	Extension of transport and logistics communication systems, ensuring efficient use of energy resources (including optimization of transportation routes, improvement of the quality of roads etc.); and expansion of measures to change motor vehicles to run on alternative fuels
Yemen	Improving energy efficiency in the transportation sector

Reference Table 6: Mitigation potential studies of IsDB MCs

Country	Policy name	Type of transport mitigation measure	MITIGATION POTENTIAL		Notes	Source
			% of BAU in 2030	% of BAU in 2050		
Albania	Passenger travel demand	Passenger avoid	8.1%	10.5%	Average transport demand per person increases by ≈110% by 2050 compared to 2010 level; occupation level of cars increases by ≈10%; occupation level of buses increases by ≈90%; and occupation of trains increases by ≈35%	South East Europe 2050 Carbon Calculator[84]
Albania	Modal shift	Passenger mode shift	11.8%	21.0%	Share of walking and cycling increases to ≈11%; share of buses/coaches increases to ≈44.5%; share of rail increases to ≈5%; share of cars decreases to ≈39.5%	South East Europe 2050 Carbon Calculator
Albania	Energy efficiency	Passenger fuel efficiency improvement	12.6%	25.0%	Fuel combustion efficiency of cars improves by ≈60% by 2050, while efficiency of plug-in hybrids improves by 50–55% and of electric cars improves by ≈55%; fuel combustion efficiency of buses improves by ≈47%, while efficiency of hybrid and electric buses improves by ≈30% by 2050; rail transport's efficiency improves by ≈29% for diesel and by ≈23% for electric traction	South East Europe 2050 Carbon Calculator
Albania	Passenger fuel decarbonization/ electrification	Passenger fuel decarbonization	13.6%	33.4%	79% of cars are battery electric (≈32% of buses); ≈20% of cars are fuel cell (≈3% of buses); ≈45% of buses are (plug-in) hybrids	South East Europe 2050 Carbon Calculator
Albania	Freight demand	Freight avoid	8.9%	13.5%	Transported freight volumes increase by ≈60% between 2010 and 2050	South East Europe 2050 Carbon Calculator
Albania	Modal shift	Freight mode shift	1.7%	3.7%	By 2050, the transport mode share of trucks decreases from ≈98.2% to ≈89%, of rail increases from 1.5% to ≈10% and of inland waterways increases to ≈1%	South East Europe 2050 Carbon Calculator
Albania	Energy efficiency	Freight fuel efficiency improvement	6.2%	13.5%	Efficiency of fuel combustion of trucks improves by ≈35%; efficiency of diesel and electric trains improves by ≈29% and ≈23%, respectively	South East Europe 2050 Carbon Calculator
Albania	Freight fuel decarbonization	Freight fuel decarbonization	2.2%	5.2%	≈35% of trucks will be diesel (hybrid), 45% CNG (hybrid), and ≈20% electric; 100% of trains will be electric	South East Europe 2050 Carbon Calculator
Bangladesh	Shift to zero-emission transport	Freight improve and shift	39.6%	46.4%	5% of road freight and 75% of rail freight will be electrified; diesel engines will be three times as efficient as at present	Bangladesh 2050 Pathways[85]
Bangladesh	Freight modal shift	Freight mode shift	10.0%	30.0%	By 2050, 25% of domestic freight will be carried by rail, and 25% by water	Bangladesh 2050 Pathways

(continued next pages)

84   www.see2050carboncalculator.net/2050/Albania/Energy.php

85   www.bd2050.org

Country	Policy name	Type of transport mitigation measure	MITIGATION POTENTIAL		Notes	Source
			% of BAU in 2030	% of BAU in 2050		
Bangladesh	Improvement in fuel efficiency of HDVs and LDVs	Fuel-efficiency improvement	7.5%			Low-Carbon Society Development towards 2025 in Bangladesh[86]
Brunei Darussalam	Fuel decarbonization	Fuel decarbonization	5.2%	4.3%	CNG, biofuels, electric and hybrid vehicles	
Brunei Darussalam	Eco driving	Passenger fuel-efficiency improvement	2.0%	1.6%	Measures such as speed limitation and a driving test to promote ecological driving	Clean Air Asia Brunei[87]
Brunei Darussalam	Air fuel-efficiency improvement	Fuel-efficiency improvement	6.2%	17.9%	Improvement of fuel efficiency in BAU is 1% per year; this package achieves an improvement of 2% per year from its start + 'time lag' to 2050	Clean Air Asia Brunei
Brunei Darussalam	Mode shift	Passenger mode shift	8.4%	9.7%	Starting in 2020 with a shift rate of 75%	Clean Air Asia Brunei
Brunei Darussalam	Mode shift	Freight mode shift	2.9%	3.2%	20% shift rate between 2020 and 2030	Clean Air Asia Brunei
Brunei Darussalam	Mode shift	Freight mode shift	10.0%	11.2%	50% shift rate starting in 2020	Clean Air Asia Brunei
Brunei Darussalam	Pricing regimes	Fiscal measures	17.7%	14.5%	Policy package to reduce transport volume, comprising measures such as parking charges and congestion charges	Clean Air Asia Brunei
Brunei Darussalam	Avoid policies	Passenger avoid	24.0%	34.3%	A-1: pricing regimes; A-2: information and communication technologies; A-3: tele-activities; A-4: travel plans; A-5: car ownership; A-6: improved travel awareness; A-9: urban and land-use planning	Clean Air Asia Brunei
Brunei Darussalam	Avoid policies	Freight avoid	3.5%	4.0%	Freight transport subsidiarity and freight dematerialization	Clean Air Asia Brunei
Kazakhstan	Passenger road transport (increased fuel efficiency, hybrid and electric vehicles)	Passenger fuel-efficiency improvement	36.8%			The Demand for Greenhouse Gas Emissions Reduction Investments: An Investors' Marginal Abatement Cost Curve for Kazakhstan[88]
Kazakhstan	Freight road transport (increased fuel efficiency, preventive maintenance)	Freight fuel-efficiency improvement	21.1%			The Demand for Greenhouse Gas Emissions Reduction Investments: An Investors' Marginal Abatement Cost Curve for Kazakhstan

86   http://2050.nies.go.jp/report/file/lcs_asia/Bangladesh_2012.pdf

87   http://cleanairasia.org/wp-content/uploads/portal/files/brunei.pdf

88   www.ebrd.com/downloads/research/economics/publications/specials/Kazakhstan_MACC_report_ENG.pdf

Country	Policy name	Type of transport mitigation measure	MITIGATION POTENTIAL		Notes	Source
			% of BAU in 2030	% of BAU in 2050		
Kazakhstan	Public transport (modernized buses)	Passenger mode shift	4.8%			The Demand for Greenhouse Gas Emissions Reduction Investments: An Investors' Marginal Abatement Cost Curve for Kazakhstan
Malaysia	Car shift to public transport	Passenger mode shift	6.0%			A review on emissions and mitigation strategies for road transport in Malaysia[89]
Malaysia	Two-wheelers shift to public transport	Passenger mode shift	0.9%			A review on emissions and mitigation strategies for road transport in Malaysia
Malaysia	Car shift to natural gas vehicles	Passenger fuel decarbonization	1.1%			A review on emissions and mitigation strategies for road transport in Malaysia
Malaysia	Car renewal	Passenger fuel-efficiency improvement	1.5%			A review on emissions and mitigation strategies for road transport in Malaysia
Malaysia	LDV fuel-efficiency improvement	Passenger fuel-efficiency improvement	12.0%	18.0%	50% improvement in fuel efficiency of LDVs by 2050	Low Carbon Transport Study in Southeast Asia[90]
Malaysia	Two- and three-wheel fuel-efficiency improvement	Passenger fuel-efficiency improvement	3.0%	2.9%	50% improvement in fuel efficiency of two- and three-wheelers by 2051	Low Carbon Transport Study in Southeast Asia
Malaysia	Biofuels, electric, liquefied petroleum gas and CNG	Fuel decarbonization	9.8%	19.5%	The number of alternately powered vehicles has increased since 2015; gasoline and diesel have been modified with ethanol and biodiesel, with an assumption that countries would still pursue this with increasing prices, and we may expect up to 30% penetration of biofuels by 2030	Low Carbon Transport Study in Southeast Asia
Malaysia	Public transport improvement	Passenger mode shift	1.3%	5.4%	30% shift in passenger-kms travelled to public transport from other modes (urban transport)	Low Carbon Transport Study in Southeast Asia
Malaysia	Improvement of non-motorized transport	Passenger mode shift	8.5%	14.8%	Nominal 10% shift in passenger-kms travelled to non-motorized transport from other private modes	Low Carbon Transport Study in Southeast Asia

89   www.sciencedirect.com/science/article/pii/S1364032111002097
90   http://cleanairasia.org/node1471/

Country	Policy name	Type of transport mitigation measure	MITIGATION POTENTIAL		Notes	Source
			% of BAU in 2030	% of BAU in 2050		
Malaysia	HDV fuel economy	Freight fuel-efficiency improvement	16.0%	19.7%	Improving fuel efficiency based on FIA (Fédération Internationale de l'Automobile) assumptions of freight vehicles: by 20% by 2020, 35% by 2030 and 50% by 2050	Low Carbon Transport Study in Southeast Asia
Malaysia	Logistics optimization	Freight avoid	6.0%	6.0%	Reduce the vehicle-kms travelled by 10%, as statistics reveal that a significant amount of travel is district cabotage (2012–2020)	Low Carbon Transport Study in Southeast Asia
Malaysia	Freight shift to rail	Freight mode shift	5.2%	5.4%	Shift 10% of freight ton-kms to rail to evaluate the impact (2012–2020)	Low Carbon Transport Study in Southeast Asia
Malaysia	Urban intelligent transportation systems/speed management	Passenger fuel-efficiency improvement	3.0%	4.0%	Increasing the speed to posted speed	Low Carbon Transport Study in Southeast Asia
Middle East	Clean transport policies (fuel efficiency of LDVs and HDVs, low-carbon fuel)	Fuel economy and fuel decarbonization	23.2%		Benefits associated with environmental policies for LDVs and HDVs, marine vessels, aircraft and fuels in terms of reduced GHG emissions and local air pollution, fuel savings and benefits to public health	ICCT Roadmap (Baseline vs Efficient Vehicle)[91]
Middle East	Fuel economy, fuel decarbonization and vehicle emissions standards	Fuel-efficiency improvement	12.8%	55.1%	Increasingly stringent emissions control policies are implemented (vehicle-emissions standards and fuel-economy policies) for HDVs, LDVs and aviation	ICCT Roadmap (Baseline vs Efficient Vehicle)
Middle East	Aviation technology	Fuel economy and fuel decarbonization	2.9%	17.4%	Aviation fuel-efficiency improvement and fuel decarbonization	ICCT Roadmap (Baseline vs Efficient Vehicle)
Middle East	Bus technology improvement	Passenger fuel economy and fuel decarbonization	0.3%	2.4%	Bus fuel-efficiency improvement and fuel decarbonization	ICCT Roadmap (Baseline vs Efficient Vehicle)
Nigeria	Rail freight improvement	Freight mode shift	0.3%			Assessing Low-Carbon Development in Nigeria: An Analysis of Four Sectors[92]
Nigeria	Freight logistics improvement	Freight avoid	3.4%			Assessing Low-Carbon Development in Nigeria: An Analysis of Four Sectors
Nigeria	Eco driving	Fuel-efficiency improvement	1.0%			Assessing Low-Carbon Development in Nigeria: An Analysis of Four Sectors

91   www.theicct.org/sites/default/files/publications/ICCT%20Roadmap%20Energy%20Report.pdf
92   https://elibrary.worldbank.org/doi/abs/10.1596/978-0-8213-9973-6

Country	Policy name	Type of transport mitigation measure	MITIGATION POTENTIAL		Notes	Source
			% of BAU in 2030	% of BAU in 2050		
Nigeria	Improvement in fuel efficiency of HDVs and LDVs	Fuel-efficiency improvement	18.0%			Assessing Low-Carbon Development in Nigeria: An Analysis of Four Sectors
Nigeria	Passenger transport demand reduction	Passenger avoid	15.6%	36.9%	Individuals' travel will increase from 6,000km in 2010 to 8,400km by 2050	Nigeria 2050 Calculator[93]
Nigeria	Low-carbon technology (passenger)	Passenger fuel-efficiency improvement	13.5%	22.4%	60% liquid hydrocarbon and 40% gaseous hydrocarbon by 2050	Nigeria 2050 Calculator
Nigeria	Fuel switch for internal combustion engine	Passenger fuel decarbonization	27.7%	29.6%	60% ICEs, 25% hybrid EVs and 10% EVs by 2051	Nigeria 2050 Calculator
Nigeria	Freight improvement (efficiency, logistics and shift)	Freight avoid-shift-improve	22.5%	22.2%	Road modal share falls to half; greater hybridization; rail freight is all electric	Nigeria 2050 Calculator
Nigeria	Passenger transport demand reduction	Passenger avoid	15.6%	36.9%	Individuals' travel will increase from 6,000km in 2010 to 8,400km by 2050	Nigeria Energy Calculator
Nigeria	Passenger fuel-efficiency improvement	Passenger fuel-efficiency improvement	13.5%	22.4%		Nigeria Energy Calculator
Nigeria	Passenger fuel decarbonization	Passenger fuel decarbonization	27.7%	29.6%	60% ICEs, 25% hybrid EVs and 10% EVs by 2050	Nigeria Energy Calculator
Nigeria	Domestic freight	Freight avoid-shift-improve	22.5%	22.2%	Road modal share falls to half; greater hybridization; rail freight is all electric	Nigeria Energy Calculator

93   https://openknowledge.worldbank.org/handle/10986/15797

Reference Table 7: Transport adaptation measures identified in NDCs of IsDB MCs

Country	NDC transport adaptation measures
Algeria	Integrate the effects of climate change in sectoral policies, in particular agriculture, hydropower, human health and transport; integrate climate change effects on political stability and national security
Bangladesh	Introduce the Climate-Resilient Infrastructure Development Plan; projects under way through the Inland Water Transport Authority and the Ministry of Road Transport and Bridges
Gambia (Republic of the)	Adaptation proposal to improve the resilience of road networks under a changing climate
Guyana	Implementation of the Climate Resilience Strategy and Action Plan; upgrading infrastructure and assets to protect against flooding
Maldives	The Ibrahim Nasir International Airport is planned for Maldives's INDC expansion to handle additional passenger capacity along with an additional runway. Moreover, coastal protection measures would be carried out to protect the shoreline of Hulhule (the airport island) as well as for other air and sea ports. Malé commercial port handles more than 90% of imported cargo. To increase capacity and reduce the impacts of high winds and seas on the port's operations, the commercial port would be relocated to a different island called Thilafushi.
Nigeria	Include increased protective margins in construction and placement of transportation and communications infrastructure (i.e. higher standards and specifications); undertake risk-assessment and risk-reduction measures to increase the resilience of the transportation and communication sectors; and strengthen existing transportation and communications infrastructure, in part through early efforts to identify and implement all possible 'no regrets' actions
Pakistan	Building climate-resilient infrastructure with a focus on improved and safe operation of water-related infrastructure and better management of transport operations and energy transmission, supported by innovations in urban planning for synergistic implementation of mitigation and adaptation actions
Palestine	Rehabilitation of resilient road infrastructure
Saudi Arabia	Transportation technologies that are resilient to the adverse effects of climate change while reducing and/or capturing transportation-related emissions
Tajikistan	The reduction of vulnerability to the impacts of climate change by means of full-scale integration of climate resilience and adaptation measures into the planning and development of green infrastructure in the transport sector
Tunisia	Tunisia has prepared a raft of measures focusing on the adaptation of six key sectors (including transport) and ecosystems which are among the most vulnerable to the adverse effects of climate change
Country	**NAPA transport adaptation measures**
Afghanistan	Provision of improved transportation facilities and construction of highways
Comoros	To reinforce energy infrastructure for production and transport
Maldives	Introduce coastal protection measures for airports and the development of focus islands; and strengthen capacity for planning and design to ensure the development of resilient infrastructure
Mali	Development of basic infrastructure
Mauritania	Development of basic infrastructure
Country	**NAP transport adaptation measures**
Burkina Faso	Pass and enforce laws and regulations, where applicable, on: (i) construction of hydraulic, road and settlement infrastructure; (ii) space occupancy in urban and rural environments, especially for flood zones; (iii) mining activities (gold prospecting); and (iv) industrial activities; and promote public transport to control energy consumption
Cameroon	Development, maintenance and rehabilitation of urban infrastructure (construction of 150km of roads and 17,000 social housing units); development and extension (by more than 3,500km by 2020) and rehabilitation (2,000km by 2020) of the tarred road network; provision of at least 1,000km of railway tracks; exploitation of the deep-water port of Kribi; and construction of the deep-water port and the Limbe yard

Reference Table 8: Scores and ranks for human habitat vulnerability score on the ND-GAIN Index

Country	Overall rank	Vulnerability	Country	Overall rank	Vulnerability
Afghanistan	109	0.532	Malaysia	57	0.421
Albania	104	0.526	Maldives	68	0.453
Algeria	20	0.333	Mali	144	0.596
Azerbaijan	59	0.423	Mauritania	128	0.562
Bahrain	94	0.492	Morocco	11	0.304
Bangladesh	99	0.517	Mozambique	115	0.539
Benin	148	0.604	Niger	157	0.624
Brunei Darussalam	91	0.479	Nigeria	125	0.559
Burkina Faso	136	0.575	Oman	76	0.461
Cameroon	155	0.618	Pakistan	38	0.373
Chad	170	0.659	Palestine	–	–
Comoros	93	0.489	Qatar	12	0.305
Côte d'Ivoire	143	0.595	Saudi Arabia	65	0.434
Djibouti	164	0.634	Senegal	130	0.563
Egypt	9	0.301	Sierra Leone	171	0.667
Gabon	178	0.745	Somalia	161	0.632
Gambia (Republic of the)	158	0.629	Sudan	110	0.533
Guinea	162	0.633	Suriname	120	0.543
Guinea Bissau	149	0.613	Syrian Arab Republic	78	0.465
Guyana	150	0.614	Tajikistan	60	0.424
Indonesia	79	0.469	Togo	167	0.640
Iran (Islamic Republic of)	23	0.340	Tunisia	39	0.375
Iraq	64	0.433	Turkey	14	0.311
Jordan	19	0.331	Turkmenistan	45	0.399
Kazakhstan	25	0.352	Uganda	121	0.545
Kuwait	85	0.474	United Arab Emirates	1	0.221
Kyrgyzstan	56	0.420	Uzbekistan	36	0.371
Lebanon	68	0.453	Yemen	139	0.590
Libya	36	0.371			

Reference Table 9: Urban rail systems in IsDB MCs

Country	City	Classifi-cation	Opening year	Size (km)	Number of lines	Number of stations	Passengers per day	Year of data
Algeria	Algiers	M	2011	13.5	1	14	35,600	2013
Algeria	Constantine	L	2013	9.0	1	11	–	2017
Algeria	Oran	L	2013	18.0	1	32	–	2012
Algeria	Sidi Bel Abbes	L	2017	13.7	1	22	–	2017
Azerbaijan	Baku	M	1967	34.8	2	23	501,000	2012
Egypt	Alexandria	L	1863	32.0	20	140	–	2004
Egypt	Cairo	M	1987	76.3	3	64	2,290,000	2010
Iran (Islamic Republic of)	Esfahan	M	2015	12.0	2	17	–	–
Iran (Islamic Republic of)	Mashhad	M	2011	31.5	1	30	–	–
Iran (Islamic Republic of)	Shiraz	M	2014	10.5	1	9	–	–
Iran (Islamic Republic of)	Tabriz	M	2015	7.0	1	6	–	–
Iran (Islamic Republic of)	Tehran	M	2000	73.0	4	70	1320000	2011
Kazakhstan	Almaty	M	2011	11.3	1	9	19,200	2012
Malaysia	Kuala Lumpur	M	1995	208.0	7	135	–	–
Morocco	Casablanca	L	2012	31.0	1	48	–	2016
Morocco	Rabat	L	2011	19.5	2	31	172,000	2011
Tunisia	Tunis	L	1985	45.2	8	67	600,000	2009
Turkey	Adana	M	2009	13.5	1	13	–	–
Turkey	Ankara	M/L	1996	55.1	4	45	244930	2013
Turkey	Antalya	L	2009	11.1	1	16	–	2011
Turkey	Bursa	L	2002	22.0	2	23	137000	–
Turkey	Istanbul	M/L	1989	91.0	5	70	860000	2014
Turkey	Istanbul	F	1875	0.6	1	2	30000	2014
Turkey	Izmir	L	2000	11.5	1	10	860000	2014
United Arab Emirates	Dubai	M	2009	74.6	2	47	460000	2014
Uzbekistan	Tashkent	M	1977	36.2	3	29	178,000	2012

Source: Japan Metro Association,[94] Micro Metro,[95] Urban Rail[96]
Notes: M = metro; L = light rail; F = funicular/cable car

94   www.jametro.or.jp/world/list.html

95   http://mic-ro.com/metro/table.html

96   www.urbanrail.net/

Reference Table 10: BRT systems in IsDB MCs

Country	City	Passengers per day	Number of corridors	Length (km)
Indonesia	Jakarta	370,000	12	207
Iran (Islamic Republic of)	Isfahan	135,000	1	17
Iran (Islamic Republic of)	Tabriz	–	1	18
Iran (Islamic Republic of)	Tehran	2,000,000	8	130
Malaysia	Subang Jaya	–	1	5
Nigeria	Lagos	200,000	1	22
Pakistan	Islamabad–Rawalpindi	125,000	1	23
Pakistan	Lahore	180,000	1	27
Turkey	Istanbul	750,000	1	52

Source: BRTData.org[97]

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97   http://brtdata.org/

Reference Table 11: Road traffic fatalities in IsDB MCs

Country	Road traffic fatalities 2000	Road traffic fatalities 2005	Road traffic fatalities 2010	Road traffic fatalities 2011	Road traffic fatalities 2012	Road traffic fatalities 2013	Change from 2000 to 2013
Afghanistan	3,155	4,011	4,522	4,635	4,727	4,918	56%
Albania	465	480	468	465	438	441	-5%
Algeria	7,484	8,056	8,957	9,242	8,941	9,125	22%
Azerbaijan	642	1,178	994	1,088	1,251	939	46%
Bahrain	80	140	133	123	146	105	32%
Bangladesh	18,816	20,654	22,062	22,009	21,179	21,430	14%
Benin	1,971	2,347	2,723	2,800	2,695	2,771	41%
Brunei Darussalam	54	55	29	46	32	33	-39%
Burkina Faso	3,436	4,080	4,869	5,018	4,971	5,122	49%
Cameroon	4,231	5,000	5,811	5,951	5,819	5,977	41%
Chad	2,161	2,497	3,388	3,134	3,062	3,165	46%
Comoros	149	170	194	201	203	208	40%
Côte d'Ivoire	4,222	4,786	5,304	5,495	5,205	5,316	26%
Djibouti	192	224	255	236	218	221	15%
Egypt	7,899	8,522	12,196	11,854	10,889	11,495	46%
Gabon	281	331	408	421	404	416	48%
Gambia (Republic of the)	370	439	516	540	532	547	48%
Guinea	2,431	2,730	3,098	3,167	3,080	3,150	30%
Guinea Bissau	328	381	439	450	447	462	41%
Guyana	197	210	128	133	128	131	-33%
Indonesia	32,154	35,594	42,199	42,016	39,821	38,561	20%
Iran (Islamic Republic of)	22,154	28,732	25,278	25,743	24,312	24,857	12%
Iraq	4,831	5,726	6,522	6,092	6,621	6,844	42%
Jordan	1,337	1,531	1,896	2,219	2,094	2,213	65%
Kazakhstan	2,123	4,911	4,313	4,944	4,078	4,164	96%
Kuwait	574	662	603	715	866	673	17%
Kyrgyzstan	590	873	981	1,074	1,080	1,250	112%
Lebanon	741	945	1,019	1,092	1,101	1,192	61%
Libya	1,966	2,352	3,220	1,703	3,843	4,548	131%
Malaysia	6,167	6,338	7,056	7,073	7,118	7,130	16%
Maldives	8		12	10	6	14	71%
Mali	2,852	3,417	4,040	4,165	4,082	4,218	48%
Mauritania	675	808	935	963	938	967	43%
Morocco	6,953	7,447	7,876	7,130	6,933	7,036	1%
Mozambique	5,998	6,779	7,751	7,956	8,139	8,353	39%
Niger	2,929	3,691	4,517	4,710	4,663	4,865	66%

(continued next page)

Country	Road traffic fatalities 2000	Road traffic fatalities 2005	Road traffic fatalities 2010	Road traffic fatalities 2011	Road traffic fatalities 2012	Road traffic fatalities 2013	Change from 2000 to 2013
Nigeria	29,120	32,234	36,156	33,716	34,296	35,225	21%
Oman	742	836	891	1,143	1,206	943	27%
Pakistan	20,501	23,240	26,778	27,347	25,263	25,803	26%
Palestine	197	207	187	192	241	247	26%
Qatar	178	290	301	277	287	342	93%
Saudi Arabia	4,319	5,976	6,829	7,511	8,086	8,205	90%
Senegal	2,639	3,094	3,591	3,711	3,727	3,841	46%
Sierra Leone	1,305	1,647	1,879	1,917	1,881	1,890	45%
Somalia	2,325	2,665	3,110	3,238	3,242	3,336	43%
Sudan	6,785	7,604	8,390	7,913	8,602	8,955	32%
Suriname	122	132	118	116	112	104	-15%
Syrian Arab Republic	3,528	3,915	4,498	4,590	4,002	3,962	12%
Tajikistan	1,225	1,316	1,460	1,485	1,511	1,537	26%
Togo	1,481	1,785	2,074	2,124	2,140	2,190	48%
Tunisia	2,405	2,546	2,681	2,733	2,645	2,688	12%
Turkey	7,399	6,043	5,280	4,992	4,922	6,745	-9%
Turkmenistan	813	894	946	942	848	934	15%
Uganda	7,284	8,506	9,869	9,230	9,912	10,290	41%
United Arab Emirates	300	943	968	1,032	970	982	228%
Uzbekistan	2,410	3,447	3,547	3,634	3,427	3,362	39%
Yemen	3,629	4,302	5,099	5,457	5,356	5,499	52%

Annex III: Country factsheets

The country factsheets were developed to give a profile of each IsDB MC to assist understanding of the current status of transport development, actions taken to mitigate and adapt to climate change and future projections. These are divided into five major parts:

- **Socio-economic characteristics** are displayed in the header (mostly based on 2016 data).

- **Transport activity** shows the motorization rate, number of cars and traffic fatalities. The chart combines socio-economic characteristics (e.g. population, GDP) with transport activity (e.g. motorization rates and road fatalities) and displays trends and growth rates for 2005–2015.

- **Transport consumption and emissions** includes key data on fossil fuel consumption, prices, CO_2 emissions and other major transport pollutants. Transport CO_2 emissions are presented in total and relative to economy-wide emissions. The share of road transport in transport CO_2 emissions shows the importance of road transport for mitigation. The value might be higher than in other statistics because the data only compare CO_2 emissions from fuel combustion. The chart shows historical transport CO_2 emissions (1990–2015) and future projections (2020–2050) for BAU and low-carbon scenarios.

- **Transport mitigation responses** focuses on policy responses (left-hand side) and implemented features of a country's sustainable transport system (right-hand side). The country factsheet contains economy-wide and transport NDC targets and lists of transport mitigation measures. The field 'Transport Targets defined by National Policy' shows which types of national targets have been established, and which are to be translated to road infrastructure, railways, urban rail and BRT.

- **Transport adaptation** indicates whether transport adaptation was highlighted in NDCs, NAPs and NAPAs. Scores are given for the ND-GAIN Index on vulnerability for human habitat, as well as the logistics performance index for trade and transport. A chart shows the quality of transport infrastructure, which can be used as a proxy for resilience of the transport system. The evaluation is based on the scores of the WEF Global Competitiveness Index 2016.

The global average ('Global Average') and IsDB average ('IsDB Average') are calculated by taking the average of all countries both globally and for all IsDB MCs. A country factsheet with many missing data fields emphasizes the need for improved data collection.

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Income Level Group:	**Low-income**	
GDP per Capita:	**581.59**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**35.53**	
Share of Urban Population:	**25.96%**	
Human Development Index:	**0.479**	

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	47	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**1,156,215**		
Amount of Commercial Cars:	**416,448**	*OICA (2015)*	
Traffic Fatalities (deaths per 1,000 People):	16	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 107%

Population: + 35%

Motorization Rate: + 28%

Traffic Fatalities (to 2013): + 23%
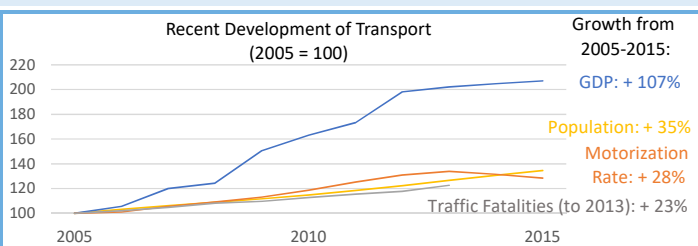
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	130	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**10,000**		
Gasoline Sulphur Levels (ppm):	No Data	*UNEP*	
Diesel Prices (USD cents/liter):	70.00	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	70.00	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

NOx and Black Carbon from EDGAR v. 4.3.1 (2010)

Transport NO_x Emissions (Gg):	2.8		
Share of Road Transport in Transport NO_x Emissions:	64%	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	0.10		
Share of Road Transport in Transport Black Carbon:	70%	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	48.0	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	4.50%	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	1.7		
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	0.1	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	1.7	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	1.8	for 2030	
	13.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	1.5	for 2030	
	10.3	for 2050	*IEA and/or SLoCaT (2005)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2005: 52%

BAU 2020-2050: 2666%

LCS 2020-2050: 2075%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**13.6% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Energy Efficiency Biofuels**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**42,150**		
Roads per 1 Million People:	**1,186.32**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	29%	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data	*Various Sources*	
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data	*BRT Data (2016)*	

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**Yes**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.532** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.84** *World Bank (2016)*
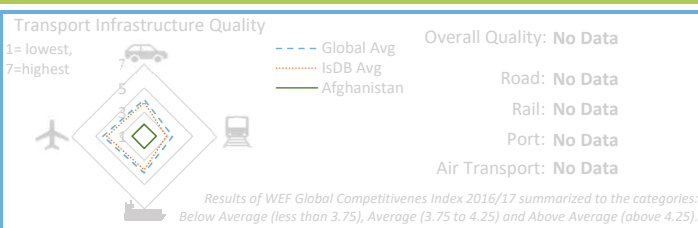
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Afghanistan

Overall Quality: **No Data**
Road: **No Data**
Rail: **No Data**
Port: **No Data**
Air Transport: **No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**
GDP per Capita:	**4625.01**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**2.93**
Share of Urban Population:	**65.12%**
Human Development Index:	**0.764**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**165**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**403,680**		
Amount of Commercial Cars:	**77,434**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**15**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**49.20%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

Motorization Rate: + 84%

GDP: + 41%

Population: - 5%

Traffic Fatalities (to 2013): - 8%
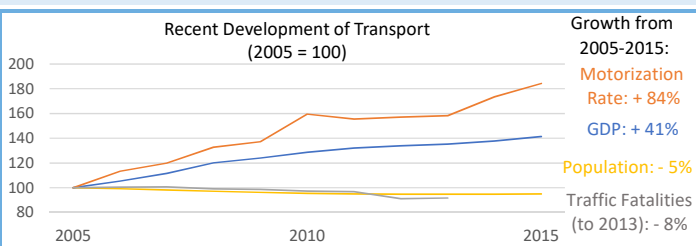
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**28**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	*None*		
Diesel Sulphur Levels (ppm):	**10**		
Gasoline Sulphur Levels (ppm):	**10**		*UNEP*
Diesel Prices (USD cents/liter):	**135.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**136.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport CO_2 Emissions (Mt):	**2.4**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**46.02%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**95.83%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.8**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.8**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**3.4**	for 2030	
	3.9	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**1.8**	for 2030	
	1.2	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO_x Emissions (Gg):	**8.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**73%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.29**		
Share of Road Transport in Transport Black Carbon:	**84%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**17.9**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.23%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 238%

BAU 2020-2050: 32%

LCS 2020-2050: -46%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**11.5% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**18,000**		
Roads per 1 Million People:	**6,142.95**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**39%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**32.00**		
Size of Rail Network (km):	**423.00**		
Rail per 1 Million People:	**144.36**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2013)*
Urban Rail System Length (km):	*No Data*		
BRT System Length (km):	*No Data*		*Various Sources*
BRT System Passengerper Day:	*No Data*		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	*No NAPA*
Highlighted in NAP:	*No NAP*
Human Habitat Vulnerability Score:	**0.526** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.98** *World Bank (2016)*
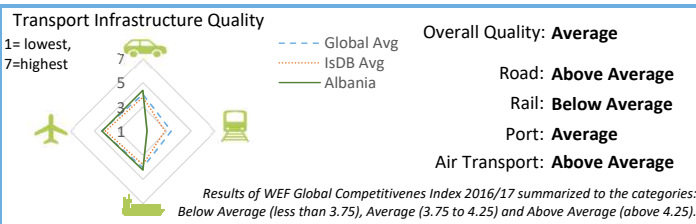
Transport Infrastructure Quality

1= lowest, 7=highest

Global Avg
IsDB Avg
Albania

Overall Quality: **Average**

Road: **Above Average**

Rail: **Below Average**

Port: **Average**

Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**	
GDP per Capita:	**4762.89**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**41.32**	
Share of Urban Population:	**73.01%**	
Human Development Index:	**0.745**	

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**140**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**3,700,000**		
Amount of Commercial Cars:	**1,870,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Motorization Rate: + 59%
- GDP: + 33%
- Population: + 20%
- Traffic Fatalities (to 2013): + 13%
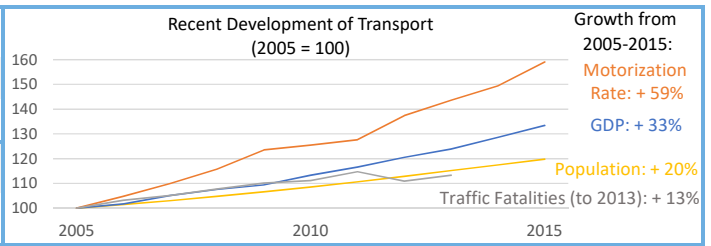
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**428**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 2 and Euro 3 for diesel and gasoline**		
Diesel Sulphur Levels (ppm):	**900**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**17.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**28.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO_2 Emissions (Mt):	**46.5**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**33.06%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**95.27%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**1.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**2.5**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**53.1**	for 2030	
	88.8	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**41.6**	for 2030	
	36.6	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO_x Emissions (Gg):	**200.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**7.57**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**35.6**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.12%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 194%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**7% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**Up to 22% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**To Convert 1,000,000 light-duty vehicles and more than 20.000 buses to LPG**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **LPG/CNG Target**

Size of Road Network (km):	**113,655**		
Roads per 1 Million People:	**2,750.73**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**77%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**1,269.00**		
Size of Rail Network (km):	**3,799.94**		
Rail per 1 Million People:	**91.97**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	**13.50**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.333** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.58** *World Bank (2016)*
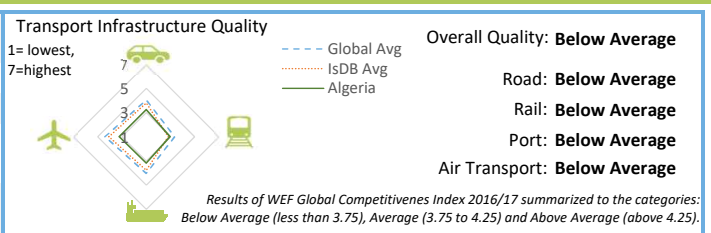
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Algeria

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	**Below Average**
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of **Azerbaijan**

Income Level Group:	**Middle-income**
GDP per Capita:	**5819.89**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**9.83**
Share of Urban Population:	**55.00%**
Human Development Index:	**0.759**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**135**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**1,129,596**		
Amount of Commercial Cars:	**172,330**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**10**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**38.00%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 138%
- Motorization Rate: + 94%
- Population: + 13%
- Traffic Fatalities (to 2013): - 20%
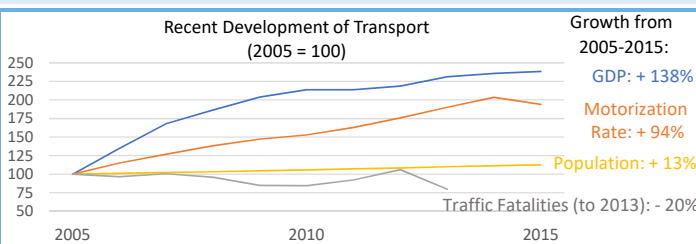
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**101**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 4 for LDV and HDV**		
Diesel Sulphur Levels (ppm):	**350**		
Gasoline Sulphur Levels (ppm):	**150**		*UNEP*
Diesel Prices (USD cents/liter):	**35.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**56.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO_2 Emissions (Mt):	**7.0**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**21.12%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**90.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.7**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.2**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**13.4**	for 2030	
	10.8	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**11.2**	for 2030	
	4.7	for 2050	*IEA and/or SLoCaT (2015)*

Transport NOₓ Emissions (Gg):	**23.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOₓ Emissions:	**86%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.29**		
Share of Road Transport in Transport Black Carbon:	**88%**	Global Avg:	79%
		IsDB Avg:	92%
PM₂.₅ Annual Mean (μg/m³):	**30.4**	Global Avg:	28.63
		IsDB Avg:	43.39
PM₂.₅ Damage as Share of GNI:	**0.17%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO2 1990-2015: 13%
- BAU 2020-2050: 3%
- LCS 2020-2050: -52%
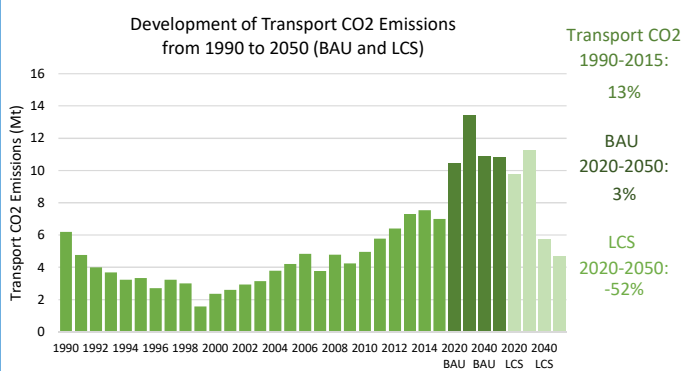
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**35% below 1990 by 2030**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Walking** **Public Transport (Urban Rail)** **Fuel Quality and Vehicle Emission Standards Improvement** **E- mobility** **Intelligent Transport System** **Road and Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**52,942**		
Roads per 1 Million People:	**5,387.08**	Global Avg:	73,807
		IsDB Avg:	33,065
Share of Paved Roads:	**51%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**519.13**		
Size of Rail Network (km):	**2,074.00**		
Rail per 1 Million People:	**211.04**	Global Avg:	1,306
		IsDB Avg:	456 *World Bank (2015)*
Urban Rail System Length (km):	**34.80**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.423** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**No Information** *World Bank (2016)*
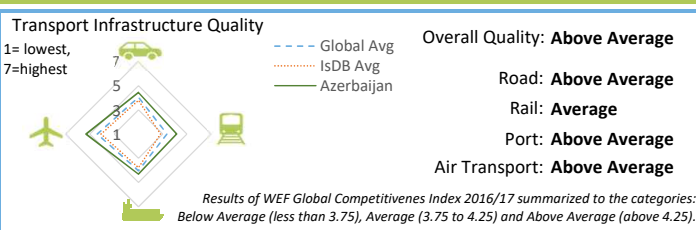
Transport Infrastructure Quality
(1= lowest, 7=highest)
- Global Avg
- IsDB Avg
- Azerbaijan

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	**Average**
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Bahrain

Income Level Group:	**High-income**
GDP per Capita:	**21596.86**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**1.49**
Share of Urban Population:	**83.67%**
Human Development Index:	**0.824**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**422**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**499,584**		
Amount of Commercial Cars:	**78,887**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**8**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**40.70%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 57%
Population: + 54%
Motorization Rate: + 21%
Traffic Fatalities (to 2013): - 25%
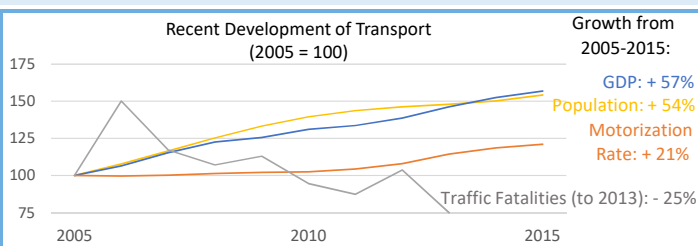
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**58**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Vehicle emission standards exist.**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**32.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**43.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO$_2$ Emissions (Mt):	**3.5**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**11.50%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**97.14%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**2.6**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**1.1**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**3.4**	for 2030	
	3.6	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**2.5**	for 2030	
	0.7	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO$_x$ Emissions (Gg):	**13.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**99%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.13**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**55.5**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.09%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 250%
BAU 2020-2050: 11%
LCS 2020-2050: -76%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus and Urban Rail) LPG/CNG Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**4,122**		
Roads per 1 Million People:	**2,761.65**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**82%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.492** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.10** *World Bank (2016)*
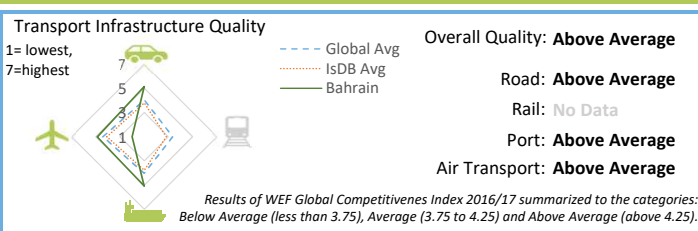
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg / IsDB Avg / Bahrain

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	No Data
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Bangladesh

Income Level Group:	**Middle-income**	
GDP per Capita:	**1018.84**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**164.67**	
Share of Urban Population:	**35.68%**	
Human Development Index:	**0.579**	

Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**4**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**380,000**		
Amount of Commercial Cars:	**240,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**14**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**58.50%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 82%
Motorization Rate: + 31%
Population: + 12%
Traffic Fatalities (to 2013): + 4%
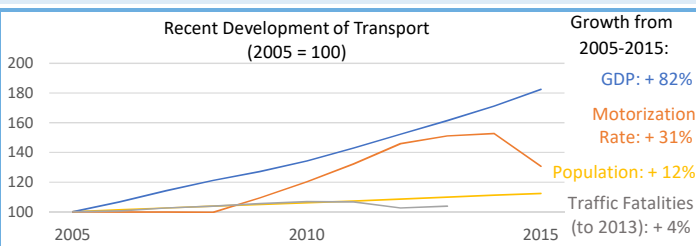
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**107**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 1**		
Diesel Sulphur Levels (ppm):	**5,000**		
Gasoline Sulphur Levels (ppm):	**1,000**		*UNEP*
Diesel Prices (USD cents/liter):	**84.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**112.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**117.6**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**64%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**3.98**		
Share of Road Transport in Transport Black Carbon:	**50%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**89.4**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**1.19%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**9.3**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**13.15%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**76.34%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**0.6**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**27.6**	for 2030	
	88.1	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**15.9**	for 2030	
	31.0	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 457%
BAU 2020-2050: 509%
LCS 2020-2050: 188%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**5% below 2030 BAU for power, transport and industry sectors**
Economy-Wide Conditional Target of NDC:	**15% below 2030 BAU for power, transport and industry sectors**
Transport Target in NDC:	**9% below 2030 BAU (unconditional), 24% below 2030 BAU (conditional), shift from road to rail of around 20% compared to 2030 BAU, 15% vehicle efficiency improvements**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus and Urban Rail) Road Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target Transport Emission Target Freight Mode Share Target Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**21,269**		
Roads per 1 Million People:	**129.16**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**10%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**7,305.00**		
Size of Rail Network (km):	**2,835.00**		
Rail per 1 Million People:	**17.22**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.517** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.48** *World Bank (2016)*
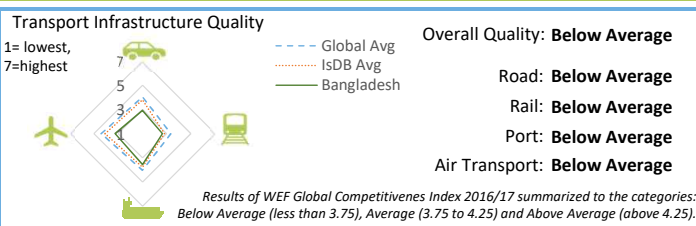
Transport Infrastructure Quality
1= lowest, 7=highest

- - - Global Avg
...... IsDB Avg
— Bangladesh

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Income Level Group:	**Low-income**	
GDP per Capita:	**814.61**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**11.18**	
Share of Urban Population:	**45.96%**	
Human Development Index:	**0.485**	

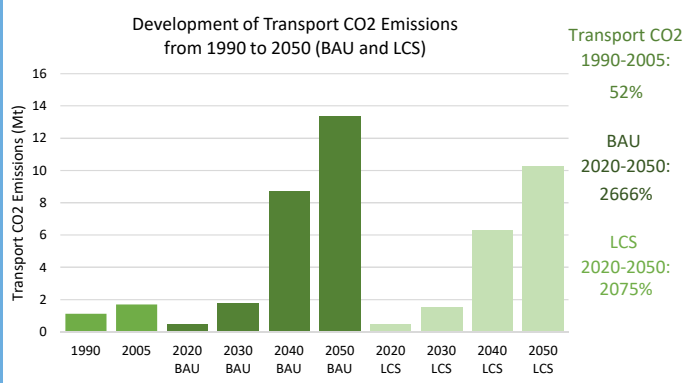Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**24**	Global Avg:	173	
		IsDB Avg:	76	
Amount of Passenger Cars:	**210,000**			
Amount of Commercial Cars:	**42,000**			*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**28**	Global Avg:	17	
		IsDB Avg:	22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**84.50%**			*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 52%
Population: + 32%
Motorization Rate: + 22%
Traffic Fatalities (to 2013): + 18%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**44**	Global Avg:	502	
		IsDB Avg:	277	*EIA (2015)*
Fuel Emission Standards:	No Data			
Diesel Sulphur Levels (ppm):	**3500**			
Gasoline Sulphur Levels (ppm):	**3500**			*UNEP*
Diesel Prices (USD cents/liter):	**72.00**	Global Avg:	85.48	
		IsDB Avg:	68.58	
Super Gasoline Prices (USD cents/liter):	**72.00**	Global Avg:	97.11	
		IsDB Avg:	77.1	*GIZ (2016)*
Transport CO_2 Emissions (Mt):	**4.6**			
Share of Transport in Total Economy-Wide CO_2 Emissions:	**71.47%**	Global Avg:	29.85%	
		IsDB Avg:	26.64%	
Share of Road Transport in Transport CO_2 Emissions:	**100.00%**	Global Avg:	93.64%	
		IsDB Avg:	93.68%	
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.4**	Global Avg:	1.24	
		IsDB Avg:	1.16	
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**5.3**	Global Avg:	1.3	
		IsDB Avg:	1.7	
Projected Transport CO_2 Emissions for BAU Projections:	**7.5**	for 2030		
	17.5	for 2050		
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**5.1**	for 2030		
	13.5	for 2050		*IEA and/or SLoCaT (2015)*

Transport NO_x Emissions (Gg):	**31.7**			*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg:	81%	
		IsDB Avg:	93%	
Transport Black Carbon Emissions (Gg):	**0.73**			
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%	
		IsDB Avg:	92%	
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**35.2**	Global Avg:	28.63	
		IsDB Avg:	43.39	
$PM_{2.5}$ Damage as Share of GNI:	**1.83%**	Global Avg:	0.63%	*World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*
		IsDB Avg:	0.98%	

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 2606%
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**3.5% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**17.9% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions** **Public Bus Transport** **Motorized Two and Three Wheelers Measures**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**16,000**			
Roads per 1 Million People:	**1,431.68**	Global Avg:	7,325	
		IsDB Avg:	3,242	
Share of Paved Roads:	**9%**	Global Avg:	50.61%	
		IsDB Avg:	48.29%	*Various Sources*
Railway Passenger Activity (million pkm):	No Data			
Size of Rail Network (km):	**758.00**			
Rail per 1 Million People:	**67.83**	Global Avg:	348	
		IsDB Avg:	151	*World Bank (2008)*
Urban Rail System Length (km):	No Data			
BRT System Length (km):	No Data			*Various Sources*
BRT System Passengerper Day:	No Data			*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**	
Highlighted in NAPA:	**No**	
Highlighted in NAP:	No NAP	
Human Habitat Vulnerability Score:	**0.604**	*ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.39**	*World Bank (2016)*
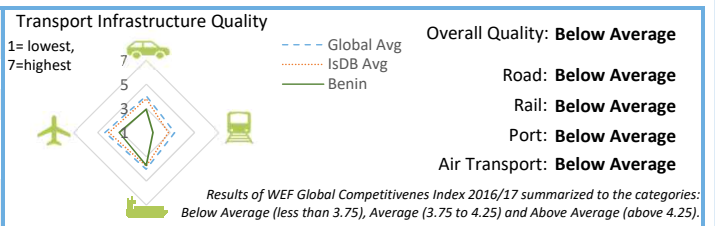
Transport Infrastructure Quality
1= lowest, 7=highest
— Global Avg
···· IsDB Avg
— Benin

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Income Level Group:	**High-income**
GDP per Capita:	**31027.64**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**0.43**
Share of Urban Population:	**79.66%**
Human Development Index:	**0.865**

Partnership on Sustainable
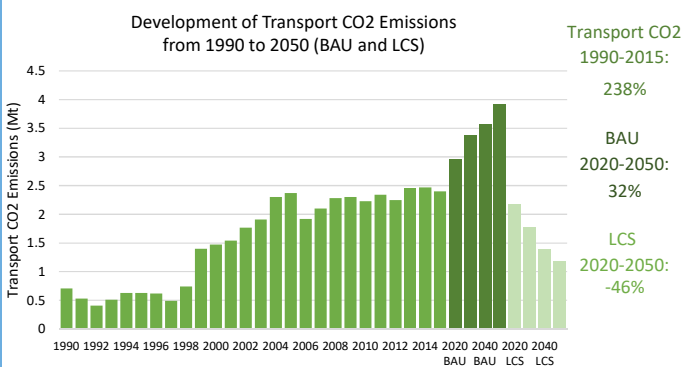Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**721**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**294,605**		
Amount of Commercial Cars:	**6,292**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**8**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Motorization Rate: + 202%
Population: + 14%
GDP: + 3%
Traffic Fatalities (to 2013): - 40%
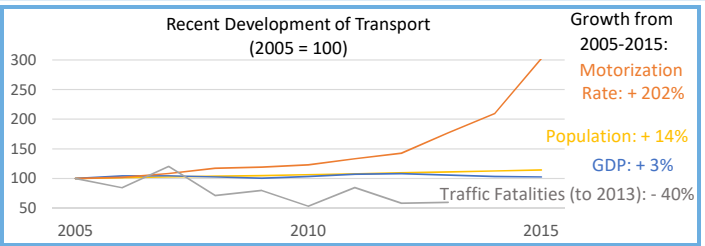
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**18**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Diesel: Euro 1** **Gasoline: Euro 2**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	**1,000**		*UNEP*
Diesel Prices (USD cents/liter):	**22.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**37.00**	Global Avg:	97.11
		IsDB Avg:	77.61 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**4.6**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.15**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**5.1**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.03%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

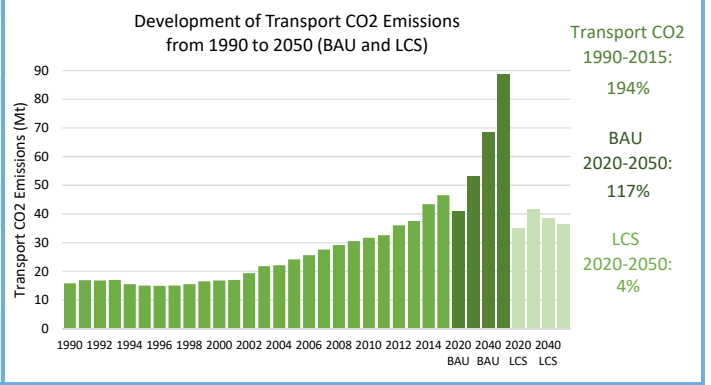*World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**1.4**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**19.58%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**3.4**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.0**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**1.7**	for 2030	
	1.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**1.0**	for 2030	
	0.2	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 155%
BAU 2020-2050: -14%
LCS 2020-2050: -82%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Energy Consumption 63% below 2035 BAU, Renewable Share to be 10%, Increase Forest to 55% of Land Area**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**Land Transport sector: to reduce CO2 from morning peak hour vehicle use by 40% by 2035**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Land Use** **Parking Policies** **Mobility Management** **Public Transport (Bus)** **Walking and Cycling Measures** **Fuel Economy and Energy Efficiency** **E- mobility** **Intelligent Transport System**
Transport Targets defined by National Policy:	**Road Safety Target** **LDV Fuel Economy targets**

Size of Road Network (km):	**3,029**		
Roads per 1 Million People:	**7,065.60**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**80%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.479** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.75** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Brunei Darussalam

Overall Quality:	**Average**
Road:	**Above Average**
Rail:	No Data
Port:	**Below Average**
Air Transport:	**Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Burkina Faso

Income Level Group:	**Low-income**	Population Size (million):	**19.19**
GDP per Capita:	**625.67**	Share of Urban Population:	**31.09%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.402**

Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**16**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**200,000**		
Amount of Commercial Cars:	**97,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**30**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Motorization Rate: + 80%
GDP: + 70%
Population: + 35%
Traffic Fatalities (to 2013): + 26%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**22**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**35,000**		
Gasoline Sulphur Levels (ppm):	**150**		*UNEP (2013)*
Diesel Prices (USD cents/liter):	**86.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**98.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**5.1**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**93%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.15**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (µg/m³):	**40.0**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**1.75%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt) (2007):	**0.8**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**47.17%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**0.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**1.0**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**2.8**	for 2030	
	6.6	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**1.9**	for 2030	
	5.1	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**6.6% below 2030 BAU scenario**
Economy-Wide Conditional Target of NDC:	**11.6% below 2030 BAU scenario**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus) Biofuels**
Transport Targets defined by National Policy:	**Road Safety Target Transport Renewable Energy Target Energy Consumption Target**

Size of Road Network (km):	**15,272**		
Roads per 1 Million People:	**795.69**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		*World Bank (2002)*
Size of Rail Network (km):	**622.00**		
Rail per 1 Million People:	**32.41**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	**No**
Highlighted in NAP:	**Yes**
Human Habitat Vulnerability Score:	**0.575** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.67** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Burkina Faso

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
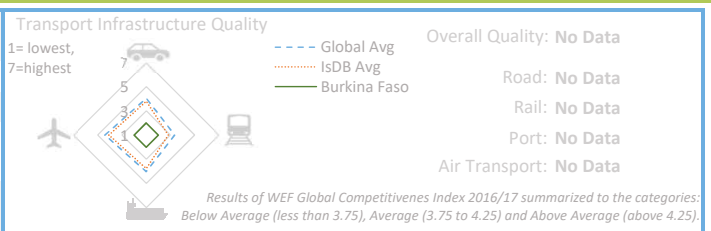
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Cameroon

Income Level Group:	**Middle-income**	
GDP per Capita:	**1322.40**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**24.05**	
Share of Urban Population:	**56.68%**	
Human Development Index:	**0.518**	

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**15**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**260,000**		
Amount of Commercial Cars:	**87,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**28**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 49%
Population: + 31%
Traffic Fatalities (to 2013): + 20%
Motorization Rate: + 13%
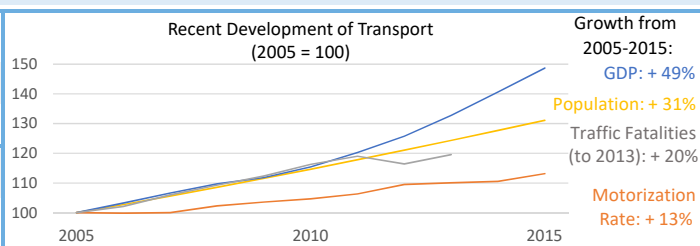
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**42**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**10,000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**94.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**103.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**26.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**95%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.92**		
Share of Road Transport in Transport Black Carbon:	**92%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**66.4**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**1.42%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**3.5**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**44.04%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**94.29%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.0**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**5.2**	for 2030	
	8.7	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**4.0**	for 2030	
	3.6	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 100%
BAU 2020-2050: 117%
LCS 2020-2050: 4%
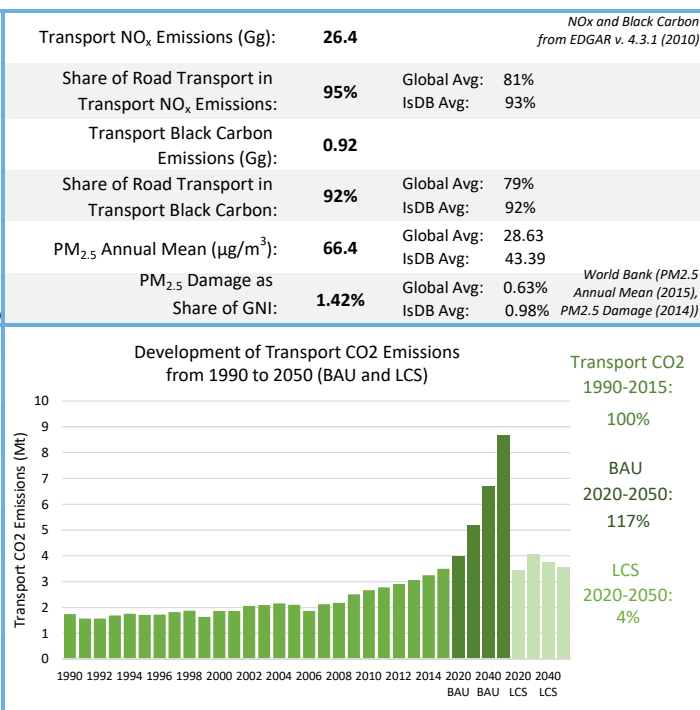
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Reduce GHG emissions by 32% compared to 2035 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Land Use** **Vehicle Restrictions** **Public Rail Transport** **Fuel Quality and Vehicle Emission Standards Improvements**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**51,350**		
Roads per 1 Million People:	**2,134.80**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**8%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**494.00**		
Size of Rail Network (km):	**976.00**		
Rail per 1 Million People:	**40.58**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	**Yes**
Human Habitat Vulnerability Score:	**0.618** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.21** *World Bank (2016)*
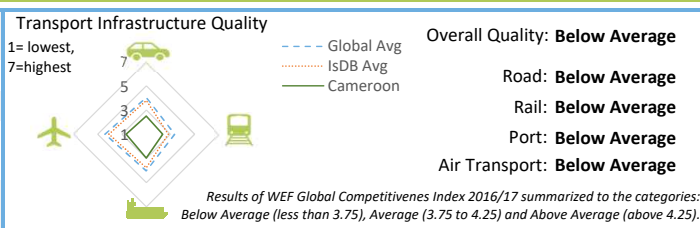
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Cameroon

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Chad

Income Level Group:	**Low-income**	Population Size (million):	**14.90**
GDP per Capita:	**833.83**	Share of Urban Population:	**22.05%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.396**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**49**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		*WHO (2010)*
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 59%
Population: + 39%
Traffic Fatalities (to 2013): + 27%
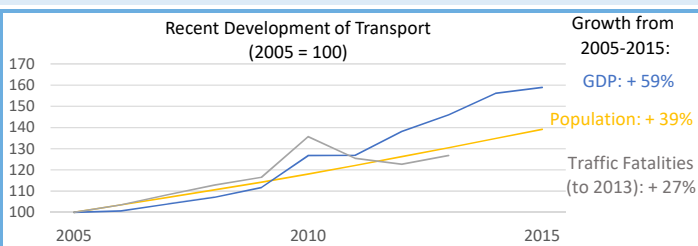
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**2**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**166**		
Gasoline Sulphur Levels (ppm):	**35**		*UNEP*
Diesel Prices (USD cents/liter):	**85.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**78.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**0.8**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**96%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.02**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**46.1**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**3.75%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO$_2$ Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**3.6**	for 2030	
	8.4	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**2.4**	for 2030	
	6.4	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**18.2% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**71% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**40,000**		
Roads per 1 Million People:	**2,684.56**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**1%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.659** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.07** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Chad

Overall Quality: **Below Average**
Road: **Below Average**
Rail: No Data
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
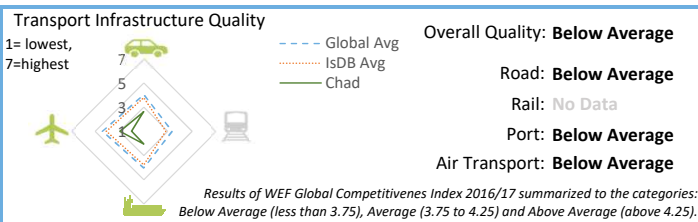
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Comoros

Income Level Group:	**Low-income**	Population Size (million):	**0.81**
GDP per Capita:	**751.15**	Share of Urban Population:	**28.25%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.498**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	No Data	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**28**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

Traffic Fatalities (to 2013): + 22%

Population: + 27%

GDP: + 22%

(chart: 2005, 2010, 2015; y-axis 100–130)

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**1.3**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	No Data	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**0.5**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**91%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.01**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**17.1**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**1.64%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections	**0.1**	for 2030	
	0.3	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario	**0.1**	for 2030	
	0.2	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 2020 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data

BAU 2020-2050: 261%

LCS 2020-2050: 232%

(bar chart: 2020 BAU, 2030 BAU, 2040 BAU, 2050 BAU, 2020 LCS, 2030 LCS, 2040 LCS, 2050 LCS; y-axis Transport CO2 Emissions (Mt))

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**84% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**880**		
Roads per 1 Million People:	**1,081.20**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**76%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**Yes**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.489** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.36** *World Bank (2016)*
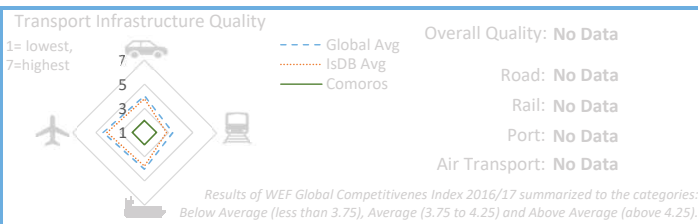
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg — IsDB Avg — Comoros

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

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Factsheet of Côte D'Ivoire

Income Level Group:	**Middle-income**
GDP per Capita:	**1524.84**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**24.29**
Share of Urban Population:	**50.92%**
Human Development Index:	**0.474**

Partnership on Sustainable Low Carbon Transport
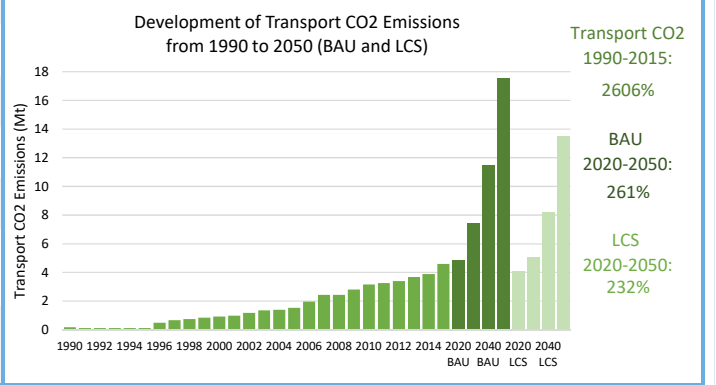
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**41**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**430,000**		
Amount of Commercial Cars:	**510,000**	*OICA (2015)*	
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**78.00%**	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 53%
- Population: + 26%
- Motorization Rate: + 22%
- Traffic Fatalities (to 2013): + 11%
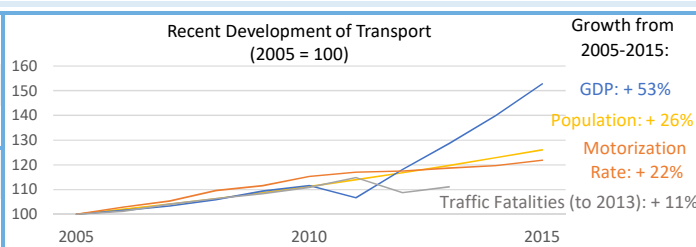
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**43**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**35,000**		
Gasoline Sulphur Levels (ppm):	**150**	*UNEP (2013)*	
Diesel Prices (USD cents/liter):	**93.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**93.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO$_2$ Emissions (Mt):	**3.2**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**30.06%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**87.50%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**0.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**2.5**	for 2030	
	4.2	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**2.0**	for 2030	
	1.7	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO$_x$ Emissions (Gg):	**17.3**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**67%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.79**		
Share of Road Transport in Transport Black Carbon:	**67%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (μg/m^3):	**23.5**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**1.56%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO2 1990-2015: 169%
- BAU 2020-2050: 117%
- LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**28% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**5.73% below 2030 BAU**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions** **Mobility Management** **Public Transport (Urban Rail)** **Fuel Quality and Vehicle Emission Standards Improvement** **E- mobility**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Emission Target** **Transport Renewable Energy Target**

Size of Road Network (km):	**81,996**		
Roads per 1 Million People:	**3,375.05**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**8%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**148.00**		*World Bank (2002)*
Size of Rail Network (km):	**639.00**		
Rail per 1 Million People:	**26.30**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.595** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.46** *World Bank (2016)*

Transport Infrastructure Quality
(1= lowest, 7=highest)
- Global Avg
- IsDB Avg
- Côte D'Ivoire

Overall Quality:	**Average**
Road:	**Above Average**
Rail:	**Below Average**
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
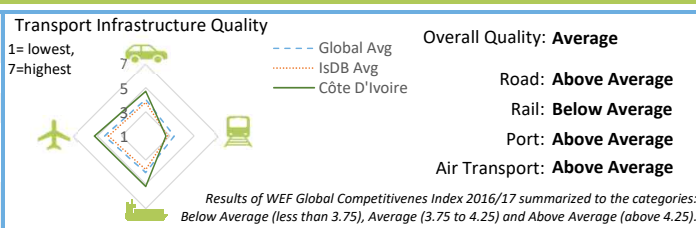
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**	
GDP per Capita (2015):	**1579.92**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**0.96**	
Share of Urban Population:	**75.02%**	
Human Development Index:	**0.473**	

Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	No Data	Global Avg: 173 IsDB Avg: 76
Amount of Passenger Cars:	No Data	
Amount of Commercial Cars:	No Data	OICA (2015)
Traffic Fatalities (deaths per 1,000 People):	25	Global Avg: 17 IsDB Avg: 22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data	WHO (2015)

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 64%
Population: + 18%
Traffic Fatalities (to 2013): - 1%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	6	Global Avg: 502 IsDB Avg: 277 EIA (2015)
Fuel Emission Standards:	No Data	
Diesel Sulphur Levels (ppm):	5,000	
Gasoline Sulphur Levels (ppm):	1,000	UNEP
Diesel Prices (USD cents/liter):	98.00	Global Avg: 85.48 IsDB Avg: 68.58
Super Gasoline Prices (USD cents/liter):	132.00	Global Avg: 97.11 IsDB Avg: 77.1 GIZ (2016)

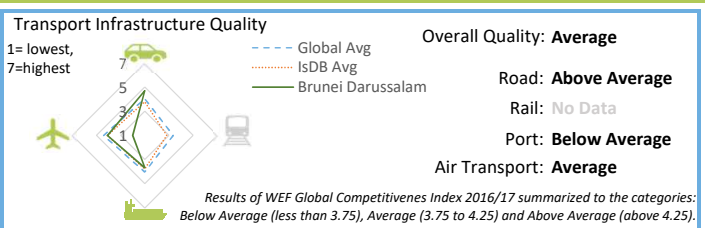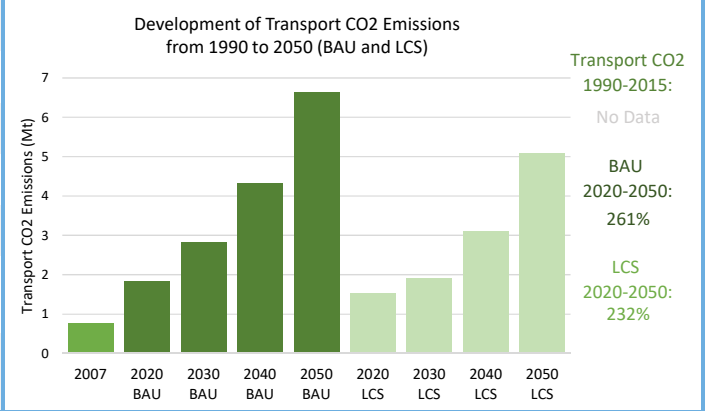|		
Transport NOx Emissions (Gg):	2.1	NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NOx Emissions:	92%	Global Avg: 81% IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	0.06	
Share of Road Transport in Transport Black Carbon:	99%	Global Avg: 79% IsDB Avg: 92%
PM2.5 Annual Mean (μg/m³):	51.5	Global Avg: 28.63 IsDB Avg: 43.39
PM2.5 Damage as Share of GNI:	No Data	Global Avg: 0.63% IsDB Avg: 0.98% World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	No Data	
Share of Transport in Total Economy-Wide CO2 Emissions:	No Data	Global Avg: 29.85% IsDB Avg: 26.64%
Share of Road Transport in Transport CO2 Emissions:	No Data	Global Avg: 93.64% IsDB Avg: 93.68%
Transport CO2 Emissions per Capita (t CO2/person):	No Data	Global Avg: 1.24 IsDB Avg: 1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	No Data	Global Avg: 1.3 IsDB Avg: 1.7
Projected Transport CO2 Emissions for BAU Projections:	0.2 for 2030 0.3 for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	0.2 for 2030 0.1 for 2050	IEA and/or SLoCaT (2015)

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	40% below 2030 BAU
Economy-Wide Conditional Target of NDC:	60% below 2030 BAU
Transport Target in NDC:	No transport target
Transport Highlighted in NDC:	Yes
Transport Measures Proposed in NDC:	Vehicle Restrictions Specific Motorized Two and Three Wheelers Measures Rail Infrastructure Development
Transport Targets defined by National Policy:	Import Restrictions

Size of Road Network (km):	3,065	
Roads per 1 Million People:	3,202.77	Global Avg: 7,325 IsDB Avg: 3,242
Share of Paved Roads:	45%	Global Avg: 50.61% IsDB Avg: 48.29% Various Sources
Railway Passenger Activity (million pkm):	No Data	
Size of Rail Network (km):	93.00	
Rail per 1 Million People:	97.18	Global Avg: 348 IsDB Avg: 151 Various (2018)
Urban Rail System Length (km):	No Data	Various Sources
BRT System Length (km):	No Data	
BRT System Passengerper Day:	No Data	BRT Data (2016)

Transport Adaptation

Transport Adaptation Highlighted in NDC:	No
Highlighted in NAPA:	No
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	0.634
Logistics Performance Index for Trade and Transport:	2.30

ND Gain Index (2016)
World Bank (2016)

Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Djibouti

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Egypt

Income Level Group:	**Middle-income**	Population Size (million):	**97.55**
GDP per Capita:	**2672.33**	Share of Urban Population:	**38.78%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.691**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**61**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**4,384,338**		
Amount of Commercial Cars:	**1,349,472**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**13**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**51.40%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 54%
Traffic Fatalities (to 2013): + 35%
Motorization Rate: + 48%
Population: + 22%
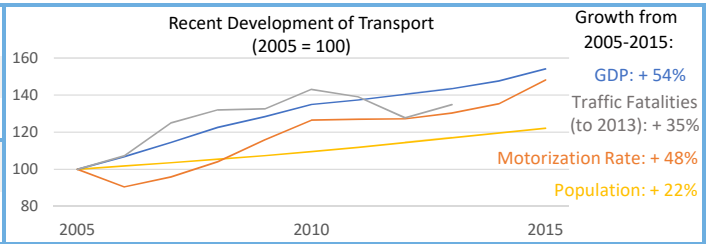
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**782**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**HC: 600 ppm; CO: 2.5% of volume; Opacity: 30% (Vehicles after 2003)**		
Diesel Sulphur Levels (ppm):	**6000-7000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**15.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**40.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO$_2$ Emissions (Mt):	**55.0**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**27.46%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**95.09%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.6**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**2.2**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**75.1**	for 2030	
	125.6	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**58.8**	for 2030	
	51.8	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO$_x$ Emissions (Gg):	**248.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**84%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**8.15**		
Share of Road Transport in Transport Black Carbon:	**84%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**104.7**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.59%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 241%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Achieve low carbon development**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus and Rail) Green Freight Measures (Shift to Rail and Water Transport) Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**137,430**		
Roads per 1 Million People:	**1,408.77**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**92%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**40,837.00**		*World Bank (2014)*
Size of Rail Network (km):	**5,153.00**		
Rail per 1 Million People:	**52.82**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	**76.30**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.301** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.07** *World Bank (2016)*
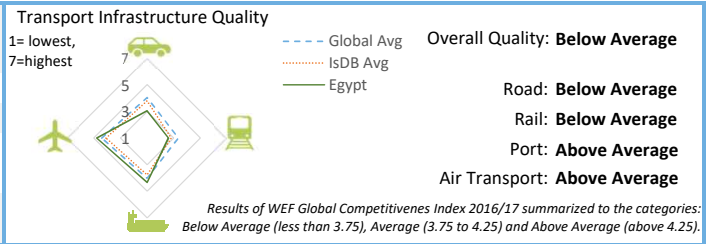
Transport Infrastructure Quality
1= lowest, 7=highest
--- Global Avg
··· IsDB Avg
— Egypt

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Above Average**
Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Gabon

Income Level Group:	**Middle-income**	Population Size (million):	**2.03**
GDP per Capita:	**9355.16**	Share of Urban Population:	**79.19%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.697**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**117**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		*WHO (2010)*
Traffic Fatalities (deaths per 1,000 People):	**23**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Population: + 38%
GDP: + 36%
Traffic Fatalities (to 2013): + 26%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**22**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**1,500**		
Gasoline Sulphur Levels (ppm):	**150**		*UNEP (2011)*
Diesel Prices (USD cents/liter):	**79.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**92.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO₂ Emissions (Mt):	**0.8**		
Share of Transport in Total Economy-Wide CO₂ Emissions:	**13.88%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO₂ Emissions:	**100%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO₂ Emissions per Capita (t CO₂/person):	**0.4**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO₂ Emissions per GDP (t CO₂/10,000 USD):	**0.4**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO₂ Emissions for BAU Projections:	**1.1**	for 2030	
	1.8	for 2050	
Projected Transport CO₂ Emissions for Low Carbon Scenario:	**0.8**	for 2030	
	0.7	for 2050	*IEA and/or SLoCaT (2015)*

Transport NOₓ Emissions (Gg):	**3.0**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOₓ Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.10**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM₂.₅ Annual Mean (μg/m³):	**39.9**	Global Avg:	28.63
		IsDB Avg:	43.39
PM₂.₅ Damage as Share of GNI:	**0.37%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 150%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**At least 50% reduction from 2025 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**20% reduction below BAU (1.6 Mt reduction)**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions Public Bus Transport Road Infrastructure Development**
Transport Targets defined by National Policy:	**Transport Emission Target Import Restriction Target**

Size of Road Network (km):	**9,170**		
Roads per 1 Million People:	**4,528.09**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**12%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**127.00**		
Size of Rail Network (km):	**810.00**		
Rail per 1 Million People:	**399.97**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	**No Data**		*Various Sources*
BRT System Length (km):	**No Data**		
BRT System Passengerper Day:	**No Data**		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.745** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.05** *World Bank (2016)*
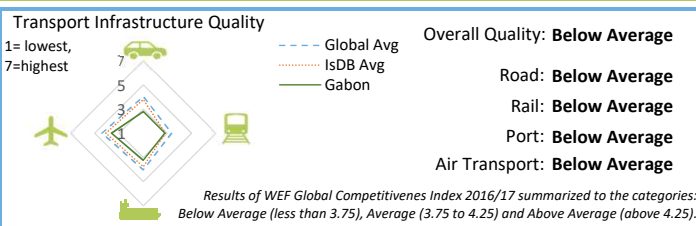
Transport Infrastructure Quality

1= lowest, 7=highest

- - - Global Avg
···· IsDB Avg
— Gabon

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	**Below Average**
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Low-income**
GDP per Capita:	**516.55**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**2.10**
Share of Urban Population:	**60.68%**
Human Development Index:	**0.452**

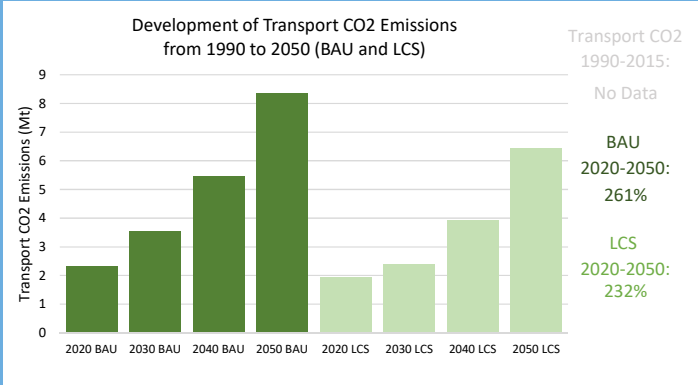Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**29**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**26,564**		
Amount of Commercial Cars:	**8,487**	*WHO (2013)*	
Traffic Fatalities (deaths per 1,000 People):	**29**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 41%
Population: + 37%
Traffic Fatalities (to 2013): + 25%
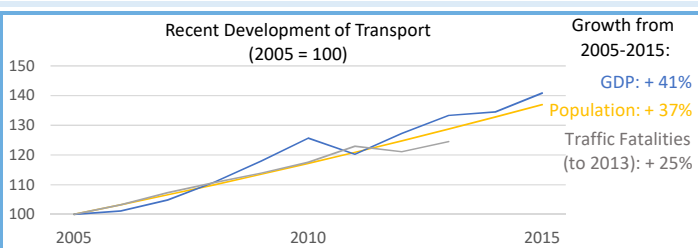
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**4**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**5,000**		
Gasoline Sulphur Levels (ppm):	No Data	*UNEP*	
Diesel Prices (USD cents/liter):	**106.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**118.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**2.5**	*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*	
Share of Road Transport in Transport NOx Emissions:	**98%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.07**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (μg/m³):	**60.9**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	No Data	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**0.3**	for 2030	
	0.8	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**0.2**	for 2030	
	0.6	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 2020 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data

BAU 2020-2050: 261%

LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**45.4% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**0.193 Mt CO2eq reduction by 2030**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Fuel Economy and Energy Efficiency**
Transport Targets defined by National Policy:	**Transport Emission Target** **Transport Renewable Energy Target**

Size of Road Network (km):	**3,740**		
Roads per 1 Million People:	**1,780.47**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**19%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.629** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	No Data *World Bank (2016)*

Transport Infrastructure Quality

1= lowest, 7=highest
- - - Global Avg
······· IsDB Avg

Overall Quality: **Below Average**

Road: **Average**
Rail: No Data
Port: **Average**
Air Transport: **Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
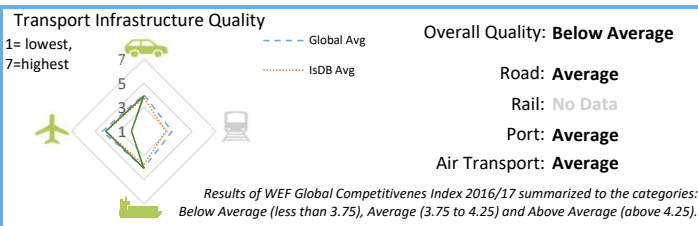
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Guinea Bissau

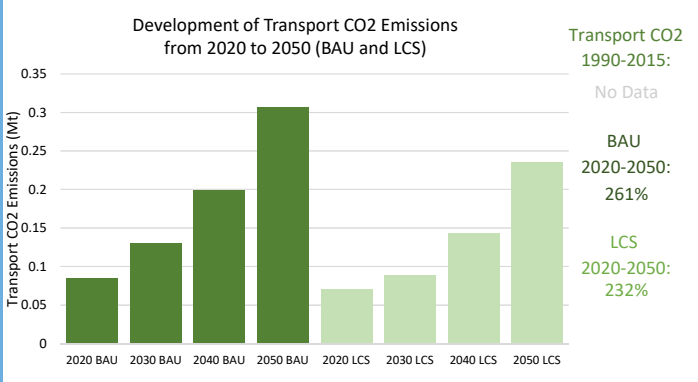|	
Income Level Group:	**Low-income**
GDP per Capita:	**558.41**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**1.86**
Share of Urban Population:	**51.15%**
Human Development Index:	**0.424**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**37**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**60,297**		
Amount of Commercial Cars:	No Data	*OICA (2015)*	
Traffic Fatalities (deaths per 1,000 People):	**28**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 37%
Population: + 28%
Traffic Fatalities (to 2013): + 21%
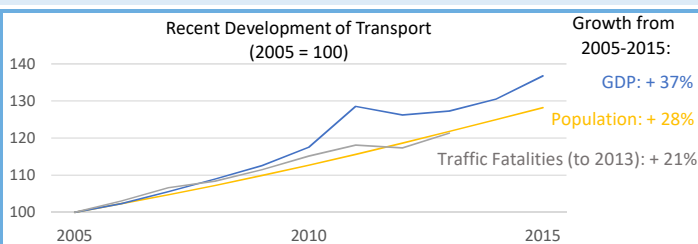
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**3**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**5,000**		
Gasoline Sulphur Levels (ppm):	No Data	*UNEP*	
Diesel Prices (USD cents/liter):	No Data	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**1.4**	*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*	
Share of Road Transport in Transport NOx Emissions:	**93%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.04**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (µg/m³):	**33.0**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**2.61%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**0.3**	for 2030	
	0.7	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**0.2**	for 2030	
	0.5	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: #DIV/0!
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No conditional target**
Economy-Wide Conditional Target of NDC:	**80% renewable energy in the national energy mix by 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target** / **Transport Renewable Energy Target**

Size of Road Network (km):	**3,455**		
Roads per 1 Million People:	**1,856.25**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**28%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data	*Various Sources*	
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data	*BRT Data (2016)*	

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.613** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.91** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Guinea Bissau

Overall Quality:	**No Data**
Road:	**No Data**
Rail:	**No Data**
Port:	**No Data**
Air Transport:	**No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
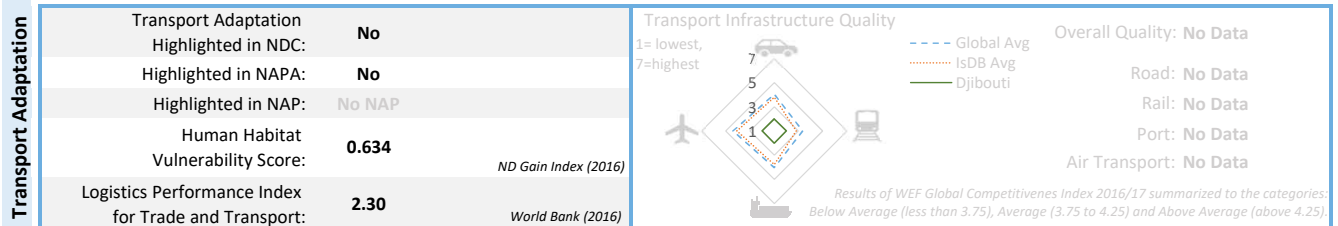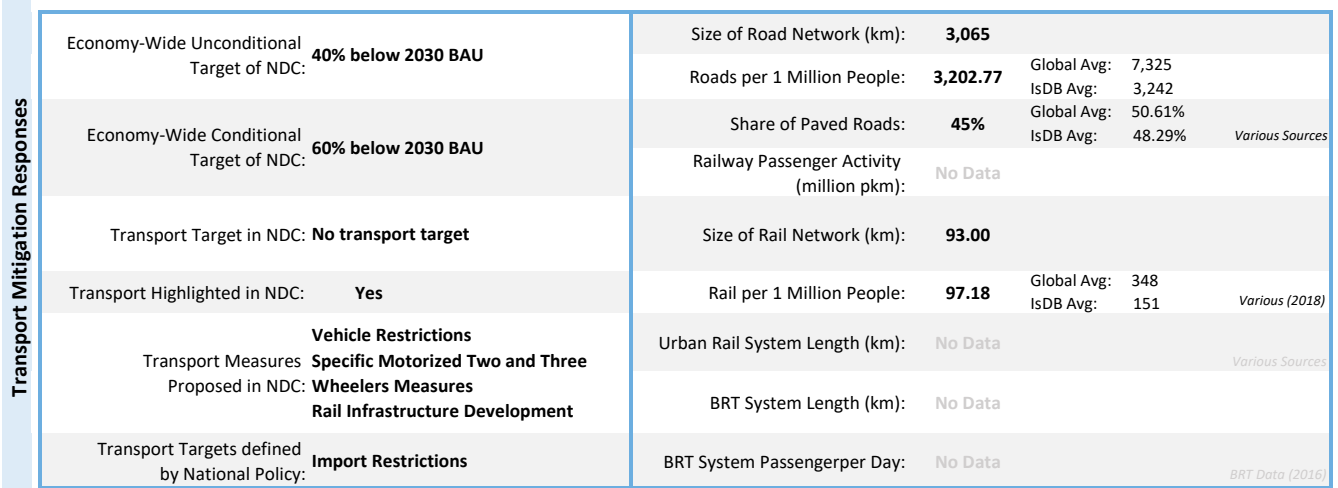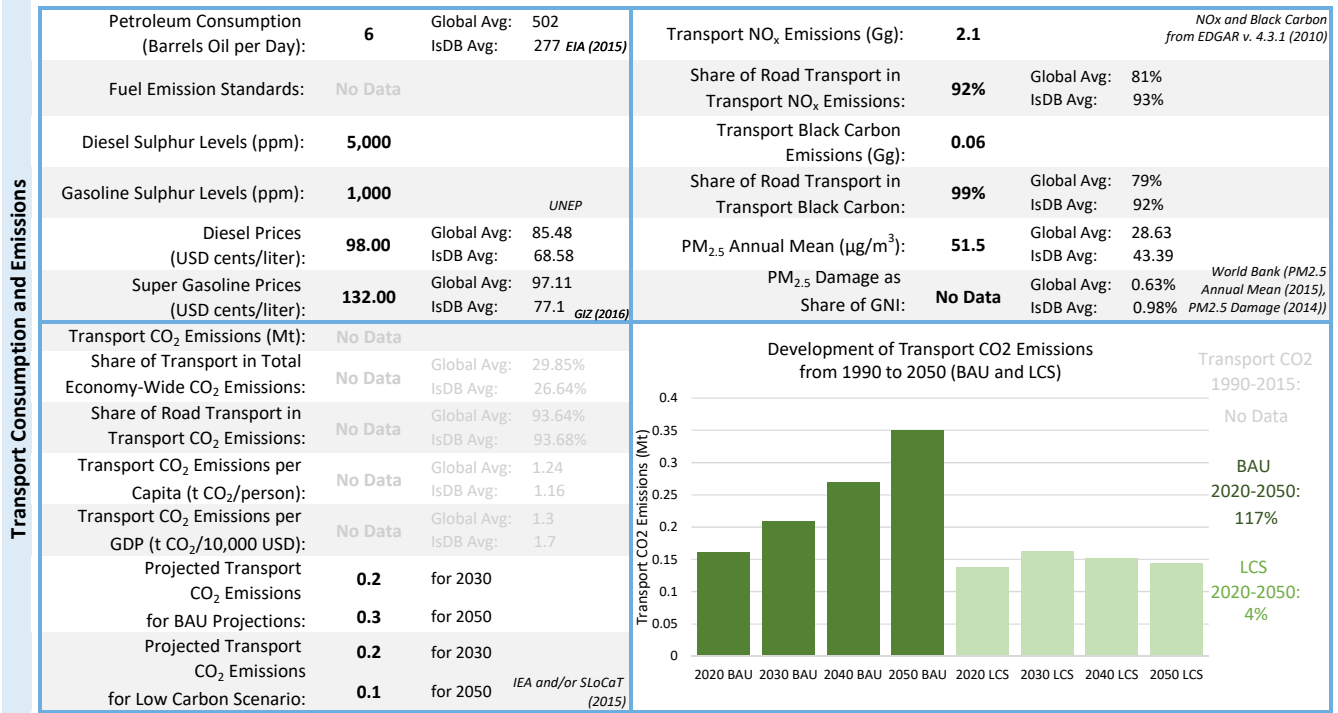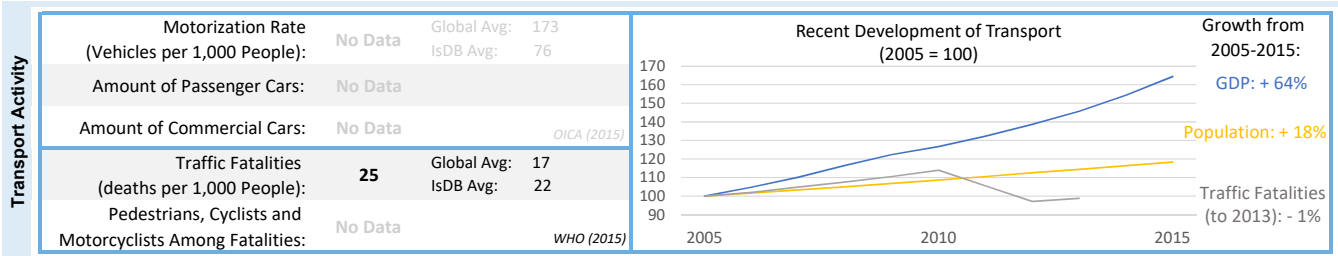# Guinea

Income Level Group:	**Low-income**
GDP per Capita:	**435.04**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**12.72**
Share of Urban Population:	**38.90%**
Human Development Index:	**0.414**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**3**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**26,609**		
Amount of Commercial Cars:	**407**		*WHO (2011)*
Traffic Fatalities (deaths per 1,000 People):	**27**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Population: + 25%
- GDP: + 24%
- Traffic Fatalities (to 2013): + 15%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**16**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**2,000**		
Gasoline Sulphur Levels (ppm):	**1,500**		*UNEP (2011)*
Diesel Prices (USD cents/liter):	**90.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**90.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**4.1**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**90%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.14**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (μg/m³):	**22.6**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**1.45%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO2 Emissions (Mt) (1994):	**0.6**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**50.51%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**1.6**	for 2030	
	3.7	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**1.1**	for 2030	
	2.8	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**13% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus)**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target**

Size of Road Network (km):	**44,348**		
Roads per 1 Million People:	**3,487.25**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**10%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.633** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.01** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Guinea

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of
Guyana

Income Level Group:	**Middle-income**
GDP per Capita:	**3736.71**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**0.78**
Share of Urban Population:	**30.16%**
Human Development Index:	**0.638**

Partnership on Sustainable Low Carbon Transport
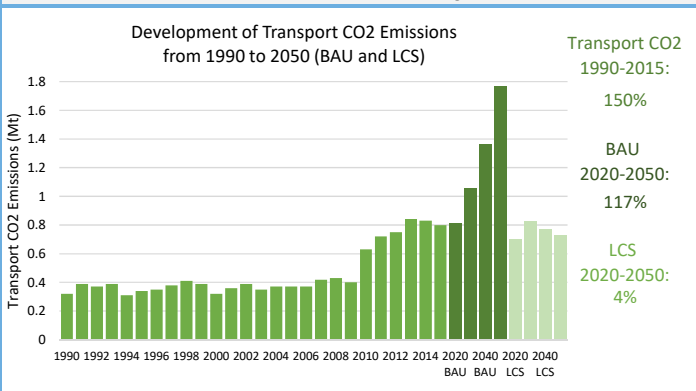
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**20**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**8,846**		
Amount of Commercial Cars:	**1,356**		*WHO (2013)*
Traffic Fatalities (deaths per 1,000 People):	**17**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**75.00%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 54%

Population: + 2%

Traffic Fatalities (to 2013): - 38%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**13**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**78.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**90.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO_2 Emissions (Mt):	**0.3**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**20.07%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.4**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.7**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**1.4**	for 2030	
	0.8	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**1.1**	for 2030	
	0.3	for 2050	*IEA and/or SLoCaT (2015)*

Transport NOx Emissions (Gg):	**1.8**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**96%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.04**		
Share of Road Transport in Transport Black Carbon:	**98%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m³):	**17.4**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.33%**	Global Avg:	0.63%
		IsDB Avg:	0.98%
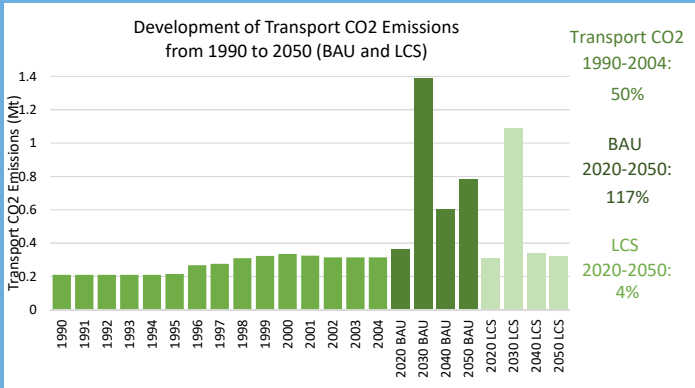
World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2004: 50%

BAU 2020-2050: 117%

LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**Avoid deforestation to save 48.7 Mt emissions annually** **100% renewable energy supply by 2025**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**7,970**		
Roads per 1 Million People:	**10,246.07**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**7%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.614** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.24** *World Bank (2016)*

Transport Infrastructure Quality

1= lowest, 7=highest

- - - Global Avg
⋯⋯ IsDB Avg
— Guyana

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
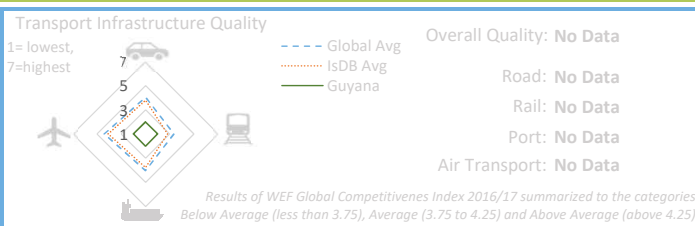
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**
GDP per Capita:	**3930.77**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**263.99**
Share of Urban Population:	**54.62%**
Human Development Index:	**0.689**

Partnership on Sustainable
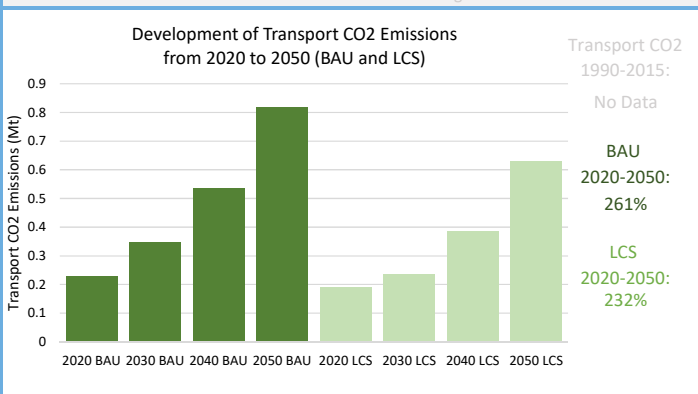Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**87**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**13,480,973**		
Amount of Commercial Cars:	**9,031,945**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**15**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**94.00%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Motorization Rate: + 118%
GDP: + 73%
Population: + 14%
Traffic Fatalities (to 2013): + *%
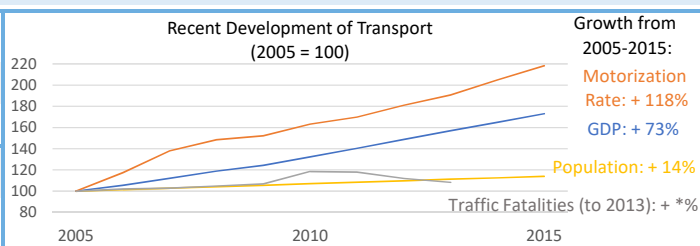
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**1648**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 2**		
Diesel Sulphur Levels (ppm):	**Cetane Number 48: 3500** **Cetane Number 51: 500**		
Gasoline Sulphur Levels (ppm):	**500**		*UNEP*
Diesel Prices (USD cents/liter):	**61.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**63.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**667.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**76%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**30.76**		
Share of Road Transport in Transport Black Carbon:	**81%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**15.4**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.46%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**128.6**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**26.92%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**87.95%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.5**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.3**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**240.1**	for 2030	
	263.9	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**172.5**	for 2030	
	104.0	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 300%
BAU 2020-2050: 71%
LCS 2020-2050: 3%
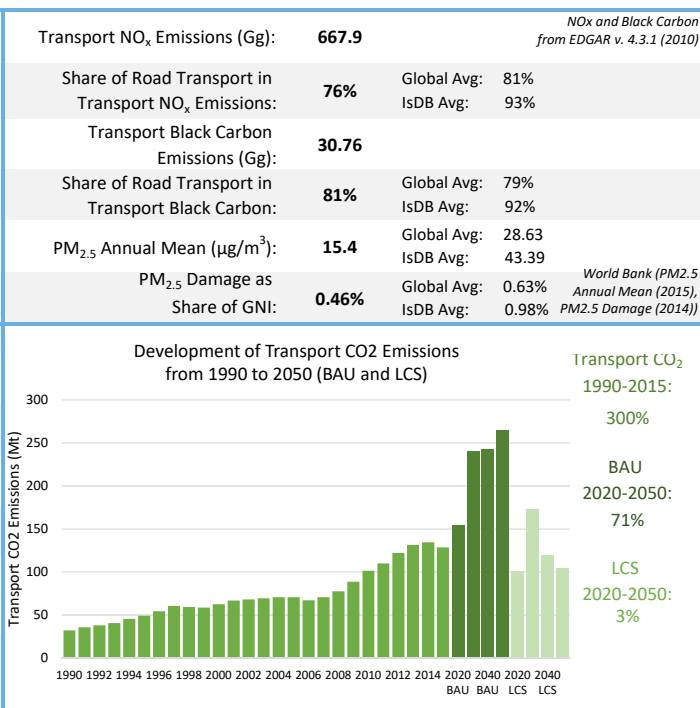
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**26% below 2020 BAU**
Economy-Wide Conditional Target of NDC:	**Additional 15% reduction**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Biofuels**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**496,607**		
Roads per 1 Million People:	**1,881.15**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**57%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**20,283.00**		
Size of Rail Network (km):	**4,684.00**		
Rail per 1 Million People:	**17.74**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	**207**		
BRT System Passengerper Day:	**370,000**		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.469** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.65** *World Bank (2016)*
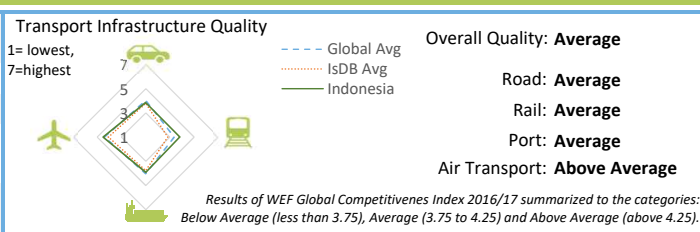
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Indonesia

Overall Quality: **Average**
Road: **Average**
Rail: **Average**
Port: **Average**
Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Iran

Income Level Group:	**Middle-income**	Population Size (million):	**81.16**
GDP per Capita:	**5629.97**	Share of Urban Population:	**74.61%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.774**

Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**178**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**32**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**58.80%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

Motorization Rate: + 70%

GDP: + 24%

Population: + 13%

Traffic Fatalities (to 2013): - 13%
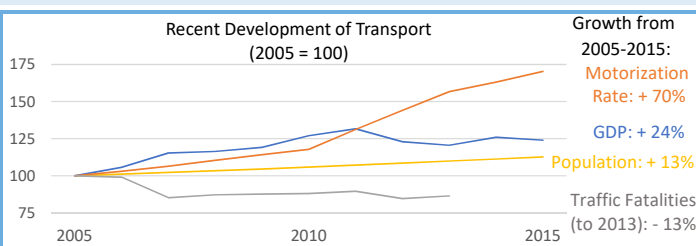
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**1912**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**21.60**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**39.90**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

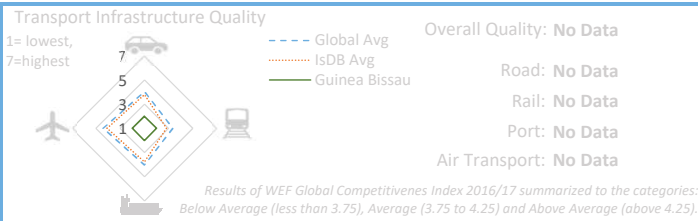|			
Transport NOx Emissions (Gg):	**1397.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg: 81%	IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	**21.94**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg: 79%	IsDB Avg: 92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**43.0**	Global Avg: 28.63	IsDB Avg: 43.39
$PM_{2.5}$ Damage as Share of GNI:	**No Data**	Global Avg: 0.63%	IsDB Avg: 0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**136.6**	
Share of Transport in Total Economy-Wide CO_2 Emissions:	**22.12%**	Global Avg: 29.85% / IsDB Avg: 26.64%
Share of Road Transport in Transport CO_2 Emissions:	**88.87%**	Global Avg: 93.64% / IsDB Avg: 93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**1.7**	Global Avg: 1.24 / IsDB Avg: 1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**2.9**	Global Avg: 1.3 / IsDB Avg: 1.7
Projected Transport CO_2 Emissions for BAU Projections:	**195.4** for 2030 / **327.1** for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**153.0** for 2030 / **134.8** for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 249%

BAU 2020-2050: 117%

LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**4% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**additional 8% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Passenger Mode Share Target**

Size of Road Network (km):	**198,866**	
Roads per 1 Million People:	**2,450.21**	Global Avg: 7,325 / IsDB Avg: 3,242
Share of Paved Roads:	**81%**	Global Avg: 50.61% / IsDB Avg: 48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**12,982.00**	
Size of Rail Network (km):	**8,576.00**	
Rail per 1 Million People:	**105.66**	Global Avg: 348 / IsDB Avg: 151 *World Bank (2016)*
Urban Rail System Length (km):	**134.00**	*Various Sources*
BRT System Length (km):	**165**	
BRT System Passengers per Day:	**2,135,000**	*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.34** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.67** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest — - - Global Avg

Overall Quality:	**Average**
Road:	**Average**
Rail:	**Below Average**
Port:	**Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
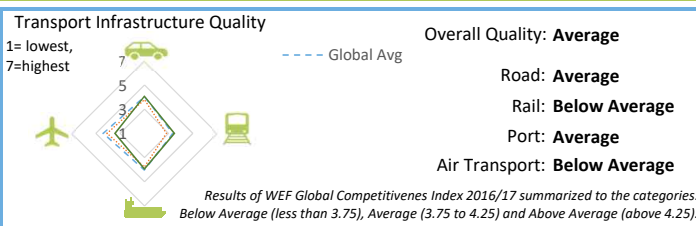
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Iraq

Income Level Group: Middle-income	**Population Size (million):** 38.27	Partnership on Sustainable Low Carbon Transport
GDP per Capita: 5536.15	**Share of Urban Population:** 68.73%	
UNFCCC Classification: Non-Annex I	**Human Development Index:** 0.649	

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**108**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**1,700,000**		
Amount of Commercial Cars:	**2,200,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**20**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 83%
Motorization Rate: + 34%
Population: + 34%
Traffic Fatalities (to 2013): + 20%
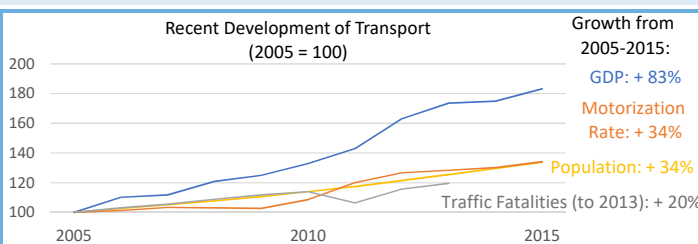
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**850**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**13,000**		
Gasoline Sulphur Levels (ppm):	**10,000**		*UNEP*
Diesel Prices (USD cents/liter):	**70.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**61.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**385.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg: 81%	IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	**7.25**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg: 79%	IsDB Avg: 92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**52.0**	Global Avg: 28.63	IsDB Avg: 43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.48%**	Global Avg: 0.63%	IsDB Avg: 0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**25.3**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**14.80%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.7**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.3**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**46.8**	for 2030	
	78.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**36.7**	for 2030	
	32.3	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 16%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**1% below 2035 BAU**
Economy-Wide Conditional Target of NDC:	**additional 13% below 2035 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions** **Public Transport (Bus)** **Fuel Economy and Energy Efficiency** **Vehicle Inspection and Maintenance**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**59,623**		
Roads per 1 Million People:	**1,557.77**	Global Avg: 7,325	IsDB Avg: 3,242
Share of Paved Roads:	**100%**	Global Avg: 50.61%	IsDB Avg: 48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**99.00**		
Size of Rail Network (km):	**2,138.00**		
Rail per 1 Million People:	**55.86**	Global Avg: 348	IsDB Avg: 151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.433** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.87** *World Bank (2016)*
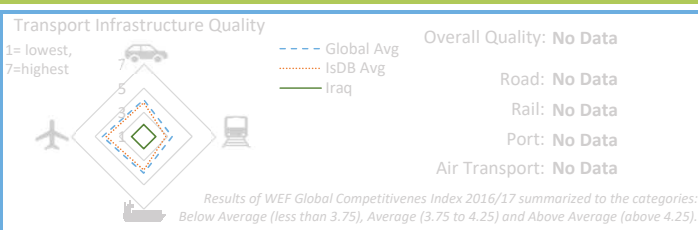
Transport Infrastructure Quality
1= lowest, 7=highest
- - - Global Avg
········ IsDB Avg
— Iraq

Overall Quality: **No Data**
Road: **No Data**
Rail: **No Data**
Port: **No Data**
Air Transport: **No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Jordan

Income Level Group:	**Middle-income**	Population Size (million):	**9.70**
GDP per Capita:	**3175.68**	Share of Urban Population:	**68.52%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.742**

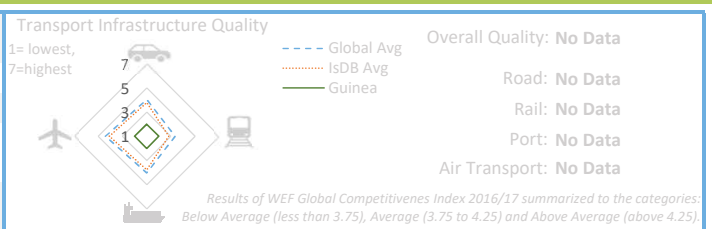Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**123**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**1,000,000**		
Amount of Commercial Cars:	**130,000**		OICA (2015)
Traffic Fatalities (deaths per 1,000 People):	**26**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**35.70%**		WHO (2015)

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Population: + 60%
- GDP: + 55%
- Traffic Fatalities (to 2013): + 44%
- Motorization Rate: + 35%
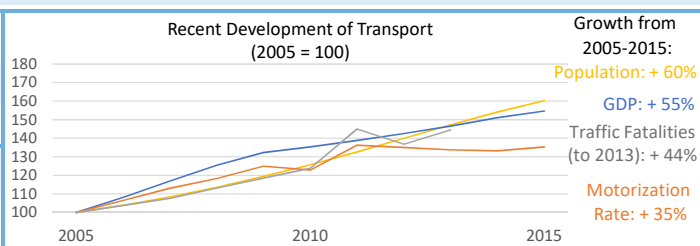
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**160**	Global Avg:	502
		IsDB Avg:	277 EIA (2015)
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**9300**		
Gasoline Sulphur Levels (ppm):	No Data		UNEP
Diesel Prices (USD cents/liter):	**64.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**110.00**	Global Avg:	97.11
		IsDB Avg:	77.1 GIZ (2016)

Transport NOx Emissions (Gg):	**17.6**		NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NOx Emissions:	**99%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.22**		
Share of Road Transport in Transport Black Carbon:	**98%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**38.8**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.17%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**7.8**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**29.60%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.9**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**2.6**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**8.7**	for 2030	
	14.6	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**6.8**	for 2030	
	6.0	for 2050	IEA and/or SLoCaT (2015)

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 186%

BAU 2020-2050: 117%

LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**1.5% below 2030 BAU emissions**
Economy-Wide Conditional Target of NDC:	**14% below 2030 BAU emissions**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions** **Public Transport (Bus)** **Measures to Improve Energy Efficiency** **E- mobility** **Intelligent Transport System** **Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Passenger Mode Share Target**

Size of Road Network (km):	**7,203**		
Roads per 1 Million People:	**742.40**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**100%**	Global Avg:	50.61%
		IsDB Avg:	48.29% Various Sources
Railway Passenger Activity (million pkm):	**503.00**		
Size of Rail Network (km):	**509.00**		
Rail per 1 Million People:	**52.46**	Global Avg:	348
		IsDB Avg:	151 World Bank (2014)
Urban Rail System Length (km):	No Data		Various Sources
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		BRT Data (2016)

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.331** ND Gain Index (2016)
Logistics Performance Index for Trade and Transport:	**2.77** World Bank (2016)
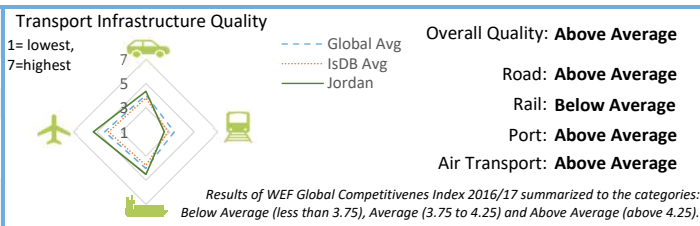
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Jordan

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	**Below Average**
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Kazakhstan

Income Level Group:	**Middle-income**	Population Size (million):	**18.20**
GDP per Capita:	**10333.87**	Share of Urban Population:	**49.97%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.794**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**248**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**3,856,505**		
Amount of Commercial Cars:	**540,849**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**39.40%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Motorization Rate: + 119%
- GDP: + 70%
- Population: + 14%
- Traffic Fatalities (to 2013): - 15%
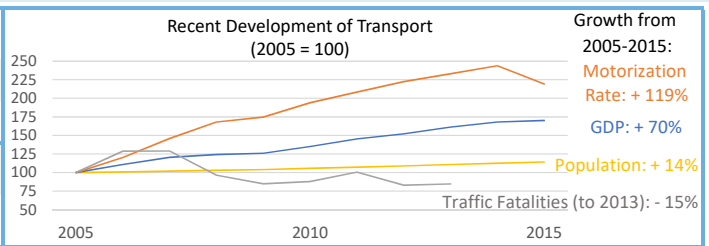
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**238**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 4**		
Diesel Sulphur Levels (ppm):	**500/350**		
Gasoline Sulphur Levels (ppm):	**500/350**		*UNEP*
Diesel Prices (USD cents/liter):	**40.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**42.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**58.3**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**72%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.50**		
Share of Road Transport in Transport Black Carbon:	**71%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**19.7**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.27%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**14.8**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**6.38%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**89.86%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.8**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**0.8**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**45.8**	for 2030	
	60.9	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**31.6**	for 2030	
	26.5	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO_2 1990-2015: 3%
- BAU 2020-2050: 70%
- LCS 2020-2050: -7%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**15% below 1990 levels by 2030**
Economy-Wide Conditional Target of NDC:	**25% below 1990 levels by 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target Fuel Quality Target**

Size of Road Network (km):	**97,418**		
Roads per 1 Million People:	**5,351.31**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**89%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**18,165.10**		
Size of Rail Network (km):	**15,529.80**		
Rail per 1 Million People:	**853.07**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	**11.30**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.352** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.76** *World Bank (2016)*
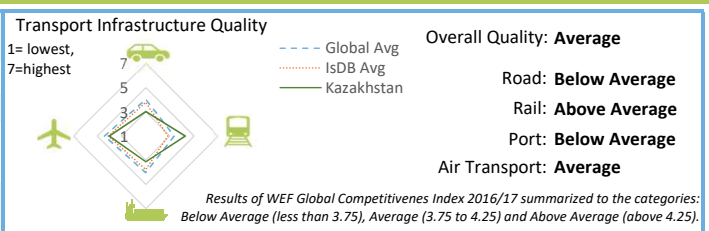
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Kazakhstan

Overall Quality: **Average**
Road: **Below Average**
Rail: **Above Average**
Port: **Below Average**
Air Transport: **Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Kuwait

Income Level Group:	**High-income**	Population Size (million):	**4.14**
GDP per Capita (2015):	**33768.05**	Share of Urban Population:	**89.62%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.8**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**477**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**1,570,196**		
Amount of Commercial Cars:	**305,992**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**19**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Population: + 73%
GDP: + 28%
Motorization Rate: + 12%
Traffic Fatalities (to 2013): + 2%
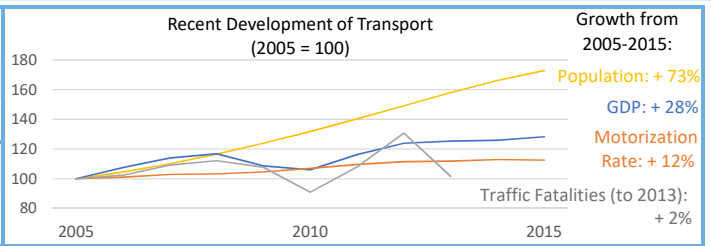
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**478**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Vehicle emission standards exist**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**31.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**35.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO$_x$ Emissions (Gg):	**45.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.51**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (μg/m^3):	**67.4**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.09%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO$_2$ Emissions (Mt):	**12.7**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**14.37%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**3.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**0.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**13.4**	for 2030	
	14.4	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**9.9**	for 2030	
	2.6	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: 347%
BAU 2020-2050: 11%
LCS 2020-2050: -76%
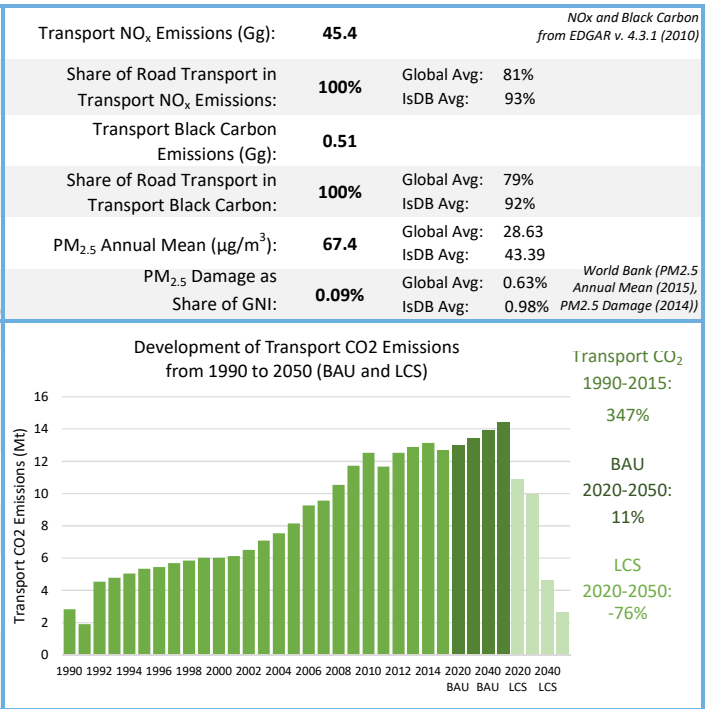
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Avoid increase of GHG emissions**		
Economy-Wide Conditional Target of NDC:	**No conditional target**		
Transport Target in NDC:	**No transport target**		
Transport Highlighted in NDC:	**Yes**		
Transport Measures Proposed in NDC	**Public Rail Transport Rail Infrastructure Development**		
Transport Targets defined by National Policy:	**Road Safety Target**		

Size of Road Network (km):	**6,608**		
Roads per 1 Million People:	**1,597.47**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.474** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.92** *World Bank (2016)*
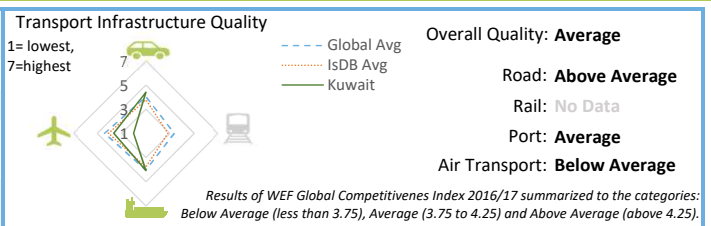
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Kuwait

Overall Quality: **Average**
Road: **Above Average**
Rail: No Data
Port: **Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Kyrgyzstan

Income Level Group:	**Middle-income**	
GDP per Capita:	**1044.76**	
UNFCCC Classification:	**Non-Annex I**	

Population Size (million):	**6.05**
Share of Urban Population:	**35.07%**
Human Development Index:	**0.664**

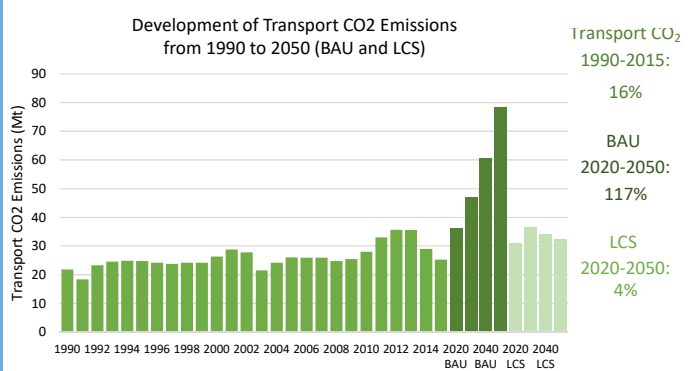Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**227**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**880,000**		
Amount of Commercial Cars:	**450,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**22**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**32.80%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Motorization Rate: + 168%
- GDP: + 58%
- Traffic Fatalities (to 2013): + 43%
- Population: + 16%
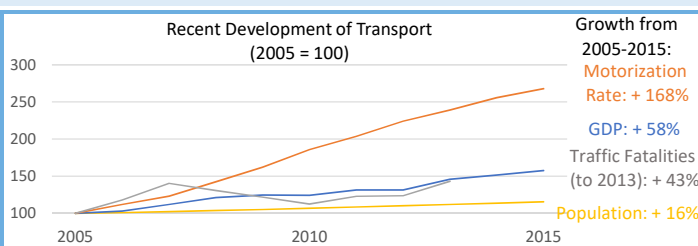
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**33**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**2000**		
Gasoline Sulphur Levels (ppm):	**500**		*UNEP*
Diesel Prices (USD cents/liter):	**49.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**56.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO2 Emissions (Mt):	**2.7**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**29.28%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**0.5**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**4.4**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**4.9**	for 2030	
	5.2	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**3.6**	for 2030	
	1.7	for 2050	*IEA and/or SLoCaT (2015)*

Transport NOx Emissions (Gg):	**21.0**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.90**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (µg/m³):	**16.9**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.50%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO2 1990-2015: -55%
- BAU 2020-2050: 44%
- LCS 2020-2050: -46%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**13.75% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**30.89% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**34,000**		
Roads per 1 Million People:	**5,624.37**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**40.80**		
Size of Rail Network (km):	**424.00**		
Rail per 1 Million People:	**70.14**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.42**
Logistics Performance Index for Trade and Transport:	**1.96**

ND Gain Index (2016)
World Bank (2016)

Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Kyrgyzstan

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	**Below Average**
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Lebanon

Income Level Group:	**Middle-income**
GDP per Capita:	**6896.77**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**6.08**
Share of Urban Population:	**72.96%**
Human Development Index:	**0.763**

Partnership on Sustainable Low Carbon Transport
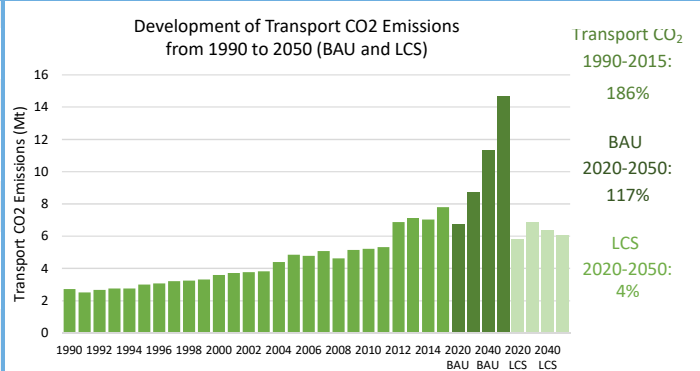
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**117**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**570,000**		
Amount of Commercial Cars:	**113,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**23**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**100.00%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 57%
Population: + 47%
Traffic Fatalities (to 2013): + 26%
Motorization Rate: - 11%
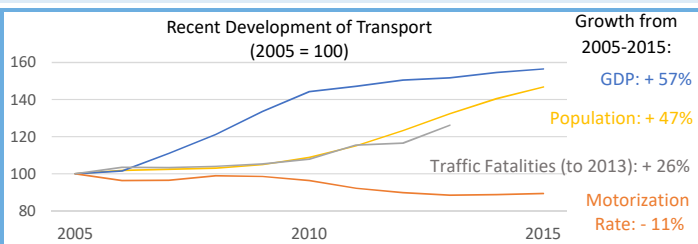
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**143**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**47.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**74.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**5.6**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.06**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**32.6**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.23%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	**5.6**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**22.29%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**1.0**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**1.3**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**5.2**	for 2030	
	14.2	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**4.1**	for 2030	
	5.8	for 2050	*IEA and/or SLoCaT (2015)*
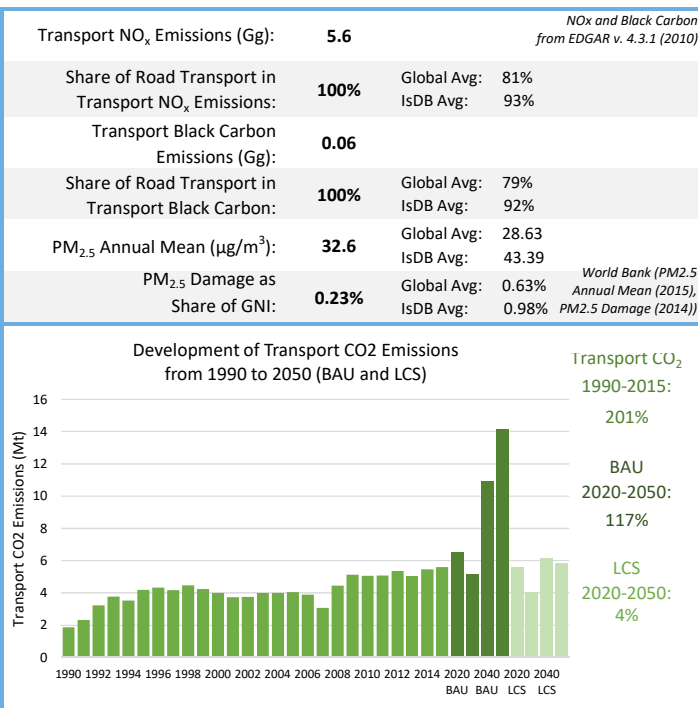
Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 201%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**15% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**Up to 30% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus) Measures to Improve Energy Efficiency**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**6,970**		
Roads per 1 Million People:	**1,145.94**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.453** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.64** *World Bank (2016)*
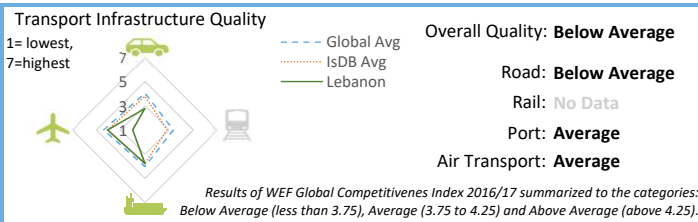
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Lebanon

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	No Data
Port:	**Average**
Air Transport:	**Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Libya

Income Level Group:	**Middle-income**
GDP per Capita (2010):	**12120.56**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**6.37**
Share of Urban Population:	**80.32%**
Human Development Index:	**0.716**

Partnership on Sustainable Low Carbon Transport
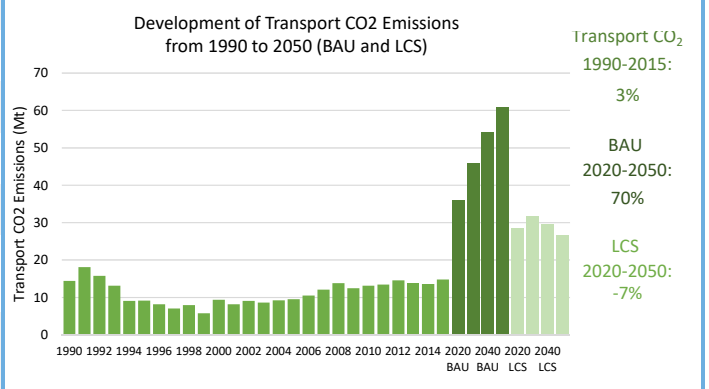
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**439**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**2,170,000**		
Amount of Commercial Cars:	**570,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**73**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**29.20%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Traffic Fatalities (to 2013): + 93%
- Motorization Rate: + 72%
- Population: + 8%
- GDP (to 2010): + 21%
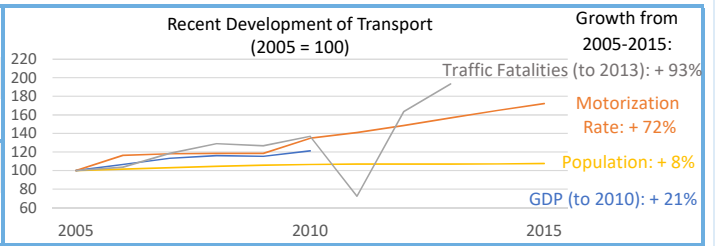
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**260**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**1,000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**11.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**11.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO$_2$ Emissions (Mt):	**17.8**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**31.20%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**100%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**2.9**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**2.4**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**30.4**	for 2030	
	50.8	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**23.8**	for 2030	
	20.9	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO$_x$ Emissions (Gg):	**118.2**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**5.40**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (μg/m^3):	**79.2**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**No Data**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO$_2$ 1990-2015: 188%
- BAU 2020-2050: 117%
- LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	No Data
Economy-Wide Conditional Target of NDC:	No Data
Transport Target in NDC:	No Data
Transport Highlighted in NDC:	No Data
Transport Measures Proposed in NDC:	No Data
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**100,024**		
Roads per 1 Million People:	**15,690.98**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**57%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	No Data
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.371** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.04** *World Bank (2016)*
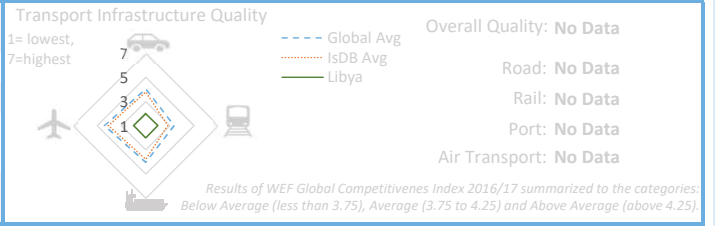
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Libya

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Malaysia

Income Level Group:	**Middle-income**	Population Size (million):	**31.62**
GDP per Capita:	**10875.80**	Share of Urban Population:	**75.83%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.789**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**433**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**12,043,730**		
Amount of Commercial Cars:	**1,264,986**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**76.40%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 61%
Motorization Rate: + 50%
Population: + 20%
Traffic Fatalities (to 2013): + 12%
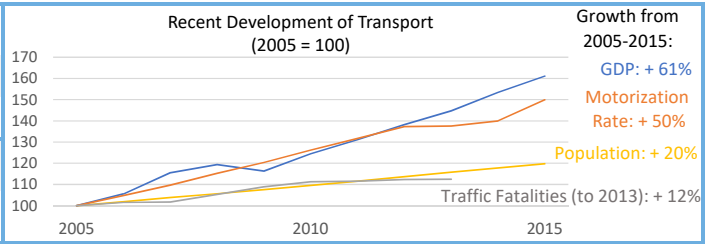
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**760**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Euro 2**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	**500**		*UNEP*
Diesel Prices (USD cents/liter):	**44.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**45.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**187.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**94%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**6.29**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**15.6**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.23%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**61.4**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**26.29%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**96.09%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**2.0**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**92.9**	for 2030	
	120.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**57.5**	for 2030	
	47.1	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 322%
BAU 2020-2050: 65%
LCS 2020-2050: -28%
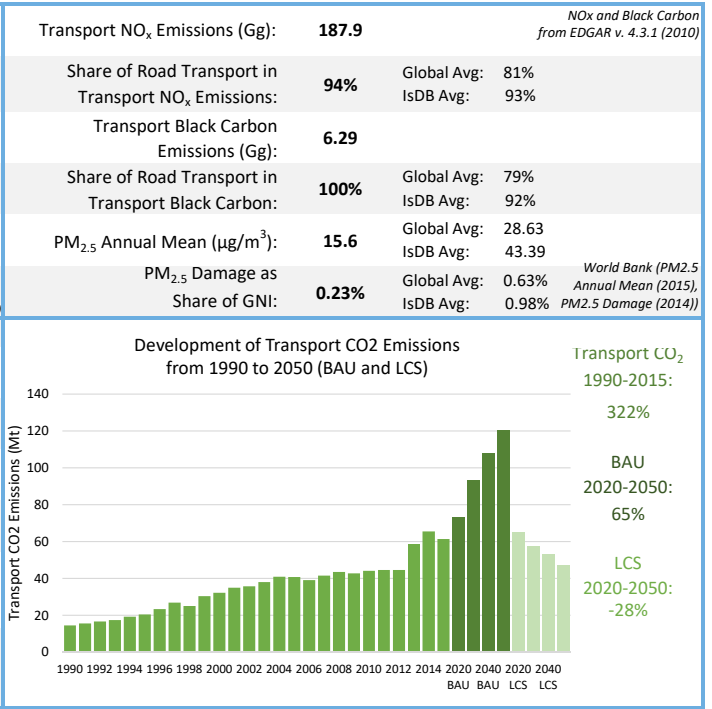
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**GHG emission intensity of GDP reduced by 35% below 2005 levels by 2030**
Economy-Wide Conditional Target of NDC:	**additional 10% below 2005 levels by 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target** **Passenger Mode Share Target** **Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**144,403**		
Roads per 1 Million People:	**4,566.21**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**80%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**3,293.00**		
Size of Rail Network (km):	**2,250.00**		
Rail per 1 Million People:	**71.15**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	**208.10**		*Various Sources*
BRT System Length (km):	**5**		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.421** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.45** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest

- Global Avg
- IsDB Avg
- Malaysia

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	**Above Average**
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**	Population Size (million):	**0.44**
GDP per Capita:	**7049.05**	Share of Urban Population:	**40.31%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.701**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**178**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**10,256**		
Amount of Commercial Cars:	**145**		*WHO (2013)*
Traffic Fatalities (deaths per 1,000 People):	**4**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**83.40%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 92%

Population: + 31%

Traffic Fatalities (2006 to 2013): +28%
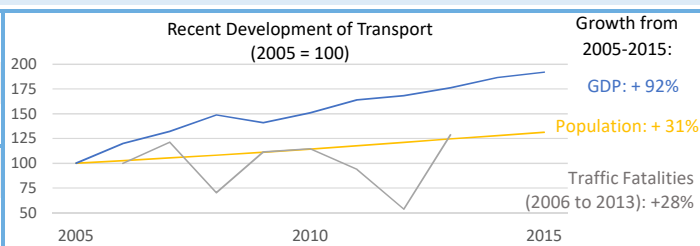
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**11**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	No Data	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**3.5**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**76%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.09**		
Share of Road Transport in Transport Black Carbon:	**72%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**29.1**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.16%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**1.2**	for 2030	
	1.2	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**0.9**	for 2030	
	0.3	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 2020 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: No Data

BAU 2020-2050: 30%

LCS 2020-2050: -64%
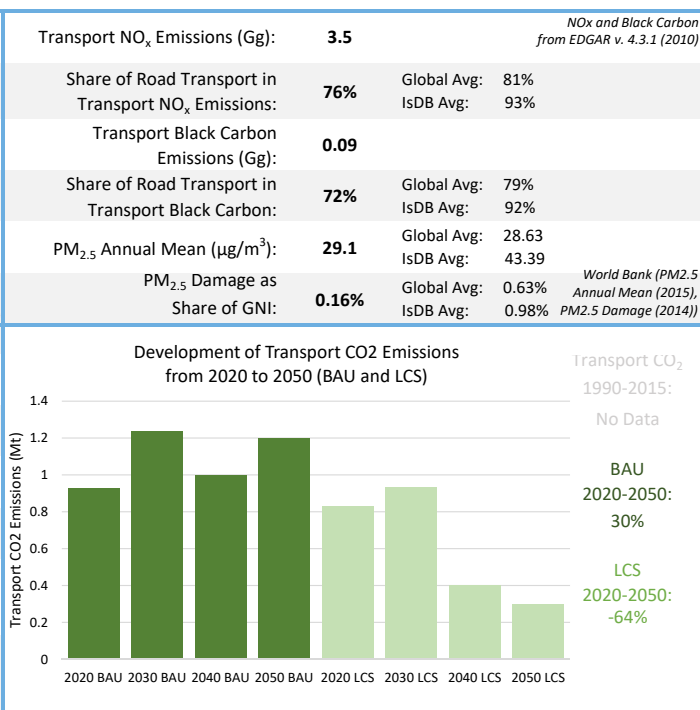
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**10% below BAU by 2030**
Economy-Wide Conditional Target of NDC:	**Up to 24% below BAU by 2030**
Transport Target in NDC:	**No Information**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**88**		
Roads per 1 Million People:	**201.68**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**100%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**Yes**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.453** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.57** *World Bank (2016)*
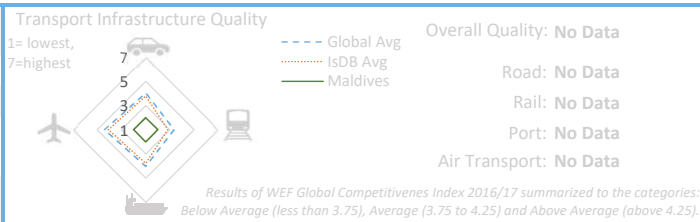
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Maldives

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Mali

Income Level Group:	Low-income	**Population Size (million):**	18.54
GDP per Capita:	720.78	**Share of Urban Population:**	38.70%
UNFCCC Classification:	Non-Annex I	**Human Development Index:**	0.442

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	12	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	170,000		
Amount of Commercial Cars:	33,000		OICA (2015)
Traffic Fatalities (deaths per 1,000 People):	26	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	81.30%		WHO (2015)

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 49%
- Motorization Rate: + 36%
- Population: + 36%
- Traffic Fatalities (to 2013): + 23%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	8	Global Avg:	502
		IsDB Avg:	277 EIA (2015)
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	10,000		
Gasoline Sulphur Levels (ppm):	No Data		UNEP
Diesel Prices (USD cents/liter):	98.00	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	112.00	Global Avg:	97.11
		IsDB Avg:	77.1 GIZ (2016)

Transport NOx Emissions (Gg):	2.9		NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NOx Emissions:	95%	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	0.14		
Share of Road Transport in Transport Black Carbon:	100%	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean (µg/m³):	44.0	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	1.98%	Global Avg:	0.63%
		IsDB Avg:	0.98% World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt) (2006):	0.8		
Share of Transport in Total Economy-Wide CO2 Emissions:	58.79%	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	0.00%	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	0.1	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	0.9	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	4.0	for 2030	
	9.5	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	2.7	for 2030	
	7.3	for 2050	IEA and/or SLoCaT (2015)

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO2 1990-2015: 22%
- BAU 2020-2050: 261%
- LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	No unconditional target
Economy-Wide Conditional Target of NDC:	31.6% below 2030 BAU
Transport Target in NDC:	No transport target
Transport Highlighted in NDC:	No
Transport Measures Proposed in NDC:	Biofuels
Transport Targets defined by National Policy:	Road Safety Target, Transport Renewable Energy Target

Size of Road Network (km):	22,474		
Roads per 1 Million People:	1,212.06	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	25%	Global Avg:	50.61%
		IsDB Avg:	48.29% Various Sources
Railway Passenger Activity (million pkm):	196.00		
Size of Rail Network (km):	733.00		
Rail per 1 Million People:	39.53	Global Avg:	348
		IsDB Avg:	151 World Bank (2002)
Urban Rail System Length (km):	No Data		Various Sources
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		BRT Data (2016)

Transport Adaptation

Transport Adaptation Highlighted in NDC:	No
Highlighted in NAPA:	Yes
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	0.596 ND Gain Index (2016)
Logistics Performance Index for Trade and Transport:	2.30 World Bank (2016)
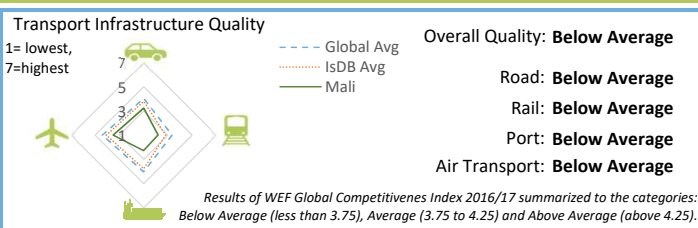
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Mali

Overall Quality:	Below Average
Road:	Below Average
Rail:	Below Average
Port:	Below Average
Air Transport:	Below Average

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of
Mauritania

Income Level Group:	**Middle-income**	
GDP per Capita:	**1261.07**	
UNFCCC Classification:	**Non-Annex I**	

Population Size (million):	**4.42**
Share of Urban Population:	**59.02%**
Human Development Index:	**0.513**

Partnership on Sustainable Low Carbon Transport
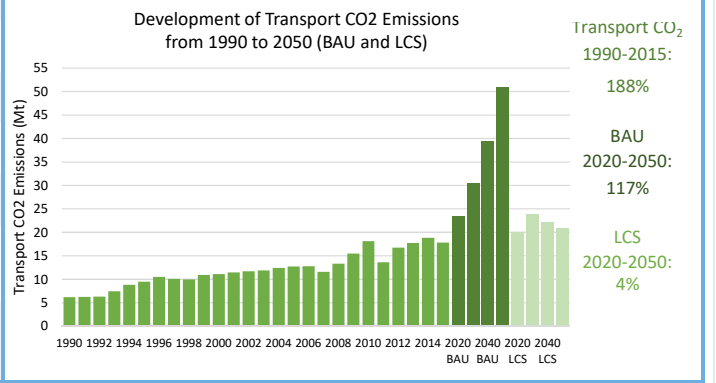
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**10**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**20,000**		
Amount of Commercial Cars:	**21,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**25**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 61%
- Population: + 34%
- Traffic Fatalities (to 2013): + 20%
- Motorization Rate: + 4%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**16**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**2,000**		
Gasoline Sulphur Levels (ppm):	**1,000**		*UNEP (2012)*
Diesel Prices (USD cents/liter):	**109.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**113.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO$_2$ Emissions (Mt) (2012):	**1.1**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**43.99%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.3**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**2.2**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**1.6**	for 2030	
	2.7	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**1.3**	for 2030	
	1.1	for 2050	*IEA and/or SLoCaT (2012)*

Transport NO$_x$ Emissions (Gg):	**16.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**94%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.49**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**85.1**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	No Data	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO$_2$ 1990-2012: 163%
- BAU 2020-2050: 117%
- LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**22.3% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**Vehicle Restrictions**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**10,628**		
Roads per 1 Million People:	**2,404.42**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**30%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**47.00**		
Size of Rail Network (km):	**728.00**		
Rail per 1 Million People:	**164.70**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2010)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**Yes**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.562** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.54** *World Bank (2016)*
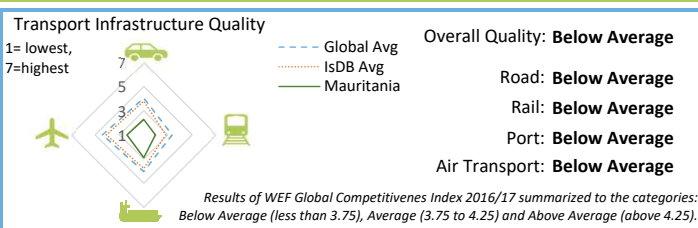
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Mauritania

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	**Below Average**
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of **Morocco**

Income Level Group:	**Middle-income**
GDP per Capita:	**3202.83**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**35.74**
Share of Urban Population:	**59.55%**
Human Development Index:	**0.647**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**103**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**2,550,000**		
Amount of Commercial Cars:	**1,020,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**21**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**64.20%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Motorization Rate: + 58%
- GDP: + 55%
- Population: + 14%
- Traffic Fatalities (to 2013): - 6%
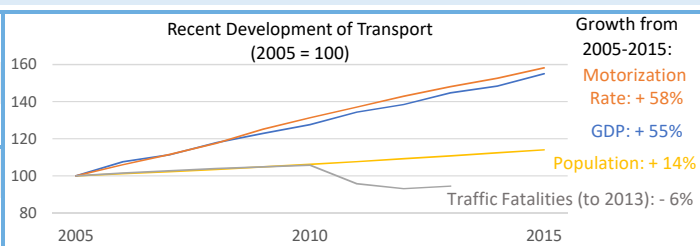
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**286**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Vehicle emissions standards exist. 4.5% for CO, 70% for opacity**		
Diesel Sulphur Levels (ppm):	**50**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**86.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**99.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**76.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**3.07**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**23.0**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.23%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**15.9**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**26.09%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**99.37%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.5**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.4**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**14.2**	for 2030	
	38.1	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**11.1**	for 2030	
	15.7	for 2050	*IEA and/or SLoCaT (2015)*
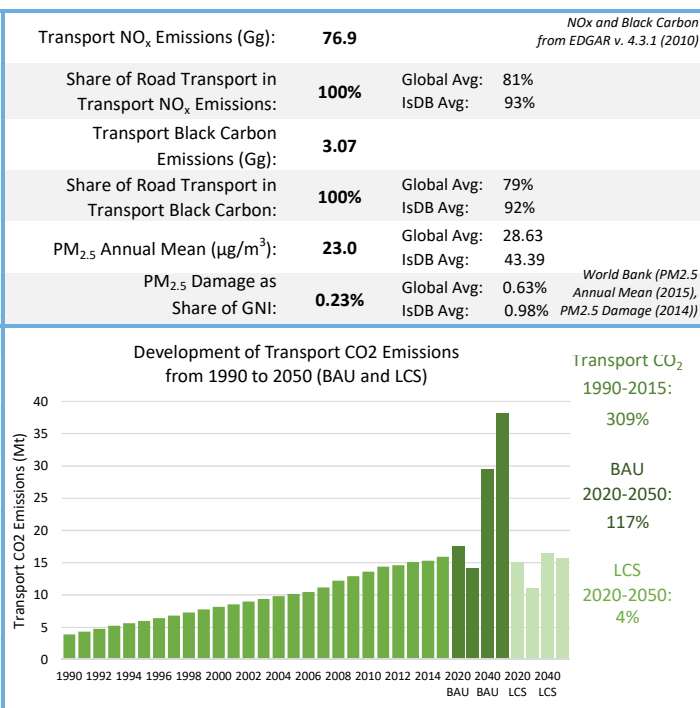
Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

- Transport CO_2 1990-2015: 309%
- BAU 2020-2050: 117%
- LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**13% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**34% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Fuel Subsidy Removal** **Rail Infrastructure Development**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**58,395**		
Roads per 1 Million People:	**1,633.90**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**70%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**5,208.00**		
Size of Rail Network (km):	**2,109.00**		
Rail per 1 Million People:	**59.01**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	**19.50**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.304** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.46** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Morocco

Overall Quality: **Above Average**
Road: **Above Average**
Rail: **Average**
Port: **Above Average**
Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
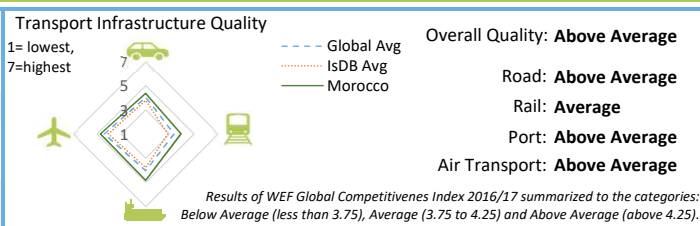
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Mozambique

Income Level Group:	**Low-income**	
GDP per Capita:	**500.81**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**29.67**	
Share of Urban Population:	**31.47%**	
Human Development Index:	**0.418**	

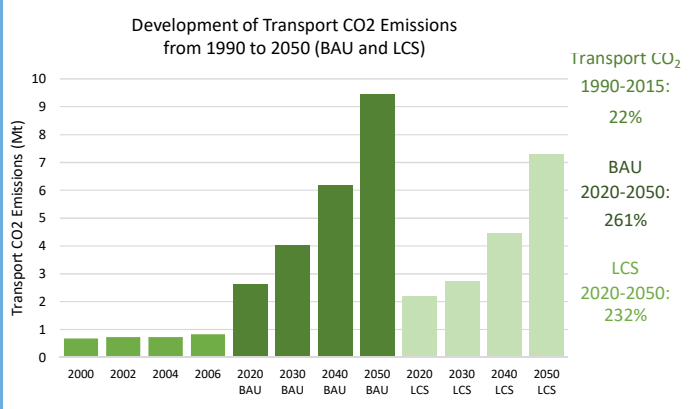Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**14**	Global Avg:	173	
		IsDB Avg:	76	
Amount of Passenger Cars:	**300,000**			
Amount of Commercial Cars:	**100,000**			*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**32**	Global Avg:	17	
		IsDB Avg:	22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data			*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 102%
Motorization Rate: + 75%
Population: + 34%
Traffic Fatalities (to 2013): + 23%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**23**	Global Avg:	502	
		IsDB Avg:	277 *EIA (2015)*	
Fuel Emission Standards:	No Data			
Diesel Sulphur Levels (ppm):	**500**			
Gasoline Sulphur Levels (ppm):	No Data			*UNEP*
Diesel Prices (USD cents/liter):	**60.00**	Global Avg:	85.48	
		IsDB Avg:	68.58	
Super Gasoline Prices (USD cents/liter):	**65.00**	Global Avg:	97.11	
		IsDB Avg:	77.1 *GIZ (2016)*	
Transport CO$_2$ Emissions (Mt):	**2.5**			
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**54.14%**	Global Avg:	29.85%	
		IsDB Avg:	26.64%	
Share of Road Transport in Transport CO$_2$ Emissions:	**92.00%**	Global Avg:	93.64%	
		IsDB Avg:	93.68%	
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.1**	Global Avg:	1.24	
		IsDB Avg:	1.16	
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**1.7**	Global Avg:	1.3	
		IsDB Avg:	1.7	
Projected Transport CO$_2$ Emissions for BAU Projections:	**4.0**	for 2030		
	9.4	for 2050		
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**2.7**	for 2030		
	7.2	for 2050	*IEA and/or SLoCaT (2015)*	

Transport NO$_x$ Emissions (Gg):	**18.9**			*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**80%**	Global Avg:	81%	
		IsDB Avg:	93%	
Transport Black Carbon Emissions (Gg):	**0.83**			
Share of Road Transport in Transport Black Carbon:	**82%**	Global Avg:	79%	
		IsDB Avg:	92%	
PM$_{2.5}$ Annual Mean (µg/m^3):	**19.5**	Global Avg:	28.63	
		IsDB Avg:	43.39	
PM$_{2.5}$ Damage as Share of GNI:	**0.96%**	Global Avg:	0.63%	*World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*
		IsDB Avg:	0.98%	

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: 310%
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**Total reduction of about 76,5 MtCO2eq in the period from 2020 to 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target Transport Renewable Energy Target Energy Consumption Target**

Size of Road Network (km):	**31,083**			
Roads per 1 Million People:	**1,047.67**	Global Avg:	7,325	
		IsDB Avg:	3,242	
Share of Paved Roads:	**24%**	Global Avg:	50.61%	
		IsDB Avg:	48.29%	*Various Sources*
Railway Passenger Activity (million pkm):	**246.00**			
Size of Rail Network (km):	**2,983.00**			
Rail per 1 Million People:	**100.54**	Global Avg:	348	
		IsDB Avg:	151	*World Bank (2014)*
Urban Rail System Length (km):	No Data			*Various Sources*
BRT System Length (km):	No Data			
BRT System Passengers per Day:	No Data			*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.539** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.24** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Mozambique

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
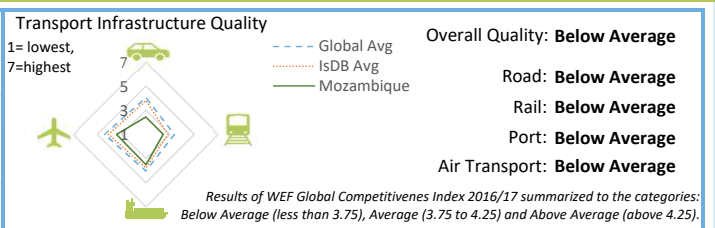
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Niger

Income Level Group:	**Low-income**	
GDP per Capita:	**373.41**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**21.48**	
Share of Urban Population:	**18.72%**	
Human Development Index:	**0.353**	

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	No Data	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		OICA (2015)
Traffic Fatalities (deaths per 1,000 People):	26	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	33.00%		WHO (2015)

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 72%
Population: + 45%
Traffic Fatalities (to 2013): + 32%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	13	Global Avg:	502
		IsDB Avg:	277 EIA (2015)
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	380		
Gasoline Sulphur Levels (ppm):	160		UNEP
Diesel Prices (USD cents/liter):	88.00	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	88.00	Global Avg:	97.11
		IsDB Avg:	77.1 GIZ (2016)
Transport CO_2 Emissions (Mt):	1.2		
Share of Transport in Total Economy-Wide CO_2 Emissions:	60.88%	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	100.00%	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	0.1	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	1.6	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	1.9	for 2030	
	4.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	1.3	for 2030	
	3.4	for 2050	IEA and/or SLoCaT (2015)

Transport NO_x Emissions (Gg):	4.3		NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NO_x Emissions:	98%	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	0.12		
Share of Road Transport in Transport Black Carbon:	100%	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean (µg/m³):	62.7	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	2.49%	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 243%
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**3.5% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**34.6% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Land Use, Parking Policies, Mobility Management, Public Transport (Bus), Walking and Cycling Measures, Fuel Economy and Energy Efficiency, E- mobility, Intelligent Transport System**
Transport Targets defined by National Policy:	**Transport Renewable Energy Target**

Size of Road Network (km):	**18,949**		
Roads per 1 Million People:	**882.28**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**21%**	Global Avg:	50.61%
		IsDB Avg:	48.29% Various Sources
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 World Bank (2015)
Urban Rail System Length (km):	No Data		Various Sources
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		BRT Data (2016)

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.624** ND Gain Index (2016)
Logistics Performance Index for Trade and Transport:	**2.22** World Bank (2016)
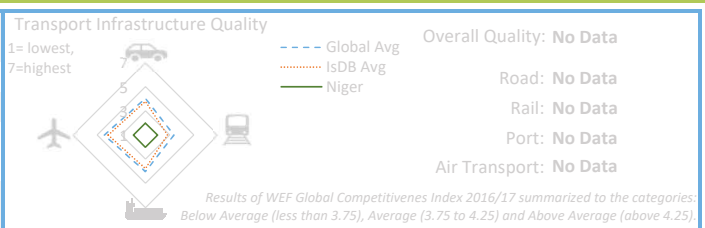
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg, IsDB Avg, Niger

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

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Factsheet of Nigeria

Income Level Group:	**Middle-income**
GDP per Capita:	**2394.76**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**190.89**
Share of Urban Population:	**50.17%**
Human Development Index:	**0.527**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**21**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**2,970,000**		
Amount of Commercial Cars:	**780,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**21**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 78%
Motorization Rate: + 65%
Population: + 30%
Traffic Fatalities (to 2013): + 9%
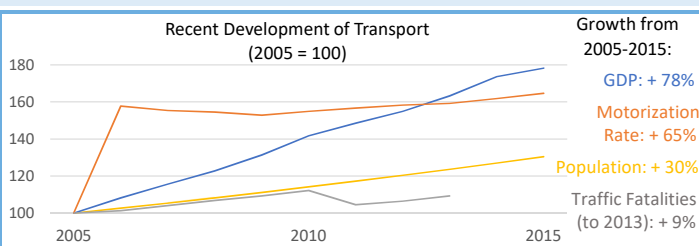
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**316**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**3,000**		
Gasoline Sulphur Levels (ppm):	**1,000**		*UNEP (2012)*
Diesel Prices (USD cents/liter):	**64.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**46.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO$_x$ Emissions (Gg):	**272.2**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**99%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**1.41**		
Share of Road Transport in Transport Black Carbon:	**95%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**38.0**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**1.48%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO$_2$ Emissions (Mt):	**24.6**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**27.44%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**99.59%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**0.5**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**96.8**	for 2030	
	173.7	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**62.6**	for 2030	
	30.4	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: 109%
BAU 2020-2050: 196%
LCS 2020-2050: -33%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**20% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**45% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Fuel Subsidy Removal**
	Congestion Charging/ Low Emission Zones
	Public Transport (Bus)
	Green Freight Measures
	Fuel Economy/ Energy Efficiency Standards
	Biofuels, LPG and CNG
	Road and Rail Infrastructure Development
Transport Targets defined by National Policy:	**Road Safety Target**
	Transport Renewable Energy Target

Size of Road Network (km):	**193,200**		
Roads per 1 Million People:	**1,012.12**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**15%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**174.00**		
Size of Rail Network (km):	**3,528.00**		
Rail per 1 Million People:	**18.48**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2007)*
Urban Rail System Length (km):	No Data		*(Conflicting information about a planned opening of 35 km rail mass transit system in Lagos.) Various Sources*
BRT System Length (km):	**22**		
BRT System Passenger per Day:	**200,000**		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.559** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.40** *World Bank (2016)*
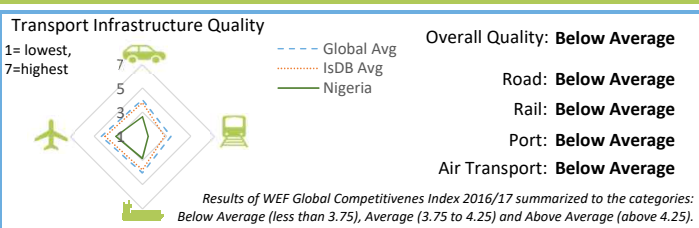
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Nigeria

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	**Below Average**
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Oman

Income Level Group:	**High-income**	Population Size (million):	**4.64**
GDP per Capita (2015):	**16203.08**	Share of Urban Population:	**74.56%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.796**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**233**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**760,000**		
Amount of Commercial Cars:	**220,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**25**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**35.70%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Population: + 67%
GDP: + 62%
Motorization Rate: + 45%
Traffic Fatalities (to 2013): + 13%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**166**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**49.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**45.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**8.5**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.10**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**53.3**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.10%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	**13.1**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**20.10%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**3.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**1.8**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**8.8**	for 2030	
	9.4	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**6.5**	for 2030	
	1.7	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 680%
BAU 2020-2050: 11%
LCS 2020-2050: -76%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**2% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**60,230**		
Roads per 1 Million People:	**12,991.07**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**49%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.461** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.44** *World Bank (2016)*
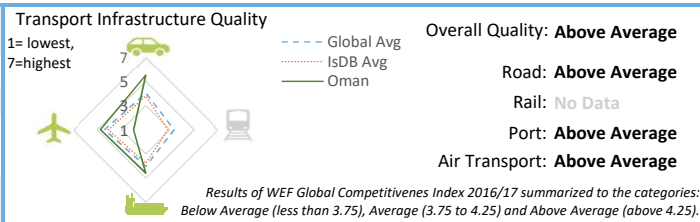
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg / IsDB Avg / Oman

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	No Data
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Pakistan

Income Level Group:	**Middle-income**	Population Size (million): **197.02**
GDP per Capita:	**1158.73**	Share of Urban Population: **39.14%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index: **0.55**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**17**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**2,720,000**		
Amount of Commercial Cars:	**500,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**14**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Motorization Rate: + 49%
- GDP: + 44%
- Population: + 23%
- Traffic Fatalities (to 2013): + 11%
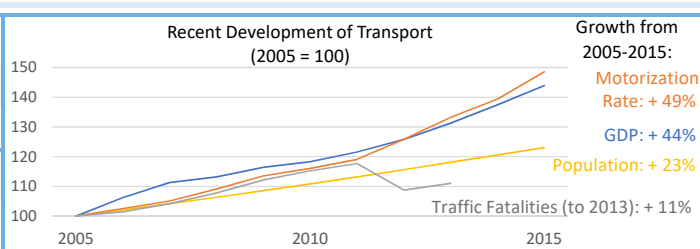
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**517**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**None**		
Diesel Sulphur Levels (ppm):	**5,000 - 7,000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**70.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**79.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**374.1**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**96%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**13.57**		
Share of Road Transport in Transport Black Carbon:	**94%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**65.0**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**1.48%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO_2 Emissions (Mt):	**40.8**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**26.57%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**97.06%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**63.4**	for 2030	
	115.0	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**45.4**	for 2030	
	46.0	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 196%
BAU 2020-2050: 170%
LCS 2020-2050: 24%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**Vehicle Efficiency** **Public Bus and Rail Transport** **Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Renewable Energy Target**

Size of Road Network (km):	**263,942**		
Roads per 1 Million People:	**1,339.70**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**70%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**20,288.00**		
Size of Rail Network (km):	**9,255.00**		
Rail per 1 Million People:	**46.98**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	**50**		
BRT System Passenger per Day:	**305,000**		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.373** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.70** *World Bank (2016)*
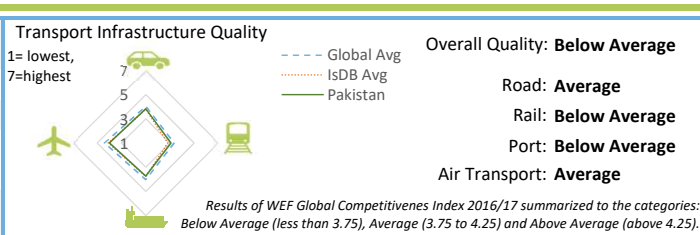
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Pakistan

Overall Quality: **Below Average**
Road: **Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**
GDP per Capita:	**2377.82**
UNFCCC Classification:	**Non-Annex I**

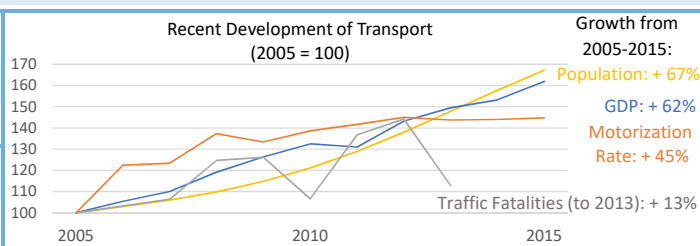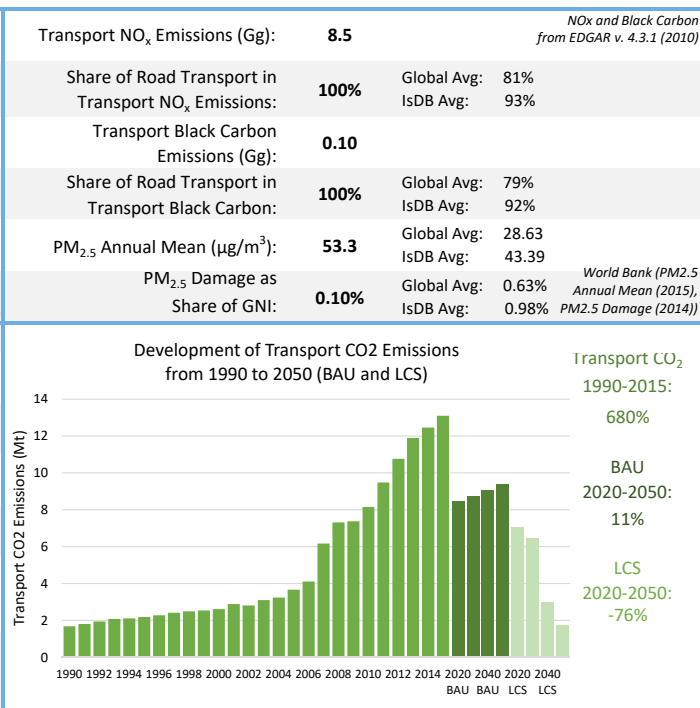|	
Population Size (million):	**4.92**
Share of Urban Population:	**73.54%**
Human Development Index:	**0.684**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**87**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**260,000**		
Amount of Commercial Cars:	**145,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**6**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 61%
Motorization Rate: + 32%
Population: + 30%
Traffic Fatalities (to 2013): + 19%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**16**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**over 5,000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**141.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**154.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	No Data		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	No Data	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	No Data		
Share of Road Transport in Transport Black Carbon:	No Data	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**20.6**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	No Data	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014)

Transport CO_2 Emissions (Mt):	No Data	
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg: 29.85% IsDB Avg: 26.64%
Share of Road Transport in Transport CO_2 Emissions:	0.00%	Global Avg: 93.64% IsDB Avg: 93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	No Data	Global Avg: 1.24 IsDB Avg: 1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	No Data	Global Avg: 1.3 IsDB Avg: 1.7
Projected Transport CO_2 Emissions for BAU Projections:	**2.9** for 2040 **0.0** for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**1.6** for 2040 **0.0** for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data
BAU 2020-2050: No Data
LCS 2020-2050: No Data

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**Independence: 24.4% below 2040 BAU** **Status Quo: 12.8% below 2040 BAU**
Transport Target in NDC:	**20% Trucks and buses using CNG by 2040** **25% shift from private cars to public buses by 2030**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Bus)** **Green Freight Measures** **Fuel Economy/ Energy Efficiency Standards** **Other Measures to Improve Energy Efficiency** **LPG/CNG** **E- mobility** **Inspection and Maintenance** **Intelligent Transport System**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**4,686**		
Roads per 1 Million People:	**952.30**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**100%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	**No**
Human Habitat Vulnerability Score:	No Data *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	No Data *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg / IsDB Avg / Palestine

Overall Quality: **No Data**
Road: **No Data**
Rail: **No Data**
Port: **No Data**
Air Transport: **No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)
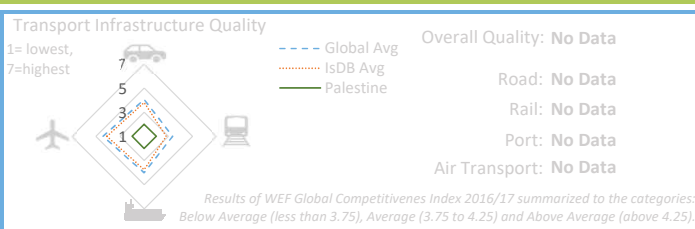
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Qatar

Income Level Group:	**High-income**	Population Size (million):	**2.64**	
GDP per Capita:	**64668.73**	Share of Urban Population:	**92.67%**	
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.856**	

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**411**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**700,000**		
Amount of Commercial Cars:	**320,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**15**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**28.40%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 213%

Population: + 187%

Traffic Fatalities (to 2013): + 18%

Motorization Rate: - 4%
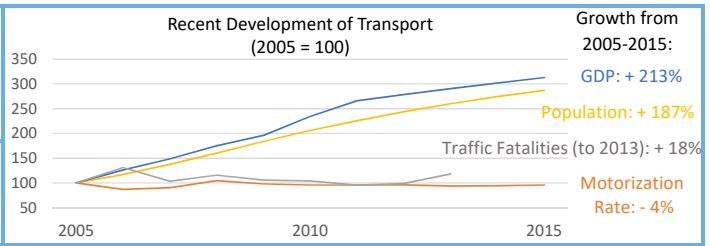
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**280**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Vehicle emission standards exist**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**38.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**40.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**27.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.37**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**107.3**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.04%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO2 Emissions (Mt):	**15.0**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**18.30%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	**100%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**6.0**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**0.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**11.3**	for 2030	
	12.1	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**8.3**	for 2030	
	2.2	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 920%

BAU 2020-2050: 11%

LCS 2020-2050: -76%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport** **Vehicle Emission Standards** **Road Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**9,830**		
Roads per 1 Million People:	**3,724.60**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.305** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.57** *World Bank (2016)*
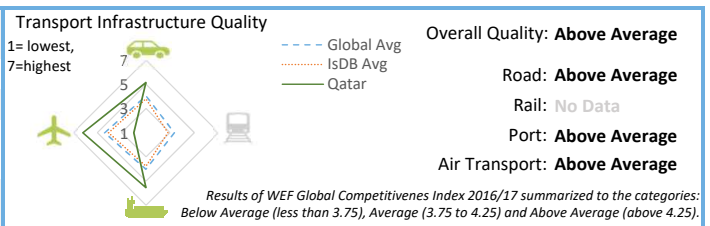
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Qatar

Overall Quality: **Above Average**

Road: **Above Average**

Rail: No Data

Port: **Above Average**

Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of Saudi Arabia

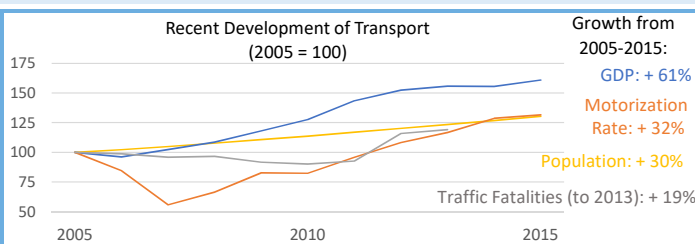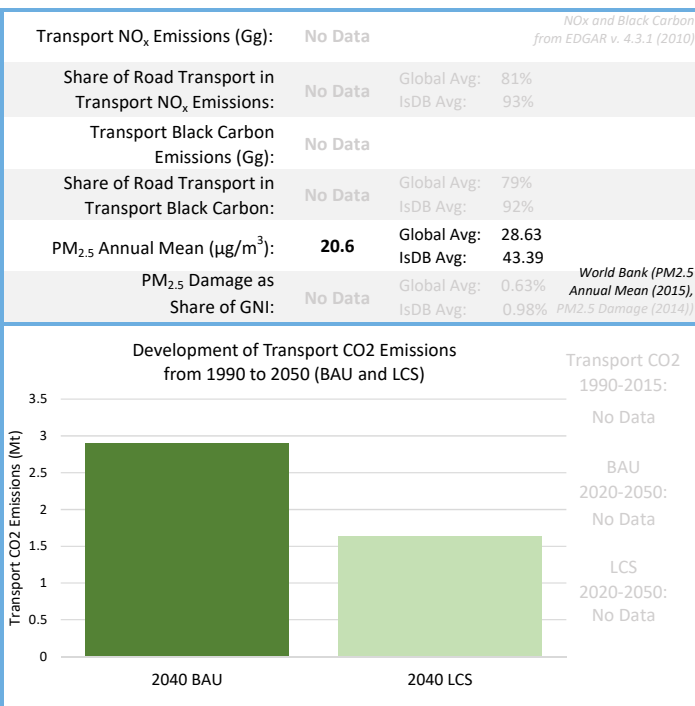|	
Income Level Group:	**High-income**
GDP per Capita:	**20965.01**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**32.94**
Share of Urban Population:	**78.42%**
Human Development Index:	**0.847**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**209**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**4,400,000**		
Amount of Commercial Cars:	**2,200,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**27**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 47%
Motorization Rate: + 40%
Traffic Fatalities (to 2013): + 37%
Population: + 32%
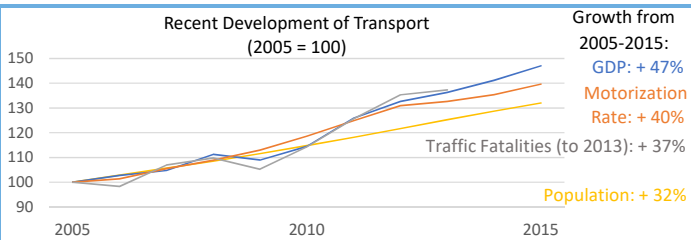
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**3237**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**Vehicle emission standards exist**		
Diesel Sulphur Levels (ppm):	**50**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**12.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**24.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**431.9**		NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NO_x Emissions:	**99%**	Global Avg: 81%	IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	**4.44**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg: 79%	IsDB Avg: 92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**106.2**	Global Avg: 28.63	IsDB Avg: 43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.15%**	Global Avg: 0.63%	IsDB Avg: 0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**142.1**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**26.55%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**98.03%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**4.5**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**2.1**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**113.0**	for 2030	
	121.2	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**83.6**	for 2030	
	22.1	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 188%
BAU 2020-2050: 11%
LCS 2020-2050: -76%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**130 million tons of CO2eq avoided by 2030**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (Urban Rail) Energy Efficiency Standards**
Transport Targets defined by National Policy:	**LDV Fuel Economy Target**

Size of Road Network (km):	**221,372**		
Roads per 1 Million People:	**6,720.83**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**21%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**297.00**		
Size of Rail Network (km):	**1,412.00**		
Rail per 1 Million People:	**42.87**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.434** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.24** *World Bank (2016)*
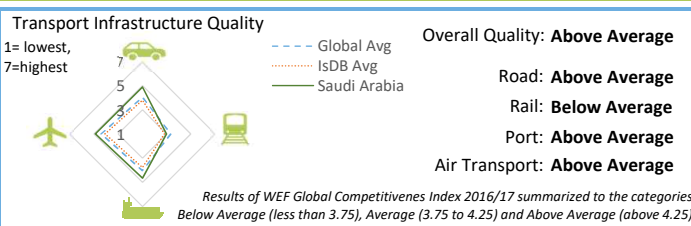
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Saudi Arabia

Overall Quality:	**Above Average**
Road:	**Above Average**
Rail:	**Below Average**
Port:	**Above Average**
Air Transport:	**Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of
Senegal

Income Level Group:	**Low-income**
GDP per Capita:	**1063.13**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**15.85**
Share of Urban Population:	**44.33%**
Human Development Index:	**0.494**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**44**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**340,000**		
Amount of Commercial Cars:	**320,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**27**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 45%
Population: + 33%
Motorization Rate: + 30%
Traffic Fatalities (to 2013): + 24%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**44**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**5,000**		
Gasoline Sulphur Levels (ppm):	**1,000**		*UNEP*
Diesel Prices (USD cents/liter):	**97.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**114.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**20.3**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**99%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.97**		
Share of Road Transport in Transport Black Carbon:	**93%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**37.6**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.91%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**2.6**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**29.82%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**96.15%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.6**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**4.8**	for 2030	
	11.4	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**3.3**	for 2030	
	8.8	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 256%
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**5% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**21% below 2030 BAU**
Transport Target in NDC:	**for Energy Sector (incl. transport): 6% below 2030 BAU (unconditional), 31% below BAU 2030 (conditional)**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Public Transport (BRT)**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**16,496**		
Roads per 1 Million People:	**1,040.72**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**36%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**129.00**		*World Bank (2007)*
Size of Rail Network (km):	**906.00**		*World Bank (2000)*
Rail per 1 Million People:	**57.16**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.563** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.23** *World Bank (2016)*
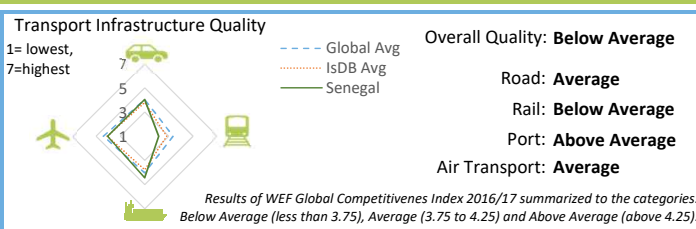
Transport Infrastructure Quality
1= lowest, 7=highest
- - - Global Avg
· · · IsDB Avg
— Senegal

Overall Quality: **Below Average**
Road: **Average**
Rail: **Below Average**
Port: **Above Average**
Air Transport: **Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Sierra Leone

Income Level Group:	**Low-income**
GDP per Capita:	**444.92**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**7.56**
Share of Urban Population:	**35.27%**
Human Development Index:	**0.42**

Partnership on Sustainable Low Carbon Transport
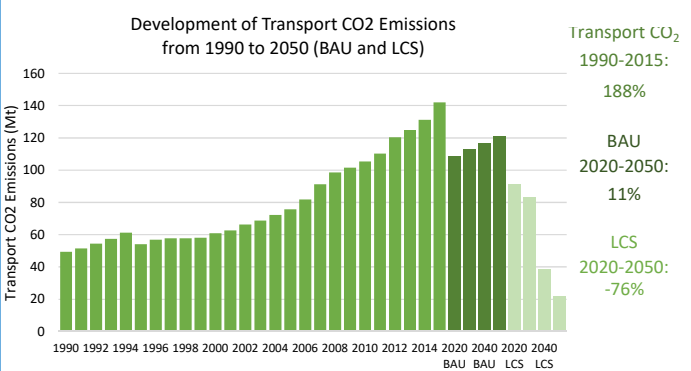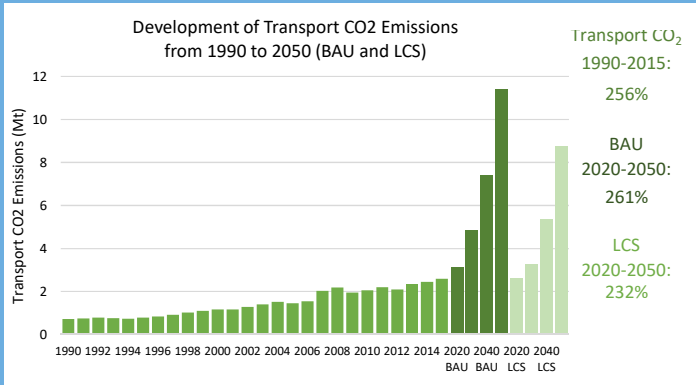
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**11**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**44,685**		
Amount of Commercial Cars:	**1,172**		*WHO (2013)*
Traffic Fatalities (deaths per 1,000 People):	**27**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

GDP: + 61%

Population: + 28%

Traffic Fatalities (to 2013): + 15%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**8**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**3,000**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP (2012)*
Diesel Prices (USD cents/liter):	**108.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**108.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**3.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**93%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.08**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**19.3**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**2.16%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	No Data	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	No Data	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**1.0**	for 2030	
	2.3	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**0.7**	for 2030	
	1.8	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 2020 to 2050 (BAU and LCS)

Transport CO2 1990-2015: No Data

BAU 2020-2050: 261%

LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**Maintain emission levels close to the world average of 7.58 MtCO2e by 2035**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Mobility Management** **Public Bus Transport** **Inspection and Maintenance**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**11,300**		
Roads per 1 Million People:	**1,495.26**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**8%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.667** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.07** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Sierra Leone

Overall Quality:	**Below Average**
Road:	**Below Average**
Rail:	No Data
Port:	**Below Average**
Air Transport:	**Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
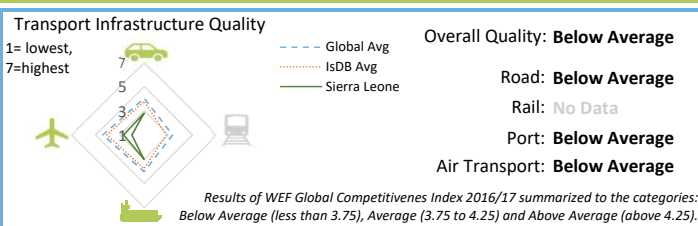
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Low-income**	Population Size (million):	**14.74**		
GDP per Capita:	No Data	Share of Urban Population:	**32.37%**		
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	No Data		

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**6**	Global Avg: 173	
		IsDB Avg: 76	
Amount of Passenger Cars:	**56,000**		
Amount of Commercial Cars:	No Data		*WHO (2013)*
Traffic Fatalities (deaths per 1,000 People):	**25**	Global Avg: 17	
		IsDB Avg: 22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

Population: + 34%

Traffic Fatalities (to 2013): + 25%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**6**	Global Avg: 502	
		IsDB Avg: 277 *EIA (2015)*	
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	No Data	Global Avg: 85.48	
		IsDB Avg: 68.58	
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg: 97.11	
		IsDB Avg: 77.1 *GIZ (2016)*	
Transport CO_2 Emissions (Mt):	No Data		
Share of Transport in Total Economy-Wide CO_2 Emissions:	No Data	Global Avg: 29.85%	
		IsDB Avg: 26.64%	
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg: 93.64%	
		IsDB Avg: 93.68%	
Transport CO_2 Emissions per Capita (t CO_2/person):	No Data	Global Avg: 1.24	
		IsDB Avg: 1.16	
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	No Data	Global Avg: 1.3	
		IsDB Avg: 1.7	
Projected Transport CO_2 Emissions for BAU Projections:	No Data	for 2030	
	No Data	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	No Data	for 2030	
	No Data	for 2050 *IEA and/or SLoCaT (2015)*	

Transport NOx Emissions (Gg):	**3.0**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**93%**	Global Avg: 81%	
		IsDB Avg: 93%	
Transport Black Carbon Emissions (Gg):	**0.09**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg: 79%	
		IsDB Avg: 92%	
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**19.8**	Global Avg: 28.63	
		IsDB Avg: 43.39	
$PM_{2.5}$ Damage as Share of GNI:	No Data	Global Avg: 0.63%	*World Bank ($PM_{2.5}$ Annual Mean (2015), $PM_{2.5}$ Damage (2014))*
		IsDB Avg: 0.98%	

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: No Data

BAU 2020-2050: No Data

LCS 2020-2050: No Data

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Fiver year projects plan**
Economy-Wide Conditional Target of NDC:	**No Target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**Vehicle Maintenance**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**22,100**		
Roads per 1 Million People:	**1,499.06**	Global Avg: 7,325	
		IsDB Avg: 3,242	
Share of Paved Roads:	**12%**	Global Avg: 50.61%	
		IsDB Avg: 48.29%	*Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg: 348	
		IsDB Avg: 151	*World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.632** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.57** *World Bank (2016)*
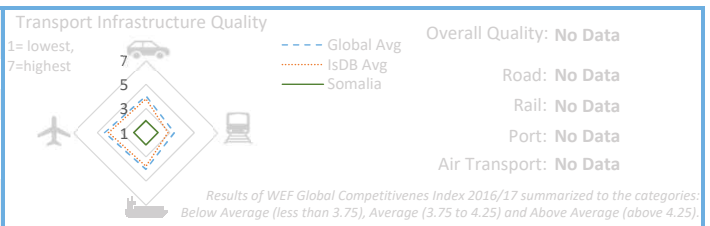
Transport Infrastructure Quality
1= lowest, 7=highest

- - - Global Avg
- - - IsDB Avg
—— Somalia

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

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Sudan

Income Level Group:	**Middle-income**	Population Size (million):	**40.53**
GDP per Capita:	**1878.13**	Share of Urban Population:	**35.02%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.49**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**3**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**50,000**		
Amount of Commercial Cars:	**61,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**100%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 57%
Population: + 25%
Traffic Fatalities (to 2013): + 18%
Motorization Rate: + 32%
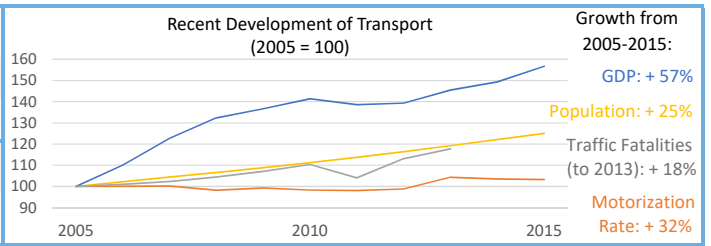
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**110**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**80**		
Gasoline Sulphur Levels (ppm):	**30**		*UNEP*
Diesel Prices (USD cents/liter):	**61.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**95.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*
Transport CO_2 Emissions (Mt):	**7.9**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**59.22%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**100%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**1.1**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**11.0**	for 2030	
	24.7	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**8.6**	for 2030	
	10.2	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO_x Emissions (Gg):	**76.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**99%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**3.37**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**50.0**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**2.43%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 99%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Low carbon development interventions in energy, forestry and waste**
Economy-Wide Conditional Target of NDC:	**N/A**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target Transport Renewable Energy Target**

Size of Road Network (km):	**11,900**		
Roads per 1 Million People:	**293.59**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**36%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**81.50**		
Size of Rail Network (km):	**4,313.00**		
Rail per 1 Million People:	**106.41**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	**No**
Human Habitat Vulnerability Score:	**0.533** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.20** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Sudan

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)

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Factsheet of Suriname

Income Level Group:	**Middle-income**	Population Size (million):	**0.56**
GDP per Capita:	**7593.34**	Share of Urban Population:	**65.27%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.725**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**349**	Global Avg: 173 IsDB Avg: 76	
Amount of Passenger Cars:	**150,000**		
Amount of Commercial Cars:	**43,000**	*OICA (2015)*	
Traffic Fatalities (deaths per 1,000 People):	**19**	Global Avg: 17 IsDB Avg: 22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**64.40%**	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
Motorization Rate: + 82%
GDP: + 35%
Population: + 11%
Traffic Fatalities (to 2013): - 21%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**14**	Global Avg: 502 IsDB Avg: 277 *EIA (2015)*
Fuel Emission Standards:	No Data	
Diesel Sulphur Levels (ppm):	**5,000**	
Gasoline Sulphur Levels (ppm):	**300**	*UNEP*
Diesel Prices (USD cents/liter):	No Data	Global Avg: 85.48 IsDB Avg: 68.58
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg: 97.11 IsDB Avg: 77.1 *GIZ (2016)*

NOx and Black Carbon from EDGAR v. 4.3.1 (2010)

Transport NO$_x$ Emissions (Gg):	**1.5**	
Share of Road Transport in Transport NO$_x$ Emissions:	**83%**	Global Avg: 81% IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	**0.03**	
Share of Road Transport in Transport Black Carbon:	**92%**	Global Avg: 79% IsDB Avg: 92%
PM$_{2.5}$ Annual Mean (μg/m^3):	**18.5**	Global Avg: 28.63 IsDB Avg: 43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.19%**	Global Avg: 0.63% IsDB Avg: 0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO$_2$ Emissions (Mt):	**0.7**	
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**34.05%**	Global Avg: 29.85% IsDB Avg: 26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**57.14%**	Global Avg: 93.64% IsDB Avg: 93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**1.3**	Global Avg: 1.24 IsDB Avg: 1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**1.5**	Global Avg: 1.3 IsDB Avg: 1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**1.1** for 2030 **1.8** for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**0.9** for 2030 **0.8** for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 2000 to 2050 (BAU and LCS)

Transport CO$_2$ 2000-2015: 141%
BAU 2020-2050: 117%
LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Increase the percentage of forests and wetlands under protection**
Economy-Wide Conditional Target of NDC:	**Above 25% renewable energy by 2025**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**Biofuels**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**4,304**	
Roads per 1 Million People:	**7,639.31**	Global Avg: 7,325 IsDB Avg: 3,242
Share of Paved Roads:	**26%**	Global Avg: 50.61% IsDB Avg: 48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data	
Size of Rail Network (km):	No Data	
Rail per 1 Million People:	No Data	Global Avg: 348 IsDB Avg: 151 *World Bank (2016)*
Urban Rail System Length (km):	No Data	*Various Sources*
BRT System Length (km):	No Data	
BRT System Passengerper Day:	No Data	*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.543** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	No Data *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg / IsDB Avg / Suriname

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).
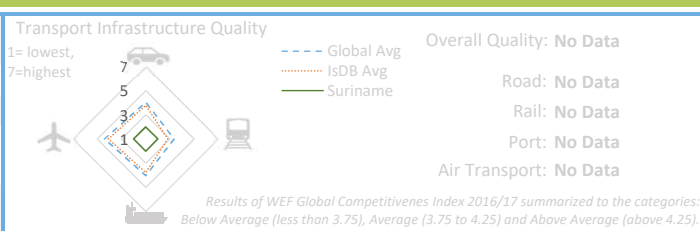
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**	
GDP per Capita:	**No Data**	
UNFCCC Classification:	**Non-Annex I**	

Population Size (million):	**18.27**
Share of Urban Population:	**75.11%**
Human Development Index:	**0.536**

Partnership on Sustainable
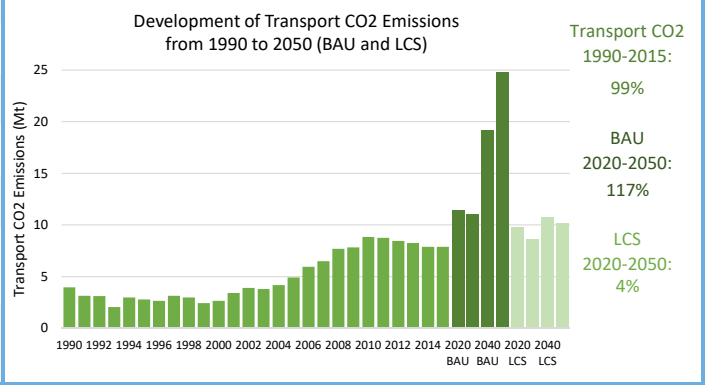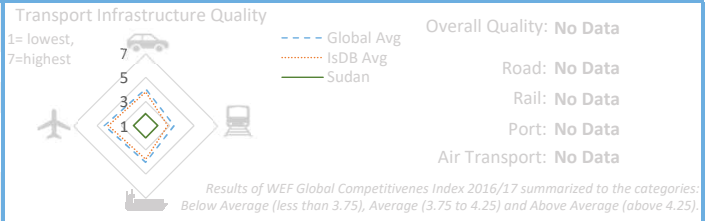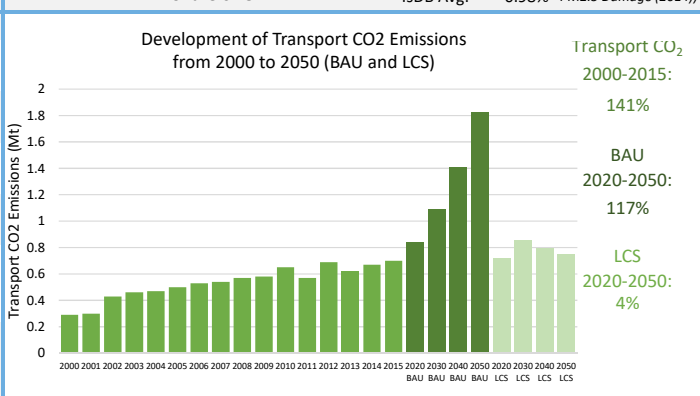Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**368**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**4,600,000**		
Amount of Commercial Cars:	**2,300,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**20**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:

Motorization Rate: + 88%

Population: + 2%

Traffic Fatalities (to 2013): + 1%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**140**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**6,500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	No Data	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	No Data	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO$_x$ Emissions (Gg):	**66.8**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**98%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.87**		
Share of Road Transport in Transport Black Carbon:	**99%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**41.6**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**No Data**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO$_2$ Emissions (Mt):	**6.4**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**21.40%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**98.44%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.3**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**No Data**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**20.6**	for 2030	
	34.4	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**16.1**	for 2030	
	14.2	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: -12%

BAU 2020-2050: 117%

LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	No Data
Economy-Wide Conditional Target of NDC:	No Data
Transport Target in NDC:	No Data
Transport Highlighted in NDC:	No Data
Transport Measures Proposed in NDC:	No Data
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**69,873**		
Roads per 1 Million People:	**3,824.49**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**90%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**1,857.00**		
Size of Rail Network (km):	**2,139.00**		
Rail per 1 Million People:	**117.08**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2014)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passenger per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	No Data
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.465** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**1.24** *World Bank (2016)*
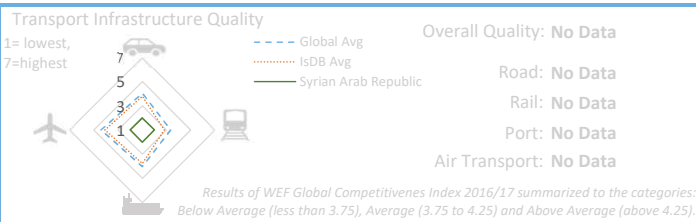
Transport Infrastructure Quality

1= lowest, 7=highest

- - - Global Avg
····· IsDB Avg
—— Syrian Arab Republic

Overall Quality:	**No Data**
Road:	**No Data**
Rail:	**No Data**
Port:	**No Data**
Air Transport:	**No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Tajikistan

Income Level Group:	**Middle-income**
GDP per Capita:	**948.15**
UNFCCC Classification:	**Non-Annex I**

Population Size (million):	**8.92**
Share of Urban Population:	**27.29%**
Human Development Index:	**0.627**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**50**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**353,919**		
Amount of Commercial Cars:	**36,942**		*WHO (2014)*
Traffic Fatalities (deaths per 1,000 People):	**19**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**37.50%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 93%
Population: + 25%
Traffic Fatalities (to 2013): + 17%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**23**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	**500**		*UNEP*
Diesel Prices (USD cents/liter):	**69.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**71.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport CO$_2$ Emissions (Mt):	**2.3**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**43.96%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	**100.00%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.3**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**2.9**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	**2.5**	for 2030	
	5.6	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**1.7**	for 2030	
	2.2	for 2050	*IEA and/or SLoCaT (2015)*

			NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Transport NO$_x$ Emissions (Gg):	**0.9**		
Share of Road Transport in Transport NO$_x$ Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.01**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	**50.0**	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	**0.41%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)
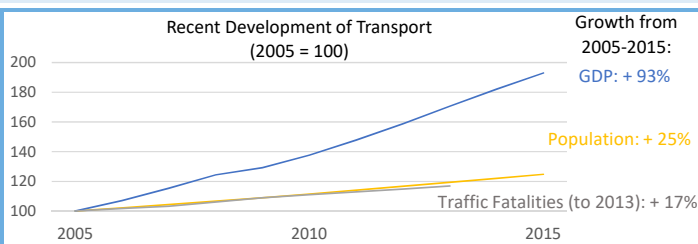
Transport CO$_2$ 1990-2015: 215%
BAU 2020-2050: 199%
LCS 2020-2050: 32%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**Not to exceed 80-90% of 1990 levels by 2030**
Economy-Wide Conditional Target of NDC:	**65-75% of 1990 level by 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**27,767**		
Roads per 1 Million People:	**3,112.42**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	No Data	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**18.40**		
Size of Rail Network (km):	**597.00**		
Rail per 1 Million People:	**66.92**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.424** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.13** *World Bank (2016)*
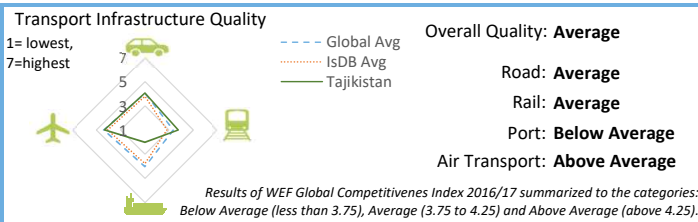
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg / IsDB Avg / Tajikistan

Overall Quality: **Average**
Road: **Average**
Rail: **Average**
Port: **Below Average**
Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Togo

Income Level Group:	**Low-income**	
GDP per Capita:	**544.43**	
UNFCCC Classification:	**Non-Annex I**	

Population Size (million):	**7.80**
Share of Urban Population:	**39.55%**
Human Development Index:	**0.487**

Partnership on Sustainable
Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**27**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**140,000**		
Amount of Commercial Cars:	**58,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**31**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	*No Data*		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 49%
Population: + 31%
Traffic Fatalities (to 2013): + 23%
Motorization Rate: + 3%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**14**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	*No Data*		
Diesel Sulphur Levels (ppm):	**10,000**		
Gasoline Sulphur Levels (ppm):	*No Data*		*UNEP*
Diesel Prices (USD cents/liter):	**71.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**71.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**9.4**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.21**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**32.7**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**2.14%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

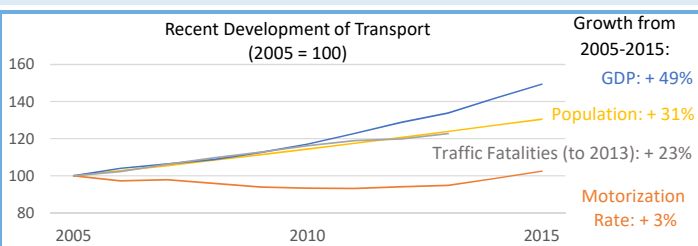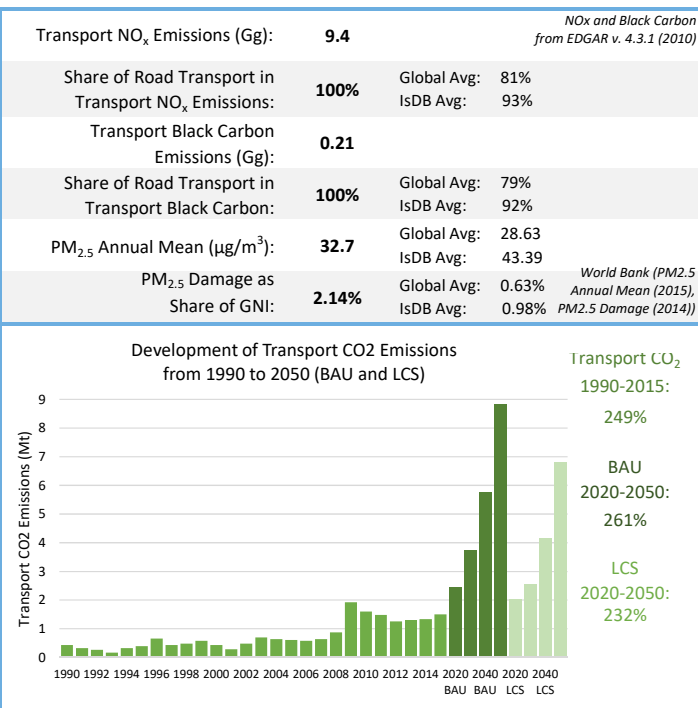|			
Transport CO_2 Emissions (Mt):	**1.5**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**58.70%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**100%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.2**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**3.7**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**3.8**	for 2030	
	8.9	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**2.6**	for 2030	
	6.8	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 249%
BAU 2020-2050: 261%
LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**11.4% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**31.14% below 2030 BAU**
Transport Target in NDC:	**20% reduction of fossil fuel use**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions** **Public Bus Transport** **Road Infrastructure Development**
Transport Targets defined by National Policy:	**Import Restrictions Target** **Energy Consumption Target**

Size of Road Network (km):	**11,652**		
Roads per 1 Million People:	**1,494.29**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**21%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	*No Data*		
Size of Rail Network (km):	*No Data*		
Rail per 1 Million People:	*No Data*	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	*No Data*		*Various Sources*
BRT System Length (km):	*No Data*		
BRT System Passengerper Day:	*No Data*		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	*No NAP*
Human Habitat Vulnerability Score:	**0.64** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.24** *World Bank (2016)*

Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Togo

Overall Quality: **No Data**
Road: **No Data**
Rail: **No Data**
Port: **No Data**
Air Transport: **No Data**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25)
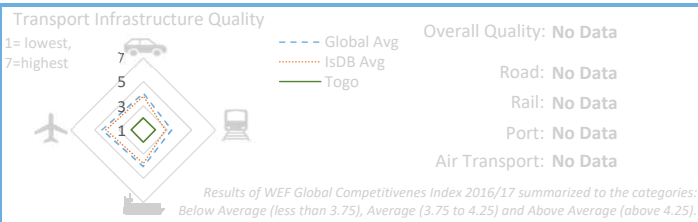
This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of
Tunisia

Income Level Group:	**Middle-income**	Population Size (million):	**11.53**
GDP per Capita:	**4217.70**	Share of Urban Population:	**66.86%**
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.725**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**129**	Global Avg: 173 IsDB Avg: 76	
Amount of Passenger Cars:	**990,000**		
Amount of Commercial Cars:	**460,000**	*OICA (2015)*	
Traffic Fatalities (deaths per 1,000 People):	**24**	Global Avg: 17 IsDB Avg: 22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**51.20%**	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 36%
Motorization Rate: + 33%
Population: + 12%
Traffic Fatalities (to 2013): + 6%
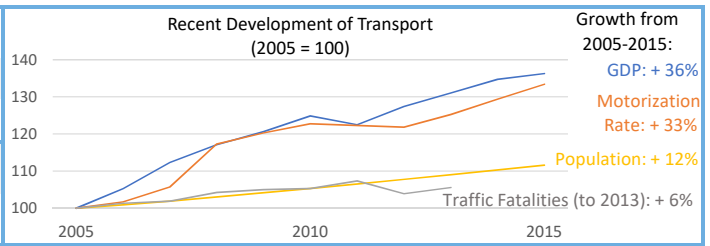
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**98**	Global Avg: 502 IsDB Avg: 277 *EIA (2015)*	
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	No Data		
Gasoline Sulphur Levels (ppm):	No Data	*UNEP*	
Diesel Prices (USD cents/liter):	**62.00**	Global Avg: 85.48 IsDB Avg: 68.58	
Super Gasoline Prices (USD cents/liter):	**73.00**	Global Avg: 97.11 IsDB Avg: 77.1 *GIZ (2016)*	
Transport CO₂ Emissions (Mt):	**6.7**		
Share of Transport in Total Economy-Wide CO₂ Emissions:	**22.54%**	Global Avg: 29.85% IsDB Avg: 26.64%	
Share of Road Transport in Transport CO₂ Emissions:	**97.01%**	Global Avg: 93.64% IsDB Avg: 93.68%	
Transport CO₂ Emissions per Capita (t CO₂/person):	**0.6**	Global Avg: 1.24 IsDB Avg: 1.16	
Transport CO₂ Emissions per GDP (t CO₂/10,000 USD):	**1.4**	Global Avg: 1.3 IsDB Avg: 1.7	
Projected Transport CO₂ Emissions for BAU Projections:	**24.8** for 2030 **19.2** for 2050		
Projected Transport CO₂ Emissions for Low Carbon Scenario:	**25.1** for 2030 **7.9** for 2050	*IEA and/or SLoCaT (2015)*	

Transport NOₓ Emissions (Gg):	**26.1**	*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*	
Share of Road Transport in Transport NOₓ Emissions:	**100%**	Global Avg: 81% IsDB Avg: 93%	
Transport Black Carbon Emissions (Gg):	**0.96**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg: 79% IsDB Avg: 92%	
PM₂.₅ Annual Mean (µg/m³):	**44.8**	Global Avg: 28.63 IsDB Avg: 43.39	
PM₂.₅ Damage as Share of GNI:	**0.25%**	Global Avg: 0.63% IsDB Avg: 0.98%	*World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO₂ 1990-2015: 169%
BAU 2020-2050: 37%
LCS 2020-2050: -43%
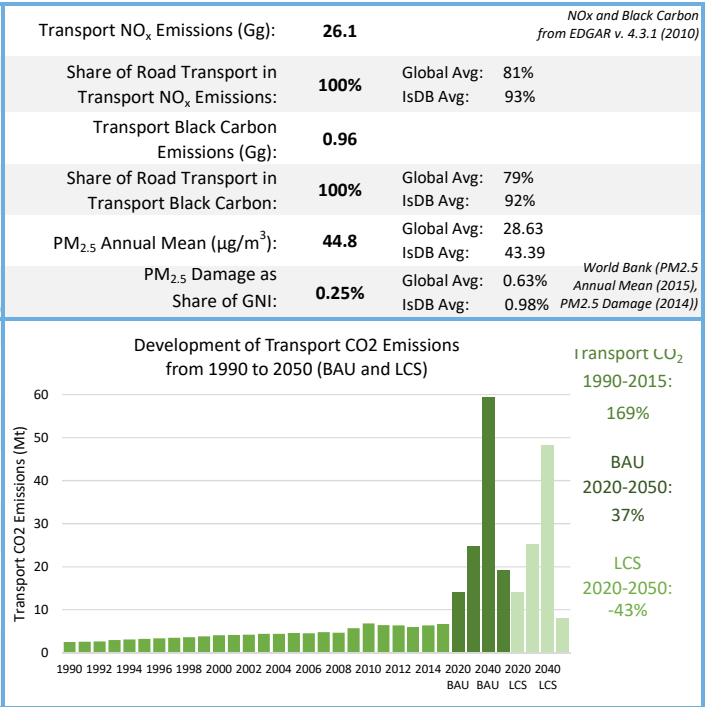
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**13% reduction in carbon intensity relative to 2010**
Economy-Wide Conditional Target of NDC:	**41% compared to 2010**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Measures to Improve Energy Efficiency**
Transport Targets defined by National Policy:	**Road Safety Target**

Size of Road Network (km):	**19,418**		
Roads per 1 Million People:	**1,683.82**	Global Avg: 7,325 IsDB Avg: 3,242	
Share of Paved Roads:	**76%**	Global Avg: 50.61% IsDB Avg: 48.29%	*Various Sources*
Railway Passenger Activity (million pkm):	**1,246.00**		
Size of Rail Network (km):	**2,244.00**		
Rail per 1 Million People:	**194.59**	Global Avg: 348 IsDB Avg: 151	*World Bank (2015)*
Urban Rail System Length (km):	**45.20**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.375** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.44** *World Bank (2016)*
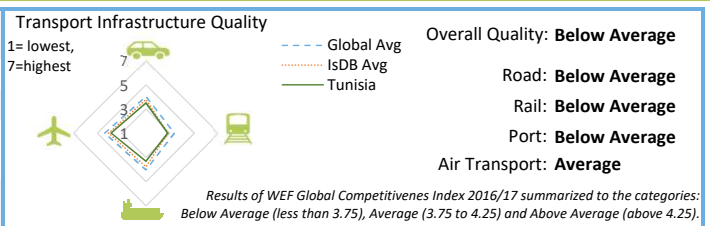
Transport Infrastructure Quality
1= lowest, 7=highest
- - - Global Avg
······ IsDB Avg
—— Tunisia

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Turkey

Income Level Group:	**Middle-income**	
GDP per Capita:	**13856.37**	
UNFCCC Classification:	**Annex I**	
Population Size (million):	**80.75**	
Share of Urban Population:	**72.04%**	
Human Development Index:	**0.767**	

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**196**	Global Avg: 173 IsDB Avg: 76	
Amount of Passenger Cars:	**10,589,337**		
Amount of Commercial Cars:	**4,771,619**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**9**	Global Avg: 17 IsDB Avg: 22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**75.00%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 65%
Motorization Rate: + 58%
Population: + 15%
Traffic Fatalities (to 2013): + 12%
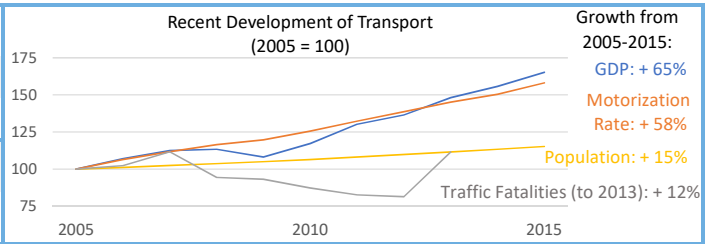
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**861**	Global Avg: 502 IsDB Avg: 277	*EIA (2015)*
Fuel Emission Standards:	**LDV: Euro 5 HDV: Euro VI**		
Diesel Sulphur Levels (ppm):	**10**		
Gasoline Sulphur Levels (ppm):	**10**		*UNEP*
Diesel Prices (USD cents/liter):	**123.00**	Global Avg: 85.48 IsDB Avg: 68.58	
Super Gasoline Prices (USD cents/liter):	**142.00**	Global Avg: 97.11 IsDB Avg: 77.1	*GIZ (2016)*
Transport CO_2 Emissions (Mt):	**72.5**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**21.16%**	Global Avg: 29.85% IsDB Avg: 26.64%	
Share of Road Transport in Transport CO_2 Emissions:	**92.28%**	Global Avg: 93.64% IsDB Avg: 93.68%	
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.9**	Global Avg: 1.24 IsDB Avg: 1.16	
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**0.7**	Global Avg: 1.3 IsDB Avg: 1.7	
Projected Transport CO_2 Emissions for BAU Projections:	**92.0** for 2030 **116.0** for 2050		
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**50.0** for 2030 **16.0** for 2050		*IEA and/or SLoCaT (2015)*

Transport NO_x Emissions (Gg):	**359.7**	*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**84%**	Global Avg: 81% IsDB Avg: 93%
Transport Black Carbon Emissions (Gg):	**13.48**	
Share of Road Transport in Transport Black Carbon:	**93%**	Global Avg: 79% IsDB Avg: 92%
$PM_{2.5}$ Annual Mean (µg/m^3):	**36.4**	Global Avg: 28.63 IsDB Avg: 43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.16%**	Global Avg: 0.63% IsDB Avg: 0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 160%
BAU 2020-2050: 61%
LCS 2020-2050: -71%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**21% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Vehicle Restrictions Public Transport (Bus and Urban Rail) Green Freight Measures Biofuels, LPG andCNG Road and Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**385,754**	
Roads per 1 Million People:	**4,777.43**	Global Avg: 7,325 IsDB Avg: 3,242
Share of Paved Roads:	**91%**	Global Avg: 50.61% IsDB Avg: 48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**4,325.00**	
Size of Rail Network (km):	**10,131.00**	
Rail per 1 Million People:	**125.47**	Global Avg: 348 IsDB Avg: 151 *World Bank (2015)*
Urban Rail System Length (km):	**193.67**	*Various Sources*
BRT System Length (km):	**52**	
BRT System Passengerper Day:	**750,000**	*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**	
Highlighted in NAPA:	No NAPA	
Highlighted in NAP:	No NAP	
Human Habitat Vulnerability Score:	**0.311**	*ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**3.49**	*World Bank (2016)*
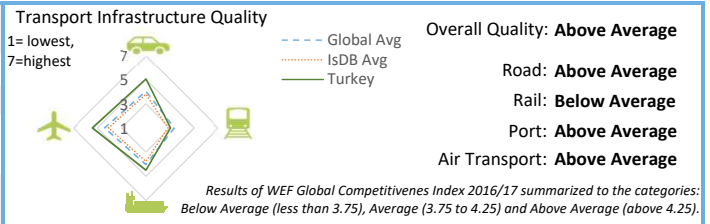
Transport Infrastructure Quality
1= lowest, 7=highest

Global Avg
IsDB Avg
Turkey

Overall Quality: **Above Average**
Road: **Above Average**
Rail: **Below Average**
Port: **Above Average**
Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Income Level Group:	**Middle-income**
GDP per Capita:	**6870.94**
UNFCCC Classification:	**Non-Annex I**

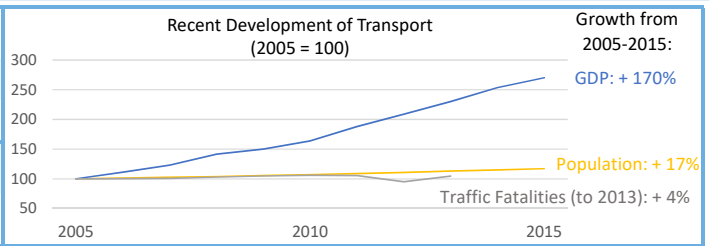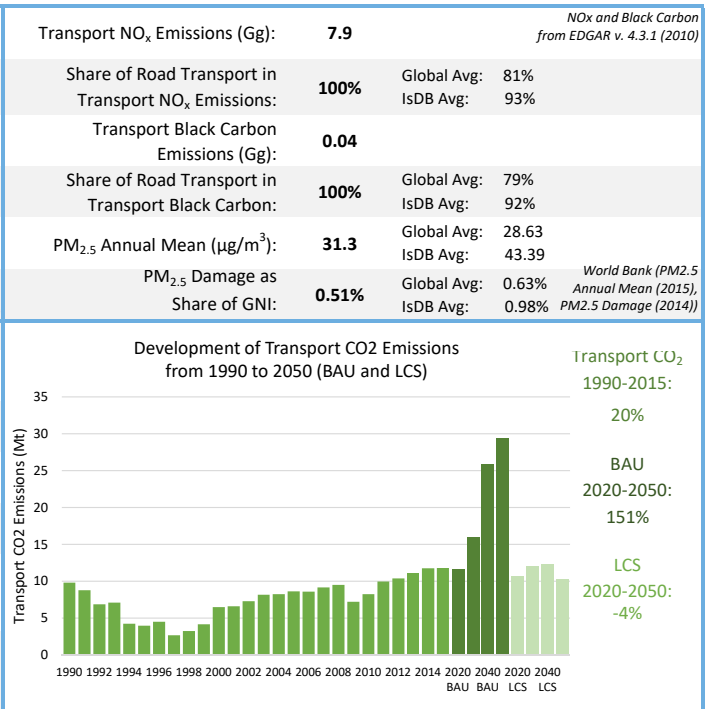|	
Population Size (million):	**5.76**
Share of Urban Population:	**48.51%**
Human Development Index:	**0.692**

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**162**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**676,622**		
Amount of Commercial Cars:	**114,004**	*WHO (2014)*	
Traffic Fatalities (deaths per 1,000 People):	**17**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**25.30%**	*WHO (2015)*	

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
GDP: + 170%
Population: + 17%
Traffic Fatalities (to 2013): + 4%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**158**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**100**		
Gasoline Sulphur Levels (ppm):	**1,000**	*UNEP*	
Diesel Prices (USD cents/liter):	**27.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**29.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NOx Emissions (Gg):	**7.9**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NOx Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.04**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
PM2.5 Annual Mean ($\mu g/m^3$):	**31.3**	Global Avg:	28.63
		IsDB Avg:	43.39
PM2.5 Damage as Share of GNI:	**0.51%**	Global Avg:	0.63%
		IsDB Avg:	0.98% *World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*

Transport CO2 Emissions (Mt):	**11.8**		
Share of Transport in Total Economy-Wide CO2 Emissions:	**16.90%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO2 Emissions:	**66.95%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO2 Emissions per Capita (t CO2/person):	**2.1**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO2 Emissions per GDP (t CO2/10,000 USD):	**3.2**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO2 Emissions for BAU Projections:	**16.0**	for 2030	
	29.3	for 2050	
Projected Transport CO2 Emissions for Low Carbon Scenario:	**12.0**	for 2030	
	10.2	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO2 1990-2015: 20%
BAU 2020-2050: 151%
LCS 2020-2050: -4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No conditional target**
Economy-Wide Conditional Target of NDC:	**Stabilize or begin to reduce GHG emissions by 2030**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**No**
Transport Measures Proposed in NDC:	**None**
Transport Targets defined by National Policy:	**None**

Size of Road Network (km):	**58,592**		
Roads per 1 Million People:	**10,175.62**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**81%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	**2,336**		
Size of Rail Network (km):	**3,115**		
Rail per 1 Million People:	**540.98**	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	No Data		
BRT System Length (km):	No Data		*Various Sources*
BRT System Passengerper Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.399** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.34** *World Bank (2016)*
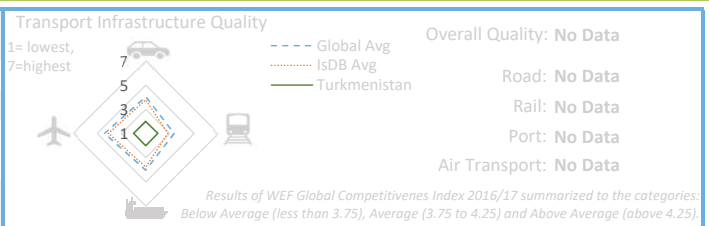
Transport Infrastructure Quality
1= lowest, 7=highest
Global Avg
IsDB Avg
Turkmenistan

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

Factsheet of United Arab Emirates

Income Level Group:	**High-income**	
GDP per Capita:	**40296.80**	
UNFCCC Classification:	**Non-Annex I**	
Population Size (million):	**9.40**	
Share of Urban Population:	**91.20%**	
Human Development Index:	**0.84**	

Partnership on Sustainable Low Carbon Transport
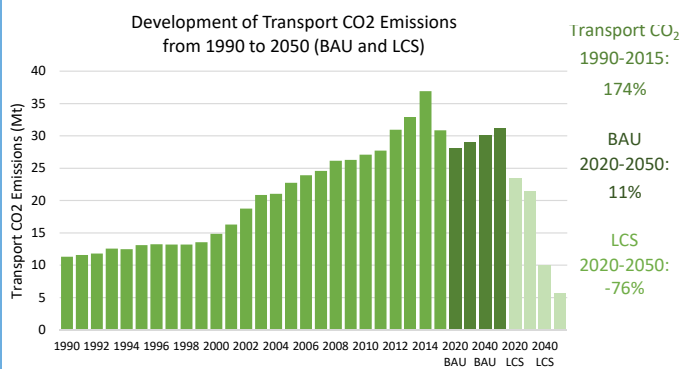
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**234**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**2,000,000**		
Amount of Commercial Cars:	**140,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**11**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**42.70%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005 2015:
- Population: + 100%
- GDP: + 43%
- Motorization Rate: + 24%
- Traffic Fatalities (to 2013): +4%
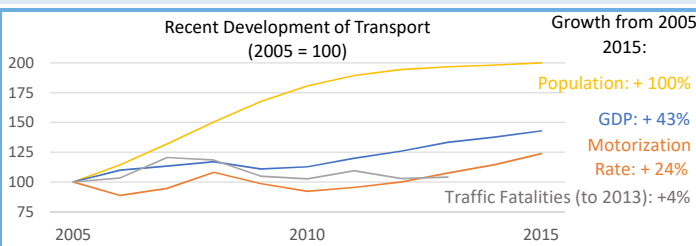
Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**901**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	**currently being updated to Euro 5 levels**		
Diesel Sulphur Levels (ppm):	**50-350**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**52.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**49.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**111.1**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**100%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**1.43**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**64.3**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**0.27%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt):	**30.9**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**16.68%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	**96.76%**	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**3.4**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**0.8**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**29.1**	for 2030	
	31.2	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**21.5**	for 2030	
	5.7	for 2050	*IEA and/or SLoCaT (2015)*

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO_2 1990-2015: 174%

BAU 2020-2050: 11%

LCS 2020-2050: -76%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Fuel Subsidy Removal** **Mobility Management** **Public Transport (Urban Rail)** **Green Freight Measures** **Fuel Economy/ Energy Efficiency Standards** **Fuel Quality and Vehicle Emission Standards** **CNG** **E- mobility** **Rail Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target** **Transport Emission Target** **Transport Renewable Energy Target** **LPG/CNG Target**

Size of Road Network (km):	**4,080**		
Roads per 1 Million People:	**434.04**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**100%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2015)*
Urban Rail System Length (km):	**74.60**		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.221** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**4.07** *World Bank (2016)*
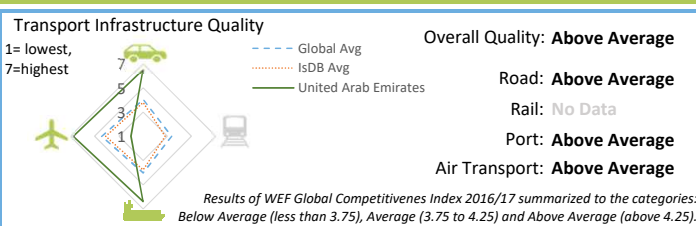
Transport Infrastructure Quality

1= lowest, 7=highest

- Global Avg
- IsDB Avg
- United Arab Emirates

Overall Quality: **Above Average**

Road: **Above Average**

Rail: No Data

Port: **Above Average**

Air Transport: **Above Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.

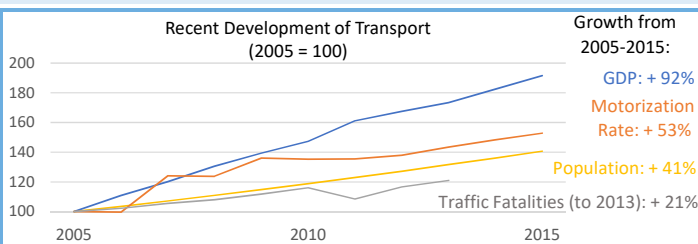|	
Income Level Group:	**Low-income**
GDP per Capita:	**640.87**
UNFCCC Classification:	**Non-Annex I**
Population Size (million):	**42.86**
Share of Urban Population:	**16.78%**
Human Development Index:	**0.493**

Partnership on Sustainable Low Carbon Transport
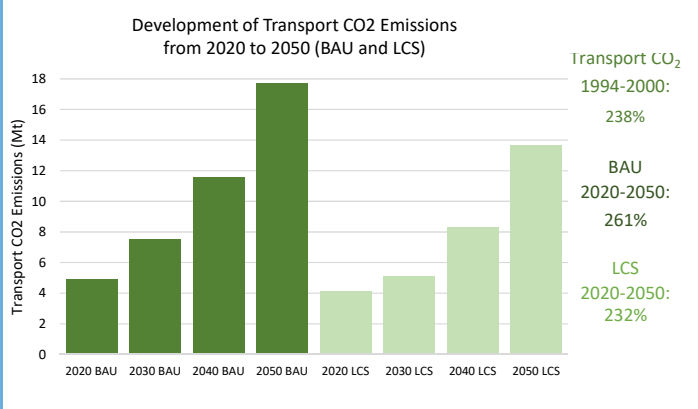
Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**12**	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	**150,000**		
Amount of Commercial Cars:	**340,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**27**	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	**92.90%**		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 92%
- Motorization Rate: + 53%
- Population: + 41%
- Traffic Fatalities (to 2013): + 21%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**27**	Global Avg:	502
		IsDB Avg:	277 *EIA (2015)*
Fuel Emission Standards:	No Data		
Diesel Sulphur Levels (ppm):	**50**		
Gasoline Sulphur Levels (ppm):	**150**		*UNEP*
Diesel Prices (USD cents/liter):	**79.00**	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	**94.00**	Global Avg:	97.11
		IsDB Avg:	77.1 *GIZ (2016)*

Transport NO_x Emissions (Gg):	**9.5**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO_x Emissions:	**98%**	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	**0.32**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg:	79%
		IsDB Avg:	92%
$PM_{2.5}$ Annual Mean ($\mu g/m^3$):	**60.3**	Global Avg:	28.63
		IsDB Avg:	43.39
$PM_{2.5}$ Damage as Share of GNI:	**1.69%**	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO_2 Emissions (Mt) (2000):	**0.04**		
Share of Transport in Total Economy-Wide CO_2 Emissions:	**2.80%**	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO_2 Emissions:	No Data	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO_2 Emissions per Capita (t CO_2/person):	**0.00167**	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO_2 Emissions per GDP (t CO_2/10,000 USD):	**0.0**	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO_2 Emissions for BAU Projections:	**7.5**	for 2030	
	17.7	for 2050	
Projected Transport CO_2 Emissions for Low Carbon Scenario:	**5.1**	for 2030	
	13.6	for 2050	*UNFCCC and/or SLoCaT (2000)*

Development of Transport CO2 Emissions from 2020 to 2050 (BAU and LCS)

Transport CO_2 1994-2000: 238%

BAU 2020-2050: 261%

LCS 2020-2050: 232%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**No unconditional target**
Economy-Wide Conditional Target of NDC:	**22% below 2030 BAU**
Transport Target in NDC:	**24 to 34% below 2030 BAU for road transport**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Energy Efficiency**
Transport Targets defined by National Policy:	**Transport Emission Target** **Transport Renewable Energy Target** **Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**20,000**		
Roads per 1 Million People:	**466.60**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**16%**	Global Avg:	50.61%
		IsDB Avg:	48.29% *Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg:	348
		IsDB Avg:	151 *World Bank (2016)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**Yes**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.545** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	**2.74** *World Bank (2016)*
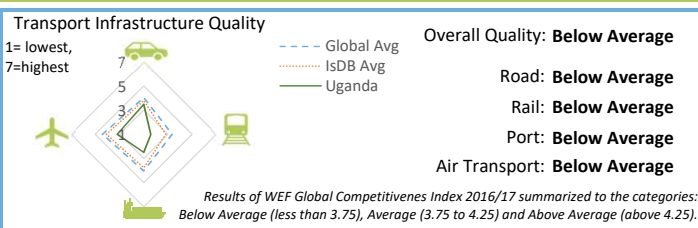
Transport Infrastructure Quality
1= lowest, 7=highest
- Global Avg
- IsDB Avg
- Uganda

Overall Quality: **Below Average**
Road: **Below Average**
Rail: **Below Average**
Port: **Below Average**
Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of Uzbekistan

Income Level Group:	**Middle-income**	Population Size (million):	**31.91**	
GDP per Capita:	**1957.63**	Share of Urban Population:	**34.95%**	
UNFCCC Classification:	**Non-Annex I**	Human Development Index:	**0.701**	

Partnership on Sustainable Low Carbon Transport

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	No Data	Global Avg:	173
		IsDB Avg:	76
Amount of Passenger Cars:	No Data		
Amount of Commercial Cars:	No Data		OICA (2015)
Traffic Fatalities (deaths per 1,000 People):	11	Global Avg:	17
		IsDB Avg:	22
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		WHO (2015)

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- GDP: + 122%
- Population: + 17%
- Traffic Fatalities (to 2013): - 2%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	61	Global Avg:	502
		IsDB Avg:	277 EIA (2015)
Fuel Emission Standards:	**Euro 3 from 2018, Euro 4 from 2019**		
Diesel Sulphur Levels (ppm):	**2,000**		
Gasoline Sulphur Levels (ppm):	**500**		UNEP
Diesel Prices (USD cents/liter):	128.00	Global Avg:	85.48
		IsDB Avg:	68.58
Super Gasoline Prices (USD cents/liter):	103.00	Global Avg:	97.11
		IsDB Avg:	77.1 GIZ (2016)

Transport NO$_x$ Emissions (Gg):	23.9		NOx and Black Carbon from EDGAR v. 4.3.1 (2010)
Share of Road Transport in Transport NO$_x$ Emissions:	78%	Global Avg:	81%
		IsDB Avg:	93%
Transport Black Carbon Emissions (Gg):	0.41		
Share of Road Transport in Transport Black Carbon:	91%	Global Avg:	79%
		IsDB Avg:	92%
PM$_{2.5}$ Annual Mean (µg/m^3):	39.7	Global Avg:	28.63
		IsDB Avg:	43.39
PM$_{2.5}$ Damage as Share of GNI:	0.56%	Global Avg:	0.63%
		IsDB Avg:	0.98%

World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))

Transport CO$_2$ Emissions (Mt):	6.4		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	6.30%	Global Avg:	29.85%
		IsDB Avg:	26.64%
Share of Road Transport in Transport CO$_2$ Emissions:	56.25%	Global Avg:	93.64%
		IsDB Avg:	93.68%
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	0.2	Global Avg:	1.24
		IsDB Avg:	1.16
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	1.1	Global Avg:	1.3
		IsDB Avg:	1.7
Projected Transport CO$_2$ Emissions for BAU Projections:	20.2	for 2030	
	29.1	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	13.8	for 2030	
	9.0	for 2050	IEA and/or SLoCaT (2015)

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: 12%

BAU 2020-2050: 86%
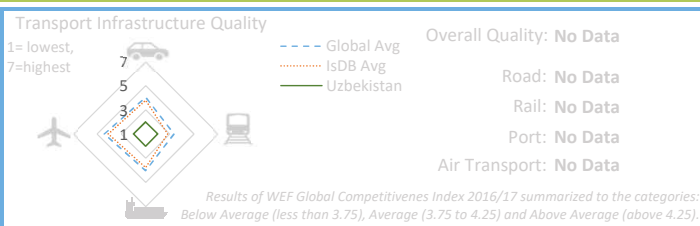
LCS 2020-2050: -34%
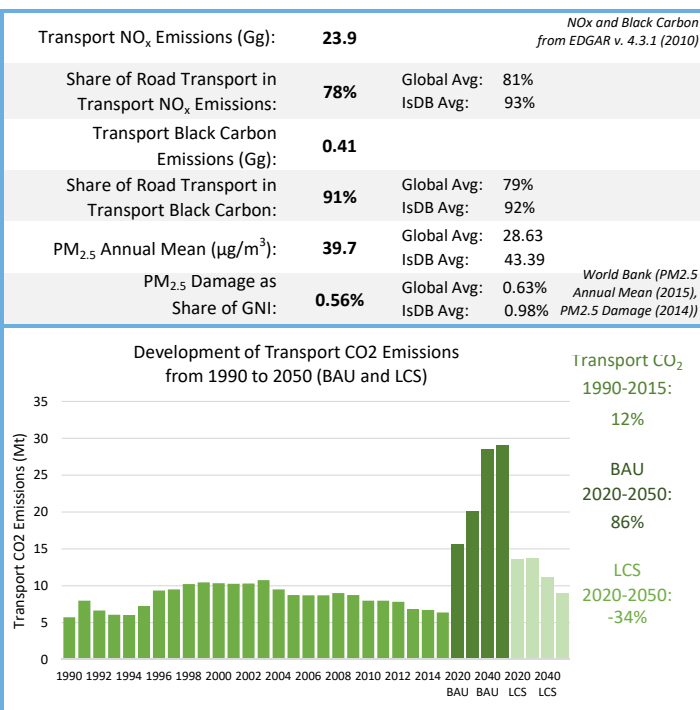
Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**reduce GHG per unit of GDP by 10% by 2030 from 2010 levels**
Economy-Wide Conditional Target of NDC:	**No conditional target**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Fuel Economy and Energy Efficiency Road Infrastructure Development**
Transport Targets defined by National Policy:	**Road Safety Target Fuel Quality - 50 ppm Sulphur or less**

Size of Road Network (km):	**86,496**		
Roads per 1 Million People:	**2,710.57**	Global Avg:	7,325
		IsDB Avg:	3,242
Share of Paved Roads:	**87%**	Global Avg:	50.61%
		IsDB Avg:	48.29% Various Sources
Railway Passenger Activity (million pkm):	**3,934.00**		
Size of Rail Network (km):	**4,304.00**		
Rail per 1 Million People:	**134.88**	Global Avg:	348
		IsDB Avg:	151 World Bank (2015)
Urban Rail System Length (km):	**36.20**		Various Sources
BRT System Length (km):	No Data		
BRT System Passengerper Day:	No Data		BRT Data (2016)

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	No NAPA
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.371** ND Gain Index (2016)
Logistics Performance Index for Trade and Transport:	**2.45** World Bank (2016)

Transport Infrastructure Quality

1= lowest, 7=highest

- Global Avg
- IsDB Avg
- Uzbekistan

Overall Quality: No Data
Road: No Data
Rail: No Data
Port: No Data
Air Transport: No Data

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

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Factsheet of
Yemen

Income Level Group: **Middle-income**	Population Size (million): **28.25**	
GDP per Capita: **663.64**	Share of Urban Population: **33.78%**	Partnership on Sustainable Low Carbon Transport
UNFCCC Classification: **Non-Annex I**	Human Development Index: **0.482**	

Transport Activity

Motorization Rate (Vehicles per 1,000 People):	**37**	Global Avg: 173	
		IsDB Avg: 76	
Amount of Passenger Cars:	**600,000**		
Amount of Commercial Cars:	**400,000**		*OICA (2015)*
Traffic Fatalities (deaths per 1,000 People):	**22**	Global Avg: 17	
		IsDB Avg: 22	
Pedestrians, Cyclists and Motorcyclists Among Fatalities:	No Data		*WHO (2015)*

Recent Development of Transport (2005 = 100)

Growth from 2005-2015:
- Traffic Fatalities (to 2013): + 28%
- Population: + 31%
- Motorization Rate: + 26%
- GDP: - 17%

Transport Consumption and Emissions

Petroleum Consumption (Barrels Oil per Day):	**140**	Global Avg: 502	
		IsDB Avg: 277	*EIA (2015)*
Fuel Emission Standards:	**Regulation stipulates compliance with environmental requirements**		
Diesel Sulphur Levels (ppm):	**500**		
Gasoline Sulphur Levels (ppm):	No Data		*UNEP*
Diesel Prices (USD cents/liter):	**76.00**	Global Avg: 85.48	
		IsDB Avg: 68.58	
Super Gasoline Prices (USD cents/liter):	**92.00**	Global Avg: 97.11	
		IsDB Avg: 77.1	*GIZ (2016)*
Transport CO$_2$ Emissions (Mt):	**3.1**		
Share of Transport in Total Economy-Wide CO$_2$ Emissions:	**12.77%**	Global Avg: 29.85%	
		IsDB Avg: 26.64%	
Share of Road Transport in Transport CO$_2$ Emissions:	**100.00%**	Global Avg: 93.64%	
		IsDB Avg: 93.68%	
Transport CO$_2$ Emissions per Capita (t CO$_2$/person):	**0.1**	Global Avg: 1.24	
		IsDB Avg: 1.16	
Transport CO$_2$ Emissions per GDP (t CO$_2$/10,000 USD):	**1.5**	Global Avg: 1.3	
		IsDB Avg: 1.7	
Projected Transport CO$_2$ Emissions for BAU Projections:	**12.0**	for 2030	
	20.0	for 2050	
Projected Transport CO$_2$ Emissions for Low Carbon Scenario:	**9.4**	for 2030	
	8.3	for 2050	*IEA and/or SLoCaT (2015)*

Transport NO$_x$ Emissions (Gg):	**8.7**		*NOx and Black Carbon from EDGAR v. 4.3.1 (2010)*
Share of Road Transport in Transport NO$_x$ Emissions:	**100%**	Global Avg: 81%	
		IsDB Avg: 93%	
Transport Black Carbon Emissions (Gg):	**0.30**		
Share of Road Transport in Transport Black Carbon:	**100%**	Global Avg: 79%	
		IsDB Avg: 92%	
PM$_{2.5}$ Annual Mean (μg/m^3):	**52.8**	Global Avg: 28.63	
		IsDB Avg: 43.39	*World Bank (PM2.5 Annual Mean (2015), PM2.5 Damage (2014))*
PM$_{2.5}$ Damage as Share of GNI:	No Data	Global Avg: 0.63%	
		IsDB Avg: 0.98%	

Development of Transport CO2 Emissions from 1990 to 2050 (BAU and LCS)

Transport CO$_2$ 1990-2015: -23%

BAU 2020-2050: 117%

LCS 2020-2050: 4%

Transport Mitigation Responses

Economy-Wide Unconditional Target of NDC:	**1% below 2030 BAU**
Economy-Wide Conditional Target of NDC:	**13% below 2030 BAU**
Transport Target in NDC:	**No transport target**
Transport Highlighted in NDC:	**Yes**
Transport Measures Proposed in NDC:	**Measures to Improve Energy Efficiency**
Transport Targets defined by National Policy:	**No targets**

Size of Road Network (km):	**71,300**		
Roads per 1 Million People:	**2,523.86**	Global Avg: 7,325	
		IsDB Avg: 3,242	
Share of Paved Roads:	**9%**	Global Avg: 50.61%	
		IsDB Avg: 48.29%	*Various Sources*
Railway Passenger Activity (million pkm):	No Data		
Size of Rail Network (km):	No Data		
Rail per 1 Million People:	No Data	Global Avg: 348	
		IsDB Avg: 151	*World Bank (2015)*
Urban Rail System Length (km):	No Data		*Various Sources*
BRT System Length (km):	No Data		
BRT System Passengers per Day:	No Data		*BRT Data (2016)*

Transport Adaptation

Transport Adaptation Highlighted in NDC:	**No**
Highlighted in NAPA:	**No**
Highlighted in NAP:	No NAP
Human Habitat Vulnerability Score:	**0.59** *ND Gain Index (2016)*
Logistics Performance Index for Trade and Transport:	No Data *World Bank (2016)*

Transport Infrastructure Quality

1= lowest, 7=highest

- - - Global Avg
··· IsDB Avg
— Yemen

Overall Quality: **Below Average**

Road: **Below Average**

Rail: No Data

Port: **Below Average**

Air Transport: **Below Average**

Results of WEF Global Competitivenes Index 2016/17 summarized to the categories: Below Average (less than 3.75), Average (3.75 to 4.25) and Above Average (above 4.25).

This factsheet was generated by The Partnership on Sustainable, Low Carbon Transport (SLoCaT). Data is based on TraKB Version 0.2.