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BASELINE REPORT

FOR THE AICHI 2030 DECLARATION ON ENVIRONMENTALLY SUSTAINABLE TRANSPORT - MAKING TRANSPORT IN ASIA SUSTAINABLE (2021-2030)

OCTOBER 2021

DRAFT for comments

UNITED NATIONS CENTRE FOR REGIONAL DEVELOPMENT (UNCRD)
ASIAN DEVELOPMENT BANK (ADB)

UNCRD ADB ADB TRANSPORT

Baseline Report for the Aichi 2030 Declaration on Environmentally Sustainable Transport – Making Transport in Asia Sustainable (2021-2030)

October 2021

United Nations Centre for Regional Development (UNCRD)

Asian Development Bank (ADB)

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List of Abbreviations

ATO	Asian Transport Outlook
BC	Black Carbon
EAD	Expected Annual Damages
EST	Environmentally Sustainable Transport
GBD	Global Burden of Disease
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GVA	Gross Value Added
ILO	International Labour Organization
IRAP	International Road Assessment Program
LDV	Light Duty Vehicles
LPI	Logistics Performance Index
LSCI	Liner Shipping Connectivity Index
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PM	Particulate Matter
PPP	Public-Private Partnership
ND-GAIN	Notre Dame Global Adaptation Initiative
NOx	Nitrogen Oxides
RAI	Rural Access Index
RTR	Rapid Transit to Resident Ratio
SDG	Sustainable Development Goals
SOx	Sulphur Oxides
TEU	Twenty-Foot-equivalent Units
UN	United Nations
UNCRD	United Nations Center for Regional Development
USD	United States Dollar
WEF	World Economic Forum
WHO	World Health Organisation

Introduction

I. INTRODUCTION

Background of the Environmentally Sustainable Transport (EST) Initiative

1. The Asian Environmentally Sustainable Transport (EST) Forum is a joint initiative of the United Nations Center for Regional Development (UNCRD) and the Ministry of the Environment, Japan, which aims to promote the integration of environmentally sustainable transport in general policies, planning, and development processes in the countries of Asia. The Regional EST Forum was formally established in 2005 with the view to:

a) Facilitate high-level policy dialogues on environment and transport issues on a regular basis;

b) Provide a strategic and knowledge platform for sharing experiences & disseminating among Asian countries best practices, tools, technologies, policy instruments, in response to various issues concerning EST;

c) Provide a platform for discussion on specific issues of concern through expert group meetings, policy consultations;

d) Provide a platform for interagency coordination both at national and international level to efficiently address the environment and transport issues.

2. The geographic coverage of the EST Forum currently encompasses 25 countries in Northeast, Southeast, and South Asia (Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, People's Republic of China, Indonesia, India, Islamic Republic of Iran, Japan, Republic of Korea, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, the Philippines, Pakistan, Singapore, Sri Lanka, Thailand, Timor-Leste and Viet Nam and the Russian Federation).

3. A key characteristic of the EST Forum is that it brings together representatives from Ministries of Transport and Ministries of Environment. An important accomplishment of the EST Forum was the adoption of the Bangkok Declaration for 2020, Sustainable Transport Goals 2010 – 2020, focusing on national environmentally sustainable transport systems (2010)[1]. This unprecedented voluntary agreement was the first time that Asian countries adopted a joint declaration on environmentally sustainable transport.

[1] https://sustainabledevelopment.un.org/content/documents/bangkok_declaration.pdf

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4. The participants in the EST initiated discussions on a follow-up declaration to the Bangkok 2020 Declaration in the 11th, 12th and 13th Regional EST Forums and asked the EST Secretariat to develop an initial draft of a successor Declaration to the Bangkok 2020 Declaration. This draft, based on the recommendations of discussions in the 11th and 12th Regional EST Forums was presented and discussed in 2020, in the Thirteenth Regional Environmentally Sustainable Transport (EST) Forum in Asia[2]. As a next step a pre-Zero draft was developed which was subsequently discussed in a series of country consultations with EST member countries, UN organizations, multi- and bilateral development organizations, civils society organizations and sustainable transport experts. This resulted in the formal zero draft "Aichi 2030 Declaration on Environmentally Sustainable Transport - Making Transport in Asia Sustainable (2021-2030).

5. The proposed Aichi 2030 Declaration includes a set of time-bound goals and supporting strategies that were influenced by the 2030 Agenda on Sustainable Development - Sustainable Development Goals (SDGs) , the Paris Agreement on Climate Change and other international agreements on sustainable development. In its effort to contribute to the successful implementation of these different international agreements the Aichi 2030 Declaration combines targets and strategies supporting the development of the transport sector through the provision of additional sustainable, low carbon transport infrastructure and services to increase access with concerted efforts to make transport safer, and reduce emissions of air pollutants and greenhouse gasses .

Tracking the Aichi 2030 Declaration

6. With the vision and goals for the Aichi 2030 Declaration largely derived from the SDGs, the Paris Agreement on Climate Change and other international agreements, the organizations supporting the Aichi 2030 Declaration agree that reporting on the implementation of the Aichi 2030 Declaration can be an important contribution towards reporting the progress on the implementation of the SDGs, Paris Agreement, and other international agreements in the transport sector in Asia.

7. The tracking of the Aichi 2030 Declaration will be supported by the Asian Transport Outlook (ATO) which is developed and implemented through the Asian Development Bank.[3] The ATO contains a wide range of transport data and policy information, which covers 49 ADB members as well as Iran and Russia. All the EST member countries are covered in the ATO.

[2] https://sdgs.un.org/sites/default/files/2021-01/UNCRD_13th%20EST%20Forum_Forum%20Summary%20-%20Final-Adopted-issued-without%20formal%20editing-12%20Jan%202021.pdf

[3] The Asian Transport Outlook documents the transport sector in 51 economies in the Asian Pacific region and includes all 25 EST member countries. It collects information on Transport Infrastructure, Transport Activity and Services, Access and Connectivity, Road safety, Air Pollution and Health, Climate Change, Socio Economic factors relevant for the transport sector, and miscellaneous topics. See: https://www.adb.org/what-we-do/sectors/transport/overview#asian-transport-outlook and https://data.adb.org/dataset/asian-transport-outlook-database

8. The proposed monitoring of the new 2030 Declaration is divided into:

a. Tracking and reporting of the 6 goals in the Declaration. The indicators for this will be sourced from the ATO and responsibility for collection and organizing data will rest with the ATO team. As indicated in the Aichi 2030 Declaration, the indicators listed in the Declaration is an initial list of indicators. Following the adoption of the Aichi 2030 Declaration a review of the proposed indicators will follow, which can lead to improvements in the indicators .
b. Tracking of policies, institutional arrangements and funding in support of the new Declaration. This includes reporting on the strategies outlined in Annex 1 of the draft Aichi 2030 Declaration. EST member countries will be requested to submit annual progress reports. The information provided through the country reports will be combined with relevant policy information collected through the ATO.

9. To allow for successful tracking of the Aichi 2030 Declaration, there is a need for substantial strengthening in the collection, documentation and analysis of transport data and information on transport policy.

Baseline Report

10. In support of the 2021 14th EST Forum, where the Aichi 2030 Declaration is expected to be formally adopted a supportive baseline report is developed which describes the status of the 6 proposed goals under the new Aichi 2030 Declaration on Sustainable Transport. The purpose of the baseline report is to serve as a reference document for a regional EST review and to serve as an indicative benchmark to assess the overall progress and regional trends of sustainable transport development aligned with the 6 goals of the Aichi 2030 Declaration, the objectives of the SDGs and the Paris Agreement on climate change, among others. The baseline report is a reference document made available by the EST Secretariat on a "For Information basis", which is not part of the formally agreed upon outcome of the 14th EST Forum This baseline report was developed jointed by the EST Forum Secretariat and the ATO team. The baseline report is based on indicators listed above. The baseline report is developed at the regional, and in certain cases sub-regional level. Country level information is provided for the participating EST member countries through an Annex to the baseline report, which contains detailed datasets for the indicators included. The draft baseline report is/was circulated to EST member countries before the 14th EST Forum, to enable them to validate information in the baseline report and provide where relevant additional information for inclusion in the baseline report.

11. Figure 1 below provides an overview of how the goals of the Aichi 2030 Declaration on sustainable transport are linked to SDGs. As the goals in the Aichi 2030 Declaration are in a large part based on targets that are part of, or are linked to the SDGs use can be made of the indicators that have been developed to track transport related SDG targets. The most relevant indicators are in this context the Tier 1-2 indicators formulated by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs)[4].

[4] Tier I: Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant. Tier II: Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.

It is intended that the indicators in the baseline report provide a quick status overview of the current status of the six goals of the new Aichi 2030 Declaration on sustainable transport.

Figure 1: List of Indicators

EST Goal	SDG Target	SDG Indicator	Indicator No.	Initial Aichi 2030 Declaration Tracking Indicator	Associated ATO Indicator/s
Goal 1a – Low-Carbon (mitigation)	13.2	13.2.2	1	Transport Co2 emissions (Fossil) and GDP	CLC-VRE-045, CLC-VRE-064
	9.4	9.4.1			
			2	Modal share transport CO2 emissions	CLC-VRE-054, CLC-VRE-055, CLC-VRE-056, CLC-VRE-057
			3	Fuel subsidies in the transport sector	SEC-TFI-009
	12.c	12.c.1	4	Renewable energy in the transport sector	SEC-VRE-016
Goal 1b – Resiliency	7.2	7.2.1	5	Global climate risk for infrastructure	CLC-CVT-004
			6	Notre Dame - GAIN infrastructure vulnerability score	CLC-CVT-001
			7	Multi hazard expected annual damages to transport infrastructure/GDP	CLC-CVT-002
Goal 1c – Air pollution	11.5	11.5.2	8	Transport related air pollutant emissions (NOx, PM10, BC), transport related CO2 emissions, and GDP	APH-VAP-022, APH-VAP-021, APH-VAP-023, CLC-VRE-045, APH-AAP-001
			9	NOx and PM emissions by transport mode	APH-VAP-006, APH-VAP-007, APH-VAP-008, APH-VAP-009, APH-VAP-001, APH-VAP-002, APH-VAP-003, APH-VAP-004
	3.9	3.9.1	10	Transport air pollution health impact	APH-HAT-002
Goal 2 – Road safety	3.6	3.6.1	11	Road traffic crash fatalities	RSA-RSI-001
			12	Road traffic crash fatalities and GDP	RSA-RSI-001
			13	Traffic deaths by road user category	RSA-RSI-004, RSA-RSI-005, RSA-RSI-006, RSA-RSI-007, RSA-RSI-008
			14	IRAP safety rating of road infrastructure	RSA-SRI-009, RSA-SRI-010, RSA-SRI-011, RSA-SRI-012
Goal 3 - Economic sustainability			15	Transport share in GDP	SEC-TIV-001
			16	Multilateral Development Bank funding for transport	SEC-TIV-005
			17	PPP investments in transport	SEC-TIV-013
			18	Transport employment	SEC-TRE-001
			19	Logistics Performance Index (LPI)	TAS-TSG-004

EST Goal	SDG Target	SDG Indicator	Indicator No.	Initial Aichi 2030 Declaration Tracking Indicator	Associated ATO Indicator/s
Goal 4 - Rural access	9.1	9.1.1	20	Rural population who live within 2 km of an all-season road	ACC-RAC-001
Goal 5 - Urban access	11.2	11.2.1	21	Share of population with convenient access to public transport	ACC-UDB-001
			22	Rapid Transit to Resident ratio (RTR)	ACC-UAC-002
Goal 6 - National access and connectivity			23	Transport infrastructure growth	INF-TTI-005, INF-TTI-016, INF-TTI-019, INF-UTI-001, INF-UTI-002, INF-UTI-003, TAS-VEP-060
			24	Transport infrastructure score	INF-TTI-001
			25	Transport connectivity	ACC-NRC-003, ACC-NRC-004, ACC-NRC-005
	9.1	9.1.2	26	Passenger and freight transport activity	TAS-PAG-001, TAS-FRA-001
	17.6	17.6.1	27	ICT broadband coverage and internet use	INF-ICT-009, INF-ICT-010, INF-ICT-006
	9.c	9.c.1			
	17.8	17.8.1			

12. This baseline report on the Aichi 2030 Declaration establishes a regional and national baseline for its proposed goals and provides the basis for regional monitoring in an ambitious, consistent, and collaborative manner. This baseline report also identifies prospects and opportunities for enhanced action to address sustainability in the transport sector in the longer term in the EST region.

13. Once the Aichi 2030 Declaration has been formally approved in the 14th EST Forum it is expected that an annual status report on the implementation of the Aichi 2030 Declaration is developed and published. Like the baseline report the annual status reports will serve as a reference document for a regional EST review and to serve as an indicative benchmark to assess the overall progress and regional trends of sustainable transport development aligned with the 6 goals of the Aichi 2030 Declaration, the objectives of the SDGs and the Paris Agreement on climate change, among others. It is expected that the indicators included in the baseline report will be used for the annual status reports[5], this taking into account any changes in indicators that might be agreed upon as an outcome of the review of the initial indicators following the adoption of the Aichi 2030 Declaration.

14. This baseline report prepared for the 14th EST Forum contains mostly information for 2018 and 2019. It typically takes a few years before information on the different indicators is available for all EST member countries. It is expected that 2020 data will be available for most of the proposed indicators by the 15th EST Forum in 2022. This means that for relevant indicators data will be indexed at 100 for the different indicators to allow comparison across countries for the implementation of the 6 goals of the 2030 Declaration on sustainable transport.

[5] In some cases this might be problematic because the required data for annual updates might not always be available. In some cases, as new data sources become available, additional indicators might be added for one or more of the goals in the Aichi 2030 Declaration.

Goals assessed in this Baseline Report

***Goal 1 - Environment sustainability**: By 2030, improve the environmental sustainability of transport in Asia for the following areas: Goal 1a – Low-Carbon (climate change mitigation), Goal 1b – Resilience, Goal 1c – Air pollution*

***Goal 2 – Road safety:** By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users. (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety)*

***Goal 3 - Economic sustainability:** By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services, (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c).*

***Goal 4 - Rural access:** By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1).*

***Goal 5 - Urban access:** By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7).*

***Goal 6 - National access and connectivity:** By 2030, facilitate inclusive multi-modal national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1).*

II. GOALS ASSESSED IN THIS BASELINE REPORT

15. This baseline report assesses the 6 goals included in the formal zero draft of Aichi 2030 Declaration on Environmentally Sustainable Transport - Making Transport in Asia Sustainable (2021-2030).

***Goal 1 Environment sustainability*:** By 2030, improve the environmental sustainability of transport in Asia for the following areas:

> ***Goal 1a – Low-Carbon (climate change mitigation):*** By 2030, aim to peak transport carbon dioxide emissions and initiate reductions in transport related carbon dioxide emissions with the intention to move towards decarbonization of the transport sector by 2050, or shortly thereafter (Based on SDG 7.2, 9.1, 13.2, Paris Agreement);[6]

> ***Goal 1b – Resilience:*** By 2030, increase resilience and adaptive capacity of transport system to climate-related hazards and pandemics such as COVID-19. (Based on SDG 13, Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030);

> ***Goal 1c – Air pollution:*** By 2030, reduce air pollution and contamination caused by traffic, including PM2.5, other air pollutants and noise. (Based on SDG 3.9, 11.6).

***Goal 2 – Road safety*:** By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users. (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety).

Goal 3 - Economic sustainability: By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services, (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c).

***Goal 4 - Rural access*:** By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1).

[6] To realize the objective of the Paris Agreement on Climate Change, it is not expected that global emissions from the transport sector will be zero by 2050. It is estimated that transport emissions will be around 1.8-3.3 GT Gt of CO2-equivalent at the global level (Gota et. al. (2017) https://www.ipcc.ch/sr15/, https://link.springer.com/article/10.1007/s12053-018-9671-3, ICCT (2020) https://theicct.org/sites/default/files/publications/ICCT_Vision2050_sept2020.pdf). It is estimated that a Paris Agreement aligned pathway for the transport sector for all of Asia (not limited to the EST member countries and excluding international shipping and aviation) could emit about 0.5 Gt CO2 eq (Global Energy and Climate Outlook 2020: A New Normal beyond Covid-19, https://ec.europa.eu/jrc/en/geco)

Goal 5 - Urban access: By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7).

Goal 6 - National access and connectivity: By 2030, facilitate inclusive multi-modal national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1).

16. The information gathered, compiled and synthesized in the baseline report is mainly derived from the Asian Transport Outlook (ATO). The baseline report captures trends using data from multiple official national and regional transport statistical reports, supplemented by data from reputed international publications and research studies documented in the ATO. The baseline analysis does not generate any new data and does not entirely resolve issues concerning the consistency, comparability, and quality of transport data. The diversity of the national circumstances is duly acknowledged. It is hoped that data availability and quality would be improved in future monitoring reports. The country based data relevant to the quantitative analysis is documented in the annexure to create transparency.

Goal 1 - Environmental Sustainability

By 2030, improve the environmental sustainability of transport in Asia for the following areas:

Goal 1a – Low-Carbon (climate change mitigation): By 2030, aim to peak transport carbon dioxide emissions and initiate reductions in transport related carbon dioxide emissions with the intention to move towards decarbonization of the transport sector by 2050, or shortly thereafter (Based on SDG 7.2, 9.1, 13.2, Paris Agreement)

Goal 1b – Resilience: By 2030, increase resilience and adaptive capacity of transport system to climate-related hazards and pandemics such as COVID-19. (Based on SDG 13, Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030)

Goal 1c – Air pollution: By 2030, reduce air pollution and contamination caused by traffic, including PM2.5, other air pollutants and noise. (Based on SDG 3.9, 11.6)

Goal – 1 Environmental Sustainability

Goal 1a – Low-Carbon (climate change mitigation)

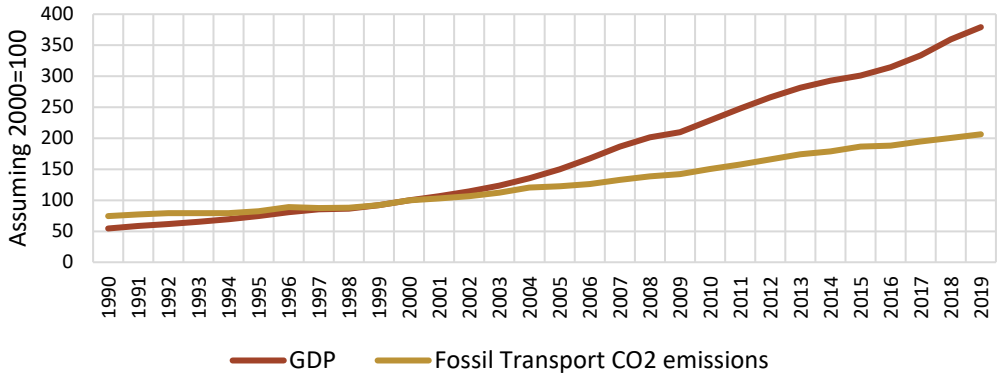
Goal 1a – By 2030, aim to peak transport carbon dioxide emissions and initiate reductions in transport related carbon dioxide emissions with the intention to move towards decarbonization of the transport sector by 2050, or shortly thereafter (Based on SDG 7.2, 9.1, 13.2, Paris Agreement)

Indicator 1: Transport CO2 emissions (Fossil) and GDP[7]

(Associated ATO Indicators: CLC-VRE-045, CLC-VRE-064)[8]

17. In 2019, the transport sector in EST countries emitted about 2.4 Gt (fossil fuel) CO2 emissions. The transport sector is responsible for 16% of direct CO2 emissions from fuel combustion. Therefore, it is helpful to compare transport emission trends to GDP trends to determine if EST countries transport sector is becoming CO2 intensive. Since 2000, the transport CO2 emissions increased at an annual rate of 3.9%, significantly lower than the GDP yearly growth of 7.3% (Figure 2), thereby lowering the emission intensity of the transport sector. In 2000, the fossil transport emission intensity in EST countries was about 78 g of CO2/$GDP, and it reduced to 43 g/$GDP9 in 2019. In the last two decades, in 84% of EST countries, the transport emission intensity has diminished, i.e., except in Lao PDR, Afghanistan, Cambodia and Iran (the Islamic Republic of). However, the emission intensity varies widely across EST countries, owing to various factors, i.e., energy intensity, economic structure, fuel mix, etc. Further, the overall intensity of growth of transport CO2 emissions in EST economies has slightly lessened in the last decade compared to the intensity of development in 2000 to 2010.

Figure 2. Fossil transport CO2 emissions and GDP of EST countries from 1990-2019

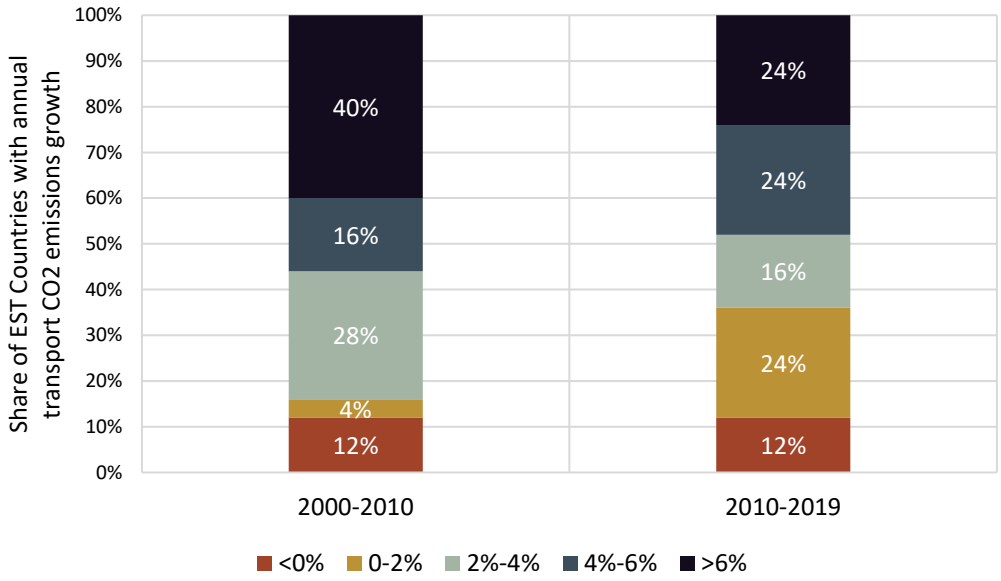


Sources: World Bank. GDP, PPP (current international $). https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD; Crippa et al. (2020). EDGAR v6.0 Global Greenhouse Gas Emissions. https://edgar.jrc.ec.europa.eu/report_2020#data_download

[7] This refers to the total fossil fuel CO2 emissions emitted by the transportation sector and its share in total CO2 emissions.
[8] See Tables 3, 8 in Annex for country specific data
[9] Gross domestic product (GDP) expressed in current international dollars, converted by purchasing power parity (PPP) conversion factor.

18. In the last decade the growth of transport emissions as a share of total CO2 emission growth has slowed down somewhat. In the period 2000 – 2010 16% of the EST countries had a growth of transport CO2 emissions of less than 2%, in the period 2010 – 2019 this had increased to 36 %. (Figure 3). During the same time the share of countries that saw increases of above 6% went down from 40% to 24%. Among EST countries, since 2010, the transport CO_2 emissions have increased in the low-income & lower-middle-income economies (45%), upper-middle-income economies (48%) and reduced in high-income economies (-6%).

Figure 3. Proportion of EST countries by annual CO2 emissions growth for 2000-2010 and 2010-2019



Source: Crippa et al. 2020. EDGAR v6.0 Global Greenhouse Gas Emissions. https://edgar.jrc.ec.europa.eu/report_2020#data_download

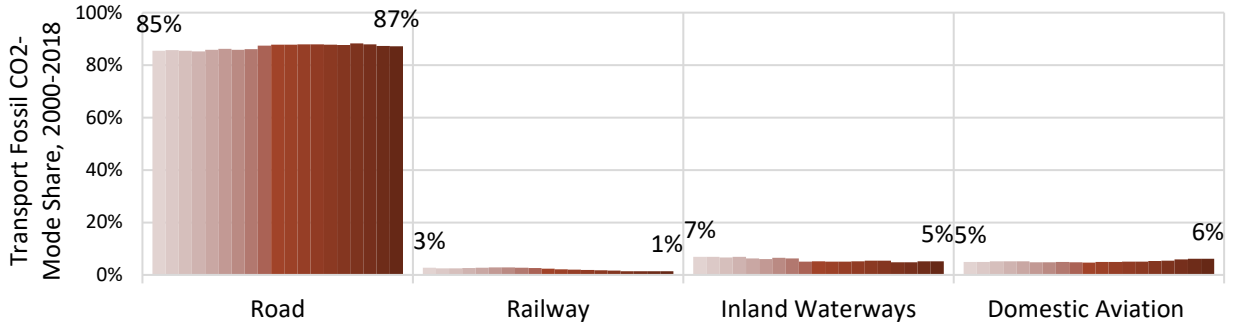
Indicator 2: Modal share transport CO2 emissions[10]

(Associated ATO Indicators: CLC-VRE-054, CLC-VRE-055, CLC-VRE-056, CLC-VRE-057)[11]

19. Most transport CO2 emissions are contributed by roads with a share of 87% in 2018 (Figure 4). In comparison, the percentage of domestic aviation, inland waterways and railways in total transport CO2 emissions in 2018 is only 6%, 5% and 1%, respectively. Since 2000, increase in transport emissions for the different modes was as follows: the roads (113%), railways (9%), domestic aviation (159%), and inland waterways transport (57%), respectively.

[10] This refers to the total CO2 emissions emitted by the road transportation, railway transportation, domestic navigation, and domestic aviation sector. We consider fossil CO2 emissions.
[11] See Tables 4-7 in Annex for country specific data

Figure 4. Transport CO2 emissions by mode in EST countries



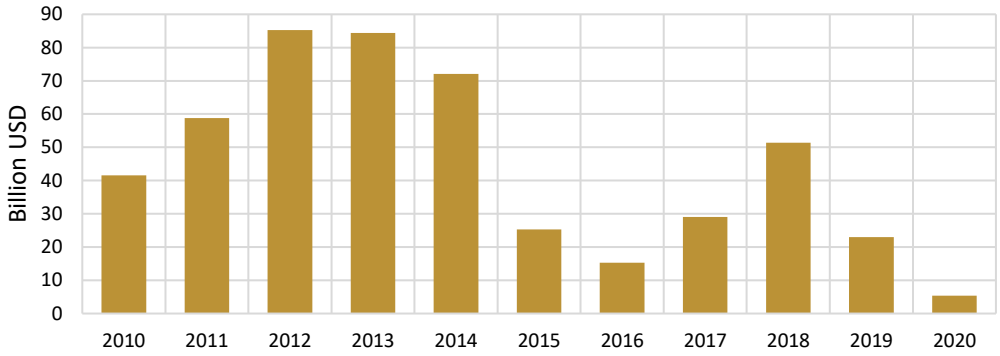
Source: Crippa et al. 2020. EDGAR v6.0 Global Greenhouse Gas Emissions. https://edgar.jrc.ec.europa.eu/dataset_ghg60

Indicator 3: Fuel subsidies in the transport sector[12]

(Associated ATO Indicator: SEC-TFI-009)[13]

20. In 2020, global fossil fuel subsidies in the transport sector accounted for 26 billion US$. Fossil fuel subsidy reform contributes towards a reduction in transport motorized activity, a shift to more fuel-efficient modes and stimulates vehicle technology innovation, thereby decreasing emissions and air pollution. Figure 5 indicates that fuel subsidies in the EST countries peaked in 2012 and 2013 at about 80 billion US$, since then they have come down considerably. In 2020, EST countries still spent nearly 5.3 billion USD to subsidize fossil fuel use in the transport sector, which counts for about 20% of the global transport fossil fuel subsidy and 3% of the total fossil fuel subsidy across all industries. In 2020, compared to 2010, in all EST countries, the fossil fuel subsidy in the transport sector was eliminated or reduced[14].

Figure 5. Transport fossil fuel subsidies in EST countries from 2010-2020



Source: International Energy Agency. Fossil fuel consumption subsidies, 2010-2020. https://www.iea.org/topics/energy-subsidies

[12] The IEA estimates subsidies to fossil fuels that are consumed directly by end-users or consumed as inputs to electricity generation. The indicator considers the ratio of fossil fuel subsidy in the transport sector to all the sectors in the economy. The subsidy is estimated by comparing average end-user prices paid by consumers with reference prices that correspond to the full cost of supply.

[13] See Table 9 in Annex for country specific data

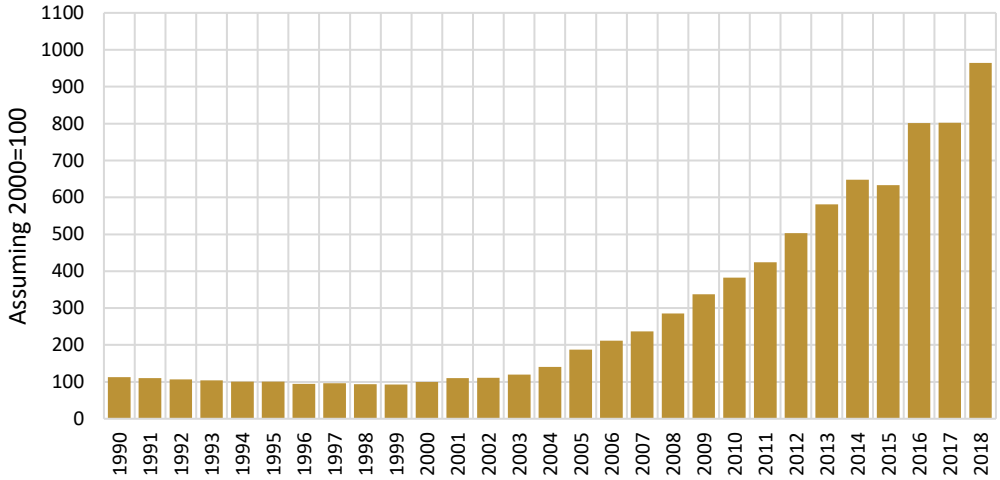
[14] COVID transport restrictions are believed to have played a major role in reducing fossil fuel consumption

Indicator 4: Renewable energy in the transport sector[15]

(Associated ATO Indicator: SEC-VRE-016)[16]

21. In EST countries, the transport sector remains the least diversified energy sector. Of all the renewable energy consumed in the energy sector, the EST transport share is still only 1.5%. In Asia, in 2018, about 88% of the transport sector is driven by oil, 8% by natural gas, 3% by electricity, and biofuels constitute about 1% of total transport fuel use. Since 2000, renewable energy in transport in EST countries has increased at an annual rate of 13%, with most of the growth having taken place since the middle of the last decade (Figure 6).

Figure 6. Renewable energy consumed by the transport sector in EST countries



Source: Tracking SDG7: The Energy Progress Report. https://trackingsdg7.esmap.org/downloads

[15] This indicator refers to the renewable energy consumption in transport sector
[16] See Table 10 in Annex for country specific data

Goal 1b – Resilience

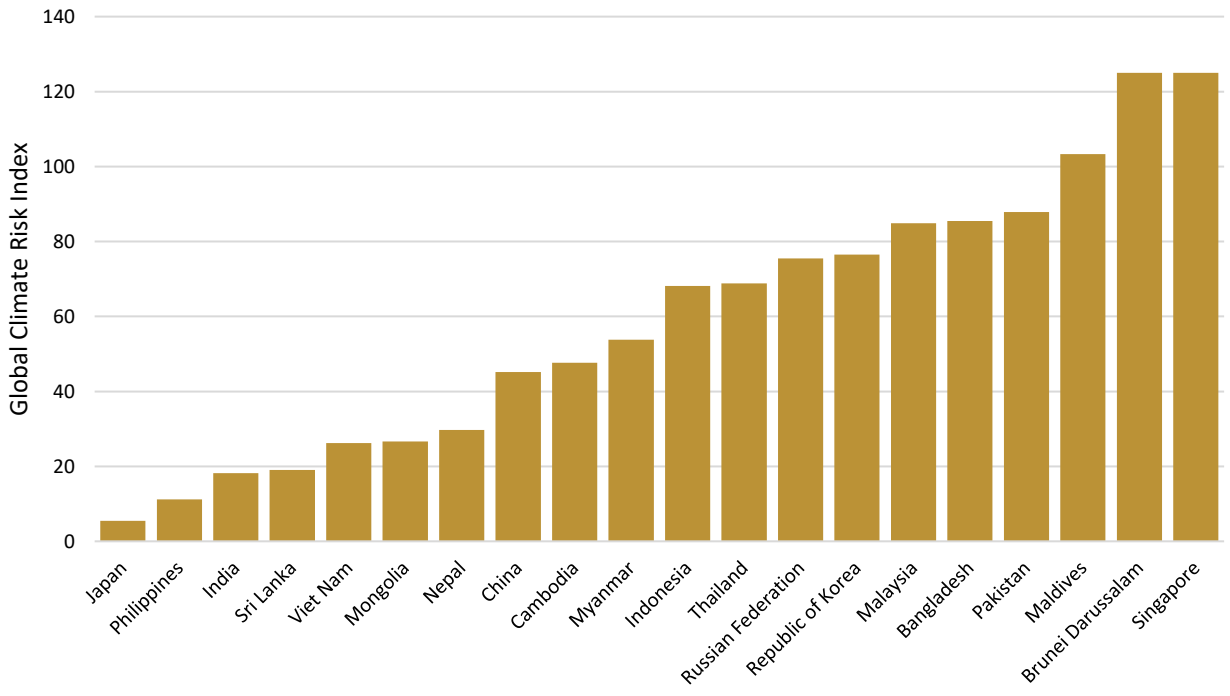
Goal 1b – Resilience (climate change adaptation): By 2030, increase resilience and adaptive capacity of transport system to climate-related hazards and pandemics such as COVID-19. (Based on SDG 13, Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030).

Indicator 5: Global climate risk for infrastructure[17]

(Associated ATO Indicator: CLC-CVT-004)[18]

22. Transport infrastructure and services with low resilience to climate change can impose high costs for maintenance, repair, in the case of climate change related disruptions. The Global Climate Risk Index 2021 analyses impacts of weather-related loss events (storms, floods, heat waves etc.) based on four indicators: total number of deaths, deaths per 100,000 inhabitants, absolute losses US$ purchasing power parities (PPP) and losses per unit GDP (in %) Figure 7 shows the 2021 rankings for the 25 EST countries. Over 2000-2019 of the global top 10 countries with the highest risk, 6 are EST countries – Myanmar, Philippines, Bangladesh, Pakistan, Thailand, and Nepal.

Figure 7: Global Climate Risk Index of EST countries in 2021



Source: Eckstein et al. 2021. Global Climate Risk Index 2021. https://germanwatch.org/en/19777

[17] Global Climate Risk Index analyses to what extent countries have been affected by the impacts of weather-related loss events (storms, floods, heat waves etc.)

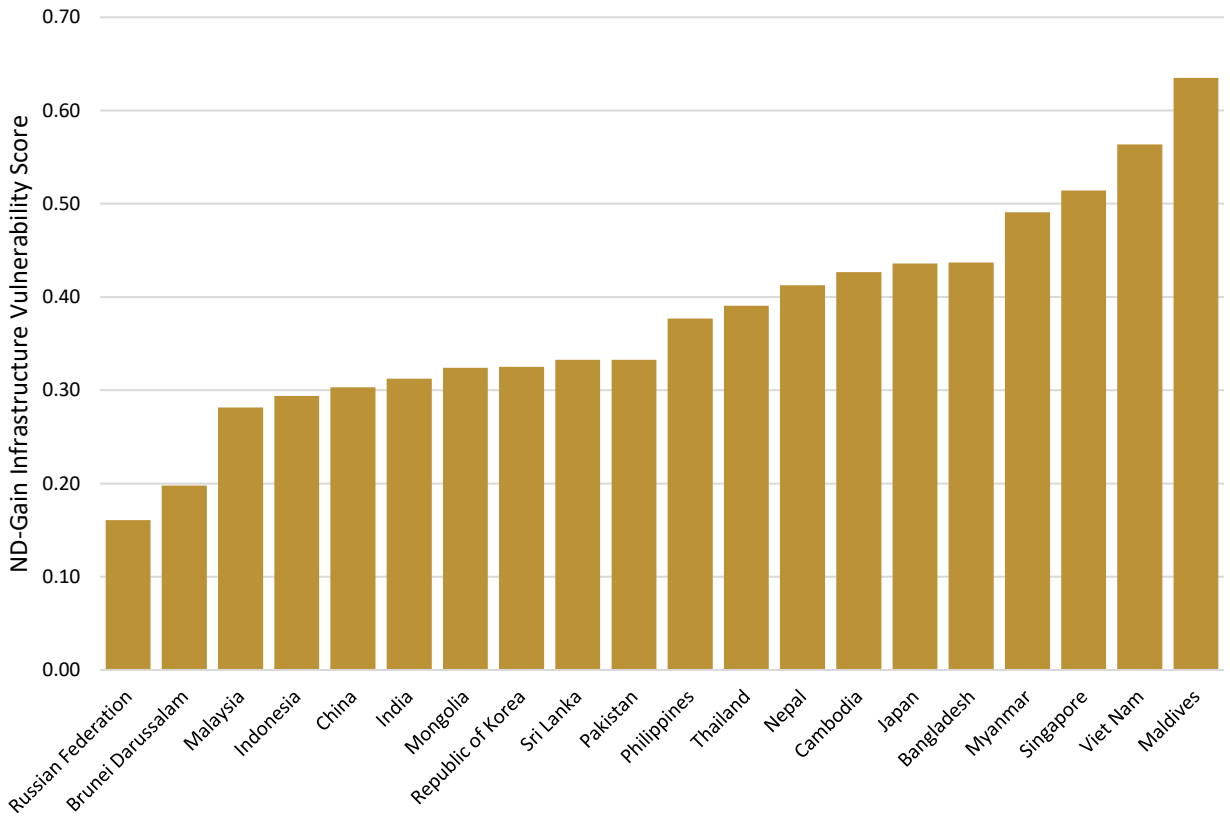
[18] See Table 12 in Annex for country specific data

Indicator 6 : Notre Dame - GAIN infrastructure vulnerability score[19]

(Associated ATO Indicator: CLC-CVT-001)[20]

23. The climate vulnerability of infrastructure is assessed using Notre Dame Global Adaptation Index (ND-GAIN). The ND Gain climate vulnerability of infrastructure rating combines three cross-cutting components i.e., the vulnerability of infrastructure, which is a function of location, its exposure and sensitivity to climate change and its adaptive capacity. (Figure 8).

Figure 8: ND-Gain Infrastructure Vulnerability Score



Source: Chen et al. 2015. Notre Dame Global Adaptation Inititative (ND-GAIN), Infrastructure Vulnerability Score. https://gain.nd.edu/

24. Overall, since 2000, there is a slight decrease in climate vulnerability of infrastructure, i.e., from 0.35 to 0.32, indicating a slight improvement in adaptive capacity of the overall infrastructure sector to cope or adapt to climate-exacerbated hazards.

[19] The Infrastructure score captures the vulnerability of coastal and energy infrastructure to climate change, primarily general preparedness to climate-related natural disasters, coastal hazards, and energy supply challenges. Indicators include projected change of hydropower generation capacity, projected change of sea level rise impacts, dependency on imported energy, population living under 5m above sea level, electricity access, and disaster preparedness.

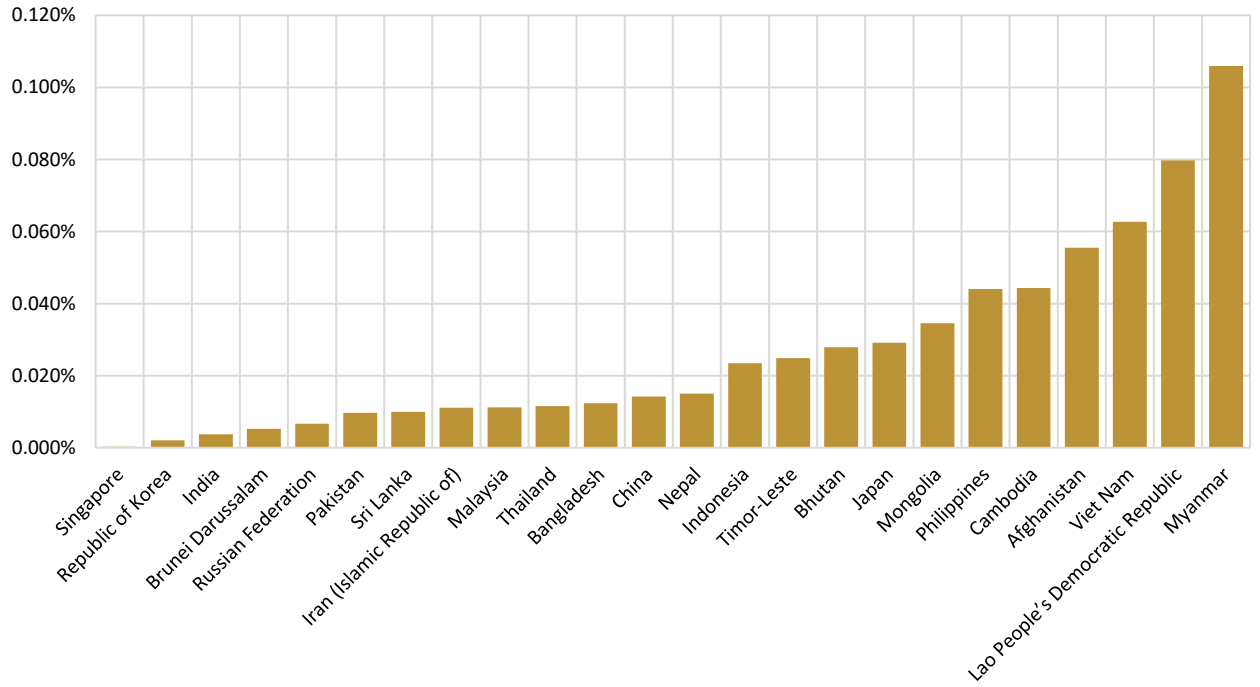
[20] See Table 13 in Annex for country specific data

Indicator 7 : Multi hazard expected annual damages to transport infrastructure/GDP[21]

(Associated ATO Indicator: CLC-CVT-002)[22]

25. Natural disasters can impact the entire transport network and services, with the impacts depending on location and design. The impacts can include flooding of roads, damage to railway networks and ports, increased maintenance costs due to damage, and service disruption. In EST countries, in 2018, the impact of tropical cyclones, earthquakes, surface flooding, river flooding, and coastal flooding on road and railway assets was believed to be about 8 billion USD[23]. While the highest absolute expected annual damages (EAD) are observed in high-income countries, low-and-middle-income countries are at the highest risk when considered relative to GDP. At the country level, total EAD is highest for countries with large transport asset totals. The average EAD to GDP ratio for EST countries is about 0.014%, and the global average is 0.02%[24] (Figure 9).

Figure 9. Multi-hazard expected annual damages to road and rail infrastructure/ GDP of EST countries



Source: Koks et al. 2019. A global multi-hazard risk analysis of road and railway infrastructure assets. https://www.nature.com/articles/s41467-019-10442-3

[21] Infrastructure damages are estimated using a variety of sources of cost data, fragility curves, and assumed parameters for each hazard. These represent direct damages to road and rail assets, and do not include the costs from transport delays and disruption, or wider economic impacts.

[22] See Table 14 in Annex for country specific data

[23] Koks et al. 2019. A global multi-hazard risk analysis of road and railway infrastructure assets. https://www.nature.com/articles/s41467-019-10442-3

[24] https://www.nature.com/articles/s41467-019-10442-3#Sec15

Goal 1 C – Air pollution

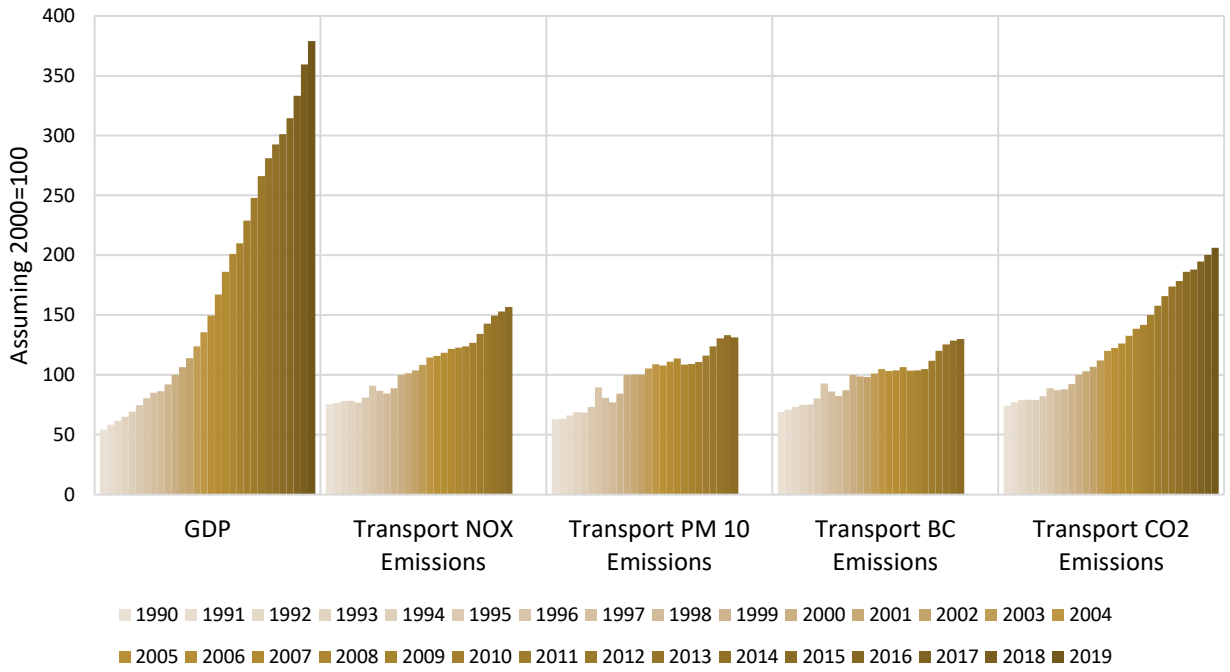
Goal 1c – Air pollution: By 2030, reduce air pollution and contamination caused by traffic, including PM2.5, other air pollutants and noise. (Based on SDG 3.9, 11.6).

Indicator 8 : Transport related air pollutant emissions (NOx, PM10, BC), transport related CO2 emissions, and GDP[25]

(Associated ATO Indicators: APH-VAP-022, APH-VAP-021, APH-VAP-023, CLC-VRE-045, APH-AAP-001)[26]

26. The transport sector is a significant contributor to outdoor air pollution and associated health impacts. Evidence from epidemiological and toxicological studies[27] indicates that transport-related air pollution affects several health outcomes. The use of fossil fuels in transport operations results in a complex mixture of air pollutants, many of which are harmful to health, i.e. linked to acute respiratory infections, cerebrovascular diseases (stroke), ischaemic heart diseases chronic obstructive pulmonary disease and lung cancer.

Figure 10. Growth of Transport NOx, PM 10, BC, and CO2 emissions in EST countries from 1990-2019



Source: World Bank. GDP, PPP (current international $). https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD; Crippa et al. 2020. EDGAR v6.0 Global Greenhouse Gas Emissions. https://edgar.jrc.ec.europa.eu/report_2020#data_download

[25] Transport NOX, PM 10, BC, CO2, PM 2.5 emissions i.e. all modes combined
[26] See Tables 3, 15-18 in Annex for country specific data
[27] https://www.euro.who.int/en/data-and-evidence/evidence-informed-policy-making/publications/hen-summaries-of-network-members-reports/what-are-the-effects-on-health-of-transport-related-air-pollution

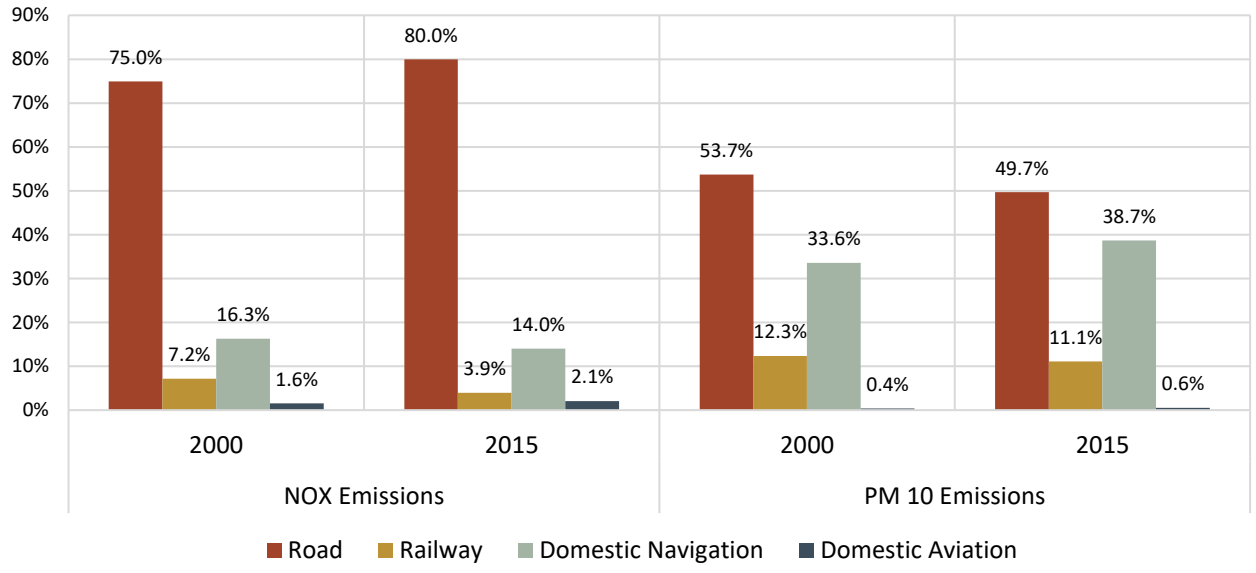
27. In EST economies, in 2017, the population-weighted exposure to ambient PM2.5 pollution, i.e. average level of population exposure to concentrations of suspended particles measuring less than 2.5 microns, was about 58 micrograms per cubic meter. Since 2000, the population-weighted exposure to ambient PM2.5 pollution has not reduced. The transport sector is a major pollution contributor, producing significant particulate matter, nitrogen oxides, carbon monoxide, and other pollution. From 2000 to 2015, transport PM10, Black carbon (B.C.) and NOx emissions increased at an annual rate of 1.8%, 1.8% and 3%, respectively (Figure 10). This is significantly lower than the GDP yearly growth of 7.6%, thereby lowering the emission intensity of the transport sector. Air pollutants from the transport sector increased at a slower rate than CO2 emissions, which increased at a rate of 3.9%, indicating the somewhat better performance of air pollution mitigation policies when compared with the low-carbon policies in the transport sector. This can be linked to the trend towards more stricter vehicle emission standards and fuel quality standards in many of the EST countries.

Indicator 9 : NOX and PM emissions by transport mode[28]

(Associated ATO Indicators: APH-VAP-006, APH-VAP-007, APH-VAP-008, APH-VAP-009, APH-VAP-001, APH-VAP-002, APH-VAP-003, APH-VAP-004, APH-HAT-002)[29]

28. Roads contribute close to 50% of transport related PM 10 emissions and 80% of NOx emissions in EST countries, while domestic navigation contributes close to 40% of PM 10 emissions and 14% of NOx emissions. Since 2000, the highest intensity of growth in PM 10 and NOx emissions is in domestic aviation mode, while railways had a minor change with an 18% increase in PM10 emissions and a 15% reduction in NOx emissions (Figure 11).

Figure 11. NOx and PM 10 emissions in EST countries by mode



Source: Crippa et al. 2020. EDGAR v6.0 Global Greenhouse Gas Emissions. https://edgar.jrc.ec.europa.eu/report_2020#data_download

[28] NOX and PM 10 Emissions due to road transport, railway transport, domestic navigation, domestic aviation activity in 1000 tonnes. The emissions are estimated using bottom-up data and assumptions on fleet, technology, usage etc. Also considers health impact of transport PM 2.5 emissions

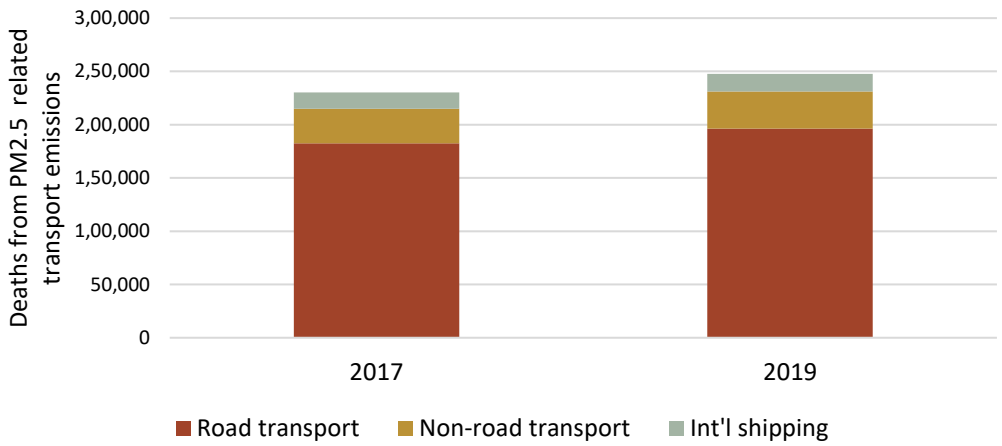
[29] See Tables 19-26 in Annex for country specific data

Indicator 10: Transport air pollution health impact

(Associated ATO Indicator:APH-HAT-002)

29. The 2019 Global Burden of Diseases, Injuries, and Risk Factors Study estimated that long-term exposure to fine particulate air pollution (PM2.5) from the transport sector contributed to about 248,000 premature deaths in the EST region.[30] Close to 80% of attributable deaths due to transport-related air pollution in 2019 was due to road transport. The premature deaths in the EST region increased from 2017 till 2019 by about 7.5%. (Figure 12)

Figure 12: Deaths from PM2.5 related transport emissions



Source: McDuffie et al. Fine Particulate Matter and Global Health: Fuel and Sector Contributions to Ambient PM2.5 and its Disease Burden Across Multiple Scales, https://costofairpollution.shinyapps.io/gbd_map_global_source_shinyapp/

[30] See Table 27 in Annex for country specific data

Goal 2 - Road Safety

By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety).

Goal – 2 Road Safety

Goal 2 – Road safety: By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users. (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety).

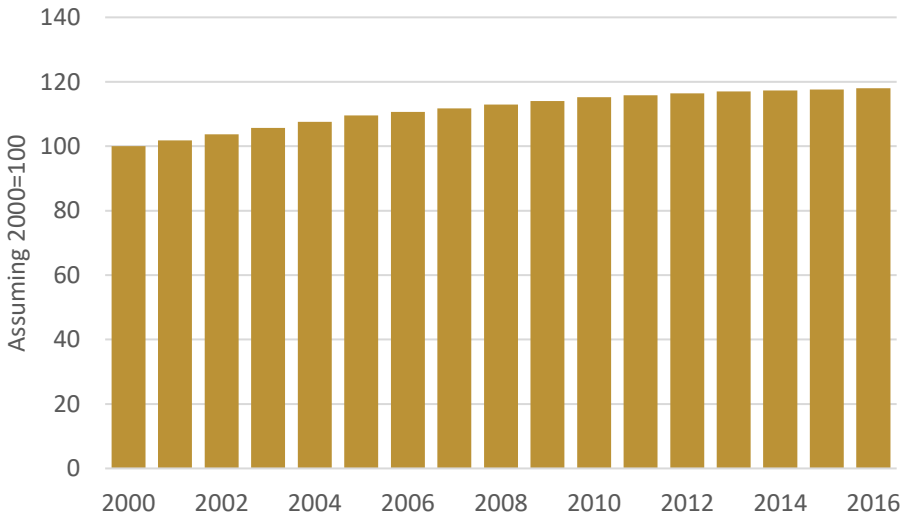
Indicator 11 : Road traffic crash fatalities[31]

(Associated ATO Indicator: RSA-RSI-001)[32]

30. In 2016, close to 790,000 people died due to road traffic crashes in the EST countries. This constituted about 60% of global road traffic crash deaths. In terms of injuries due to road crashes, World Health Organization has estimated about 11.6 million injuries in 2016 in EST countries.

31. Since 2000, in about 36% of EST countries, road traffic crashes fatalities have reduced. But, overall, the road traffic crashes fatalities has increased by 18% in EST countries (Figure 13). Furthermore, road traffic injuries cause substantial economic losses to countries considering the cost of treatment and lost productivity for those killed or disabled by their injuries. In 2016, the cost of fatalities and serious injuries was estimated to be about 1.1 trillion USD[33,34].

Figure 13. Road traffic crash fatalities in EST countries from 2000-2016



Source: WHO. https://www.who.int/publications/i/item/9789241565684

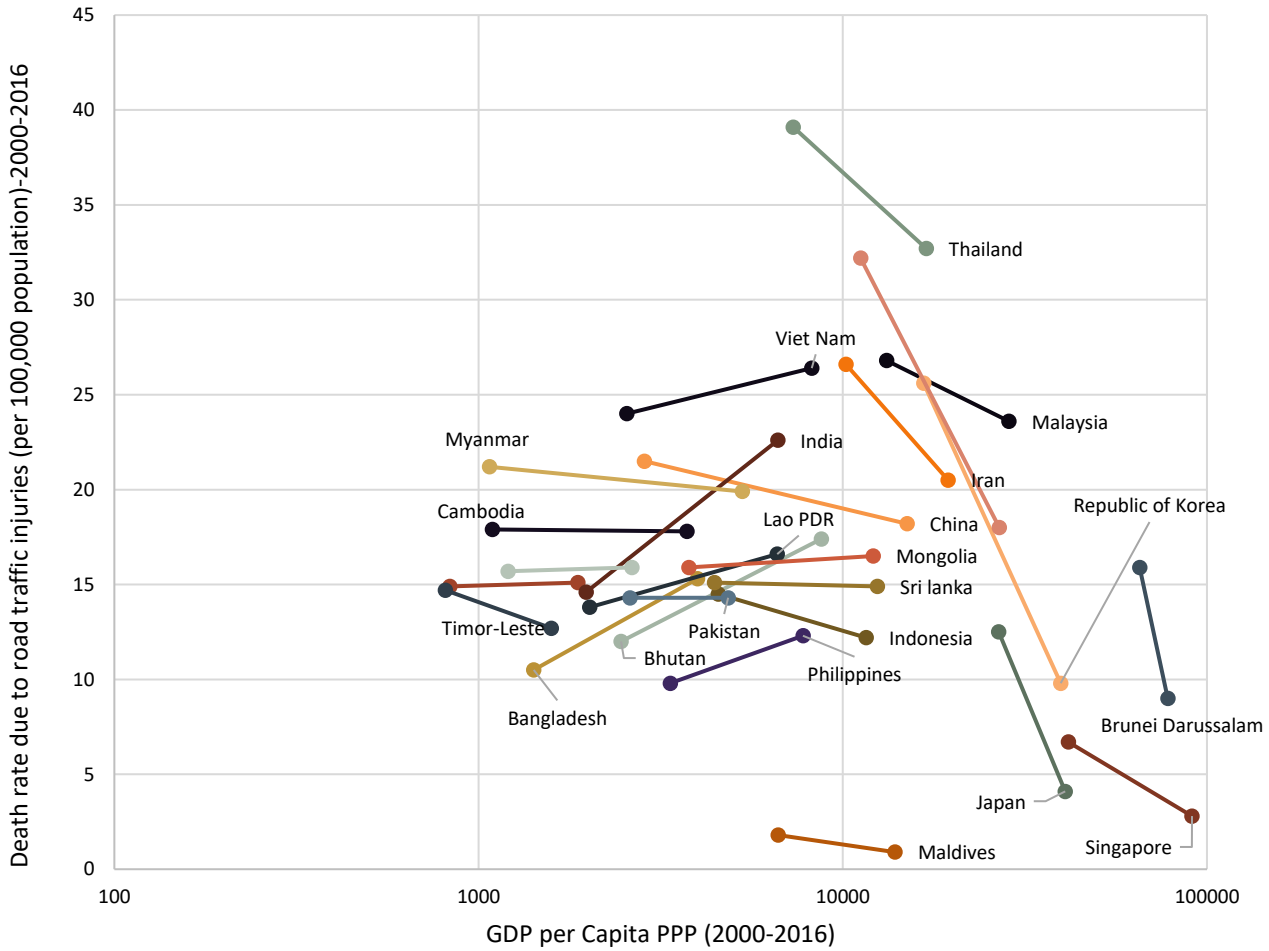
[31] Road Traffic Crash Fatalities means any person killed immediately or dying within 30 days as a result of a road injury accident. Suicides involving the use of a road motor vehicle are excluded.
[32] See Tables 28 and 30 in Annex for country specific data
[33] https://www.roadsafetyfacility.org/publications/guide-road-safety-opportunities-and-challenges-low-and-middle-income-country-profiles
[34] See Table 31 in Annex for country specific data

Indicator 12 : Road traffic crash fatalities and GDP[35]

(Associated ATO Indicator: RSA-RSI-001)[36]

32. The number of people dying as a consequence of road crashes in the EST region remains high. In 2016, close to 790,000 person died in this manner in the EST region. In terms of road traffic crash intensity (per 100,000 population), since 2000, 60% of EST countries have lowered the crash fatality per 100,000 population (Figure 14). However, overall, the intensity has remained stable at 2000 levels, with about 18.7 deaths per 100,000 population[37].

Figure 14. Road crash fatality rate vs GDP per capita of EST countries from 2000-2016



Source: The Lancet. 2017. Global Burden of Disease (GBD) Study 2017. https://www.thelancet.com/gbd

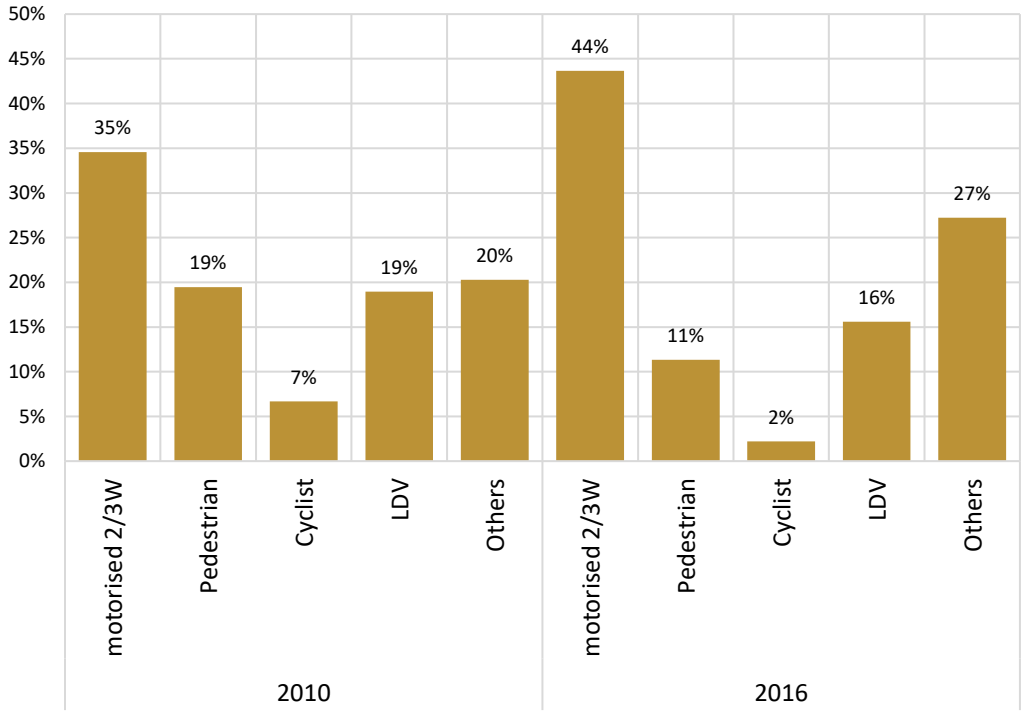
[35] Road Traffic Crash Fatalities means any person killed immediately or dying within 30 days as a result of a road injury accident. Suicides involving the use of a road motor vehicle are excluded.
[36] See Table 30 in Annex for country specific data
[37] For example, the average in the European Union was 5.1 deaths per 100 000 inhabitants in 2019.

Indicator 13 : Traffic deaths by road user category[38]

(Associated ATO Indicators: RSA-RSI-004, RSA-RSI-005, RSA-RSI-006, RSA-RSI-007, RSA-RSI-008)[39]

33. Vulnerable road users such as pedestrians (11%), cyclists (2%), and motorcyclists (44%) continue to be the group most affected by road crashes, i.e., more than half of all road traffic deaths in EST countries (Figure 15). In fact, since 2010, the share of vulnerable road users (non-LDV) in road traffic deaths has increased. One of the main reasons for the increase in vulnerable road user fatalities is unsafe infrastructure.

Figure 15. Road crash deaths by road user types in EST countries in 2010 and 2016



Source: World Health Organization (WHO). 2018. Global status report on road safety 2018. https://www.who.int/publications/i/item/9789241565684

[38] Reported distribution of road traffic deaths by type of road user type. Motorised 2/3W, Pedestrian, Cyclist, LDV, and Others are considered here

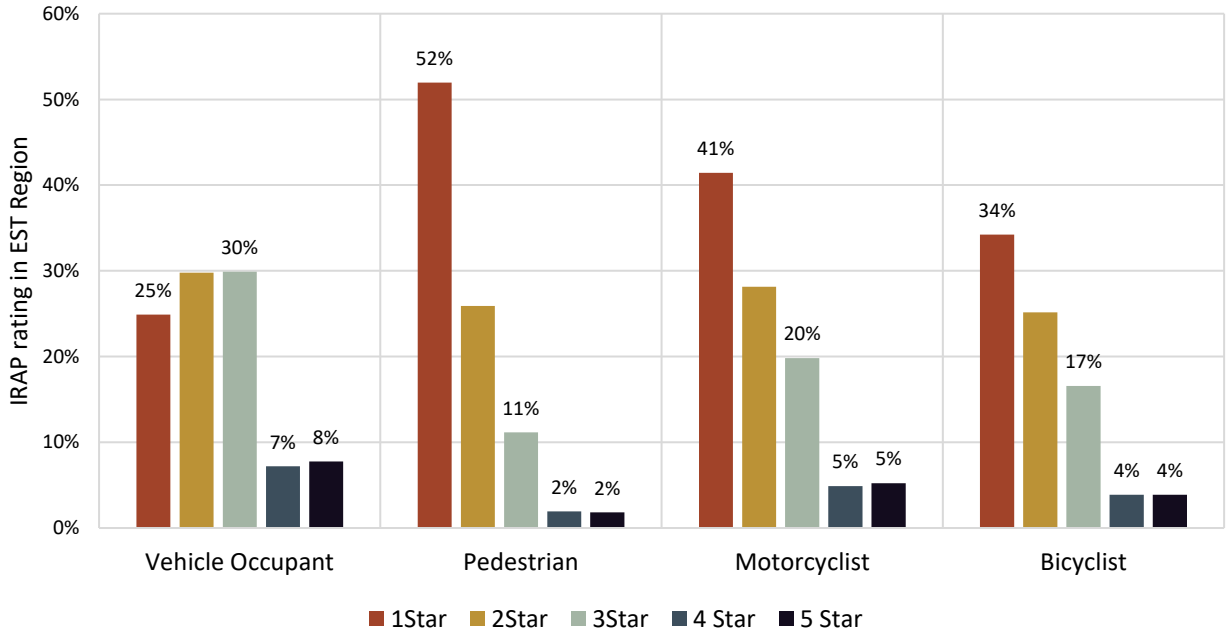
[39] See Table 29 in Annex for country specific data

Indicator 14 : IRAP safety rating of road infrastructure[40]

(Associated ATO Indicators: RSA-SRI-009, RSA-SRI-010, RSA-SRI-011, RSA-SRI-012)[41]

34. The International Road Assessment Programme (iRAP) Star Ratings[42] suggest that transport infrastructure safety ratings from the perspective of motorcyclists, bicyclists and pedestrians are poor. Based on road inspection data, iRAP has estimated that only about 45%, 30%, 24% and 15% of streets in the EST countries are three-star or above ratings for vehicle occupants, motorcyclists, bicyclists, and pedestrians, respectively (Figure 16). This means that the bulk of road transport infrastructure in Asia is not safe.

Figure 16. Average IRAP rating in the EST region by road user type

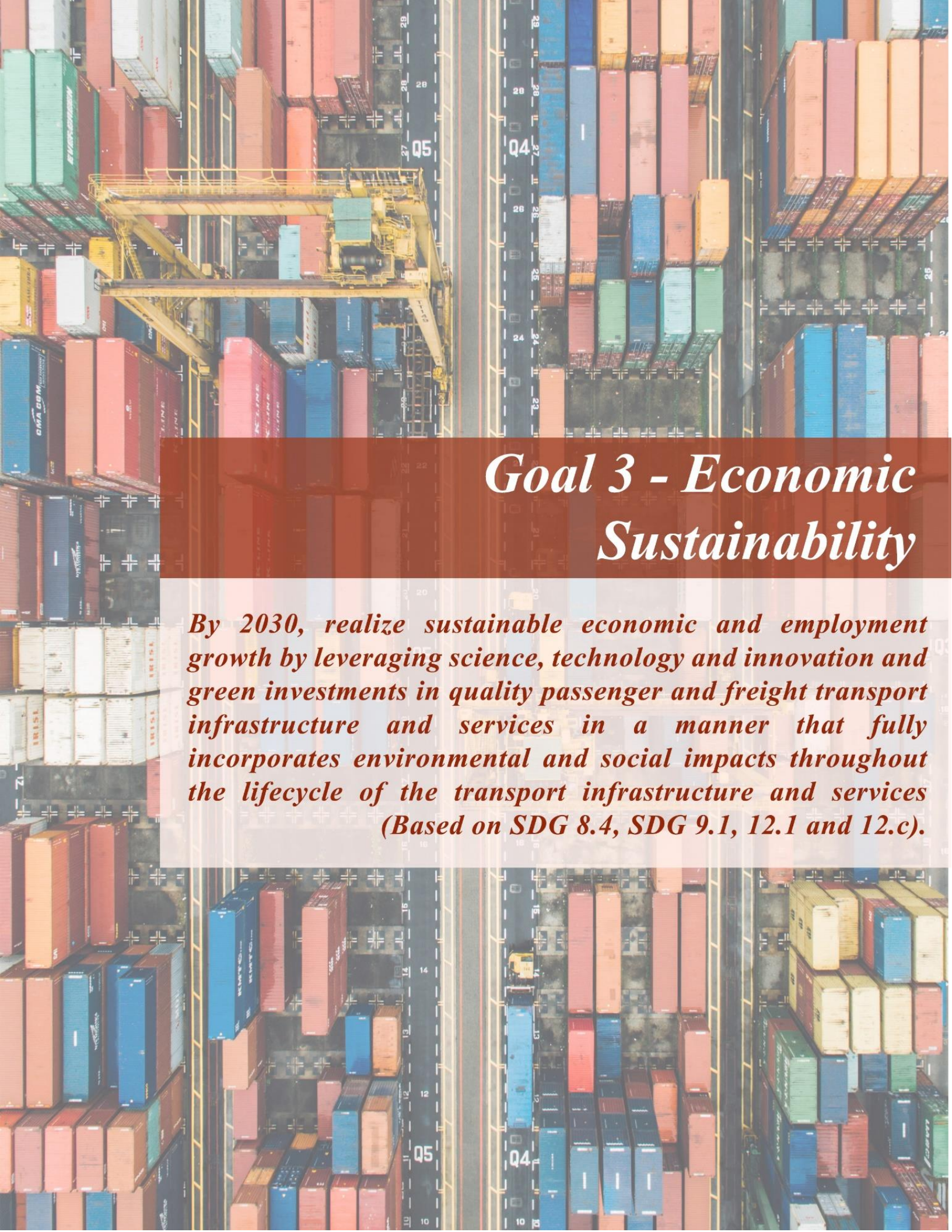


Source: International Road Assessment Programme (IRAP). Vaccines for Roads. https://www.vaccinesforroads.org/irap-big-data-tool-human-impact/

[40] IRAP Star Ratings involve an inspection of national road infrastructure attributes that are known to have an impact on the likelihood of a crash and its severity. The rating is for Vehicle Occupant, Pedestrian, Motorcyclist, and Bicyclist

[41] See Tables 32-35 in Annex for country specific data

[42] based on road inspection data and provide a simple and objective measure of the level of safety which is 'built-in' to the road for vehicle occupants, motorcyclists, bicyclists and pedestrians.
establishing 3, 4 or 5-star standards for new and upgraded roads.



Goal 3 - Economic Sustainability

By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c).

Goal – 3 Economic Sustainability

Goal 3 - Economic sustainability: By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services, (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c).

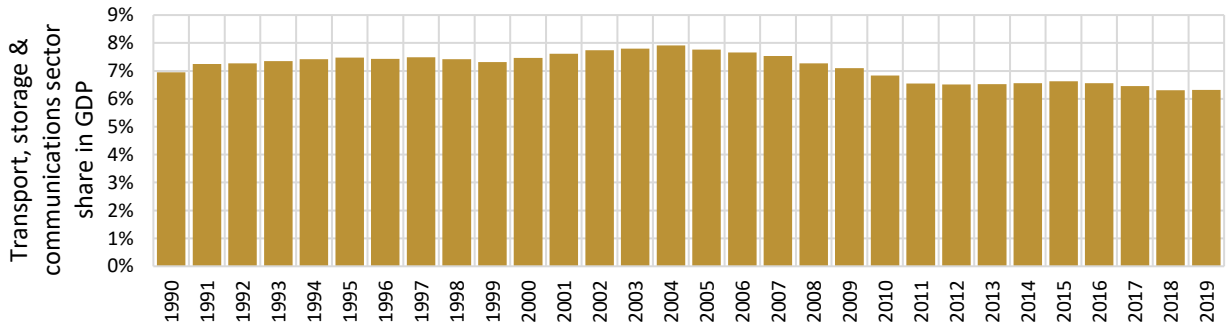
Indicator 15 : Transport share in GDP[43]

(Associated ATO Indicator: SEC-TIV-001)[44]

35. The transport sector is a crucial component of the economy. While mobility of people and goods positively influence economic productivity and employment. Similarly, economic development induces additional transport demand. This relationship between transport and the economy is a multi-faceted one. One crucial indicator of the economic contribution of the transport sector is the gross value added by the transport sector and its share in the GDP.

36. In 2019, the transport, storage and communications sector contributed 3.6 trillion USD to the EST economies, i.e., about 26% of the global transport sector value-added[45]. This estimate considers activities related to providing passenger or freight transport, rail, pipeline, road, water or air, supporting activities such as terminal and parking facilities, cargo handling, storage, postal activities, and telecommunication (renting transport equipment with driver or operator). Regarding the current share of transport, storage and communication sector in GDP, it is about 6.3%, and in 2000, the percentage was 7.5% (Figure 17). In Myanmar, Sri Lanka, Bhutan, Indonesia, Pakistan, Singapore, Iran and Japan, the share of the transport, storage and communication sector in GDP was equal to or above 10%.

Figure 17. Transport Share in GDP in EST countries from 1990-2019



Source: Unite Nations Statistics Division. GDP and its breakdown at constant 2015 prices in US Dollars. https://unstats.un.org/unsd/snaama/Downloads

[43] The transport sector Gross Value Added (GVA) is combined with GDP to get this ratio. Gross value added, is defined as the value of output minus the value of intermediate consumption and is a measure of the contribution to GDP made by an individual transport sector. Transport and Storage sectors are combined.

[44] See Table 36 in Annex for country specific data

[45] https://unstats.un.org/unsd/amaapi/api/file/6

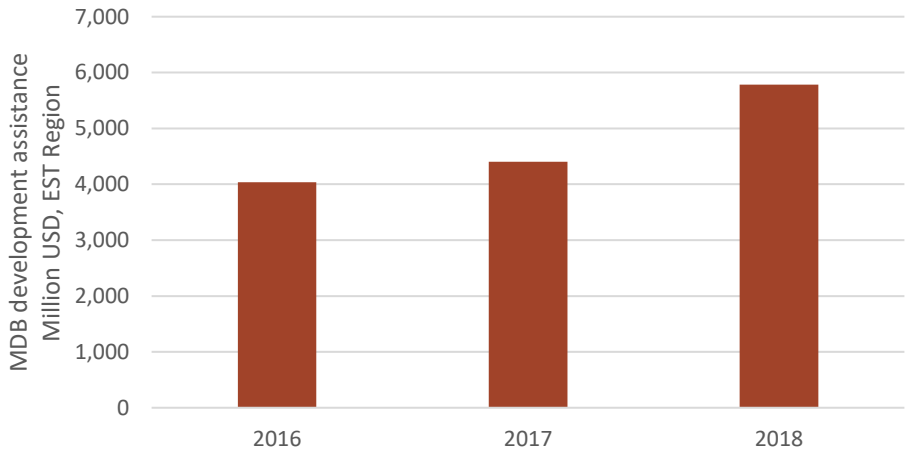
37. Infrastructure investment[46] is a crucial determinant of the transport sector performance. In terms of Transport investments as a share of GDP, limited secondary data exists, however, in Asia. Based on the data available, the Infrastructure investment spending as a percentage of the Gross Domestic Product (GDP) is about 5.5%, 1%, 0.9%, 1.7% & 0.9% in China, India, Japan, Republic of Korea & Russian Federation respectively[47]. In the past decade, in China and India, the infrastructure investment spending share with GDP has increased significantly, indicating significant enhancement of urban, rural market accessibility, productivity, and employment.

Indicator 16 : Multilateral Development Bank funding for transport

(Associated ATO Indicator: SEC-TIV-022)[48]

38. Multilateral Development Banks (MDBs) are the main source of development assistance for the transport sector in the EST countries. In 2018, financing for transport from the MDBs alone was 5.8 billion USD, a 14% annual increase from 4 billion USD in 2016 (Figure 18). The main sub-sectors of assistance were the road and the rail sector.

Figure 18. MDB development assistance for transport in the EST region from 2016-2018



Source: Progress Report (2016-2018) of the MDB Working Group on Sustainable Transport.
https://www.adb.org/sites/default/files/institutional-document/536306/mdb-progress-report-2016-2018.pdf

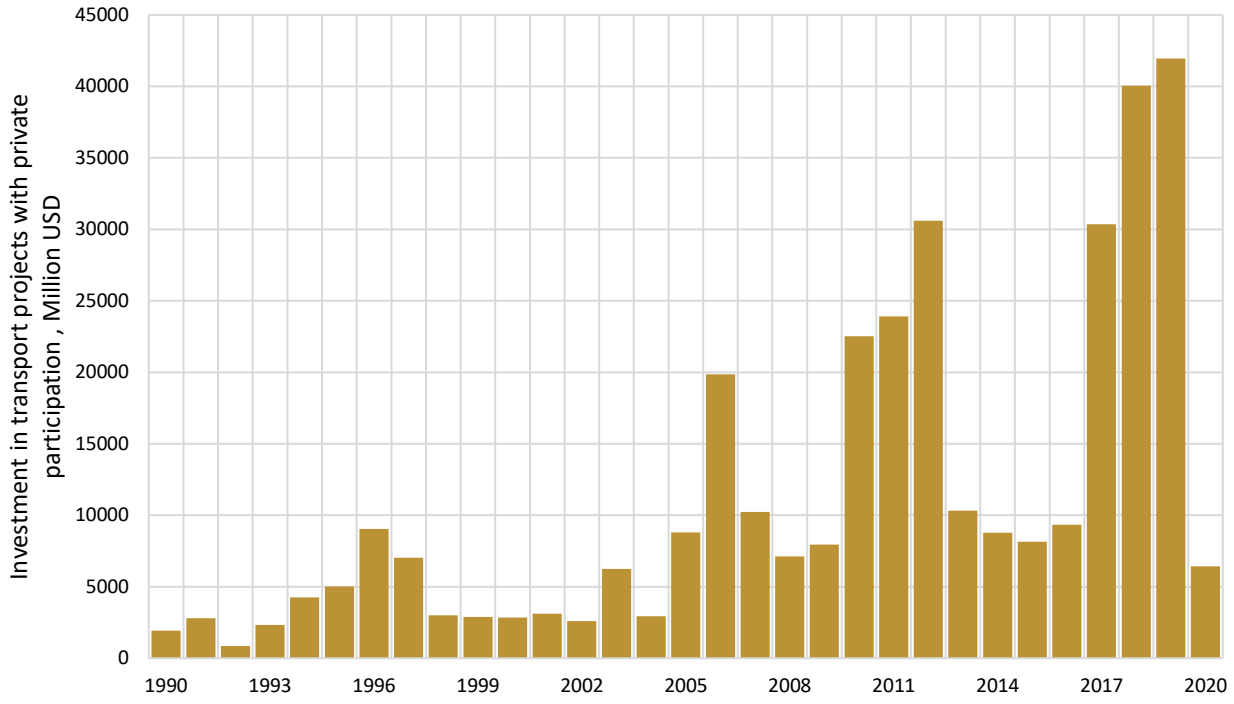
[46] Inland infrastructure includes road, rail, inland waterways, maritime ports and airports
[47] See Table 37 in Annex for country specific data
[48] See Table 38 in Annex for country specific data

Indicator 17 : PPP investments in transport[49]

(Associated ATO Indicator: SEC-TIV-013)[50]

39. Public-private partnerships (PPPs) are key for private participation in transport infrastructure investment, construction, and management. The investment in transport projects with private participation increased in the EST countries from about 2.8 billion USD in 2000 to 41 billion USD in 2019. However, in 2020, due to covid-2019, private participation in transport projects decreased to 6.4 billion USD. Maximum PPP investment (in current U.S. dollars) in EST countries was in China and India who combinedly constitute about 70% of PPP investments in 2019 (Figure 19).

Figure 19. Amount of investment in transport sector with private participation from 1990-2020



Source: World Bank. 2020. Investment In Transport With Private Participation (Current USD). https://datacatalog.worldbank.org/investment-transport-private-participation-current-us

[49] Investment in transport projects with private participation refers to commitments to infrastructure projects in transport that have reached financial closure and directly or indirectly serve the public. Movable assets and small projects are excluded. The types of projects included are management and lease contracts, operations and management contracts with major capital expenditure, greenfield projects (in which a private entity or a public-private joint venture builds and operates a new facility), and divestitures. Investment commitments are the sum of investments in facilities and investments in government assets. Investments in facilities are the resources the project company commits to invest during the contract period either in new facilities or in expansion and modernization of existing facilities. Investments in government assets are the resources the project company spends on acquiring government assets such as state-owned enterprises, rights to provide services in a specific area, or the use of specific radio spectrums. Data are in current U.S. dollars.

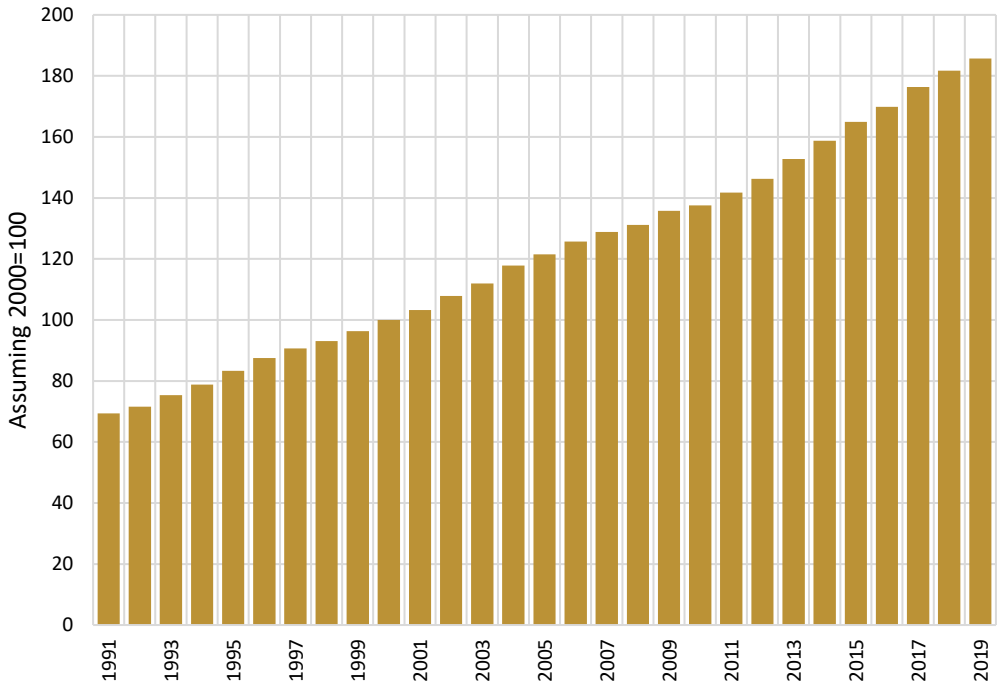
[50] See Table 39 in Annex for country specific data

Indicator 18 : Transport employment[51]

(Associated ATO Indicator: SEC-TRE-001)[52]

40. The transportation sector is a significant industry sector in any economy. It offers a wide variety of employment involving different skills sets. In terms of transport sector employment, transport and related industries employ over 112 million people, accounting for 6 percent of total formal employment in the EST region. Work in these industries rose steadily from 2000 by 86%. The highest share of the transport industry in total employment is in Singapore (13%), Maldives (11%), Iran (11%), Russia (10%) and Bangladesh (9%) (Figure 20).

Figure 20. Employment in transport sector from 1991 to 2019 in EST countries, thousands



Source: International Labour Organization (ILO). Employment Statistics. https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm

[51] Data on employment by sector describe the main activity of the establishment where a person works or the activity contributing most to the value added of the entity. In this indicator, total employment including services, manufacture within transport and other derived employment is considered and a ratio is derived. It considers share of Transport+storage+Communications in Total Employment

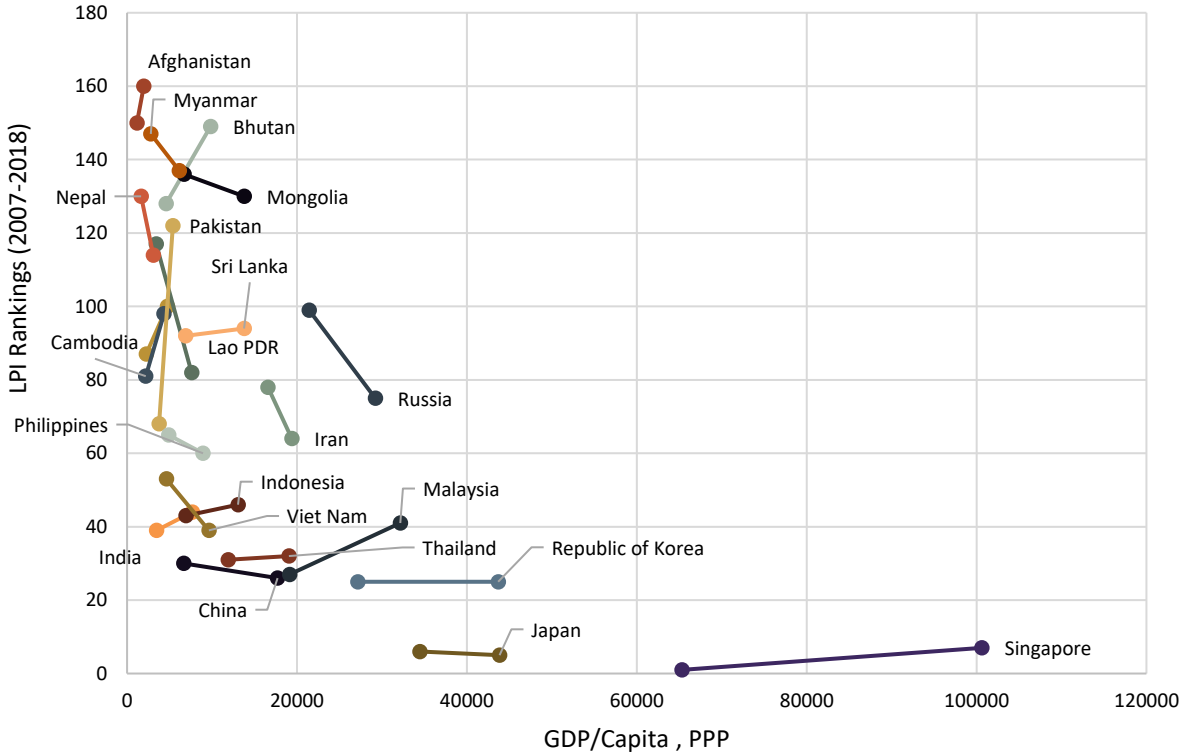
[52] See Tables 40-41 in Annex for country specific data

Indicator 19 : Logistics Performance Index (LPI)[53]

(Associated ATO Indicator: TAS-TSG-004)[54]

41. Empirical research has established that trade has a positive and significant impact on economic growth. Trade performance is heavily dependent upon transport and logistics services. The World Bank's Logistics Performance Index (LPI) is based on a global survey of logistics operators (international freight forwarders and express carriers), providing qualitative scoring on the logistics "friendliness" of the countries in which they operate and those with which they trade. The Index includes the following parameters: customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing and timeliness to explain how efficiently supply chains connect firms to domestic and international opportunities. The LPI indicator positively correlates with international trade and economic growth, indicating that LPI score improvement can significantly enhance trade volume and economic development. The average LPI score for the EST region in 2007 and 2018 was 3.20 and 3.39, showing a marginal improvement in overall logistics infrastructure. This improvement of average score was realized through improvements in 45% of EST countries (Figure 21). At the same time, however, other global regions have improved their logistics infrastructure at a much higher pace.

Figure 21. Logistics Performance Index (LPI) rankings of EST countries from 2007-2018



Source: World Bank. Logistics Performance Index (LPI). https://lpi.worldbank.org/

[53] The LPI is an interactive benchmarking tool created by the World Bank to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.
[54] See Tables 42-45 in Annex for country specific data

Goal 4 - Rural Access

By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1).

Goal – 4 Rural Access

Goal 4 - Rural access: By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1).

Indicator 20 : Rural population who live within 2 km of an all-season road[55]

(Associated ATO Indicator: ACC-RAC-001)[56]

42. Accessibility is a fundamental prerequisite for sustainable development. The role of transport is to facilitate the access people have to goods, services and facilities. The Vientiane Declaration on Sustainable Rural Transport towards Achieving the 2030 Agenda for Sustainable Development[57] has acknowledged rural transport as a critical driver for improving rural wellbeing, economic development, community empowerment, and livelihood - and food security. The Declaration promotes inclusive, affordable, accessible, and sustainable rural transport infrastructure and services, thus facilitating improved access to essential utilities and services, including health and education, by the rural poor, farmers, agricultural workers, girls and women, youth, and differently-abled and vulnerable group.

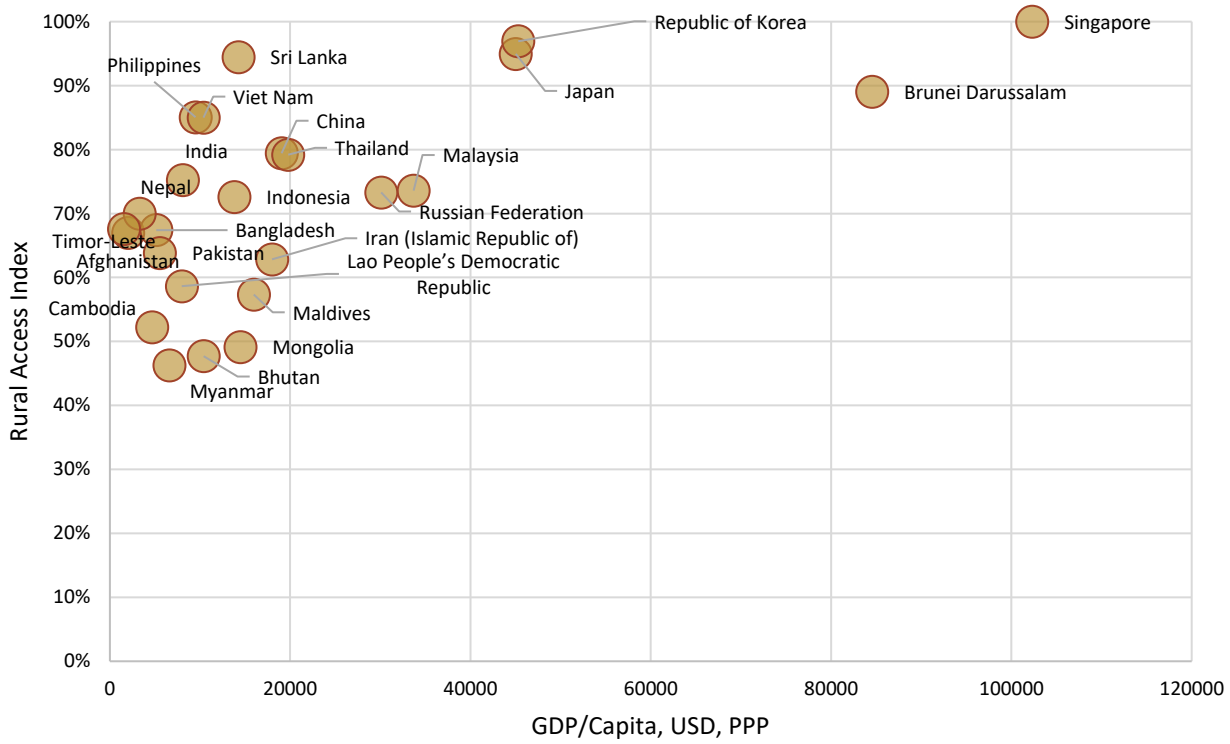
43. Sustainable Development Goal (SDG) Target 9.1 states "develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human wellbeing, with a focus on affordable and equitable access for all". SDG Target 9.1 has its defined indicator – Rural Access Index (RAI): "Proportion of the rural population who live within 2 km of an all-season road".

44. The rural access indicator positively correlates with poverty, health, and educational parameters, indicating that rural accessibility improvement can significantly enhance socio-economic development. Populations without physical access to economic and social services are more impoverished than those with access.

45. The global rural population is now close to 3.4 billion, and in EST countries, about 2.1 billion, i.e. nearly half of the people in the EST countries are rural dwellers. However, only about 75% of the rural population live within 2 km of an all-season road. Based on the 2019 RAI scores, 550 million persons in the EST countries are unconnected to a good quality road network (Figure 22).

[55] The RAI is defined as the proportion of the rural population who live within 2 km of an all-season road.
[56] See Table 46 in Annex for country specific data
[57] https://www.uncrd.or.jp/content/documents/5099Final%20Adopted%20Vientiane%20Declaration-16March2017-(Unedited).pdf

Figure 22. Rural access index and GDP per capita of EST countries



Source: Research for Community Access Partnership (ReCAP). 2019. Rural Access Index. https://rai.azavea.com/

Goal 5 - Urban Access

By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7).

Goal – 5 Urban Access

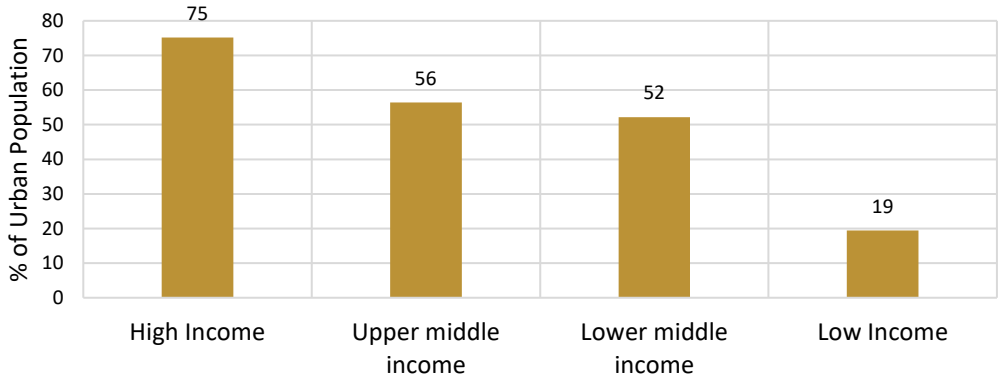
Goal 5 - Urban access: By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7).

Indicator 21 : Share of population with convenient access to public transport[58]

(Associated ATO Indicator: ACC-UDB-001)[59]

46. Currently, about half of the people in the EST countries are urban dwellers, i.e., about 2.1 billion. Sustainable Development Goal (SDG) Target 11.2 states," By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with particular attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons". SDG Target 11.2 has its defined indicator – "Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities".

Figure 23. Access to public transport in selected cities in EST countries by income level



Source: United Nations (UN) Habitat Urban Indicators Database 11.2.1 Percentage Access to Public Transport. https://data.unhabitat.org/datasets/GUO-UN-Habitat::11-2-1-percentage-access-to-public-transport/about

47. In the last two decades, population growth and decreasing densities have led many cities to expand, increasing motorisation and reducing access. As a result, several Asian cities have constructed a wide

[58] This indicator is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport stops which are mapped are included in the analysis which may include both formal and informal stops. Many cities (mostly in the developing countries) have informal public transport systems which are not fully mapped - meaning that they may record higher levels of access to public transport than reported in this dataset. The delineation of the city/urban areas used for the estimates do not follow municipal boundaries, but rather adopt spatial analysis based on the concepts of Urban Extent or the Degree of Urbanization. As a result, the urban/city area used for the indicator computation in this dataset may be larger or smaller than the official municipality boundaries.

[59] See Table 61 in Annex for country specific data

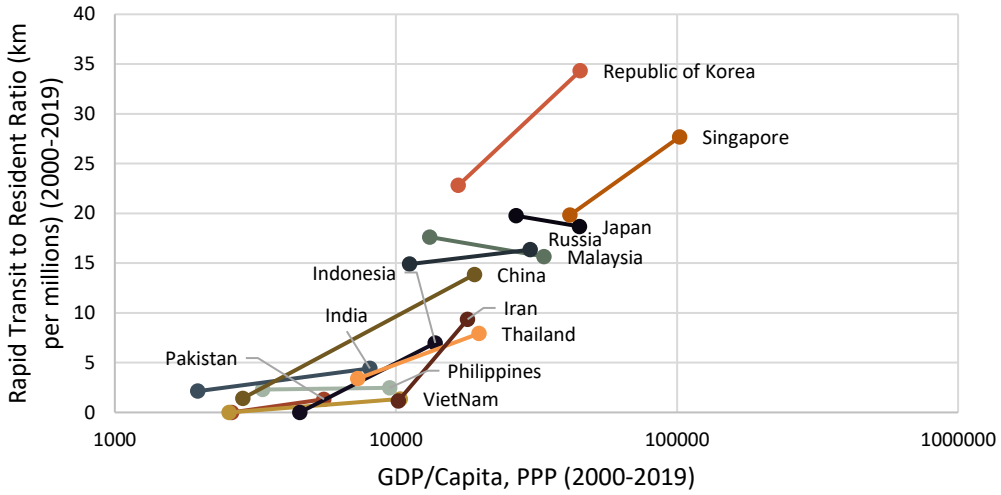
range of public transport systems in response. Based on data available from 94 cities in EST economies[60], 57% of the urban population in these cities have some access to public transit, i.e., the share of the people who live within walking distance (along with a street network) of 500m to a low-capacity public transport system (e.g. bus, tram) and 1000m to a high capacity public transport system (e.g. trains, ferries, etc.). However, the access is dependent upon income profile. Residents in high-income and upper-middle-income cities have better access to public transit when compared with residents in lower & lower-middle-income countries (Figure 23 above).

Indicator 22 : Rapid Transit to Resident ratio (RTR)[61]

(Associated ATO Indicator: ACC-UAC-002)[62]

48. Indicator Rapid Transit to Resident Ratio (RTR) measures urban access. This indicator compares a country's urban population (cities with more than 500,000 people) with the length of rapid transit lines (including rail, metro, and BRT) that serve them. Currently, in the EST region, the Rapid Transit to Resident Ratio increased from 5.6 in 2000 to 10.8 in 2019 (Figure 24). This average increase is the result of large public transport schemes in a limited number of countries. What is noticeable is that Asian countries are generally building modern public transport systems at a lower GDP/capita level than in the past in OECD economies.

Figure 24. Rapid transit ratio and GDP per capita of EST countries from 2000-2019



Soure: Institute or Transportation & Development Policy (ITDP). Rapid Transit Database. https://www.itdp.org/rapid-transit-database/

[60] UN Habitat/ European Commission DG REGIO

[61] The Rapid Transit to Urban Resident ratio (RTR) is the ratio of rapid transit to urban population in metropolitan agglomerations with populations greater than five hundred thousand.

[62] See Table 47 in Annex for country specific data

Goal 6 - National Access and Connectivity

By 2030, facilitate inclusive multi-modal national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1).

Goal – 6 National Access and Connectivity

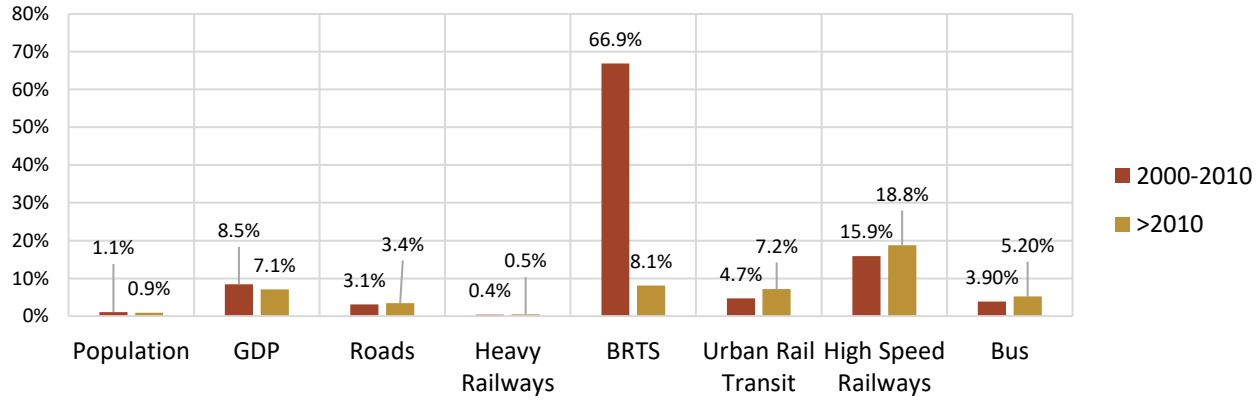
Goal 6 - National access and connectivity: By 2030, facilitate inclusive national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1).

Indicator 23 : Transport infrastructure growth[63]

(Associated ATO Indicators: INF-TTI-005, INF-TTI-016, INF-TTI-019, INF-UTI-001, INF-UTI-002, INF-UTI-003, TAS-VEP-060)[64]

49. Improved access to services and goods is the primary aim of transport. Such access should be equitable for both genders and all income groups, and that it should be safe, efficient, and green (i.e., sustainable). Transport infrastructure plays a vital role in socio-economic development by providing access to economic and social opportunities. Sustainable Development Goal 9.1 proposes "develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human wellbeing, with a focus on affordable and equitable access for all". The EST countries provide infrastructure – about 4.3 meter/capita of roads and about 7.9 centimeter/capita of inland public transport systems (railways, urban transit, high-speed railways). In comparison, in 2000, it was 2.8 meter/capita and 7.7 centimeter/capita. Which indicates the much greater rate of progress in developing the road infrastructure.

Figure 25. Annual growth rate of population, GDP, transport infrastructure and service in EST countries in 2000-2010 and after 2010



Source: United Nations (UN) Statistics Division. World Population Prospects 2019. https://population.un.org/wpp/; World Bank. GDP, PPP (current international $). https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD; Country Statistics; International Union of Railways (UIC) RAILISA STAT. https://uic-stats.uic.org/; Institute or Transportation & Development Policy (ITDP). Rapid Transit Database. https://www.itdp.org/rapid-transit-database/

[63] Length is considered for transport infrastructure growth in road, railways, urban transport sectors. Bus registrations are considered for bus growth.

[64] See Tables 50-53 in Annex for country specific data

50. In actual terms the largest expansion in transport infrastructure has been in roads which provides 98% of the total surface transport infrastructure. Heavy railways have grown at a much lower pace. This is also reflected in a shift from freight transport from rail to road in several of the EST countries. Noticeable is the growth, however in High Speed Rail, which initially was mainly in China and Japan, but which is now also being developed in several other EST countries.

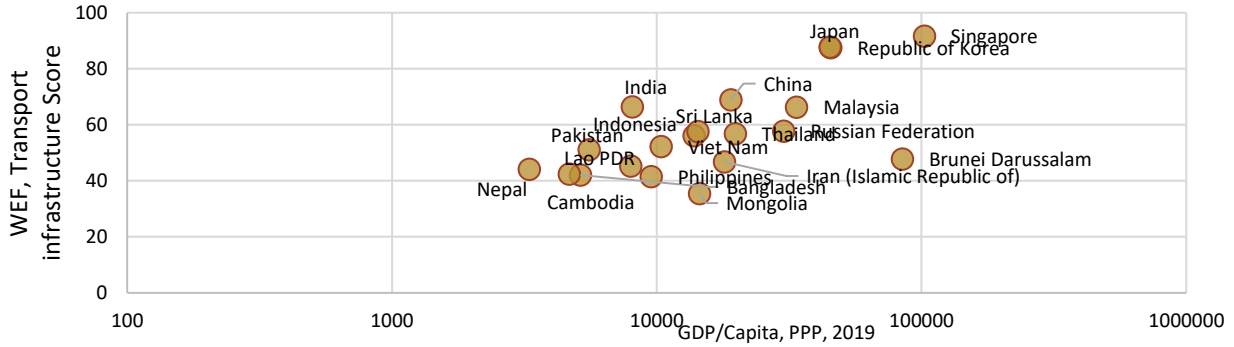
51. In terms of growth, urban transit systems have grown in proportion with GDP, but the share in total passenger activity remains very low. In terms of Buses, in 2000, EST countries had two buses per 1000 population, and it increased to four buses per 1000 population in 2018. This is a doubling but overall the share of bus transport remains quite low. (Figure 25 above).

Indicator 24 : Transport infrastructure score[65]

(Associated ATO Indicator: INF-TTI-001)[66]

52. There are significant gaps in information on road asset management in the EST countries (data availability, definitions, coverage, quality), making it challenging to develop detailed quantitative comparisons among EST countries on transport infrastructure quality. Thus, qualitative data on road quality remains the primary source of information on the quality of road transport infrastructure. Transport infrastructure quality is one indicator that is part of the Global Competitiveness Index published annually by the World Economic Forum (WEF). The 2019 edition of the Survey captured the views of 16,936 business executives in 139 economies between January and April 2019. Data for the EST countries reveals that economies are gradually improving the standards and quality of the transport infrastructure as GDP is going up. Since 2017, there is a marked improvement in the rankings, with 48% of EST economies improving their transport infrastructure rankings (Figure 26). Transport infrastructure score corresponds to the average score of the Road, Rail, Air and Sea components (quality + performance). Qualitative assessment of the existence of a network is conducted by the World Economic Forum based on various sources.

Figure 26. Transport infrastructure score and GDP per capita in EST countries



Source: World Economic Forum (WEF). The Global Competitiveness Report. http://reports.weforum.org/global-competitiveness-index-2017-2018/

[65] Transport infrastructure score/ranking corresponds to the average score of the Road, Rail, Air and Sea components (quality + performance). Qualitative assessment of the existence of a network is conducted by the World Economic Forum based on various sources. The 2019 edition of the Survey captured the views of 16,936 business executives in 139 economies between January and April 2019.

[66] See Table 54 in Annex for country specific data

Indicator 25 : Transport connectivity[67]

(Associated ATO Indicators: ACC-NRC-003, ACC-NRC-004, ACC-NRC-005)[68]

The IATA airport connectivity indicator measures the degree of integration of a country within the global air transport network. It is based on the number of available seats offered in flights originating from a country.[69]

The Road Connectivity Index, developed by the World Economic Forum, comprises two elements: (1) a measure of the average speed of a driving itinerary connecting the 10 or more largest cities in an economy accounting for at least 15% of the economy's total population; and (2) a measure of road straightness.[70]

The current version of the LSCI is generated from the following six components:

a) The number of scheduled ship calls per week in the country;

b) Deployed annual capacity in Twenty-Foot-equivalent Units (TEU): total deployed capacity offered at the country;

c) The number of regular liner shipping services from and to the country;

d) The number of liner shipping companies that provide services from and to the country;

e) The average size in TEU (Twenty-Foot-equivalent Units) of the ships deployed by the scheduled service with the largest average vessel size; and

f) The number of other countries that are connected to the country through direct liner shipping services

53. Connectivity is a measure of accessibility that ensures travel and all origin-destination connections within a reasonable range of time and costs. Transport connectivity is a crucial determinant of trade and socio-economic development. Evidence from the ATO economies indicates that maritime connectivity is indeed an essential facilitator of trade. EST countries have improved transport connectivity by improving roads, railways, aviation, and maritime infrastructure in terms of infrastructure connectivity (Figure 27).

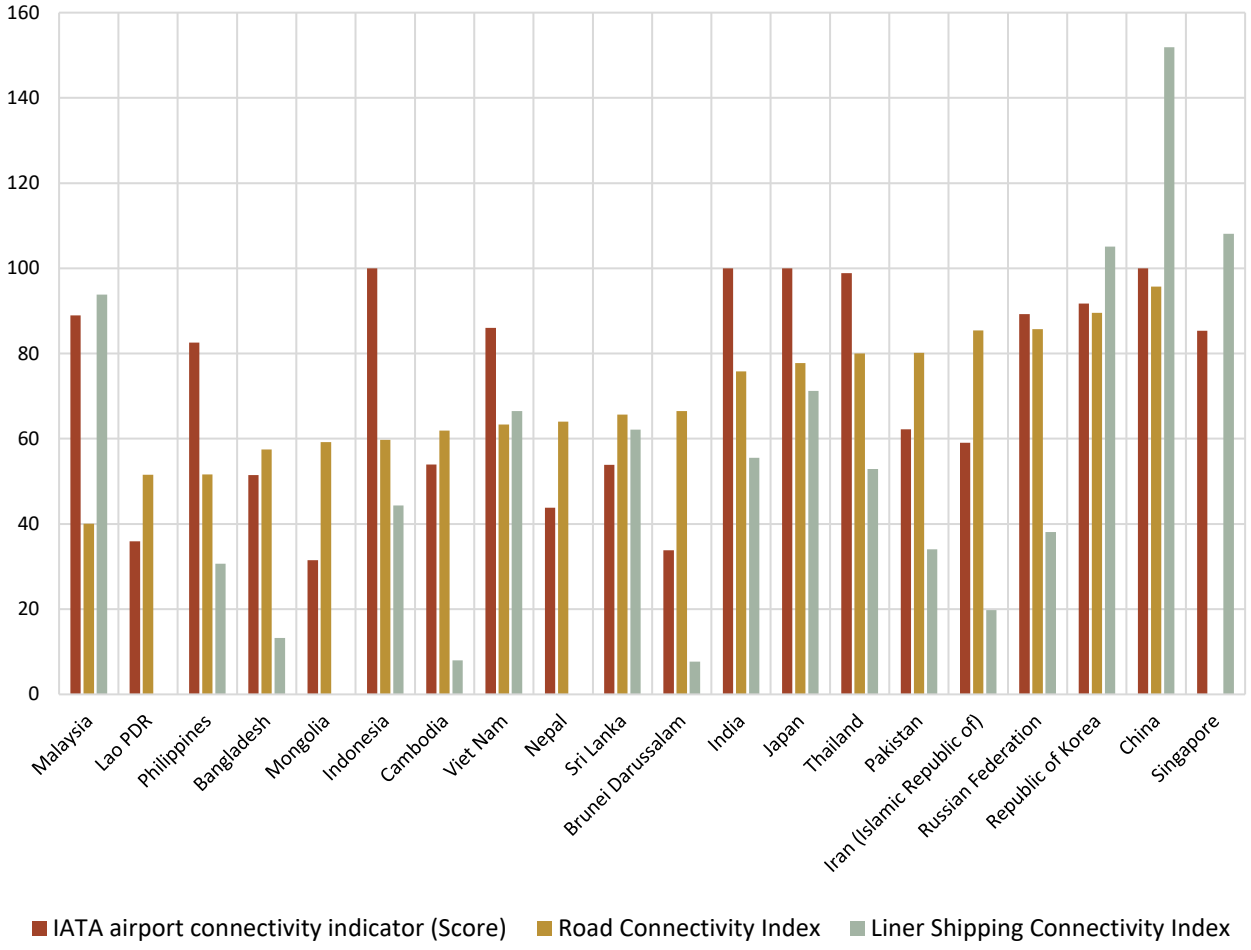
[67] Various empirical connectivity indices are considered here such as IATA airport connectivity indicator, Road Connectivity Index, and Liner Shipping Connectivity Index (LSCI).

[68] See Tables 55-57 in Annex for country specific data

[69] For each airport, the number of available seats to each destination is weighted by the size of the destination airport (in terms of number of passengers handled). The weighted totals are then summed for all destinations, then for all airports in the country to produce a score. This score is then divided by the highest score (United States) and multiplied by 100. The scale of this indicator ranges from 0 to 100 [best].

[70] The itinerary was not optimized and connects the cities from the largest to the smallest.. As a first step to the identification of cities to include in the itinerary, pairwise distances ("as the crow flies") were calculated, and when the distance was less than 20 kilometres, the smallest city in the pair was excluded. The road straightness corresponds to the ratio of the sum of driving distances between each city in the journey to the sum of crow-fly distances between each city in the journey.

Figure 27. Airport connectivity, road connectivity, liner shipping connectivity in EST countries in 2019



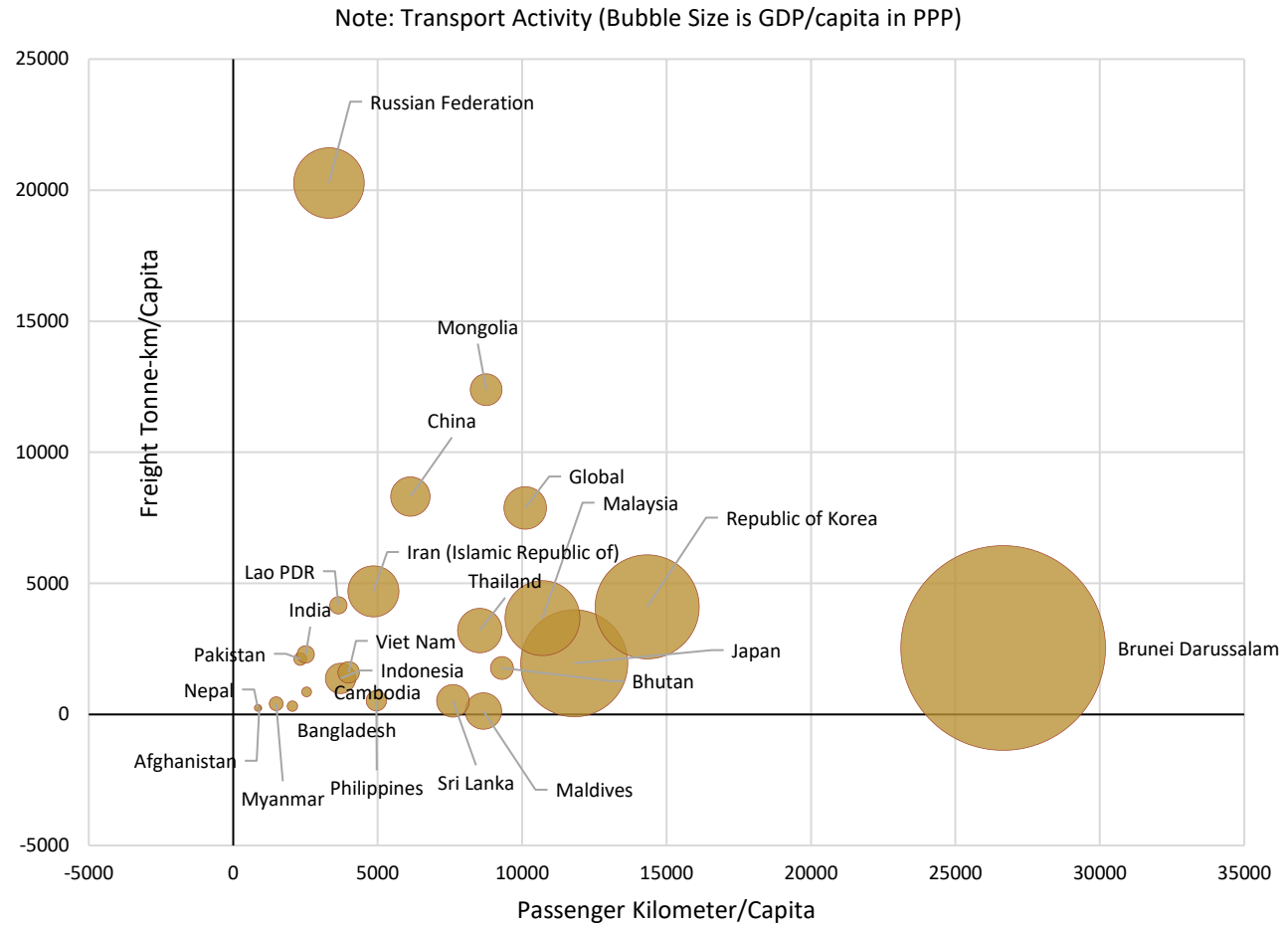
Source: World Economic Forum (WEF). The Global Competitiveness Report. http://reports.weforum.org/global-competitiveness-index-2017-2018/; United Nations Conference on Trade and Development (UNCTAD). Liner shipping connectivity index, quarterly. https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=92

Indicator 26 : Passenger and freight transport activity[71]

(Associated ATO Indicators: TAS-PAG-001, TAS-FRA-001)[72]

54. A person travels in EST countries travels about 4500 km annually[73], while the global and OECD average is about 6500 and 14600 km/year[74] , respectively. In terms of freight transport, the freight demand per capita in EST countries is 4800 km/year is significantly higher than the global domestic average of 3600 tonne-km/capita. Many EST countries are at an early stage in their economic development and as such their GDP is still derived in a large part from primary (agriculture) and secondary (industry) sector, which is typically more associated by the transport of bulk products. With increasing income, access and connectivity, transport activity would also increase (Figure 28).

Figure 28. Passenger kilometer per capita and freight tonne kilometer per capita vs GDP per capita in EST countries



Source: ATO Country Statistics

[71] Total number of passenger kilometer and freight kilometer travel by all modes combined.
[72] See Tables 48-49 in Annex for country specific data
[73] approx. 12 km per capita daily which is equivalent to the prescribed minimum per capita mobility level sufficient to meet basic transport needs as per research by European Parliament's Committee on Transport and Tourism, https://www.europarl.europa.eu/RegData/etudes/note/join/2010/431579/IPOL-TRAN_NT(2010)431579_EN.pdf
[74] ITF Outlook, 2019

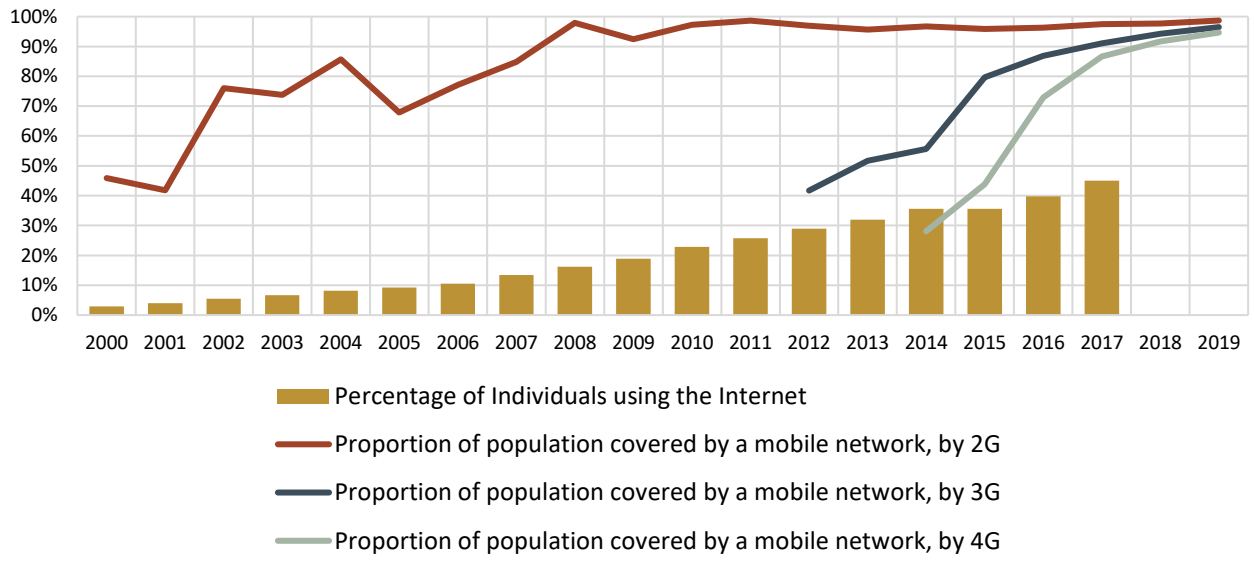
Indicator 27 : ICT broadband coverage and internet use[75]

(Associated ATO Indicators: INF-ICT-009, INF-ICT-010, INF-ICT-006)[76]

55. Access to ICT is rapidly evolving in the EST countries, helping bridge some of the access and connectivity gaps of the transport infrastructure. Sustainable Development Goal 9.c. refers to "significantly increase access to Information and Communication Technologies (ICT) and strive to provide universal and affordable access to the Internet in the least developed countries by 2020".

56. As of 2017, around 45% of the EST countries' individuals use the internet compared to 3% in 2000. In comparison, in 2000, almost half of the population in the U.S. was accessing information through the internet. Enhancing affordable digital connectivity using a computer, mobile phone or personal digital assistant can be positively linked to achieving most of the 17 U.N. Sustainable Development Goals (SDGs)[77]. In terms of fixed broadband subscriptions in the EST countries, i.e., the number of subscriptions per 100 inhabitants, the increase is from 1 in 2003 to about 15 in 2019[78]. The fixed broadband subscriptions vary widely among countries. The most significant density of fixed broadband subscriptions is in China (31%), Japan (33%), and the Republic of Korea (43%). In terms of the share of population covered by a mobile network, above 95% of the population in EST countries are covered by the 2G, 3G and 4G mobile networks (Figure 29).

Figure 29. Percentage of individuals using the internet and proportion of population covered by mobile network, by technology, in EST countries



Source: United Nations (UN) Global SDG Database. Indicator 17.8.1 Proportion of individuals using the Internet. https://unstats.un.org/sdgs/indicators/database; United Nations (UN) Global SDG Database. Indicator 9.c.1 Proportion of population covered by a mobile network, by technology. https://unstats.un.org/sdgs/indicators/database

[75] ICT Indicators considered here are fixed broadband subscription as a proportion of population; proportion of population with coverage of mobile network broken down by technology; and percentage of individuals using the internet

[76] See Tables 58-60 in Annex for country specific data

[77] https://gesi.org/research/enabling-the-global-goals

[78] Fixed broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s

III. FINAL OBSERVATION

56. This initial baseline report for the Aichi 2030 Declaration on Environmentally Sustainable transport shows that the realization of the six goals included in the new Aichi 2030 Declaration will be a substantial task for the countries in the Regional Environmentally Sustainable Transport Forum.

57. Progress is needed both in terms of making transport more sustainable: low carbon, more resilient, cleaner and safer as well as in the development of transport infrastructure and transport services to unleash the developmental role of the transport sector in promoting economic and social development.

58. At the same the baseline report also provides hope. The data presented indicates that in several areas EST countries have made progress in developing the transport sector and making it more sustainable.

IV. ANNEX

1. Population

ATO Indicator: SEC-DEV-001
Units: Millions
Source: UN Population Database, https://population.un.org/wpp/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Afghanistan	12.4	13.3	14.5	15.8	17.1	18.1	18.9	19.4	19.7	20.2	20.8	21.6	22.6	23.7	24.7	25.7	26.4	27.1	27.7	28.4	29.2	30.1	31.2	32.3	33.4	34.4	35.4	36.3	37.2	38	38.9
Bangladesh	103	106	108	110	113	115	118	120	123	125	128	130	132	135	137	139	141	143	144	146	148	149	151	153	155	156	158	160	161	163	165
Bhutan	0.53	0.53	0.53	0.53	0.53	0.53	0.54	0.55	0.56	0.58	0.59	0.6	0.62	0.63	0.64	0.65	0.66	0.66	0.67	0.68	0.69	0.69	0.7	0.71	0.72	0.73	0.74	0.75	0.75	0.76	0.77
Brunei Darussalam	0.26	0.27	0.27	0.28	0.29	0.3	0.3	0.31	0.32	0.33	0.33	0.34	0.35	0.35	0.36	0.37	0.37	0.37	0.38	0.38	0.39	0.39	0.4	0.4	0.41	0.41	0.42	0.42	0.43	0.43	0.44
Cambodia	8.98	9.29	9.62	9.97	10.3	10.7	11	11.3	11.6	11.9	12.2	12.4	12.6	12.9	13.1	13.3	13.5	13.7	13.9	14.1	14.3	14.5	14.8	15	15.3	15.5	15.8	16	16.2	16.5	16.7
China	1177	1193	1207	1219	1230	1241	1252	1262	1272	1282	1291	1299	1307	1315	1323	1331	1338	1346	1354	1361	1369	1376	1384	1392	1399	1407	1414	1421	1428	1434	1439
India	873	891	909	927	946	964	982	1001	1019	1038	1057	1075	1093	1112	1130	1148	1165	1183	1201	1218	1234	1250	1266	1281	1296	1310	1325	1339	1353	1366	1380
Indonesia	181	185	188	191	194	197	200	203	206	209	212	214	217	220	223	226	229	232	235	239	242	245	248	252	255	258	262	265	268	271	274
Iran (Islamic Republic of)	56.4	57.7	58.8	59.7	60.6	61.4	62.3	63.1	64	64.8	65.6	66.4	67.3	68.1	69	69.8	70.6	71.3	72.1	72.9	73.8	74.6	75.5	76.5	77.5	78.5	79.6	80.7	81.8	82.9	84
Japan	125	125	125	126	126	126	127	127	127	127	128	128	128	128	128	128	128	128	129	129	129	128	128	128	128	128	128	128	127	127	126
Lao People's Democratic Republic	4.26	4.38	4.5	4.62	4.74	4.85	4.95	5.05	5.14	5.24	5.32	5.41	5.49	5.58	5.66	5.75	5.85	5.94	6.05	6.15	6.25	6.35	6.44	6.54	6.64	6.74	6.85	6.95	7.06	7.17	7.28
Malaysia	18	18.5	19	19.5	20	20.5	21	21.6	22.1	22.7	23.2	23.7	24.2	24.7	25.2	25.7	26.2	26.7	27.2	27.7	28.2	28.7	29.1	29.5	29.9	30.3	30.7	31.1	31.5	31.9	32.4
Maldives	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.29	0.29	0.3	0.31	0.32	0.33	0.34	0.34	0.35	0.37	0.38	0.4	0.42	0.44	0.45	0.48	0.5	0.52	0.53	0.54
Mongolia	2.18	2.22	2.24	2.26	2.28	2.3	2.32	2.34	2.36	2.38	2.4	2.42	2.44	2.47	2.5	2.53	2.56	2.59	2.63	2.67	2.72	2.77	2.82	2.88	2.94	3	3.06	3.11	3.17	3.23	3.28
Myanmar	41.3	41.9	42.4	42.9	43.4	43.9	44.5	45	45.6	46.2	46.7	47.2	47.7	48.1	48.6	48.9	49.3	49.6	49.9	50.3	50.6	51	51.4	51.9	52.3	52.7	53	53.4	53.7	54	54.4
Nepal	18.9	19.4	19.9	20.5	21	21.6	22.1	22.6	23.1	23.5	23.9	24.3	24.7	25.1	25.4	25.7	26.1	26.4	26.7	26.9	27	27	27	26.9	26.9	27	27.3	27.6	28.1	28.6	29.1
Pakistan	108	111	114	117	120	124	127	131	135	139	142	146	150	153	157	160	164	168	172	176	179	183	187	191	195	199	204	208	212	217	221
Philippines	61.9	63.5	65	66.6	68.2	69.8	71.4	73	74.7	76.3	78	79.7	81.4	83.1	84.7	86.3	87.9	89.4	90.9	92.4	94	95.6	97.2	98.9	101	102	104	105	107	108	110
Republic of Korea	42.9	43.4	43.8	44.3	44.8	45.3	45.8	46.2	46.6	47	47.4	47.7	48	48.3	48.5	48.7	48.9	49	49.2	49.3	49.5	49.8	50.1	50.3	50.6	50.8	51	51.1	51.2	51.2	51.3
Russian Federation	148	148	148	148	148	148	148	148	147	147	146	146	145	145	144	144	143	143	143	143	143	144	144	144	145	145	145	146	146	146	146
Singapore	3.01	3.1	3.2	3.31	3.42	3.53	3.64	3.75	3.86	3.95	4.03	4.08	4.1	4.13	4.18	4.27	4.4	4.58	4.78	4.97	5.13	5.26	5.37	5.45	5.53	5.59	5.65	5.71	5.76	5.8	5.85
Sri Lanka	17.3	17.5	17.7	17.9	18.1	18.2	18.4	18.5	18.6	18.7	18.8	18.9	19.1	19.2	19.4	19.5	19.7	19.8	20	20.1	20.3	20.4	20.5	20.7	20.8	20.9	21	21.1	21.2	21.3	21.4
Thailand	56.6	57.2	57.8	58.3	58.9	59.5	60.1	60.8	61.6	62.3	63	63.5	64.1	64.5	65	65.4	65.8	66.2	66.5	66.9	67.2	67.5	67.8	68.1	68.4	68.7	69	69.2	69.4	69.6	69.8
Timor-Leste	0.74	0.76	0.78	0.81	0.83	0.84	0.86	0.86	0.87	0.87	0.88	0.9	0.92	0.95	0.97	1	1.02	1.04	1.06	1.07	1.09	1.11	1.13	1.15	1.17	1.2	1.22	1.24	1.27	1.29	1.32
Viet Nam	68	69.4	70.9	72.3	73.7	74.9	76.1	77.1	78.1	79	79.9	80.7	81.5	82.3	83.1	83.8	84.6	85.4	86.2	87.1	88	88.9	89.8	90.8	91.7	92.7	93.6	94.6	95.5	96.5	97.3
Rest of Asia																															
Global	5327	5414	5499	5582	5663	5744	5825	5905	5985	6064	6143	6223	6302	6381	6461	6542	6624	6706	6789	6873	6957	7041	7126	7211	7295	7380	7464	7548	7631	7713	7795

2. GDP (Historical)

ATO Indicator: SEC-SEG-001
Units: Billions, USD
Source: World Bank, https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Afghanistan													20	22	23	26	28	33	35	43	50	51	60	65	69	72	70	75	77	82	81
Bangladesh	88	94	101	109	115	124	132	140	149	158	170	183	193	205	222	244	268	295	318	337	360	391	444	480	520	556	608	664	734	808	837
Bhutan	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.8	2.0	2.2	2.4	2.6	2.9	3.5	3.8	4.1	4.6	5.1	5.6	5.7	6.2	6.9	7.7	8.3	8.8	9.4	8.9
Brunei Darussalam	14	15	17	17	18	19	20	20	20	21	22	23	25	26	27	27	30	30	30	30	31	33	35	34	33	26	24	26	27	28	29
Cambodia				11	7.5	8.4	9.1	10	10	12	13	14	16	17	20	23	26	30	32	32	35	38	42	46	49	53	58	63	69	75	74
China	1115	1260	1472	1716	1981	2244	2512	2791	3044	3325	3688	4083	4526	5073	5736	6589	7652	8976	10033	11060	12379	13844	15125	16185	17121	17797	18712	19887	21739	23444	24273
India	1049	1096	1183	1268	1382	1518	1662	1759	1889	2086	2214	2372	2501	2748	3045	3389	3773	4171	4384	4764	5229	5618	6153	6478	6781	7160	7735	8277	9029	9562	8907
Indonesia	559	618	673	734	806	891	978	1041	915	935	1003	1063	1128	1204	1299	1415	1538	1680	1816	1914	2057	2230	2413	2535	2622	2648	2745	2894	3117	3332	3302
Iran (Islamic Republic of)	406	472	496	513	516	539	578	591	610	625	676	697	759	841	901	959	1037	1152	1177	1198	1283	1344	1205	1168	1180	1067	1115	1173	1128	1071	1102
Japan	2417	2584	2665	2714	2799	2936	3083	3170	3169	3207	3404	3493	3589	3694	3877	4046	4231	4416	4456	4251	4481	4573	4747	4967	4987	5135	5075	5194	5276	5328	
Lao People's Democratic Republic	4.4	4.7	5.1	5.5	6.1	6.7	7.2	7.9	8.3	9.0	10	11	11	12	13	15	17	18	20	22	24	26	31	35	39	42	47	50	55	59	60
Malaysia	123	139	155	174	195	218	244	267	250	269	300	308	329	355	389	423	460	502	536	532	579	622	668	692	735	751	784	829	890	945	903
Maldives						1.6	1.7	1.9	2.1	2.2	2.4	2.3	2.5	2.9	3.2	2.9	3.7	4.1	4.6	4.3	4.6	5.2	5.4	6.1	7.0	7.6	8.3	9.0	10	11	7.4
Mongolia	7.3	6.9	6.4	6.3	6.6	7.2	7.5	7.9	8.3	8.6	8.9	9.4	10	11	12	14	15	17	19	19	21	25	29	30	33	32	33	35	39	41	40
Myanmar	18	18	20	22	24	26	29	31	33	37	43	49	56	65	75	88	103	118	133	148	164	177	192	208	222	233	238	253	277	286	261
Nepal	16	18	19	20	22	24	25	27	28	30	32	35	35	37	40	43	46	49	52	55	59	62	68	73	79	81	82	99	109	118	117
Pakistan	207	225	248	258	273	293	313	321	333	351	374	395	412	444	490	538	587	632	655	679	698	732	753	785	828	872	898	950	1030	1059	1077
Philippines	165	170	174	182	194	207	223	239	240	251	268	282	298	319	349	377	409	448	476	487	529	561	612	654	700	734	799	854	930	1005	919
Republic of Korea	358	410	445	487	544	609	669	722	693	783	872	934	1019	1058	1143	1214	1302	1414	1469	1456	1573	1625	1685	1727	1793	1934	2027	2104	2193	2209	2233
Russian Federation	1188	1166	1019	953	851	833	818	843	807	871	1001	1075	1168	1339	1473	1697	2133	2377	2878	2769	2927	3259	3480	3742	3764	3526	3539	3807	4211	4284	4133
Singapore	73	80	87	100	113	124	136	149	148	158	177	178	188	201	226	250	281	315	327	330	382	415	436	448	462	481	501	535	567	585	560
Sri Lanka	40	43	46	51	54	59	62	67	71	75	81	82	87	93	101	111	123	135	146	152	166	184	211	223	234	242	259	270	285	297	290
Thailand	244	274	303	335	370	408	439	434	406	431	460	486	524	572	625	671	726	786	815	815	887	913	1009	1050	1059	1087	1146	1206	1287	1339	1273
Timor-Leste											1.1	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.8	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.8	3.9	4.0	4.8	4.4
Viet Nam	62	68	76	84	93	104	116	128	137	145	159	172	186	203	224	248	274	301	324	344	371	402	453	486	527	566	615	677	742	808	842
Rest of Asia																															
Global	29297	30897	32312	33716	35523	37518	39750	42040	43453	45597	49000	51344	53813	56816	61421	66175	72433	78423	83057	83864	89338	95175	100133	105049	109032	111379	115817	122047	129460	135284	132647

3. Fossil Transport CO2 emissions

ATO Indicator: CLC-VRE-045
Units: Million Tonnes
Source: EDGAR v5.0 Global Greenhouse Gas Emissions, https://edgar.jrc.ec.europa.eu/report_2020#data_download

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan	0.56	0.56	0.34	0.32	0.23	0.24	0.24	0.20	0.20	0.17	0.20	0.20	0.16	0.13	0.16	0.25	0.31	0.27	0.92	1.83	2.52	3.64	6.35	11.20	5.10	4.81	4.60	4.81	5.02	5.35
Bangladesh	1.67	1.83	2.11	2.17	2.21	2.67	2.94	3.32	3.40	3.10	3.03	3.79	3.86	3.93	4.54	5.06	5.27	5.39	6.02	6.35	7.35	8.57	8.66	8.18	8.85	9.26	9.35	10.47	11.67	12.01
Bhutan	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.03	0.04	0.03	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.05	0.07	0.10	0.12	0.17	0.30	0.27	0.13	0.12	0.11	0.12	0.12	0.13
Brunei Darussalam	0.55	0.60	0.65	0.68	0.72	0.78	0.84	0.87	0.82	0.81	0.81	0.84	0.88	0.92	0.97	0.95	1.03	1.13	1.13	1.12	1.18	1.28	1.34	1.33	1.35	1.36	1.35	1.37	1.43	1.52
Cambodia	0.12	0.14	0.16	0.16	0.11	1.16	1.16	1.20	1.39	1.36	1.32	1.51	1.33	1.35	1.38	1.49	1.59	1.97	2.03	2.66	3.09	3.28	3.45	3.52	3.84	4.22	4.90	5.01	5.24	5.58
China	107.04	114.33	125.30	140.64	130.44	140.81	188.71	165.66	161.60	178.40	263.57	269.77	292.61	331.28	387.37	413.23	450.13	482.49	520.39	529.87	581.55	634.76	698.39	753.24	781.54	836.80	862.69	895.82	937.85	986.45
India	64.64	67.23	68.84	68.75	70.89	78.34	83.83	85.81	88.78	93.31	95.09	94.92	97.74	99.53	108.05	114.67	119.68	141.78	161.96	177.31	191.28	207.21	219.24	223.73	232.82	254.52	269.93	284.11	298.21	306.83
Indonesia	32.20	35.85	37.91	40.49	45.35	49.26	54.60	60.65	59.20	58.78	62.69	66.75	67.99	69.27	70.83	70.64	67.14	70.63	77.67	88.87	101.33	109.93	121.93	128.58	127.98	128.63	121.72	135.56	140.83	141.05
Iran (Islamic Republic of)	39.15	42.32	44.15	49.81	56.75	55.71	59.93	61.27	63.73	71.21	76.49	80.31	86.56	91.43	96.96	104.93	111.13	110.55	115.23	125.21	116.74	116.93	121.64	125.96	138.66	136.61	124.85	123.98	126.83	138.49
Japan	199.78	212.19	218.39	221.98	231.10	240.06	246.41	247.43	245.58	249.28	247.77	251.65	247.59	243.43	238.17	232.33	228.76	225.84	217.32	213.76	214.23	211.74	216.61	215.81	208.19	207.85	201.31	195.18	189.75	187.23
Lao People's Democratic Republic	0.06	0.08	0.09	0.09	0.07	0.09	0.10	0.08	0.09	0.08	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.09	0.15	0.15	0.18	0.26	0.45	0.32	0.14	0.13	0.13	0.13	0.14	0.15
Malaysia	14.56	15.67	16.75	17.43	19.25	20.48	23.39	26.93	25.15	30.41	32.21	34.96	35.80	38.12	40.96	40.70	39.00	41.53	43.62	42.75	44.10	44.63	44.62	58.52	65.53	61.41	59.53	61.11	62.02	63.28
Maldives	0.02	0.02	0.02	0.05	0.05	0.09	0.10	0.07	0.09	0.08	0.14	0.14	0.21	0.25	0.18	0.15	0.20	0.20	0.29	0.38	0.44	0.64	1.12	0.99	0.45	0.43	0.41	0.43	0.45	0.48
Mongolia	1.54	0.99	0.89	0.99	0.67	0.83	0.87	0.81	0.79	0.82	0.97	0.93	1.04	1.00	1.16	1.03	1.27	1.54	1.62	1.48	1.45	1.72	1.95	1.89	1.97	1.99	1.72	2.23	2.40	2.55
Myanmar	1.34	1.26	1.04	1.59	1.83	2.72	2.92	2.40	2.95	3.00	3.51	2.82	3.47	3.88	4.27	4.70	3.99	4.47	2.04	2.14	2.30	2.36	3.03	4.21	7.61	10.25	11.31	19.12	19.94	21.16
Nepal	0.34	0.40	0.44	0.48	0.56	0.62	0.64	0.74	0.77	0.77	0.83	0.75	0.79	0.78	0.84	0.84	0.88	0.91	1.34	1.75	1.94	1.96	2.16	2.37	2.61	2.27	3.76	4.54	4.74	5.05
Pakistan	13.79	14.30	16.11	18.42	19.47	20.24	22.79	23.35	24.56	25.89	25.60	25.53	25.87	27.13	29.26	27.20	27.59	33.20	32.17	32.69	33.36	34.95	35.75	36.59	39.07	40.76	43.58	43.68	37.36	33.78
Philippines	13.74	13.94	15.87	16.92	18.48	22.15	25.12	27.06	27.26	27.17	24.60	26.64	26.83	25.77	26.68	25.16	23.37	21.98	22.20	23.30	23.75	23.53	24.49	25.56	26.65	30.82	32.97	34.28	34.46	35.12
Republic of Korea	43.73	49.03	54.51	61.48	64.57	72.47	76.37	78.07	65.17	71.80	77.78	80.98	86.38	88.30	88.95	86.06	85.96	88.64	84.17	85.07	86.61	85.09	87.56	90.86	92.43	97.06	101.04	97.76	97.38	96.05
Russian Federation	298.74	293.08	280.67	235.59	207.03	190.92	181.45	166.55	196.38	198.03	189.15	195.62	198.59	207.53	222.16	220.87	229.15	230.69	245.28	228.31	244.10	249.67	237.30	238.69	241.37	240.59	230.63	239.31	247.44	247.79
Singapore	4.07	4.93	4.76	4.72	5.14	5.65	5.11	5.06	5.08	5.14	5.22	5.32	5.29	5.31	5.41	5.59	5.81	6.01	6.13	6.70	7.03	7.55	7.36	7.11	6.88	6.64	6.62	6.89	6.97	6.80
Sri Lanka	2.50	2.51	2.80	2.99	3.48	3.70	5.07	4.67	4.88	5.40	5.16	5.22	5.32	5.66	5.84	6.32	5.99	6.57	6.02	5.50	6.92	7.38	7.37	7.73	8.00	8.69	9.36	10.60	10.57	11.40
Thailand	27.35	28.35	30.01	35.33	39.27	46.80	51.11	50.85	43.97	45.32	44.20	45.38	47.92	51.20	54.98	54.95	51.27	55.63	53.07	56.35	57.18	60.20	62.85	62.46	60.55	64.65	66.81	67.36	68.39	69.38
Timor-Leste	0.04	0.04	0.05	0.05	0.03	0.04	0.04	0.03	0.04	0.03	0.04	0.04	0.03	0.03	0.04	0.04	0.06	0.08	0.07	0.08	0.09	0.13	0.22	0.27	0.13	0.12	0.12	0.12	0.13	0.14
Viet Nam	4.17	3.94	4.42	6.90	7.61	7.27	8.00	8.75	9.20	9.83	10.57	11.29	13.84	15.65	19.08	19.25	19.19	22.45	23.84	28.57	30.54	30.11	29.61	28.82	29.43	32.06	34.84	35.60	37.04	38.65
Rest of Asia																														
International Aviation	258.31	251.14	259.14	264.31	278.57	289.69	301.37	316.83	327.61	341.65	354.52	347.41	367.45	365.79	394.76	420.26	435.63	447.69	455.07	433.42	457.47	474.45	478.19	486.34	502.59	530.38	553.31	584.09	605.39	627.48
International Shipping	371.28	386.05	414.64	401.89	414.67	427.96	438.04	448.53	461.98	485.73	498.43	473.83	491.64	502.08	551.08	571.50	608.66	644.82	647.25	616.14	662.89	663.51	616.93	614.90	636.15	660.03	678.56	696.99	713.43	730.26

4. Road in Transport CO2 Emissions

ATO Indicator: CLC-VRE-054
Units: Million Tonnes
Source: EDGAR v6.0 Global Greenhouse Gas Emissions, https://edgar.jrc.ec.europa.eu/dataset_ghg60

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan	0.38	0.37	0.22	0.22	0.22	0.22	0.19	0.17	0.16	0.15	0.12	0.11	0.09	0.13	0.12	0.19	0.25	0.21	0.72	1.50	2.15	4.24	3.49	2.20	1.62	2.25	1.48	2.02	2.08
Bangladesh	1.20	1.29	1.49	1.54	1.59	1.92	2.11	2.44	2.47	2.21	2.23	2.72	2.75	2.85	2.83	3.49	3.67	3.79	4.41	4.76	5.82	6.52	6.60	6.30	6.78	7.11	7.52	8.41	9.44
Bhutan	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.04	0.06	0.07	0.11	0.20	0.22	0.20	0.18	0.22	0.20	0.16	0.16
Brunei Darussalam	0.55	0.60	0.65	0.68	0.72	0.78	0.84	0.87	0.82	0.81	0.81	0.84	0.88	0.92	0.97	0.95	1.03	1.13	1.13	1.12	1.18	1.28	1.34	1.33	1.35	1.36	1.34	1.33	1.35
Cambodia	0.09	0.09	0.10	0.10	0.11	1.08	1.05	1.07	1.22	1.18	1.11	1.26	1.11	1.12	1.14	1.21	1.29	1.66	1.75	2.25	2.62	2.76	2.89	2.95	3.22	3.56	4.15	4.47	4.88
China	58.53	68.08	77.22	92.01	85.03	92.99	113.58	106.43	107.12	110.14	184.76	191.27	207.75	233.68	285.87	311.63	339.49	366.65	413.75	419.68	463.11	515.34	568.84	610.33	632.40	691.11	697.91	717.98	744.28
India	47.45	50.45	53.59	56.98	61.39	69.66	74.88	77.57	80.41	84.88	86.48	85.70	88.62	90.11	98.22	103.17	107.50	127.66	147.21	162.42	176.04	190.62	202.94	207.01	215.86	236.60	246.79	265.70	269.89
Indonesia	28.89	31.07	32.81	34.60	38.80	42.46	46.95	52.34	51.57	51.87	55.72	58.85	59.91	60.68	61.54	62.10	58.82	60.54	64.47	73.19	79.19	96.38	114.77	120.68	121.11	109.22	118.15	124.49	132.13
Iran (Islamic Republic of)																													
Japan	178.83	189.36	195.68	199.28	207.95	215.85	221.86	221.81	221.88	226.18	225.26	229.74	226.08	222.45	218.71	213.13	210.20	208.02	201.93	199.89	200.43	196.35	196.40	193.83	188.92	187.99	186.03	184.15	173.37
Lao People's Democratic Republic	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.07	0.21	0.21	0.20	0.23	0.23	0.27	0.34	0.26	0.44	0.60	0.75	1.19	1.23	1.12	1.08	1.39	1.25	1.13	1.16
Malaysia	14.05	15.08	16.04	16.66	18.60	19.73	22.48	25.82	24.15	29.51	31.25	33.89	34.72	37.00	39.72	39.48	37.69	40.23	42.34	41.41	42.64	42.97	43.09	56.53	63.46	58.97	60.94	58.92	57.11
Maldives	0.02	0.02	0.02	0.03	0.06	0.08	0.08	0.06	0.07	0.06	0.14	0.11	0.12	0.11	0.14	0.14	0.19	0.15	0.25	0.32	0.39	0.64	0.75	0.70	0.88	0.73	0.69	0.73	0.75
Mongolia	1.12	0.72	0.68	0.59	0.54	0.61	0.62	0.57	0.68	0.62	0.75	0.72	0.79	0.84	0.88	0.84	0.92	1.14	1.21	1.07	0.97	1.11	1.32	1.30	1.40	1.45	1.28	1.40	1.48
Myanmar	1.27	1.19	0.96	1.50	1.70	2.57	2.77	2.26	2.81	2.85	3.35	2.65	3.26	3.63	4.02	4.49	3.75	4.23	1.65	1.80	1.77	1.81	2.20	2.47	2.73	2.98	3.13	4.30	4.39
Nepal	0.34	0.40	0.44	0.48	0.56	0.62	0.64	0.74	0.77	0.77	0.83	0.75	0.79	0.78	0.84	0.84	0.88	0.91	1.34	1.75	1.94	1.96	2.16	2.44	2.72	2.34	3.90	4.77	5.30
Pakistan	12.89	13.41	15.33	17.65	18.67	19.46	21.77	22.33	23.43	24.68	24.37	24.34	24.64	25.94	27.93	25.92	26.38	31.92	30.95	31.51	31.95	33.83	34.65	35.47	37.93	42.83	45.16	52.56	55.55
Philippines	11.52	11.18	12.81	14.36	15.05	17.26	19.05	20.13	20.28	20.73	20.64	20.89	21.93	21.84	22.57	21.56	20.19	20.25	19.98	20.70	20.85	20.52	21.41	22.28	22.79	26.34	28.94	29.95	30.31
Republic of Korea	31.87	36.63	41.60	46.95	52.84	59.97	65.80	66.40	54.64	59.78	66.00	69.20	74.37	76.63	77.30	78.31	79.21	81.78	79.57	80.76	82.60	82.37	83.89	87.75	88.57	93.68	95.85	97.89	95.71
Russian Federation	153.95	154.28	146.49	116.06	105.74	95.57	88.87	87.55	103.35	103.47	101.66	107.88	107.14	109.48	116.34	113.83	120.96	120.06	133.29	138.20	141.34	142.39	140.46	144.12	151.37	150.39	145.84	149.17	140.30
Singapore	4.07	4.93	4.76	4.72	5.14	5.65	5.11	5.06	5.08	5.14	5.22	5.32	5.29	5.31	5.41	5.59	5.81	6.01	6.12	6.01	6.12	6.54	6.53	6.28	6.53	7.00	6.85	6.71	6.65
Sri Lanka	2.22	2.22	2.46	2.67	2.94	3.08	4.32	3.88	4.18	4.55	4.56	4.68	4.84	5.14	5.15	5.83	5.49	5.85	5.27	4.96	6.42	7.08	7.06	7.50	7.86	8.41	9.02	10.62	9.66
Thailand	25.93	26.92	29.02	34.14	38.01	45.58	50.37	50.19	43.36	44.79	43.72	44.89	47.36	50.65	54.43	54.44	50.76	53.85	51.34	54.69	55.42	58.14	60.77	60.07	57.97	61.60	65.54	71.62	70.38
Timor-Leste	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.05	0.07	0.09	0.14	0.15	0.20	0.22	0.24	0.21	0.26	0.26
Viet Nam	3.79	3.48	3.76	6.48	7.11	6.72	7.41	8.14	8.65	9.33	10.11	10.88	13.36	15.17	18.65	18.81	18.73	21.95	23.28	27.96	29.78	29.51	28.97	28.14	28.74	31.11	34.17	35.82	35.99
Rest of Asia																													
Global	3304.04	3357.88	3434.86	3498.05	3585.87	3689.19	3831.52	3909.96	4002.93	4103.67	4238.26	4311.15	4422.44	4531.36	4703.71	4777.03	4867.18	5007.17	5044.26	5014.78	5204.99	5266.93	5374.05	5530.16	5616.88	5770.84	5872.56	5967.43	6010.85

5. Railways in Transport CO2 Emissions

ATO Indicator: CLC-VRE-055
Units: Million Tonnes
Source: EDGAR v6.0 Global Greenhouse Gas Emissions, https://edgar.jrc.ec.europa.eu/dataset_ghg60

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan																													
Bangladesh	0.16	0.22	0.26	0.26	0.26	0.32	0.35	0.38	0.39	0.38	0.34	0.46	0.47	0.46	0.57	0.49	0.53	0.52	0.52	0.52	0.53	0.85	0.86	0.79	0.86	0.90	0.96	1.06	1.25
Bhutan																													
Brunei Darussalam																													
Cambodia						0.06	0.08	0.09	0.12	0.12	0.13	0.17	0.15	0.15	0.17	0.20	0.23	0.23	0.22	0.32	0.36	0.39	0.43	0.44	0.48	0.51	0.63	0.54	0.59
China	25.97	22.44	19.33	17.22	13.94	11.53	9.81	6.72	5.06	3.55	12.75	11.85	12.35	15.00	18.24	19.54	19.38	19.38	19.74	17.76	16.85	15.68	14.60	13.44	11.82	10.01	9.80	9.64	9.91
India	13.43	13.26	11.79	8.01	5.64	5.01	5.08	4.64	4.59	4.47	4.66	5.14	5.39	5.26	5.25	6.06	5.99	6.57	6.98	7.29	7.63	7.81	8.16	8.45	8.65	8.76	8.51	8.47	8.60
Indonesia																													
Iran (Islamic Republic of)																													
Japan	0.95	0.94	0.92	0.87	0.86	0.84	0.82	0.79	0.79	0.74	0.72	0.69	0.68	0.64	0.67	0.66	0.64	0.64	0.62	0.60	0.58	0.57	0.57	0.55	0.53	0.53	0.51	0.51	0.48
Lao People's Democratic Republic																													
Malaysia																													
Maldives																													
Mongolia	0.43	0.27	0.21	0.40	0.13	0.22	0.26	0.23	0.10	0.20	0.22	0.21	0.25	0.16	0.28	0.19	0.22	0.28	0.31	0.30	0.36	0.46	0.51	0.56	0.56	0.53	0.46	0.67	0.71
Myanmar																			0.17	0.19	0.21	0.21	0.42	0.57	0.71	0.80	0.74	1.05	1.07
Nepal																													
Pakistan	0.89	0.88	0.78	0.77	0.80	0.78	0.77	0.75	0.80	0.87	0.91	0.86	0.86	0.86	0.95	0.87	0.83	0.97	0.89	0.83	0.77	0.77	0.76	0.76	0.79	0.87	0.87	0.97	1.03
Philippines	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00			0.00	0.02									0.03	0.01	0.01	0.01	0.01
Republic of Korea	0.88	0.90	0.92	0.96	0.92	0.93	0.92	0.92	0.91	0.95	0.98	0.98	0.98	1.00	0.86	0.81	0.74	0.68	0.67	0.59	0.57	0.52	0.52	0.46	0.39	0.35	0.31	0.30	0.29
Russian Federation	18.89	16.26	13.97	11.82	7.18	6.75	6.83	5.69	4.80	5.27	6.53	5.52	6.16	5.77	6.47	6.72	7.64	7.02	6.09	5.56	5.06	6.20	5.22	5.22	4.94	4.97	4.88	6.09	5.73
Singapore																													
Sri Lanka	0.08	0.07	0.08	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.09	0.09	0.06	0.08	0.07	0.08	0.08	0.08	0.07	0.06	0.18	0.10	0.11	0.12	0.12	0.13	0.12	0.11
Thailand	0.33	0.36	0.37	0.37	0.34	0.36	0.41	0.36	0.29	0.32	0.30	0.32	0.36	0.33	0.29	0.31	0.31	0.29	0.29	0.27	0.26	0.24	0.24	0.24	0.22	0.24	0.24	0.21	0.21
Timor-Leste																													
Viet Nam	0.06	0.09	0.09	0.06	0.05	0.01																							
Rest of Asia																													
Global	127.87	118.46	113.17	102.90	90.14	87.52	85.94	79.22	73.23	71.67	85.35	82.00	83.93	86.68	93.76	99.86	104.58	104.18	95.47	82.74	85.81	95.53	90.73	90.99	90.06	90.66	88.99	89.72	91.00

6. Shipping/Inland Waterways Transport CO2 Emissions

ATO Indicator: CLC-VRE-056
Units: Million tonnes
Source: EDGAR v6.0 Global Greenhouse Gas Emissions, https://edgar.jrc.ec.europa.eu/dataset_ghg60

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan	0.036	0.034	0.017	0.014	0.014	0.014	0.013	0.013	0.012	0.009	0.011	0.012	0.011	0.018	0.017	0.025	0.029	0.018	0.036	0.052	0.061	0.247	0.223	0.139	0.112	0.142	0.109	0.149	0.153
Bangladesh	0.305	0.314	0.363	0.363	0.363	0.436	0.478	0.513	0.533	0.517	0.459	0.622	0.642	0.629	1.142	1.065	1.068	1.075	1.088	1.072	1.007	1.190	1.187	1.088	1.190	1.248	1.325	1.470	1.729
Bhutan	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.005	0.005	0.006	0.005	0.003	0.003	0.003	0.003	0.012	0.014	0.013	0.012	0.014	0.015	0.012	0.012
Brunei Darussalam																													
Cambodia	0.008	0.009	0.008	0.006	0.007	0.016	0.026	0.032	0.048	0.058	0.061	0.074	0.058	0.064	0.054	0.070	0.061	0.061	0.058	0.086	0.096	0.102	0.112	0.115	0.125	0.134	0.166	0.144	0.157
China	7.829	6.939	10.575	12.615	12.897	16.075	37.276	22.131	18.028	29.549	37.112	37.539	38.446	45.696	44.549	44.219	53.698	56.332	44.656	47.898	50.547	52.689	60.338	69.250	73.113	65.617	67.920	76.830	78.940
India	1.768	1.571	1.530	1.756	1.868	1.540	1.692	1.474	1.628	1.629	1.550	1.564	1.280	1.460	1.539	2.021	2.113	2.957	3.288	2.950	2.547	2.532	2.181	2.136	2.149	2.220	2.235	3.931	3.992
Indonesia	2.405	2.798	2.836	3.279	3.704	4.164	4.751	5.337	5.600	5.250	5.124	5.419	5.352	5.083	4.557	4.190	3.782	3.474	3.654	4.399	4.737	6.742	8.834	8.974	8.875	6.543	7.678	8.433	8.950
Iran (Islamic Republic of)																													
Japan	13.437	13.991	13.788	13.626	13.928	14.424	15.292	16.258	14.487	14.413	14.658	14.199	14.329	13.937	12.742	12.754	12.410	11.909	11.054	10.192	10.507	10.321	10.568	10.444	10.436	10.085	10.104	10.003	9.417
Lao People's Democratic Republic	0.004	0.005	0.005	0.004	0.004	0.005	0.005	0.006	0.006	0.004	0.020	0.024	0.026	0.032	0.033	0.035	0.039	0.022	0.022	0.021	0.021	0.069	0.079	0.071	0.075	0.088	0.093	0.083	0.086
Malaysia	0.132	0.167	0.257	0.251	0.061	0.055	0.103	0.244	0.029	0.042	0.013	0.016	0.013	0.010	0.013	0.013	0.013	0.010	0.010	0.067	0.039	0.125	0.016	0.193	0.186	0.562	0.045	0.003	0.003
Maldives	0.002	0.002	0.002	0.002	0.003	0.005	0.005	0.005	0.005	0.004	0.013	0.013	0.016	0.016	0.021	0.019	0.021	0.013	0.012	0.011	0.011	0.037	0.048	0.045	0.061	0.046	0.051	0.054	0.055
Mongolia																													
Myanmar			0.012	0.009	0.022	0.025	0.022	0.022	0.025	0.022	0.012	0.016	0.075	0.093	0.106	0.121	0.096	0.068	0.120	0.132	0.145	0.148	0.196	0.234	0.266	0.286	0.180	0.248	0.253
Nepal																													
Pakistan																													
Philippines	1.798	2.403	2.690	2.176	2.894	4.300	5.259	5.991	6.253	5.705	2.993	4.958	4.219	3.212	3.407	2.909	2.496	1.604	1.696	1.908	2.192	2.094	1.974	1.990	2.199	3.135	2.615	2.888	2.923
Republic of Korea	5.269	6.010	7.077	8.479	4.621	4.551	2.918	3.449	3.580	4.661	4.157	3.727	4.000	3.999	3.793	2.808	2.772	2.719	2.785	2.618	2.149	0.768	0.720	0.664	0.418	0.685	1.446	1.334	1.299
Russian Federation	14.544	9.143	7.648	6.436	4.915	3.777	3.657	3.296	2.947	3.160	3.641	3.833	3.680	3.601	3.488	3.882	3.777	3.482	3.277	3.306	1.979	3.735	2.648	2.680	2.190	1.802	1.354	1.353	1.272
Singapore																				0.687	0.664	0.706	0.484	0.237	0.199	0.218	0.225	0.233	0.231
Sri Lanka	0.006	0.003					0.064	0.070	0.007	0.029	0.039	0.019	0.023	0.023	0.075	0.003	0.003	0.006	0.080	0.029	0.089	0.102	0.109	0.115	0.153	0.143	0.210	0.216	0.197
Thailand	1.088	1.070	0.612	0.819	0.913	0.859	0.326	0.304	0.317	0.201	0.185	0.179	0.204	0.223	0.248	0.210	0.198	0.166	0.191	0.207	0.241	0.458	0.474	0.486	0.433	0.467	0.489	0.599	0.587
Timor-Leste	0.003	0.003	0.003	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005	0.005	0.004	0.003	0.003	0.002	0.002	0.008	0.010	0.013	0.015	0.015	0.015	0.019	0.020
Viet Nam	0.022	0.026	0.029	0.039	0.039	0.055	0.055	0.051	0.071	0.087	0.116	0.128	0.141	0.177	0.199	0.199	0.218	0.222	0.225	0.231	0.257	0.189	0.128	0.084	0.151	0.218	0.183	0.172	0.173
Rest of Asia																													
Global	471.599	481.701	515.011	503.282	509.307	526.909	562.038	561.054	568.857	605.869	621.553	597.356	613.835	634.120	681.996	704.906	751.012	790.029	778.017	751.601	798.640	813.446	774.511	777.610	800.863	816.087	837.561	867.411	876.666

7. Domestic Aviation Transport CO2 Emissions

ATO Indicator: CLC-VRE-057
Units: Million tonnes
Source: EDGAR v6.0 Global Greenhouse Gas Emissions, https://edgar.jrc.ec.europa.eu/dataset_ghg60

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan	0.14	0.14	0.09	0.09	0.09	0.09	0.10	0.07	0.08	0.07	0.04	0.04	0.02	0.02	0.02	0.03	0.04	0.04	0.09	0.16	0.13	0.19	0.16	0.13	0.11	0.14	0.09	0.13	0.13
Bangladesh																													
Bhutan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Brunei Darussalam																													
Cambodia	0.03	0.04	0.04	0.04	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.06	0.12	0.13
China	1.72	3.06	3.90	3.85	4.34	5.72	7.27	9.67	9.11	12.54	12.68	12.33	16.52	17.28	20.17	19.29	19.31	22.83	25.14	27.73	33.81	33.27	36.69	41.90	46.86	53.89	61.01	69.22	71.12
India	1.60	1.49	1.50	1.66	1.82	1.99	2.06	2.02	2.02	2.10	2.15	2.16	2.17	2.38	2.69	3.88	4.77	5.54	5.48	5.83	6.50	7.39	7.32	7.80	8.27	9.22	10.76	12.22	12.41
Indonesia	0.90	1.99	2.26	2.61	2.85	2.63	2.90	2.97	2.03	1.66	1.85	2.50	2.74	3.52	4.74	3.55	3.69	3.80	3.94	4.09	5.19	5.37	6.02	6.46	6.60	6.81	7.81	8.75	9.28
Iran (Islamic Republic of)																													
Japan	7.30	7.91	8.45	8.86	9.33	10.48	10.28	10.95	10.92	10.74	10.80	10.85	11.06	11.19	10.79	10.92	11.31	11.00	10.40	9.90	9.30	9.11	9.63	10.21	10.25	10.17	10.27	10.45	9.84
Lao People's Democratic Republic	0.02	0.02	0.03	0.02	0.03	0.03	0.04	0.03	0.04	0.03	0.07	0.08	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.06	0.07	0.07	0.09	0.08	0.07	0.07
Malaysia	0.38	0.41	0.46	0.53	0.59	0.70	0.80	0.86	0.97	0.85	0.94	1.05	1.07	1.11	1.23	1.20	1.29	1.29	1.26	1.27	1.42	1.53	1.51	1.79	1.89	1.87	1.81	1.93	1.86
Maldives	0.01	0.01	0.01	0.01	0.02	0.03	0.04	0.03	0.03	0.03	0.05	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.04	0.06	0.04	0.04	0.05	0.05
Mongolia																							0.02	0.03	0.02	0.02	0.02	0.02	0.02
Myanmar	0.07	0.06	0.07	0.08	0.11	0.13	0.13	0.12	0.12	0.13	0.14	0.16	0.14	0.16	0.15	0.09	0.15	0.16	0.15	0.17	0.18	0.18	0.22	0.24	0.26	0.28	0.39	0.34	0.34
Nepal																													
Pakistan							0.25	0.26	0.33	0.34	0.32	0.33	0.36	0.34	0.38	0.40	0.38	0.32	0.34	0.36	0.37	0.36	0.35	0.37	0.33	0.37	0.39	0.34	0.36
Philippines	0.41	0.36	0.36	0.38	0.53	0.58	0.80	0.93	0.72	0.73	0.96	0.79	0.68	0.72	0.70	0.67	0.68	0.13	0.53	0.69	0.71	0.92	1.11	1.29	1.63	1.34	1.78	1.53	1.55
Republic of Korea	5.71	5.50	4.93	5.10	5.66	6.34	6.07	6.54	5.77	6.12	6.26	6.38	6.65	6.30	6.62	3.73	2.92	3.11	0.82	0.80	1.02	1.47	2.45	2.00	3.08	3.68	3.71	3.94	3.84
Russian Federation	27.69	23.67	21.92	18.54	15.44	14.38	13.40	13.25	12.43	12.85	13.50	13.89	14.41	14.64	14.38	15.54	16.41	16.56	17.52	14.58	15.60	19.36	19.78	18.22	16.98	15.19	14.63	16.17	15.20
Singapore																													
Sri Lanka	0.18	0.22	0.26	0.23	0.46	0.52	0.61	0.64	0.63	0.76	0.49	0.43	0.36	0.43	0.53	0.41	0.41	0.63	0.59	0.44	0.35	0.02	0.10	0.01		0.01	0.01	0.03	0.03
Thailand																		1.33	1.25	1.19	1.27	1.36	1.37	1.66	1.93	2.58	2.80	2.89	2.83
Timor-Leste	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Viet Nam	0.30	0.33	0.54	0.32	0.41	0.50	0.53	0.55	0.48	0.41	0.35	0.28	0.33	0.31	0.32	0.35	0.39	0.46	0.60	0.74	1.03	0.82	0.95	1.08	1.08	1.71	2.13	2.18	2.19
Rest of Asia																													
Global	542.94	525.90	529.30	534.05	557.36	571.33	597.00	616.85	628.84	650.05	675.39	659.06	665.06	661.51	704.16	730.51	739.24	758.51	750.87	710.87	748.95	769.80	779.59	798.75	825.61	871.73	913.04	968.47	997.71

8. Share of Transport CO2 Emissions in Total Fuel Combustion Energy CO2 Emissions

ATO Indicator: CLC-VRE-064
Units: %
Source: Calculated from IEA, https://www.iea.org/reports/co2-emissions-from-fuel-combustion-overview

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Afghanistan																												
Bangladesh	15%	17%	18%	17%	16%	16%	18%	18%	18%	16%	14%	15%	15%	14%	15%	16%	15%	14%	15%	14%	15%	16%	15%	14%	14%	13%	13%	14%
Bhutan																												
Brunei Darussalam	17%	18%	18%	18%	17%	17%	18%	17%	19%	19%	18%	19%	20%	18%	20%	20%	14%	17%	16%	15%	17%	18%	19%	19%	20%	23%	21%	20%
Cambodia						79%	76%	73%	74%	71%	67%	70%	60%	57%	58%	56%	54%	56%	56%	61%	67%	68%	69%	69%	64%	53%	54%	49%
China	5%	5%	5%	6%	5%	5%	7%	6%	5%	6%	9%	8%	8%	8%	8%	8%	8%	7%	8%	7%	7%	7%	8%	8%	9%	9%	9%	10%
India	12%	12%	12%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	10%	11%	11%	10%	11%	12%	12%	12%	12%	12%	12%	11%	13%	13%	13%
Indonesia	24%	25%	25%	24%	25%	24%	25%	26%	24%	22%	25%	24%	24%	22%	22%	22%	20%	20%	22%	25%	28%	28%	29%	31%	29%	28%	30%	29%
Iran (Islamic Republic of)	23%	22%	21%	24%	24%	23%	24%	23%	24%	24%	24%	25%	25%	26%	25%	25%	25%	23%	24%	25%	23%	23%	24%	23%	25%	25%	24%	23%
Japan	19%	20%	20%	21%	21%	21%	22%	22%	23%	22%	22%	22%	21%	21%	20%	20%	20%	19%	19%	20%	19%	18%	18%	17%	17%	18%	18%	18%
Lao People's Democratic Republic																												
Malaysia	29%	26%	27%	26%	26%	26%	26%	28%	26%	29%	28%	29%	28%	29%	28%	26%	24%	23%	23%	25%	23%	23%	23%	28%	30%	28%	29%	29%
Maldives																												
Mongolia	12%	7%	7%	8%	7%	8%	10%	10%	9%	10%	11%	10%	11%	11%	12%	9%	10%	12%	13%	11%	10%	11%	11%	10%	11%	12%	10%	11%
Myanmar	34%	33%	25%	34%	33%	40%	41%	34%	38%	35%	38%	34%	43%	38%	43%	45%	41%	44%	27%	30%	29%	29%	26%	30%	43%	55%	21%	20%
Nepal	38%	35%	39%	37%	35%	35%	35%	35%	35%	26%	27%	22%	30%	27%	31%	27%	35%	35%	46%	51%	47%	44%	43%	48%	44%	40%	46%	47%
Pakistan	25%	25%	25%	26%	27%	26%	29%	29%	30%	29%	29%	28%	28%	29%	28%	25%	24%	25%	26%	26%	27%	28%	28%	29%	28%	27%	28%	29%
Philippines	36%	37%	39%	38%	39%	39%	40%	39%	39%	40%	36%	39%	40%	37%	38%	35%	36%	32%	31%	33%	31%	30%	30%	29%	28%	30%	29%	27%
Republic of Korea	19%	19%	20%	20%	20%	20%	20%	19%	19%	19%	18%	18%	20%	20%	19%	19%	18%	19%	17%	17%	16%	15%	15%	16%	16%	17%	17%	17%
Russian Federation	14%	14%	14%	13%	13%	12%	12%	12%	14%	14%	13%	13%	14%	14%	15%	15%	15%	15%	16%	16%	16%	16%	15%	16%	15%	16%	16%	16%
Singapore	14%	16%	15%	13%	14%	15%	13%	13%	14%	14%	12%	13%	13%	14%	14%	15%	16%	16%	16%	17%	17%	17%	17%	16%	15%	15%	14%	15%
Sri Lanka	68%	66%	57%	62%	65%	68%	64%	59%	59%	59%	49%	50%	48%	47%	47%	47%	51%	51%	50%	48%	56%	50%	46%	56%	47%	45%	45%	48%
Thailand	34%	31%	31%	32%	32%	33%	33%	32%	30%	30%	29%	28%	28%	29%	28%	27%	25%	27%	25%	27%	26%	27%	26%	25%	25%	26%	28%	31%
Timor-Leste																												
Viet Nam	24%	23%	25%	33%	32%	26%	26%	24%	23%	24%	24%	23%	24%	26%	26%	24%	24%	25%	24%	26%	24%	24%	24%	22%	22%	18%	19%	20%
Global	22%	23%	23%	23%	24%	24%	24%	24%	24%	25%	25%	25%	25%	24%	24%	24%	24%	24%	23%	23%	23%	23%	23%	23%	23%	24%	24%	24%

9. Amount of transport fossil fuel subsidies per unit of GDP

Related ATO Indicator: SEC-TFI-009 [Transport Fossil Fuel Subsidy Share in Total Fossil Fuel Subsidy]
Units: Million USD subsidy per Billion USD GDP
Source: IEA Fossil Fuel Subsidy, https://www.iea.org/topics/energy-subsidies

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Afghanistan											
Bangladesh	0.84	2.34	1.70	0.82	0.22						
Bhutan											
Brunei Darussalam	4.12	5.15	5.11	5.14	4.86	3.62	2.28	3.52	4.46	3.56	0.89
Cambodia											
China											
India		1.89	2.44	1.82	0.86						
Indonesia	4.07	7.52	9.51	8.21	7.60	2.65	0.96	2.79	5.60	3.51	0.74
Iran (Islamic Republic of)	24.46	18.14	35.23	38.47	35.50	16.93	10.08	16.58	28.97	9.60	2.61
Japan											
Lao People's Democratic Republic											
Malaysia	2.09	5.49	5.64	8.92	5.56	0.19	1.68	1.68	1.25	0.87	
Maldives											
Mongolia											
Myanmar											
Nepal											
Pakistan	0.06	2.78						0.00	0.00		0.00
Philippines											
Republic of Korea											
Russian Federation											
Singapore											
Sri Lanka	1.05	2.34	0.80	0.46	0.30				0.19	0.40	
Thailand											
Timor-Leste											
Viet Nam		0.00					0.00				
Rest of Asia											
Global	1.33	1.73	1.97	1.84	1.54	0.70	0.42	0.65	0.85	0.47	0.20

10. Transport - Final consumption of renewable energy (PJ)

ATO Indicator: CLC-VRE-016
Units: PJ
Source: UNStats, https://unstats.un.org/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan																													
Bangladesh																													
Bhutan																													
Brunei Darussalam																													
Cambodia																													
China	4.4	4.4	4.8	5.3	6.0	6.7	8.6	8.6	7.5	7.5	10.0	13.6	13.5	15.7	19.6	48.0	59.0	67.7	84.9	99.7	115.6	125.5	151.0	161.7	169.6	176.1	197.3	207.8	227.1
India	3.7	3.8	3.8	4.0	4.6	3.9	3.8	4.1	4.5	4.5	7.0	7.5	7.5	8.4	9.1	10.3	11.2	11.5	13.1	9.7	10.1	17.8	16.0	19.6	18.0	25.1	34.9	27.7	49.2
Indonesia																	0.1	0.8	0.8	4.0	7.3	11.7	21.9	34.3	53.7	21.7	85.8	73.8	118.7
Iran (Islamic Republic of)																		0.1				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Japan	6.9	7.7	6.6	7.6	5.2	6.3	6.0	6.6	6.7	6.3	6.2	6.1	6.0	6.9	6.8	6.0	6.8	5.9	6.3	6.6	14.6	14.7	14.6	16.6	19.6	23.5	25.2	27.6	28.5
Lao People's Democratic Republic																													
Malaysia																	0.3	1.3	1.8	0.2	0.2	1.0	4.9	7.9	11.8	16.4	16.4	16.2	18.5
Maldives																													
Mongolia																													
Myanmar																													
Nepal																													
Pakistan	0.1	0.1																											
Philippines											0.1	0.1	0.1		0.1	0.2	0.2	1.5	2.5	8.7	7.8	8.6	11.1	13.3	14.4	16.7	18.1	19.4	20.0
Republic of Korea	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	1.8	3.4	7.0	10.3	14.0	13.3	14.3	15.0	15.8	17.7	21.0	22.5	27.3
Russian Federation	57.3	54.7	53.3	50.1	49.3	47.9	42.4	43.0	41.5	41.4	41.1	43.8	44.6	46.2	54.8	54.5	54.1	54.7	47.6	51.6	49.5	51.4	51.6	56.0	53.8	46.9	50.7	47.6	51.1
Singapore																0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Sri Lanka																													
Thailand															0.1	1.4	2.7	5.9	20.1	26.6	27.4	29.6	38.8	50.3	61.2	64.2	67.4	74.6	81.5
Timor-Leste																													
Viet Nam																													
Rest of Asia																													
Global	417.7	423.5	410.3	512.4	537.6	559.3	544.6	559.4	562.4	568.6	561.1	554.7	630.3	699.9	815.5	978.9	1208.7	1577.9	2062.3	2340.6	2572.5	2697.4	3011.2	3264.4	3428.8	3546.8	3714.1	3833.1	4108.0

11. Total Transport CO2 emissions per GDP

ATO Indicator: CLC-VRE-050
Units: Tonnes per Million USD
Source: calculated from CO2 emissions and GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Afghanistan																												
Bangladesh	18	19	20	19	18	21	21	23	22	18	17	20	19	18	19	19	18	17	17	17	19	20	19	16	16	16	16	16
Bhutan																												
Brunei Darussalam	39	40	40	41	41	42	43	44	41	39	37	37	36	36	37	35	35	38	38	38	38	39	40	40	41	41	41	39
Cambodia						135	126	123	134	115	100	103	83	77	69	64	60	66	63	81	88	85	82	77	77	78	85	82
China	96	91	85	82	66	63	75	59	53	54	72	66	65	65	68	63	59	54	52	48	47	46	46	45	43	43	40	38
India	65	65	62	57	54	55	53	52	50	48	46	42	41	38	38	35	33	34	37	37	36	36	35	33	32	32	30	30
Indonesia	62	61	60	58	59	58	58	61	68	66	65	65	63	60	57	52	46	44	44	48	51	51	52	52	50	45	44	44
Iran (Islamic Republic of)	94	89	89	97	110	104	104	105	106	116	114	116	112	106	106	105	103	93	96	103	90	86	95	97	101	100	84	81
Japan	81	81	81	81	81	81	79	77	76	77	72	72	69	66	61	57	54	51	49	50	48	46	46	44	42	40	40	38
Lao People's Democratic Republic																												
Malaysia	116	110	106	98	97	92	93	99	98	110	105	111	106	105	103	95	83	81	80	79	75	70	65	81	84	74	72	64
Maldives																												
Mongolia	207	142	137	154	100	114	115	101	94	94	107	96	100	88	91	74	82	89	85	78	71	70	69	59	58	55	47	53
Myanmar									74	69	70	49	54	52	49	46	33	32	13	13	14	13	15	18	30	39	16	20
Nepal	24	25	26	27	28	30	28	31	31	29	29	24	25	23	23	22	21	21	28	35	37	35	36	38	38	32	54	60
Pakistan	70	67	69	75	74	72	78	78	79	79	73	70	67	67	65	54	50	55	50	50	50	49	47	46	45	44	47	51
Philippines	85	84	93	95	97	109	115	116	116	111	94	97	92	83	78	68	59	50	48	49	46	43	41	40	38	41	41	39
Republic of Korea	135	132	135	140	131	132	126	119	104	101	98	96	93	91	85	76	70	67	60	60	56	52	52	51	49	50	50	49
Russian Federation			164	148	146	137	133	118	145	136	115	111	106	101	99	89	83	75	74	75	75	72	65	64	61	62	61	61
Singapore	59	65	57	50	48	48	40	36	36	34	31	31	30	28	25	23	22	20	20	21	19	19	18	16	15	13	13	13
Sri Lanka	66	58	65	63	67	65	79	64	68	72	62	62	60	60	57	56	48	48	41	36	41	40	35	35	34	35	36	40
Thailand	113	105	99	105	106	114	116	117	108	105	96	93	91	89	88	82	71	71	65	69	64	66	63	60	56	58	59	61
Timor-Leste																												
Viet Nam	52	45	45	64	63	54	54	53	52	53	52	51	57	59	65	59	54	57	56	63	63	57	52	47	48	45	48	46
Rest of Asia																												
Global	168	160	144	139	135	131	129	124	122	119	115	110	108	104	101	95	90	86	82	80	78	75	72	70	68	67	65	63

12. Global Climate Risk Index

ATO Indicator: CLC-CVT-004
Source: GermanWatch, https://germanwatch.org/en/19777

	Climate Risk Index for 2000–2019					Climate Risk Index for 2019				
	CRI score	**Average Fatalities 2000-2019 (Rank)**	**Average Fatalities per 100000 inhabitants 2000-2019 (Rank)**	**Average Losses in million US$ (PPP) 2000-2019 (Rank)**	**Average Losses per unit GDP in % 2000-2019 (Rank)**	**CRI score**	**Fatalities in 2019 (Rank)**	**Fatalities per 100000 inhabitants (Rank)**	**Losses in million US$ (PPP) (Rank)**	**Losses per unit GDP in % (Rank)**
Afghanistan	37.83	12	14	75	56	16	11	11	33	15
Bangladesh	28.33	9	37	13	37	23.5	7	29	20	28
Bhutan	95.17	131	53	154	90	118	106	106	130	130
Brunei Darussalam	167.5	167	151	178	179	118	106	106	130	130
Cambodia	36.17	38	35	53	28	75.83	60	63	97	86
China	56.33	5	106	1	60	42.83	4	83	3	42
India	38.5	3	61	2	52	16.67	1	36	1	13
Indonesia	74	14	91	18	115	24.83	3	31	6	39
Japan	64.83	21	90	4	92	14.5	9	20	2	18
Lao People's Democratic Republic	60.5	82	66	73	38	55.17	57	28	86	66
Malaysia	105.67	64	108	66	144	87.33	58	78	74	118
Maldives	166.83	172	172	171	157	97.33	106	106	114	76
Mongolia	59.17	88	46	83	46	31.67	50	9	62	30
Myanmar	10	1	1	19	19	31.33	24	38	30	29
Nepal	31.33	16	18	56	40	20	10	7	42	27
Pakistan	29	11	45	7	33	25	8	39	14	25
Philippines	18.17	7	16	8	31	26.67	13	40	15	26
Republic of Korea	85.17	49	101	24	118	64	52	81	24	73
Singapore	172	172	172	162	177	118	106	106	130	130
Sri Lanka	39.5	35	42	28	45	41.83	33	24	48	61
Thailand	29.83	22	60	3	17	43.17	36	64	19	38
Timor-Leste										
Viet Nam	35.67	15	47	11	47	50.17	25	57	32	65
Iran (Islamic Republic of)	90	41	110	29	125	27	22	45	8	21
Russian Federation	48.5	2	6	17	130	50.67	33	80	13	49

13. Climate vulnerability rating for infrastructure

ATO Indicator: CLC-CVT-001
Units: Index
Source: ND-GAIN, https://gain.nd.edu/our-work/country-index/

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan																								
Bangladesh	0.58	0.57	0.57	0.57	0.56	0.56	0.55	0.55	0.54	0.54	0.53	0.52	0.53	0.52	0.50	0.50	0.48	0.48	0.48	0.48	0.46	0.46	0.44	0.44
Bhutan																								
Brunei Darussalam	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Cambodia	0.56	0.56	0.56	0.56	0.58	0.56	0.57	0.56	0.56	0.55	0.56	0.54	0.54	0.55	0.52	0.54	0.51	0.50	0.49	0.49	0.47	0.45	0.43	0.43
China	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
India	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.34	0.34	0.35	0.33	0.33	0.33	0.32	0.32	0.31	0.31
Indonesia	0.39	0.38	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.35	0.34	0.34	0.32	0.32	0.30	0.30	0.29	0.30	0.30	0.29	0.29	0.29
Iran (Islamic Republic of)																								
Japan	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Lao People's Democratic Republic																								
Malaysia	0.24	0.24	0.25	0.24	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Maldives	0.69	0.69	0.69	0.69	0.69	0.69	0.68	0.68	0.68	0.67	0.67	0.67	0.67	0.67	0.63	0.63	0.64	0.63	0.64	0.63	0.63	0.63	0.63	0.63
Mongolia	0.52	0.52	0.52	0.52	0.52	0.52	0.50	0.50	0.50	0.50	0.43	0.46	0.45	0.43	0.37	0.31	0.32	0.30	0.30	0.34	0.33	0.33	0.32	0.32
Myanmar	0.56	0.56	0.56	0.56	0.55	0.54	0.54	0.54	0.54	0.54	0.53	0.52	0.52	0.52	0.51	0.52	0.51	0.51	0.51	0.53	0.51	0.52	0.49	0.49
Nepal	0.63	0.63	0.64	0.63	0.62	0.61	0.62	0.59	0.58	0.59	0.57	0.55	0.55	0.54	0.49	0.49	0.48	0.47	0.45	0.44	0.43	0.42	0.41	0.41
Pakistan	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Philippines	0.46	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.42	0.43	0.43	0.43	0.43	0.39	0.39	0.38	0.38	0.39	0.38	0.38	0.38	0.38	0.38
Republic of Korea	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Russian Federation	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Singapore	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Sri Lanka	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.37	0.38	0.38	0.37	0.37	0.37	0.37	0.36	0.36	0.35	0.35	0.34	0.34	0.34	0.34	0.33	0.33
Thailand	0.45	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.42	0.43	0.43	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Timor-Leste	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.38	0.38	0.37	0.36	0.36	0.35	0.34	0.36	0.32	0.31	0.31	0.30	0.28	0.26	0.25	0.25
Viet Nam	0.58	0.58	0.58	0.57	0.56	0.56	0.56	0.56	0.56	0.54	0.54	0.54	0.54	0.55	0.56	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56

14. Multi-hazard expected annual damages to transport infrastructure

ATO Indicator: CLC-CVT-002
Units: Million USD
Source: Koks et al, https://www.nature.com/articles/s41467-019-10442-3

	2019 Median
Afghanistan	42.96
Bangladesh	90.42
Bhutan	2.45
Brunei Darussalam	1.38
Cambodia	30.69
China	3093.84
India	339.43
Indonesia	730.08
Iran (Islamic Republic of)	125.65
Japan	1534.87
Lao People's Democratic Republic	43.80
Malaysia	99.31
Maldives	
Mongolia	13.38
Myanmar	293.01
Nepal	16.34
Pakistan	99.42
Philippines	409.62
Republic of Korea	44.16
Russian Federation	279.83
Singapore	1.51
Sri Lanka	28.38
Thailand	148.95
Timor-Leste	0.99
Viet Nam	465.34
Rest of Asia	
Global	

15. PM2.5 air pollution annual exposure

ATO Indicator: APH-AAP-001
Units: micrograms per cubic meter
Source: Brauer, M. et al. 2017, for the Global Burden of Disease Study 2017, https://www.thelancet.com/gbd

	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017
Afghanistan	65.5	65.2	64.9	64.5	65.2	66.8	66.0	61.4	59.0	61.3	56.3	56.9
Bangladesh	61.6	61.8	63.0	68.9	70.8	70.2	70.8	65.6	68.4	67.0	60.1	60.8
Bhutan	40.2	40.1	39.7	43.0	44.0	43.1	42.9	41.9	40.8	39.8	37.2	37.9
Brunei Darussalam	6.7	6.8	6.9	7.2	7.4	7.4	7.6	6.7	6.2	6.5	5.9	5.9
Cambodia	29.5	30.1	30.0	31.4	31.3	30.9	31.3	30.3	28.6	26.8	25.2	25.6
China	57.8	58.7	60.7	66.2	69.5	70.5	63.8	65.5	59.8	59.1	52.2	52.7
India	81.3	82.8	84.2	90.3	95.8	97.6	88.2	91.8	89.6	89.3	89.7	90.9
Indonesia	18.1	18.2	17.9	18.9	18.2	18.0	18.2	16.9	16.5	16.6	16.4	16.5
Iran (Islamic Republic of)	38.1	37.7	38.4	37.6	38.7	38.0	38.5	38.1	38.1	39.6	38.8	39.0
Japan	14.4	14.3	14.2	14.3	14.1	14.1	13.1	13.4	12.6	12.7	11.6	11.7
Lao People's Democratic Republic	26.5	27.1	27.5	30.2	31.7	29.7	30.3	30.3	28.4	26.1	25.8	25.1
Malaysia	17.3	17.7	18.1	19.4	18.6	19.2	19.2	17.6	16.9	17.4	15.8	16.0
Maldives	11.4	11.5	11.1	11.4	11.3	11.8	11.2	10.6	9.9	9.4	8.0	7.8
Mongolia	37.9	36.8	39.0	39.7	43.3	45.4	42.7	42.3	39.3	42.5	38.2	40.1
Myanmar	39.8	40.8	39.4	43.3	44.1	43.6	42.5	42.9	40.3	38.5	36.0	35.6
Nepal	87.6	90.7	88.9	93.2	100.8	100.8	97.0	95.3	98.1	96.3	98.1	99.7
Pakistan	60.3	61.4	61.1	63.4	68.0	68.5	62.4	61.0	59.5	60.1	58.6	58.3
Philippines	22.1	22.0	22.2	22.8	23.6	22.8	22.5	21.2	20.3	19.6	18.2	18.1
Republic of Korea	29.3	29.5	29.8	30.4	29.8	29.7	27.9	29.5	27.2	28.2	25.1	25.0
Russian Federation	21.2	19.9	19.1	19.0	19.5	19.2	18.3	17.8	16.6	17.0	16.2	16.2
Singapore	18.7	18.8	19.3	20.8	20.6	19.3	20.9	18.7	17.4	20.7	18.8	19.1
Sri Lanka	29.8	30.2	30.9	31.0	31.0	31.2	30.1	28.9	26.9	25.3	14.0	11.1
Thailand	30.8	30.9	31.0	31.8	31.6	31.6	31.5	31.2	29.4	27.3	26.3	26.3
Timor-Leste	23.1	23.3	23.5	23.3	23.5	23.8	22.5	22.0	20.5	20.6	20.0	19.3
Viet Nam	35.9	36.0	36.2	37.7	39.4	38.5	37.2	36.8	34.9	32.5	30.2	29.6
Rest of Asia												
Global												

16. Transport PM 10 Emissions

ATO Indicator: APH-VAP-021
Units: 1000 tonnes
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.6	1.2	1.7	2.9	4.0	6.8	5.0	4.7
Bangladesh	3.4	3.8	4.4	4.4	4.4	5.3	5.9	6.4	6.6	6.3	5.7	7.6	7.8	7.7	10.8	10.5	10.7	10.6	10.7	10.5	10.6	13.8	13.9	12.7	13.9	14.6
Bhutan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Brunei Darussalam	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Cambodia	0.1	0.1	0.1	0.1	0.1	1.4	1.5	1.6	2.0	2.0	2.0	2.4	2.1	2.1	2.2	2.5	2.7	3.0	3.0	4.2	4.8	5.1	5.4	5.6	6.1	6.6
China	99.9	99.8	122.0	142.1	138.2	159.4	285.6	204.1	187.5	248.4	403.4	395.8	401.4	453.0	476.5	479.4	526.2	538.9	484.5	476.6	483.1	502.8	553.1	596.6	609.4	570.8
India	78.4	80.5	81.9	83.4	85.8	90.9	96.6	95.0	96.9	99.0	97.1	97.1	97.2	96.9	101.9	110.5	111.0	129.5	144.6	149.9	154.6	164.5	172.4	174.4	178.6	190.1
Indonesia	36.3	40.2	41.8	45.6	51.2	56.5	63.5	71.3	72.1	71.0	73.4	76.9	76.8	75.4	72.7	70.5	63.9	64.0	68.1	77.2	86.1	93.5	104.5	110.3	109.8	109.3
Iran (Islamic Republic of)	15.3	16.3	16.6	18.6	21.3	20.5	21.6	21.3	20.9	21.3	22.1	22.7	23.9	23.8	24.2	24.9	25.3	26.8	28.6	29.0	29.5	29.5	30.5	30.6	31.1	27.6
Japan	105.3	109.3	108.3	107.2	109.8	109.9	107.8	103.3	92.2	85.3	77.9	74.0	70.0	65.7	60.3	57.5	54.8	52.0	47.7	43.8	43.5	42.9	43.8	43.6	42.8	42.7
Lao People's Democratic Republic	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.1
Malaysia	11.2	11.9	12.9	12.7	12.6	12.8	14.3	17.0	13.7	16.6	17.8	18.5	18.0	18.2	18.6	17.1	15.5	13.9	13.8	12.6	11.5	13.0	12.5	16.8	19.9	20.2
Maldives	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.4	0.5	0.4	0.4	0.4
Mongolia	2.2	1.5	1.1	1.5	0.8	0.8	0.9	0.9	0.8	0.9	1.0	1.0	1.0	1.0	1.2	1.1	1.3	1.6	1.8	1.7	2.0	2.6	2.9	3.1	2.8	2.7
Myanmar	1.0	1.0	0.8	1.3	1.5	2.3	2.5	2.0	2.4	2.4	2.8	2.1	2.7	2.9	3.1	3.2	2.5	2.5	2.4	2.6	2.6	2.7	4.2	5.7	8.5	10.6
Nepal	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.3	1.4	1.4	1.5	1.6	1.8	1.6
Pakistan	15.8	16.2	17.4	19.5	20.6	21.3	22.8	23.3	24.7	26.3	26.6	25.8	25.5	25.7	27.0	24.0	23.2	27.7	25.1	23.4	21.8	21.9	21.9	21.8	22.9	23.9
Philippines	16.5	19.6	22.3	21.0	25.0	33.4	39.3	43.6	44.8	42.3	29.0	38.3	34.9	29.3	30.3	26.8	23.3	17.4	17.2	18.1	18.9	18.3	18.1	18.6	19.7	25.8
Republic of Korea	28.2	31.7	35.6	40.3	32.5	34.5	31.8	32.0	26.8	30.8	31.8	30.7	32.3	32.4	30.9	26.8	25.5	24.2	22.1	20.3	18.2	14.9	15.3	15.8	15.6	17.5
Russian Federation	98.2	83.6	74.0	55.3	42.0	32.8	29.4	25.5	30.2	29.5	30.7	30.6	29.1	29.2	30.7	30.1	30.6	27.4	27.3	27.8	22.7	27.9	23.0	23.6	23.7	23.1
Singapore	2.7	3.3	3.1	3.0	3.2	3.4	2.9	2.9	2.9	2.9	3.0	2.8	2.6	2.5	2.4	2.3	2.2	2.0	1.9	5.2	5.0	5.4	4.2	3.4	2.9	2.5
Sri Lanka	2.3	2.3	2.6	2.8	3.1	3.2	4.7	4.3	4.2	4.8	4.8	4.8	4.9	4.9	5.2	5.2	4.8	4.9	4.7	3.9	5.2	5.8	5.8	6.1	5.9	7.1
Thailand	29.4	30.2	29.6	35.2	38.8	45.3	45.8	44.0	37.3	37.0	34.8	34.2	34.9	35.4	35.8	33.2	28.9	29.0	25.9	25.4	23.7	25.1	25.9	25.3	24.5	27.0
Timor-Leste	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Viet Nam	3.8	3.5	3.7	6.1	6.5	6.2	6.8	7.4	7.9	8.5	9.2	9.9	11.9	13.6	16.7	16.8	16.1	17.4	17.6	20.2	20.6	20.1	19.3	18.5	19.3	20.8
Rest of Asia																										
Global																										

17. Transport NOX Emissions

ATO Indicator: APH-VAP-022
Units: 1000 tonnes
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	5.1	5.0	3.0	2.7	1.9	2.0	1.9	1.6	1.5	1.3	1.7	1.7	1.5	1.2	1.6	2.4	3.0	2.4	8.2	16.2	23.2	35.1	56.9	100.3	53.7	50.7
Bangladesh	24.6	27.0	31.2	31.8	32.3	39.0	42.7	47.2	48.2	44.8	42.0	54.6	56.1	56.8	72.0	77.7	80.4	81.8	89.1	92.4	103.3	122.2	122.9	115.1	124.9	131.0
Bhutan	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.2	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.7	1.1	1.3	1.9	3.2	2.9	1.5	1.4
Brunei Darussalam	4.6	5.0	5.5	5.7	6.1	6.5	7.4	8.0	7.8	8.0	8.2	7.9	7.7	7.5	7.3	6.6	6.6	7.0	6.3	5.4	5.0	5.6	5.8	5.6	5.7	5.6
Cambodia	0.8	1.0	1.0	0.9	0.7	9.0	9.4	10.1	12.6	12.5	12.8	15.1	12.9	13.3	13.6	15.1	15.9	18.2	18.2	24.8	28.5	30.3	32.4	33.1	36.1	39.3
China	1745.3	1770.5	1902.6	2086.2	1918.1	2024.6	2890.0	2334.7	2224.0	2505.1	3688.4	3676.4	3827.4	4274.1	4686.1	4814.6	5180.6	5325.0	5304.0	5265.3	5501.3	5962.2	6587.9	7033.1	7245.5	7346.4
India	897.1	926.7	933.1	894.3	889.4	967.3	1024.9	1031.8	1054.5	1087.1	1116.7	1119.1	1154.5	1184.8	1299.8	1399.1	1434.0	1708.1	1939.6	2084.7	2198.1	2373.7	2511.9	2549.8	2638.2	2868.6
Indonesia	304.5	337.2	353.6	382.5	429.9	471.7	522.6	578.7	568.7	557.8	574.8	604.0	603.5	595.1	577.2	559.8	505.6	517.0	545.7	613.7	683.5	740.2	827.1	870.5	865.4	861.0
Iran (Islamic Republic of)	371.9	405.8	423.8	485.5	564.5	557.5	604.9	618.0	637.3	674.4	730.9	804.0	904.2	991.9	1093.2	1227.3	1309.5	1281.2	1325.8	1353.2	1365.0	1350.9	1422.4	1465.0	1493.4	1435.6
Japan	1260.7	1309.3	1299.1	1282.9	1307.2	1456.2	1450.0	1414.2	1310.3	1261.5	1200.1	1183.9	1147.7	1107.4	1060.9	1032.6	997.0	959.9	893.0	829.7	827.8	813.4	824.3	818.7	800.1	810.3
Lao People's Democratic Republic	0.5	0.6	0.6	0.6	0.4	0.5	0.6	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.9	0.9	0.9	0.6	1.0	0.9	1.2	1.8	2.5	1.7	1.2	1.1
Malaysia	133.8	146.5	160.0	168.7	186.0	200.7	222.5	249.7	221.8	260.2	265.7	274.7	267.6	270.3	274.9	255.8	230.9	233.6	227.6	203.4	182.5	204.9	198.2	252.3	299.7	279.4
Maldives	0.2	0.2	0.2	0.4	0.4	0.8	0.8	0.5	0.7	0.6	1.2	1.2	2.1	2.6	2.0	1.7	2.3	2.1	3.0	4.0	4.8	7.2	11.8	10.5	5.5	5.3
Mongolia	24.5	15.6	14.7	18.5	11.0	15.7	17.0	15.5	12.9	15.0	18.0	17.2	20.1	18.0	22.8	19.2	21.3	26.6	28.3	25.6	24.4	28.8	33.7	33.9	37.2	37.5
Myanmar	11.8	11.0	8.7	13.7	15.6	23.7	25.5	20.3	25.0	25.2	29.5	22.3	26.4	28.6	30.5	32.8	25.8	28.7	10.3	9.9	11.4	11.6	16.2	21.0	29.6	36.0
Nepal	3.8	4.6	5.0	5.5	6.3	7.1	7.2	8.3	8.6	8.5	9.0	8.1	8.6	8.5	9.1	9.2	9.4	9.6	14.4	18.8	20.6	20.6	22.8	24.9	27.4	23.8
Pakistan	161.0	168.1	189.9	217.9	231.7	241.8	270.6	276.2	288.4	303.0	298.2	301.4	309.2	329.2	359.0	336.2	337.4	391.7	376.7	381.3	383.9	407.0	419.0	430.7	463.2	483.4
Philippines	159.9	170.0	192.4	194.0	218.8	275.0	315.1	342.1	346.9	334.6	263.9	310.0	295.5	265.2	271.4	246.5	218.6	201.0	196.8	204.2	203.8	200.2	205.1	214.7	216.4	265.7
Republic of Korea	584.7	661.8	747.5	847.6	821.3	903.2	919.4	924.6	769.7	844.9	890.4	892.2	932.2	932.7	908.6	851.4	831.3	826.8	772.6	748.1	720.2	680.8	698.9	721.0	723.9	770.6
Russian Federation	2260.7	2091.8	1952.8	1548.7	1315.8	1159.6	1107.9	1084.0	1267.3	1303.5	1340.5	1349.4	1299.1	1265.7	1287.9	1228.1	1233.5	1129.8	1131.1	1079.5	963.7	1044.3	968.4	986.2	1016.6	1005.9
Singapore	45.2	53.6	51.6	50.8	54.4	59.4	52.8	50.6	49.3	48.2	47.4	47.1	45.6	44.6	44.4	44.7	40.6	39.5	37.1	51.6	50.5	55.0	49.2	44.5	41.0	38.2
Sri Lanka	27.4	27.1	30.0	32.4	35.9	37.7	53.5	48.4	49.7	54.8	53.8	54.7	56.4	59.0	60.9	65.1	60.9	67.1	61.8	55.2	72.6	80.8	78.6	83.3	85.2	94.6
Thailand	251.2	258.0	261.2	307.7	339.0	398.0	414.9	397.8	330.4	332.3	316.7	316.7	323.4	335.6	354.7	355.0	326.7	333.1	322.8	338.9	339.8	373.8	400.0	410.4	400.1	411.8
Timor-Leste	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.6	0.7	1.1	1.9	2.3	1.2	1.1
Viet Nam	31.1	30.5	33.2	55.6	61.1	59.1	65.5	72.2	76.3	82.1	89.0	95.4	115.9	132.7	162.7	164.2	159.0	189.7	194.8	226.7	233.4	228.9	222.6	214.3	221.9	239.7
Rest of Asia																										
Global																										

18. Transport BC Emissions

ATO Indicator: APH-VAP-023
Units: 1000 tonnes
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.7	1.0	1.4	2.4	1.8	1.7
Bangladesh	0.8	0.8	1.0	1.0	1.0	1.2	1.3	1.4	1.5	1.4	1.3	1.7	1.7	1.7	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.9	2.9	2.7	3.0	3.1
Bhutan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Brunei Darussalam	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Cambodia	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0	1.2	1.3	1.4	1.4	1.5	1.7
China	32.9	33.1	37.8	43.0	40.9	45.7	75.6	56.6	53.7	66.3	107.1	103.5	104.2	114.1	122.3	123.5	133.6	137.0	126.8	123.9	126.1	135.9	152.8	163.3	167.8	163.3
India	23.8	25.1	26.2	26.4	27.7	30.5	32.4	32.6	33.1	34.3	32.8	31.7	31.6	31.5	34.1	35.8	36.0	42.5	48.5	50.7	52.7	57.1	60.7	60.8	62.1	67.1
Indonesia	12.9	14.2	14.8	16.0	17.9	19.7	22.1	24.7	24.5	24.4	25.5	26.7	26.5	25.8	24.5	23.6	21.1	20.9	22.0	24.8	27.4	29.8	33.5	35.5	35.6	35.3
Iran (Islamic Republic of)	6.5	7.0	7.1	8.0	9.3	9.0	9.6	9.5	9.3	9.6	10.1	10.5	11.1	11.2	11.6	12.1	12.3	13.0	13.9	14.0	14.3	14.3	14.8	14.8	15.0	13.3
Japan	39.9	41.6	41.3	41.0	42.3	43.0	41.5	38.6	34.5	31.3	27.7	26.1	23.9	22.1	20.4	19.0	17.8	16.7	15.2	13.7	13.3	13.2	13.4	13.3	13.0	13.1
Lao People's Democratic Republic	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Malaysia	4.6	4.9	5.2	5.1	5.3	5.4	5.9	7.1	5.6	7.0	7.8	8.2	8.0	8.1	8.3	7.5	6.9	6.2	6.2	5.5	5.0	5.9	5.6	7.2	8.9	8.4
Maldives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Mongolia	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Myanmar	0.5	0.5	0.3	0.6	0.7	1.1	1.2	0.9	1.1	1.1	1.3	1.0	1.2	1.3	1.4	1.4	1.0	1.0	0.4	0.4	0.4	0.4	0.5	0.7	1.3	1.8
Nepal	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.7
Pakistan	5.6	5.8	6.7	7.7	8.3	8.7	9.4	9.7	10.3	10.9	11.0	10.7	10.5	10.7	11.1	9.8	9.5	11.4	10.3	9.6	8.9	8.9	8.9	8.9	9.3	9.7
Philippines	5.7	6.4	7.3	7.4	8.3	10.4	11.9	12.9	13.0	12.6	9.9	11.6	11.0	9.7	9.9	8.8	7.7	6.1	5.9	6.0	5.9	5.8	5.8	6.0	6.3	7.9
Republic of Korea	10.8	12.2	13.4	14.8	13.6	14.7	14.6	14.2	11.2	12.5	13.5	13.3	13.9	14.0	13.4	12.1	11.4	10.7	9.5	8.7	7.9	7.2	7.5	7.8	8.0	8.7
Russian Federation	35.8	33.2	29.8	20.9	15.9	11.8	10.2	8.8	12.3	11.8	11.9	11.9	10.9	11.1	11.9	11.1	11.2	9.8	10.1	10.6	8.9	10.0	8.4	8.7	9.2	9.3
Singapore	1.4	1.8	1.6	1.6	1.7	1.8	1.5	1.6	1.5	1.6	1.6	1.5	1.4	1.3	1.2	1.2	1.2	1.1	1.0	1.6	1.5	1.6	1.4	1.2	1.1	1.0
Sri Lanka	0.9	0.9	1.0	1.1	1.3	1.3	2.0	1.8	1.9	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.1	2.1	1.9	1.6	2.2	2.4	2.3	2.5	2.5	2.8
Thailand	11.8	12.0	12.3	14.7	16.4	19.6	20.4	19.4	16.0	16.0	15.0	14.6	14.7	15.0	15.3	14.4	12.4	12.1	10.6	10.3	9.4	9.9	10.2	9.8	9.4	10.3
Timor-Leste	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Viet Nam	1.6	1.5	1.5	2.7	2.9	2.8	3.1	3.4	3.6	3.8	4.1	4.3	5.2	6.0	7.5	7.5	7.1	7.8	7.8	9.0	9.0	8.8	8.5	8.1	8.5	9.1
Rest of Asia																										
Global																										

19. PM 10 Emissions - Mode Share (Road)

ATO Indicator: APH-VAP-001
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	53%	54%	59%	63%	62%	62%	61%	60%	61%	67%	60%	54%	52%	49%	49%	51%	55%	60%	71%	77%	82%	69%	77%	82%	63%	63%
Bangladesh	29%	27%	27%	27%	28%	28%	28%	28%	28%	28%	29%	28%	27%	27%	18%	24%	23%	23%	23%	22%	26%	24%	24%	25%	24%	24%
Bhutan	55%	56%	60%	64%	63%	63%	61%	60%	60%	66%	59%	53%	50%	47%	46%	47%	52%	56%	67%	74%	79%	66%	73%	78%	61%	61%
Brunei Darussalam	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cambodia	63%	65%	69%	73%	73%	72%	65%	62%	57%	55%	51%	48%	50%	49%	48%	45%	45%	50%	53%	49%	50%	50%	49%	49%	49%	50%
China	31%	37%	36%	38%	37%	37%	27%	36%	41%	33%	37%	34%	33%	29%	31%	30%	27%	27%	30%	28%	27%	28%	29%	28%	28%	31%
India	50%	52%	55%	58%	61%	65%	65%	67%	67%	68%	67%	65%	65%	64%	66%	62%	63%	62%	64%	65%	66%	68%	69%	69%	69%	70%
Indonesia	66%	64%	65%	63%	63%	62%	62%	62%	60%	62%	64%	64%	64%	65%	67%	69%	69%	68%	68%	65%	62%	63%	63%	64%	65%	66%
Iran (Islamic Republic of)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Japan	69%	68%	69%	69%	69%	68%	65%	61%	61%	58%	54%	53%	50%	48%	48%	45%	44%	43%	43%	42%	40%	41%	40%	40%	40%	41%
Lao People's Democratic Republic	63%	65%	69%	74%	74%	75%	73%	71%	72%	76%	66%	63%	60%	58%	57%	59%	63%	70%	80%	85%	87%	78%	86%	90%	69%	69%
Malaysia	94%	93%	90%	90%	97%	98%	96%	93%	99%	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	97%	98%	95%	99%	94%	95%	86%
Maldives	53%	54%	59%	63%	62%	62%	61%	60%	60%	66%	59%	53%	50%	46%	46%	46%	50%	54%	64%	72%	77%	62%	69%	75%	57%	57%
Mongolia	33%	30%	36%	21%	34%	33%	31%	29%	36%	27%	29%	25%	22%	21%	15%	13%	13%	12%	12%	11%	9%	9%	9%	9%	9%	10%
Myanmar	100%	100%	92%	96%	92%	94%	95%	94%	95%	95%	97%	96%	86%	84%	83%	81%	81%	84%	34%	33%	31%	31%	25%	28%	41%	48%
Nepal	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Pakistan	71%	72%	77%	80%	80%	81%	83%	83%	83%	83%	83%	83%	83%	83%	82%	81%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%
Philippines	46%	40%	41%	49%	43%	36%	34%	32%	31%	33%	49%	36%	40%	46%	44%	46%	47%	54%	51%	47%	42%	43%	45%	46%	44%	39%
Republic of Korea	52%	52%	50%	48%	63%	66%	75%	71%	64%	60%	65%	67%	67%	67%	67%	72%	71%	70%	68%	67%	69%	85%	85%	87%	91%	88%
Russian Federation	50%	58%	60%	55%	58%	55%	51%	50%	63%	59%	54%	55%	52%	54%	56%	51%	50%	48%	52%	55%	60%	48%	52%	53%	59%	62%
Singapore	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	32%	32%	33%	41%	50%	59%	67%
Sri Lanka	80%	83%	83%	83%	84%	84%	84%	82%	90%	88%	88%	88%	88%	91%	84%	92%	90%	90%	82%	86%	85%	83%	81%	82%	88%	81%
Thailand	75%	76%	83%	83%	83%	86%	92%	92%	92%	93%	93%	93%	92%	92%	92%	92%	91%	92%	90%	90%	89%	85%	86%	85%	86%	86%
Timor-Leste	62%	63%	66%	70%	70%	70%	68%	66%	66%	71%	63%	58%	56%	53%	53%	55%	59%	64%	75%	81%	84%	73%	81%	85%	66%	66%
Viet Nam	94%	91%	91%	95%	96%	95%	96%	96%	95%	95%	94%	93%	94%	94%	94%	94%	93%	94%	94%	94%	94%	95%	97%	98%	96%	97%
Rest of Asia																										
Global																										

20. PM 10 Emissions - Mode Share (Railways)

ATO Indicator: APH-VAP-002
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bangladesh	25%	30%	31%	31%	30%	31%	31%	30%	30%	31%	30%	31%	31%	31%	27%	24%	25%	25%	25%	25%	25%	32%	32%	32%	32%	32%
Bhutan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	0%	0%	0%	0%	0%	22%	27%	28%	31%	30%	34%	36%	36%	36%	40%	41%	44%	39%	37%	40%	39%	39%	40%	40%	41%	40%
China	29%	27%	20%	17%	15%	12%	8%	10%	11%	7%	17%	18%	19%	20%	22%	23%	21%	20%	23%	21%	20%	18%	15%	13%	11%	10%
India	39%	38%	35%	32%	28%	26%	26%	25%	24%	23%	25%	27%	28%	28%	26%	28%	28%	26%	25%	25%	25%	24%	24%	25%	25%	24%
Indonesia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Japan	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Lao People's Democratic Republic	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Malaysia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Maldives	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mongolia	67%	70%	64%	79%	66%	67%	69%	71%	64%	73%	71%	75%	78%	79%	85%	87%	87%	88%	88%	89%	91%	91%	91%	91%	91%	90%
Myanmar	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	40%	41%	41%	51%	51%	43%	39%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pakistan	29%	28%	23%	20%	20%	19%	17%	17%	17%	17%	17%	17%	17%	17%	18%	19%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
Philippines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Republic of Korea	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%
Russian Federation	13%	13%	13%	14%	11%	14%	16%	15%	11%	12%	14%	12%	14%	13%	14%	15%	17%	17%	15%	13%	15%	15%	15%	15%	14%	14%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sri Lanka	18%	16%	16%	16%	15%	15%	8%	9%	8%	7%	7%	9%	10%	6%	8%	7%	9%	9%	9%	9%	6%	9%	9%	9%	0%	9%
Thailand	6%	6%	6%	5%	5%	4%	5%	4%	4%	4%	4%	5%	5%	5%	4%	5%	5%	5%	6%	5%	6%	5%	5%	5%	5%	5%
Timor-Leste	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Viet Nam	3%	5%	4%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Rest of Asia																										
Global																										

21. PM 10 Emissions - Mode Share (Domestic Navigation)

ATO Indicator: APH-VAP-003
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	45%	44%	39%	34%	35%	35%	36%	38%	36%	31%	38%	44%	47%	50%	50%	49%	44%	39%	29%	22%	18%	30%	23%	18%	36%	36%
Bangladesh	47%	42%	42%	42%	42%	42%	42%	41%	41%	42%	41%	42%	42%	42%	54%	52%	51%	52%	52%	52%	49%	44%	44%	44%	44%	44%
Bhutan	43%	42%	38%	33%	34%	34%	35%	38%	37%	31%	40%	45%	49%	53%	53%	52%	47%	42%	32%	25%	20%	34%	27%	21%	39%	39%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	35%	34%	29%	25%	25%	6%	9%	10%	12%	15%	15%	16%	14%	15%	13%	14%	12%	10%	10%	11%	10%	10%	11%	11%	11%	10%
China	40%	35%	43%	45%	47%	51%	66%	54%	49%	60%	46%	48%	48%	51%	47%	46%	51%	52%	47%	51%	53%	53%	55%	59%	61%	58%
India	11%	10%	9%	11%	11%	9%	9%	8%	8%	8%	8%	8%	7%	8%	8%	9%	10%	12%	12%	10%	8%	8%	6%	6%	6%	6%
Indonesia	34%	36%	35%	37%	37%	38%	38%	38%	39%	38%	36%	36%	36%	35%	32%	30%	30%	31%	32%	35%	37%	36%	36%	35%	34%	34%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Japan	30%	30%	30%	30%	30%	31%	34%	38%	37%	40%	45%	46%	49%	51%	50%	53%	54%	54%	55%	55%	57%	57%	57%	58%	58%	57%
Lao People's Democratic Republic	35%	34%	29%	24%	24%	23%	25%	27%	26%	22%	32%	36%	39%	41%	42%	40%	37%	29%	20%	15%	12%	22%	13%	10%	31%	31%
Malaysia	6%	7%	10%	10%	2%	2%	4%	7%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	2%	5%	1%	6%	5%	14%
Maldives	45%	44%	39%	34%	35%	35%	36%	38%	37%	31%	39%	45%	49%	53%	53%	53%	49%	45%	35%	27%	23%	37%	30%	25%	43%	43%
Mongolia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Myanmar	0%	0%	8%	4%	7%	5%	4%	5%	5%	4%	2%	4%	13%	16%	17%	18%	19%	16%	26%	26%	28%	27%	24%	21%	16%	14%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pakistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Philippines	53%	60%	59%	51%	57%	63%	66%	68%	69%	66%	51%	64%	60%	54%	55%	53%	53%	46%	49%	52%	58%	57%	54%	54%	54%	60%
Republic of Korea	44%	45%	47%	50%	34%	31%	22%	26%	32%	37%	32%	29%	30%	30%	29%	25%	26%	27%	30%	31%	28%	12%	11%	10%	6%	10%
Russian Federation	36%	27%	25%	28%	29%	28%	30%	31%	24%	26%	29%	30%	30%	30%	27%	31%	30%	31%	29%	29%	21%	33%	28%	28%	23%	19%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	68%	68%	67%	59%	50%	41%	33%
Sri Lanka	1%	1%	0%	0%	0%	0%	7%	8%	1%	3%	4%	2%	2%	2%	7%	0%	0%	1%	9%	4%	9%	9%	9%	9%	12%	10%
Thailand	19%	18%	11%	12%	12%	10%	4%	4%	4%	3%	3%	3%	3%	3%	4%	3%	4%	3%	4%	4%	5%	9%	9%	10%	9%	9%
Timor-Leste	36%	35%	31%	27%	28%	28%	29%	32%	31%	27%	35%	40%	43%	46%	46%	45%	40%	35%	25%	19%	15%	27%	19%	15%	34%	34%
Viet Nam	3%	4%	4%	3%	3%	4%	4%	3%	4%	5%	6%	6%	6%	6%	6%	6%	7%	6%	6%	6%	6%	5%	3%	2%	4%	3%
Rest of Asia																										
Global																										

22. PM 10 Emissions - Mode Share (Domestic Aviation)

ATO Indicator: APH-VAP-004
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	2%	2%	3%	3%	3%	3%	3%	2%	3%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Bangladesh	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bhutan	2%	2%	3%	3%	3%	3%	3%	2%	3%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
China	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
India	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Indonesia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Japan	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Lao People's Democratic Republic	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Malaysia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Maldives	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	1%	0%	0%	0%
Mongolia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Myanmar	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pakistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Philippines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Republic of Korea	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
Russian Federation	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	3%	4%	4%	5%	5%	4%	4%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sri Lanka	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	1%	1%	0%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Thailand	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Timor-Leste	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Viet Nam	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Rest of Asia																										
Global																										

23. NOx Emissions - Mode Share (Road)

ATO Indicator: APH-VAP-006
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	75%	75%	77%	79%	79%	78%	74%	75%	73%	76%	74%	70%	71%	70%	69%	71%	74%	79%	85%	89%	92%	86%	90%	93%	81%	81%
Bangladesh	57%	56%	56%	57%	57%	58%	57%	59%	58%	56%	58%	57%	57%	58%	46%	54%	55%	55%	59%	61%	66%	63%	63%	64%	64%	64%
Bhutan	73%	74%	75%	77%	77%	77%	73%	75%	73%	77%	75%	72%	73%	72%	72%	74%	77%	82%	88%	91%	93%	88%	92%	94%	83%	83%
Brunei Darussalam	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cambodia	66%	66%	68%	70%	69%	84%	79%	77%	74%	72%	70%	69%	70%	69%	69%	66%	66%	70%	72%	70%	70%	70%	69%	69%	69%	70%
China	39%	44%	46%	50%	50%	52%	44%	50%	52%	47%	58%	58%	58%	56%	60%	61%	60%	60%	65%	64%	64%	66%	67%	66%	66%	69%
India	64%	66%	70%	77%	83%	86%	87%	88%	88%	89%	89%	88%	89%	89%	90%	89%	89%	88%	89%	90%	91%	91%	92%	92%	92%	92%
Indonesia	78%	76%	77%	75%	75%	75%	74%	74%	73%	75%	76%	75%	75%	76%	77%	78%	77%	77%	77%	75%	73%	73%	74%	74%	75%	75%
Iran (Islamic Republic of)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Japan	70%	70%	70%	70%	69%	71%	70%	67%	68%	67%	65%	66%	64%	64%	65%	64%	64%	64%	64%	64%	63%	63%	62%	62%	61%	63%
Lao People's Democratic Republic	71%	70%	71%	72%	70%	68%	65%	66%	64%	69%	68%	63%	64%	62%	63%	64%	68%	72%	80%	84%	89%	80%	85%	89%	77%	77%
Malaysia	97%	96%	95%	95%	98%	98%	98%	96%	98%	98%	99%	99%	99%	99%	98%	98%	98%	98%	98%	97%	97%	96%	97%	96%	96%	93%
Maldives	75%	75%	77%	79%	79%	78%	74%	75%	73%	76%	74%	71%	73%	73%	73%	75%	78%	82%	88%	91%	93%	88%	92%	94%	84%	84%
Mongolia	59%	62%	65%	46%	74%	60%	57%	59%	85%	68%	69%	72%	69%	85%	73%	84%	83%	83%	82%	81%	76%	74%	75%	73%	72%	74%
Myanmar	98%	98%	97%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	99%	98%	98%	65%	62%	65%	64%	54%	52%	58%	62%
Nepal	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Pakistan	91%	91%	93%	94%	94%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	96%	96%	96%	96%	96%	97%	97%	97%	97%	97%
Philippines	72%	65%	66%	72%	67%	61%	58%	56%	55%	58%	72%	60%	65%	70%	69%	71%	72%	81%	79%	77%	73%	73%	75%	75%	76%	72%
Republic of Korea	71%	72%	72%	71%	82%	83%	88%	86%	84%	82%	84%	85%	85%	85%	85%	89%	89%	89%	89%	89%	91%	95%	95%	96%	96%	95%
Russian Federation	66%	72%	74%	73%	77%	78%	77%	79%	84%	84%	82%	83%	81%	81%	81%	79%	78%	77%	79%	79%	81%	75%	77%	78%	81%	82%
Singapore	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	65%	66%	66%	74%	80%	85%	89%
Sri Lanka	92%	93%	93%	93%	92%	91%	91%	89%	93%	92%	93%	94%	94%	95%	92%	96%	95%	95%	91%	94%	94%	92%	94%	94%	96%	94%
Thailand	87%	87%	92%	91%	91%	93%	96%	97%	96%	97%	97%	97%	97%	97%	97%	97%	97%	96%	96%	96%	96%	94%	95%	95%	95%	94%
Timor-Leste	71%	71%	72%	74%	74%	74%	70%	72%	70%	74%	70%	67%	68%	67%	66%	68%	71%	77%	84%	88%	91%	84%	90%	93%	78%	78%
Viet Nam	91%	88%	87%	94%	95%	95%	95%	96%	96%	96%	95%	96%	96%	96%	96%	96%	96%	97%	97%	97%	97%	97%	98%	98%	97%	98%

24. NOx Emissions - Mode Share (Railways)

ATO Indicator: APH-VAP-007
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bangladesh	11%	13%	14%	13%	13%	13%	13%	13%	13%	14%	13%	14%	14%	13%	13%	10%	11%	10%	10%	9%	8%	11%	11%	11%	11%	11%
Bhutan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	0%	0%	0%	0%	0%	11%	14%	14%	16%	15%	17%	18%	18%	18%	21%	22%	23%	21%	19%	21%	21%	21%	21%	21%	22%	21%
China	49%	45%	39%	34%	32%	27%	22%	25%	26%	22%	15%	15%	15%	15%	14%	14%	13%	12%	12%	11%	10%	9%	8%	7%	6%	5%
India	31%	29%	26%	17%	11%	9%	8%	7%	7%	7%	7%	7%	8%	7%	7%	7%	7%	6%	6%	6%	6%	5%	5%	5%	5%	5%
Indonesia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Japan	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Lao People's Democratic Republic	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Malaysia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Maldives	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mongolia	41%	38%	35%	54%	26%	40%	43%	41%	15%	32%	31%	28%	31%	15%	27%	16%	17%	17%	18%	19%	24%	26%	25%	27%	28%	26%
Myanmar	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	33%	30%	30%	42%	44%	39%	36%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pakistan	9%	9%	7%	6%	6%	5%	5%	4%	4%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Philippines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Republic of Korea	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Russian Federation	14%	13%	12%	12%	9%	9%	10%	9%	6%	7%	8%	7%	8%	7%	8%	9%	10%	10%	9%	8%	9%	10%	9%	9%	8%	8%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sri Lanka	5%	4%	4%	4%	4%	4%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	2%	2%	2%	2%	1%	4%	2%	2%	0%	2%
Thailand	2%	2%	2%	2%	2%	1%	2%	1%	1%	2%	2%	2%	2%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Timor-Leste	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Viet Nam	4%	7%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

25. NOx Emissions - Mode Share (Domestic Navigation)

ATO Indicator: APH-VAP-008
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Viet Nam	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	1%	1%	2%	1%
Timor-Leste	19%	18%	15%	12%	13%	13%	14%	16%	15%	13%	19%	22%	26%	28%	29%	27%	25%	17%	11%	8%	7%	14%	8%	6%	20%	20%
Thailand	11%	11%	6%	7%	7%	6%	2%	2%	3%	2%	2%	1%	2%	2%	2%	2%	2%	1%	2%	2%	2%	3%	3%	3%	3%	3%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	34%	33%	26%	20%	15%	11%
Russian Federation	17%	11%	10%	11%	10%	8%	9%	8%	6%	6%	7%	7%	7%	7%	7%	8%	8%	8%	7%	8%	5%	9%	7%	7%	5%	5%
Philippines	27%	34%	34%	27%	32%	38%	41%	43%	44%	42%	27%	39%	34%	29%	30%	28%	27%	18%	20%	22%	26%	25%	23%	23%	21%	27%
Pakistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Malaysia	2%	3%	4%	4%	1%	1%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	0%	2%	2%	5%
Mongolia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Myanmar	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Maldives	16%	15%	13%	10%	11%	11%	12%	14%	13%	11%	17%	19%	22%	23%	23%	21%	19%	14%	9%	6%	5%	11%	7%	5%	14%	14%
Sri Lanka	1%	0%	0%	0%	0%	0%	3%	4%	0%	1%	2%	1%	1%	1%	3%	0%	0%	0%	3%	1%	3%	3%	3%	3%	4%	4%
Lao People's Democratic Republic	19%	19%	16%	14%	15%	16%	16%	19%	18%	15%	21%	25%	29%	32%	31%	31%	27%	21%	15%	11%	9%	17%	13%	10%	21%	21%
Republic of Korea	23%	23%	24%	25%	14%	13%	8%	9%	12%	14%	12%	11%	11%	11%	11%	8%	8%	8%	9%	9%	8%	3%	3%	2%	1%	2%
Cambodia	21%	21%	17%	15%	16%	5%	7%	8%	10%	12%	12%	13%	12%	13%	10%	12%	10%	9%	8%	9%	9%	9%	9%	9%	9%	9%
Japan	27%	27%	27%	27%	27%	25%	27%	29%	28%	29%	31%	30%	32%	32%	30%	31%	32%	31%	31%	31%	32%	32%	32%	33%	33%	32%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
India	5%	4%	4%	5%	5%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	3%	3%	2%	2%	2%	2%
Indonesia	21%	22%	21%	22%	22%	23%	24%	24%	25%	24%	23%	23%	23%	22%	21%	20%	20%	20%	20%	22%	24%	23%	23%	23%	22%	22%
China	12%	10%	14%	15%	17%	20%	33%	24%	21%	30%	26%	26%	26%	27%	24%	23%	26%	27%	22%	23%	24%	23%	24%	25%	26%	23%
Bhutan	17%	16%	13%	11%	12%	11%	12%	14%	14%	11%	16%	19%	22%	23%	23%	22%	19%	14%	9%	6%	5%	11%	7%	5%	15%	15%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bangladesh	32%	30%	30%	30%	29%	29%	29%	28%	29%	30%	29%	30%	30%	29%	41%	36%	35%	34%	32%	30%	25%	25%	25%	25%	25%	25%
Afghanistan	16%	15%	13%	10%	11%	11%	12%	14%	14%	11%	17%	20%	23%	26%	26%	25%	22%	16%	11%	8%	6%	12%	8%	6%	17%	17%
Rest of Asia																										
Global																										

26. NOx Emissions - Mode Share (Domestic Aviation)

ATO Indicator: APH-VAP-009
Units: Share, %
Source: EDGAR v5.0 Global Air Pollutant Emissions, https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	9%	9%	11%	11%	10%	11%	14%	11%	14%	12%	9%	10%	6%	5%	5%	5%	4%	5%	4%	3%	2%	2%	2%	1%	2%	2%
Bangladesh	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bhutan	10%	10%	11%	12%	11%	12%	14%	11%	14%	12%	9%	9%	5%	4%	5%	4%	4%	4%	3%	3%	2%	2%	1%	1%	2%	2%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	12%	13%	15%	16%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
China	0%	1%	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%
India	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Indonesia	1%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Iran (Islamic Republic of)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Japan	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Lao People's Democratic Republic	11%	12%	14%	15%	14%	16%	19%	15%	18%	16%	11%	12%	7%	6%	6%	6%	5%	7%	6%	5%	3%	2%	2%	1%	2%	2%
Malaysia	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Maldives	9%	9%	11%	11%	10%	11%	14%	11%	14%	12%	9%	9%	5%	4%	4%	4%	4%	4%	3%	3%	2%	2%	1%	1%	2%	1%
Mongolia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Myanmar	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	2%	2%	5%	6%	5%	5%	5%	4%	3%	3%
Nepal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pakistan	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Philippines	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	1%	1%	1%	2%	2%	2%	3%	2%
Republic of Korea	3%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	2%
Russian Federation	4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	5%	5%	5%	5%	6%	6%	7%	6%	6%	5%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sri Lanka	2%	3%	3%	2%	4%	5%	4%	5%	4%	5%	3%	3%	2%	3%	3%	2%	2%	3%	3%	3%	2%	0%	0%	0%	0%	0%
Thailand	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	2%	2%
Timor-Leste	11%	11%	13%	13%	12%	13%	16%	12%	15%	14%	11%	11%	6%	5%	6%	5%	5%	6%	4%	4%	2%	2%	2%	1%	2%	2%
Viet Nam	3%	4%	5%	2%	2%	3%	3%	3%	2%	2%	1%	1%	1%	1%	0%	0%	1%	0%	1%	1%	1%	1%	1%	1%	1%	1%
Rest of Asia																										
Global																										

27. Transport air pollution health impact

ATO Indicator: APH-HAT-002(2)
Units: Deaths
Source: McDuffie et al. Fine Particulate Matter and Global Health: Fuel and Sector Contributions to Ambient PM2.5 and its Disease Burden Across Multiple Scales, https://costofairpollution.shinyapps.io/gbd_map_global_source_shinyapp/

	2017			2019		
	Non-road transport	**Road transport**	**Int'l shipping**	**Non-road transport**	**Road transport**	**Int'l shipping**
Afghanistan	7.10	440.80	7.10	7.70	480.40	7.70
Bangladesh	1019.50	4587.70	63.70	1162.30	5230.40	72.60
Bhutan	2.60	10.30	0.00	2.80	11.10	0.00
Brunei Darussalam	0.20	4.40	0.90	0.20	5.00	1.10
Cambodia	14.90	148.80	26.80	16.80	168.10	30.20
China	19413.60	85974.70	4160.10	20469.90	90652.60	4386.40
India	8665.70	49394.30	6066.00	9538.60	54369.80	6677.00
Indonesia	281.40	11350.60	938.10	313.20	12631.40	1043.90
Iran (Islamic Republic of)	40.90	4495.70	122.60	42.20	4643.20	126.60
Japan	662.00	3115.40	817.80	693.20	3262.20	856.30
Lao People's Democratic Republic	9.80	62.00	7.60	11.60	73.60	9.00
Malaysia	28.90	1596.80	250.10	31.70	1752.60	274.50
Maldives	0.70	2.10	1.10	0.70	2.30	1.20
Mongolia	13.90	73.60	8.00	16.00	84.80	9.20
Myanmar	216.90	954.40	173.50	237.20	1043.80	189.80
Nepal	111.30	843.00	63.60	123.40	934.20	70.50
Pakistan	605.30	7437.00	605.30	652.30	8014.00	652.30
Philippines	205.10	1465.30	644.70	222.80	1591.50	700.30
Republic of Korea	275.60	1830.70	196.80	307.70	2044.30	219.80
Russian Federation	342.40	3698.00	273.90	353.90	3822.00	283.10
Singapore	2.50	224.40	38.00	2.70	248.50	42.10
Sri Lanka	27.80	402.50	166.60	29.20	423.30	175.20
Thailand	236.00	2448.60	265.50	261.00	2708.40	293.70
Timor-Leste	0.50	16.70	2.60	0.60	17.90	2.80
Viet Nam	244.00	1917.40	348.60	263.10	2067.50	375.90
Rest of Asia						
Global	34494.00	229960.20	26828.70	36789.40	245262.60	28614.00

28. Road Traffic Crash Fatalities

ATO Indicator: RSA-RSI-001(2)
Units: 1000 Deaths
Source: Global burden of disease, https://www.thelancet.com/gbd

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Afghanistan	4.58	4.76	5.53	6.61	7.34	7.94	8.27	8.35	8.3	8.01	7.73	7.59	7.64	8.3	8.4	8.47	8.3	8.1	8.04	7.88	7.97	8.05	8.06	8.28	8.38	8.38	8.51	8.69
Bangladesh	8.88	8.77	8.64	8.37	8.88	9.22	9.07	9.3	9.27	10	11.1	11.8	12.5	14.3	14.6	16.2	16.1	16.9	17.4	17.6	17.7	17.4	17.2	16.8	17.6	17.3	16.8	16.9
Bhutan	0.1	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Brunei Darussalam	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07
Cambodia	4	4.02	4.05	4.1	4.17	4.17	4.21	4.28	4.27	4.29	4.29	4.26	4.24	4.18	4.11	3.99	4.05	4.1	4.09	4.15	4.15	4.18	4.2	4.2	4.22	4.23	4.23	4.22
China	248	249	261	270	279	291	298	302	305	312	320	314	310	301	307	307	301	300	304	308	307	300	293	287	288	287	282	271
India	155	161	166	168	171	173	174	183	189	193	195	196	197	196	197	205	213	221	233	241	251	260	264	256	250	243	245	245
Indonesia	53.3	52.8	52.6	52.3	51.7	51.2	51.3	51.6	52	52.9	52.7	53	51.7	50.4	47.7	47.2	47.2	47.1	45.5	44.7	42.9	41.8	41	40.2	39.5	38.6	38.2	38.1
Iran (Islamic Republic of)	28	27.9	27.2	26.7	26.6	26.6	26.7	26.9	27.3	27.6	28	28.4	29.1	29.9	30.3	30.5	30.6	30.9	30.1	29.1	28.2	27	25.9	24.7	23.2	22	21.4	21.1
Japan	15.4	15.5	15.6	15.4	15	15.1	14.4	14	14	13.7	12.9	12.3	11.7	11.3	10.7	10.4	9.74	9.3	8.9	8.58	8.37	8.21	7.9	7.7	7.67	7.51	7.58	7.68
Lao People's Democratic Republic	1.89	1.92	1.99	2.06	2.12	2.17	2.21	2.18	2.19	2.11	2.08	2.04	2.04	2.09	2.1	2.1	2.1	2.08	2.08	2.05	2.01	1.97	1.93	1.94	1.87	1.87	1.82	1.79
Malaysia	4.92	5.08	5.02	5.14	5.3	5.59	5.66	5.73	5.72	5.79	5.88	5.73	5.76	6.04	6.12	6.11	6.14	6.29	6.69	7.1	7.07	6.84	6.91	7.01	7.62	7.6	7.64	7.79
Maldives	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.03	0.07	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Mongolia	0.28	0.29	0.32	0.34	0.34	0.35	0.35	0.34	0.33	0.34	0.36	0.4	0.43	0.47	0.5	0.53	0.53	0.52	0.52	0.53	0.54	0.54	0.54	0.54	0.53	0.54	0.54	0.55
Myanmar	15.4	15.4	15.5	15.7	15.9	15.9	15.9	15.8	15.6	15.3	15	14.8	14.4	13.8	14.2	13.9	13.7	13.5	13.4	13.3	13	12.8	12.6	12.5	12.1	12	11.8	11.8
Nepal	3.97	4.05	4.5	4.57	4.98	5.37	5.48	5.64	5.75	5.84	5.87	5.77	5.84	5.85	5.89	6.18	6.18	6.22	6.43	6.57	6.7	6.93	7.09	7.22	7.38	7.41	7.48	7.52
Pakistan	23.3	24.9	26.8	28.4	30	31.9	33.8	35.7	36.8	38.1	38.7	39.9	41.5	43.1	44.7	46.3	46.7	47.4	49.3	50.7	52.1	53.4	54.9	55.5	57.8	57.4	57.9	58.1
Philippines	5.79	6.11	6.58	6.73	7.02	7.41	7.63	7.94	8.21	7.96	8.46	8.55	9.04	9.43	10.1	10.4	10.3	10.4	10.9	11	11.2	11.2	11.4	11.6	11.9	12.3	12.2	12
Republic of Korea	15.8	16.5	16.5	16.6	17	16.8	16.3	15.2	13.8	12.7	11.6	10.5	9.61	9.14	8.55	8.05	7.73	7.56	7.46	7.41	7.28	7.13	7.02	6.8	6.61	6.52	6.49	6.64
Russian Federation	40.4	40.6	43.1	50	52.8	47.7	41.5	37.4	36.9	41	43.9	44.8	45.5	46.4	45.8	47.2	42.1	39.2	37.9	34.3	33.7	31.2	30.1	28.9	28.6	26.6	24.9	24.4
Singapore	0.27	0.28	0.28	0.28	0.29	0.28	0.28	0.28	0.26	0.25	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.22	0.22	0.22	0.21	0.2	0.2	0.2	0.2
Sri Lanka	2.34	2.26	2.31	2.35	2.41	2.71	2.73	3.14	3	3.08	3.24	3.11	3.08	3.17	3.2	3.38	3.36	3.44	3.54	3.43	3.42	3.52	3.51	3.41	3.39	3.34	3.32	3.31
Thailand	24.9	26.2	27.5	29.4	32	34.5	36.1	33.4	32.4	32.9	31.6	29.2	28.3	26.6	25.7	24.7	23.6	22.8	22	21	20.9	20.4	19.9	19.5	19.6	19.6	20.1	20.1
Timor-Leste	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.1	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12
Viet Nam	17	17.1	17.3	17.4	17.5	17.7	17.7	17.8	17.9	18	18.3	18.6	19.1	19.5	20	20.4	20.7	22	23.6	23.8	23.9	23.8	23.7	23.7	23.6	23.5	23.4	23.2
Rest of Asia																												
Global																												

29. Deaths by road user category

ATO Indicator: RSA-RSI-004, RSA-RSI-005, RSA-RSI-006, RSA-RSI-007, RSA-RSI-008
Units: Share of Road accident Fatalities (%)
Source: WHO, https://www.who.int/publications/i/item/9789241565684

	2007					2010					2013					2016				
	motorised 2/3W	Pedestrian	Cyclist	LDV	Others	motorised 2/3W	Pedestrian	Cyclist	LDV	Others	motorised 2/3W	Pedestrian	Cyclist	LDV	Others	motorised 2/3W	Pedestrian	Cyclist	LDV	Others
Afghanistan																				
Bangladesh	8.2	53.7	2.6	26.2	9.3	15.8	40.8	2.8	23.6	17	10.8	32.2	1.8	41.5	13.7					
Bhutan						2.5	5.1		60.8	31.7	1.7	3.4		94.9						
Brunei Darussalam	11.1	9.2	1.9	75.8	2.1															
Cambodia	62.8	13.3	4.7	14.9	4.2	66.6	12	4	11.8	5.7	70.4	12.7	2.3	8.5	6.1	73.5	9.6	2.3	6.2	8.4
China	28.1	26	9.5	22.6	13.8	34.5	25	10.4	22.6	7.6	26.8	26.1	8.1	19.2	19.8					
India	27.4	12.6	4.3	15.1	40.5	32.4	8.7	4.6	15.5	38.7	33.9	9.1	3.5	17.2	36.2	39.6	10.4	1.7	17.9	30.4
Indonesia	61	15	13	7	4	35.7	21.1	1.7	6.1	35.4	36	21	2	6	35	73.6	15.5	3.2	4.9	2.7
Iran (Islamic Republic of)																				
Japan	17.6	32.3	12.8	37.1	0.2	17.7	34.6	16.2	31.2	0.3	17.4	36.2	13.7	32.4	0.3	17.2	35.0	15.1	32.4	1.0
Lao People's Democratic Republic					0	74.4	6.3	1.3	14.6	3.4										
Malaysia	58	10.1	3	23.3	5.6	58.7	9.1	2.8	26	3.4	62.1	6.6	2.2	23.7	5.5					
Maldives	75		25			33.3	16.7		50		16.7	33.3	16.7	16.7	16.7	75.0	25.0	0.0		
Mongolia	16.7	17.9	0.4	64.9		18.7	25.1	0.2	39.7	16.3	19.3	30.6	0.2	47	2.9	18.6	28.7	1.2	39.3	12.2
Myanmar	9.6	30.3	11.5	46.7	1.9	22.9	26.5	8.6	26.2	15.9	23	26	9	26	16	64.8	14.2	3.1	10.8	7.1
Nepal																				
Pakistan						38.6	40.9		16.1	4.4										
Philippines											52.5	19	2	25.3	1.1	4.7	1.0	0.1	0.3	93.9
Republic of Korea	20.7	37.4	4.9	36.6	0.5	19.7	37.8	5.3	24.9	12.3	16.3	38.9	5.5	33.2	6.1	20.5	39.9	5.9		33.7
Russian Federation																				
Singapore	47.7	27.1	10.3	14.9		46.1	28.5	8.3	8.8	8.3	45.6	26.9	9.4	17.5	0.6	44.0	33.3	14.2	7.8	0.7
Sri Lanka	65.2	32.8			2		32.5		67.5		40.8	29.8	11	5.7	12.7	50.8	29.2	8.1	6.2	5.7
Thailand	69.7	8.3	2.8	11	8.2	73.5	7.8	3	13.3	2.5	72.8	8.1	2.3	13	3.8	74.4	7.6	3.5	12.3	2.3
Timor-Leste																				
Viet Nam																				
Rest of Asia																				
Global																				

30. Road Traffic Crash Fatalities

ATO Indicator: RSA-RSI-001(1)
Units: deaths per 100,000 population
Source: WHO, https://www.who.int/publications/i/item/9789241565684

	2000	2005	2010	2013	2016
Afghanistan	14.9	15.5	14.6	14.2	15.1
Bangladesh	10.5	17.1	16.4	15.4	15.3
Bhutan	12	13.2	12.8	11	17.4
Brunei Darussalam	15.9	15.1	7.7	9.6	9
Cambodia	17.9	17.9	18.1	17.1	17.8
China	21.5	20.9	20.4	19.7	18.2
India	14.6	16.9	19.8	21.1	22.6
Indonesia	14.5	14.2	13.6	12.9	12.2
Iran (Islamic Republic of)	26.6	40.6	32.1	24	20.5
Japan	12.5	9.4	5.3	4.5	4.1
Lao People's Democratic Republic	13.8	14	14.3	14.4	16.6
Malaysia	26.8	24.9	25.2	24	23.6
Maldives	1.8	5	3	3	0.9
Mongolia	15.9	21.7	18.7	20.8	16.5
Myanmar	21.2	19.5	19.2	19.6	19.9
Nepal	15.7	16.1	15.7	15.1	15.9
Pakistan	14.3	15	15.4	14.4	14.3
Philippines	9.8	10.1	11.5	10.7	12.3
Republic of Korea	25.6	16.1	13.7	11.8	9.8
Russian Federation	32.2	33.3	23.8	24.1	18
Singapore	6.7	4.8	5.1	3.2	2.8
Sri Lanka	15.1	14.9	14.3	12.7	14.9
Thailand	39.1	39	38.5	36.2	32.7
Timor-Leste	14.7	15.1	15.1	14.4	12.7
Viet Nam	24	24.5	25.5	24.8	26.4
Rest of Asia					
Global	18.8	19.2	18.7	18.3	18.2

31. Cost of Fatalities and Serious Injuries

ATO Indicator: RSA-RSI-013
Units: Injuries, Million USD
Source: World Bank/ IRAP, http://documents1.worldbank.org/curated/en/447031581489115544/pdf/Guide-for-Road-Safety-Opportunities-and-Challenges-Low-and-Middle-Income-Country-Profiles.pdf

	Estimated Serious Injuries, 2016	Cost of Fatalities and Serious Injuries, 2016 (Million)
Afghanistan	78450	956
Bangladesh	374310	11270
Bhutan	2085	129
Brunei Darussalam		
Cambodia	42045	1180
China	3842700	691430
India	4486365	172020
Indonesia	475890	37650
Iran (Islamic Republic of)	246390	28500
Japan		
Lao People's Democratic Republic	16800	871
Malaysia	110610	23330
Maldives	60	14
Mongolia	7485	613
Myanmar	158100	4190
Nepal	69330	1120
Pakistan	413730	13230
Philippines	190350	12450
Republic of Korea		
Russian Federation	389535	75510
Singapore		
Sri Lanka	46440	3970
Thailand	337365	44710
Timor-Leste	2415	106
Viet Nam	374550	18020
Rest of Asia		
Global		

32. IRAP rating (National)- Vehicle Occupant

ATO Indicator: RSA-RSI-009
Units: Stars
Source: IRAP, *VIDA, https://www.vaccinesforroads.org/irap-big-data-tool/, https://vida.irap.org/

	1Star	2Star	3Star	4 Star	5 Star	Distance (km)
Afghanistan						
Bangladesh	52%	28%	19%	0%	0%	1373
Bhutan	95%	4%	1%	0%	0%	347
Brunei Darussalam						
Cambodia	1%	59%	39%	1%	0%	1674
China	44%	13%	22%	11%	10%	1000
India	24%	27%	24%	8%	18%	19000
Indonesia	21%	23%	41%	13%	1%	9000
Iran (Islamic Republic of)						
Japan	21%	51%	28%	0%	0%	113
Lao People’s Democratic Republic						
Malaysia	5%	42%	52%	1%	0%	2370
Maldives						
Mongolia						
Myanmar						
Nepal	79%	16%	5%	0%	0%	718
Pakistan						
Philippines	34%	38%	22%	2%	1%	7483
Republic of Korea						
Russian Federation	19%	41%	35%	4%	2%	1000
Singapore						
Sri Lanka						
Thailand	21%	38%	38%	3%	0%	1001
Timor-Leste						
Viet Nam	17%	28%	39%	11%	4%	4020
Rest of Asia						
Global	0.203	0.324	0.404	0.053	0.016	359000

33. IRAP rating (National)- Pedestrian

ATO Indicator: RSA-RSI-010
Units: Stars
Source: IRAP, *VIDA, https://www.vaccinesforroads.org/irap-big-data-tool/, https://vida.irap.org/

	1Star	2Star	3Star	4 Star	5 Star	Distance (km)
Afghanistan						
Bangladesh	80%	19%	1%	0%	0%	1373
Bhutan	73%	26%	1%	0%	0%	347
Brunei Darussalam						
Cambodia	88%	11%	0%	0%	0%	1674
China	27%	29%	21%	14%	10%	763
India	51%	24%	18%	3%	4%	18000
Indonesia	63%	31%	6%	0%	0%	7000
Iran (Islamic Republic of)						
Japan						
Lao People's Democratic Republic						
Malaysia	0%	0%	0%	0%	0%	2370
Maldives						
Mongolia						
Myanmar						
Nepal	84%	13%	3%	0%	0%	700
Pakistan						
Philippines	45%	40%	9%	1%	0%	7483
Republic of Korea						
Russian Federation	9%	82%	5%	3%	0%	864
Singapore						
Sri Lanka						
Thailand	41%	7%	6%	4%	0%	1001
Timor-Leste						
Viet Nam	68%	19%	9%	1%	0%	4020
Rest of Asia						
Global	0.484	0.342	0.125	0.036	0.013	115000

34. IRAP rating (National)- Motorcyclist

ATO Indicator: RSA-RSI-011
Units: Stars
Source: IRAP, *VIDA, https://www.vaccinesforroads.org/irap-big-data-tool/, https://vida.irap.org/

	1Star	2Star	3Star	4 Star	5 Star	Distance (km)
Afghanistan						
Bangladesh	62%	27%	10%	0%	0%	1372.5
Bhutan	98%	2%	0%	0%	0%	347
Brunei Darussalam						
Cambodia	7%	72%	22%	0%	0%	1673.7
China	52%	16%	15%	11%	6%	1000
India	35%	23%	21%	8%	13%	19000
Indonesia	38%	31%	28%	3%	0%	9000
Iran (Islamic Republic of)						
Japan	33%	50%	17%	0%	0%	113
Lao People's Democratic Republic						
Malaysia	96%	5%	0%	0%	0%	2370.2
Maldives						
Mongolia						
Myanmar						
Nepal	86%	12%	2%	0%	0%	718
Pakistan						
Philippines	48%	33%	14%	2%	0%	7483.3
Republic of Korea						
Russian Federation	33%	47%	17%	3%	1%	1000
Singapore						
Sri Lanka						
Thailand	49%	45%	5%	0%	0%	1000.8
Timor-Leste						
Viet Nam	28%	33%	31%	6%	1%	4019.8
Rest of Asia						
Global	35%	36%	25%	3%	1%	265000

35. IRAP rating (National)- Bicyclist

ATO Indicator: RSA-RSI-012
Units: Stars
Source: IRAP, *VIDA, https://www.vaccinesforroads.org/irap-big-data-tool/, https://vida.irap.org/

	1Star	2Star	3Star	4 Star	5 Star	Distance (km)
Afghanistan						
Bangladesh	69%	22%	5%	0%	1%	1372.5
Bhutan	80%	20%	1%	0%	0%	347
Brunei Darussalam						
Cambodia	43%	47%	9%	0%	1%	1673.7
China	15%	18%	32%	13%	22%	655
India	43%	22%	22%	7%	7%	17000
Indonesia	6%	24%	13%	1%	0%	7000
Iran (Islamic Republic of)						
Japan						
Lao People's Democratic Republic						
Malaysia	0%	0%	0%	0%	1%	2370.2
Maldives						
Mongolia						
Myanmar						
Nepal	85%	11%	3%	0%	0%	684
Pakistan						
Philippines	41%	36%	15%	2%	1%	7483.3
Republic of Korea						
Russian Federation	19%	58%	17%	3%	4%	186
Singapore						
Sri Lanka						
Thailand	26%	23%	4%	1%	1%	1000.8
Timor-Leste						
Viet Nam	31%	32%	23%	8%	7%	4019.8
Rest of Asia						
Global	42%	28%	21%	5%	4%	107000

36. Transport as a share of GDP

ATO Indicator: SEC-TIV-001(2)
Units: %
Source: UN, https://unstats.un.org/unsd/snaama/Downloads

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan	6%	6%	7%	4%	3%	6%	7%	7%	7%	8%	8%	9%	10%	12%	12%	10%	10%	10%	11%	11%	11%	11%	11%	12%	11%	10%	9%	9%	9%	8%
Bangladesh	8%	9%	9%	10%	9%	9%	9%	9%	8%	8%	8%	9%	9%	10%	10%	10%	10%	10%	9%	10%	10%	10%	11%	10%	10%	11%	10%	9%	9%	9%
Bhutan	7%	7%	7%	9%	7%	7%	8%	8%	8%	9%	9%	9%	9%	9%	10%	11%	10%	9%	10%	10%	10%	10%	9%	9%	10%	9%	9%	9%	10%	10%
Brunei Darussalam	4%	4%	4%	4%	5%	5%	4%	5%	5%	4%	3%	4%	4%	4%	3%	3%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%
Cambodia	7%	6%	6%	6%	6%	6%	6%	6%	5%	6%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
China	6%	6%	6%	6%	6%	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%	6%	6%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%	4%	4%	4%
India	5%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Indonesia	7%	7%	7%	8%	8%	7%	7%	7%	6%	5%	5%	5%	6%	7%	7%	7%	8%	8%	7%	7%	7%	7%	7%	8%	8%	9%	9%	9%	9%	10%
Iran (Islamic Republic of)	7%	8%	7%	7%	6%	6%	6%	7%	7%	6%	7%	7%	6%	7%	9%	8%	9%	9%	10%	10%	10%	9%	10%	9%	10%	11%	10%	10%	10%	10%
Japan	8%	8%	8%	8%	8%	9%	9%	9%	9%	9%	9%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Lao People's Democratic Republic	4%	4%	4%	4%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%
Malaysia	6%	6%	6%	6%	7%	7%	7%	7%	7%	7%	7%	8%	7%	7%	7%	7%	7%	6%	6%	7%	8%	8%	8%	8%	8%	9%	9%	9%	9%	9%
Maldives	7%	7%	7%	7%	8%	8%	9%	9%	11%	10%	11%	12%	14%	11%	13%	12%	10%	9%	9%	10%	11%	10%	10%	10%	10%	10%	10%	9%	9%	9%
Mongolia	9%	5%	5%	6%	8%	6%	7%	7%	8%	8%	9%	11%	12%	11%	10%	10%	9%	9%	9%	11%	10%	8%	8%	7%	7%	7%	7%	7%	6%	6%
Myanmar	3%	3%	3%	3%	4%	4%	5%	5%	5%	5%	6%	6%	8%	10%	11%	12%	12%	12%	13%	13%	13%	13%	13%	13%	13%	14%	13%	13%	13%	13%
Nepal	5%	5%	5%	6%	6%	6%	6%	6%	7%	6%	7%	7%	8%	8%	9%	9%	9%	10%	9%	9%	8%	8%	8%	8%	8%	8%	7%	7%	6%	6%
Pakistan	8%	8%	9%	10%	10%	10%	10%	10%	10%	10%	11%	13%	13%	13%	12%	12%	12%	12%	11%	13%	13%	11%	10%	11%	10%	12%	13%	12%	11%	10%
Philippines	5%	6%	6%	5%	5%	5%	5%	5%	5%	6%	6%	7%	7%	7%	8%	8%	8%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Republic of Korea	7%	7%	7%	7%	7%	7%	7%	7%	8%	8%	8%	9%	9%	9%	9%	9%	9%	8%	8%	8%	8%	7%	7%	7%	8%	8%	8%	7%	7%	7%
Russian Federation	9%	7%	8%	8%	9%	11%	11%	11%	10%	8%	8%	8%	9%	9%	9%	9%	8%	8%	8%	8%	8%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Singapore	13%	14%	13%	13%	13%	13%	12%	12%	12%	13%	13%	13%	12%	14%	14%	13%	12%	12%	13%	11%	11%	10%	10%	10%	11%	11%	10%	11%	10%	10%
Sri Lanka	8%	9%	9%	8%	8%	8%	8%	9%	9%	9%	9%	10%	9%	9%	10%	10%	10%	10%	10%	11%	11%	11%	13%	13%	13%	13%	13%	12%	12%	12%
Thailand	7%	7%	7%	8%	7%	7%	7%	8%	8%	9%	9%	9%	9%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	7%	8%
Timor-Leste	6%	6%	6%	6%	6%	7%	8%	8%	10%	5%	1%	1%	2%	2%	6%	6%	8%	9%	9%	10%	5%	5%	5%	3%	2%	2%	3%	2%	3%	3%
Viet Nam	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%
Rest of Asia																														
Global																														

37. Transport Investment as a share of GDP

ATO Indicator: SEC-TIV-002
Units: %
Source: OECD, https://data.oecd.org/transport/infrastructure-investment.htm

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																														
Bangladesh																														
Bhutan																														
Brunei Darussalam																														
Cambodia																														
China						1.36		1.46	1.99	2.00	1.98	1.93			3.41	3.66	3.85	3.49	3.60	4.94	4.95	4.05	4.38	4.59	5.01	5.28	5.45	5.81	5.57	5.56
India															0.74	0.92	0.97	0.96	1.08	1.01	0.91	0.78	0.85	1.00	1.14	1.21	1.08			
Indonesia																														
Iran (Islamic Republic of)																														
Japan						1.92	1.84	1.72	1.85	1.82	1.69	1.61	1.58	1.46	1.28	1.21	1.20	1.17	1.14	1.24	1.09	1.04	1.02	1.09	1.05	0.94	0.94			
Lao People's Democratic Republic																														
Malaysia																														
Maldives																														
Mongolia																														
Myanmar																														
Nepal																														
Pakistan																														
Philippines																														
Republic of Korea												1.68	1.56	1.63	1.35	1.31	1.19	1.09	2.12	2.48	1.86	1.57	1.68	1.66	1.53	1.65				
Russian Federation						1.32	1.31	1.39	1.40	1.56	1.86	1.67	1.14	1.43	1.47	1.28	1.15	1.35	1.72	1.46	1.33	1.26	1.20	1.14	0.95	0.91	1.08	0.85	0.83	0.89
Singapore																														
Sri Lanka																														
Thailand																														
Timor-Leste																														
Viet Nam																														
Rest of Asia																														
Global																														

38. MDB development assistance for transport

ATO Indicator: SEC-TIV-022
Units: Million USD
Source: Progress Report (2016-2018) of the MDB Working Group on Sustainable Transport, https://www.adb.org/sites/default/files/institutional-document/536306/mdb-progress-report-2016-2018.pdf

	2016	2017	2018
Afghanistan	160.45		
Bangladesh	374.10	500.00	1006.00
Bhutan	22.87		
Brunei Darussalam			
Cambodia	66.00	180.00	60.00
China	710.80	1495.00	600.00
India	280.30	250.00	
Indonesia			
Iran (Islamic Republic of)	1022.90	372.60	75.20
Japan	9.00		
Lao People’s Democratic Republic	9.69		
Malaysia			33.10
Maldives			38.50
Mongolia			
Myanmar			
Nepal			
Pakistan	359.71	302.00	
Philippines			38.00
Republic of Korea			
Russian Federation			
Singapore	114.00		13.90
Sri Lanka	84.85		44.00
Thailand	11.30	8.80	20.00
Timor-Leste	198.00	80.00	
Viet Nam			
Rest of Asia			
Global	20451.62	21951.19	18681.74
Lao People's Democratic Republic and Cambodia			77.00

39. Investment in transport projects with private participation

ATO Indicator: SEC-TIV-013
Units: Million USD
Source: World Bank, https://datacatalog.worldbank.org/investment-transport-private-participation-current-us

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Afghanistan																															
Bangladesh																												179.58		909.26	861
Bhutan																															
Brunei Darussalam																															
Cambodia						120						65	7.2		53.1		40.1											1000			
China	173	2378.8	532.6	1172	2086.1	309.3	5084.4	3092.7	1670.5	695.55	1558.5	642.23	1787.1	4054.7	782.58	6628.9	8351	4494.4	436.75	2512.9		1095.4	1879.4	4475.8	5009.4	2913.7	3469.6	12587	25965	22516	2789
India	1.9				125		182	405	301.6	466.7	96.4	350.8	719.17	579.14	1141.4	1526.5	10028	3924.9	5254	4871.8	15495	17668	22035	5136.4	2931.7	2047.2	2623.1	3482.9	8966.5	6469.8	1862
Indonesia	116	10.8	114.5	351.5	26.7	502.8				1028					159.2		372	518.6		220			2662				462	6000	2903.4		
Iran (Islamic Republic of)																											235				
Japan																															
Lao People's Democratic Republic											1.5									1.5										5700	
Malaysia	0.7		160	814	2010.6	1889	2981	2210.3	591.9	317.88	1079.7	684.3		1569.9	342.11	586.95	531	423	425		253.3			381				1543			
Maldives																					478										
Mongolia																															
Myanmar							50																						104		
Nepal																										350					
Pakistan						199.6		118.7					31.8		17	64	40	580.7	303		1200									240	
Philippines						300	514	1126.7		78.3	4.9	908.5	30.1				214.6		315.3	149	343	370	49.7	46.67	837.1	1023.9	2471.9	53.55		1733.3	
Republic of Korea																															
Russian Federation									406		109.4						144	23	24		4595.9	4284.6	3983.9	3.1		1822.2	79.4	2037	1622.7	3357.8	925.7
Singapore																															
Sri Lanka										240												500						120			
Thailand	1637.2	415.7	48			1700	210		27.4	63.73		455		45	439													3356			
Timor-Leste																													490		
Viet Nam					10		15	70					20				133	267	365	200	155			275.5			4.5			1025.1	
Rest of Asia																															
Global																															

40. Transport Sector Employment share in Total Employment

ATO Indicator: SEC-TRE-001(1)
Units: %
Source: ILO, https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%	6%	6%	6%	6%	6%
Bangladesh	4%	4%	5%	5%	5%	5%	5%	5%	6%	6%	6%	7%	7%	8%	8%	8%	8%	8%	8%	7%	8%	8%	8%	8%	8%	8%	9%	9%	9%
Bhutan	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Brunei Darussalam	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Cambodia	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	4%	4%	4%	4%	4%	3%	4%	4%	4%	4%	4%	5%	5%	5%	5%	6%
China	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	5%	5%
India	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%
Indonesia	4%	3%	4%	4%	4%	5%	5%	5%	5%	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%	5%	5%	5%	5%	5%	4%	5%	5%	5%	5%
Iran (Islamic Republic of)	7%	7%	7%	7%	7%	7%	7%	7%	7%	8%	8%	8%	8%	9%	9%	9%	9%	10%	10%	10%	10%	10%	10%	11%	11%	11%	10%	11%	11%
Japan	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	8%	8%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Lao People's Democratic Republic	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Malaysia	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	7%	7%	6%	6%	6%	6%	6%	6%	6%
Maldives	5%	5%	5%	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%	6%	7%	7%	7%	8%	8%	8%	9%	9%	10%	10%	10%	11%	11%	11%	11%
Mongolia	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	6%	4%	4%	4%	8%	7%	8%	9%	8%	7%	7%	8%	8%	7%	7%	7%	7%
Myanmar	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%
Nepal	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Pakistan	4%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	6%	6%	5%	6%	6%	6%
Philippines	6%	6%	6%	6%	6%	6%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	9%	9%	9%
Republic of Korea	5%	5%	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%	6%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Russian Federation	9%	9%	9%	9%	9%	9%	9%	9%	9%	8%	9%	9%	9%	9%	9%	9%	9%	9%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Singapore	10%	10%	10%	11%	11%	11%	11%	11%	11%	12%	12%	12%	11%	11%	14%	14%	15%	14%	14%	14%	14%	13%	14%	13%	13%	13%	13%	13%	13%
Sri Lanka	4%	4%	5%	5%	5%	5%	5%	4%	5%	5%	5%	5%	5%	5%	5%	6%	6%	6%	6%	7%	7%	6%	7%	7%	7%	7%	7%	7%	7%
Thailand	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Timor-Leste	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%	5%
Viet Nam	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Rest of Asia																													
Global																													

41. Transport Sector Employment

ATO Indicator: SEC-TRE-002
Units: Thousand
Source: ILO, https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan	102	111	120	128	140	145	148	150	153	157	165	186	202	217	232	244	257	269	286	307	329	361	392	423	457	490	526	559	590
Bangladesh	1441	1557	1679	1804	1934	2059	2196	2340	2482	2627	2870	3121	3388	3686	3994	4322	4277	4209	4102	4095	4219	4335	4449	4606	4742	4889	5732	5987	6180
Bhutan	4	4	4	4	4	4	4	4	5	5	5	5	6	6	7	8	9	11	12	14	12	12	12	12	13	13	13	13	14
Brunei Darussalam	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10	10	10	10	11
Cambodia	64	67	69	71	74	80	87	95	109	126	175	196	208	227	250	271	293	282	259	287	306	324	338	358	413	465	482	494	511
China	10639	11347	12340	13603	14825	15820	16287	16742	17035	17515	17719	18582	19243	20085	20859	21661	22038	22574	23775	24182	25133	26016	28188	30139	31940	33225	34484	35382	36123
India	8878	9255	9679	10201	10878	11564	12205	12916	13668	14445	15164	15873	16657	17241	18029	18559	18936	19262	19854	20320	21516	23010	23771	24638	25676	26633	27329	28160	28764
Indonesia	2652	2647	3020	3352	3520	3878	4152	4150	4370	4693	4510	4703	4853	5469	5499	5627	5978	6162	6122	5793	5525	5276	5359	5374	5250	5556	5818	6089	6288
Iran (Islamic Republic of)	838	865	892	921	956	997	1068	1145	1218	1303	1392	1488	1633	1782	1876	1972	2025	2114	2025	2139	2187	2198	2279	2293	2454	2486	2517	2589	2656
Japan	4603	4614	4623	4568	4625	4713	4736	4684	4683	4748	4711	4689	4795	4833	4575	4935	4918	4867	4966	5029	4955	4803	5052	4937	5172	5185	5228	5307	5374
Lao People's Democratic Republic	15	16	17	17	18	20	21	22	24	25	26	28	29	31	33	34	37	39	42	44	48	51	55	59	63	66	69	72	76
Malaysia	297	307	309	324	340	363	375	385	395	405	472	505	486	547	571	567	566	615	627	712	815	841	819	813	834	849	878	906	937
Maldives	3	3	3	3	4	4	4	4	5	5	5	6	6	7	8	9	10	11	12	14	15	17	20	22	24	26	28	29	31
Mongolia	31	31	32	32	32	33	33	35	37	37	38	41	56	43	43	41	79	78	82	96	97	78	89	95	94	87	86	90	92
Myanmar	617	608	602	612	651	677	712	728	745	775	778	800	832	852	871	890	904	933	960	984	1025	1060	1092	1116	1151	1164	1166	1197	1226
Nepal	84	92	102	112	122	133	144	155	167	175	184	190	199	207	215	225	235	245	255	264	272	282	293	305	318	336	358	381	404
Pakistan	1418	1465	1496	1560	1585	1668	1755	1827	1920	2021	2099	2181	2291	2382	2433	2473	2480	2628	3023	3111	3123	3311	3490	3574	3652	3599	3984	4398	4538
Philippines	1314	1341	1390	1446	1543	1616	1766	1898	1938	2050	2123	2175	2232	2305	2399	2471	2544	2657	2783	2891	2997	3070	3210	3245	3398	3538	3662	3772	3898
Republic of Korea	977	1064	1047	1050	1108	1152	1210	1203	1247	1309	1373	1424	1384	1775	1827	1867	1910	1889	1940	1982	2070	2119	2149	2169	2224	2231	2205	2255	2274
Russian Federation	6283	6203	6269	5929	5999	5838	5640	5437	5543	5524	5851	6012	6052	6356	6346	6294	6668	6631	7052	7039	7219	7253	7280	7311	7297	7301	7315	7357	7389
Singapore	154	159	168	180	188	205	220	226	226	241	252	240	236	235	299	318	364	381	386	407	415	419	438	427	420	429	440	447	438
Sri Lanka	253	269	311	327	295	342	352	320	327	342	353	366	385	400	415	432	449	466	474	522	521	512	553	570	560	607	593	604	609
Thailand	481	460	512	506	578	623	652	634	678	680	883	977	1057	1150	1159	1117	1107	1157	1175	1127	1074	1186	1151	1466	1483	1456	1480	1488	1528
Timor-Leste	11	12	12	12	12	12	12	12	11	12	13	13	14	13	13	14	14	15	16	17	18	19	20	21	22	23	25	27	28
Viet Nam	731	771	819	868	908	939	988	1109	1192	1196	1245	1354	1376	1363	1489	1607	1723	1731	1771	1739	1731	1818	1809	1910	2025	1989	2157	2199	2242
Rest of Asia																													
Global																													

42. Logistics Performance Index, 2018

ATO Indicator: TAS-TSG-004
Units: Score and Rank
Source: WEF, https://reports.weforum.org/global-competitiveness-report-2018/downloads/

	2018													
	overall LPI		Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
Afghanistan	1.94857	160	1.7349	158	1.80714	158	2.10443	152	1.91925	158	1.69702	159	2.38244	153
Bangladesh	2.57658	100	2.3	121	2.38868	100	2.56278	104	2.48344	102	2.785	79	2.92368	107
Bhutan	2.16898	149	2.13638	135	1.90833	150	1.8039	160	2.34626	115	2.34626	130	2.48648	146
Brunei Darussalam	2.70656	80	2.62201	73	2.46095	89	2.51339	113	2.70983	77	2.74724	88	3.17363	80
Cambodia	2.57861	98	2.36974	109	2.14455	130	2.79396	71	2.40809	111	2.51501	111	3.15535	84
China	3.60515	26	3.28592	31	3.75322	20	3.53572	18	3.59498	27	3.64847	27	3.84002	27
India	3.17657	44	2.96451	40	2.90517	52	3.21198	44	3.12807	42	3.31939	38	3.49714	52
Indonesia	3.15006	46	2.67278	62	2.895	54	3.22833	42	3.1	44	3.3	39	3.66956	41
Iran (Islamic Republic of)	2.85272	64	2.625	71	2.7667	63	2.75677	79	2.83813	62	2.7667	85	3.35577	60
Japan	4.02565	5	3.99399	3	4.24824	2	3.59192	14	4.08845	4	4.0491	10	4.25407	10
Lao People's Democratic Republic	2.70029	82	2.61287	74	2.44133	91	2.71569	85	2.64902	83	2.91402	69	2.84259	117
Malaysia	3.22089	41	2.89827	43	3.14719	40	3.34784	32	3.29784	36	3.14784	47	3.46381	53
Maldives	2.66547	86	2.39872	105	2.71792	71	2.6591	94	2.28615	125	2.60028	104	3.32287	64
Mongolia	2.37327	130	2.22449	127	2.09649	135	2.48538	117	2.2076	140	2.09976	152	3.06068	93
Myanmar	2.29773	137	2.16667	131	1.99469	143	2.19914	144	2.27925	128	2.20233	143	2.90842	108
Nepal	2.51302	114	2.28984	122	2.19414	123	2.36081	129	2.46416	105	2.64598	98	3.10052	89
Pakistan	2.4192	122	2.12205	139	2.19749	121	2.62939	97	2.58688	89	2.26545	136	2.66329	136
Philippines	2.90366	60	2.52941	85	2.72595	67	3.29262	37	2.77603	69	3.05917	57	2.98361	100
Republic of Korea	3.61216	25	3.40259	25	3.72553	22	3.33025	33	3.58776	28	3.75412	22	3.91957	25
Russian Federation	2.75689	75	2.42038	97	2.77518	61	2.64403	96	2.74927	71	2.64604	97	3.3133	66
Singapore	3.99612	7	3.88708	6	4.06379	6	3.58009	15	4.1	3	4.08011	8	4.31994	6
Sri Lanka	2.59793	94	2.58242	79	2.48901	85	2.51474	112	2.42383	109	2.78746	78	2.78746	122
Thailand	3.41106	32	3.1425	36	3.13813	41	3.4569	25	3.41073	32	3.46716	33	3.81382	28
Timor-Leste														
Viet Nam	3.27398	39	2.95015	41	3.00549	47	3.15549	49	3.39934	33	3.44978	34	3.672	40

43. Logistics Performance Index, 2016

ATO Indicator: TAS-TSG-004
Units: Score and Rank
Source: WEF, https://reports.weforum.org/global-competitiveness-report-2018/downloads/

	2016													
	overall LPI		Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
Afghanistan	2.14128	150	2.01115	138	1.83547	154	2.37503	125	2.14507	139	1.7724	155	2.6112	137
Bangladesh	2.6639	87	2.56721	82	2.48	87	2.73	84	2.67394	80	2.59388	92	2.90121	109
Bhutan	2.32144	135	2.20952	128	1.95584	151	2.5013	108	2.29524	131	2.19524	131	2.69524	129
Brunei Darussalam	2.87049	70	2.78182	57	2.74773	66	2.99773	62	2.56727	93	2.90649	68	3.19221	84
Cambodia	2.80059	73	2.61539	77	2.36292	99	3.11292	52	2.60487	89	2.70487	81	3.30465	73
China	3.6611	27	3.31888	31	3.75236	23	3.70496	12	3.62007	27	3.6767	28	3.89628	31
India	3.42004	35	3.17442	38	3.33718	36	3.36412	39	3.38706	32	3.51898	33	3.73805	42
Indonesia	2.98454	63	2.68843	69	2.64516	73	2.90191	71	3.00006	55	3.19237	51	3.45992	62
Iran (Islamic Republic of)	2.60125	96	2.33333	110	2.66667	72	2.66667	88	2.66667	82	2.44444	111	2.81327	116
Japan	3.97046	12	3.84845	11	4.09689	11	3.69451	13	3.99023	12	4.02995	13	4.20662	15
Lao People's Democratic Republic	2.06725	152	1.84615	155	1.76183	155	2.1785	148	2.09517	144	1.76183	156	2.6785	133
Malaysia	3.42631	32	3.16715	40	3.44762	33	3.48208	32	3.34222	35	3.46124	36	3.65295	47
Maldives	2.51308	104	2.38745	102	2.56764	81	2.33616	132	2.43684	111	2.48884	102	2.87772	110
Mongolia	2.50606	108	2.39239	100	2.05128	140	2.36515	129	2.3073	129	2.46795	108	3.39821	65
Myanmar	2.45857	113	2.42857	96	2.32959	105	2.22959	144	2.35842	119	2.56895	94	2.84862	112
Nepal	2.37678	124	1.93333	149	2.26667	112	2.5	109	2.13333	140	2.46667	109	2.93333	104
Pakistan	2.92322	68	2.66162	71	2.69728	69	2.93189	66	2.81606	68	2.9141	67	3.48206	58
Philippines	2.85626	71	2.60848	78	2.5501	82	3.01399	60	2.70161	77	2.85594	73	3.34849	70
Republic of Korea	3.71713	24	3.45309	26	3.79054	20	3.58251	27	3.69025	25	3.78365	24	4.02519	23
Russian Federation	2.57086	99	2.00643	141	2.42952	94	2.45048	115	2.76056	72	2.61545	90	3.15369	87
Singapore	4.14363	5	4.17894	1	4.20396	6	3.95659	5	4.09353	5	4.04737	10	4.3952	6
Sri Lanka														
Thailand	3.2551	45	3.10507	46	3.12367	46	3.36694	38	3.13545	49	3.20362	50	3.55993	52
Timor-Leste														
Viet Nam	2.97663	64	2.75055	64	2.69519	70	3.12347	50	2.88252	62	2.84292	75	3.49836	56

44. Logistics Performance Index, 2012

ATO Indicator: TAS-TSG-004
Units: Score and Rank
Source: WEF, https://reports.weforum.org/global-competitiveness-report-2018/downloads/

	2012													
	overall LPI		Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
Afghanistan	2.29727	135	2.33362	99	2.00361	141	2.33218	134	2.16259	139	2.09516	146	2.79526	119
Bangladesh														
Bhutan	2.52032	107	2.29167	109	2.29388	117	2.61188	102	2.42027	111	2.56312	101	2.89646	111
Brunei Darussalam														
Cambodia	2.56233	101	2.29779	108	2.19779	128	2.61212	101	2.50101	103	2.77005	78	2.94546	104
China	3.51702	26	3.25453	30	3.614	26	3.46284	23	3.47162	28	3.5155	31	3.79692	30
India	3.07589	46	2.77026	52	2.8666	56	2.98183	54	3.13678	38	3.09405	54	3.58112	44
Indonesia	2.94478	59	2.52833	75	2.53812	85	2.96586	57	2.84622	62	3.11954	52	3.61171	42
Iran (Islamic Republic of)	2.4894	112	2.19017	126	2.42418	100	2.4914	115	2.66304	87	2.49327	108	2.66304	138
Japan	3.93286	8	3.71959	11	4.10627	9	3.61148	14	3.97414	9	4.03357	9	4.21071	6
Lao People's Democratic Republic	2.4996	109	2.38462	93	2.4021	106	2.4021	123	2.49301	104	2.48718	111	2.82051	118
Malaysia	3.49404	29	3.2816	29	3.42897	27	3.40206	26	3.45234	30	3.53862	28	3.85801	28
Maldives	2.54523	104	2.24192	119	2.47059	93	2.47059	117	2.68253	81	2.43253	118	2.9592	102
Mongolia	2.25026	140	1.98333	144	2.21667	125	2.13333	142	1.88333	152	2.28889	134	2.99222	97
Myanmar	2.36822	129	2.23529	122	2.0999	133	2.47108	116	2.42269	110	2.33936	129	2.58936	140
Nepal	2.03544	151	2.19581	125	1.86963	149	1.85989	151	2.12009	146	1.95039	149	2.20812	153
Pakistan	2.82561	71	2.84615	46	2.69231	71	2.8575	68	2.77416	72	2.6075	90	3.13872	83
Philippines	3.02486	52	2.625	67	2.80208	62	2.96875	56	3.13542	39	3.30208	39	3.30208	69
Republic of Korea	3.69543	21	3.4172	23	3.74004	22	3.66548	12	3.64781	22	3.67966	22	4.02458	21
Russian Federation	2.58496	95	2.03564	138	2.44623	97	2.58775	106	2.64652	92	2.75969	79	3.0164	94
Singapore	4.12581	1	4.09886	1	4.1481	2	3.98516	2	4.06993	6	4.06941	6	4.39436	1
Sri Lanka	2.75042	81	2.58333	71	2.5	89	3	50	2.7957	68	2.65425	86	2.90133	110
Thailand	3.17615	38	2.95858	42	3.08214	44	3.21175	35	2.97551	49	3.17723	45	3.62681	39
Timor-Leste														
Viet Nam	3.00448	53	2.65028	63	2.68185	72	3.14139	39	2.68185	82	3.16492	47	3.64469	38

45. Logistics Performance Index, 2007

ATO Indicator: TAS-TSG-004
Units: Score and Rank
Source: WEF, https://reports.weforum.org/global-competitiveness-report-2018/downloads/

	2007													
	overall LPI		Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
Afghanistan	1.21167	150	1.3	150	1.1	150					1	150	1.375	150
Bangladesh	2.47139	87	2	125	2.28571	82					2.46154	88	3.33333	54
Bhutan	2.15675	128	1.95	135	1.94737	127					2.26667	109	2.57143	126
Brunei Darussalam														
Cambodia	2.49789	81	2.19048	104	2.3	81					2.52632	81	3.05263	74
China	3.32194	30	2.99296	35	3.20285	30					3.37453	31	3.67729	36
India	3.07091	39	2.69118	47	2.90476	42					3.03333	42	3.47458	47
Indonesia	3.0097	43	2.72727	44	2.83333	45					3.3	33	3.27778	58
Iran (Islamic Republic of)	2.50962	78	2.5	62	2.44444	66					2	125	2.8	106
Japan	4.02355	6	3.78648	11	4.10638	6					4.07605	7	4.34454	6
Lao People's Democratic Republic	2.25273	117	2.08333	120	2	120					1.88889	139	2.83333	102
Malaysia	3.48023	27	3.35556	23	3.32558	28					3.51163	28	3.94737	26
Maldives														
Mongolia	2.08491	136	2	131	1.91667	129					2	136	2.25	142
Myanmar	1.86204	147	2.07143	124	1.6875	145					1.57143	149	2.08333	147
Nepal	2.13759	130	1.83333	141	1.76923	144					2.33333	102	2.75	110
Pakistan	2.61855	68	2.40909	69	2.36842	71					2.57143	76	2.92857	88
Philippines	2.68924	65	2.63636	53	2.26087	87					2.65217	69	3.14286	70
Republic of Korea	3.52007	25	3.22388	27	3.44444	25					3.55932	25	3.85714	30
Russian Federation	2.36838	99	1.93966	137	2.23009	93					2.17391	119	2.94253	86
Singapore	4.19034	1	3.89744	3	4.26957	2					4.24771	1	4.52941	1
Sri Lanka	2.39961	92	2.25	91	2.13333	105					2.58333	75	2.69231	113
Thailand	3.31144	31	3.02632	32	3.16216	31					3.25	36	3.91176	28
Timor-Leste														
Viet Nam	2.88885	53	2.88889	37	2.5	60					2.9	53	3.22222	65

46. Rural Access Index

ATO Indicator: ACC-RAC-001(1)
Units: Share of population
Source: ReCAP (2019), https://rai.azavea.com/

	2019
Afghanistan	67%
Bangladesh	67%
Bhutan	48%
Brunei Darussalam	89%
Cambodia	52%
China	79%
India	75%
Indonesia	73%
Iran (Islamic Republic of)	63%
Japan	95%
Lao People's Democratic Republic	59%
Malaysia	74%
Maldives	57%
Mongolia	49%
Myanmar	46%
Nepal	70%
Pakistan	64%
Philippines	85%
Republic of Korea	97%
Russian Federation	73%
Singapore	100%
Sri Lanka	94%
Thailand	79%
Timor-Leste	68%
Viet Nam	85%
Rest of Asia	
Global	

47. Rapid Transit to Resident Ratio (km per millions)

ATO Indicator: ACC-UAC-002
Units: km of Rapid Transit / Million Urban Residents (in cities with populations above 500,000)
Source: ITDP, https://www.itdp.org/2016/01/25/infographic-rapid-transit-to-resident-ratio-rtr/2015-itdp-infographic-spread-1206/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																														
Bangladesh																														
Bhutan																														
Brunei Darussalam																														
Cambodia																														
China	1.0	1.0	0.9	1.1	1.0	1.0	0.9	0.9	1.2	1.1	1.4	1.4	1.9	2.1	2.7	3.2	3.2	3.6	4.2	4.8	6.0	6.4	7.2	8.1	8.6	9.1	10.1	11.1	12.1	13.9
India	2.7	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.2	2.3	2.3	2.3	2.3	2.5	2.8	3.0	2.9	2.9	3.2	3.5	3.7	3.9	4.0	4.4
Indonesia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	1.6	4.1	4.1	4.0	5.5	5.8	5.7	6.3	6.2	6.1	5.9	6.1	6.6	7.0
Iran (Islamic Republic of)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.9	2.9	2.8	2.8	2.7	2.7	2.6	3.3	3.8	3.8	4.4	5.4	5.3	6.0	6.9	7.0	9.2	9.1	9.4
Japan	18.0	18.1	17.9	18.0	18.4	18.5	19.0	19.1	19.1	19.2	19.8	19.7	19.6	19.6	19.6	19.6	19.6	19.5	19.7	19.6	19.5	19.4	19.2	19.1	19.0	18.9	18.8	18.8	18.7	18.7
Lao People's Democratic Republic																														
Malaysia	0.0	0.0	0.0	0.0	0.0	0.0	12.8	12.0	16.7	18.6	17.6	17.1	16.5	16.1	15.6	15.2	14.7	14.2	13.8	13.4	13.0	12.6	12.3	11.9	11.6	11.8	13.7	16.5	16.1	15.7
Maldives																														
Mongolia																														
Myanmar																														
Nepal																														
Pakistan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.1	1.1	1.4	1.4	1.3
Philippines	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.1	2.0	2.3	2.3	2.2	2.5	3.0	2.9	2.9	2.8	2.7	2.7	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5
Republic of Korea	14.6	14.4	14.4	14.5	15.3	15.1	18.8	19.0	19.3	20.8	22.8	22.9	23.1	23.2	25.8	27.2	27.5	29.4	29.6	30.6	31.3	32.4	34.0	34.1	34.0	34.0	34.5	34.3	34.5	34.3
Russian Federation	13.7	13.9	14.0	14.0	14.1	14.9	14.8	14.9	14.9	14.9	14.9	14.8	14.8	15.0	14.9	14.9	14.9	14.8	14.8	14.8	14.8	14.9	14.9	14.8	14.7	14.7	16.0	16.0	16.1	16.3
Singapore	20.9	20.3	19.7	19.1	18.6	18.1	21.8	21.2	20.8	20.3	19.8	19.5	20.1	24.2	23.6	23.0	22.4	21.8	21.3	22.7	24.1	26.5	26.4	26.7	26.2	25.7	25.3	28.5	28.1	27.7
Sri Lanka																														
Thailand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.3	3.2	3.1	5.5	5.4	5.2	5.0	4.8	4.9	5.9	6.1	5.9	6.1	5.9	5.7	7.4	7.2	6.9	7.9
Timor-Leste																														
Viet Nam	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.4	1.4	1.4
Rest of Asia																														
Global	8.2	8.1	8.1	8.0	8.0	8.0	8.1	8.0	8.0	8.0	8.2	8.2	8.2	8.2	8.4	8.6	8.6	8.7	8.8	8.9	9.1	9.2	9.4	9.5	9.6	9.7	9.9	10.2	10.3	10.7

48. Total Passengers Kilometer Travel

ATO Indicator: TAS-PAT-001(4), TAS-PAT-002, TAS-PAT-004, TAS-PAG-005(3)
Units: Billion Passenger kilometers
Source: Country Statistics

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan															0.017	0.005	0.001	0.001												
Bangladesh				5.11	4.57	4.04	3.33	3.75	4.06	4.10	4.19	4.52	4.52	4.56	4.95	4.81							8.25	8.14	8.71	8.71	10.04	12.99		
Bhutan																														
Brunei Darussalam																														
Cambodia															0.017	0.005	0.001	0.001												
China	540	588	654	738	804	832	842	928	984	1044	1129	1206	1286	1255	1453	1542	1683	1880	2031	2146	2386	2645	2836	2191	2231	2278	2288	2330	2351	2364
India										1832	2076	2413	2815	3070	3469	4252	4657	5482	6182	8095	9388	10525	11567	12882	14540	15428	18982	1178	1157	
Indonesia											19.23	18.63	16.83	15.03	14.78	14.35	15.58	15.87	17.94	19.78	20.34	19.03	17.16	16.93	20.40	22.30	21.64	25.66	28.00	29.07
Iran (Islamic Republic of)		4.59					7.04					8.04				11.15	12.55	13.90	15.31	16.81	17.61	17.88	17.17	17.41	16.27	14.94	12.98	13.27		
Japan	92.98					161.62	158.03	155.01	153.59	150.90	151.11	150.68	152.88	154.20	154.72	157.05	556.39	564.43	565.19	549.55	544.10	538.73	551.61	559.75	555.12	567.00	568.93	573.89	579.19	
Lao People's Democratic Republic	0.40					0.77	0.96	1.15	1.24	1.34	1.50	1.54	1.65	1.56	2.10	1.72	1.92	2.16	2.16	2.25	2.62	2.42	2.69	2.82	3.06	3.30	3.46	3.61	3.85	4.12
Malaysia													1.14	1.03	1.15	1.20	1.25	1.32	1.39	1.53	1.53	1.43	1.22	1.10	0.64	0.43	0.29	0.20	0.20	
Maldives																														
Mongolia	1.48	1.51	1.59	1.28	1.36	1.10	1.16	1.28	1.32	1.37	1.43	1.43	1.45	1.60	1.86	1.87	1.94	2.28	2.62	2.54	2.70	3.72	3.75	3.29	3.99	2.94	2.92	3.01	3.91	4.04
Myanmar	0.78	5.46				0.86	7.10				0.74	5.80		0.77	7.33	7.33	8.09	8.76	9.10	9.17	9.29	8.33	7.44	6.17	46.64	45.12	115.22	29.78	55.69	30.32
Nepal																														
Pakistan																														
Philippines															0.13	0.07	0.08	0.03												
Republic of Korea										122.33	124.44	144.36	130.88	129.34	137.34	147.83	155.08	177.08	162.81	158.32	165.04	409.14	422.38	429.06	429.55	454.15	484.14	484.12		
Russian Federation											341.90	331.08	324.67	324.77	334.07	315.49	314.76	325.07	328.87	293.86	280.36	279.15	278.54	265.14	257.67	247.46	249.59	247.18	252.66	256.75
Singapore															5.43	5.61	5.90	6.32	7.04	7.20	7.88	8.45	8.97	9.15	9.39					
Sri Lanka															4.63	4.68	4.36	4.32	49.05	48.96	56.56	58.47	60.27	62.94	67.69	7.41	72.90	7.50		
Thailand	11.61	12.82	14.14	13.70	13.81	12.98	12.21	11.80	10.95	9.89	9.94	10.32	10.38	10.25	9.33	9.05	8.82	446.10	446.12	460.99	452.89	518.55	565.34	697.91	649.64	669.69	702.17	701.95	721.70	735.05
Timor-Leste																														
Viet Nam	14.51	15.24	16.39	17.63	18.67	20.36	22.85	24.24	25.52	26.89	28.09	29.51	32.25	37.27	41.80	46.57	51.09	57.18	62.03	68.70	76.77	85.44	92.42	97.65	104.35	112.60	120.84	132.52	138.82	153.60
Rest of Asia																														
Global																														

49. Freight Transport - Tonne-km (Total)

ATO Indicator: TAS-FRA-004(2), TAS-FRA-005(3), TAS-FRA-006(2), TAS-FRA-007(3)
Units: Billion Tonne Kilometer Travel
Source: Country Statistics

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																						6.8	7.0	7.3	7.3	4.4	4.3			
Bangladesh						0.8	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.0	1.1	1.0	1.0	0.9	1.0	0.7	0.8	0.1	0.5	0.8	0.8	0.9	1.2	1.4		
Bhutan																														
Brunei Darussalam																														
Cambodia															0.1	0.1	0.1	0.1	0.1	0.0		0.0								
China	2558.1	2736.6	2860.1	3003.9	3282.3	3531.9	3600.5	3780.6	3748.3	3994.0	4368.4	4705.7	5000.3	5312.0	6863.0	7917.0	8728.9	9955.3	10835.7	12011.1	13964.0	15643.8	17059.3	16451.8	17733.9	17369.1	18243.4	19258.8	19938.6	19404.5
India										467.0	494.0	515.0	545.0	595.0	643.0	728.3	825.9	933.7	1021.6	1144.5	1287.3	1407.8	1516.2	1652.1	1823.2	2027.4	2260.2			
Indonesia	3.2	3.5	3.8	4.0	3.9	4.2	4.7	5.0	5.0	5.0	5.0	4.9	4.5	4.4	6.7	7.2	11.2	11.2	9.2	22.2	18.2	11.9	18.8	13.7	15.9	16.0	17.6	20.3	22.9	15.6
Japan	272.6					293.0	303.9	304.7	299.1	305.6	311.6	311.6	310.6	538.2	544.7	544.8	576.1	579.6	562.6	530.5	450.8	432.6	415.3	427.7	423.1	415.0	421.8	424.2	417.7	189.3
Lao People's Democratic Republic						0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.6	0.4	0.4	0.5	0.5	0.5	0.7	0.5	0.5	0.6
Malaysia													1.1	0.9	1.0	1.2	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.8	1.7	1.5	1.3	1.2	1.2	
Maldives																														
Mongolia	7.0	4.4	3.3	2.8	2.3	2.4	2.7	2.7	2.9	3.6	4.4	5.4	6.6	7.5	9.2	10.3	9.7	9.0	9.1	9.0	12.1	16.3	15.7	14.6	17.4	13.8	16.6	19.2	22.0	23.6
Myanmar															2.0	2.0	2.1	2.2	2.3	2.5	2.7	2.8	2.5	2.0	1.8	1.7	1.4	1.2	1.1	0.6
Nepal												0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
Pakistan							4.8	4.7	4.2	3.8	4.7	4.7	5.0	5.0	5.2	5.2	5.7	6.4	6.1	5.0	2.0	0.6	0.6	1.2	3.4	5.0	5.2	8.2		
Philippines																														
Republic of Korea	13.7	14.5	14.3	14.7	14.1	13.8	12.9	12.7	10.4	10.1	10.8	138.0	10.8	11.1	137.7	142.5	146.2	144.3	142.7	133.7	136.8	10.0	10.3	10.5	9.6	173.8	180.8	8.2	7.9	7.4
Singapore																														
Sri Lanka															0.1	1.2	1.3	1.4	1.3	1.1	1.6	1.4	1.6	1.6	11.6	1.3	1.7	0.1		
Thailand															31.0	34.8	40.5	27.3	19.1	22.4	29.3	35.9	34.6	23.8	223.0	230.8	230.8	237.9	237.4	24.2
Timor-Leste																														
Viet Nam	5.8	6.6	6.8	7.8	8.3	10.0	10.9	11.6	12.0	12.7	24.4	28.3	29.2	30.8	34.3	38.9	43.1	51.0	57.3	67.0	72.2	79.1	84.6	88.4	93.1	98.2	106.2	115.6	128.5	139.8
Iran (Islamic Republic of)		7.7					13.6					14.6				19.1	20.5	20.2	20.5	20.2	21.8	21.0	22.6	22.4	24.5	25.0	27.2	30.3		
Russian Federation											1721.5	1792.6	1875.7	2009.7	2145.0	2201.8	2301.9	2450.4	2483.7	2199.6	2368.7	2493.0	2602.1	2571.0	2657.2	2664.6	2708.6	2872.9	2967.8	2987.4
Rest of Asia																														
Global																														

50. BRT length (corridor)

ATO Indicator: INF-UTI-001
Units: Kilometers
Source: ITDP, https://www.itdp.org/rapid-transit-database/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																														
Bangladesh																														
Bhutan																														
Brunei Darussalam																														
Cambodia																														
China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	41	41	168	234	374	390	488	549	575	598	598	609	676	717
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	27	41	41	41	66	96	149	188	188	233	240
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	46	123	123	123	172	187	187	210	210	210	210	220	220	220
Japan	0	0	0	0	0	0	0	0	0	0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Lao People's Democratic Republic																														
Malaysia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5
Maldives																														
Mongolia																														
Myanmar																														
Nepal																														
Pakistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	27	50	50	68	68	68
Philippines																														
Republic of Korea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Singapore																														
Sri Lanka																														
Thailand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12	12	12	12	12	12	12
Timor-Leste																														
Viet Nam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	23	23	23
Iran (Islamic Republic of)																														
Russian Federation																														
Rest of Asia																														
Global	221	221	221	240.5	241	260	266	275	278	293	324	359	404	483	584	651	740	951	1179	1379	1728	1800	2057	2457	2710	2933	3104	3178	3357	3467

51. LRT Route KM

ATO Indicator: INF-UTI-002
Units: Kilometers
Source: ITDP, https://www.itdp.org/rapid-transit-database/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																														
Bangladesh																														
Bhutan																														
Brunei Darussalam																														
Cambodia																														
China	33.2	33.2	33.2	35.2	35	36	36	36	36	36	36	53	75	75	75	75	90	98	98	98	108	126	126	186	229	229	238	284	311	406
India																														
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Japan	121.7	121.7	121.7	121.7	122	136	136	136	136	136	136	136	136	136	136	136	136	136	146	146	146	146	146	146	146	146	146	146	146	146
Lao People's Democratic Republic																														
Malaysia																														
Maldives																														
Mongolia																														
Myanmar																														
Nepal																														
Pakistan																														
Philippines																														
Republic of Korea																														
Singapore																														
Sri Lanka																														
Thailand																														
Timor-Leste																														
Viet Nam																														
Iran (Islamic Republic of)																														
Russian Federation	178.8	178.8	178.8	178.8	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	182	182	182	182	182	182	182	182	182
Rest of Asia																														
Global	1924	1968	2082	2130	2185	2225	2262	2321	2384	2488	2607	2766	2856	2941	3168	3298	3467	3616	3809	3984	4146	4311	4454	4606	4768	4876	4991	5097	5146	5279

52. Metro Route KM

ATO Indicator: INF-UTI-003
Units: Kilometers
Source: ITDP, https://www.itdp.org/rapid-transit-database/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																														
Bangladesh																														
Bhutan																														
Brunei Darussalam																														
Cambodia																														
China	120.2	120.2	120.2	156.6	157	157	157	175	241	241	345	345	479	550	735	948	948	1098	1229	1433	1806	1975	2302	2629	2906	3208	3776	4300	4810	5701
India	303.7	303.7	303.7	303.7	308	313	313	321	321	321	321	321	329	334	363	393	404	415	418	446	503	555	555	562	596	641	656	725	730	855
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	39
Japan	1201	1211	1213	1229	1265	1265	1306	1322	1322	1335	1380	1380	1380	1393	1402	1418	1426	1426	1448	1448	1448	1452	1452	1452	1452	1452	1452	1452	1452	1452
Lao People's Democratic Republic																														
Malaysia	0	0	0	0	0	0	59	59	87	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	122	152	152	152
Maldives																														
Mongolia																														
Myanmar																														
Nepal																														
Pakistan																														
Philippines	15	15	15	15	15	15	15	15	15	28	32	32	32	36	44	44	44	44	44	44	48	48	48	48	48	48	48	48	48	48
Republic of Korea	378.4	378.4	381.1	388.6	413	413	520	531	545	594	657	664	674	680	692	739	751	809	817	851	874	910	964	970	970	974	992	992	1001	1001
Singapore	63.1	63.1	63.1	63.1	63	63	78	78	78	78	78	79	83	103	103	103	103	103	103	112	122	138	140	144	144	144	144	165	165	165
Sri Lanka																														
Thailand	0	0	0	0	0	0	0	0	0	24	24	24	24	24	45	45	45	45	45	48	48	53	53	58	58	58	81	81	81	97
Timor-Leste																														
Viet Nam																														
Iran (Islamic Republic of)	0	0	0	0	0	0	0	0	0	0	23	60	60	60	60	60	60	60	78	78	78	96	103	103	125	150	157	221	221	233
Russian Federation	384.3	393	396.6	399.5	402	433	433	438	438	442	443	443	445	455	455	459	461	462	465	468	469	473	476	476	479	479	541	541	546	558
Rest of Asia																														
Global	7155	7238	7338	7519	7637	7883	8199	8349	8544	8775	9118	9219	9469	9705	10032	10423	10563	10922	11194	11632	12186	12607	13131	13567	14009	14433	15222	16063	16697	17846

53. Bus Motorisation Index

ATO Indicator: TAS-VEP-060
Units: Index - Number of vehicles per 1000 population. Estimated using buses registered and population.
Source: Country Statistics

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																						2.6	3.0	3.0	3.1	3.0	3.0	3.0	2.9	2.9
Bangladesh										0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
Bhutan																														
Brunei Darussalam																				3.3	3.0	4.3	5.4	5.2	5.8	5.9	10.2	5.8	5.8	6.0
Cambodia			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3														
China																														
India	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.7	0.9	1.0	1.0	0.1	1.0	1.0	1.1	1.1	1.2	1.0	1.4		
Indonesia	2.6	2.7	2.9	3.0	3.4	3.5	3.0	3.0	3.0	3.1	3.2	3.2	3.3	3.6	4.2	4.9	5.9	7.5	8.7	9.1	9.3	9.2	19.0	20.5	21.8	22.9	23.9	24.1	25.7	17.4
Iran (Islamic Republic of)																														
Japan	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Lao People's Democratic Republic															0.4	0.2	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8
Malaysia													2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.1						
Maldives												2.1	1.3	1.4	1.5	1.7	2.1	2.6	2.9	2.9	2.5	2.6	2.6	2.7	2.8	3.0	3.1	3.3	3.4	
Mongolia																							2.0	2.1	2.1	2.2	2.2	2.2	2.1	6.1
Myanmar															0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
Nepal																														
Pakistan								0.9	0.9	1.1	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.2	1.1	
Philippines			11.8	12.9	13.8	14.7	15.8	16.7	17.1	17.6	18.2	19.1	20.7	20.7	21.5	21.1	20.6	20.3	20.0	20.5	21.2	21.6	21.8	22.0		19.7	19.3	20.4	20.8	21.5
Republic of Korea																										2.8	2.9	2.9	2.9	2.9
Russian Federation																5.5					6.2					6.0		6.2	5.9	6.0
Singapore	3.1	3.1	3.0	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.4
Sri Lanka																			4.1	4.1	4.2	4.3	4.5	4.5	4.7	4.9	5.0	5.1	5.2	5.3
Thailand	7.5	8.1	8.7	9.1	9.5	10.3	11.3	127.0	12.0		12.3	12.7	12.8	12.5	16.9	11.7	12.9	13.3	13.6	13.9	14.2	14.7	15.3	16.2	16.9	17.2	17.6	18.1		
Timor-Leste																														
Viet Nam																			1.1	1.2	1.1	1.2	1.2	1.2	1.2	1.3	1.5	1.6		
Rest of Asia																														
Global																														

54. Transport infrastructure Score/Ranking

ATO Indicator: INF-TTI-001(1)
Units: Rank & score
Source: World Economic Forum, http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

	Rank	Score
Afghanistan		
Bangladesh	100	42
Bhutan		
Brunei Darussalam	77	48
Cambodia	96	42
China	24	69
India	28	66
Indonesia	55	56
Iran (Islamic Republic of)	82	47
Japan	4	88
Lao People's Democratic Republic	87	45
Malaysia	29	66
Maldives		
Mongolia	119	36
Myanmar		
Nepal	91	44
Pakistan	69	51
Philippines	102	42
Republic of Korea	5	88
Russian Federation	49	58
Singapore	1	92
Sri Lanka	50	58
Thailand	53	57
Timor-Leste		
Viet Nam	66	52
Rest of Asia		
Global	0	52

55. IATA airport connectivity indicator

ATO Indicator: ACC-NRC-003
Units: Value, rank and score
Source: International Air Transport Association (IATA), http://www3.weforum.org/docs/GCR2018/04Backmatter/3.%20Appendix%20C.pdf

	VALUE 2017	RANK 2017	SCORE 2017	VALUE 2018	RANK 2018	SCORE 2018	VALUE 2019	RANK 2019	SCORE 2019
Afghanistan									
Bangladesh	59074	59	54	48504	63	51	48504	63	51
Bhutan									
Brunei Darussalam	12657	89	35	11872	91	34	11872	91	34
Cambodia	55061	61	53	57535	58	54	57535	58	54
China	5235971	2	100	4925931	2	100	4925931	2	100
India	1245197	4	100	1224526	4	100	1224526	4	100
Indonesia	1054519	5	100	972337	5	100	972337	5	100
Iran (Islamic Republic of)	79647	49	59	80533	49	59	80533	49	59
Japan	1834116	3	100	1610558	3	100	1610558	3	100
Lao People's Democratic Republic	13839	88	36	14364	88	36	14364	88	36
Malaysia	461163	18	91	420240	20	89	420240	20	89
Maldives									
Mongolia	10859	96	33	9490	97	31	9490	97	31
Myanmar									
Nepal	29876	75	45	27599	75	44	27599	75	44
Pakistan	107367	42	64	98082	41	62	98082	41	62
Philippines	320476	26	83	306153	26	83	306153	26	83
Republic of Korea	510265	16	93	481088	16	92	481088	16	92
Russian Federation	400814	22	88	426397	18	89	426397	18	89
Singapore	387550	23	87	352688	23	85	352688	23	85
Sri Lanka	58865	60	54	57216	59	54	57216	59	54
Thailand	712965	9	100	670387	9	99	670387	9	99
Timor-Leste									
Viet Nam	386299	24	87	364184	22	86	364184	22	86
Rest of Asia									
Global									

56. Road Connectivity Index

ATO Indicator: ACC-NRC-004
Units: Value, rank and score
Source: World Economic Forum, http://www3.weforum.org/docs/GCR2018/04Backmatter/3.%20Appendix%20C.pdf

	VALUE	RANK	SCORE
	2019	2019	2019
Afghanistan			
Bangladesh	57	117	57
Bhutan			
Brunei Darussalam	66	93	66
Cambodia	62	107	62
China	96	10	96
India	76	72	76
Indonesia	60	109	60
Iran (Islamic Republic of)	85	42	85
Japan	78	60	78
Lao People's Democratic Republic	52	126	52
Malaysia	40	133	40
Maldives			
Mongolia	59	112	59
Myanmar			
Nepal	64	101	64
Pakistan	80	52	80
Philippines	52	125	52
Republic of Korea	90	26	90
Russian Federation	86	41	86
Singapore	N/Appl.	n/a	n/a
Sri Lanka	66	96	66
Thailand	80	54	80
Timor-Leste			
Viet Nam	63	104	63
Rest of Asia			
Global			

57. Liner Shipping Connectivity Index

ATO Indicator: ACC-NRC-005
Units: Index, maximum value in 2004 = 100
Source: UNCTAD, https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=92

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan																
Bangladesh	5	5	8	10	8	8	7	8	8	8	10	11	12	12	13	13
Bhutan																
Brunei Darussalam	4	3	4	4	4	4	5	6	5	5	5	5	9	6	5	8
Cambodia	4	3	4	4	7	5	6	6	4	6	6	8	9	9	8	8
China	100	108	100	111	123	117	121	133	131	129	135	139	142	140	151	152
India	34	37	41	44	47	48	48	49	46	46	46	49	57	55	55	56
Indonesia	26	29	32	32	33	35	33	34	34	36	35	36	34	43	46	44
Iran (Islamic Republic of)	14	14	21	27	19	27	30	28	25	24	19	20	31	37	38	20
Japan	69	67	75	75	74	70	72	72	67	67	65	75	77	69	71	71
Lao People’s Democratic Republic																
Malaysia	63	65	65	75	73	78	72	87	88	87	91	92	95	91	94	94
Maldives	4	4	3	4	3	6	6	7	3	8	8	3	7	3	7	7
Mongolia																
Myanmar	3	2	4	3	5	5	6	6	6	7	8	9	11	9	10	8
Nepal																
Pakistan	20	21	26	28	28	27	32	31	27	29	28	33	34	33	35	34
Philippines	15	16	19	19	19	20	21	23	21	24	26	22	28	28	29	31
Republic of Korea	69	73	68	70	73	75	75	89	90	90	94	98	100	99	102	105
Russian Federation	12	13	20	21	23	29	29	29	45	45	47	47	44	41	44	38
Singapore	82	84	80	83	86	84	92	98	98	96	94	101	102	102	111	108
Sri Lanka	35	33	34	40	40	36	37	40	41	40	44	49	54	61	63	62
Thailand	31	32	38	38	36	35	40	39	38	39	41	43	45	42	45	53
Timor-Leste			2	1	1	2	2	3	5	6	7	6	3	3	3	3
Viet Nam	13	14	21	22	25	24	41	48	47	42	42	48	60	58	60	67
Rest of Asia																
Global																

58. Proportion of population covered by a mobile network, by technology

ATO Indicator: INF-ICT-010
Units: %
Source: UNStats, https://unstats.un.org/

	2G																3G															4G							
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan								72	75	80	80	85	88	89	89	89	89	90	90	90							28	35	32	24	46	55	60					4	7	22
Bangladesh		40	44	50	70	80	90			93	96	99	99	99	99	99	99	99	100	100						1	22	59	71	91	93	95	95			59	65	65	67	79	82
Bhutan						5	12	21			98	98				98	98	98	98	98				15	33	34	55	60	80	85	88	90	95		5	11	40	53	55	60	78
Brunei Darussalam																97	99	99	99	99						81	88	90	91	92	93	96	96		5	11	80	90	90	95	95
Cambodia	80	85	87	88		75	85	87	87	99	99	99	99	99	99	99	99	99	99	99			43					60	70	80	84	85	85			9	30	50	58	80	80
China	50	50				95	95	97	99	99	99	99	99	99	100	100	100	100	100	100								44	95	98	98	99	100		10	44	85	97	98	99	100
India	21	21				31	61	70		83				93		95	96	97	97	99			0			37	47	61	74	80	88	94	98			2	4	74	88	94	98
Indonesia	89				90	90	90					100				88	88	99	99	99								60	60	75	94	98	98		5	10	5	23	90	98	98
Iran (Islamic Republic of)		32		50	65	75	82	95			85	85	96	94	94	94	97	97	97	97						41	48	52	60	63	77	79	85			4	14	29	74	76	81
Japan	99	99	99	99	99	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100						100	100	100	100	100	100	100	100	84	99	99	99	99	99		
Lao People's Democratic Republic						55		65	70	80	59	64	72	96	96	98	98	94	94	95				17	18	19	40	60	65	69	78	78	82			2	5	7	9	43	
Malaysia		95						93	92	95	95	95	95	95	95	96	96	96	96	97			74	81	82	82	83	88	92	95	94	95	96		15	33	71	88	77	80	87
Maldives	40	40	54	71	81	91		100	100	100	100	100	100	100		100	100	100	100	100			42	57	75	78	83	83	100	100	100	100	100		11	44	58	80	100	100	100
Mongolia	58	60	64		18	29	41	45	66	82	85	88	91			99	99	99	100	134		40	47	50	50	53		53	95	95	95	95	96					7	21	45	59
Myanmar							10								73	95	95	90	95						10	13	50	79	90	90	94						9	30	75	
Nepal							10				35			81	80	82	92	92					20					30	50	54	54							15	15		
Pakistan		27				36	36						75	78	82	86	87	88	89	89								33	46	87	72	73	77			7	16	27	67	69	69
Philippines	70	70		75	92	99	99	99	99	99	99	99	99	99	99	99	99	99					69	69	70	73	75	78	78	93	93			6	27	48	39	80	80		
Republic of Korea	99	99	99	99	99	80	83	90	94	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99	99	99	99	99	100	100	100	100			99	99	100	100	100	100
Russian Federation																89	90	91	91	99									73	75	77	78	88	25	36	50	50	59	62	70	88
Singapore	100	100	100	100	100	100	100	100	99	100	100	99	99	99	100	100	100	100	100	100	100	99	100	100	99	99	99	100	100	100	100	100	100			99	100	100	100	100	100
Sri Lanka		58			80	85	90	90	95	96	98	98	98	98		99	99	100	99	99						72	72	72	83	85	88	86	89	5	11	25	35	36	48	80	80
Thailand						26	31	38				100			97	97	98	98	98	98							80	97	97	98	98	98	98					21	98	98	98	98
Timor-Leste				38	48	50	54	69	69		86		92		96	96	97	97	97	97								96	96	97	97	97	97						20	40	45
Viet Nam							70									94	94	100	100	100						31	41	55	70	77	98	100	100					5	95	94	97
Rest of Asia																																									
Global																																									

59. Fixed-broadband subscriptions

ATO Indicator: INF-ICT-009
Units: %
Source: UNStats, https://unstats.un.org/

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Afghanistan					0.00	0.00	0.00	0.00	0.00	0.00	0.01		0.00	0.00	0.00	0.02	0.02	0.03	0.04	0.05
Bangladesh								0.03	0.03	0.22	0.28	0.31	0.40	1.00	2.00	3.13	4.17	4.57	4.99	4.96
Bhutan									0.31	0.50	1.27	1.91	2.39	2.88	3.47	3.83	2.24	2.24	1.43	1.15
Brunei Darussalam		0.56	0.80	1.09	1.74	2.23	2.42	3.10	4.45	5.22	5.58	5.89	4.97	6.81	7.38	8.30	8.60	9.68	11.53	12.51
Cambodia			0.00	0.00	0.01	0.01	0.02	0.06	0.12	0.21	0.25	0.15	0.20	0.22	0.43	0.54	0.62	0.83	1.02	1.12
China	0.00	0.03	0.25	0.85	1.88	2.81	3.80	4.93	6.12	7.64	9.23	11.37	12.66	13.57	14.33	19.69	22.81	27.74	28.54	31.34
India		0.00	0.01	0.01	0.02	0.12	0.20	0.26	0.44	0.64	0.89	1.07	1.18	1.17	1.22	1.29	1.41	1.33	1.34	1.40
Indonesia	0.00	0.01	0.02	0.03	0.04	0.05	0.08	0.34	0.42	0.78	0.94	1.12	1.20	1.29	1.33	1.54	2.00	2.35	3.32	3.80
Iran (Islamic Republic of)	0.00	0.00	0.02	0.03			0.14	0.28	0.42	0.55	1.34	2.84	5.04	6.75	7.93	8.42	9.56	10.66	12.71	10.58
Japan	0.67	3.00	7.35	11.65	15.25	18.16	20.59	22.03	23.43	25.56	26.53	27.78	28.14	28.77	29.48	30.37	31.16	31.79	32.62	33.50
Lao People's Democratic Republic				0.00	0.00	0.01	0.01	0.02	0.05	0.07	0.09	0.10	0.12	0.14	0.24	0.22	0.36	0.39	0.64	1.06
Malaysia		0.02	0.08	0.45	1.00	1.88	2.87	3.87	4.88	5.60	7.44	8.75	10.05	9.97	10.25	10.12	8.86	8.64	8.55	9.28
Maldives			0.06	0.17	0.23	1.02	1.92	3.10	4.47	4.35	4.25	4.64	4.55	4.90	4.56	5.09	6.16	7.36	9.24	9.98
Mongolia		0.00	0.00	0.02	0.04	0.07	0.14	0.29	1.24	1.50	2.82	3.39	3.90	4.85	6.71	6.94	7.40	9.16	9.66	9.84
Myanmar						0.00	0.01	0.01	0.02	0.05	0.05	0.04				0.06	0.17	0.21	0.24	
Nepal							0.00	0.04	0.05	0.06	0.22	0.35	0.85	1.16	0.93	1.12	0.82	1.82	2.82	
Pakistan						0.01	0.02	0.03	0.10	0.22	0.44	0.64	0.81	0.85	1.03	0.90	0.81	0.88	0.85	0.81
Philippines		0.01	0.03	0.07	0.11	0.14	0.30	0.55	1.15	1.86		1.87	2.21	2.60	2.89	2.84	2.88	3.23	3.55	5.48
Republic of Korea	8.17	16.39	21.68	23.16	24.58	25.03	28.73	30.00	31.46	33.13	34.70	35.87	36.46	37.22	37.94	39.40	40.32	41.48	41.60	42.76
Russian Federation			0.01	0.24	0.47	1.11	2.02	3.42	6.48	9.00	10.94	12.27	14.53	16.45	17.25	18.54	18.95	21.37	22.00	22.52
Singapore	1.71	3.70	6.58	10.10	13.05	15.38	17.90	20.22	22.43	24.84	26.08	26.75	26.68	27.38	26.68	26.58	28.16	25.85	25.94	25.91
Sri Lanka		0.00	0.00	0.02	0.11	0.11	0.12	0.32	0.51	0.84	1.13	1.76	1.72	2.05	2.73	2.99	4.24	5.78	7.27	7.81
Thailand		0.00		0.02	0.25	0.85	1.36	1.95	3.12	3.92	4.84	5.77	6.66	7.62	7.95	9.07	10.47	11.86	13.24	14.52
Timor-Leste				0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.05	0.05	0.06	0.09	0.09	0.05	0.05	0.05	0.05
Viet Nam			0.00	0.01	0.06	0.25	0.61	1.52	2.38	3.69	4.17	4.32	5.32	5.68	6.54	8.26	9.72	11.91	13.60	15.35
Rest of Asia																				
Global																				

60. Percentage of Individuals using the Internet

ATO Indicator: INF-ICT-006
Units: Share of population
Source: ITU, https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Afghanistan		0%	0%	0%	0%	1%	2%	2%	2%	4%	4%	5%	5%	6%	7%	8%	11%	14%	
Bangladesh	0%	0%	0%	0%	0%	0%	1%	2%	3%	3%	4%	5%	5%	7%	14%	14%	18%	15%	
Bhutan	0%	1%	2%	2%	3%	4%	5%	6%	7%	7%	14%	14%	16%	22%	30%	40%	42%	48%	
Brunei Darussalam	9%	13%	15%	20%	30%	36%	42%	45%	46%	49%	53%	56%	60%	65%	69%	71%	90%	95%	
Cambodia	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	3%	5%	7%	14%	6%	32%	32%	
China	2%	3%	5%	6%	7%	9%	11%	16%	23%	29%	34%	38%	42%	46%	48%	50%	53%	54%	
India	1%	1%	2%	2%	2%	2%	3%	4%	4%	5%	8%	10%	13%	15%	21%	17%	22%	34%	
Indonesia	1%	2%	2%	2%	3%	4%	5%	6%	8%	7%	11%	12%	15%	15%	17%	22%	25%	32%	
Iran (Islamic Republic of)	1%	1%	5%	7%	7%	8%	9%	9%	12%	14%	16%	19%	23%	30%	39%	45%	53%	64%	70%
Japan	30%	39%	47%	48%	62%	67%	69%	74%	75%	78%	78%	79%	79%	88%	89%	91%	93%	85%	91%
Lao People's Democratic Republic	0%	0%	0%	0%	0%	1%	1%	2%	4%	6%	7%	9%	11%	13%	14%	18%	22%	26%	
Malaysia	21%	27%	32%	35%	42%	49%	52%	56%	56%	56%	56%	61%	66%	57%	64%	71%	79%	80%	
Maldives	2%	4%	5%	6%	7%	7%	11%	16%	23%	25%	27%	34%	39%	44%	49%	54%	59%	63%	
Mongolia	1%	2%	2%					9%	10%	10%	10%	12%	16%	18%	20%	23%	22%	24%	
Myanmar		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	4%	8%	12%	22%	25%	31%	
Nepal	0%	0%	0%	0%	0%	1%	1%	1%	2%	2%	8%	9%	11%	13%	15%	18%	20%	34%	
Pakistan		1%	3%	5%	6%	6%	7%	7%	7%	8%	8%	9%	10%	11%	12%	14%	12%	16%	
Philippines	2%	3%	4%	5%	5%	5%	6%	6%	6%	9%	25%	29%	36%	48%	50%	36%	56%	60%	
Republic of Korea	45%	57%	59%	66%	73%	74%	78%	79%	81%	82%	84%	84%	84%	85%	88%	90%	93%	95%	96%
Russian Federation	2%	3%	4%	8%	13%	15%	18%	25%	27%	29%	43%	49%	64%	68%	71%	70%	73%	76%	81%
Singapore	36%	42%	47%	54%	62%	61%	59%	70%	69%	69%	71%	71%	72%	81%	79%	79%	84%	84%	88%
Sri Lanka	1%	1%	1%	1%	1%	2%	3%	4%	6%	9%	12%	15%	18%	22%	26%	12%	16%	34%	
Thailand	4%	6%	8%	9%	11%	15%	17%	20%	18%	20%	22%	24%	26%	29%	35%	39%	48%	53%	
Timor-Leste			0%			0%	1%	1%	2%	2%	3%	4%	7%	11%	18%	23%	25%	27%	
Viet Nam	0%	1%	2%	4%	8%	13%	17%	21%	24%	27%	31%	35%	37%	39%	41%	45%	53%	58%	
Rest of Asia																			
Global																			

61. Share of Population with convenient access to public transport

ATO Indicator: ACC-UDB-001
Units: Share of population
Source: UN Habitat, https://data.unhabitat.org/datasets/GUO-UN-Habitat::11-2-1-percentage-access-to-public-transport/about

	2020[79]
Afghanistan	19.59%
Bangladesh	37.69%
Bhutan	33.46%
Brunei Darussalam	
Cambodia	
China	53.50%
India	62.88%
Indonesia	36.23%
Iran (Islamic Republic of)	48.34%
Japan	72.72%
Lao People's Democratic Republic	
Malaysia	38.06%
Maldives	
Mongolia	47.30%
Myanmar	66.06%
Nepal	51.79%
Pakistan	36.50%
Philippines	33.74%
Republic of Korea	73.97%
Russian Federation	
Singapore	94.20%
Sri Lanka	62.95%
Thailand	26.05%
Timor-Leste	
Viet Nam	
Rest of Asia	
Global	

[79] The indicated percentages are based on the weighted (by population) averages data available for a limited number of cities from the source database included in the ATO.