

# IsDB



البنك الإسلامي للتنمية  
Islamic Development Bank

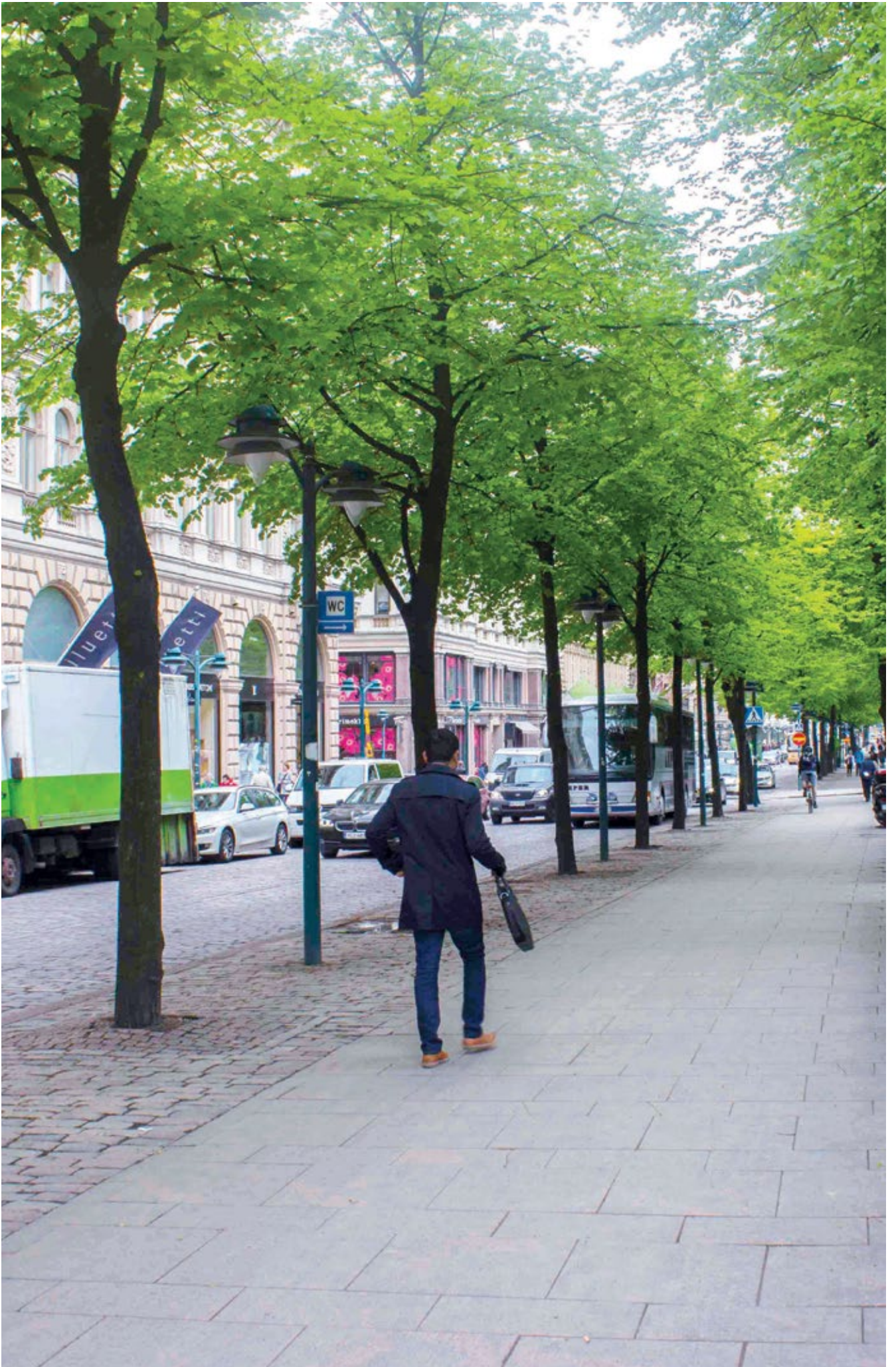
# SLOCAT

Partnership on Sustainable,  
Low Carbon Transport

## TRANSPORT, CLIMATE ACTION AND SUSTAINABLE DEVELOPMENT: SYNERGIES ACROSS NDCs AND VNRs IN IsDB MEMBER COUNTRIES







# Table of Contents

<b>List of Figures</b>	<b>3</b>
<b>List of Tables</b>	<b>3</b>
<b>List of Abbreviations and acronyms</b>	<b>4</b>
<b>Acknowledgments</b>	<b>5</b>
<b>Executive Summary</b>	<b>6</b>
<b>1. PROJECT BACKGROUND AND OVERVIEW</b>	<b>10</b>
1.1 Project Context	11
1.2 Report Objectives	13
1.3 Scope of Analysis	15
1.4 Selection Criteria for Focus Countries	15
<b>2. NDC-VNR TRANSPORT SECTOR SYNERGIES</b>	<b>18</b>
2.1 Areas of convergence between NDCs and VNRs	19
2.2 Areas of divergence between NDCs and VNRs	22
<b>3. STRATEGIC OBJECTIVES OF TRANSPORT SECTOR SYNERGIES BETWEEN NDCs AND VNRs</b>	<b>24</b>
3.1 Improve inclusion of transport development benefits in NDCs and VNRs	26
3.2 Reduce negative impacts of the transport sector	29
3.3 Increase ambition in transport targets and commitments	32
3.4 Balance and optimise sustainable low carbon transport measures	34
3.5 Increase integration of sustainable, low carbon transport in national transport plans	37
3.6 Improve NDC/SDG coordination for transport among ministries/levels of government	39
3.7 Increase integration of transport in global reporting mechanisms	40
3.8 Questions for further analysis	43
<b>4. TRANSPORT SECTOR NDC AND SDG INTEGRATION FRAMEWORK AND GUIDANCE</b>	<b>46</b>
4.1 Component 1: Gap Analysis/ Diagnosis	49
4.2 Component 2: Consultations	51
4.3 Component 3: Vision and Targets	54
4.4 Component 4: Policy Coherence and Prioritization	57
4.5 Component 5: Institutional Frameworks	60
4.6 Component 6: Financing NDC-SDG Implementation	62
4.7 Component 7: Awareness and Capacity Building	64
4.8 Component 8: Measurement, Reporting and Verification	66
<b>5. SUMMARY AND RECOMMENDATIONS</b>	<b>70</b>
5.1 Summary of strengths and gaps in planning and reporting for focus countries	71
5.2 Best practices to enhance strengths and address gaps	75
5.3 National, regional, and global capacity building opportunities	77
<b>Annex 1: Resources on NDC and SDG Synergies</b>	<b>80</b>
<b>Annex 2: NDC and VNR Transport Typology</b>	<b>80</b>
<b>Annex 3: Key Performance Indicators for Tracking Global Processes</b>	<b>82</b>

# List of Figures

<b>Figure 1:</b>	SDG targets related to Sustainable Transport	<b>12</b>
<b>Figure 2:</b>	Impacts of Transport Mitigation Measures on the 17 SDGs (green = positive, grey = neutral, red = negative)	<b>27</b>
<b>Figure 3:</b>	References to Co-Benefits of Transport in Focus Countries	<b>28</b>
<b>Figure 4:</b>	Share of IsDB countries in Major Indicators	<b>29</b>
<b>Figure 5:</b>	Growth of motorization rate	<b>31</b>
<b>Figure 6:</b>	Comparison of economy-wide and transport emissions growth	<b>31</b>
<b>Figure 7:</b>	Transport mitigation measures in NDCs and VNRs of IsDB member countries	<b>35</b>
<b>Figure 8:</b>	Comparison of lead/co-lead ministries implementing NDCs and SDGs for 90 countries	<b>39</b>
<b>Figure 9:</b>	Sustainable transport in all and IsDB VNRs (red=2017, blue=2018)	<b>41</b>
<b>Figure 10:</b>	Components of guidance tool	<b>48</b>
<b>Figure 11:</b>	Key words provided by EGM participants	<b>51</b>
<b>Figure 12:</b>	EGM result on importance of transport targets	<b>56</b>

# List of Tables

<b>Table 1:</b>	Focus countries by income group	<b>16</b>
<b>Table 2:</b>	Overview of few major characteristics of focus countries	<b>16</b>
<b>Table 3:</b>	Vehicle ownership growth in comparison	<b>30</b>
<b>Table 4:</b>	Trends in transport emissions, pollution and fatalities	<b>32</b>
<b>Table 5:</b>	Non-transport emission targets by countries	<b>32</b>
<b>Table 6:</b>	Targets in NDCs	<b>34</b>
<b>Table 7:</b>	Transport measures of NDCs in detail	<b>36</b>
<b>Table 8:</b>	Climate change and sustainable development references in transport strategies	<b>38</b>
<b>Table 9:</b>	Leads of NDCs, NCs and VNRs in comparison	<b>40</b>
<b>Table 10:</b>	Sustainable transport in NDCs and VNRs of focus countries	<b>41</b>
<b>Table 11:</b>	Reporting for major UNFCCC mechanisms	<b>42</b>
<b>Table 12:</b>	Transport activities in NCs	<b>42</b>
<b>Table 13:</b>	Vision of focus countries	<b>56</b>
<b>Table 14:</b>	Summary of strengths and gaps in focus country plans and reporting	<b>72</b>
<b>Table 15:</b>	IsDB countries member countries with transport mitigation targets	<b>73</b>
<b>Table 16:</b>	Best Practices for Application of Guidance	<b>75</b>
<b>Table 17:</b>	NDC and VNR Activity Timeframes	<b>77</b>

# List of Abbreviations and Acronyms

<b>ADB</b>	Asian Development Bank
<b>AfDB</b>	African Development Bank
<b>BAU</b>	Business-as-usual
<b>BRT</b>	Bus rapid transit
<b>BUR</b>	Biennial Update Reports
<b>CNG</b>	Compressed natural gas
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>COP</b>	Conference of Parties
<b>ECA</b>	United Nations Economic Commission for Africa
<b>EGM</b>	Expert group meeting
<b>ESCAP</b>	United Nations Economic and Social Commission for Asia and the Pacific
<b>ESCWA</b>	United Nations Economic and Social Commission for Western Asia
<b>EST</b>	Environmentally Sustainable Transport
<b>GCF</b>	Green Climate Fund
<b>GHG</b>	Greenhouse gas
<b>HLPF</b>	United Nations High-level Political Forum on Sustainable Development
<b>IKI</b>	International Climate Initiative
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IsDB</b>	Islamic Development Bank
<b>LIC</b>	Low-income country
<b>LMIC</b>	Low- and middle-income country
<b>MAPS</b>	Mainstreaming, Acceleration, Polity, Support
<b>MCA</b>	Multi-Criteria Analysis
<b>MDB</b>	Multilateral Development Bank
<b>MRV</b>	Measurement, reporting and verification
<b>Mt</b>	million tonnes
<b>NAMA</b>	Nationally Appropriate Mitigation Action
<b>NAP</b>	National adaptation plan
<b>NC</b>	National communications
<b>NDC</b>	Nationally Determined Contribution
<b>NO</b>	Nitrogen oxide
<b>PM</b>	Particulate matter
<b>RCW</b>	Regional climate week
<b>RHD</b>	Roads and Highways Division
<b>SCAN</b>	SDG Climate Action Nexus tool
<b>SDG</b>	Sustainable Development Goal
<b>SLoCaT</b>	Partnership on Sustainable, Low Carbon Transport
<b>SUMP</b>	Sustainable urban mobility plan
<b>SUTRI</b>	Sustainable Urban Transport Programme Indonesia
<b>TUMI</b>	Transformative Urban Mobility Initiative
<b>UNCRD</b>	United Nations Centre for Regional Development
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VNRs</b>	Voluntary National Reviews on the SDGs
<b>WRI</b>	World Resources Institute

# Acknowledgments

The preparation of this report was led by the Climate Change Division and Economic Infrastructure Division at the Islamic Development Bank's Country Programs Complex (CPC).

The report was developed with contributions from Dr. Ahmed Qabany (Manager, Climate Change Division) and Mr. Mohammed Al Sayed (Manager, Economic Infrastructure Division), and reviewed by Mr. Olatunji Yusuf, Senior Climate Change Specialist (Climate Change Division), Mr. Saeed Mohamed, Senior Transport Specialist (Economic Infrastructure Division), under the guidance of Mr. Amadou Thierno Diallo, Director (Economic & Social Infrastructure Department), Ms. May Ali Babiker (Resilience and Social Development Department), and under the general oversight of Dr. Mansur Muhtar, Vice President (Country Programs).

The main author of the study was the Partnership on Sustainable, Low Carbon Transport (SLoCaT), IsDB technical partner on sustainable transport. Special thanks to Mr. Karl Peet, Research Director (SLoCaT Partnership), Mr. Sudhir Gota, Senior Transport and GHG Consultant (SLoCaT), Mr. Nikola Medimorec, Senior Researcher, (SLoCaT) and Ms. Maruxa Cardama, Secretary General (SLoCaT) for their effort in this in-depth research work.

# Executive Summary

The transport sector has a critical role to play in achieving climate change mitigation targets and Sustainable Development Goals (SDGs), and the Paris Agreement on climate change and the 2030 Agenda for Sustainable Development provide a useful framework to help scale up sustainable transport measures. However, further alignment between these global processes is required to raise ambition and measure progress to realise the full potential of sustainable low-carbon transport in achieving these goals. This alignment is required both in the governance of the processes themselves and in the coordination among the national and sub-national actors formulating and putting them into practice.

The Islamic Development Bank (IsDB) and the SLoCaT Partnership on Sustainable, Low Carbon Transport are engaged in a multi-phase research collaboration on transport and climate change in IsDB member countries. The first phase of this collaboration yielded the report *Low-carbon Transport for Development*<sup>1</sup>, which describes major challenges and needs, potential policy activities and areas of required action related to transport and climate change in IsDB member countries.

This report, the result of the second phase of IsDB and SLoCaT collaboration, emphasises that a successful implementation of sustainable transport measures in the context of the Paris Agreement and the 2030 Agenda must involve concerted and coordinated efforts to more closely link the processes of developing, implementing and tracking progress toward Nationally-Determined Contributions (NDCs) and Voluntary National Reviews (VNRs).

The report links mechanisms in the climate change and sustainable development frameworks with the objective to identify synergies for the development, implementation and reporting on sustainable transport for IsDB member countries. In conducting a detailed analysis of the transport dimension in a subset of IsDB countries' NDCs and their VNRs – a mechanism to assess progress toward SDG goals and targets – the report addresses the following primary questions:



How can NDC and VNR development, implementation and reporting be optimised and leveraged to accelerate scale-up of sustainable transport measures across IsDB sub-regions?



What gaps exist for sustainable transport in NDCs and VNRs among IsDB member countries, and what opportunities exist for more coordinated and efficient management of transport within these mechanisms?



What kind of guidance is needed for mainstreaming sustainable transport measures in NDCs and VNRs in a more structured and quantified manner?

This report presents a general analysis of IsDB member countries (based on available data) and conducts a focused analysis of synergies between the NDCs and SDGs in six IsDB member countries (i.e. Cameroon, Indonesia, Kuwait, Pakistan, Tunisia and Turkey) representing different sub-regions and income groups. The guidance section also introduces relevant examples and best practices from other IsDB countries (e.g. Jordan, Morocco and Saudi Arabia). The analysis of the six focus countries reveals that there is a need to better integrate various elements of sustainable, low carbon transport within NDCs, VNRs and national transport strategies and indicates the need for a framework to support more transparent and effective decision-making, which can accommodate and reconcile the interest of multi-stakeholders.

<sup>1</sup> IsDB and SLoCaT, 2018, *Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries*, available at: <http://slocat.net/news/2009>



In response to this identified need, a guidance is proposed to support the implementation of NDCs and SDGs for the transport sector at the national level. The guidance presents a set of eight components for mainstreaming the 2030 Agenda and the Paris Agreement objectives within the transport sector, which is based on the “Mainstreaming, Acceleration, Policy Support (MAPS)”<sup>2</sup> approach, to support convergence between climate action and sustainable development:

The report demonstrates that applying these eight components can increase synergies between NDCs and SDGs within the transport sector, by illustrating for each component a foundational background and guidance, examples of best practices in IsDB countries, and discussion in country specific contexts. The report concludes with key observations and recommended actions to increase coordination in these processes among IsDB member countries, which are divided into three parts:

The initial section summarises **strengths and gaps** in planning and reporting across the six focus countries. First, it is noted that NDCs submitted in 2015 have not clearly informed VNRs (submitted 2016 and later), despite many examples of NDCs with balanced transport mitigation measures. And while none of the focus countries has set a transport sector mitigation target (few have set economy-wide targets) in NDCs due to lack of data, IsDB peer countries in each represented region have set mitigation targets, which can be used as examples for peer countries. NDCs submitted in 2015 have not clearly translated to VNRs (submitted 2016 and later), notably not in the 2019 VNRs which have a focus on **SDG 13** about climate action. Finally, five of the six focus countries have yet to submit a National Adaptation Plan, suggesting the needed action across a broader set of climate-vulnerable IsDB countries.

Recommendations to address gaps and enhance strengths include the following:



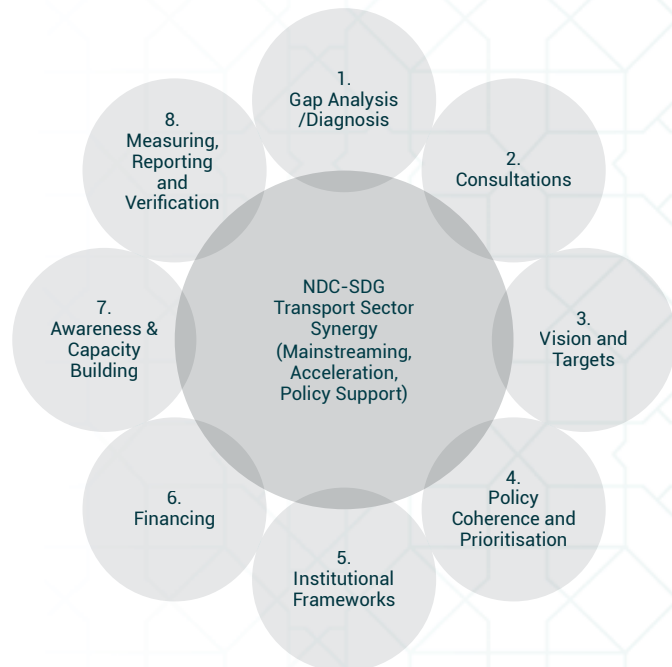
To support quantified emissions reduction targets, member countries should improve transport data collection strategies through connected databases in national statistical offices that serve to monitor SDG indicators and NDC MRV strategies.



Member countries should make more efforts to increase the coordination and cooperation among government ministries (e.g. Transport, Environment, Energy) responsible for monitoring and reporting efforts on transport and climate change (including NDCs) and sustainable development (including VNRs), to increase the efficiency and correlation of these processes.



Member countries should consider adaptation ambition as well as mitigation ambition in shaping their NDCs and VNRs and should set qualitative and/or quantitative targets to increase resilience of transport infrastructure and services.



<sup>2</sup> MAPS is the common approach adopted by the UN Development Group to frame support for countries to implement the 2030 Agenda

The second section summarises the use of **best practices** to enhance the strengths and address the gaps. First, it is to be noted that best practices on NDCs and VNRs are available across IsDB sub-regions and income groupings, often with least-developed countries setting the pace. Further, there is a strong emphasis among existing best practices on SDG 9 on infrastructure, SDG 11 on sustainable cities, and SDG 13 on climate action, and a lesser emphasis on other key transport-relevant SDGs (e.g. SDG 3 on road safety and SDG 7 on affordable and clean energy). And, while the emphasis on transport sectoral plans in NDCs is encouraging (e.g. in recent efforts by Bangladesh), sectoral coverage is incomplete across focus countries, and does not necessarily extend to transport sector coverage in VNRs (e.g. Nigeria).

Recommendations to expand, enhance and deploy best practices include the following:



Member countries should work together to showcase these best practices at relevant UN-convened sustainable development and climate change events, like the Regional Forums for Sustainable Development (RFSD) and the Regional Climate Weeks (RCWs), and to refine the strategies in concert with regional peers.



Member countries should deepen involvement in wider UN processes related to tracking sustainable development indicators, especially the Inter-Agency Expert Group on SDG Indicators (IAEG-SDGs).



IsDB should support the establishment of transport data observatories in key sub-regions in co-operation with peer MDBs (e.g. ADB in South Asia; AfDB in Sub-Saharan Africa) to support member countries in IAEG-SDGs

The third section summarises national, regional, and global **capacity building opportunities**. First, it is noted that NDC and VNR touchpoints in 2020 offers an opportunity for a greater alignment between ambition, implementation and evaluation of sustainable transport measures while the staggered scheduling of NDC and VNR activities allow the potential for these processes to be mutually reinforced if activities are contributed properly. Further, UNFCCC Regional Climate Weeks and HLPF Regional Preparatory Meetings could be more closely linked, in chronology as well as content. Finally, the planned evolution of NDC and VNR activities in 2020 (i.e. updated NDCs, reimagined VNR structure) offers an opportunity for a greater alignment between NDC ambition and SDG evaluation, if conceived in concert between UNFCCC and UNDESA.

Recommendations to strengthen capacity building effort on NDC-VNR synergies include the following:



Member countries should convene and/or participate in transport-focused workshops for preparation of VNRs in IsDB sub-regions, to feed into forthcoming global VNR workshops.



Member countries should engage relevant UN regional commissions in order to participate in the regional capacity building activities and should work internally to ensure the involvement of relevant climate and transport focused government officials in the regional VNR preparation workshops, while those responsible for sustainable development to attend the workshops organised by regional NDC support platforms and the UNFCCC.



Member countries should engage UNDESA in order to participate in and help to set agendas on transport and climate change priorities in global VNR workshops, to focus on reporting and preparation for the HLPF.





# PROJECT BACKGROUND AND OVERVIEW

01



# 01. PROJECT BACKGROUND AND OVERVIEW



## 1.1 Project Context

The 2015 Paris Agreement on climate change establishes the ambition of keeping global temperature increases to “well below 2 degrees” Celsius above pre-industrial levels to avoid the worst consequences of climate change. In support of the Paris Agreement, the Nationally Determined Contributions (NDCs) are mitigation- and adaptation-related commitments submitted by countries to the United Nations Framework Convention on Climate Change (UNFCCC). Central to the success of the Paris Agreement was the Intended Nationally Determined Contributions (INDCs), which were submitted by more than 190 countries during 2015. The contributions elaborate the country’s mitigation-related and adaptation-related commitments. The current NDC’s are not yet enough to achieve the long-term targets of the Paris Agreement and, by 2020, countries would need to submit revised updated NDCs with an increased level of ambition to move countries closer to low-emission development.

In parallel, on 1 January 2016, the 2030 Agenda for Sustainable Development officially came into force. The 2030 Agenda includes a set of 17 Sustainable Development Goals (SDGs) adopted by world leaders in September 2015 and aimed at stimulating actions to shift the world onto a sustainable and resilient path. Following the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement, countries now face a challenge for integrating actions for advancing very ambitious sets of targets on sustainable development and climate action across all the sectors including the transport sector.

Transport is a cross-cutting issue in the SDGs, connected to various of the 169 targets. SLoCaT examined the importance of sustainable transport in the SDGs and identified that at least five targets are directly linked to transport, while 9 targets are indirectly linked to transport (Figure 1).<sup>3</sup>

<sup>3</sup> SLoCaT, 2018, Sustainable Development Goals and Transport, <http://www.slocat.net/sdgs-transport>

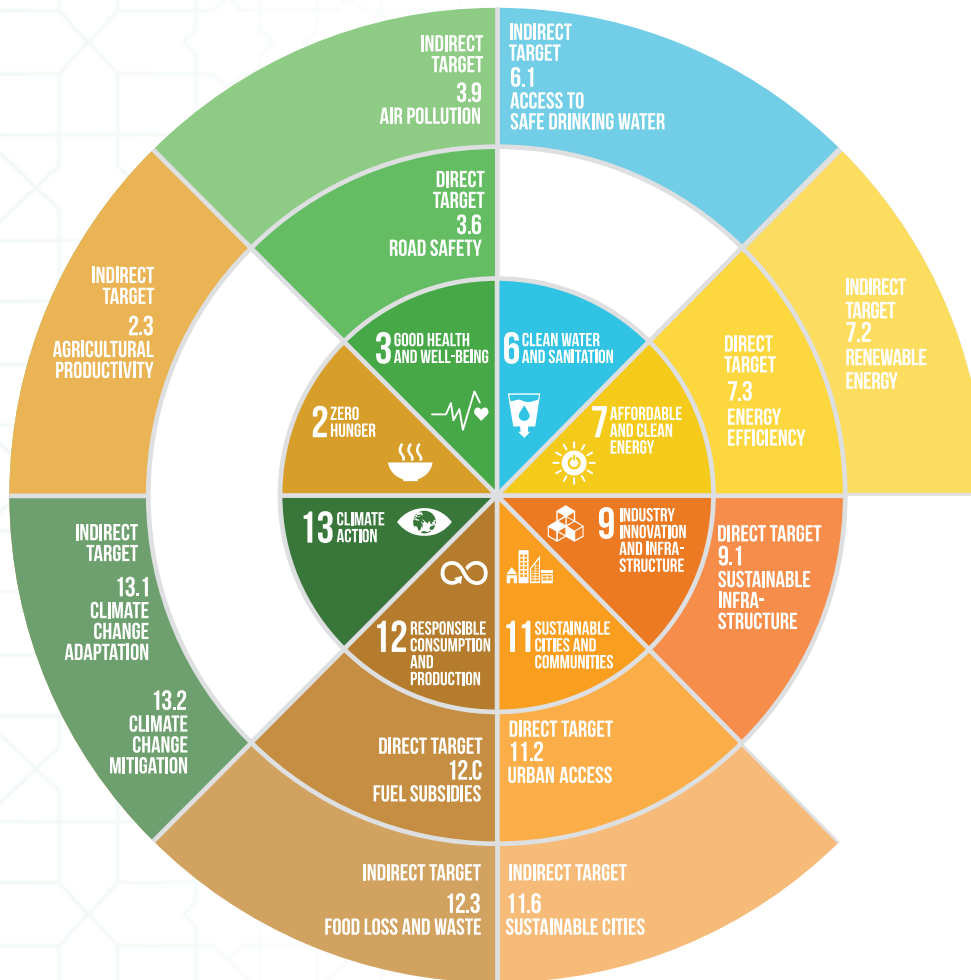


Figure 1: SDG targets related to Sustainable Transport

Sustainable transport contributes directly to five SDG targets:

- Road safety (Target 3.6)
- Energy efficiency (Target 7.3)
- Sustainable infrastructure (Target 9.1)
- Urban access (Target 11.2)
- Fossil fuel subsidies (Target 12.c)

Further, it contributes indirectly to eight SDG targets:

- Agricultural productivity (Target 2.3)
- Air pollution (Target 3.9)
- Access to safe drinking water (Target 6.1)
- Renewable energy (Target 7.2)
- Sustainable cities (Target 11.6)
- Reduction of food loss (Target 12.3)
- Climate change adaptation (Target 13.1)
- Climate change mitigation (Target 13.2)

While the SDGs have been under implementation since 1 January 2016, countries are still finalizing their new updated NDCs for submission by 2020. In SDG implementation, there is no equivalent of the NDCs. Instead, each state is free to determine how they implement and how they report on the 17 SDGs and the 169 targets. The Voluntary National Reviews (VNRs) is a process by which countries take stock of and assess progress – and shortcomings – and facilitates the sharing

of experiences among countries in the implementation of the 2030 Agenda for Sustainable Development. VNRs are submitted to the High-Level Political Forum (HLPF), the central platform for follow-up and review of the 2030 Agenda for Sustainable Development. Every year a subset of countries produces and submit VNRs in accordance with paragraph 84<sup>4</sup>. It is important to note that VNRs do not represent national development strategies in themselves, but rather the means to evaluate these strategies, while NDCs do represent national climate strategies that are evaluated through measurement, reporting and verification. Thus, there is an inherent and acknowledged asymmetry in seeking synergies between NDCs and SDGs.

Rising global challenges have also led to increased attention to transport across a number of global and regional entities (e.g. United Nations Conference on Trade and Development (UNCTAD); frameworks (e.g. United Nations Conference on Housing and Sustainable Urban Development (Habitat III); Addis Ababa Action Agenda, Sendai Framework on Disaster Risk Reduction; Vienna Programme of Action for Landlocked Developing Countries; Istanbul Programme of Action for the Least Developed Countries; and SIDS Accelerated Modalities of Action (SAMOA) Pathway); and initiatives (e.g. United Nations Centre for Regional Development (UNCRD) Environmentally Sustainable Transport (EST) Initiative; United Nations Global Decade of Action on Road Safety) that will require a scaling up of sustainability measures across all sectors of the economy. To ensure an equal weighting of priorities, countries are encouraged to consider “coherent and mutually reinforcing” approaches in implementing global and regional frameworks and initiatives.

The establishment of new global initiatives provides momentum and leadership for accelerated implementation across different sectors. However, despite the ample common ground among these processes, there is currently no common methodological framework available at the transport sectoral level to integrate synergies across diverse global and regional processes in development, implementation and reporting. Several efforts are being made to align the NDCs and VNRs in national development plans and strategies; however, literature review currently indicates that not only the two agendas are being advanced in separate tracks, the transport sector is also poorly represented with a limited alignment and synergies ensured in both the processes.

Tackling climate change is not the only major challenge facing transport sector as roadway congestion undermines the quality of life, traffic crashes kill 1.35 million people per year and air pollution from motor vehicles kills even more. Transport must also be more inclusive and therefore more accessible and affordable. In acknowledgement of the magnitude of the challenge confronting the transport sector, future policies and programs need to be sufficiently ambitious in scale and foster sector-wide transformation. Thus, a comprehensive effort to account for the transport sector role in these global processes has never been more critical.

## 1.2 Report Objectives

The Islamic Development Bank (IsDB) maintains a portfolio of projects in 57 member countries across four continents, several climate zones and ten subregions in Northern Africa, Sub-Saharan Africa, West, Central, South and Southeast Asia, and (to a lesser extent) Europe and Latin America. Transport accounted in 2016 for USD 1.7 billion out of USD 3.5 billion for infrastructure financing by IsDB; 46% spent for rail, 44% for road and 10% for urban mass transit. The report Low-carbon transport for development outlines that sustainable transport is crucial to achieving the developing mandate of IsDB in its member countries.

The Islamic Development Bank (IsDB) and the Partnership on Sustainable, Low Carbon Transport (SLoCaT) are engaged in a multi-phase research collaboration. Phase I yielded the Low-carbon Transport for Development report<sup>5</sup>, released in December 2018. The report describes major challenges and needs, potential policy activities and areas of required action related to transport and climate change in IsDB member countries. It concludes that it is possible to design pathways for transport in developing countries to be both a driver for inclusive development and to offer benefits for climate change mitigation and adaptation.

4 UN DESA, 2019, HLPF: <https://sustainabledevelopment.un.org/hlpf/2019/>

5 IsDB and SLoCaT, 2018, Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries, available at: <http://slocat.net/news/2009>

The second phase consists of an analysis of the transport dimension in IsDB member countries' actions toward the Paris Agreement (through the framework of NDCs), and the 2030 Agenda for Sustainable Development (through the framework of VNRs). The objective is to identify potential synergies in the development, implementation and reporting on sustainable transport in these processes.



How can NDC and SDG development, implementation and reporting be optimised and leveraged to accelerate scale-up of sustainable transport measures in IsDB sub-regions?



What gaps exist for sustainable transport in NDCs and VNRs among IsDB member countries, and what opportunities exist for more coordinated treatment of transport within these processes?



What kind of guidance is needed for mainstreaming sustainable transport and other cross-cutting issues within NDCs and VNRs in a more structured and quantified manner?

The research provides answers by drawing on the situation to a set of focus countries submitting VNRs in 2019. The primary intended outcome of the study is to generate knowledge for countries to broaden the scope of sustainable low carbon transport strategies to maximise the development benefits, i.e. socioeconomic and environmental benefits and support the achievement of the SDGs by 2030.





### 1.3 Scope of Analysis

This report presents a general analysis of the 57 IsDB member countries based on available data. Detailed profiles on transport and climate change relevant indicators for all IsDB member countries can be found in Annex III of the IsDB-SLoCaT report “Low-carbon Transport for Development”<sup>6</sup>.

In addition, the report conducts a focused analysis of synergies between the NDCs and VNRs on six IsDB member countries representing different sub-regions and income groups - **Cameroon, Indonesia, Kuwait, Pakistan, Tunisia** and **Turkey**. The guidance tool also introduces relevant examples from other IsDB countries, such as **Jordan, Morocco** and **Saudi Arabia**.

The guidance document was subject to consultation at an expert group meeting (EGM) in Beirut, Lebanon in April 2019. The event was organised by IsDB and SLoCaT and was supported by GIZ’s Transformative Urban Mobility Initiative (TUMI). The EGM informed the report with insights from participants from Jordan, Lebanon, Morocco, Palestine and Tunisia. The participants work on transport as engineers, planners or government officials in transport ministries. The workshop discussed in detail Component 1 (gaps and challenges), Component 3 (targets and measures), Component 7 (institutional framework) and Component 8 (MRV) and illustrated opportunities to apply these components of the NDC-SDG synergy guidance to participants’ respective countries. The results are shown in Section 4.

### 1.4 Selection Criteria for Focus Countries

The criteria for the selection of six focus countries for this study were set as follows:



The potential focus country had to be an IsDB member who planned to submit a VNR in 2019.



The potential focus country has strong transport CO<sub>2</sub> emission growth between 2000-2017 relative to other IsDB member countries.



Strong projected transport CO<sub>2</sub> emission growth to 2050 relative to other IsDB countries is assumed to happen in the potential focus country.



The detail of transport in NDCs is high in the potential focus country relative to other IsDB member countries.



The availability of transport-related information and plans for the potential focus countries.

In 2019, 18 IsDB countries were scheduled to submit VNRs to the HLPF 2019.<sup>7</sup> **Azerbaijan, Indonesia, Sierra Leone** and **Turkey** were part of the group and they submitted VNRs in one of the previous years as well. HLPF 2019 focused specifically on **SDG 4** (education), **SDG 8** (economic growth), **SDG 10** (inequality), **SDG 13** (climate change), **SDG 16** (peace) and **SDG 17** (global partnerships).

Among the focus countries, **Kuwait** is the only high-income country and the other focus countries are middle-income countries from five different regions (Table 1). Among IsDB member countries, 60% (34 countries) are middle-income countries, 28% (16 countries) are low-income countries, and 12% (7 countries) are high-income countries.

<sup>6</sup> IsDB and SLoCaT, 2018, Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries, available at: <http://slocat.net/news/2009>

<sup>7</sup> The countries are Algeria, Azerbaijan, Burkina Faso, Cameroon, Chad, Côte D'Ivoire, Guyana, Indonesia, Iraq, Kazakhstan, Kuwait, Mauritania, Oman, Pakistan, Sierra Leone, Tunisia, Turkey and Turkmenistan.

**Table 1: Focus countries by income group**

Income Group	Western Asia	Northern Africa	West/Central Africa	Southern Asia	South-Eastern Asia
High income	Kuwait	/	/	/	/
Middle income	Turkey	Tunisia	Cameroon	Pakistan	Indonesia

The six focus countries have a population size between 4 million (Kuwait) and 260 million people (Indonesia) and the GDP per capita ranges from USD 1,100 (Pakistan) to USD 35,000 (Kuwait), reflecting that these countries are very diverse and in different stages of development. Similar to the economic strength, the motorization rate (cars per 1,000 people) is the highest in Kuwait with 477 cars per 1,000 people and the lowest in Cameroon with 15 and Pakistan with 17 cars per 1,000 people. The transport CO<sub>2</sub> emissions produced each year are just 3.6 million tonnes in Cameroon but nearly 144 million tonnes CO<sub>2</sub> in Indonesia. Under the business-as-usual scenario (BAU), in which no low carbon transport policies are being introduced, the emissions can grow significantly in the countries with a low baseline (Table 2).

**Table 2: Overview of few major characteristics of focus countries**

Country	Motorization Rate (cars per 1,000 people) (2015)	Transport CO <sub>2</sub> Emissions (Million tonnes) (2017)	Transport Emissions per Capita (tonnes per person) (2017)	Transport CO <sub>2</sub> Emissions BAU Growth (2020 to 2050)
Cameroon	15	3.6	0.15	116.6%
Indonesia	87	133.9	0.51	71.4%
Kuwait	477	13.1	3.16	11.1%
Pakistan	17	48.5	0.25	170.4%
Tunisia	129	7.2	0.62	37.3%
Turkey	196	85.9	1.06	61.1%







# NDC-VNR TRANSPORT SECTOR SYNERGIES

02



## 02. NDC-VNR TRANSPORT SECTOR SYNERGIES



### 2.1 Areas of convergence between NDCs and VNRs

Due to the implementation of various global processes, for the first time, there is a worldwide agreement on a vision for sustainable development and low-carbon development, which acknowledges explicitly the central cross-cutting contribution of the sustainable low-carbon transport. A closer comparison of transport sector goals and targets indicate that the climate change and sustainable development agendas are closely linked with the transport sector and must be approached in an integrated manner. The awareness of the need to tackle growing impacts from the transport sector has gone hand in hand with increasing insights on what constitutes sustainable low-carbon transport.

The Paris Agreement emphasises the social, economic and environmental value of voluntary mitigation actions and their development benefits for adaptation, health and sustainable development and avoiding dangerous climate change is one of the 17 SDGs under Agenda 2030. A comprehensive review<sup>8</sup> by UNFCCC found that several countries considered specific development benefits of climate action, including reduced local air pollution and resulting health benefits; improved access to energy and enhanced energy security; improved water quality and management; social progress, including poverty reduction, increased well-being and job creation; economic diversification; and synergies between adaptation and mitigation actions towards building resilience, in particular in agriculture and forestry, as well as food security.

<sup>8</sup> UNFCCC, 2016, Aggregate effect of the intended nationally determined contributions: an update, <https://unfccc.int/sites/default/files/resource/docs/2016/cop22/eng/02.pdf>

Research indicates that at an economy-wide scale, most of the SDGs have the potential to bring progress in other SDGs and Paris Agreement targets. However, at the same time, advancement in some goals could negatively affect growth in other areas without careful policy design<sup>9</sup>. To ensure an equal weighting of sustainable development and low-carbon transport priorities, countries need to consider “coherent and mutually reinforcing” sectoral approaches to implement the global and regional processes. Thus, a comprehensive evaluation of the points of intersection between the NDC and SDG agendas is needed at the sectoral level where the two initiatives are profoundly intertwined. A study by the International Climate Initiative (IKI)<sup>10</sup> based on the SCAN-tool<sup>11</sup> shows that transport not only has the second highest number of positive linkages after the industry sector but also the second highest number of negative linkages after the power industry. In total there are 102 linkages between mitigation action and SDGs for the transport sector and 84% are positive.

Growing GHG emissions from the global transport sector are intricately linked to an overall lack of environmental, economic and social sustainability, proved by road traffic fatalities and injuries, increased air pollution, noise pollution, congestion, and environmental degradation. Low carbon transport can only succeed through an integrated approach that explicitly addresses sustainability priorities while mitigating GHG emissions, i.e. implementation of sustainable low-carbon transport measures can help deliver other economic, social and environmental transport-related objectives.<sup>12</sup>



**Principle 1:** Effective climate action is incomplete without addressing overall system performance of the transport sector.



**Principle 2:** Climate action in the transport sector should recognise associated development benefits.



**Principle 3:** More effective carbon finance mechanisms and associated procedures should catalyse sustainable transport and mobility policies, programs and projects.



<sup>9</sup> Synergy is interaction among two or more actions resulting in an impact greater or less than the sum of individual effects (trade-off) i.e. “a whole which is greater or less than sum of its part”.

<sup>10</sup> LEDSGP, 2018, NDC Update Report: Special Edition: Linkage between NDCs and SDGs, available at: <http://ledsgp.org/wp-content/uploads/2018/05/NDC-Update-Report-May-2018.pdf>

<sup>11</sup> Ambition to Action, n.d., SDG Climate Action Nexus tool (SCAN-tool), [http://ambitiontoaction.net/scan\\_tool/](http://ambitiontoaction.net/scan_tool/)

<sup>12</sup> The principles and actions of sustainable low-carbon transport are defined in SLoCaT, 2009, Bellagio Declaration on Transport and Climate Change, [http://www.slocat.net/sites/default/files/u3/bellagio\\_declaration\\_on\\_transportation\\_and\\_climate\\_change-final.pdf](http://www.slocat.net/sites/default/files/u3/bellagio_declaration_on_transportation_and_climate_change-final.pdf)



However, global enthusiasm for sustainable low-carbon transport has not inspired an equal measure of local action. As the review of current NDCs and VNRs will indicate, countries often do not acknowledge the importance of sustainable development benefits of low-carbon transport policies. The implementation of sustainable transport leads in general to air pollution improvements, improved health outcomes, reduced traffic and parking congestion and increased energy security, among other benefits.

Transport sector interactions in NDC and SDG interactions are often mutually reinforcing (i.e. implementation of a low-carbon transport measure could support the implementation of sustainable development objectives and vice versa). However, there are instances where an action in one agenda may undermine the achievement of the other (for example first-generation biofuels use in the “food vs fuel” debate<sup>13</sup>). Thus, the transport-sector stakeholders need to comprehensively analyse and anticipate possible interactions among climate change and sustainable development-related challenges over time to maximise potential positive synergies and to avoid unsustainable lock-in effects. Please see Figure 2 for further discussion.

<sup>13</sup> A valuable example of the “food vs fuel” debate is illustrated by T&E: <https://www.transportenvironment.org/what-we-do/biofuels>

## 2.2 Areas of divergence between NDCs and VNRs

NDCs diverge from the VNRs (in support of the 2030 Agenda) in a number of important aspects, including the specific features and scope of each mechanism, content and direction of the NDCs and VNRs.

Different stakeholders and decision mechanisms have been set up for the NDCs and SDGs at the national level, mirroring the split between the global processes under the UNFCCC and the High-Level Political Forum on Sustainable Development. However, in both cases the focus is sustainable, low carbon transport and thus, advancing NDCs and SDGs necessitates immense data collection and analysis, transparency and monitoring challenges that overlap to a large extent.

The current effort to more closely link the NDC and SDG processes has acknowledged limitations, due to divergences between the processes, which include the following issues:



**Approach:** NDCs are a target-setting mechanism (i.e. ex ante approach) which prioritise political consensus over science-based targets, while VNRs are a reporting mechanism (i.e. ex post approach), marked by limited preparation time, though supported by a more formal process than NDCs. Thus, the two mechanisms diverge fundamentally in terms of approach and timeframe under consideration.



**Coverage:** There is a divergence of quantitative data covered in both target setting (for NDCs) and progress reporting (for VNRs). NDCs report on quantified transport emission data (in most cases), along with qualitative information on transport adaptation (describing the need for more resilient transport infrastructure). VNRs report on few aspects of quantitative transport data (e.g. road traffic fatalities, passenger transport volume) if it is included at all.



**Acceptance:** NDCs are the product of a binding process accepted by more than 190 signatories, while VNRs are by definition a voluntary process. During the first quadrennial cycle of the HLPF from 2016 to 2019, a subset of 40 to 60 countries signatories to the SDGs submitted VNRs in each of these years.<sup>14</sup>



**Implementation:** VNRs report on what has been implemented in recent years, while NDCs set targets and look towards what will be implemented in the future. VNRs share experience of countries in the success, challenges and lessons learned from the SDG implementation; but there is little availability of information on implementation of NDCs to date, which are slated to formally take effect in 2020.



<sup>14</sup> SLoCaT, 2019, Sustainable Transport: A Critical Driver to Achieve the Sustainable Development Goals, <http://www.slocat.net/vnr>







STRATEGIC  
OBJECTIVES OF  
TRANSPORT SECTOR  
SYNERGIES BETWEEN  
NDCs AND VNRs

03



## 03. STRATEGIC OBJECTIVES OF TRANSPORT SECTOR SYNERGIES BETWEEN NDCs AND VNRs



Current transport sector challenges in IsDB member countries and other countries are the product of the confluence of five trends of great proportions: high population growth, urban sprawl, high economic growth, private motorization and high dependency on fossil fuels. Despite the best intentions and efforts by the decision-makers and development agencies, more and more countries and cities are experiencing ill-effects of transport externalities such as air pollution, climate change, traffic congestion etc. In IsDB member countries, GHG emissions from transport are projected to double between 2020 and 2050. Thus, urgent action is required to reverse these trends and to further increase the resilience of transport systems in the face of climate change, especially in critically vulnerable IsDB countries.<sup>15</sup>

The transport sector has an important role to play in climate change mitigation and sustainable development. Due to the implementation of various global processes, there is now a unique opportunity for low- and middle-income countries to use the global processes to leapfrog ahead of high-income countries to an increased level of sustainable transport provisions. However, the mounting severity of environmental and social challenges linked to the current transport policies of IsDB countries indicates that not only the international processes are being advanced in separate tracks, but the transport sector is also poorly represented with limited alignment and synergies ensured.

While sustainable development and climate policy objectives are often formulated on a socio-economic- and environmental-wide basis at international and national levels, in practice such goals need to be implemented on a sectoral basis. Despite the ample common ground among these processes, there is currently no common methodological framework available at the transport sectoral level to integrate synergies across diverse global and regional processes in development, implementation and reporting. Thus, a methodological framework for linking NDC

<sup>15</sup> A valuable example of the "food vs fuel" debate is illustrated by T&E: <https://www.transportenvironment.org/what-we-do/biofuels>

and SDG implementation at the transport sector level needs to be identified. This framework needs to consider a comprehensive evaluation of the points of intersection between the NDC and SDG agendas to optimise the role of the transport sector.

The below analysis of IsDB member countries against seven key objectives indicates the need for a framework of transparent and effective decision-making, which can sustainably accommodate and reconcile multi-stakeholder interests.

### 3.1 Improve inclusion of transport development benefits in NDCs and VNRs

#### 3.1.1 General analysis and trends

Development benefits (commonly referred to as “co-benefits” in the climate change literature) are additional benefits beyond direct mitigation benefits of climate action (i.e. tonnes CO<sub>2</sub>e reduced). While several studies and initiatives have examined general benefits of climate action on sustainable development, a few attempts have been made to focus solely on the transport sector. The SCAN-tool<sup>16</sup> shows that among 102 links between climate action and SDG there are 16 negative linkages, and a study by Antwi-Agyei et al.<sup>17</sup> examines transport as part of various sectors and identifies that the introduction of sustainable mass transit can have the trade-off of reduced household incomes for drivers.

Implementing climate action in the transport sector would generate multiple benefits like reduced air pollution and associated health benefits, improved energy security through reduced energy use and costs. However, each individual measure can have adverse impacts on certain goals. For example, the use of biofuels supports SDG 7 but may have a negative impact on SDG 2 on zero hunger, because an increase in production of biofuels (esp. first-generation biofuels) may endanger food production and reduce genetic diversity. The impact of the development benefits in terms of economic, environmental and social facets in the transport sector are detailed in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).<sup>18</sup>

The VNR review by SLoCaT examines references to positive impacts on major development aspects. In the 2018 report<sup>19</sup> the analysed VNRs refer most often to social inclusion and equity (40% countries that submitted VNRs) which is covered under SDG 11 on sustainable cities, followed by SDG 3 on road safety (26%) and SDG 9 on regional connectivity (23%). Mexico and Niger were the only countries who linked sustainable transport to increasing agricultural production and food security (SDG 2) in their VNRs.

In SLoCaT’s NDC analysis (first published in 2016),<sup>20</sup> a typology of transport mitigation measures was developed to examine each country’s contribution to the Paris Agreement (see Annex 2). The transport mitigation measures can have positive, neutral or negative impacts on the goals and targets of the 2030 Agenda. A measure-by-measure assessment was performed to show their general impact (Figure 2).

It shows that coordination and synergy of climate action and sustainable development measures have by far mostly positive impacts. The implementation of any of the mitigation measures will most likely have positive impacts on SDG 9 about infrastructure and SDG 11 about sustainable cities.

16 Ambition to Action, n.d., SDG Climate Action Nexus tool (SCAN-tool), [http://ambitiontoaction.net/scan\\_tool/](http://ambitiontoaction.net/scan_tool/)

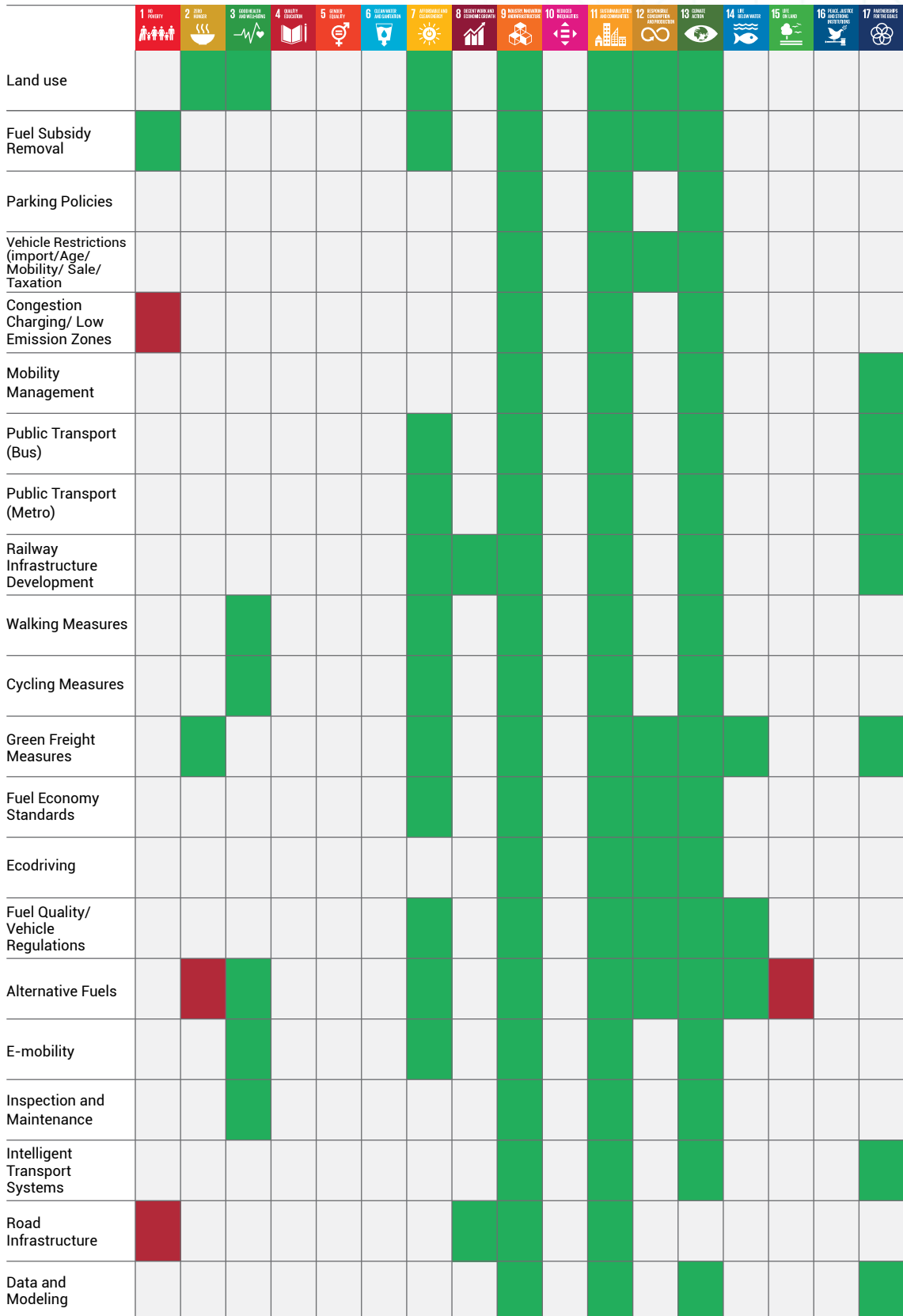
17 Antwi-Agyei et al., 2018, Alignment between nationally determined contributions and the sustainable development goals for West Africa, *Climate Policy*, <https://www.tandfonline.com/doi/abs/10.1080/14693062.2018.1431199>

18 IPCC, 2014, Transport. In: *Climate Change: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_wg3\\_ar5\\_chapter8.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf)

19 SLoCaT, 2018, 2018 Voluntary National Reviews: Showcasing the Critical Role of the Transport Sector to Achieve the Sustainable Development Goals, <http://www.slocat.net/vnr2018>

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

Figure 2: Impacts of Transport Mitigation Measures on the 17 SDGs (green = positive, grey = neutral, red = negative)

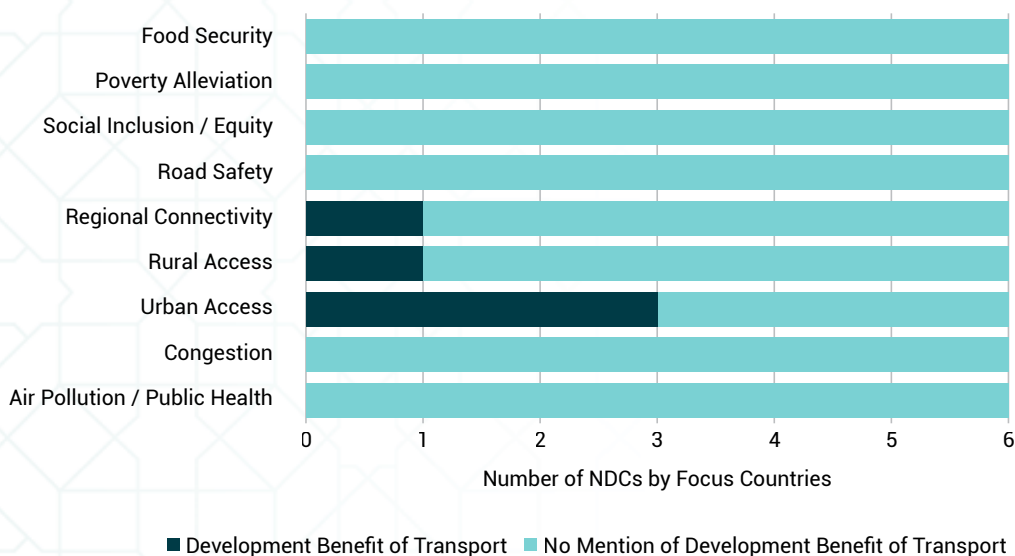




Most negative impacts for SDG 1 are about poverty: While the removal of fossil fuel subsidies can have positive impact due to more funds being available for welfare and employment activities. Negative impacts can be caused by congestion charging as increased cost for transport can become a burden for individuals. Also, road infrastructure spending is counterproductive for poverty reduction due to allocating government funds to road infrastructure instead of other public welfare areas. In SLoCaT's assessments, public transport measures have a neutral impact as they might lead to the mentioned income reductions for taxi drivers/informal transport operators, but they generate new jobs in public transport operations, planning, service and related sectors.

On the other side, the NDCs miss out the opportunity to illustrate wider development benefits of transport. The analysis of the six focus countries of this study shows that besides the highly-linked access-related benefits, the NDCs do not refer to the benefits towards air pollution, congestion, road safety, equity and food security (Figure 3).

**Figure 3: References to Development Benefits of Transport in Focus Countries**



### 3.1.2 Specific Analysis for Focus Countries

Acknowledging the positive development benefits of sustainable transport enables more opportunities in the climate change and sustainable development processes. The development benefits will be very likely the same for all countries.

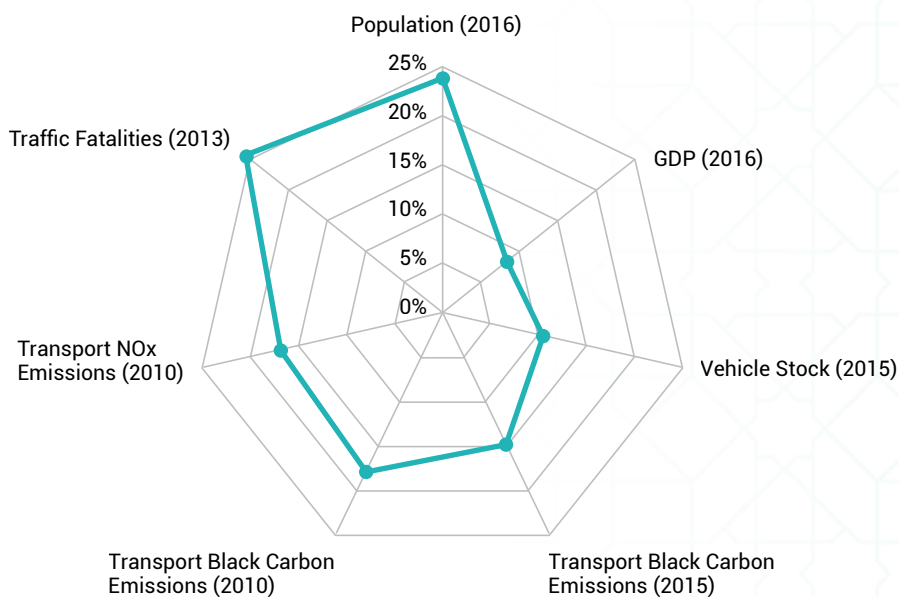
Bangladesh highlights that public transport development (esp. bus rapid transit and underground metro) will lead to better air quality, reduced congestion and improved traffic safety.

Transport sector review of current NDCs and VNRs indicate that countries often do not acknowledge the importance of development benefits of sustainable low-carbon transport policies including air pollution reduction, enhanced health protection, reduced traffic and parking congestion, diminished traffic crash rates, improved productivity, reduced noise pollution and increased energy security among other benefits. For example, only three of six countries examined NDCs highlight urban access benefits.

## 3.2 Reduce negative impacts of the transport sector

### 3.2.1 General Analysis and Trends

Figure 4: Share of IsDB countries in Major Indicators



IsDB member countries' transport sector contributes to a disproportionate share of transport-related externalities. IsDB countries constitute about 8% of global GDP and about 10% of global vehicle fleet but emit about 15% of global transport CO<sub>2</sub> emissions, 17% of transport sector NO<sub>x</sub> emissions, 18% of transport sector black carbon emissions and about 25% of global traffic-related fatalities (Figure 4). When the rate of road traffic deaths is slowing down globally, it is towards an upward trend in IsDB member countries. Current estimates indicate that the IsDB countries transport energy consumption and CO<sub>2</sub> emissions would outpace global growth in transport energy consumption and CO<sub>2</sub> emissions from 2010 to 2050 in the absence of sustainable low-carbon transport policies. GDP growth and urbanization are likely to continue in the future, and these externalities will further increase private motorization, transport emissions and road fatalities in the absence of sustainable transport.

Currently, the vehicle stock is just slightly above the average GDP level, but the motorization rate is growing rapidly. The motorization rate grew from 46 vehicles per 1,000 people in 2005 to 76 people per 1,000 vehicles by 2015 indicating a 63% growth rate and double the global average. The vehicle stock (excluding 2- and 3-wheelers) grew from 67 million vehicles in 2005 to 132 million vehicles

in 2015 (Table 3). Efforts to stabilise motorization growth will contribute directly to SDG Target 3.6 (Reduce road injuries and deaths), which aims to halve the number of global deaths and injuries from road traffic crashes by 2020.

**Table 3: Vehicle ownership growth in comparison**

Regions	Growth of Vehicle Ownership from 2005 to 2015
Global average	44%
IsDB average	97%
IsDB member countries in Asia	101%
IsDB member countries in Europe	75%
IsDB member countries in North Africa	81%
IsDB member countries in Sub-Saharan Africa	92%

Today, stakeholders in IsDB member countries cannot adequately “measure” transport externalities. Research on data availability in the IsDB member countries indicates that the information available on the impact of transport strategies on externalities is insufficient and potentially misleading. Data availability differs greatly across the data types, as identified in previous research. Existing aggregate data tells us that only 48% of IsDB member countries have data available on road infrastructure, 74% have data on vehicle fleets and 72% have data on transport CO2 emissions.

### 3.2.2 Specific Analysis on Focus Countries

Among the six focus countries of this research, the motorization rate grew between 2005 and 2015 by 118% in Indonesia, 58% in Turkey and 49% in Pakistan. Kuwait, as a high-income country, still had a growth rate of 12% despite having a very high motorization rate of 477 cars per 1,000 people (Figure 5). Private vehicle growth outpaced GDP growth and urbanization trends in each of these countries; a general reason is that passenger and freight transport highly depend on road transport and under current circumstances it is expected that the trend of private motorization will continue.<sup>21</sup> Other potential reasons include a lack of policies on integrated land use and transport planning along with a lack of robust public alternatives to private transport. To achieve SDG Target 3.6 on road safety, it is necessary to stabilise motorization growth in emerging countries, and to provide alternatives to private vehicle use in highly motorised countries; for instance, Indonesia enacted fossil fuel subsidy reform in late 2014, and saved USD 15.6 billion in 2015, with savings reinvested in budgets for key ministries and infrastructure investment,<sup>22</sup> but impacts to motorization will require a longer timeframe.

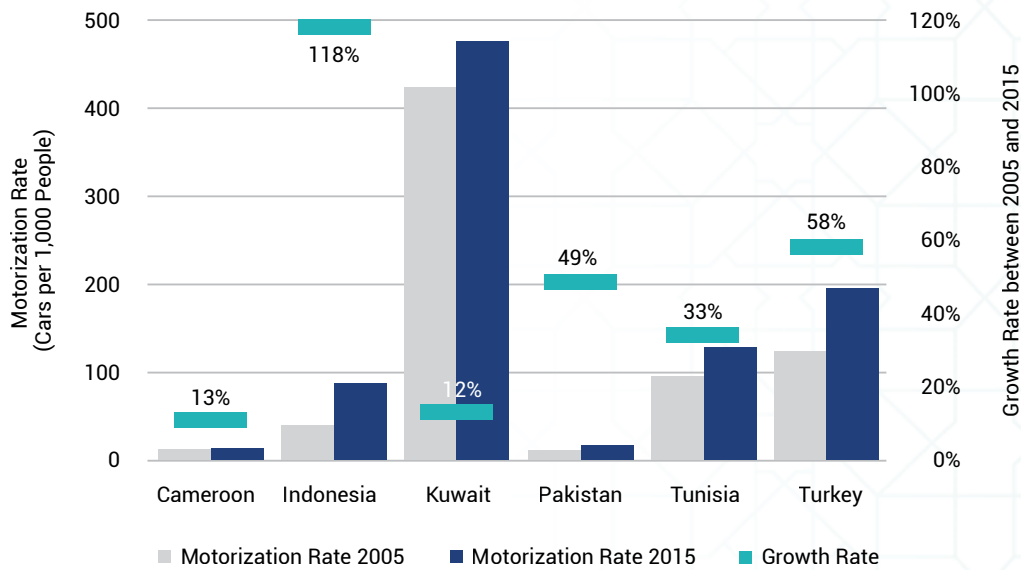


<sup>21</sup> IsDB and SLoCaT, 2018, Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries, available at: <http://slocat.net/news/2009>.

<sup>22</sup> IISD, 2018; Removing Subsidies for Gasoline and Diesel Consumption in Indonesia, available at: <https://www.iisd.org/sites/default/files/publications/stories-g20-indonesia-en.pdf>



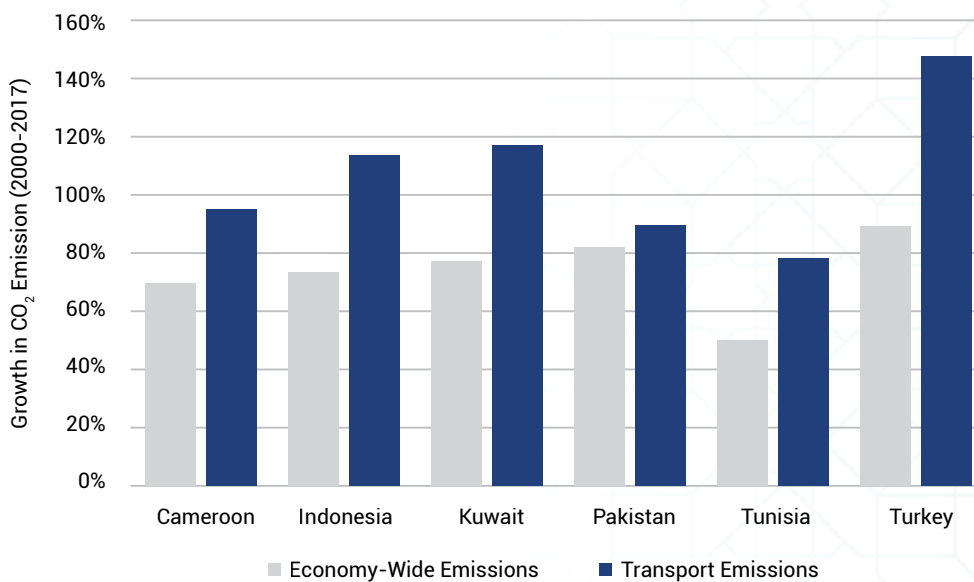
**Figure 5: Growth of motorization rate**



Increases in private motorization coupled with the high urbanization rates in the IsDB member countries will create challenges in achieving SDG 11 on sustainable cities. Climate action and commitments to sustainable development include balanced provision of public transport, walking and cycling.

The focus countries of this study illustrate the importance of tackling transport emissions, as the growth of transport emissions is higher than the overall economy-wide emission growth (Figure 6).

**Figure 6: Comparison of economy-wide and transport emissions growth**



Transport emissions growth in the selected countries ranged from 80% (Tunisia) to 147% (Turkey). Transport emission growth is connected to the increase of private vehicles, and it is likely that there was an increase in road-based freight transport activity (and domestic aviation) in these countries. For example, in the case of Turkey, recent transport policies missed the opportunity to reduce emission levels of passenger vehicles thus leading to a growth in transport CO2 emissions<sup>23</sup>.

<sup>23</sup> Şenzeybek, M. and Mock, P., 2019, Vehicle registration tax as a policy instrument to help reduce CO2 emissions and fuel consumption in Turkey, <https://theicct.org/publications/vehicle-registration-tax-policy-turkey>.

Fatalities related to transport are on the rise in all focus countries except **Turkey**. In **Cameroon** transport fatalities grew by 41% between 2000 and 2013, which shows an alarming trend (Table 4). This trend is likely to continue unless sustainable low-carbon transport measures are scaled up and introduced more widely.

**Table 4: Trends in transport emissions, pollution and fatalities**

Country	Transport Share in Economy-wide Emissions (2017)	Transport CO <sub>2</sub> Emissions Growth (2000-2017)	Transport CO <sub>2</sub> Emissions Growth (2020-2050)	Transport NO <sub>x</sub> Emissions Growth (1990-2010)	Transport Fatalities Growth (2000 to 2013)
Cameroon	37.1%	95.1%	116.6%	58.8%	41.3%
Indonesia	26.2%	113.6%	71.4%	12.4%	19.9%
Kuwait	13.5%	117.2%	N/A	-9.5%	17.2%
Pakistan	24.6%	89.6%	170.4%	26.2%	25.9%
Tunisia	22.7%	78.0%	N/A	-24.5%	11.7%
Turkey	20.0%	147.4%	61.1%	-6.5%	-8.8%

### 3.3 Increase ambition in transport targets and commitments

#### 3.3.1 General analysis and trends

An evaluation of IsDB member countries' NDCs shows that while 71% highlight transport as a priority mitigation source, only about 11% of NDCs (six countries) have established transport sector emission mitigation targets. Nine IsDB countries - **Bangladesh, Brunei, Burkina Faso, Djibouti, Indonesia, Jordan, Mali, Morocco** and **UAE** have established other low-carbon and sustainability related transport targets (i.e. mode share, renewable energy, infrastructure etc.) (Table 5).

**Table 5: Non-transport emission targets by countries**

Country	Non-Emission Mitigation Targets expressed in NDCs
Bangladesh	<ul style="list-style-type: none"> <li>Implement Modal shift from road to rail through a range of measures (metro systems and bus rapid transit systems) with impacts on congestion, air pollution and road safety</li> </ul>
Brunei	<ul style="list-style-type: none"> <li>Achieve a share of 22% for public transport by 2035 through bus fleet expansion, national school bus system and BRT systems</li> </ul>
Burkina Faso	<ul style="list-style-type: none"> <li>Reduce energy consumption of vehicles by 30% until 2025</li> <li>Increase share of alternative fuels, for example bioethanol to substitute 10% of consumption and substitute 5% of diesel consumption by 2030</li> </ul>
Djibouti	<ul style="list-style-type: none"> <li>Halt import of 10,000 old polluting cars</li> </ul>
Jordan	<ul style="list-style-type: none"> <li>Increase commuting by public transport to 25% of total trips by 2025</li> </ul>
Mali	<ul style="list-style-type: none"> <li>Replace more than one-third of fossil fuels (with renewables) for electricity and transport by 2030.</li> </ul>
Morocco	<ul style="list-style-type: none"> <li>Achieve a 23% reduction in energy consumption by 2030</li> </ul>
United Arab Emirates	<ul style="list-style-type: none"> <li>Shift 25% of government vehicles to compressed natural gas</li> </ul>



### 3.3.2 Specific Analysis for Focus Countries

None of the six focus countries of this study have established transport emission targets and only **Indonesia** with a biofuel blend mandate and **Tunisia** with energy consumption reduction have non-emission targets (Table 6).

**Table 6: Targets in NDCs**

Country	Unconditional NDC Target	Conditional NDC Target	Transport Emission targets (NDC)	Other transport targets (NDC)	Transport SDG related data submitted (VNR)
<b>Cameroon</b>	Reduce GHG emissions by 32% compared to 2035 BAU	No target	No target	No targets	Not submitted
<b>Indonesia</b>	26% below 2020 BAU	Additional 15% reduction	No target	Implementation of biofuel in transportation sector (Mandatory B30)	No targets
<b>Kuwait</b>	avoid an increase of BAU GHG	No Information	No target	No targets	Not submitted
<b>Pakistan</b>	"Pakistan will only be able to make specific commitments once reliable data on our peak emission levels is available."	No target	No target	No targets	Not submitted
<b>Tunisia</b>	13% reduction in carbon intensity relative to 2010	41% compared to 2010	No target	Primary energy demand to decrease by 30% in transport, industry, buildings and other sectors	Not submitted
<b>Turkey</b>	21% below 2030 BAU	No target	No target	No targets	No targets

Only six IsDB countries (**Albania, Bangladesh, Brunei, Kazakhstan, Malaysia and Nigeria**) have carried out known long-term emission modelling at the time of research. In the NDCs and VNR's, there is no reference to the concept of emission back casting. Thus, a wider measuring, reporting and evaluation framework for sustainable low-carbon transport encompassing all modes in passenger and freight transport is still missing in the IsDB member countries.

## 3.4 Balance and optimise sustainable low carbon transport measures

### 3.4.1 General analysis and trends

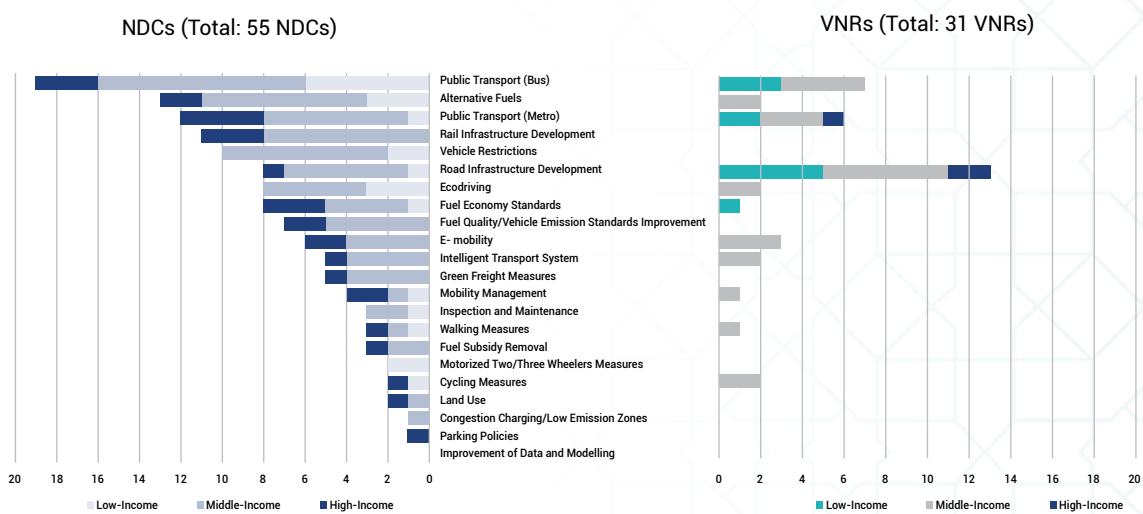
Sustainable transport is realised by the implementation of comprehensive low carbon mitigation policies that 'Avoid' (or reduce) the need for transport trips; promote a 'Shift' towards the most efficient travel modes; and 'Improve' vehicle and fuel technologies as well as supportive infrastructure. Thus, realizing the full mitigation and sustainable development potential of transport will require a balanced (if not entirely equal) implementation of 'Avoid-Shift-Improve' strategies.

However, the chances that such a comprehensive approach is taken depends on the integration of sustainable development and climate change objectives within the transport sector. Currently, the NDC and VNR data from IsDB indicate that countries are relying substantially on a limited number

of 'Improve' solutions. The 'Avoid-Shift-Improve' share of mitigation measures proposed in NDCs and VNRs are 9-35-56% and 7-33-60%, respectively. This overreliance on 'Improve' measures and imbalance among the three categories hinders realization of the full mitigation potential of low carbon transport.

It can be observed that there are large discrepancies in the transport measures that countries report in NDCs compared to VNRs (Figure 7). Road infrastructure development dominates in the VNRs while it has a less prominent role in the NDCs, which favour public transport measures, alternative fuels and rail infrastructure development. Despite the ex-post nature of VNRs, they tend to include fewer transport measures and leave out entirely certain measures that are commonly included in NDCs (e.g. rail infrastructure, green freight).

**Figure 7: Transport mitigation measures in NDCs and VNRs of IsDB member countries**



Potential reasons include the fact that ambition stated in the NDCs has yet to be translated into action and thus, the sustainable transport measures are not yet reflected in the VNRs (as a window into broader national SDG implementation strategies, frameworks, and plans). It is also possible that envisioned measures captured in NDCs are not communicated to entities responsible for the national implementation of the 2030 Agenda and thus the reporting focuses mainly on the transport measures that most directly connected to SDGs (e.g. e-mobility connected with SDG 7, road infrastructure with SDG 9, and public transport with SDG 11). These hypotheses suggest an overall lack of policy coherence in the formulation of countries' NDCs and VNRs and underscore the need for improved horizontal coordination among relevant ministries.

### 3.4.2 Specific Analysis for Focus Countries

The NDCs of the focus countries cover a range of sustainable transport measures. However, they strongly focus on 'Improve' measures. Structured through the 'Avoid-Shift-Improve' framework, an example of an 'Avoid' measure is the integration of climate change in territorial planning processes to shorten distances in **Cameroon**. 'Shift' measures are the railway project in **Kuwait**, improvements in public transport (BRT and metro) in **Pakistan** and high-speed rail development in **Turkey**. Among 'Improve' measures are the implementation of purchase incentives for low-emission vehicles in **Cameroon**, a biofuel blend mandate in **Indonesia**, **Tunisia's** ambition for better transport energy efficiency, road infrastructure and tunnel projects in **Turkey**. A detailed list of transport measures of NDCs is shown in Table 11.

Table 7: Transport measures of NDCs in detail

Country	Sustainable, Low Carbon Transport Measures in NDCs		
	Avoid	Shift	Improve
<b>Cameroon</b>	<ul style="list-style-type: none"> <li>To develop an integrated low carbon transport system through a national transport infrastructure scheme;</li> <li>To integrate climate action in territorial planning documents with the goal to shorten distances and to establish efficient transport policies;</li> </ul>	<ul style="list-style-type: none"> <li>To support state and local authorities in the development of public transport as well as low carbon development plans (e.g. tramways in Yaounde and Douala);</li> </ul>	<ul style="list-style-type: none"> <li>To develop standards, incentives and regulations encouraging the purchase of low-emission vehicles and scrapping of high-emission vehicles</li> </ul>
<b>Indonesia</b>			<ul style="list-style-type: none"> <li>To implement biofuel blend mandate</li> </ul>
<b>Kuwait</b>		<ul style="list-style-type: none"> <li>To implement a railway project linking ports and cities for integrated and sustainable development for transporting goods and passengers</li> </ul>	
<b>Pakistan</b>		<ul style="list-style-type: none"> <li>To improve public transport systems (e.g. Bus Rapid Transport in Lahore, Rawalpindi-Islamabad and Multan, and urban rail transport in Lahore)</li> <li>To modernise rail services</li> <li>To upgrade and develop efficient public transport systems</li> </ul>	<ul style="list-style-type: none"> <li>To raise awareness and provide incentives for efficient vehicles</li> </ul>
<b>Tunisia</b>			<ul style="list-style-type: none"> <li>To increase energy efficiency in transport among other sectors</li> </ul>
<b>Turkey</b>	<ul style="list-style-type: none"> <li>To reduce share of road transport</li> </ul>	<ul style="list-style-type: none"> <li>To implement sustainable urban transport</li> <li>To increase share of rail and maritime transport through comprehensive planning of all transport modes (covering passenger and freight transport)</li> </ul>	<ul style="list-style-type: none"> <li>To promote alternative fuels and low-emission vehicles</li> <li>To reduce fuel consumption and emissions of road transport (with the National Intelligent Transport Systems Strategy Document (2014-2023) and Action Plan (2014-2016))</li> <li>To implement high speed railway projects</li> <li>To expand urban railway systems</li> <li>To achieve fuel savings through tunnel projects</li> <li>To support scrapping of old vehicles</li> <li>To implement green port and green airport projects to ensure energy efficiency</li> <li>To implement special consumption tax exemptions for maritime transport</li> </ul>

### 3.5 Increase integration of sustainable, low carbon transport in national transport plans

#### 3.5.1 General analysis and trends

Many IsDB member countries recognise transport's enabling role in Paris Agreement and SDGs. However, for successful integration of NDC and SDG objectives and priorities, governments need to embed sustainable low-carbon transport into their overall national sustainable development strategy and will need to prioritise an integrated approach to development, which is economical, environmentally and socially accountable. Such a transformation at the sector level can only be achieved with the buy-in from key transport stakeholders such as transport ministries (e.g. road, rail, aviation, maritime), finance, commerce, heavy industries, environment, as well as city officials and transport industry representatives. A preliminary literature review (described in the sections below) indicates that several IsDB countries have yet to mainstream NDC and SDG priorities in transport sectoral strategies and plans.

#### 3.5.2 Specific Analysis for Focus Countries

The gaps and linkages of the focus countries' transport strategies to major topics (such as GHG emissions, air pollution, road safety, health benefits, accessibility, Paris Agreement and 2030 Agenda) are shown in Table 3.

**Indonesia's** transport development plan covers detailed climate change and related aspects, but it does not refer to sustainable development in any aspect. In contrast, Indonesia's national medium-term development plan covers the topic of sustainable development in accordance with SDGs and climate change in a chapter<sup>24</sup>.

The transport strategy with a horizon to 2040 covers in a chapter the topic of climate change with references to the Paris Agreement, the country's NDC and climate action. Yet, it misses on adding the linkage to sustainable development and the SDGs. Turkey's transport plan with the timeframe 2017 to 2021 applies a very sector-centric approach and lacks any linkages to climate change and sustainable development.

**Saudi Arabia's** transport plan was published in 2011 but it refers to all major topics and connects environmental protection to their wider sustainable development framework. The transport plan mentions that the top-down process of formulating a sustainable development strategy and leadership are major enablers for such sustainable transport policies. A strategic goal on environmental issues of transport has been formulated and it covers sub goal on reducing (air, noise, sea and ground) pollution, reducing use of environmental resources by advancing assessments and consideration for environmental issues of transport projects, reducing use of harmful substances and enhancing environmental awareness in society.

No known plans have been identified by **Cameroon** and **Pakistan**.



<sup>24</sup> Indonesia, 2014, National Medium-Term Development Plan 2015-2019, available at: <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/laws/1328.pdf>

Table 8: Climate change and sustainable development references in transport strategies

Country	References in Transport Strategy (Policy/Strategy)							Sources
	GHG Emissions	Air Pollution	Road Safety	Health Benefits	Better Accessibility	Reference to Paris Agreement	Reference to SDG	
Cameroon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No strategy identified
Indonesia	Yes	Yes	Yes	No	Yes	No direct reference	No	Strategic Plan of the Ministry of Transportation 2015-2019 National Medium-Term Development Plan 2015-2019
Kuwait	Yes	Yes	Yes	No	No	No	No	National Traffic and Transport Sector Strategy for Kuwait 2009-2019
Pakistan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	New National Transport Policy in development
Tunisia	Yes	Yes	Yes	No	Yes	Yes	No	National Transport Strategy 2040 <sup>25</sup>
Turkey	Yes	No	Yes	No	No	No direct reference	No	Strategic Plan 2017-2021



25 National Transport Strategy 2040 (Etude du Plan Directeur National des Transports (PDNT)) was received directly by IsDB.

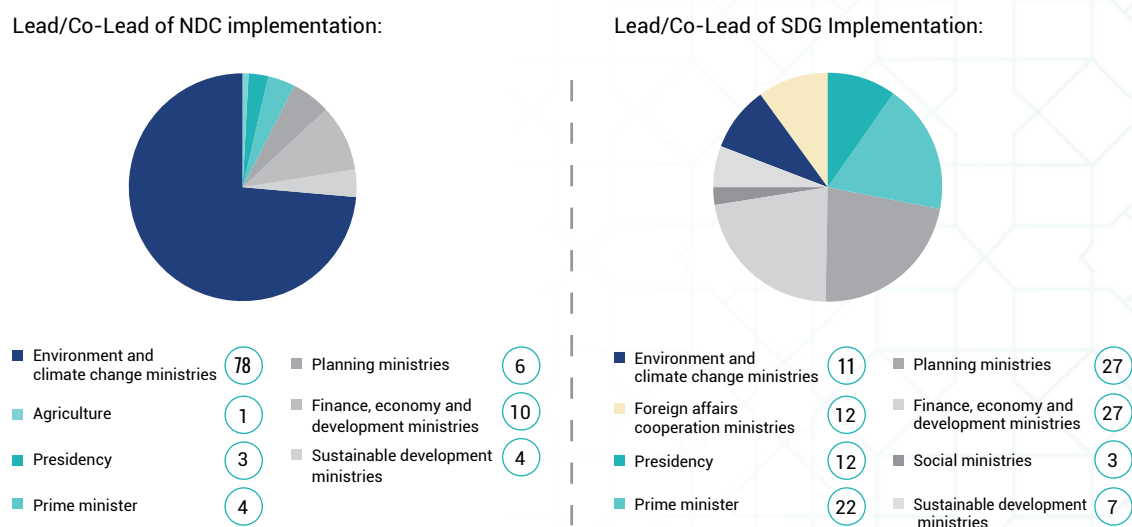


## 3.6 Improve NDC/SDG coordination for transport among ministries/levels of government

### 3.6.1 General analysis and trends

It is important to understand who from the government is involved in the development of each process. The situation will differ highly among the countries. However, the NDC's climate action and efforts for SDGs are advanced separately.<sup>26</sup> A higher degree of coordination of NDC and SDG implementation can be achieved if both processes are controlled by the same ministries<sup>27</sup>.

**Figure 8: Comparison of lead/co-lead ministries implementing NDCs and SDGs for 90 countries**



### 3.6.2 Specific Analysis for Focus Countries

In the six focus countries, the NDC development was led mostly by the national government, or at least, the national government is shown as the main author of the NDC. In the discussion at COP and the other reporting mechanisms (shown here through the NCs) the environment ministries are major government stakeholders. The VNRs and achievement of the 2030 Agenda for Sustainable Development are responsibilities of ministries of development (Table 9). It shows the mismatch between leading government entities (e.g. climate action by environment ministries and sustainable development by development ministries).

The lead organization for VNRs in the focus countries is in every case the ministry related to development and planning, while for the NCs the responsibility is with the environment ministries. In the case of **Cameroon**, the lead organization for the NC seems to be also the major authority on sustainable development while the VNR is produced by another ministry. A good example is **Bangladesh** (see case study Gap Analysis of SDGs and NDCs by Bangladesh) where strong efforts are being pursued in understanding the gaps and aligning the different ministries and coordinating their activities and SDG implementation has been reflected in medium-term development plans<sup>28</sup>.

<sup>26</sup> WRI, 2018, Connecting the Dots: Elements for a Joined-Up Implementation of the 2030 Agenda and Paris Agreement, <https://www.wri.org/publication/connectingthedots-ndc-sdg>

<sup>27</sup> Government structure and ministry organisation/responsibilities can change after each legislative period and the direct comparison of ministries has to be done with caution and might not reflect such changes.

<sup>28</sup> [http://www.sdq.gov.bd/uploads/pages/5989b62d98b4b\\_7\\_Voluntary-National-Review-VNR-2017.pdf](http://www.sdq.gov.bd/uploads/pages/5989b62d98b4b_7_Voluntary-National-Review-VNR-2017.pdf)

**Table 9: Leads of NDCs, NCs and VNRs in comparison**

Country	Lead organization in NDC	Lead organization in NC	Lead organization in VNR
Cameroon	National government, provides references to transport sector plans	Ministry of Environment, Protection of Nature and Sustainable Development	Ministry of the Economy, Planning and Regional Development
Indonesia	National government	Ministry for Environment and Forestry	Ministry of National Development Planning
Kuwait	National government	Environment Public Authority	Supreme Council for Planning and Development
Pakistan	National government	Ministry of Environment	Ministry of Planning, Development and Reforms
Tunisia	Ministry of Environment and Sustainable Development	Ministry of Equipment and Environment	Ministry of Development, Investment and International Cooperation
Turkey	National government	Ministry of Environment and Urbanization	Ministry of Development

### 3.7 Increase integration of transport in global reporting mechanisms

#### 3.7.1 General analysis and trends

Probably for the first time in the UNFCCC process, the importance of the transport sector for achieving national emission reduction targets are prominently acknowledged. The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C shows that limiting global average temperature increase to 1.5°C is still possible, but it requires unprecedented transformations in all sectors. For the 1.5°C transition within the transport sector, research indicates that global transport emissions should be 70% below 2010 levels by 2050<sup>29</sup>. Without the implementation of ambitious sustainable low-carbon transport strategies, the transport sector could potentially become a significant roadblock to heading off dangerous climate change.

#### **NDCs transport measures and targets: Global vs IsDB member countries**

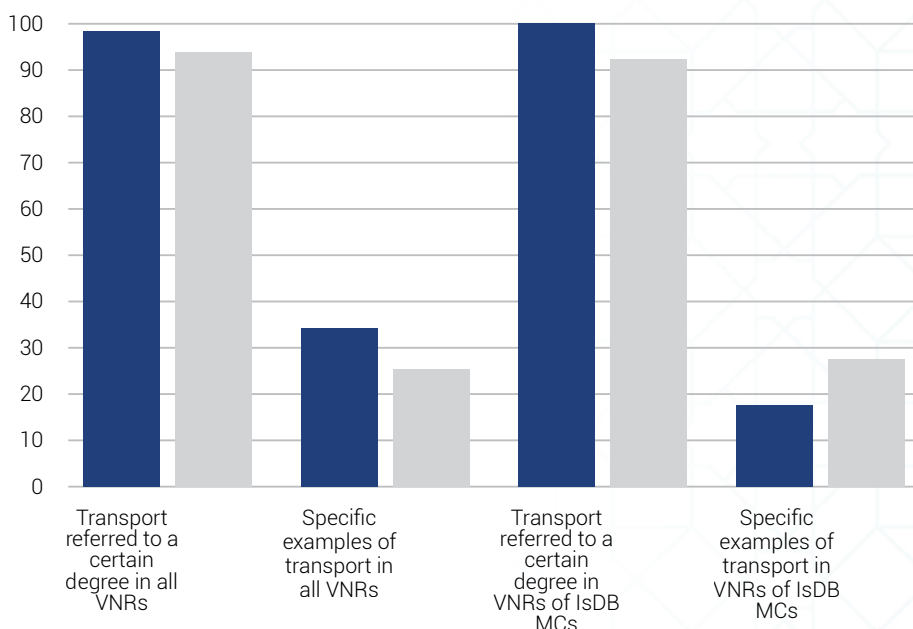
Globally, 76% of NDCs consider transport a priority mitigation sector, while only 8% of NDCs include a specific target on transport emissions mitigation (though in some NDCs, the transport sector is reflected as an intrinsic component of the energy sector). Among IsDB member countries, 56 of 57 have submitted NDCs. Of these 71% of NDCs consider transport a priority mitigation sector, and 11% include a specific target on transport emissions mitigation, thus exceeding the global average. However, 18% of IsDB countries do not make any reference to the transport sector in their NDCs, underscoring the need for greater coverage of transport across member countries.

Sustainable low-carbon transport enables the implementation of nearly all the SDGs through inter-linkage impacts and is fundamental to progress in realizing the promise of the 2030 Agenda for Sustainable Development. Sustainable transport supports employment, poverty reduction, access to markets, the empowerment of women, inclusive growth, reduce air pollution and traffic fatalities and is also essential to reduce greenhouse gases. Between 2016 and 2018, 31 IsDB member countries have been engaged in the HLPF and VNR submission process. 98% of globally submitted VNRs in 2017 and 94% of submitted VNRs in 2018 refer to the transport sector to a certain degree, but only 35% of 2017 VNRs and 26% of 2018 VNRs give specific examples of policies and projects

<sup>29</sup> IPCC, 2018, Global Warming of 1.5°C, An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, <https://www.ipcc.ch/sr15/>

for sustainable transport. In 2018, 15 countries (32% of VNRs) include targets for sustainable transport development 97% of IsDB countries refer to sustainable transport in VNRs (Figure 9); in fact, only three IsDB countries do not make any reference to the transport sector (**Morocco** (2016), **Sierra Leone** (2016) and **Qatar** (2018)).

**Figure 9: Sustainable transport in all and IsDB VNRs (red=2017, blue=2018)**



### 3.7.2 Specific Analysis for Focus Countries

The six focus countries highlight transport in their NDCs and in most of the VNRs (Table 10). Previously submitted VNRs from Indonesia and Turkey point to sustainable transport in their commitments to the 2030 Agenda. In the 2019 submissions Indonesia, Kuwait and Tunisia highlight sustainable transport as an integral strategy and provide specific measures. Cameroon refers to transport in its VNR but does not mention any specific implementation measures. While Pakistan points to low carbon transport in its NDC, the 2019 VNR only refers to electric vehicles under transport activities and misses major references to sustainable transport to achieve the SDGs.

**Table 10: Sustainable transport in NDCs and VNRs of focus countries**

Country	Transport as a Priority mitigation sector in NDC	Transport sector challenges highlighted in NDC	Sustainable Low-Carbon Transport measures highlighted NDC	Transport sector considered integral for SDGs	Transport Sector Challenges in VNR	Sustainable Low-Carbon Transport measures highlighted VNR
Cameroon	Yes	No	Yes	Yes	Yes	No
Indonesia	Yes	No	Yes	Yes	Yes	Yes
Kuwait	Yes	Yes	Yes	Yes	Yes	Yes
Pakistan	Yes	Yes	Yes	No	No	No
Tunisia	Yes	No	Yes	Yes	Yes	Yes
Turkey	Yes	No	Yes	Yes	No	No

In addition to the NDCs and VNRs, countries must also submit regular national reports on the implementation of the Convention to the Conference of the Parties (COP) in the form of National Communications (NC) and Biennial Update Reports (BURs). However, one of the key characteristics

of NCs is the “delay” in reporting. The year of data published in NC and BURs for IsDB member countries is mostly between 2000 and 2012, but in some cases even 1994 (Kuwait and Pakistan) (Table 11).

**Table 11: Reporting for major UNFCCC mechanisms**

Country	NDC Data Reporting Year	Most Recent NC Submitted	NC Submission Year	NC Data Reporting Year	Most Recent BUR Submitted	BUR Submission Year	BUR Data Reporting Year
Cameroon	2010	NC2	2015	2000	Not submitted	/	/
Indonesia	2010	NC3	2018	2014	BUR2	2018	2016
Kuwait	1994	NC1	2012	1994	Not submitted	/	/
Pakistan	2015	NC1	2003	1994	Not submitted	/	/
Tunisia	2010	NC2	2014	2000	BUR2	2016	2012
Turkey	2010	NC6	2016	2013	BR3	2018	2015

As shown above, the Paris Agreement and 2030 Agenda have been developed during similar years and have been published late 2015/early 2016. However, it does not mean that it was impossible to refer to each other in their respective reporting mechanisms. Examining the NDCs of the focus countries, just Kuwait, Pakistan and Tunisia include content and references on SDGs.

Kuwait mentions that their NDC and climate action are based on its sustainable development program and the intended railway project will help to achieve an integrated and sustainable development for passenger and freight transport. Pakistan's NDCs emphasises that the responses to climate change are linked to SDGs and the measures in agriculture are assessed for their sustainable development benefits. The NDC by Tunisia was developed by the Ministry of Environment and Sustainable Development; sustainable development has impacts (e.g. job creation, energy savings, food security) for the energy sector, agriculture and forestry and land usages but leaves out transport again.

In Indonesia's third NC, published in 2018, it is recognised that the Paris Agreement and 2030 Agenda are highly interrelated and that activities “must be mutually supportive, interrelated and complementary in the implementation”.

A detailed overview of all planned or current projects described in NCs is given in Table 12.

**Table 12: Transport activities in NCs**

Country	Transport Activities in National Communications
Cameroon	No measures on transport.
Indonesia	In its national GHG mitigation plan and other plans, Indonesia aims to introduce a comprehensive set of measures on transport that cover all modes and passenger and freight transport (e.g. intelligent transport systems, parking management, congestion charging and road pricing, bus rapid transit, and non-motorised transport lanes). A variety of national and local activities is planned through a Nationally Appropriate Mitigation Action (NAMA) entitled ‘Sustainable Urban Transport Programme Indonesia (SUTRI).’
Kuwait	Fuel efficiency improvements for light duty vehicles; use of alternative fuels (e.g., compressed natural gas); introduction of travel demand management systems (e.g., advanced traffic management systems, smart growth. land use planning).
Pakistan	GEF project “Fuel Efficiency in Road Transport Sector;” introduction of CNG in road transport.

<b>Tunisia</b>	Potential plans cover eco-driving, freight centres, rail transport increase, use of biofuels.
<b>Turkey</b>	Medium- and long-term policy plans are mentioned (e.g. shift to rail, maritime and aviation; urban transport development; combined freight transport; alternative fuels and clean vehicle technologies, etc.).

A good practice is the NDC of Morocco which aims to reduce economy-wide emissions by 42% below the BAU by 2030 and a transport-specific goal is a 23% reduction in energy consumption by 2030. The NDC explicitly refers to an alignment of activities to SDGs (with a focus on 1, 6, 7, 8, 9, 11, 13 and 17).

The UNFCCC national adaptation plan (NAP) process is a way to facilitate adaptation planning in developing countries. Bangladesh intends to integrate NDC and NAP processes to attain synergies in the implementation phase. Once the NAP process is fully underway, there will be an integrated arrangement for the implementation for the NDC and the NAP<sup>30</sup>.

### 3.8 Questions for further analysis

Building upon the above discussion, the following questions can be used to complement and expand the understanding of what is needed to achieve the stated objectives for NDC-SDG implementation. By reflecting on these questions in expert group meetings, stakeholders can gain insights to build on the analysis of the preceding sections and to apply in the context of the NDC-VNR synergies guidance described in the next section.

- 1. Increase focus on sustainable development benefits of transport measures in both NDCs and VNRs:**
  - Does reporting on transport measures in NDCs and VNRs focus primarily on outcomes (e.g. fuel use/tonnes CO<sub>2</sub>eq reduced) rather than on outputs (e.g. km roads/railways constructed)?
  - Are climate change mitigation and adaptation impacts for the transport sector jointly considered?
  - To what extent are climate change mitigation and adaptation considered associated benefits of sustainable transport interventions to achieve development goals (e.g. air quality, road safety)?
- 2. Reduce negative impacts of transport infrastructure and services:**
  - To what extent are negative impacts of transport investment considered in defining NDCs and VNRs (e.g. linking road construction to road safety)?
  - Which countries have set quantitative or qualitative targets for reducing negative impacts of transport? How are these targets set?
  - What are the most feasible/optimal approaches to reducing negative impacts based on experience of ISDB countries?
- 3. Increase integration of transport in global reporting mechanisms:**
  - What barriers exist to more regular data collection (and provision of more recent data)?
  - Which relevant sustainable transport indicators are most difficult to monitor?
  - What coordination is required to align member countries and global climate change and sustainable development frameworks?
- 4. Increase integration of sustainable, low carbon transport in national transport plans:**
  - How can transport and climate/development considerations be more effectively integrated in national plans?
  - Is it useful/necessary to have direct links to SDGs and the Paris Agreement in national plans?
  - Many commitments in national plans are more ambitious than global reporting mechanisms; can/should these processes be more closely aligned?
  - How can countries with emerging national plans draw on best practices from existing plans?

<sup>30</sup> [https://moef.portal.gov.bd/sites/default/files/files/moef.portal.gov.bd/notices/e5820e3c\\_2cd7\\_4e4d\\_baf3\\_5e613b37348a/NDC%20implementation%20roadmap\\_draft\\_v10\\_clean.docx](https://moef.portal.gov.bd/sites/default/files/files/moef.portal.gov.bd/notices/e5820e3c_2cd7_4e4d_baf3_5e613b37348a/NDC%20implementation%20roadmap_draft_v10_clean.docx)

**5. Increase ambition in transport targets and commitments:**

- How are transport sector targets established and quantified among different IsDB member countries?
- How are conditional and unconditional transport targets on climate change and sustainable development determined?
- How can direct targets (i.e. GHG emission reductions) and indirect targets (e.g. sustainable transport mode share, renewable energy) be most effectively combined?
- What best practices and tools can support long-term modelling to support the target setting process?

**6. Balance and optimise sustainable low carbon transport measures:**

- How can climate and development impacts of 'Avoid-Shift-Improve' strategies be better quantified?
- What opportunities can be identified to establish a more balanced mix of 'Avoid-Shift-Improve'?
- To what extent should 'Avoid-Shift-Improve' strategies be applied broadly across IsDB sub-regions and income groups and refined according to specific country contexts?

**7. Improve NDC/SDG coordination for transport among various ministries and levels of government:**

- How can improved coordination among ministries responsible for defining NDCs/SDGs be enabled at global, regional and national levels?
- How can coordination be improved among levels of government responsible for implementing NDCs/SDGs?
- How can non-state actors contribute to these processes?







**TRANSPORT  
SECTOR NDC  
AND SDG INTEGRATION  
FRAMEWORK AND  
GUIDANCE**

04





## 04. TRANSPORT SECTOR NDC AND SDG INTEGRATION FRAMEWORK AND GUIDANCE



The NDC-SDG integration guidance sketches new ideas and suggestions for initiating the implementation of NDCs and VNRs for the transport sector at the national level. It is focused on maximizing the role of the transport sector, considering the need for cost-efficient and integrated solutions within the NDC-SDG implementation framework.

The guidance aims to present a step-by-step methodological approach to assist transport sector policy makers to integrate NDCs and SDG targets in sectoral plans and strategies. It identifies some useful entry points for linking climate change action, as expressed in NDCs, and SDG implementation, as reported in VNRs, at sectoral level and maximizing positive synergies. This guide, however, does not identify various policy options that countries could pursue via their VNRs and NDCs. They do, however, define the generic architecture of the sustainable low-carbon transport typology of measures and guide readers to where such resources can be found.

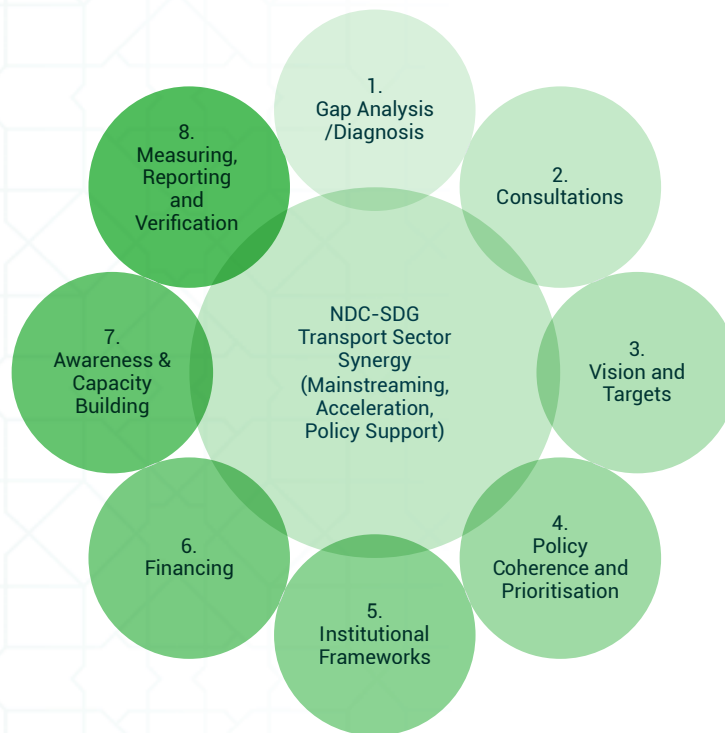
The guidance provides a comprehensive approach founded on the “Mainstreaming, Acceleration, Policy Support (MAPS)”<sup>31</sup> approach for ensuring convergence between climate action and sustainable development at the sectoral level i.e.

<sup>31</sup> MAPS is the common approach adopted by the UN Development Group to frame support for countries to implement the 2030 Agenda, more information available at: <https://www.un.org/ecosoc/sites/www.un.org.ecosoc/files/files/en/qcpr/doco-summary-brief-on-maps-march2016.pdf>

- **Mainstreaming:** Helping governments to translate both the NDC and SDG agenda in national transport sector plans, strategies, and budgets
- **Acceleration:** Consider synergies and trade-offs and supporting stakeholders to design policy interventions to target resources at root bottlenecks
- **Policy Support:** Providing coordinated and pooled policy support to countries

The guidance presents a comprehensive set of eight components for mainstreaming the 2030 Agenda and the Paris Agreement objectives within the transport sector. With these components, identification of relevant tools, identification of the policy accelerators and some case examples from developed and developing IsDB countries, the guideline is useful to the decision makers (public and private sectors) who are interested in mainstreaming and scaling-up the NDCs' and SDGs' objectives to their national transport sectoral contexts. The primary target audiences for this guideline include transport-focused policymakers, planners, implementers and operators at the national and subnational (regional, district, municipal) levels.

**Figure 10: Components of guidance tool**



The guidance acknowledges that each country is at a different stage of development, climate change policy and transport sector development and thus will approach the development of its NDC and SDG implementation plan as appropriate to its national circumstances. However, it is likely that, in each case, this process will include eight modular elements as identified in the comprehensive framework tool. The guide can be applied to each of different starting points for their implementation.

The framework tool is based on a simple policy cycle model, which begins with the consideration of a problem that requires government priority attention (agenda setting). It then considers various solutions to address the challenge (policy formulation) and prioritizing a particular course of action (decision-making). The third phase is about actual implementation where the priority course of action is translated into policy and infrastructure implementation (policy implementation). In the fourth phase, the impact of the plan (or the decisions implemented) is then monitored and evaluated against the original aims and adjustments to the policy, if needed, are made accordingly (policy

evaluation, which includes monitoring). The clear overarching principle behind this framework is that advancing the two transformational agendas in an integrated manner requires linking up current challenges with policy, financial, institutional and monitoring instruments that facilitate their implementation.

This comprehensive framework approach with a complete set of eight modular components could be applied across different market segments such as urban transport and rural transport, across different modes such as road, railways, inland waterways, sea freight, and aviation in passenger and freight transport. The eight elements presented in this document are summarised below and are meant to provide an integrated approach. The framework helps transport sector decision makers to take a long-term policy and investment decisions to make transport sector infrastructure and operations more sustainable and low carbon. Taken together, these elements can result in a comprehensive transformation of the transport sector.

## 4.1 Component 1: Gap Analysis/ Diagnosis

### 4.1.1 Component background

The starting point for the NDC and SDG alignment is the Diagnosis step, which aims to identify the transport sector “challenges” and “progress” in achieving NDC and SDG goals and targets, i.e. ability to meet important transport sector sustainability objectives.

Gap analysis helps to identify the main challenges that undermine the sustainability of the transport sector and to examine their underlying causes. It helps determine as to what extent the NDCs and SDGs are integrated into the transport sector policies and programs. This process is heavily driven by data collection and analysis as well as stakeholders’ consultations and input.

The gap analysis/diagnosis should be informed by the following guidelines:

- **Define problem scope**, including evidence of the nature and scale of the problem (e.g. transport sector externalities; see Figure 5: Growth of motorization rate)
- **Assess possible interactions** among various transport sector challenges over the time (e.g. see Table 4: Trends in transport emissions, pollution and fatalities)
- **Extrapolate current trends and scenarios** showing possible images of the future by merging quantitative and qualitative inputs (e.g. see Low-carbon Transport for Development Report, Sections I (Transport Drivers/Demand) and II (Transport Emissions)<sup>32</sup>).
- **Map NDCs and SDGs** (goals and targets) against sectoral and sub-sectoral plans, policies and strategies, to determine the current status of NDC and SDG alignment with development priorities of the country (e.g. see Table 8: Climate change and sustainable development references in transport strategies, see **Bangladesh** case study below).
- **Map existing monitoring framework and availability of data and relevant information** (e.g. see Low-carbon Transport for Development Report, Table 3: Assessment of transport data availability in IsDB member countries, and Annex III: Country factsheets<sup>33</sup>).
- **Assess the current institutional architecture** within the transport sector to support NDC and SDG implementation (e.g. Figure 9: Comparison of lead/co-lead ministries implementing NDCs and SDGs for 90 countries).

The gap analysis can provide a starting point for the ongoing implementation of the NDC and SDG goals and targets, and identify which activities are most relevant and critical to meet these targets.

<sup>32</sup> IsDB and SLoCaT, 2018, Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries, available at: <http://slocat.net/news/2009>

<sup>33</sup> Ibid

#### 4.1.2 Examples of best practices in IsDB countries

##### Gap Analysis of SDGs and NDCs by Bangladesh

Bangladesh performed an analysis<sup>34</sup> of progress, efforts and challenges for each of the 17 SDGs by examining the 7th Five-Year Plan (2016-2020). Bangladesh made serious considerations of integrating the SDGs in their national planning and all of the SDGs are integrated to a certain degree: SDGs 14, 16 and 17 partially aligned and the other SDGs are fully aligned. For example, the gap analysis of transport-related aspects under SDG 11 shows that there's a lack of efficient public transport, buses are overcrowded and safety of riders, esp. women, is low. Congestion is a major issue in Dhaka, causing a loss of five million work hours per day. The assessment describes future plans of five metro rail lines, bus rapid transit and road infrastructure.

A bottleneck to such an analysis is the lack of data: Bangladesh examined the availability of data to monitor their progress on the implementation of the 2030 Agenda for Sustainable Development and they found that data for 70 indicators (29% of all indicators) related to SDGs is readily available, while data for another 108 indicators (45%) are partially available (i.e. it can be compiled from existing sources, surveys but it would require effort and time) and 63 indicators are not available (26%).

For NDCs, a sector plan for transport in Bangladesh is under preparation. In the current draft document<sup>35</sup> the challenges and barriers towards low carbon transport are described as lack of robust data, lack of understanding of development benefits by transport mitigation and the lack of capacity. Transport infrastructure development is seen as an "enormous" challenge with low completion rates of planned projects and lagging investments for rail and waterway projects. For example, the current railway system has various constraints (rail network underdeveloped, stock shortage, safety issues, mismatch of gauges). Railway modernization is regarded as a long-term challenge requiring investments, pricing reforms and institutional changes. The document further lays out measures that can potentially contribute to reducing transport GHG emissions and structures them by 'Avoid, Shift and Improve' measures:

'Avoid' Measures	'Shift' Measures	'Improve' Measures
Decentralization of Government functions to regions	Development of railways and waterways	Road traffic management
Sustainable urban plans and compact city development	Parking charges	Lanes for slow and active transport
Demand management of road transport		Capacity for emissions measurement
		Logistic improvements
		Emissions-based tolls
		Car scrappage
		Improve road infrastructure
		Biofuels

Comparing the gap analysis of SDGs and the NDC implementation, it shows that the issues and challenges overlap. The analysis from both perspectives shows that data is a major bottleneck in transport and that yet more progress has to be made on urban transport. Thus, a combined gap analysis leads to better results, avoids redundancy, is more efficient and provides a clear nexus between NDC and SDGs.

34 General economics division, 2018, Sustainable development goals: Bangladesh progress report 2018, [http://www.bd.undp.org/content/dam/bangladesh/docs/Publications/Pub-2019/SDGs-Bangladesh\\_Progress\\_Report%202018%20\(1\).pdf](http://www.bd.undp.org/content/dam/bangladesh/docs/Publications/Pub-2019/SDGs-Bangladesh_Progress_Report%202018%20(1).pdf)

35 Bangladesh, n.d., NDC sectoral action plan for transport, <https://t.co/snLcjjkIH>

### 4.1.3 Component Discussion in Country Context

During an Expert Group Meeting (EGM) with stakeholders and representatives from IsDB Member Countries in Beirut, Lebanon in April 2019, participants were asked about the major gaps and challenges for implementing sustainable, low carbon transport in their countries. The keywords highlighted were finance, infrastructure, people, accessibility, political challenges (current situation, coordination and willingness), lack of data and knowledge. Figure 11 shows a word cloud with the words and the size of each keyword reflects how often it was mentioned relative to other keywords.

**Figure 11: Key words provided by EGM participants**



Examining the gaps and challenges for some transport-relevant SDGs, EGM participants highlighted that there is often a lack of awareness about the relationship between transport and air pollution (SDG 3). Moreover, financial gaps have been pointed out as a serious problem when it comes to issues related to energy, especially around renewable energy infrastructure, knowledge, and accessibility (SDG 7). Multiple participants mentioned the general preference for business-as-usual projects (road construction) over sustainable transport modes, thus leading to a lack of public transport (SDGs 9 and 11). Finally, the implementation of policies around sustainable cities is hindered by a lack of data and statistics, political issues, disintegrated planning, and the dominance of informality hindering regulations and improvements (SDG 11).

EGM participants from a single country cited a number of barriers and challenges in their way towards the implementation of SDGs. These include lack of the following: coordination among ministries, strategic vision, financial resources (noting that 60% of projects don't achieve their objectives), and accurate data.

Other participants highlighted that there is often conflict among various parties and stakeholders, which creates further issues. For example, conflicts can occur between funding authorities and business owners who stand in the way of a successful project. This is especially the case when it comes to the implementation of a unified public transport or bus system, where multiple, small scale private owners are already operating. This entire situation is of course exacerbated by lack of good governance.

## 4.2 Component 2: Consultations

### 4.2.1 Component background

The NDC and SDG integration in the transport sector could have a broad ownership in the local transport community if its advancement is done in a participatory manner. The consultations establish the scope of the NDC and SDG alignment process by identifying the critical strategic

choices and decisions to be made and the criteria for making them. The consultation process builds more full societal ownership of the NDC and the 2030 Agenda by giving stakeholders an opportunity to communicate their needs and requirements. Both the NDC and SDG process require broad-based multi-stakeholder mobilization and consultations, i.e. as reflected in SDG 17 calling for inclusive decision-making and partnerships and in the Marrakech Partnership for Global Climate Action under the UNFCCC.

Consultations should be informed by the following guidelines:

- Map stakeholders, identifying actors, sectors and social groups that are primarily affected by the transport sector externalities to incorporate into consultations.
- Consult stakeholder groups about the main challenges they are facing in implementing and integrating the NDCs and SDGs within the transport sector and are encouraged to provide an analysis of the causes of these challenges (see **Morocco** case study below).
- Consult across the eight elements as a continued instrument that facilitates continued participation with feedback loops that inspire ownership from various stakeholders, starting consultations as early as possible to maximise impacts on policy development.
- Consult on ways in which the diverse transport sector requirements can best be integrated into the sustainable low-carbon transport planning process.

Institutionalizing the stakeholder consultations can serve dual benefits. By establishing roundtables and task forces with adequate representation from state and non-state actors (including local stakeholders), not only successful integration of NDC and SDG process could be facilitated within the transport sector but also could ensure the optimal role of the transport sector within the economy wide NDC and SDG process discussions.



#### 4.2.2 Examples of best practices in IsDB countries

##### Roadmap for Sustainable Mobility in Morocco<sup>36</sup>

The “Roadmap for Sustainable Mobility in Morocco” led by the Ministry of Equipment, Transport, Logistics and Water is a strategic initiative to transform Morocco’s transport sector. It aims to develop a shared vision to make transport a real contributor to sustainable development. The Roadmap for Sustainable Mobility project in Morocco is inspired by the Macro-Roadmap for Transformation of Transport, initiated by the Paris Process on Mobility and Climate (PPMC).

The draft Roadmap for Sustainable Mobility in Morocco is conceived as a participatory and iterative initiative. Consultation of public and private actors of mobility is the basis of its elaboration. It invites stakeholders to identify together the priorities and opportunities for sustainable mobility to reduce economic, energy, environmental and social challenges.

Between July and November 2017, more than 150 representatives from the public and private sectors and civil society contributed by participating in workshops, interviews and online surveys. Its main objectives include the following:

- Stimulate the debate between the actors of mobility
- Identify the priorities and opportunities of Sustainable Mobility in Morocco
- Suggest short-term actions
- Initiate a Sustainable Mobility Community
- Create an orientation framework for the public, private and investor sectors
- Develop a long-term shared vision

Morocco has revised its NDC<sup>37</sup> to reflect the importance of SDGs and to increase the level of climate action. The NDC was aligned to the SDGs 1, 6, 7, 8, 9, 11, 12, 13 and 17 and enhanced through a legal framework and national strategy on sustainable development. For transport, it is highlighted that the improvement of logistics will reduce the disruptions of sustainable development, specifically through the reduction of freight ton-km and reduction of traffic density.

#### 4.2.3 Component Discussion in Country Context

Consultations are a very important element in this process. They do not have to be only limited to organizations from the public, private and civil society, but can include a wide range of stakeholders and constituencies. In Tunisia for example, the government launched a national platform to bring together diverse stakeholders to share feedback and views on the SDG review process, to comment on gaps in implementation, and share feedback on necessary next steps in the wider 2030 Agenda process.

During the EGM by IsDB and SLoCaT in Beirut in April 2019, participants were in agreement that consultation was central to the entire policy process for both climate action and sustainable development. Some participants noted the weakness of existing stakeholder engagement mechanisms in their countries and cities, while others noted that some effort has been made to ensure some elements of society have been able to have their words on the implementation of development projects. Nevertheless, there has rarely been an attempt to bring stakeholders together with a focus on synergizing climate and sustainable development policy processes.

Ultimately, participants recognised that youth groups, women groups, older people, persons with disabilities, municipal and local governments, various ministries, small business owners, public utilities, finance organizations, and public and other transport operators, and others must be recognised as essential to the success of work around the NDCs and SDGs.

<sup>36</sup> Ministère de l'Équipement, du Transport, de la Logistique et de l'Eau, n.d., Feuille de Route pour une Mobilité Durable au Maroc, <https://frmd.ma/>

<sup>37</sup> Morocco, 2016, Nationally Determined Contribution to UNFCCC, <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Morocco%20First/Morocco%20First%20NDC-English.pdf>



### 4.3 Component 3: Vision and Targets

#### 4.3.1 Component background

Establishment of a common vision, or strategy, is the driver for the integration of climate and sustainable development targets within the transport sector. With the initiation of the NDC and SDG processes, several countries have initiated the development of the long-term vision and targets with multi-year sectoral development strategies and plans. The transport sector's long-term sustainable low carbon vision needs to combine with the vision of the government, as set out in its NDC, VNR and transport strategies. Generally, NDCs, SDGs and traditional transport sectoral development strategies have different targets and timelines and assessing and recognizing the synergies between these targets and timelines will help scale-up activities.

Vision and target-setting should be informed by the following guidelines:

- Develop a vision accounting for potentially conflicting objectives of the various stakeholders involved and the full range of elements that underpin the economic, social, and environmental dimensions of sustainable low-carbon transport.
- Develop transport targets and low carbon transport measures based on the vision, to illustrate how the sector will contribute to the national-level implementation of the NDC and SDG processes (see Table 10: Targets in NDCs, Table 11: Transport measures of NDCs in detail).
- Establish robust coordination and support from NDC and SDG lead agencies (among other transport stakeholders) to optimise the transport sector's role within the national framework of sustainable development plans.
- Incorporate local development priorities and details of the proposed activities, timings and responsibilities (see **Saudi Arabia** case study below).

Establishing such a harmonised long-term strategy with ambitious vision and targets could enable implementation of the sustainable low-carbon transport activities in a sequence that maximises development benefits for both agendas and avoids long-term lock-in effects.



### 4.3.2 Examples from best practices in IsDB countries

#### Saudi Arabia's VNR, NDC and Transport Strategy

Saudi Arabia submitted a VNR in 2018. Transport is reflected in activities and targets for various SDGs. For **SDG 7**, land transport was identified as the third largest energy consumption sector by using 21% of local energy consumption. Thus, it is aimed to create an initiative to establish requirements for selling new passenger cars in the local market, standard specifications for energy efficiency of tires, apply energy economy card on light vehicles and introduce fuel economy standards for light vehicles (15 km per litre by 2020).

Under **SDG 9**, the development of an integrated national transport strategy, reforms for port regulations and the expansion of road infrastructure and airports is planned. The VNR has for SDG 11 a theme on transport with the example of public transport in Riyadh, where six metro lines and a BRT system are being constructed. Transport is mentioned in SDG 17, as Saudi Arabia provides financial support to the development of transport systems in developing countries.

Saudi Arabia expressed the following targets in their 2018 VNR submission:

- **SDG 3 Road Safety:** Reduce no. of deaths / injuries per 100,000 inhabitants (from 26 in 2018 to 20 in 2020 and 8 in 2030)
- **SDG 7 Energy Consumption:** Reducing energy consumption in the transport sector: per capita tonne oil equivalent (from 1.42 in 2018 to 1.32 in 2020 and 1.02 in 2030)
- **SDG 9 Logistics:** Transform Saudi Arabia to become a logistics centre - International Logistics Performance Index score from 3.16 in 2016 to 3.38 in 2020 and 3.7 in 2030.
- **SDG 11 Congestion:** Reduce the congestion of cities (peak hours in congestion during the year in five major cities (from 235 peak hours in 2018 to 15 peak hours in 2020 and 10 peak hours in 2030)

In the NDC, Saudi Arabia highlights that climate commitments will assist in the achievement of their sustainable development objectives. Concerning transport, the NDC expresses activities to increase energy efficiency in transport and the development of mass transit (metro systems in Dammam, Jeddah and Riyadh). Urban planning measures that support the use of public transport are envisioned.

The transport strategy, published in 2011 by Saudi Arabia's Ministry of Transport, describes environment as one of the six fields<sup>38</sup>. The plan sets as an objective to minimise the negative environmental impacts, reduce health risks and raise awareness of the environment in society. The overall vision expressed in the transport plan is: "To develop and maintain a multimodal transportation system, serving the needs of society by ensuring a safe, efficient and technologically advanced transport system that promotes social and economic development and international competitiveness of the Kingdom, and ensures a healthy and secure environment for its citizens."

### 4.3.3 Component Discussions in Country Context

The visions of the Paris Agreement on Climate Change and the 2030 Agenda for Sustainable Development have now to be translated into a workable policy at the national level. Examining the visions for transport by focus countries, it can be identified that not only this has yet to take place, but in some focus countries it wasn't possible to identify any kind of long-term vision for transport.

<sup>38</sup> Saudi Arabia's transport strategy has principle targets for the following fields: efficiency, socio-economic development, safety, environment, national protection and security and Hajj transport.

The overview of visions by focus countries in Table 13 shows that in general, countries have a medium-term strategy for transport covering between five (Indonesia, Turkey) and 10 years (Kuwait). Tunisia is the only one of the nine countries with a long-term strategy with 2040 as time horizon.

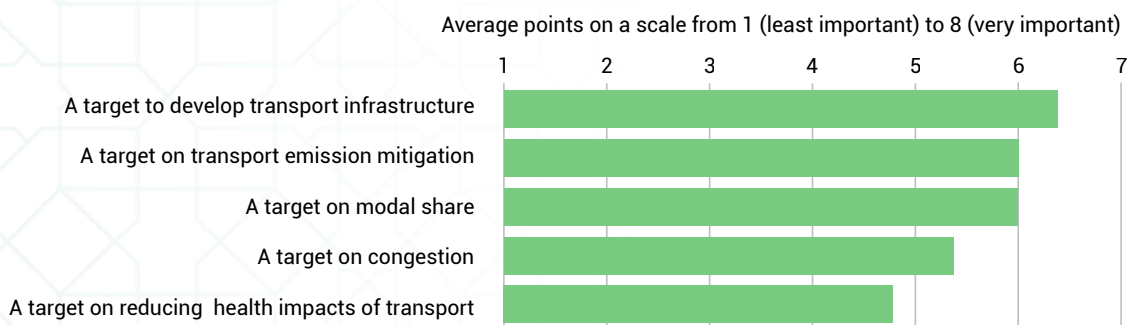
**Table 13: Vision of focus countries**

Country	Vision for transport by focus countries	Source
Cameroon	N/A	No strategy identified
Indonesia	Targets are about increasing connectivity, quality and capacity of infrastructure	Strategic Plan of the Ministry of Transportation 2015-2019 National Medium-Term Development Plan 2015-2019
Kuwait	Reduce transport fatalities to 317 by 2015	National Traffic and Transport Sector Strategy for Kuwait 2009-2019
Pakistan	N/A	New National Transport Policy in development
Tunisia	Plan introduces 10-point axis with multiple objectives, transport strategy to complement national energy and climate goals (that have a timeframe of 2030), over 47 projects are planned	National Transport Strategy 2040 <sup>39</sup>
Turkey	Transport to contribute to national development, to increase railway usage (passengers and goods) and increase efficiency of transport	Strategic Plan 2017-2021

The vision and target setting can enhance coherence between the NDCs and VNRs. As shown in Table 10, the NDCs in the focus countries lack completely a transport emission mitigation target. Through an integrated approach, the focus countries could set an emission mitigation target for transport in their NDCs and VNRs. Kuwait aims to avoid an increase of GHG emissions which translated to transport requires a transformation of mobility. This vision can be brought over to their VNR and translated into actionable measures.

At the EGM in Beirut, the topic of target setting was discussed. To initiate a discussion on the topic, participants were asked in an on-screen survey about how importantly they see certain types of targets. The survey concluded that a target to develop transport infrastructure is regarded as most important, followed by a target on transport emission mitigation and modal share.

**Figure 12: EGM result on importance of transport targets**



<sup>39</sup> Document was directly received by IsDB from Tunisian colleagues.

The result shows that the conservative approach aiming at developing transport infrastructure still dominates in the participating IsDB member countries. Aiming at reducing transport emissions is the second highest priority according to the opinions of the participants.

For the SDGs, the participants recommended the following targets:

- **SDG 3 on road safety:**
  - o to reduce road fatalities by 20% until 2025
  - o to reduce air pollution to WHO-recommended level
  - o to improve road safety for pedestrians and cyclists
- **SDG 9 on infrastructure:**
  - o to use 25% less concrete in infrastructure in construction by 2030
  - o to implement more urban transport projects
- **SDG 11 on sustainable cities:**
  - o to develop a sustainable urban mobility plan
- **SDG 12 on fossil fuel consumption:**
  - o to reduce fossil fuel consumption by 20% until 2030
- **SDG 13 on climate action:**
  - o To electrify 50% of motorised transport modes by 2022

## 4.4 Component 4: Policy Coherence and Prioritization

### 4.4.1 Component background

There is a growing recognition of the need for cost-efficient and integrated solutions to the diverse transport sector challenges. Research<sup>40</sup> indicates that the transport sector externalities could be reduced with significant economic benefits through the comprehensive implementation of low carbon mitigation policies that avoid (or decrease) the need for transport trips; promote a shift towards the most efficient travel modes; and improvement in vehicle and fuel technologies as well as related infrastructure and vehicle operations ('Avoid-Shift-Improve'). The chances that such a comprehensive approach is implemented will increase if countries, cities and companies actively integrate sustainable development objectives in their policies on transport and climate change.

The policy integration of NDC and SDG priorities into transport sectoral policies can be defined as the process through which transport long-term strategies or plans are revised (partial or completely redeveloped) to achieve a satisfactory trade-off between the transport development objectives and those that are driven by objectives of the NDCs and SDGs. This integration can be more successful if the transport sector is viewed in a sustainable low-carbon transport lens.

Policy coherence and prioritization should be informed by the following guidelines:

- Prioritize improvement strategies or actions using multi-criteria analysis tools (e.g. PEST or STEEP analysis).<sup>41</sup>
- Prioritize policy accelerators that generate high development benefits and translate potential measures into operational strategies.
- Develop evidence on development benefits, linking these benefits with the diverse interests of stakeholders.
- Set mid-term policy implementation milestones to help spur implementation.
- Address policy coherence across all modes, from national to local levels (vertically) and across all sectors (horizontally), considering the transport link with other sectors (e.g. fleet electrification must be coupled with decarbonization of power generation to maximise development benefits).

40 IPCC, 2014, Transport. In: Climate Change: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_wg3\\_ar5\\_chapter8.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf)

41 Wikipedia, 2019, PEST analysis, [https://en.wikipedia.org/wiki/PEST\\_analysis](https://en.wikipedia.org/wiki/PEST_analysis)

Considering the rising global demand for mobility, a long-term transport sector sustainable low-carbon strategy is needed to inform policy choices and to avoid unsustainable lock-in effects. Developing such a coherent long-term strategy would more likely to assemble appropriate finance and resources required to accelerate the introduction of more sustainable low-carbon transport infrastructure and services.

#### 4.4.2 Examples of best practices in IsDB countries

##### Jordan Long Term National Transport Strategy and Action Plan<sup>42</sup>

In 2014, the Ministry of Transport in Jordan developed a new Long-term Transport Strategy Action Plan. The main objective of the transport strategy was to manage transport supply and demand within a framework of social, economic, financial and environmental sustainability. Probably for the first time, Ministry of Transport recommended transport strategy prioritization to include both quantitative and qualitative evaluation through a Multi-Criteria Analysis (MCA). The strategy is the result of comparing five scenarios:

- High Investment Scenario
- Low Cost Scenario
- Integrated Scenario
- Regional Scenario
- Environmental Scenario

The MCA was applied to analyse the soundness of five transport approaches. It included in total 47 indicators under seven criteria (regional macro-economic, technical, social, policy, economic and financial and environmental). For example, under the environmental criteria the indicators are structured in:

Sub-Criteria	Emissions	Fuel consumption	Traffic reduction
<b>Indicators</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> emissions</li> <li>• CO emissions</li> <li>• PM<sub>x</sub> emissions</li> <li>• NO<sub>x</sub> Emissions</li> </ul>	<ul style="list-style-type: none"> <li>• gasoline consumption</li> <li>• diesel consumption</li> </ul>	<ul style="list-style-type: none"> <li>• vehicle-km in densely populated areas for cars</li> <li>• vehicle-km in densely populated areas for light-goods vehicles</li> <li>• vehicle-km in densely populated areas for heavy-goods vehicle</li> <li>• vehicle-km for cars</li> <li>• vehicle-km for light-goods vehicles</li> <li>• vehicle-km for heavy-goods vehicles</li> </ul>

The criteria are weighted in three levels, based on the professional expertise of the project team for the first two levels (indicator and sub-criteria) and a participatory stakeholder online consultation for the third level (criteria).

The MCA has resulted in the highest score for the environmental scenario of the transport strategy. It means that the environmental scenario performs the best against the seven criteria. The environmental scenario includes measures on maintenance and safety-upgrade of existing road networks rather than investing in road infrastructure development, implementation of a north-south railway connection, strong focus on public transport through new bus networks and Amman-Zarqa BRT and improvement of freight vehicle standards.

The case of Jordan shows an effective approach that can be copied by other countries. There are standardised approaches to policy prioritization and as it is a very important step in a national transport development, a coherent and solid approach should be utilised.

42 Ministry of Transport, Jordan Long Term National Transport Strategy and Action Plan, available at: <https://bit.ly/2Y10D11>



### 4.4.3 Component Discussion in Country Context

During discussions at the Beirut EGM, participants focused on the importance of Sustainable Urban Mobility Plans (SUMPs) and other planning tools at the municipal or local level that take into account both climate issues and sustainable development considerations as mechanisms for building policy coherence. Participants highlighted knowledge and data gaps as the key obstacles to gathering information around development benefits of climate and sustainable development policies. They also recognised that although some of their countries have incorporated transport into their planning around the Paris Agreement and 2030 Agenda, this information does not always trickle meaningfully down to subnational governments or spread across other ministries. There is also the issue of silos, where relevant government entities related to transport are often completely out of the loop when it comes to the implementation of key international policy frameworks.

## 4.5 Component 5: Institutional Frameworks

### 4.5.1 Component background

Sustainable, low carbon transport requires purpose, integration, and coherence in its planning and technocratic management activities. High-level political commitment is needed for implementing the long-term vision of sustainable low-carbon transport. While implementing NDC- and SDG-related sustainable low-carbon transport measures, institutional, legal and regulatory barriers need to be addressed along with encouragement and participation of all key stakeholder groups.

Institutional frameworks for NDC and SDG formation should be informed by the following guidelines:

- Create robust institutional arrangements that respond efficiently and effectively to transport sector challenges to achieve sustainable low-carbon transport.
- Enhance accountability, predictability, transparency and collaboration across diverse institutions and platforms through technical working groups, multidisciplinary advisory expert groups and national forums.
- Link SDG and NDC sectoral implementation frameworks by reforming existing institutional frameworks.
- Strengthen institutional capacities to reduce fragmentation, increase effectiveness, efficiency and transparency.
- Introduce entirely new coordination mechanisms, as needed, based on the local circumstances.

The institutional framework should enable an integrated approach, which means horizontal (within the transport sector) and vertical integration (across different sectors). In conjunction with political leadership it can ensure buy-in across economy-wide sectors (lead agencies for SDGs and NDCs) and along different transport-related ministries, institutions and other stakeholders.



#### 4.5.2 Examples of best practices in IsDB countries

##### Uganda's NDC Partnership Plan

In 2018, Uganda signed the first NDC Partnership Plan in Africa to advance the SDGs and the Paris Agreement commitments. Among the planned activities, following are the five priority areas:

- To strengthen operational and gender-responsive policy and institutional frameworks for the effective governance of climate change;
- To increase climate financing for planning and budgeting on the national and local levels;
- To establish effective and institutionalised measurement, reporting and verification (MRV) systems to monitor GHG emissions and gender-responsive adaptation measures;
- To strengthen the capacity of government officials, civil society, the private sector and academia to effectively integrate NDC and SDG commitments with a gender lens into existing and future programs; and
- To accelerate project financing for NDC implementation.

Uganda intends to enhance the cooperation between different stakeholders (ministries, departments and agencies) for the development of an NDC implementation plan.<sup>9</sup>

Another activity by Uganda is a fuel efficiency initiative<sup>10</sup> with strong involvement of various stakeholders. The initiative aims to develop a fuel efficiency policy and framework to regulate older vehicles among other measures. To realise this plan, several institutions and stakeholders are involved: The lead agency is the Ministry of Energy and Mineral Development, working together with the Ministry of Works and Transport. Other national government stakeholders are Ministry of Finance Planning and Economic Development, Uganda Revenue Authority, Uganda National Bureau of Standards and the National Planning Authority and National Environmental Management Authority. The Uganda Police, Transport Licensing Board and civil society are also involved in the process and Kampala Capital City Authority represents a local stakeholder. Among international organizations, the Global Fuel Economy Initiative through the UN Environments Programme is being engaged. The road map for implementation of the fuel efficiency initiative maps which organizations are involved in which steps including a roadmap.

The example of Uganda shows that the achievement of NDC-SDG coordination requires involvement of government bodies, private sector, civil society and academia. In the fuel efficiency initiative road map several institutions from various levels are involved and their participations in specific steps highlighted.

#### 4.5.3 Component Discussion in Country Context

The EGM in Beirut identified the key stakeholders associated with implementing SDGs and it showed that most of the participants agree that the government, ministries, local communities, consulting companies and citizens are the major stakeholders. Few participants mentioned NGOs, civil society and the private sector as key stakeholders.

<sup>43</sup> UNDP, n.d, Uganda, NDC support programme, <http://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/africa/uganda.html>. See also IISD, 2018, Uganda Releases First NDC Partnership Plan for Climate Action in Africa, <http://sdg.iisd.org/news/uganda-releases-first-ndc-partnership-plan-for-climate-action-in-africa/>

<sup>44</sup> NAMA Database, 2017, Fuel efficiency in motor vehicles, [http://www.nama-database.org/index.php/Fuel\\_Efficiency\\_in\\_Motor\\_Vehicles](http://www.nama-database.org/index.php/Fuel_Efficiency_in_Motor_Vehicles)

In the next step the EGM participants conducted a mapping of stakeholders to certain SDGs. For SDG 3, the police were an important stakeholder as they are responsible for road safety. The stakeholders are more diverse for SDG 11 on sustainable cities and the participants mentioned donors, civil society (neighbourhood committees and advocacy groups), the municipal and local governments and the private sector. The ministry of finance and businesses (esp. gas stations) are major stakeholders for the target on fossil fuel subsidy removals in SDG 12. The climate action in mitigation and adaptation of SDG 13 are led by the environment ministries.

Other inputs from the EGM included a discussion about trust in existing institutions. It is clear that trust is often lacking in society, especially trust in the state and its institutions, and that often causes a disconnect when it comes to the synergised implementation of these frameworks. Other participants highlighted the need for institutional reform, greater public stakeholder commitment, risk reduction mechanisms for private investment in sustainable transport projects, and enhanced powers for local authorities.

## 4.6 Component 6: Financing NDC-SDG Implementation

### 4.6.1 Component background

The implementation of both the NDCs and SDGs will require significant transformational investments, which can be a sizeable challenge in low-and-middle-income countries that are dependent on the traditional approach of funding and financing with weak engagement with the private sector. Stakeholders must recognise that NDCs and SDGs integration and related transformation do not come cheaply.

Financing the construction, operation and maintenance of sustainable low-carbon transport infrastructure and services involve many different types of funding sources, including investment by government agencies, investment by public or semi-public business enterprises and investments by the private sector. For implementing NDC and SDG targets, innovative finance instruments which encompass a combination of techniques and specially designed instruments to supplement traditional financing sources – such as leveraging funding, use of tools to attract & facilitate access to other non-traditional funding, reforming transport prices and financial management, new institutional arrangements and use of “polluter pays” principle - are required. Public funding can be used to guide innovative financial instruments to initiatives that yield the highest benefits in terms of transport sector development.

Mobilizing finance for NDC-SDG related sustainable low-carbon transport strategies should be informed by the following guidelines:

- Assess finance requirements for the proposed NDC-SDG related sustainable low-carbon transport strategy activities
- Consider benefits, such as mobility, accessibility, safety, and air quality, of sustainable low-carbon transport projects in cost-benefit analysis of projects and in directing finance for sustainable transport (see **Pakistan** case study below).
- Review current traditional and innovative finance landscape (e.g. climate bonds).
- Develop catalysing financing propositions for the identified priority projects and initiatives.
- Increase private sector engagement and overcome barriers to investments.
- Establish institutional arrangements for the oversight and coordination of innovative finance activities.



#### 4.6.2 Examples of best practices in IsDB countries

##### **Karachi Green BRT Project Financed by Green Climate Fund<sup>45</sup>**

The Green Climate Fund (GCF) is the world's largest dedicated fund helping the developing countries initiate climate mitigation and adaptation action. It was set up by the UNFCCC in 2010. In Pakistan, GCF is financing the establishment of a 30 km, fully segregated bus rapid transit (BRT) system operated with a biomethane hybrid bus fleet. The "Karachi Green BRT system" is proposed in one of the most densely populated cities which is ranked very low in the 2017 Global Liveability Report (138th rank) due to severe transport challenges (traffic congestion, road fatalities, air and noise pollution issues).

The project includes a dedicated biogas plant covering 100% of the fuel demand, a fleet scrapping program, climate proofing of the corridor and the last mile connectivity improvement using walking and cycling (including a bike sharing system and e-pedicabs).

The total project cost is USD 583.5 million of which USD 49 million are requested from the GCF (USD 37.2 million as concessional loan and USD 11.8 million as a grant). The climate finance which constitutes only 8% of the total project costs enables implementation of an innovative transport project with high benefits across sustainable development and climate mitigation for the first time in Pakistan. The project has a direct GHG reduction impact of 2.6 MtCO<sub>2</sub>e over 30 years. Further, air quality will be improved through a reduction of NO<sub>x</sub>, PM<sub>2.5</sub> and SO<sub>2</sub>, liveability will be increased through less noise, pedestrian and cycling measures, safer streets for women and universal access.<sup>46</sup>

The project includes innovative features such as a dedicated biogas plant covering 100% of the fuel demand and the last mile connectivity via bikes and e-pedicabs and includes flood proofing of the road. The BRT system is designed to increase climate resilience and enhance access, equity, energy efficiency, road safety, employment and health benefits due to reduced pollution.

This example shows that there are various opportunities to finance sustainable transport projects. The success that enabled finance of the Karachi BRT system lies in its comprehensiveness. The project has higher emissions savings through the use of renewable energy, linking mitigation and adaptation components and illustrating benefits for air quality, living quality and safety.

#### 4.6.3 Component Discussion in Country Context

The participants at the Beirut EGM recognised universally that finance is a consistent problem in their cities and countries when it comes to ensuring the successful implementation of key climate and sustainable development policies. During discussions, many participants highlighted issues related to public and private finance, including problems associated with taxation and the mobilization of private sector funds. They also mentioned that oftentimes when there is finance available for infrastructure projects, the focus is usually on major transport projects, especially those related to the building of roads. Oftentimes, there is much less finance available for sustainability-focused projects like public transport, active transport, or related measures.

In the context of cities and subnational governments, there is often even less financing available when it comes to work around climate action and sustainable development in transport. Participants recognised that these types of governments do not always qualify for financial support, particularly from multilateral development banks, and when they do qualify, have to compete with other possible projects in order to access financing.

<sup>45</sup> Green Climate Fund, 2019, Project FP065 Green BRT Karachi, available at <https://www.greenclimate.fund/projects/fp085>

<sup>46</sup> GCF, 2018, Approved Funding Proposal, [https://www.greenclimate.fund/documents/20182/574760/Funding\\_Proposal\\_-\\_FP085\\_-\\_ADB\\_-\\_Pakistan.pdf/82760637-bab2-18af-9a76-1ec6b5eed556](https://www.greenclimate.fund/documents/20182/574760/Funding_Proposal_-_FP085_-_ADB_-_Pakistan.pdf/82760637-bab2-18af-9a76-1ec6b5eed556)



## 4.7 Component 7: Awareness and Capacity Building

### 4.7.1 Component background

A key factor determining the likelihood that the potential sustainable low-carbon transport strategy is successfully translated into concrete activities is capacity building. SDG 13 on Climate Action – target 13.3 refers to “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning”. There is a broad need for capacity building in support of sustainable, low carbon transport.

Capacity building should be informed by the following guidelines:

- Identify the requirements for capacity building and awareness raising early in the NDC-SDG processes (i.e. diagnosis/gap analysis) and develop programs for capacity building and awareness raising of local stakeholders.
- Leverage existing global capacity building frameworks (e.g. the NDC Partnership) to support both NDC and SDG implementation with training, facilitated dialogues, technical support, and awareness raising (see Nigeria case study below).
- Establish peer-to-peer exchange programs where participants can learn from the experiences of counterparts to improve knowledge and capacity.
- Develop targeted communication strategies to accelerate mobilization for sustainable low-carbon transport.
- Incorporate training and capacity building mechanisms into institutionalised structures for long-term sustainability.

This capacity building should focus on the replication and scaling up of successful measures under the ‘Avoid-Shift-Improve’ approach as identified earlier. The capacity building is required in areas such as policy design, implementation, statistics and data and monitoring, and financing and decision-makers need to understand the implications of their choices to make good decisions.

#### 4.7.2 Examples of best practices in IsDB countries

##### NDC Support Programme in Nigeria<sup>13</sup>

Under the NDC Support Programme, the capacity of key institutions in Nigeria is being enhanced to mobilise finance for climate action, increase private sector engagement, catalogue climate-related activities by various stakeholders and raise awareness of the climate action plan to the public and private sectors. The capacity building programme aims to support the following activities:

- To support sectoral action plans for NDC priority sectors including summary documents and MRV notes.
- To enhance technical capacities of ministries for NDC implementation
- To conduct a detailed assessment of policies required for NDC implementation and of the governance environment
- To have consultations with stakeholders to raise awareness and to collect sectoral insights

Nigeria has committed to a 20%-30% emission reduction by 2030, with a focus on the power, oil and gas, agriculture and land use, transport, and industry sectors. Sectoral action plans are part of the intended activities. The programme will increase the technical capacity of relevant ministries for NDC implementation and conduct a detailed governance assessment. Awareness will be raised through extensive stakeholder engagement.

In the NDC14 by Nigeria transport activities play a key role in mitigation and adaptation activities:

Mitigation activities for transport	Adaptation activities for transport
<ul style="list-style-type: none"> <li>• To shift passenger travel from air to high-speed rail transport</li> <li>• To increase share of rail freight</li> <li>• To upgrade roads</li> <li>• To implement urban transit</li> <li>• To introduce toll roads and road pricing</li> <li>• To increase use of CNG</li> <li>• To reform subsidies for diesel and gasoline</li> </ul>	<ul style="list-style-type: none"> <li>• To increase protective margins in construction and placement of transport infrastructure</li> <li>• To increase resilience through a better risk assessment and risk reduction measures</li> <li>• To strengthen existing transport infrastructure</li> </ul>

In addition, Nigeria intends to introduce a biofuel blend of 10% with gasoline and 20% for diesel. It is targeted to align the SDG-related activities in the country with the NDC. Under this programme it is envisioned to create sectoral action plans for each of the five sectors including sectoral summary documents and MRV discussion documents.

However, Nigeria's VNR15 could be further aligned with the envisioned mitigation and adaptation activities of the NDCs. The VNR mentions local activities of Lagos, such as BRT implementation, road infrastructure development and improvements in transport facilities).

The example of Nigeria stresses the importance of capacity building and that the current constraints lead to huge differences between the two processes and their outlined activities. The planned programs will help to increase the coordination between the content of the NDC and VNR in general and also lead to a transport sectoral plan with high ambition and a comprehensive package of measures.

47 UNDP, n.d., Country profile Nigeria, NDC Support Programme, <http://www.ndcs.undp.org/content/dam/LECB/docs/factsheets/Nigeria.pdf>

48 Federal Republic of Nigeria, 2015, Nigeria's Intended Nationally Determined Contributions, [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Approved%20Nigeria's%20INDC\\_271115.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Approved%20Nigeria's%20INDC_271115.pdf)

49 Federal Republic of Nigeria, 2017, Implementation of the SDGs, A national voluntary review, <https://sustainabledevelopment.un.org/content/documents/16029Nigeria.pdf>

### 4.7.3 Component Discussion in Country Context

Beirut EGM participants recognised that many opportunities for capacity building are available to them, including the EGM in question. Moreover, there was discussion on the availability of capacity building around eco driving, the SDGs and other global frameworks, as well as national training workshops. Nevertheless, participants highlighted that there is often little follow-up from these sessions and they therefore find it difficult to continue to connect what they learn during workshops with the work they do on the ground.

## 4.8 Component 8: Measurement, Reporting and Verification

### 4.8.1 Component background

The transport sector differs significantly with other sectors as power, buildings and energy regarding measurement, reporting, and verification (MRV). The transport sector typically involves externalities divided over many individual sources, which all behave in their own individual manner and respond differently to a given stimulus. Further, each component of the system (say infrastructure) may directly or indirectly influence other components (transport demand, mode share, energy efficiency etc.).

In many IsDB member countries, limited data on transport infrastructure (e.g. just 21% of IsDB member countries have recent data on rail network lengths) are relatively accessible, and there are few reliable data and estimates on passenger activity (e.g. less than 7% of countries have passenger-kilometres in total) and freight transport (e.g. 9% provide ton-km information)<sup>50</sup>.

IsDB countries currently participate in data collection at global levels to a varied extent, which is dependent in part on the institutional capacity of each member country. For instance, countries report transport sector GHG emissions to the United Nations Framework Convention on Climate Change (UNFCCC) through a top-down modelling approach which utilises aggregate fuel consumption data. Fuel consumption data represents the total fuel consumed by different transport modes (road, rail, waterways) and is further separated by various fuel types. However, collecting data on fuel consumption does not provide insights into the specifics of the transport system or the policy being implemented. Thus, corresponding bottom-up data and measurements for all transport-related externalities are required which can allow analysis of plans, projects, the contribution of modes, among other factors for better decision making.

Ideally, a globally recognised bottom-up framework for measuring externalities from the transport sector by linking travel activity, fuel efficiency with energy consumption is recommended (i.e. 'Avoid-Shift-Improve' framework<sup>51</sup>). This framework connects three fundamental questions within the transport sector: How far do goods and people travel? In which modes do they travel? And How energy- and emission-efficient are these modes?

MRV should be informed by the following guidelines:

- Define, standardise, and develop sustainable low-carbon transport indicators.

(see Annex 1: NDC/VNR Evaluation Template, Annex 2: Key Performance Indicators for Tracking Global Processes, and Annex 3: EU-TERM Indicators).

- Establish data management processes and incorporate into the MRV system (see Bangladesh case study below).
- Establish institutional arrangements for the oversight and coordination of MRV activities by fostering inter-institutional cooperation and public-private cooperation.

<sup>50</sup> IsDB and SLoCaT, 2018, Low-carbon Transport for Development: Trends and Recommendations for Islamic Development Bank Member Countries, available at: <http://slocat.net/news/2009>

<sup>51</sup> Lee Schipper and Celine Marie-Lilliu, 1998, Transportation and CO2 Emissions: Flexing the Link – A Path for the World Bank, available at: <http://documents.worldbank.org/curated/en/826921468766156728/pdf/multi-page.pdf>

- Develop national sustainable low-carbon transport observatories.
- Build transparency, i.e. generating and disseminating information
- Build MRV capacity by gathering and developing expert knowledge.
- Benchmark sustainable low-carbon transport performance regionally, monitoring impact of policies and investments

For scaling up measurement and monitoring processes across the region and among diverse stakeholders, it is essential to collect the statistics, using consistent definitions, and meet minimum data quality standards, so that results are comparable. While selecting indicators, it is essential to acknowledge the importance of tools, institutional and funding support for long-term measurement and monitoring of transport investments. It is also essential to create institutional mechanisms for collection, monitoring and assessment, and for creating policy “feedback” loops so that the impact of policies can be assessed across the transport infrastructure and operations along the three dimensions of the sustainability. Transport data collection necessarily requires a decentralised system that also involves different transportation institutions as well as different layers of government (national, provincial, and urban) and collaboration with civil society.

A critical need going forward is to increase measurement capacity at national and subnational levels, as no common approach currently exists for countries to assess strategies in an internationally consistent manner (see Annex 3 for suggested approach). Within a state, a “network of experts” or “technical working group” on transport data should be established. This network of experts would consist of experts from various data producing agencies at the national level and with some key experts and private stakeholders and could develop a system of sharing, regular dissemination and communication of indicators could be designed. Based on the stakeholder consultations, the mandate of the technical working group could be established. This working group would allow better coordination and improve the development of local capacities and the exchange of experiences between countries in the region. Reforming existing institutional frameworks within the transport sector and national statistics offices, from being the primary data generators and collectors to becoming custodians of wider ‘data-ecosystems,’ will enable datasets to draw from a much larger range of sources especially from the private sector. Some of the steps involved in sustainable low-carbon transport MRV involve civil society and the private sector.



#### 4.8.2 Examples of best practices in IsDB countries

##### Bangladesh MRV for Transport<sup>16</sup>

A key aspect of Bangladesh' NDC implementation plan for transport will be the assessment of the progress in reducing GHG emissions from the transport sector and undertaking monitoring and evaluation to ensure that the mitigation measures implemented contribute to NDC commitments and thus, encouraging a shift to a lower carbon transport system. As a starting point it is necessary to understand the existing GHG measuring and reporting systems currently being used in Bangladesh then to further identify where improvements can be made depending on the mitigation action developed for the transport sector.

Specific indicators that need to be considered include:

- Modal share data for different modes
- Freight distance (vehicle km and tons km) by mode
- Passenger travel distance by mode
- Fuel efficiency (gCO<sub>2</sub>/km) of vehicles
- Numbers of low carbon cars
- Fuel consumption for different modes
- Numbers of people undergoing driver training.
- Average speed of vehicles on road
- Roughness Index of nationwide road network

It is also important to collect the data on development benefits of low carbon transport actions, to support the case for such action and to improve the evidence base on overall cost effectiveness. It is suggested that a list of key indicators be compiled and be added to the list above for the MRV of the transport sector action plan for NDC implementation. There is also the need to track implementation and assess the effectiveness of adaptation action undertaken for the sector. This is something that will be considered in more detail as part of the separate National Adaptation Plan process.

It is proposed that Roads and Highways Division (RHD) of the Ministry of Road Transport and Bridges is the overall lead for MRV of the transport system, and will liaise with the Ministry of Shipping, Ministry of Railways and Ministry of Civil Aviation and Tourism to collect data on the respective modes. Each of those ministries will liaise with modal stakeholders as necessary, for example with BRTA, Metropolitan Traffic Police etc. RHD will collate information to track the performance of the transport sector in reducing GHG emissions and will report up to the NDC Implementation Coordination Committee.

Bangladesh illustrates that progress has to be monitored through indicators and that cooperation with a variety of organizations is necessary to apply an effective MRV system.

#### 4.8.3 Component Discussion in Country Context

This component stresses the importance of an MRV system to measure the progress towards sustainable, low carbon transport. The identified documents of the focus countries cited in this report show in some cases a lack of data. In the cases of Cameroon, Kuwait and Pakistan it was challenging to identify even the basic data on transport. It can be doubted that comprehensive aspects of transport are being monitored and measured in these countries. Pakistan points out that they can only commit to a target in their NDC if they have reliable data on peak emission levels. Thus, it is important to provide the capacity to develop data and allow measurement of the progress. Indonesia, Tunisia and Turkey have extensive mobility information and it feeds into a comprehensive transport plan and vision.

At the Beirut EGM, participants talked about the importance of data for their work and how data is often missing. Participants focused on the need for multiple spheres of government to work together to ensure that gaps in data are filled. Some highlighted that even when a transport project was implemented, the assessment was incomplete because there were no tools to help assess the impacts of the modal shift.

Some participants mentioned how their countries do not have a properly functioning national inventory of data in which transport specific information is available. This certainly poses a challenge in implementing transport projects as it is difficult to know what the needs are.

52 Draft Sectoral Action Plan for Transport; Bangladesh NDC Implementation [<https://t.co/snLlcjkiH>]



05



# SUMMARY AND RECOMMENDATIONS





## 5. SUMMARY AND RECOMMENDATIONS



This report provides an overview on how to foster synergies between sustainable development and climate change for the transport sector by highlighting the benefits of these synergies and then by outlining an eight-step process on NDC-SDG synergy. In this final section, the approach will be applied to the focus countries in a conceptual manner in order to showcase what the synergy process might look like on national level and to highlight what IsDB can do to support the process.

### 5.1 Summary of strengths and gaps in planning and reporting for focus countries

In the process for improving the linkages, a stocktake of the content on the major reporting mechanisms can provide an overview of strengths and gaps. It does not replace the Component 1 to 3, as previously introduced. Table 14 gives a high-level summary of the strengths and gaps of focus countries submitting VNRs in 2019 in reporting on transport-relevant aspects of climate change and sustainable development processes:

Table 14: Summary of strengths and gaps in focus country plans and reporting

Country	NDC	VNR	NC/BUR	NAP	National Transport Plan	National Plan: Climate/Development
Cameroon	<ul style="list-style-type: none"> <li>Economy-wide target of 32% below BAU by 2035</li> <li>References to low carbon transport</li> <li>Balanced approach to transport</li> </ul>	<ul style="list-style-type: none"> <li>References only infrastructure, lacks content on sustainable mobility</li> </ul>	<ul style="list-style-type: none"> <li>Description of basic transport infrastructure without details on measures</li> </ul>	<ul style="list-style-type: none"> <li>References to resilient transport infrastructure (mainly road)</li> </ul>	Not identified	
Indonesia	<ul style="list-style-type: none"> <li>Lack of transport mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Highlights that policies to reduce transport GHG emissions are being employed</li> </ul>	<ul style="list-style-type: none"> <li>17 projects on transport listed incl. mitigation potential</li> </ul>	Not submitted	<ul style="list-style-type: none"> <li>Targets on connectivity and quality of infrastructure</li> </ul>	
Kuwait	<ul style="list-style-type: none"> <li>No specific economy-wide target</li> <li>A single rail project mentioned</li> </ul>	<ul style="list-style-type: none"> <li>References to clean, safe, sustainable and accessible are made</li> </ul>	<ul style="list-style-type: none"> <li>Brief reference on measures, such as travel demand managements</li> </ul>	Not submitted	<ul style="list-style-type: none"> <li>Mainly focuses on road safety</li> </ul>	
Pakistan	<ul style="list-style-type: none"> <li>No specific mitigation targets due to lack of data</li> <li>Public transport measures are included</li> </ul>	<ul style="list-style-type: none"> <li>Single measure of electric vehicles being included</li> </ul>	<ul style="list-style-type: none"> <li>Strong focus on fuel-related measures</li> </ul>	Not submitted	<ul style="list-style-type: none"> <li>Not identified</li> </ul>	
Tunisia	<ul style="list-style-type: none"> <li>Energy sector target included</li> <li>Energy efficiency in transport</li> </ul>	<ul style="list-style-type: none"> <li>Making linkages to Transport Strategy 2040</li> </ul>	<ul style="list-style-type: none"> <li>Mostly describing situation of transport</li> </ul>	Not submitted	<ul style="list-style-type: none"> <li>Long-term horizon up to 2040</li> <li>High level of detail</li> <li>All modes covered</li> </ul>	
Turkey	<ul style="list-style-type: none"> <li>Variety of diverse transport mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>Lack of content on transport and specific activities</li> </ul>	<ul style="list-style-type: none"> <li>Detailed background on transport</li> <li>Energy efficiency measures in transport described</li> </ul>	Not submitted	<ul style="list-style-type: none"> <li>Measures on transport development</li> </ul>	

### 5.1.1 Key observations

- NDCs submitted by **Cameroon** and **Turkey** include balanced transport mitigation measures; other focus countries have an opportunity to emulate these best practices.
- Some of the least developed countries have the most developed plans and highest transport mitigation ambitions; this sets the bar higher for more developed peer countries.

- None of the focus countries has set a transport sector mitigation target (and few have set economy-wide targets); however, IsDB peer countries have set mitigation targets in each region represented (see Table 15); these can be used as examples for peer countries.
  - Middle East and North Africa: **Palestine**
  - Sub-Saharan Africa: **Burkina Faso, Cote d'Ivoire, Gabon**
  - Southeast Asia: **Brunei Darussalam**
  - South Asia: **Bangladesh**

**Table 15: IsDB countries member countries with transport mitigation targets**

Country	Transport Target
<b>Bangladesh</b>	24% reduction from 2030 BAU
<b>Brunei Darussalam</b>	Land transport: to reduce CO <sub>2</sub> from morning peak hour vehicle use by 40% by 2035
<b>Burkina Faso</b>	Unconditional target: 0.42% below BAU by 2030 Conditional target: 42% below BAU by 2030
<b>Côte D'Ivoire</b>	5.73% reduction from 2030 BAU
<b>Gabon</b>	20% reduction below 2025 BAU (1.6 Mt less)
<b>Palestine</b>	20% trucks/buses using CNG by 2040 25% shift from private to public transport by 2030

- Submitted NDCs (2015) have not clearly translated to VNRs (submitted 2016 and later), especially not in the 2019 VNRs which have a focus on SDG 13 about climate action:
  - **Turkey** (2016 VNR): Detailed measures on transport have been outlined in NDC but only the measure of intelligent transport systems is brought over from the NDC to the VNR.
  - **Indonesia** (2017 VNR): VNR has much more detail than NDC, in which only biofuels are referred to as a sustainable transport measure.
  - **Indonesia** (2019 VNR): Climate change is highly linked and references to BURs and NDCs are done in the 2019 VNR, but linkages to NDC are missing.
  - **Kuwait** (2019 VNR): VNR identifies transport as a major source of emissions, but none of the proposed projects are linked to transport.
  - **Pakistan** (2019 VNR): The alignment of SDGs to national policies is described in the VNR, but there are no references to the NDC.
  - **Tunisia** (2019 VNR): References to NDCs and national climate strategies are made in the VNR.
- Five of six focus countries have yet to submit a National Adaptation Plan, and each of these countries is rated medium vulnerable to very highly vulnerable to climate impacts.<sup>53</sup>

### 5.1.2 Recommended Actions

- IsDB member countries should work together with regional and sub-regional peers (as listed above) to share best practices in setting direct and indirect targets in both NDCs and VNRs to help increase mitigation ambition.

<sup>53</sup> University of Notre Dame, 2019, ND-GAIN Country Index, <https://gain.nd.edu/our-work/country-index/>

- To support quantified emissions reduction targets, member countries should improve transport data collection strategies (e.g. to address needs identified by Pakistan in Table 14 and Bangladesh in Table 16) through connected databases in national statistical offices that serve to monitor SDG indicators and NDC MRV strategies (e.g. building upon suggested indicators in Annex 3).
- Member countries should make efforts to increase coordination and cooperation among government ministries (e.g. Transport, Environment, Energy) responsible for national and global monitoring and reporting efforts on transport and climate change (including NDCs) and sustainable development (including VNRs), to increase efficacy and interconnectedness of these processes.
- Member countries should consider adaptation ambition as well as mitigation ambition in shaping their NDCs and VNRs and should set qualitative and/or quantitative targets to increase resilience of transport infrastructure and services.
- Member countries should work together within the context of the UN's Technology Facilitation Mechanism (TFM), and through the Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum) to support one another in working toward the transport-relevant SDGs and the Paris Agreement.



## 5.2 Best practices to enhance strengths and address gaps

The proposed guidance can be applied to enhance strengths and fill gaps based on existing best practices from IsDB member countries (and relevant peer countries), as illustrated in Table 16.

**Table 16: Best Practices for Application of Guidance**

Country	Best Practice	Relevant Guidance Component(s)	NDC Relevance	SDG Relevance	Noted Successes	Noted Challenges
Bangladesh	Gap Analysis of SDGs and NDCs	1. Gap Analysis/Diagnosis	Example of how to identify major gaps	SDG 11	NDC transport sectoral plan in preparation.	Lack of data (primary); lack of understanding of mitigation development benefits; lack of capacity
Morocco	Roadmap for Sustainable Mobility	2. Consultations	NDC revised to increase alignment with SDGs	N/A	150 participants engaged in consultation process	
Saudi Arabia	VNR, NDC and Transport Strategy	3. Vision and Targets		SDG 3, 7, 9 and 11	Referring to sustainable development objectives and climate commitments	
Jordan	Long-term National Transport Strategy	4. Policy Coherence and Prioritization	Support in identifying NDC transport measures	N/A	Showcasing importance of climate action	
Pakistan	Karachi BRT Project	5. Financing NDC-SDG Implementation	Implemented measure that can be replicated	SDG 9 and 11	Emission savings through transport projects	
Nigeria	NDC Support Programme	6. Awareness and Capacity Building	Sectoral plans for NDCs	N/A	Enhanced capacity	Few transport measures in VNRs
Uganda	NDC Partnership Plan	7. Institutional Frameworks	Increase commitments	SDG 9, 11, 13	Enhanced cooperation in the implementation of NDCs and SDGs	
Bangladesh	MRV for Transport	8. Measurement, Reporting and Verification	Shows how to measure NDC progress	Can be also applied to various SDGs	Measuring and quantifying progress	
Tunisia	Transport Data Monitoring (from EGM)	8. Measurement, Reporting and Verification	Key indicators to be used for NDC	Progress on various SDGs	Reporting gaps where they exist (10-20% gap triggers action)	Sound cooperation among different stakeholders



### 5.2.1 Key Observations

- Best practices are available across IsDB sub-regions and income groupings, often with least-developed countries setting the pace.
- There is a strong emphasis on SDG 9 on infrastructure, SDG 11 on sustainable cities, and SDG 13 on climate action, and a lesser emphasis on other key transport-relevant SDGs (e.g. SDG 3 on road safety and SDG 7 on affordable and clean energy).
- The emphasis on transport sectoral plans in NDCs is encouraging (e.g. Bangladesh), but coverage is incomplete across focus countries, and does not necessarily extend to VNR coverage (e.g. Nigeria).
- Transport data gaps remain a challenge especially in LICs and LMICs (e.g. Bangladesh, Pakistan).

### 5.2.2 Recommended Actions

- Member countries should share and emulate established best practices (e.g. as listed in Table 16) among regional peers and compile additional examples in sub-regional workshops with the support of the trailblazers named in best practices.
- Member countries should work together to showcase these best practices at relevant UN-convened sustainable development and climate change events, like the Regional Forums for Sustainable Development (RFSD) and the Regional Climate Weeks (RCWs), and to refine strategies in concert with regional peers.
- Member countries should apply complementary research (including IsDB-SLoCaT “Low Carbon Transport for Development” report) in prioritising areas for developing best practices corresponding to guidance components (e.g. reducing motorisation rates, improving road safety measures).
- Member countries should deepen involvement in wider UN processes related to tracking sustainable development indicators, especially the Inter-Agency Expert Group on SDG Indicators (IAEG-SDGs).
- IsDB should support (through lending and technical assistance) the establishment of transport data observatories in key sub-regions in co-operation with peer MDBs (e.g. ADB in South Asia; AfDB in Sub-Saharan Africa) to support member countries in IAEG-SDGs.

### 5.3 National, regional, and global capacity building opportunities

The proposed guidance has relevance among and beyond IsDB member countries, sub-regions and income groupings. Member countries have an opportunity to promote and apply the guidance, to work with IsDB peers and other strategic partners in rollout to peer countries across regions, and to advocate for adaption and incorporation within NDC and VNR development cycles, as shown in Table 17.

**Table 17: NDC and VNR Activity Timeframes**

Timeframe	NDC-relevant Activities	VNR-relevant Activities
July 2019		HLPF under the auspices of the Economic and Social Council
Sep 2019		HLPF under auspices of General Assembly (SDG Summit)
Oct 2019		Global VNR preparatory workshops (timing TBC) <sup>54</sup>
Dec 2019	COP25 discussing preparations of NDC submissions	
Feb 2020	Submission of revised NDCs by all countries (timing TBC) <sup>55</sup>	Regional VNR preparatory workshops (timing TBC). <sup>56</sup>
Mar 2020	Africa Climate Week	HLPF regional preparatory meetings
Apr 2020	Africa Climate Week	
May/Jun 2020	Bonn Climate Change Conference 2020 (SB 51)	
Jun 2020		Submission of VNRs by selected countries
Jul 2020	Latin America and the Caribbean Climate Week	VNRs presented at HLPF 2020
Aug 2020	Asia-Pacific Climate Week	
Dec 2020	Discussion of revised NDCs at COP26	

54 UN DESA, 2018. Handbook for the Preparation of Voluntary National Reviews (2019 Edition). Available at: [https://sustainabledevelopment.un.org/content/documents/20872VNR\\_hanbook\\_2019\\_Edition\\_v2.pdf](https://sustainabledevelopment.un.org/content/documents/20872VNR_hanbook_2019_Edition_v2.pdf)

55 NB: A UNFCCC document notes that NDCs are due by February 2020, but information requires confirmation.

56 UN DESA, 2018. Handbook for the Preparation of Voluntary National Reviews (2019 Edition). Available at: [https://sustainabledevelopment.un.org/content/documents/20872VNR\\_hanbook\\_2019\\_Edition\\_v2.pdf](https://sustainabledevelopment.un.org/content/documents/20872VNR_hanbook_2019_Edition_v2.pdf)

### 5.3.1 Key Observations

- Staggered NDC and VNR activities as shown in Table 17 allow the potential for these processes to be mutually reinforcing if contributing activities are properly aligned (e.g. if outputs of global VNR preparatory workshops are used as inputs to relevant COP discussions).
- UNFCCC Regional Climate Weeks and HLPF Regional Preparatory Meetings could be more closely linked, in chronology as well as content (e.g. by providing common sectoral typologies for by NDCs and VNRs, as described in Annex 2).
- Evolution of NDC and SDG processes in 2020 (i.e. updated NDCs, reimagined VNR structure) offers an opportunity for greater alignment between NDC ambition and SDG evaluation, if pro-actively designed.

### 5.3.2 Recommended Actions

- Member countries should convene and/or participate in transport-focused workshops for preparation of VNRs in IsDB sub-regions, to feed into forthcoming global VNR workshops (as described in the Handbook for the Preparation of the Voluntary National Reviews<sup>57</sup>, timing and location forthcoming).
- Member countries should engage relevant UN regional commissions in order to participate in capacity building activities; and work internally to ensure relevant climate and transport focused government officials attend regional VNR preparation workshops, while those responsible for sustainable development attend workshops organised by regional NDC support platforms and the UNFCCC.
- Member countries should engage UNDESA in order to participate in and help set agendas to include transport and climate change priorities in global VNR workshops, to focus on reporting and preparation for the HLPF.
- Member countries (with support from IsDB SLoCaT and key partners) should promote this guidance as a basis for an official national transport guidance for the VNR planning process, and as a basis for a voluntary national guidance for NDCs (as a less prescriptive process).

#### Recommended IsDB Guidance Dissemination Strategies

The following actions are specifically recommended for IsDB to contribute to national, regional and global capacity building efforts to strengthen NDC and VNR synergies.

##### **National dissemination across IsDB countries:**

- IsDB should build on MENA EGM (and climate mainstreaming workshop) to support trainings and dialogue in other MENA countries and across IsDB sub-regions in concert with other regional commissions (e.g. ECA, ESCAP).

##### **Dissemination in peer countries and processes in other regions:**

- IsDB should promote guidance through other regional processes and fora (e.g. 2020 UNCRD EST Forum, to inform successor to Bangkok 2020 Declaration).

##### **Incorporation into global processes:**

- IsDB should supplement promotion of this guidance among member countries with other voluntary approaches under development (e.g. forthcoming WRI guidance on NDC development in the transport sector<sup>58</sup>).

57 UN DESA, 2018. Handbook for the Preparation of Voluntary National Reviews (2019 Edition). Available at: [https://sustainabledevelopment.un.org/content/documents/20872VNR\\_hanbook\\_2019\\_Edition\\_v2.pdf](https://sustainabledevelopment.un.org/content/documents/20872VNR_hanbook_2019_Edition_v2.pdf)

58 WRI, 2019, Stepping up 2020 NDCs, <https://www.wri.org/our-work/project/stepping-2020-ndcs>





## Annex 1: Resources on NDC and SDG Synergies

- Climate Action Tracker (<https://climateactiontracker.org/data-portal/>) Climate Watch NDC-SDG Linkages Website (<https://www.climatewatchdata.org/ndcs-sdg>)
- Connecting the Dots: Elements for a Joined-Up Implementation of the 2030 Agenda and Paris Agreement (<http://www.wri.org/publication/connectingthedots-ndc-SDG>)
- German Development Institute, NDC-SDG Connections (<https://klimalog.die-gdi.de/ndc-sdg/>)
- NDC Explorer (<https://klimalog.die-gdi.de/ndc/#NDCExplorerworldMap?INDC??income???catIncome>)
- NDC Update Report: Special Edition: Linkage between NDCs and SDGs (<http://ledsgp.org/wp-content/uploads/2018/05/NDC-Update-Report-May-2018.pdf>)
- SCAN Tool ([http://ambitiontoaction.net/scan\\_tool/](http://ambitiontoaction.net/scan_tool/))
- Transport and the sustainable development goals ([https://www.unescwa.org/sites/www.unescwa.org/files/events/files/transport\\_and\\_the\\_sustainable\\_development\\_goals\\_-\\_6a.pdf](https://www.unescwa.org/sites/www.unescwa.org/files/events/files/transport_and_the_sustainable_development_goals_-_6a.pdf))
- WRI, Designing and Preparing Intended Nationally Determined Contributions (INDCs) (<https://www.wri.org/publication/designing-and-preparing-indcs>)

## Annex 2: NDC and VNR Transport Typology

The following typology can be adapted and shared among government ministries to capture required transport (sub)categories for inclusion in NDCs and VNRs:

	Transport Sector	NDC	VNR
<b>Transport Modes</b>	Passenger Transport		
	Freight Transport		
<b>Transport Sub-sectors</b>	Urban Transport		
	Aviation		
	Maritime Transport		
	Heavy Rail		
	Walking/ Cycling		
	Rural Transport		
	High Speed Rail		
<b>Transport Data/ Estimates</b>	Historical Series?		
	Base Year?		
	Any Projections?		

<b>SDG Transport related Targets</b>	3.6 By 2020, halve the number of global deaths and injuries from road traffic crashes	
	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	
	7.3 By 2030, double the global rate of improvement in energy efficiency	
	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure	
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies	
	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety	
	11.6 By 2030, reduce the adverse per capita environmental impact of cities	
	12.c Rationalise inefficient fossil-fuel subsidies	
<b>Paris Agreement</b>	Limit global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.	
<b>Transport 'Avoid' Measures</b>	Mobility Management	
	SUMP/ Land use	
	Parking	
	Vehicle Restriction/ Tax	
	Fuel Subsidies	
<b>Transport 'Shift' Measures</b>	Public Transport (Bus)	
	Public Transport (Metro)	
	Cycling	
	Walking	
<b>Transport 'Improve' Measures</b>	E- mobility	
	Alternative Fuels	
	Fuel Quality/ Emission Standards	
	Fuel Economy Standards	
	Eco-driving	
	Green Freight	
<b>Other Measures</b>	Road Infrastructure	
	ITS/ App	
	Data/ Modelling	
	Transport Institution involved	

<b>Transport Development Benefits</b>	Poverty Alleviation	
	Food Security	
	Road Safety	
	Air Pollution	
	Urban Access	
	Rural Access	
	Regional Connectivity	
	Social Inclusion/ Equity	
Congestion		

## Annex 3: Key Performance Indicators for Tracking Global Processes

The listed key performance indicators (KPIs) show major data points that should be collected to track the progress on sustainable transport and their context for the following categories:

- ASIF (in green): Activity-Structure-Intensity and Fuel, a framework to understand and to calculate GHG emissions for transport;
- Development benefits (in purple): the second category displays major affected co-benefits related to the KPIs;
- DPSI (in cyan): driver-pressure-state-impact framework showing the mutual relationship and the influence of an aspect on transport.

Headline KPIs	Typology													
	Activity	Structure	Intensity	Fuel	Infrastructure	Economic	Safety	Social	Health	Crosscutting/Others	Driver	Pressure	State	Impact
Passenger and freight volumes (disaggregated)	Y										Y			
Vehicle kilometre travel (disaggregated)	Y										Y			
Passenger and Freight Motorization Index (vehicles/1000 population)	Y										Y			

Transport Infrastructure (disaggregated)					Y						Y			
Proportion of the rural population who live within 2 km of an all-season road														Y
Proportion of population that has convenient access to public transport, by age, sex and persons with disabilities														Y
Passenger Transport Mode Share (disaggregated)		Y									Y			
Urban Passenger transport mode share (disaggregated)		Y									Y			
Freight traffic mode share (disaggregated)		Y									Y			
Amount of Transport Fuel Sold/consumed (litre/MJ) (disaggregated)											Y		Y	
Fuel efficiency of vehicles (disaggregated)			Y										Y	
Alternative fuel penetration in vehicle fleet (disaggregated)				Y									Y	
Share of renewable energy in Transport fuel consumption											Y		Y	
GHG Emissions from Transport (disaggregated)											Y		Y	
PM Emissions from Transport (disaggregated)											Y			Y
NOx Emissions from Transport (disaggregated)											Y			Y
Road fatalities							Y							Y

## Disclaimer

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without authorization of IsDB. The content including boundaries shown on any map, colours, denominations and other information used in this report do not imply any judgement or views on the part of IsDB nor its member countries concerning the legal status of any territory or the endorsement or acceptance of such boundaries and information.





📍 8111 King Khalid St.  
Al Nuzlah Al Yamania Dist.  
Unit No. 1 Jeddah 22332-2444  
Kingdom of Saudi Arabia

☎ (+966-12) 636 1400

☎ (+966-12) 636 6871

🌐 [www.isdb.org](http://www.isdb.org)