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14 March 2017
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**UNITED NATIONS
CENTRE FOR REGIONAL DEVELOPMENT**

In collaboration with

**Ministry of Public Works and Transport, Lao People's Democratic Republic
Ministry of the Environment (MOE), Japan
Partnership on Sustainable, Low Carbon Transport
United Nations Economic and Social Commission for Asia and the Pacific, and
United Nations Office for Sustainable Development**

**INTERGOVERNMENTAL TENTH REGIONAL ENVIRONMENTALLY
SUSTAINABLE TRANSPORT (EST) FORUM IN ASIA,
14-16 MARCH 2017, VIENTIANE, LAO PEOPLE'S DEMOCRATIC REPUBLIC**

**A Comprehensive Assessment of EST Progress and Achievements Made
by Member Countries on the Implementation of the Goals of the
Bangkok 2020 Declaration**

(Background Paper for EST Plenary Session-9)

Final Draft

This background paper has been prepared by Mr. Robert Earley for the Tenth Regional EST Forum in Asia. The views expressed herein are those of the author only and do not necessarily reflect the views of the United Nations.

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Made by Member Countries on the Implementation of the Goals
of the Bangkok 2020 Declaration**

**Pre-Final Draft
March 2017**

**Submitted by:
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Section 1: Overview – Trends in Progress towards the Goals of the Bangkok 2020 Declaration

The Fifth Regional EST Forum in Asia (2010, Thailand) marked a key moment in the development of environmental sustainable transportation policy, when the participants unanimously adopted the “Bangkok 2020 Declaration”, demonstrating commitment towards realization of safe, secure, affordable, efficient, and people- and environment-friendly transport systems in Asia. With the design and acceptance of the Declaration’s twenty EST goals and associated indicators, countries in Asia started along a systematic, thoughtful pathway, informed by the avoid-shift-improve strategy, to cleaner development through transportation. The Bangkok 2020 Declaration called for innovative and smart solutions to significantly reduce air pollution, traffic congestion and road accidents while moving towards a more livable and sustainable society in Asia.

Today, nearly seven years after the adoption of the Bangkok 2020 Declaration, many countries in Asia have made use of these goals to establish policies, institutions, technologies, infrastructure, financing and partnerships to result in effective, efficient and beneficial transportation systems.

What are some of the trends being observed as countries in Asia move towards the goals of the Bangkok 2020 Declaration? This section will seek to briefly review some of the new policies and initiatives being developed by countries including governance, technological interventions, motorized and non-motorized transportation policies, and use of the internet for new approaches to transportation.

As will be described in detail in Section 2 of this report (see Figure 3), goals 1, 5 and 13 of the Bangkok 2020 Declaration have seen the most progress since 2010. These goals indicate what some of the trends might be in terms of implementation of EST principles in Asia, and the sections below will feature some of these trends.

Goal 1: Integrate land-use and transport planning

Integrated transportation and land-use planning has become a key feature of countries focused on EST. Planners have learned that when land-use is matched with public transportation in an intimate and integrated fashion, land-use planning can help ensure that there are enough riders to pay for public transport systems, while the public transport systems, if planned for convenience, can reduce costs for riders, and speed up local roads. The Republic of Korea described this relationship well in its report to the 7th Regional EST Forum, when it described its land-use and transport planning was integrated through budget, issue and place-centered comprehensive planning, bringing together urban authorities, transport authorities and finance under a common budget. While not all countries described integration so clearly, nearly all of the countries of the Regional EST Forum now have cities or national authorities that are bringing transport and land-use planning together to reap the benefits to their cities and economies.

Goal 5: Improving public transportation

BRT and MRT are the keywords for public transportation improvement in the Regional EST Forum. 12 of the 24 countries in the report have noted that they have either completed detailed planning or have BRT or MRT systems under construction in order to improve public transportation in their cities. BRT systems are especially noted for their relative ease and low-cost of installation, and their ability to improve the walkability of cities once they are in place. In addition to BRT systems, some countries such as Thailand, Pakistan and India are doubling down, using CNG buses to avoid the emissions associated with diesel buses. While energy prices remain low, and supply of natural gas is easy to acquire, this will be a trend in Asian cities that are increasingly dealing with diesel emission pollution.

Goal 13: Increasing safety

Safety is perhaps the top concern of governments in Asia when they are considering how to improve their transport systems, and this is the reason why Goal 13 has received the most attention through the EST process. Rates of collisions and traffic fatalities are very high in developing Asian countries, with some countries reporting that the equivalent of whole villages die on highways every year. Eleven countries have focused on reducing drink driving through enforcement and heavier penalties; Nine countries are improving speed regulation on roads as well as enforcement – including automated or enforcement or CCTV monitoring. Helmet and seat belt laws are also becoming more prevalent and better enforced.

New Technologies, New Trends

The P.R. China has revolutionized high-speed rail by rolling out the world's largest high-speed rail system in a matter of a few years. While Japan and Republic of Korea have long had high-speed rail projects in place, other countries like Indonesia, Thailand, Viet Nam, Singapore, Malaysia and India have taken the cue from P.R. China that high-speed rail is very accessible and desirable for countries to improve their connectivity and avoid developing the high-carbon aviation industry.

Bike sharing has likewise taken off in the past 5 years. Japan, India, P.R. China, Singapore, Thailand, the Philippines and the Republic of Korea are all in various stages of rolling out or encouraging bike-sharing in their countries. These systems, enabled by mobile phone technology or RFID cards or other payment systems, allow transit users to cut valuable minutes off their last mile trips from the public transport station. The P.R. China has seen another generation of bicycle sharing rolled out over the past year by the private sector. Mobike, Ofo, and a number of other companies have appeared en masse on the streets of Shanghai, Beijing, Guangzhou and other cities, providing bicycles that can be unlocked via a mobile phone app, allowing bikes to be left anywhere, and avoiding the expensive and often intrusive bike rack infrastructure needed for systems that use non mobile phone based systems. Mobike, the first of these bike share systems, plans to manufacture 5.6 million shared bikes to be put on China's streets in 2017. A new cycling revolution might be on its way.

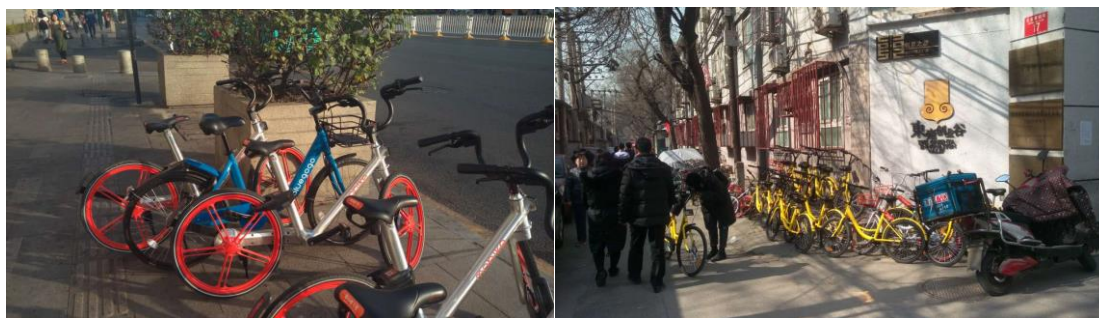


Figure 1 Mobike and ofo shared bicycles in the streets of Shanghai and Beijing, P.R. China. These new privately-operated bike-share systems do not require base stations to operate, they are activated by mobile phone. Images: Robert Earley

As countries and cities make use of the Bangkok 2020 Declaration goals as a guide for EST development, they are developing their own approaches to environmentally sustainable transport, often with the assistance of development banks and agencies. These developments will be explored in Section 2, a country-by-country and goal-by-goal assessment of EST progress and achievements made by member countries on the implementation of the goals of the Bangkok 2020 Declaration.

Section 2: Country-by-Country and Goal-by-Goal Assessment of EST Progress and Achievements Made by Member Countries on the Implementation of the Goals of the Bangkok 2020 Declaration

Methodology

Undertaking a comprehensive assessment of EST strategies in Asia is a large task. Due to the constraints of the project, the review was primarily limited to the information that had been reported by countries themselves in reports they had made to the Regional EST Forum process since the 5th Regional EST Forum, when the Bangkok 2020 Declaration was made. The 5th EST Forum was included in this comprehensive analysis to act as a baseline from which countries would move forward in the context of the Declaration.

The first task of the report was collating data from each country on each goal over the period to date of the Bangkok 2020 Declaration and creating the tables in Annex 1 of this report. In some instances, the results from global reports were also included in as many countries as possible, particularly in the areas of e-government, for which the United Nations Department of Economic and Social Affairs published a report in 2016¹, Road safety, for which the World Health Organization published a review in 2015², and the Partnership for Clean Fuels and Vehicles maintains an up-to-date database on fuel quality and automotive emission standards for most countries.³ In a limited number of cases, some follow-up was undertaken with internet research, particularly in cases where a significant initiative was reported in one year, but not in the next. Follow-up research was used to ascertain whether or not the initiative was still underway or not. Those internet resources are listed directly in the text of the specific goal-country report found in Annex 1.

The second task of the report was to try to identify trends from a comprehensive perspective on regional progress towards the goals of the Bangkok 2020 Declaration. The main objectives were to understand which goals were being addressed by more countries, which ones were seeing faster progress, and which ones might still need attention. The other objective was to identify which countries were becoming leaders in EST implementation in the Region.

In order to analyse the comprehensive progress of countries in Asia along the 20 goals of the Bangkok 2020 Declaration, a point system was developed to attempt to evaluate the importance and progress each country had made. The point system was as follows:

$$Points_{Progress-Adjusted} = (Points_{Self-rated} \times 0.75) + (Points_{Progress} \times 0.25)$$

Where:

$Points_{Progress-Adjusted}$ represents a performance rating of a specific country in a specific goal. It is a weighted average of $Points_{Self-rated}$ and $Points_{Progress}$, where they are weighted at 75% and 25% respectively.

¹ United Nations Department of Economic and Social Affairs. 2016. United Nations E-Government Survey 2016: E-Government in Support of Sustainable Development. New York: United Nations. Online: <https://publicadministration.un.org/egovkb/en-us/reports/un-e-government-survey-2016>. As viewed on 1 March 2017.

² World Health Organization. 2015. Global Status Report on Road Safety 2015. Geneva: World Health Organization. Online: http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/ As viewed on 1 March 2017.

³ Partnership for Clean Fuels and Vehicles. 2017. Webpage: "Where we Work: Asia Pacific". Online: <http://drustage.unep.org/transport/pcfV/where-we-work/asia-pacific> As viewed on 3 March 2017.

Points_{Self-rated} are the levels of action each country reported for each goal in its most recently completed country report questionnaire from the 9th or 10th EST Forum⁴, where points are given on a scale of 1 to 4:

- Not yet = 1 point
- Some Progress = 2 points
- Largely in Place = 3 points
- Fully Completed = 4 points

Points_{Progress} is an adjustment factor assigned by the author that attempts to take a broad look at progress made by each country for each goal over the period since the Bangkok 2020 Declaration. This factor is a subjective score between 1 and 4 and reflecting the author's interpretation summary of progress between the 5th EST Forum and the 10th EST Forum, and is based on the following rule:

If a country has reported on a goal consistently over the period since the Bangkok 2020 Declaration, demonstrating progress year-on-year, then:

$$\text{Points}_{\text{Progress}} = \text{Points}_{\text{Self-Rated}} + 1.$$

If a country has reported on a goal, but had not reported consistently year-on-year, or progress was not clear, then:

$$\text{Points}_{\text{Progress}} = \text{Points}_{\text{Self-Rated}}$$

If a country has reported on a goal, but the content of the report was not relevant to the goal, or inconsistent with the overall summary, then:

$$\text{Points}_{\text{Progress}} = \text{Points}_{\text{Self-Rated}} - 1$$

The impact of Points_{progress} is meant to be moderate, especially due to its subjectivity and incomplete data availability. As a result, it is given a 25% weighting in the Points_{Country-goal} rating, and does not differ dramatically from Points_{Self-rated}.

⁴ Countries that did not complete a "Country Report" questionnaire from the 9th or 10th EST forum were not included in the points analysis because there are likely to have been many changes since the Regional EST Forums before that time, or because they would not have answered the "action rating" question. This exception includes P.R. China, India, Lao P.D.R., Maldives, the Russian Federation, the Republic of Korea, Cambodia, and for some goals, Japan, Singapore and others. Because the Islamic Republic of Iran has only recently joined the EST Forum Process, it has also not been included.

Note on the methodology: Data source quality

Due to the constraints of the project, the primary source of data are the reports that countries have made to the EST forum themselves, including the progress reported on policies and projects, as well as the degree to which progress had been made (i.e. “Not Yet”, “Some progress”, “Largely in Place”, and “Fully Completed”). It was noted during the data collection process that from year to year, the focus of some country reports would change, and the degree of action reported would also fluctuate. Sometimes the degree of action would progress from year to year towards fully completed, but it was also not unusual for action in some goals to switch from “Largely in Place” in one year, to “Not Yet” in the next. As noted in a review by Litman (2016), these changes in ratings likely reflect the interpretation of the individual filling in the questionnaire rather than of changes in the situation on the ground, and that as a result, “there are probably many ‘false negatives’” which will not be properly controlled for in this analysis. It is hoped by undertaking a comprehensive assessment of each country’s performance in each Bangkok 2020 goal, that progress on each goal can be summarized and documented in this report.

Reference:

Litman, Todd. 2016. Major Challenges, Progress and Achievements by Asian Countries on the Implementation of EST Policies and Measures from Aichi EST Forum (2005) to Kathmandu EST Forum (2015) (Pre-Final Draft). Nagoya: United Nations Center for Regional Development.

Results

This section aims to identify trends in the comprehensive implementation of the Bangkok 2020 Declaration goals across Asia according primarily to the reports delivered by countries to the Regional EST Forums since the 5th Regional EST Forum. In order to provide a comprehensive analysis, the data will be used to describe patterns and trends across the region in terms of which EST strategies and goals are receiving the most attention and progress, and which countries are achieving the best outcomes at this time.

EST Strategies

The Bangkok 2020 Declaration’s 20 goals embed the strategic EST strategies of “Avoid”-“Shift”-“Improve”, plus a variety of Cross-Cutting Strategies. The goal-by-goal and country-by-country comprehensive analysis (Annex 1) was analyzed to determine which of these EST strategy groups were seeing more progress over the period since the 5th EST Forum (Figure 2).

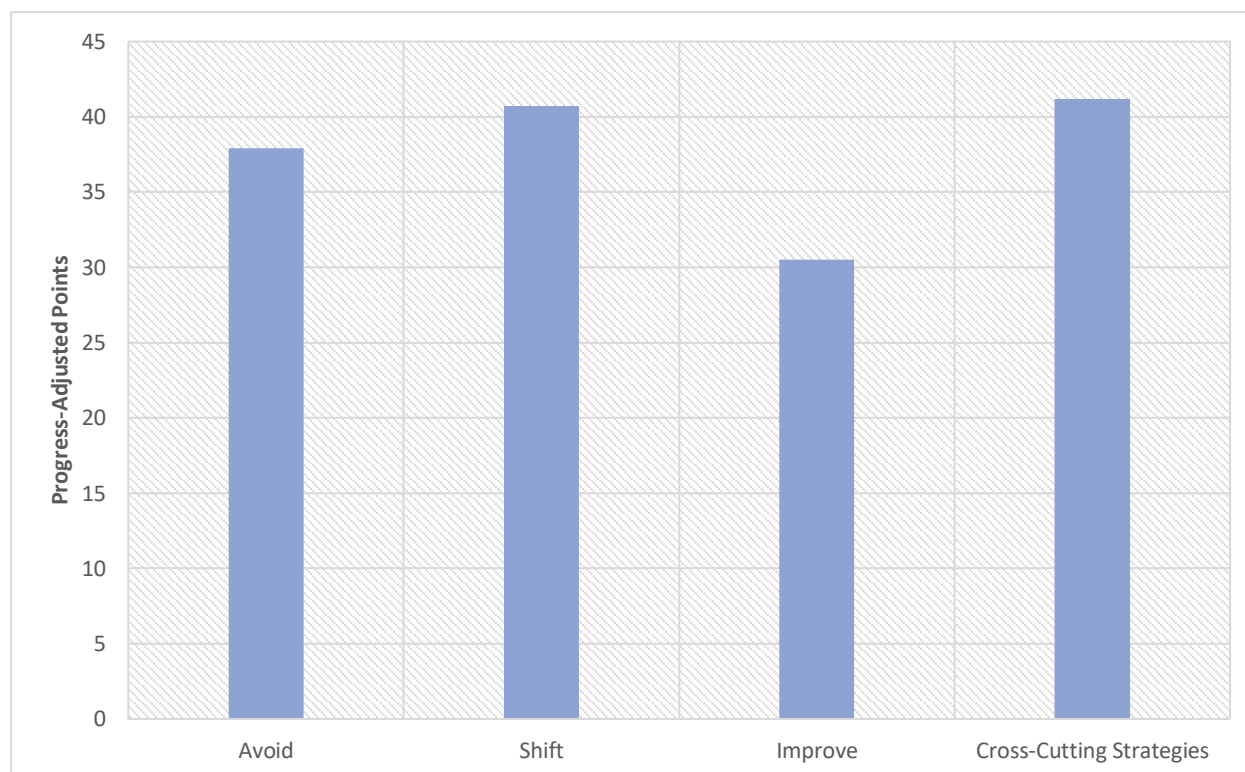


Figure 2 Average progress-adjusted points per goal within each strategy group using data from all reporting countries⁵. The goals achieving more progress in countries tend to be in the Cross-Cutting Strategies and “Shift” Strategies, while “Improve” goals could use more attention.

The analysis found that of the Avoid-Shift-Improve strategies, “Shift”, which includes Non-Motorized Transport, improved public transport, Transportation Demand Management, and improved inter-city passenger and goods transport, saw more progress over time. “Improve” strategies, which include sustainable transport fuels and technologies, standards for fuel quality, fuel efficiency and emissions,

⁵ 17 countries that submitted the “Country Report” questionnaire to the 9th or 10th Regional EST Forums are included in this analysis. Excluded countries include P.R. China, India, Lao PDR, Maldives, the Russian Federation, The Republic of Korea and Cambodia. For countries where data points were missing, they were filled with the *mean average* value of progress-adjusted points for that country. This occurred for three data points for Japan, and one data point for Singapore.

inspection and maintenance (I/M), intelligent transport systems (ITS) and improved freight transport efficiency, saw considerably lower progress over the time period.

In order to understand more about how these strategies were approached by countries, the EST goals of the Bangkok 2020 Declaration can also be analysed one-by-one.

EST Goals

The EST Goals were analysed one-by-one to try to get a picture of how Asian countries were approaching progress towards environmentally sustainable transportation in their reports to the Regional EST Forums. This analysis looked at the average progress score for all of the reporting countries for each goal (Figure 3).

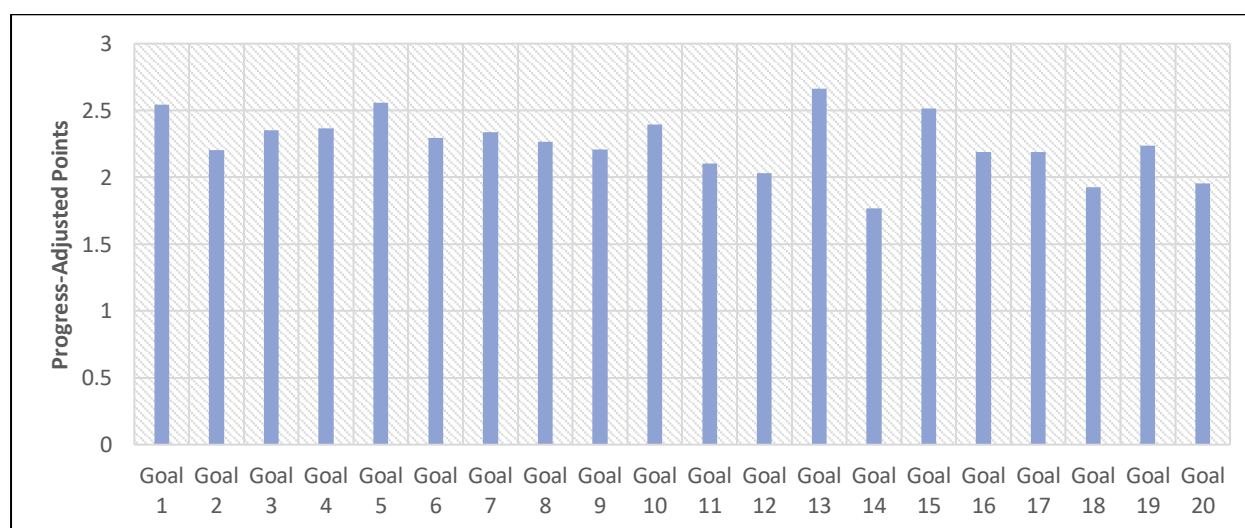


Figure 3 Average progress achieved per goal by all reporting countries. Goals 1, 5, 13 and 15 saw relatively high progress, while goals 14, 18 and 20 saw progress less than other goals.

This analysis suggests that on average, the goals that are experiencing the most progress in countries are goals 13 (road safety), 5 (improved public transport), 1 (formally integrate land-use and transport planning), and 15 (establish air quality and noise standards). These are the goals that, on average, are closer to achieving “Largely in Place” across all reporting countries. Meanwhile, Goal 14 (monitoring health impacts), goal 18 (encourage innovative financing mechanisms), and goal 20 (promote good governance) are goals that, on average, do not even meet the standard of “Some progress” and may need more attention across the region. Most of the goals seem to have exceeded the standard of “some progress” to varying degrees, indicating that countries on the whole are continuing along the pathway of meeting most of the Bangkok 2020 Declaration goals.

Progress by countries

The final analysis undertaken for this section of the report is meant to identify the performance of countries in comparison to each other. Figure 4 is a ranking of the countries that have reported using the EST Forum questionnaire at the 9th or 10th EST Forums according to their progress-adjusted points. A list of countries and their self-reported points, compared to their progress-adjusted points can be found in Annex 2.

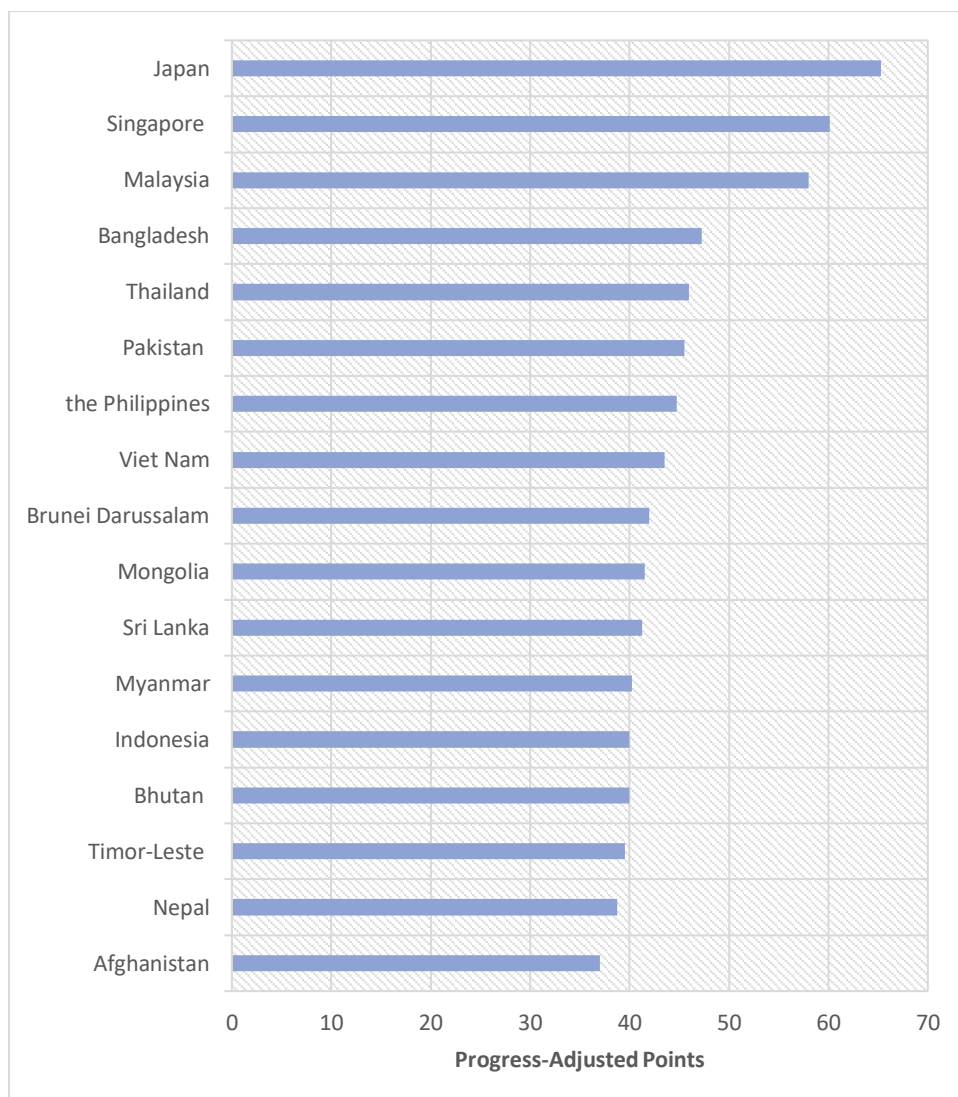


Figure 4 Progress achieved by the reporting countries over the period since the Bangkok 2020 Declaration at the 5th Regional EST Forum. In many ways, progress matches trends in economic development of the countries.

It should be expected that advanced economies in the region should achieve the most progress along the way to the Bangkok 2020 Declaration goals, given the economic, academic and industrial tools at their disposal. Yet economic development is not the only force at play, given the high performance of some countries. This will be analysed in the Discussion.

Excluded countries

Some countries were excluded from the numerical analysis of this paper because they had not provided up-to-date completed Country Report questionnaires to the Regional EST Forum process, or had not undertaken self-rating, and therefore had no data that could be used for analysis. This section will describe the performance of some of the countries.

Cambodia

Road safety has been the primary focus of Cambodia's reports to the Regional EST Forum process. While the country has not reported recently on progress along most of the 20 goals of the Bangkok 2020 Declaration, Goal 13 saw updates and progress over time. The country has identified safety as a major issue, identified locations and specific safety practices to improve,

and has rolled out a new road traffic law mandating helmet use for motorbike riders and significantly increased fines for drink driving.

P. R. China

While the P.R. China has not made a country report to the Regional EST Forum since the 7th Regional EST Forum in Bali, the country has made significant progress in most of the EST goals. Being a very large country, it is difficult to summarize specific initiatives, but key themes are as follows:

- Comprehensive urban and regional planning featured in the 13th Five-Year Plan, including macro-regional developing around the Beijing-Tianjin-Hebei region, Yangtze River Delta region and Pearl River Delta region.
- Local TOD initiatives abound in P.R. China, but also international TOD initiatives, including the Belt and Road initiative, which seeks to build up infrastructure along trade routes across Asia and Europe.
- An explosion in ICT to reduce and optimize travel. High internet access rates, advanced online shopping, payment, banking and e-government systems help to avoid trips, while internet taxi services, internet bicycle rental services, and advanced online mapping, telematics and real-time transit information help to optimise transportation without personal vehicles.
- Advanced TDM strategies such as odd/even license plate limits, limits to total license plate issuance, parking pricing reform and discussions on congestion fees
- Massive roll-out of high-speed passenger rail provides comfortable, modern rail service between major cities with a reasonable speed.
- Aggressive fuel, tailpipe emission and fuel consumption standards, with China 5/V (Euro 5/V equivalent) nationwide by 2017.
- Large electric vehicle program makes electric vehicles and plug-in hybrid electric vehicles a common sight on streets of P.R. China.
- Initiation of the China Green Freight Initiative and pilot projects on drop-and-hook logistics systems.

Air pollution, congestion and technical innovation have all forced P.R. China to dramatically improve transport systems, making it an important leader for Asia. On the whole, P.R. China would likely have increased average progress scores for most EST goals.

India

India's most recent report was to the 8th Regional EST Forum in Colombo, Sri Lanka. India has seen progress in its transport system, but also still has many opportunities to improve. Some of the highlights from recent reports include:

- The National Mission for Sustainable Habitat and National Urban Transport Policy have created an opportunity for integrated land use, transportation planning and transportation operation.
- India has focused on public transportation as a key for EST, aiming to replicate the experience of metro transport through BRT development.
- Alternative fuels are a major initiative, with CNG buses rolled out across at least 60 city public bus systems and auto LPG to 270 cities for three-wheeler conversions. A natural gas highway was under development between Delhi and Mumbai.
- A dedicated freight rail corridor is developing to facilitate faster and more efficient freight transport across the country.
- The Golden Quadrilateral, connecting Delhi, Mumbai, Chennai and Kolkata, is being used as a growth opportunity for ITS, and parking systems, electronic toll collection, automated travel information systems and intelligent signal control are being used in New Delhi, Bangalore and Pune.

Generally speaking, India faces increasing challenges due to air pollution, congestion and economic efficiency that are pushing for improved EST performance, and is likely to have increased average performance for most goals if it had reported.

Republic of Korea

The Republic of Korea (ROK) is a well-developed economy in Asia, and has dedicated resources to EST and generally performs well. Highlights of its activities include:

- Budget, issue, and place-centered comprehensive planning is practiced in ROK cities, bringing together urban authorities, transportation authorities and finance under an integrated budget.
- Republic of Korea is a leader in e-government development, which aims at active sharing of data and removing barriers between agencies for collaboration. Additionally, ROK identified 50 smart city projects in 2013.
- A “Make Drivers Uncomfortable, Passengers Comfortable” campaign was launched to support TDM measures including pedestrian priority areas, traffic calming measures, and “transit malls” that only public transit vehicles may use. Other TDM measures include congestion charges, IT-based remote working, car “rest days” based on license plate number, parking controls, etc.
- High speed rail has been implemented as a means of attracting passenger to ride, but also as an anchor for TOD.

Lao PDR

The most recent comprehensive EST report made to the Regional EST Forum was during the 7th EST Forum at Bali. As a result, information may be out of date. However some progress has been reported:

- An Urban Transport Master Plan was developed for Vientiane which included a commitment to have two bus routes available to passengers within 150 m of any point in the core area.
- Electric tuktuks were piloted in Luanprabang, and by 2015, 14 3-wheelers were operating with 2 battery exchange stations.

Maldives

As a nation of many small islands, the Maldives presents an interesting case for EST in Asia. Yet common approaches still exist:

- Master planning was underway for Hulhumale Island, a newly-reclaimed space for residential development. The Island will be connected to the International Airport and to Male by bridges, with public transportation services available. The master plan also takes into account facilities for pedestrians and cyclists.
- Maldives aims to reduce emissions from its light duty car fleet to 140g CO₂/km by 2015 and to increase biofuels in transport to 10%.
- NMT is still a main means of travel on many islands, where cars and motorbikes are not practical.
- An import duty adjustment was made to encourage electric vehicle import and discourage internal combustion motorized vehicles (a “feebate” strategy)

The Russian Federation

Unfortunately, the Russian Federation has not submitted reports to the Regional EST Forums during the period after the Bangkok 2020 Declaration, and as a result, no data is readily available for reporting.

Discussion

Countries in Asia are making remarkable advances in the direction of achieving the Bangkok 2020 Declaration goals. While a numerical analysis suggests that countries have taken off on a path towards increased progress, even reading through the reports of countries over the years demonstrate that for many countries, most of the EST concepts that were in the conceptual stage in 2010 are now well into planning and even financing or implementation phases.

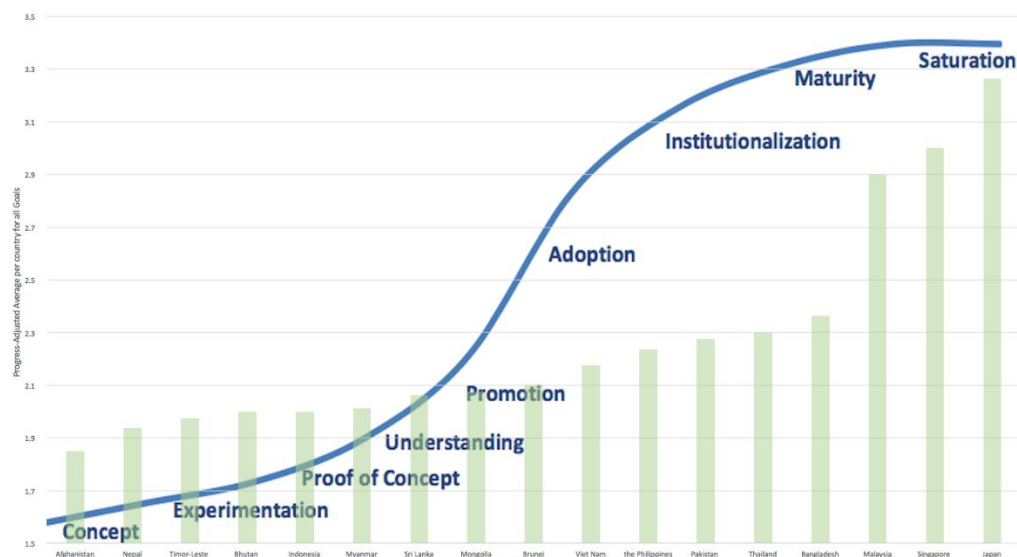


Figure 5 Overlay of the Innovation Deployment S-Curve cited in Litman (2016) on the ranking of country performance in terms of progress in carrying out the 20 goals of the Bangkok 2020 Declaration.

Figure 5 illustrates how countries with average scores of 1.8 – 2 are still in the concept, experimentation, and understanding phases of some of their EST work, while countries with more mature governance structures and economies tend to be scoring around 3 points, or “Largely in Place” – a sign of maturity and saturation, if looked at through the lens of technology.

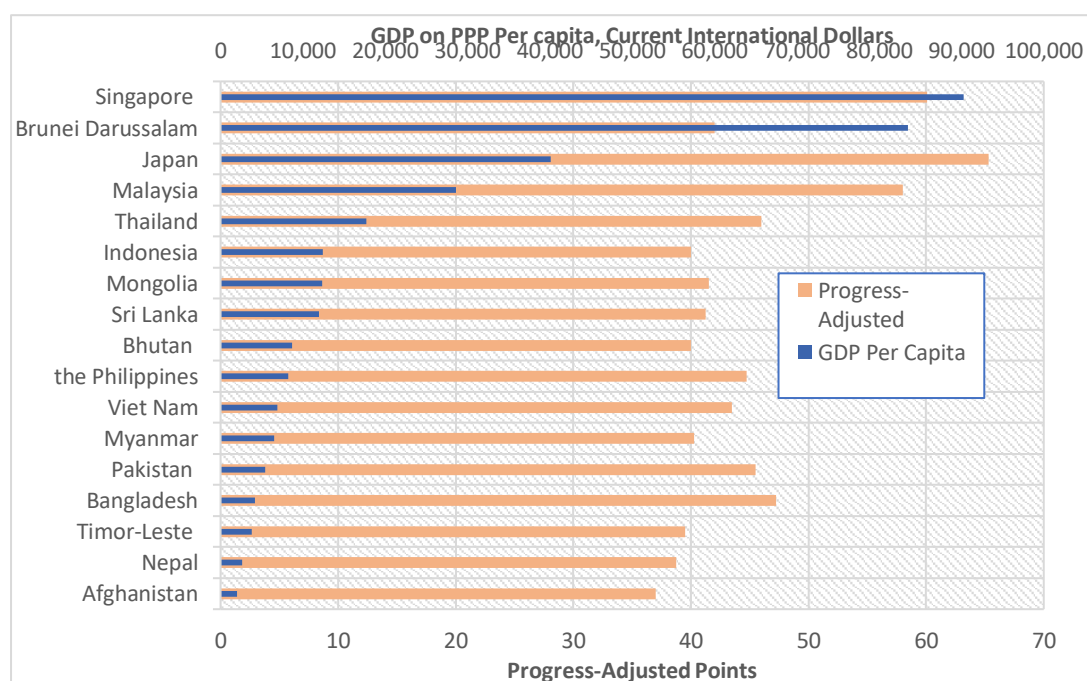


Figure 6 While a general trend is for Progress-Adjusted EST Points to follow GDP per capita, Some countries such as Pakistan, Bangladesh and the Philippines are starting to punch above their economic weights.

It should be noted, however, that economic development is not the only factor at play. Although as seen in Figure 6, progress achieved by companies broadly follows their levels of economic development, but countries such as Bangladesh, Pakistan and the Philippines seem to be accelerating their EST performance beyond their economic peers. Indeed, in Bangladesh's reports to the EST Forum, it indicated that Dhaka is quickly growing to become one of the largest cities in the world, and policy is needed to ensure that the city doesn't collapse under its own weight. Similarly, Pakistan has taken an organized and comprehensive approach to its EST reporting that gives it a feeling of increasing performance over time. That these countries can outperform in EST progress despite their GDP ratings should give hope to all developing countries that EST is within reach.

Section 3: Recommendations and Conclusions

Progress is happening in the development of EST in Asia. Countries are organizing themselves to find innovative and nationally-appropriate solutions to their transportation challenges with the help and guidance of the 20 Goals of the Bangkok 2020 Declaration and its associated indicators. In some cases, countries are starting to coalesce around solutions. CNG vehicles are proving beneficial to countries that have access to natural gas, allowing them to burn clean fuel and avoid the pollution associated with diesel. Meanwhile, electric vehicles are slowly offering an opportunity to petrol-fuelled vehicles, and more and more countries are trying to organize to accommodate and encourage their development. Public transport is starting to take real hold in more and more countries, and the concept of BRT has gained acceptance as an effective and relatively inexpensive means of providing mass transit services to populations, and creating the benefits of Transit Oriented Development around stations. And as more cities take advantage of public transportation, their urban plans and land-use planning are evolving to use those public transportation services efficiently for social and economic development. In the meantime, technological and global political changes are offering opportunities for countries to consider infrastructure such as high speed trains, digital mapping, real-time traffic monitoring by mobile phones and bike sharing in order to improve their transportation systems.

As countries' programs improve, their reporting is also improving. At the 10th EST Forum, more countries have made use of the country report reporting questionnaire than ever before, and it is more and more useful for demonstrating progress over time. Countries are listing comprehensive laws, plans and programs that can demonstrate their progress towards their EST goals. Countries would do well to continue to use this means of reporting so as to ensure consistent progress before each Regional EST Forum.

The Country Report reporting questionnaire is indeed useful for reporting plans and progress, but it is not calibrated to allow countries to report on the indicators that are associate with the goals of the Bangkok 2020 Declaration. In the analysis of national reporting for this report, it was found that no countries reported on any indicator listed in the Bangkok 2020 Declaration. As countries become comfortable with progressing towards the goals of the Bangkok 2020 Declaration, they may find it useful to have a framework in place to begin reporting along some of the indicators, and this might be a good addition to the questionnaire form. Reporting on indicators will also create a more objective and consistent metric by which to measure progress in the future for all countries and the region at large.

Finally, now that countries are beginning to develop their own concepts for EST implementation in their countries, the UNCRD and its partners would do well to create an online database or reporting system that allows for projects, indicators and other data to be reported electronically so that it is easily searchable by countries and other stakeholders. An online database would be an important platform for sharing information and experiences, tracking data, and highlighting progress.

References Cited

The country and city EST Forum reports used in the development of this report are found on the UN Centre for Regional Development (UNCRD) website:

5th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&type=13&nr=8&menu=232>

6th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&type=13&nr=12&menu=222>

7th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&type=13&nr=108&menu=222>

8th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&nr=116&type=13&menu=198>

9th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&nr=956&type=13&menu=198>

10th Regional EST Forum website:

<http://www.uncrd.or.jp/index.php?page=view&type=13&nr=984&menu=198>

Other documents used in the development of this report are as follows:

Litman, Todd. 2016. Major Challenges, Progress and Achievements by Asian Countries on the Implementation of EST Policies and Measures from Aichi EST Forum (2005) to Kathmandu EST Forum (2015) (Pre-Final Draft). Nagoya: United Nations Center for Regional Development.

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Annex 1: Goal-by-goal, country-by-country detailed assessment of progress around the goals of the Bangkok 2020 Declaration (2010-2020)

Goal-1: Formally integrate land-use and transport planning	
Afghanistan	From a state of difficulty in 2010, Afghanistan has gradually improved its planning capacity and undertaken some design and piloting of land-use and transport planning integration. Specifically, the country has undertaken the ANDS, the national development strategy and vision 2020 for Afghanistan putting priority on urban planning including transport planning (reported during the 7 th EST forum), integrated EST as a strategy in its Strategic Urban Air Quality Management Framework (reported during the 8 th EST forum), and begun an Environmental and Social Impact Assessment of housing schemes in its major cities (reported during the 9 th EST forum).
Bangladesh	<p>Bangladesh has developed various long-term strategies and plans that are meant to integrate transportation and land-use planning.</p> <ul style="list-style-type: none"> · The Strategic Transport Plan for Dhaka, 2005, is in place to be implemented over a period of 20 years, and was reported to be under revision during the 8th EST Forum in 2014, and a Dhaka Structure Plan should be implemented 2016-2035, according to the country's report to the 9th EST Forum. · The National Integrated Multimodal Transport Policy (NIMTP), mentioned in the 2010 5th EST Forum Report was approved in 2013, emphasizing the need to reduce travel demand through better integration of transport planning and land use (www.rthd.gov.bd), and was reported in place by 2015. · The Dhaka Transport Coordination Authority was put into place for transport sector coordination in greater Dhaka. DTCA prepared a Strategic Transport Plan (STP) for Dhaka to be implemented over a period of 20 years. Chittagong Development Authority, Khulna Development Authority and Rajshahi Development Authority organizations also ensure proper integration of land-use and transport planning. Implementation of Mass Rapid Transit (MRT) Line-6 and Bus Rapid Transit (BRT Line-3, Joydevpur – Airport) were ongoing in 2014 – by November 2016, newspapers had reported that the MRT would be under construction for 5 years.
Bhutan	Until 2011, Bhutan's reports focused on improved land use planning, without referring directly to transportation planning as well. In fact, EST implementation reports from the 5 th EST forum focused on improving vehicles more than integrating land use and transport planning. With the assistance of the ADB, the Bhutan Transport 2040 Integrated Strategic Vision was produced, outlining the period of transition that the country is going through, and how transport can be catalytic for changing the socioeconomic development of the country. Meanwhile, from the 5 th to the 9 th EST forums, more and more urban centers developed local area plans and followed an integrated land use and transport planning process. In its report to the 10th EST Forum, Bhutan stated that Thimphu Structural Plan has identified transport corridors and bus terminals compatible with land use, and that local area plans now have provisions for transport infrastructure.
Brunei Darussalam	Brunei Darussalam, faced with increasing car ownership and use and associated traffic congestion and traffic collisions, injuries and fatalities, the Government of Brunei commissioned the Land Transport Master Plan and the Wawasan 2035 to reduce car dependence, congestion, journey time delay and pollution while reducing costs for individual communities and investors, supporting economic growth and improving social inclusion and improving quality of life for local people and visitors alike. Policy PD1, identified in the Land Transport White Paper 2015 specifically identified that land use development and transport planning should be integrated, and that Transport for Brunei be created to coordinate its implementation.

Cambodia	No mention of land use planning or integrated transport and land use planning was made in Cambodia's reports to the EST Forums.
P.R. China	P.R. China undertakes a comprehensive planning process every five years, in the form of a five-year plan. The 12 th Five-Year Plan was issued in 2011, the 13 th Five-Year Plan was issued in 2016. Five-year plans form a comprehensive approach to planning that flows from national macro socio-economic targets down to gradually more specific plans for each segment of the economy and government to each locale. In principle, this is inherently an integrated land-use and transportation plan. Some of the highlights of the 12 th Five Year Plan included targets for urbanization, shifting industrial development in coastal cities from manufacturing to service economy, implementation of high-speed rail, new airports, etc., along with targets for GDP to grow around 8% in 2011, and other indicative macroeconomic targets. The 13 th Five-Year Plan has featured "Urbanization with Chinese Characteristics", which is still a concept under development, but which has great potential to include EST principles. The PRC is also undertaking comprehensive planning at the regional level, for example, in the Jing-Jin-Ji region (Beijing, Tianjin, Hebei) region, where these three jurisdictions which have in the past been managed separately are starting to be seen as one economic unit, complete with service industry, manufacturing, agriculture and other sectors of the economy distributed over different areas of the region, and comprehensively-planned transportation resources put in place to maximize connectivity and efficiency. One specific example in this plan could be said to be the location of Beijing's new international airport, which is located at the center of a triangle between Beijing, Tianjin and Baoding, with associated road and rail transport modes under development.
Indonesia	Integration of land-use and transportation planning has been a priority for some Indonesian cities for a long period of time. As early as 2004, Jakarta and the Jabodetabek region had undertaken land use and population density studies with the aim of laying out transportation networks (7 th EST Forum). During the 9 th EST Forum, it was reported that the Jabodetabek Master Plan would be implemented by the local transport authority. The Master Plan is scheduled to be completed mid-2017, and will be implemented in three phases, from 2017-2019, 2020-2024 and 2025-2029. The Master Plan, released as a Presidential Decree, will come complete with detailed regulations from ministries including the Ministries of Transportation, Public Works and Housing, Land and Spatial Planning, and plans drawn up by governors and mayors. (http://jakartaglobe.id/news/jakartas-integrated-transportation-masterplan-wrapped-soon/) At the national level, a "One Map Policy" was introduced in the Economic Policy Package VIII that, by 2019 could overlay up to 35 digital maps over a basic topological map of the country including land use, environmental resources, regulatory boundaries and transportation and utilities, allowing for more comprehensive planning and decision-making (KPPIP, 2016)
India	India's Ministry of Urban Development released the National Urban Transport Policy in 2006 with the aim of bringing about sustainable urban transport for passengers and goods (6 th EST Report). Master planning and the Town Planning Scheme focus primarily on land-use. Meanwhile, the National Mission for Sustainable Habitat aimed to integrate measures related to taxation, parking and congestion charges, public carriage specifications, norms for Non-Motorized Transport, etc.
Japan	Japan's reconstruction after the Great East Japan Earthquake focused on integration of railways and community development, as reported in the 6 th EST Forum. At the 7 th EST Forum, Japan reported that 59 local governments had implemented strategies for urban and regional comprehensive transport, featuring Toyama City, where land-use and transport integration was underway, with public transport as the central axis and promotion of dwelling in city center and near public transport. In its report to the 8 th EST Forum, Japan noted its "Low Carbon City Act", where 15 cities would promote low-carbon urban development through intensification of urban functions and promotion of use of public transport. As of the 9 th EST Forum, the "Regional Public Transport Network Formation Plan" had been established and 55 plans underway.

Republic of Korea	At the beginning of the Bangkok 2020 Declaration process, Republic of Korea defined integration of land use and transport as mixing of high density development and mass transit stations so as to reduce the number of trips, shorten travel distance and create better environments for walking and cycling. This was expanded upon at the 7 th EST Forum, where the country reported that land-use and transport were integrated through the budget and issue and place-centered comprehensive planning, bringing together urban authorities, transport authorities and finance under an integrated budget. In its report to the 9 th EST Forum, Republic of Korea noted that the Ministry of Land, Infrastructure and Transport has a Special Act on Metropolitan Regional Transport Management to set long-term and mid-term transport plans, while regional and local governments plan and implement urban transport within their jurisdictions.
Lao PDR	Lao PDR reported at the 5 th EST forum that it had embarked on the Mekong River Integrated Management Project as part of Vientiane's 450 th Anniversary, focusing on Safety, Cleanliness, Green, Lighting, Civilization and Charming, to be completed in 2013. The plan included riverbank protection, a riverside road, park and port improvement. According to the Lao PDR report to the 6 th EST, the Vientiane Urban Transport Master Plan was completed in 2008 and is being implemented, with the assistance of Japan. Finally, the ADB was supporting a Vientiane Sustainable Transport Project, which was in the pre-feasibility phase. The project would focus on traffic management, public transport and institutional reform over a defined urban area in Vientiane. At the 7 th EST Forum, Lao PDR reported that Land use planning was part of the EST Strategy, including several master plans. The Draft EST plan was officially submitted to the Government of Lao PDR to be considered for approval in 2015 (9 th EST Forum).
Malaysia	Malaysia's approach to integrated transport and land-use planning was largely in place by the 5 th EST Forum, with the National Green Technology Council meant to promote Land Use Transport Planning and Transit-Oriented Development. During the 7 th EST Forum, the National Physical Plan for Peninsular Malaysia was prepared, including a specific strategy on integrating national and urban transport networks, and recognizing the inter-relationship between land use and transport. Structure Plans for 11 states integrated urban-rural transport networks and facilitated land use and transport development as a focus. Local Plan and Special Area Plans for cities included strategies related to local transport and traffic planning and private vehicle use reduction, and formulation of Planning Guidelines of Compact Cities encouraged urban development and reduce travel using private vehicles. The "Future Cities Initiative" was under development, with one focus on green transportation and public transport. The National Physical Plan was reported completed in Malaysia's report to the 10 th EST Forum, awaiting publishing by the government.
Maldives	Little information has been reported on integration of land-use planning and transportation planning in Maldives. Yet during the 9 th EST Forum, it was reported that master planning was occurring for Hulhumale Island with transportation planning and land-use planned together – facilitated by the construction of a new bridge to allow for more convenient travel between Hulhumale, the International Airport, and Male. Male has also undertaken a road re-design project which allows for more parking spaces in the capital, creates more pedestrian space, redesigns the public transport network, and improves drainage on the island.
Mongolia	The Ulaanbaatar City 2030 Master Plan includes establishing land use zones in coordination with transportation planning. Plans include construction of a new network of major roads including 9 north-south corridors, 6 east-west corridors and 4 ring roads and upgrading current roads to mitigate traffic congestion and redistribute traffic. In order to support these goals, Mongolia continues to establish a legal environment for city development land policy framework and improve the legal regulation of land utilization, possession and ownership. Mongolia is implementing many plans at the national, regional and local levels, and in association with international organizations.
Myanmar	Myanmar has been steadily developing a Master Transport Plan and Project for Comprehensive Urban Transport Plan of the Greater Yangon (YUTRA) with the assistance of JICA with the final plan launched in 2014 setting a growth target of an average of 7.2 percent per year (8 th EST Forum).

Nepal	<p>Nepal has upgraded its ability to plan comprehensively in a stepwise fashion. During the 7th EST Forum, it reported that the functions of transport infrastructure and management would come under the same ministry. During the 8th EST Forum, the Transport Master Plan of Kathmandu Valley 2014 was being prepared to coordinate land use and transportation, and by the 10th EST Forum, Nepal reported that several plans were developed to achieve this goal:</p> <ol style="list-style-type: none"> i. National Urban Policy 2007 moud.gov.np ii. National Urban Development Strategy 2017 www.moud.gov.np iii. Kathmandu Valley Risk Sensitive Land Use Plan www.kvda.gov.np iv. Municipal Transport Master Plan (100 municipality) www.mofald.gov.np v. District Transport Master Plan (75 District) www.mofald.gov.np vi. Development of special transport corridor and Special Economic Zones along Birgunj-Pathalaya, Bhairahawa-Butwal, Biratnagar-Ithari-Dharan etc sector
the Philippines	<p>Integrated urban transport and land-use policy was discussed in the 5th EST Forum, especially with regards to the public transport strategic plan for Metro Cebu and Mega Manila Public Transport Planning Support System, which were expanded upon in the 6th EST Forum report. The 8th EST Forum report included a detailed description of integrated transport and comprehensive land use planning in Baguio City, including promotion of public transport, pedestrian transport in all roads, efficient circulation/access in the city to reduce travel, traffic and congestion, locating urban development services in strategic areas to reduce congestion, provision of equitable distribution of urban services, and development of an environment-friendly transport system to reduce time and energy consumption. The Metro Manila Capacity Enhancement Project to restructure public transport routes and services to meet existing and future travel demand was completed by the 9th EST Forum, and a road transit rationalization study was underway with regional transport models and urban development strategies for regions outside Metro Manila. The 10th EST Forum report notes that Traffic Impact Assessment and Traffic Management Plans are being studied, Omnibus Guidelines in Planning and Identification of Public Road Transportation Services and Franchise Issuance, and Transport was described as a sub-sector under Infrastructure of the Comprehensive Land Use Plan for local governments in the Philippines.</p>
Pakistan	<p>Pakistan was exploring the concept of integrated land use planning during the time of the 5th EST Forum, where it reported that newly developed communities were making use of this planning method. During the 8th EST Forum, Pakistan reported that all new development projects must include a traffic impact study prior to execution. The country noted that cities that are already largely built up may have little use for integrated transport and land use planning, yet the City of Karachi has made some effort to bring these two areas together, an idea that was enforced in the 9th EST Forum report. BRT planning was used as one example in 5 major cities in the report to the 10th EST Forum, and it was reported that the Federal government has it mandatory for new townships to have land use and transportation planning. Comprehensive transport studies have been conducted in Karachi, Lahore, Peshawar, Faisalabad, etc.</p>
Russian Federation	<p>The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.</p>
Singapore	<p>Singapore has long focused on integrated transport and land-use planning. The country reported at the 5th EST Forum that integrated transport and land-use planning is a key pillar of enhancing its public transport system. This task was listed as “fully completed” at the 8th EST Forum, with Singapore noting that Singapore’s Master Plan and the Concept Plan provide a comprehensive and integrated planning framework to balance the many land use needs such as housing, industry, recreation, transport, and community facilities.</p>

Sri Lanka	In its report to the 7 th EST Forum, Sri Lanka first discussed integrated land use and transportation planning, in the context of new cities, e.g. Hambantota. A case study on Colombo was presented at the 8 th EST forum, noting the relocation of government agencies and Defence complex with transportation integrated in the plan. Furthermore, the city had identified 7 corridors and identified ideal public transport options for them according to expected populations along those corridors in the future. Colombo was also developing Port City – a land reclamation project targeting mixed development. The country’s report to the 9 th EST Forum indicated a land use concept in built on the framework of the Bangkok 2020 declaration, suggesting a network of satellite cities with transport corridors. Colombo had established a zoning plan called Zoning Plan 2020. Finally, the report to the 10 th EST Forum highlights the Sri Lanka: Megalopolis Development Plan 2016-2035.
Thailand	The need to integrate land use planning and transportation planning has been identified in the 5 th EST forum, where concepts of poly-centric decentralization and integrated multimodal transport were discussed as strategies for achieving EST in Thailand. Since that time, Thailand developed the “Transport and Traffic Development Master Plan” which integrated the concepts of economic prosperity, environment, and social issues and quality of life under the theme of sustainable transport. This plan has informed Thailand’s participation and reporting to the EST forum, Rio +20 and UNFCCC processes. However, it was noted in the 2014 report, “Thailand Stocktaking Report on Sustainable Transport and Climate Change – Data, Policy and Monitoring” (GIZ, et al) that although transport planning is done as part of land use planning, they are not integrated and this still faces challenges.
Timor-Leste	According to the report of Timor-Leste to the 9 th EST Forum, the country aims to develop and maintain an integrated transport system that expands Timorese people’s access to health services, education, markets and employment. In its the 10 th EST Forum report, it was noted that public administration is being decentralized to municipalities in order to reduce public servant travel.
Viet Nam	Viet Nam has focused on integrating land-use and transport planning processes at the local, regional and national levels for several years. By the 7 th EST Forum, the country reported that it had created Article 13 of its Construction Law, and was aiming to revise the master plans of several transport sectors which evolved into revision of the law on railway and maritime, strategy for railway development and transport master plans in 3 economic zones of Viet Nam, which was rolled out as the National Transport Master Plan 2020. Additionally, the Law on Land had been approved by the National Assembly in late 2013 enshrining the importance of classifying land for transportation and Decree 43/2014/NĐ-CP of the Government was approved in May 2014
Goal-2: Achieve mixed-use development and medium-to-high densities along key corridors	
Afghanistan	Afghanistan’s cities have grown in an unplanned fashion meaning that they are in some ways, organically mixed-use. The challenge the country faces is to do this in a systematic way, and by the 9 th EST forum, Afghanistan reported that it would soon approve its national urban and transport policy and strategies to do so. In its report to the 10 th EST Forum, Afghanistan discussed planning around the Railway Transport Connection with PR China through the Silk Road
Bangladesh	Bangladesh’s cities, especially Dhaka, are fast growing and in need of a great amount of planning to accommodate much larger populations. While public transit planning and implementation is underway with BRT and MRT projects in various stages of construction, RAJUK is also undertaking planning in main transport corridors in Dhaka to convert some residential zones into mixed use zones. Although the city faces challenges to the existing built environment, it is approving multistoried buildings with mixed purposes including underground parking, commercial and residential purposes. Dhaka has initiated a TOD feasibility study along its two mass transit corridors and a regional development plan has been prepared that will focus on compact urban development for the 2016-2020 period including mixed and compatible land use provisions within residential clusters.
Bhutan	Traditionally, Bhutan has been a pastoral society with smaller urban population, focused more on regional transportation than urban transport. However, with more exposure to foreign culture and economy, urban areas are starting to grow, and the population of personal cars is growing quickly, at as much as 8 to 10% per year. The Transport 2040 Integrated Strategic Vision takes note of this change, identifying the need for municipalities to coordinate and provide urban services that are accessible by non-motorized transportation, such as the development of a pedestrianization plan with bus routes and appropriate parking areas in Thimphu.

Brunei Darussalam	There are limited reports regarding the approach to mixed-use planning in Brunei Darussalam. There was no specific reference to mixed-use planning or transport oriented development in the Land Transport Master Plan. Sub-Policy PD1(Land Use – Transport Integration) notes that mix and structure of land use should be addressed to reduce the need to travel, support public transport and non-motorized modes, and the Brunei/Muara Master Plan and Bandar Seri Begawan Development Master Plans were cited as examples of this work in the 7 th EST Forum report.
Cambodia	No mention of mixed-use or density is mentioned in Cambodia’s reports to the EST Forums.
P.R. China	China has targets both domestically and international for building up density around transportation corridors. Internationally, the One-Belt-One-Road plan brings comprehensive development and finance plans, along with financial institutions, to bear along with key transportation corridors including a marine route and an overland route heading generally in the direction of Europe. Domestically, public transport is gaining traction in many Chinese cities that were previously served by informal minibus public transit or other means. As MRT projects are constructed, density is increasing along those transport modes. Taking Beijing as a special example, the municipal government will soon be moved out of the city center to the Tongzhou suburb, requiring significant public transport upgrading. 18 transport infrastructure projects will be underway by the end of 2017 to connect Tongzhou to Beijing, including an upgraded existing subway line, and three new subway lines, highways and other projects to serve the new development and attempt to reduce the need to drive personal vehicles. (http://usa.chinadaily.com.cn/epaper/2016-12/15/content_27679678.htm)
Indonesia	While several cities in Indonesia have developed master plans and comprehensive transport plans, reports to the EST Fora have not discussed mixed-use planning or population densities around transport corridors. Surabaya, Surakarta, Tangerang and Batam report plans to develop mass transit bus and rail systems, which may be associated with population density, but this is not specifically mentioned. Jakarta reported that it planned 15 transport corridors at the 5 th EST Forum, and by 2010, 10 corridors were open.
India	It was reported at the 7 th EST Forum that India’s National Urban Transport Policy (2006) emphasizes TOD policy and matching transport technologies to the demand and density along corridors. Furthermore, the National Mission for Sustainable Habitat focused on density, diversity and compactness.
Japan	Japan reported during the 6 th EST that compact city development would be a focus of reconstruction after the Great East Japan Earthquake. Otherwise, the country has not reported specifically on this goal in the EST Forum process.
Republic of Korea	Republic of Korea has been focused on increasing density around transport corridors since the beginning of the Bangkok 2020 Declaration period. At the 5 th EST Forum, Republic of Korea introduced that it sought high-density development near high-speed railway (KTX) stations. In its report to the 6 th EST Forum, the country then reported that it is undergoing a paradigm shift to green transport, based on human-friendly, rail, ship and green-cars, with multi-modal connection and restriction of new road investment while focusing on operational efficiency. This concept evolved into Transit-Oriented Corridor development, integrating land use and transport development along transit corridors, and mixed-used and residential use “neighborhood corridors”, led by local government. The concept of “Complete Streets” was also discussed, providing more NMT, traffic calming and universal design for accessibility. By the 9 th EST Forum, this strategy was largely in place.
Lao PDR	Lao PDR reported on its road network development projects and proposed bus routes during the 6 th EST Forum, along with a description of a NAMA on transportation supported by Ministry of Environment – Japan, focused on simulating bus rapid transit routes, and which may have analysed land use and demand along those routes. This focus on transport meeting the demands of density and the current urban form were elaborated at the 7 th EST Forum.
Malaysia	Transport-Oriented Development was a goal of the National Green Technology Council, cited during the 5 th EST Forum by Malaysia, indicating that this planning practice has been under consideration for many years in the country. In the 7 th EST Forum, Malaysia reported that high-density mixed developments had become the trend in developed city areas in Malaysia and that guidelines on housing and commercial developments had been prepared. The specific examples of KL Sentral and Tasek Selatan Integrated Transport Center were presented. During the 9 th EST Forum, Malaysia

	presented pedestrian skywalk linkages as a means to achieving greater mixed-use and transport-oriented development. The 10th EST Forum report indicates that policy guidelines for TOD were completed in 2014.
Maldives	Due to Maldives' special circumstances as an island nation, density on certain islands is very high, in particular Male and Hulhumale Island, while density on other islands remains very low. Bridges are being constructed to serve as links between areas of high density, along with public transportation and NMT opportunities in those areas.
Mongolia	The 2030 Master Plan outlines a land use zoning plan that includes mixed-use zoning along the main transportation corridors. According to the 10th EST Forum report, Ulaanbattar has received financing from the ADB to implement a BRT system which will create opportunities for improved integrated planning and higher density, and detailed planning is now underway.
Myanmar	Myanmar has begun to develop the Dawei Deep-sea port Special Economic Zone but progress is slow and has experienced many delays. Similarly the Myawady Border Trade and Economic Zone and efforts are under way and other economic zones with economic corridors planned alongside the economic zones (7 th EST Forum report). These special economic zones compliment other projects such as the Rehabilitation and Modernization of Yangon-Mandalay Railway Project and Upgrading Yangon-Mandalay Expressway Project that aim to develop mixed use denser populations centers
Nepal	Activity to improve density and mixed-use around corridors has not been actively reported in the EST process until the 10 th EST Forum report. To this end, Nepal will: <ul style="list-style-type: none"> i. Implement Integrated Urban Development Program in 53 Municipalities ii. Implement corridor infrastructure development projects iii. Undertake Secondary Town Integrated Urban Environmental Improvement Projects in three Municipalities (Biratnagar, Birgunj and Butwal) iv. Develop Cities into Smart Cities in 10 years v. Implement Local Infrastructure Development Policy 2005, and vi. Implement the Kathmandu Valley Risk Sensitive Land-Use Plan Implementation of these plans will involve enforcing minimum standards in infrastructure construction and implementation of infrastructure development and service facilities in densely populated areas.
the Philippines	Besides a report in the 6 th EST Forum on urban transport programs for highly urbanized cities and the 9 th EST Forum on planning around the Cebu Rapid Transit engineering phase, the Philippines has not reported specifically on increased density or mixed-use around transport corridors (8 th EST Forum report).
Pakistan	Pakistan presented the use of city master plans and land zoning to increase neighborhood density with main street residential commercial, shopping mall conversions, live-work areas, etc., to achieve mixed-use and medium densities in new communities. Strategic Environmental Assessment for Spatial/Land-Use planning of Islamabad/Pawalpindi as featured, along with master plans in Punjab. BRT in Lahore and construction of the Islamabad Metro were examples of TOD featured in the 8 th EST Forum. In its report to the 10 th EST Forum, Pakistan reported that in existing corridors of cities that are congested, feeder systems are being developed for enhancing transport access, and that on a national scale, the New China Pakistan economic corridor (CPEC) is being constructed with mixed-use development through land use policies, new cities and industrial estates are being established. Motorways in this project are being constructed on the principle of mixed-use and TOD. Furthermore, Lahore's mass transit system (rail) is under construction.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore has incorporated this goal inside goal number one. There are already six transport oriented developments in operation and this number would double by 2025. (8 th EST Forum).

Sri Lanka	Sri Lanka has identified transportation corridors, particularly those serving Colombo and begun to plan transport scenarios around the likely density along those corridors in partnership with JICA. Colombo was divided into zones according to the Zoning Plan 2020 with development goals for each. Furthermore, a western region Megalopolis plan was generated, including 6 LRT corridors and locations for multimodal transport hubs. Implementation is now required.
Thailand	As part of its discussion on land use planning and transport planning integration, Thailand has explored the concept of mixed-use development along key corridors in discussions on poly-centric development and integrated multimodal transport. In particular, Bangkok has had success in building up density around MRT lines and other major transport routes, including that case of Transport-Oriented Development at Phahonyotin transport hub in Bangkok. However, mixed-use development faces challenges due to current planning practices, and little information is known about other cities across the country in this respect. According to the 10th EST Forum report, Thailand had undertaken a study and pilot project on transport connectivity development at Phahonyotin Transportation Hub
Timor-Leste	Access to transport is the priority of Timor-Leste at this time, including improvement of urban roads as well as better connectivity between urban and rural places.
Viet Nam	Viet Nam has focused on metro rail projects in Ha Noi and Ho Chi Minh cities as core to establishing transport-oriented development and mixed-use development. By 2025, Ho Chi Minh City will have 11 metro rail routes, and Ha Noi will have 8, in addition to BRT lines that are under construction.
Goal-3: Institute policies, programmes, and projects supporting Information and Communications Technologies (ICT) as a means to reduce unneeded travel	
Afghanistan	In 2010, Afghanistan reported that it lacked information technology and payments systems that could facilitate the reduction of trips in cities. However, by the time of the 7 th EST Forum, the country noted that the use of fax and e-mail were being partially accepted for official purposes, that the government had started to use electronic tendering and electronic financial transactions for government business, and that the use of the internet was gaining momentum, including telephone access to villages, which can avoid the need to travel for communication. During the 8 th EST forum, Afghanistan reported that the Clean Air Implementation Plan for some large cities also included strategies to encourage the use of ICT to reduce unneeded travel, although bureaucracy remained a barrier to change.
Bangladesh	Bangladesh has reported fast progress in its implementation of ICT systems that enable a reduction in transportation demand and make public transportation easier to use. Although the country suffers of internet that is too slow to support advanced telecommunications, and technology comes with high up-front costs, the nation has taken the initiative in the following areas: <ul style="list-style-type: none"> · District e-service center development to offer public services locally and government is operating e-procurement for government purchasing. · Video conferencing among government offices is being introduced to reduce government travel · Smart phone and online utility billing and payment and railway ticket purchases to avoid bank and train station trips and online shopping including book and grocery purchase is growing, likely reaching the majority of the population by 2020 · Electronic ticketing for limited bus routes throughout Dhaka and a revived plan for ‘Rapid Pass’ smart card ticketing to be rolled out with MRT development with redesigned IT system (https://sdasia.co/2017/01/26/smart-card-on-the-way-to-digitize-dhakas-transport/) · RFID number plates for vehicles have been rolled out

Bhutan	Bhutan is quickly scaling up its telecommunication technology across the country. The first agreement on development of a fiber optic network was signed in 2002, and the network officially launched in 2011. By late 2016, all the 205 Gewog offices and 20 districts were connected by fibre optic network, providing information, government services and dialogue, small-scale telemedicine and health consultation, banking and economic opportunities to even the most remote of areas, with internet penetration of more than 46%. Similarly, 3G networks have spread across the country, with more than 85% mobile coverage in the country, allowing people to avoid some long journeys to urban centers for services. A divide still exists between urban and rural areas, and ICT as a substitute for travel remains to be incorporated formally, but great progress has been made thus far. Today, in the interests of improving internet access to the rest of the world, discussions are underway to explore how broadband internet could be imported from Bangladesh via India.
Brunei Darussalam	ICT is an area of focus for Brunei Darussalam as it diversifies from oil as its major industry. The Sultanate launched its National Broadband Policy in November 2014 with the aim of increasing household penetration of broadband to at least 80% by 2017 from 31%, and reduce prices for household high-speed internet to less than 3% of average monthly income by 2016. The Digital Government Strategy 2015-2020 aims to lead the digital transformation and make government services simpler, faster and more accessible. In 2016, the United Nations Public Administration Network noted that Brunei Darussalam's ranking in e-Government initiatives penetration was ranked 83 rd out of 193 countries, up three notches from 86 in 2014, and its Online Services Index had improved from 0.3622 to 0.5072 between 2014 and 2016 – a dramatic improvement.
Cambodia	No mentions are made in Cambodia's submissions to the EST Forums with regards to the use of ICT to reduce the need to make unnecessary trips. According to the United Nations E-Government Survey 2016, Cambodia has a very low E-participation index (grouped in the lowest quartile of countries), although its E-Government Development index is considered to be "Middle". Cambodia suffers of very low connectivity rates, including only 10.10 wireless broadband subscriptions per 100 inhabitants, and 0.21 fixed broadband lines per 100 inhabitants. Only 9 percent of individuals use the internet.
P.R. China	Use of ICT to reduce travel in China is becoming more and more commonplace, particularly with the fast advance of high-speed and mobile internet in the country. Nearly 95% of the country's population uses mobile internet, with more than 400 million fixed line broadband users. In addition to website or electronic access to key government services, many government and financial services have been made accessible through mobile applications such as WeChat and AliPay. WeChat on its own claims 846 million monthly active users as of mid-2016, and features services such as bank account-linked payments and transfers, utility payments, bus card recharging (supported on some mobile phones with NFC technology), hospital appointment reservations, tax and social insurance services, and many others. Similar services can be found on AliPay, the application that enables payment for online shopping website, Taobao (an Alibaba sales platform in China). Online shopping has also expanded dramatically, enabling brands, consumers and logistics companies to optimize their locations, warehousing and location of shopping, allowing consumers to purchase any kind of product while not having to make a special trip. While more than 700 million people still have no access to fixed-line broadband, China plans to install 90,000 km of high-speed fiber-optic trunk cables by 2018, expanding broadband coverage to all urban areas and nearly 90% of countryside areas. Meanwhile, detailed online maps of cities including up-to-date public transit route maps (including some real-time bus locations and present and predicted traffic conditions) allow transport users to plan their trips according to their needs. China has also embraced the concept of online car and bicycle reservation. Didi Chuxing allows users to order a taxi on demand, reducing their need to purchase private cars. Didi Chuxing also arranges shared rides that allow riders to defray costs while vastly improving the efficiency of taxi service. Meanwhile, Mobike, ofo, and other shared bike services are multiplying across the country. These bike services do not use fixed shared bike stations. Rather, they use GPS location to allow users to locate a bike parked near them, reserve it, use an online app to unlock the bike, and ride it directly to their final destinations without having to find an open fixed parking spot. While ICT is facilitating mode shift and avoidance of personal trips in P.R. China, working schedules and working culture in China make it difficult to apply telecommuting as a strategy, as noted in P.R. China's submission to the 7th EST forum.

Indonesia	Indonesia has not comprehensively discussed ICT as a means of reducing transport demand in the EST process. However, the country has identified e-government as an important objective. While the country was categorized as a “Middle Online Service Index” Country in the 2016 UN E-Government Survey, the country signed an agreement with the Republic of Korea in 2016 to improve e-government services, and this programme may help to reduce the need to travel for receiving government services. According to the Ministry of Communication and Information Technology Republic of Indonesia’s eGovernment Indonesia Update (2015-2019) (Presented in Seoul, 2015), the Indonesian government aims to have optimized its eGovernment system by 2019, including Government-to-Government systems, Government-to-Employee systems, Government-to-Business systems and Government-to-Citizen systems. As of mid-2016, there were 100 million broadband users in Indonesia, achieving 40% penetration, with 93% of them accessing the internet by mobile phone. (http://www.computerweekly.com/news/450288410/Indonesian-internet-users-turn-to-smartphones-to-go-online)
India	India’s reports on ICT use in the implementation of EST as an avoid strategy have been limited in the EST Forums. During the 6 th EST, India reported that its E-governance program helped to reduce transport demand, and during the 7 th EST Forum, it reported that an initiative was underway to create a national common mobility card across India. In the UN E-Government Survey 2016, India ranked 27 th in e-participation, and was grouped with other countries in the “Very High” e-participation category. The same report, however, grouped India in the “Middle E-Government Development Index” – the second group out of 4, where higher is better. India launched its “Smart Cities Mission” in 2016 (http://smartcities.gov.in/content/), focusing on better public transport access, information about non-motorized transport zones, parking availability, and other services.
Japan	Japan has not reported specifically on the use of ICT to avoid transport demand through the EST Forum Process. According to the United Nations E-Government Survey 2016, Japan ranks second globally in e-participation rates, and is featured as a world e-government leader with very high E-government developing index ratings. Japan is one of the few Asian countries with open standard datasets being reported.
Republic of Korea	According to the United Nations E-Government Survey 2016, Republic of Korea is a leader in e-government, rolling out programs such as “Government 3.0” which aims at active sharing of data and removing barriers between agencies for collaboration. The Republic of Korea identified 50 smart city project ongoing at the beginning of 2013. The Republic of Korea ranks 4 th globally in e-participation, while ranking third globally for e-government development, and top in Asia. Republic of Korea is one of the few Asian countries with open standards datasets in 5 or more sectors. Republic of Korea reported that IT-based remote working could be useful for traffic management at the 6 th EST Forum, and that by making bus and other transport information available through the internet, mode-shifting should be made easier (9 th EST Forum report).
Lao PDR	There was no mention of using ICT to reduce transport demand in the reports delivered to the EST Forums. According to the United Nations E-Government Survey 2016, Lao PDR is ranked in the second lowest quartile for e-participation and e-government development. The country sees very low rate of broadband connections at 2.40 wireless broadband connections per 100 people, and 0.16 wired broadband connections per 100 people, but 14.26 percent of individuals use the internet regularly.
Malaysia	Malaysia has explored using ICT to reduce transport needs and to improve transport efficiency and experience. In its report to the 7 th EST Forum, Malaysia noted that transport ticketing was available online, and journey planners were also available indicating routes, fares, stops, etc. Malaysia introduced a centralized taxi service system to allow better taxi experience and reduce the use of private cars in cities during the 8 th EST Forum. Integrated ticketing systems between different rail operators were reported during the 9 th EST forum. Malaysia has not, however, reported on policy encouraging the use of ICT to avoid trips altogether, such as through videoconferencing, telecommuting and other strategies. According to the United Nations E-Government Survey 2016, Malaysia ranks 47 th globally in e-participation, and is placed in the second-highest quartile of e-participation as well as e-government development. 67.5% of individuals use the internet regularly in Malaysia, with 10.14 wired broadband subscriptions per 100 persons, and 14.1 wireless broadband connections per 100 persons.

Maldives	While ICT has not been a major push for EST in Maldives, the country has sought to integrate information systems to reduce unwanted travel and make trips more useful. Electronic ticketing and mobile phone-based information and reservation systems were discussed at the 6 th EST Forum, but the outcome is unclear. The UN Public Administration Programme 2016 meeting noted that Maldives is ranked in the top third of small island developing nations for e-government implementation, although it was not clear if these practices were relieving the need for transportation in Maldives. (E-Government for G2E Development in Small Island Developing Countries, Presented at the ITU REF-ADP 2016)
Mongolia	<p>There are plans to develop a “Traffic Rational System” that includes a CCTV monitoring, video sensors to detect traffic movement, and variable message boards (VMS) to display road condition information. Road users can also consult a road user website that can provide real time information, allowing them to properly plan their journey. (8th EST) As of the writing of this report, there is no evidence that suggests such a system exists except for a network of police monitored CCTV cameras. It is unclear if the CCTV network data is also used in transport analysis. Mongolia reports it has developed several policies and projects to reduce unneeded travel:</p> <ul style="list-style-type: none"> · A Government public contact center, called 11-11 (hotline) provides feedback and information to the Government service information and complaints from citizens. · Government-organized teleconferencing every month, covering all provincial Governors and organizations. · A Citizens service center, called “Single window” provides several citizens services at once to helping reducing time and travel. (7th EST country report) - Electronic ticketing system is coming into place to sell international and intercity bus, train and air tickets (10th EST Forum report) <p>Mongolia has included a plan to “increase the accessibility of wireless internet, enable its usage in recreation and camping areas, and libraries” in their 2016-2020 Action Program and in rural areas as part of the 2013 ICT goals which would lead to more capacity for telecommuting and communications. From 2012 to 2013 internet subscribers increased over 40%.</p>
Myanmar	According to the United Nations E-Government Survey 2016, Myanmar ranks in the lowest quartile for online service, and e-government development. The country suffers of very low connectivity, with only 2.1% of individuals using the internet regularly, 0.27 fixed broadband connections per 100 individuals and 1 wireless broadband connection per 100 individuals. According to the 7 th EST Forum report, residents experience improved access to the internet and mobile phones.
Nepal	<p>Until the 10th EST Forum, Nepal did not report on the use of ICT to reduce the need for travel. The Report to the 10th EST Forum indicates that telephone providers have emerged, that all village development committees are connected via telephone services, that telephone density has reached 81.72 percent and there are 7.1 million internet users. The country aims to increase internet coverage to 65% by 2018/19, roll-out of broadband and fiber optic network worldwide, and for satellite service to be enabled. E-governance is also being planned. During the 9th EST Forum, it was reported that Nepal is seeing the private-sector development of car pooling in the country using mobile phone technology for finding rides. The system helps to avoid personal car use, and improve the utility of fuel burned in vehicles, especially during the fuel crisis in the country, and research suggests that ride-sharing reduced the number of private vehicles on the road by 7000+ during peak time.</p> <p>The United Nations E-Government Survey 2016 indicates that Nepal has improved from a low E-Government Development Index (EDGI) country to a Middle EDGI country, and that e-participation ranks relatively high compared to many countries globally.</p>

the Philippines	<p>The Philippines has only reported on use of ICT as a means of avoiding transport in the 10th EST Forum. Yet, there is progress reported. Telecommuting and teleclasses and online services for government services, banking, payment and other commerce are encouraged. The Department of Information and Communications Technology has drafted an executive order for the use of telecommuting and other ICT-based tools to help in traffic de-congestion. The government has built an e-Government solution which will serve as a national government portal one-stop-shop for online services such as passport and birth certificate application and tax filing. Finally, the Climate Change Commission is developing an IT system that will provide climate information in a way that is meaningful to users. According to the United Nations E-Government Survey 2016, the Philippines is one of the few Asian countries reporting open standards datasets in 5 or more government sectors, open mapping has become an invaluable tool for transportation system mapping and disaster response. As a result of these and other efforts, the Philippines made a leap from mid-performing e-government nations to high-performing e-government nations.</p>
Pakistan	<p>According to the United Nations E-Government Survey 2016, Pakistan is ranked in the second-lowest quartile for online service index and e-government development index. Yet, it is one of the few Asian countries that makes open standard datasets available in 5 or more categories of government. 13.8% of Pakistan individuals use the internet regularly, with 1.08 fixed broadband subscriptions per 100 inhabitants, and 0.8 wireless broadband subscriptions per 100 inhabitants. During the 8th EST Forum, Pakistan reported that cell-phones were used across the country, and that 3G/4G wireless broadband was recently introduced. By the time of the 10th EST Forum, Pakistan reports that the e-government project initiated 10 years previous was highly successful. Web-based taxi services were also available in some cities of Pakistan. Pakistan would focus on the development of the legal regime moving forward to ensure that modern transportation services can be facilitated by government.</p>
Russian Federation	<p>According to the United Nations E-Government Survey 2016, Russia is ranked 34 in e-participation globally, and is in the top quartile of e-participation. The report featured social media applications in Russian government websites as a useful tool. Russia is ranked in the 2nd highest quartile for e-government development. In the Russian Federation, 70.52% of individuals use the internet with 60.2 wireless broadband connections per 100 inhabitants and 17.45 fixed broadband connections per 100 individuals.</p>
Singapore	<p>By the time of the 10th EST forum, the Government of Singapore had not reported taking any action on this goal. According to the United Nations E-Government Survey 2016, Singapore is ranked 8th in e-participation globally, along with Canada, Italy and Finland. The country is featured for making data available to residents and encouraging visualization of data by the public. Singapore is ranked 4th globally for E-government development, and second in Asia after the Republic of Korea.</p>
Sri Lanka	<p>According to the United Nations E-Government Survey 2016, Sri Lanka is ranked 50th in e-participation globally, in the second-highest quartile of countries. The country is also in the second-highest quartile in terms of e-Government development, ranking 79th. In Sri Lanka, 25.8% of individuals use the internet regularly, there are 7.8 wireless broadband connections per 100 individuals, and 2.65 fixed broadband lines per 100 individuals.</p> <p>Sri Lanka has made many efforts in implementing ICT for transportation purposes. The country e-service portal and mobile banking allow people to avoid trips altogether, while the transport sector allows for automated seat booking to promote public transport convenience (7th EST Forum report). Sri Lanka's report to the 9th EST Forum added that free Wi-Fi zones were available in public places. Prepaid card systems for public transport systems were being explored as noted in the 10th EST Forum report.</p>
Thailand	<p>Thailand is a high-ranking country on the "Online Services Index" (OSI). In the 2016 UNPAN E-government survey report, Thailand was grouped in the "High OSI" countries, and graduated from the "Middle" E-Government Development Index countries in 2014, to "High" in 2016, ranking 77th globally. Thailand has very high adoption of mobile telephone subscriptions (144.44/100 inhabitants), and broadband (fixed: 8.21/100 inhabitants; wireless: 52.5/100 inhabitants) making e-government and e-transactions accessible to many people. Thailand also plans to launch a national e-payment system in Thailand, thus reducing the need to travel to pay cash for services and products. In 2016, Thailand also created its Ministry of Digital Economy and Society, which shall make further advances in the areas of accessibility and services in ICT.</p>

Timor-Leste	According to the United Nations E-Government Survey 2016, Timor-Leste is ranked in the second-lowest quartile of e-participation globally, and in the lowest quartile for online service index, while being ranked in the second-lowest quartile for e-Government development. The country is featured in the report as a least developed country that has seen significant gains in e-government 2003-2016. In Timor-Leste, 1.14% of individuals regularly use the internet, with 0.6 wireless broadband and 0.07 wired broadband subscriptions per 100 people, respectively, in use. In its report to the 10 th EST Forum, Timor-Leste reported that it would initiate fiber telecommunications with the ambition to connect people to people, improve and promote e-administration, e-government and e-business to reduce unnecessary travel.
Viet Nam	Although the Viet Nam has invested in e-services, and is gaining recognition from UN agencies such as UN Public Administration Network for improved e-services, the use of ICT as a means of reducing transport demand has not been a heavy focus for the country. As of the 9 th EST forum, there were still concerns of a lack of human resources with good skills and knowledge in ICT, as well as a lack of policies and standards to apply ICT. According to the United Nations E-Government Survey 2016, Viet Nam ranks 43 rd globally, tied with Bulgaria and Luxemburg in e-participation, and 89 th for e-government development.
Goal-4: Require Non-Motorized Transport (NMT) components in transport master plans	
Afghanistan	Afghanistan's cities suffer from very narrow roadways with mixed and improper use by vehicles and pedestrians. The country has aimed to improve conditions for pedestrians by upgrading road surfaces, but by the 9 th EST period, still reported that the country suffered from low and old road network infrastructure, limited space around main roads, and a lack of strong urban land use policies. During the 7 th EST forum, it was reported that little attention is paid to the NMT system mainly due to security issues.
Bangladesh	Many roads in Bangladesh are narrow and land constraints often limit the provision of separate NMT lanes, resulting in chaotic traffic and difficult trips for all road users. Furthermore, as Bangladesh develops, more and more heavier vehicles are starting to use roads than originally planned. Yet, 50% of Dhaka residents commute using the NMT system. While challenges are abundant, the country has finalized a National Integrated Multimodal Transport Policy with an emphasis on NMT and design standards with NMT provisions are in place. Many roads have footpaths and over-bridges for pedestrian crossing, and some sections of national highways have separate lanes for slow-moving vehicles including NMTs. Finally, intermodal facilities at major bus terminals have been introduced. By 2020, Bangladesh seeks to install bicycle lanes in selected urban areas, NMT lanes on all upgraded national highways, and a multimodal hub at Hazrat Shah Jalal international airport. The City of Sylhet reported during the 8 th EST Forum that it had constructed separate roadways for rickshaws and that planning for pedestrians and other non-motorized modes was its priority. During the 10 th EST Forum, Bangladesh reported that there were improvements to pedestrian and bicycle facilities in all major urban areas.
Bhutan	As cars become more popular in Bhutan, awareness is starting to be raised about the importance of reserving space for non-motorized transport. In Bhutan's Transport 2040 Integrated Strategic Vision, pedestrianization is one focus of development in Thimphu. Although the country's geography and dispersed population does not lend itself to NMT, it is slowly picking up with awareness-raising efforts. Bhutan reported that it had installed user-friendly pedestrian crossings with strict monitoring to reduce hit and run cases in its report to the 10 th EST Forum.
Brunei Darussalam	The National Land Transport White Paper 2014 noted that non-motorized transport is at a very low baseline in Brunei Darussalam. The paper notes that NMT is essential for accessing and extending the catchment area of the planned enhanced public transport network, and is key to creating a safer, sustainable, inclusive society. At the 7 th EST Forum, it was reported that provision of bicycle lanes in national housing areas and parks as well as footpaths at commercial and housing areas was already underway. There is little information available regarding enhanced implementation at present.
Cambodia	In its report to the 5 th EST Forum, Cambodia expressed that road networks were increasing capacity, but at the expense of NMV transportation. The report also noted that no cycle-tracks and sidewalk networks were available at the time, indicating a need to make space for them in transport planning. Subsequent reports did not discuss NMT in depth.

P.R. China	<p>Although the expansion of car-based road traffic has widely displaced traditional non-motorized modes of transport in P.R. China, cities are starting to recognize the benefits that NMT bring in terms of traffic and emission reduction. Many cities across China have installed bike-share programs that allow users to use bicycles for free or at very low cost for short periods of time. Private-sector bike share systems have also evolved, such as Mobike, ofo and others that offer similar services, but without the cost of fixed bicycle parking stands. Many cities in China, with Beijing as a prime example, plan for bicycle lanes on almost all roads. These bike lanes, however, still require major efforts to ensure that cars do not park in them and displace cyclists. Similarly, sidewalks are often installed but blocked by cars or by commercial enterprises using the public space for their business purposes. The State Council of China recently recognized that China's "superblock" and gated community style of urban planning is presenting major roadblocks to NMT and efficient use of transportation space, and recently recommended that these communities be opened up. However, there has been widespread opposition to this recommendation from residents of gated communities.</p>
Indonesia	<p>Beginning at the 6th EST Forum, Indonesia began reporting that NMT was a key program for supporting EST, with the strategies of pedestrian facility development, bike lanes, car free days and public transport days. During the 7th EST Forum, Indonesia reported that its National Action Plan for GHG Emission Reduction (a Unilateral NAMA) would include non-motorized transport development as a measure. By the 9th EST, Indonesia was reporting that bicycle facilities had been constructed in Surabaya (over 60km of track), and Batam (over 78km of track) had been built, and pedestrian facilities had been built in Surakarta, Tangerang, Batam and South Tangerang. Car-free days have been implemented in 21 cities in Indonesia (10th EST Forum report).</p>
India	<p>India is promoting cycling in Indian cities through a public bike sharing scheme. The country reported during the 7th EST Forum that NMT infrastructure was inadequate and NMT use was decreasing, and therefore was developing a national cycling policy, a toolkit for public bicycle scheme projects, project design and specifications for public bike schemes, and proposed financing mechanisms. A new scheme was promoted in 2013-14 to promote public bike systems with 100% funding from Government of India for pilot cities. India's National Mission for Sustainable Habitat has listed walking and cycling as key to sustainable transportation, and the National Urban Transport Policy has clearly stated that NMT should play a key role in last-mile connectivity. As part of the Smart Cities Mission, Chennai became the first city to implement an NMT policy in India. (https://roofandfloor.com/realty-guide/10-smart-solutions-citizens-can-expect-from-indias-20-smart-cities/)</p>
Japan	<p>Japan introduced the concept of bicycle sharing in its report to the 5th EST Forum, describing its unattended, IC-card enabled bike share system and pilots across Japan, featuring roll-out in Toyama City, where a monthly fee was charged, as well as a time-based fee for usage times over than 30 minutes per use. Japan also encourages environmentally-aware private companies to promote to their employees to ride bicycles to work, especially for short trips. During the 8th EST Forum, Japan described its efforts to improve and maintain bicycle parking areas and facilities, support for community cycling projects, formulation of Guidelines for Creating a Safe and Comfortable Bicycle-Use Environment, and Formulation of a bicycle network maintenance plan and support for maintenance of cycle lanes. Upgrades to public transport facilities were also featured to demonstrate better transfer from cycles. During the 9th EST Forum, Japan featured more examples of upgraded transport nodes to facilitate NMT and multi-modal transportation. The 10th EST Forum report featured a newly revised "Guideline for Creating a Safe & Comfortable Bicycle-Use Environment" by the Ministry of Land, Infrastructure, Transport and the National Police Agency, which supports the organizing program for bicycle network planning and maintaining open space for bicycle running.</p>

Republic of Korea	NMT is a major component of Republic of Korea’s integrated transport and land-use planning approach. During the 5 th EST Forum, it reported that it would provide more pedestrian priority zones, where traffic calming measures, low traffic speeds (30km/h) and parking prohibitions are put in place, as well as a “Pedestrian Day”. The country planned to extend its bicycle network to 3,114km by 2018, ensure enough road space for bicycles, install bicycle racks on trains and buses and promote public bikes and bike-sharing. At the 6 th EST Forum, Republic of Korea introduced biking and walking as one of its five major tasks to achieve green transport, ensuring smooth transitions between bicycles and public transport and the construction of a safe bike path network. The report to the 7 th EST forum featured the concept of “Complete Streets” that can be used safely and conveniently by all users. Seoul was featured with its vision for a “Pedestrian-friendly City”, featuring more sidewalks, pedestrian priority areas, universal design, traffic calming measures, more crosswalks, and better policy integration. Seoul aimed to expand the mode share of bicycles from 1.2% in 2007 to 5% in 2013 and 10% in 2020, and to construct better bicycle parking systems. The country established 10 pilot cities for biking and enacted Pedestrian Laws to promote project for the convenience of pedestrians. It seemed these strategies were mostly in place by the time of the 9 th EST Forum.
Lao PDR	Lao PDR reported that NMT is part of its EST strategy during the 6 th and 7 th EST Forums, and had received support in the form of Technical Assistance from the ADB to work on NMT, including capacity building in NMT planning, Preliminary design for NMT implementation, and funding for NMT implementation. Subsequent reports did not elaborate on this plan.
Malaysia	The promotion of an NMT has been a core initiative of Malaysia since the 5 th EST forum when it reported that non-motorized transport is a theme of the National Green Technology Council. During the 7 th EST Forum, Malaysia had formulated an initiative on construction of bike lanes in housing schemes and city center areas, and featured covered pedestrian walkways between commercial areas and rail stations in Kuala Lumpur. During the 9 th EST Forum, Malaysia introduced the Putrajaya Structure Plan (Sustainable Putrajaya 2025) and Putrajaya Green City 2025 plans as examples of NMT integration, and elaborated in the report to the 10 th EST Forum, noting that these plans encourage cycling and walking as the preferred transport options. Malaysia also reported that it had initiated a “Kuala Lumpur Car Free Morning” Campaign to encourage NMT.
Maldives	Although vehicle ownership – cars, motorcycles and logistics vehicles – has increased rapidly since the 5 th EST Forum – especially in the Capital city, NMT remains the predominant mode of transportation on land. The Master Plan for Hulhumale Island, a newly reclaimed island under development, includes pedestrian-friendly roads and dedicated bicycle lanes.
Mongolia	The 2030 General Development Plan includes “capacity for pedestrian walkways, environmentally friendly transport vehicles, infrastructure of accommodate bikes and road networks which separate road users from bike users and pedestrians.” In 2014, work was planned for the first stage of the UB Bikes Project (8 th EST). Implementation of the “Street” and “Bicycle road” sub-programs appear in the 2016-2020 general plan suggesting that this program is still in the middle of the implementation stage. As of the writing of this report there is no evidence that a public bicycle program or bicycle lanes are open to the public, but a standard for bicycle roads was developed, and a national standard for pedestrian sidewalks was completed (10 th EST Forum Report)
Myanmar	Bicycles and trishaws are used in the suburbs of Yangon, Mandalay and other major cities, all country sides. There are two days per month to reduce the use of departmental vehicles and Yangon city has adopted motorcycle-free zones in the city’s urban zones. (7 th EST) Plans include construction of separate roads for bicycles in Mandalay City, Construction of separate roads and overbridges for pedestrians in Yangon City, Mandalay City and Nay Pyi Taw City (9 th EST Forum Report)
Nepal	Nepal’s first report during the Bangkok 2020 Declaration period (5 th EST Forum) on NMT was about pedestrianization of historical areas in Kathmandu, in the context where the report also stated that NMT was “non-existent”. By the 6 th EST Forum, it was reported that a cycle lane was planned, and pedestrianization of historical areas was still planned. By the 8 th EST Forum, Nepal noted that provision of cycling lanes along intra-urban roads was part of its National Urban Development Strategy, 2014, and walkability was described as part of the Kathmandu Sustainable Urban Transport Project. The project reported that walkability has improved with completion of 15km of sidewalk and 4 km of pedestrian walkway along with 2 pedestrian bridges under construction (27 Feb 2017: https://www.adb.org/printpdf/projects/44058-013/main).

the Philippines	<p>The Philippines has reported annually on NMT integration in the country. The 5th EST Forum saw reports on pedestrian and bicycle ways in Marikina, with NMT-friendly cities being described in Makati, Marikina and Quezon City. The 7th EST Forum report discussed Bike-on Bike-off service for LRT in Metro Manila, and a bikeway and walkway program was underway in Metro Manila close to major transport terminals and other urban facilities. The 8th EST Forum report described the development of a highly visible demonstration corridor intended to improve pedestrian mobility in the Ortigas and Mandaluyong Greenways, and overall better publicizing of benefits and viability of bicycles as alternative transport in Metro Manila to be adopted elsewhere in the Philippines and even other countries. The Ortigas Greenway was listed as fully completed by the time of the 9th EST forum, although the 10th EST Forum report noted that engineering work was still underway and that implementation would be estimated to begin in the second quarter of 2017. A bike-sharing project will be promoted in Metro Manila in 2017, family zones around points of interests based on heritage, history or activity are being developed, an elevated walkway was constructed at a length of 1.5 km (to be expanded to 30 km) in Makati, and the Tutubi Bike Program is being installed in the City of Pasig.</p>
Pakistan	<p>Pakistan's report to the 5th EST Forum mentioned that despite extreme weather conditions and "undulating topography", continuous walkways along major roads and safe intersections are important for moving towards EST. The report to the 7th EST Forum focused on bicycles as an integral part of conveyance, especially for economically disadvantaged people, and they needed to be included. Starting with the 8th EST Forum report, Pakistan noted that all new planned housing schemes would have footpath networks. By the 10th EST Forum, Pakistan reported that cycle lanes were beginning to be provided in Islamabad, and policy would be adopted to provide pedestrian facilities along all urban roads.</p>
Russian Federation	<p>The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.</p>
Singapore	<p>At least as early as the 5th EST forum, Singapore had integrated non-motorized transport into its transport mobility planning. The country reported allowing foldable bicycles on MRT and bus, Bicycle parking facilities at public transport hubs, cycling lanes, safety signs, and seven cycling towns. At the 8th EST forum, that it had completed its national cycling plan, bringing cycling paths to all public housing towns by 2030, and promoting cyclist education. A network of 700 km of track should be completed by 2030. Singapore also introduced its Walk2Ride program. This program includes shelter walkways built into the trip generating developments within a 400 m radius of MRT stations and 200 m of bus interchanges and light rail stations. These two programs are included in the Land Transport Master Plan 2013. Singapore reported he much more aggressive non-motorized transport approach at the 10th EST forum. In addition to the national cycling plan, an automated mechanized bicycle parking system is to be installed in 2017; A bike sharing system is being piloted and is expected to be ready in 2018; A Walking and Cycling Plan was launched in July 2016, aiming to ensure that new developments consider the needs of pedestrians and cyclists at the upfront stage of the design; A Road Typology Review was conducted to balance of benefits and promote safety among the road users; an active mobility bill was passed in early 2017 establishing a regulatory regime to govern the types of devices permitted on public paths such as footpaths, cycling and shed paths; a publicity campaign and public education campaign was launched to educate the public on new rules, code of conduct, and penalties; and, a car free program is supported by a number of community and interest groups to promote a car-light message and enliven the streets.</p>
Sri Lanka	<p>Sri Lanka has relied on NMT for many years, yet even before the Bangkok 2020 Declaration, it had been promoting NMT modes for school children in the Eastern province, and "Vehicle Free Da" at Matale, Central Province (5th EST Forum Report). The country reported increased walkways and dedicated cycle lanes in main cities, at the 7th EST Forum and noted bicycle distribution to school children. The country reported a success in walkability at the 9th EST Forum, noting a vast improvement by providing foot paths with proper safety and quality, as well as trees along walkways to provide shade, and intersection improvement. Bike lanes were reported, but were observed to be used only for recreation.</p>

Thailand	At the 7 th EST Forum, Bangkok reported that it had taken some initiatives to create an NMT environment in the city. Bicycle facilities are available in some areas of Bangkok including shared public bicycles at some BTS stations, primarily aimed at tourists. As of the 9 th EST Forum, Thailand reported that it would undertake a Non-Motorized Transport project (Nov 2013 – end of August 2014) that would undertake 3 pilot projects in the BMR, 1 pilot “bicycle town”, and monitor energy consumption reduction and GHG emission reduction. This project was supported by the National Health Assembly and the Cabinet. In some cases, NMT faced challenges due to safety issues. As of the 10 th EST Forum report, Thailand noted that the country has 566 km of bike lanes across the country, and NMT policies are to be included in master plans in all major cities across the country.
Timor-Leste	There is not yet anything to report for this goal.
Viet Nam	Between 1994 and 2005, the proportion of NMT trips in Ha Noi city had declined while transport by other modes had increased considerably. By 2014, Viet Nam was implementing minimum width of pedestrian pavements along each side of roads, with initial plans to pedestrianize certain roads. Furthermore, public bike rental services were to be launched in 5 cities in 2015, and in master plans, cycling routes had been defined to attract people to ride bicycles. Regional or higher grade roads are required to have bike lanes. (ASEAN-German Technical Cooperation – Energy Efficiency and Climate Change Mitigation in the Land Transport Sector, 2015)
Goal-5: Improve public transport services	
Afghanistan	Development of public transportation systems in Afghanistan has been a challenge. In 2010, Afghanistan reported that there was very poor public transit in its cities. However, by the 8 th EST forum, the country noted that the Kabul Urban Transport Efficiency Improvement Project was being developed to be implemented with World Bank support, including a component for road improvements and transport efficiency including promoting public transport and connecting feeder services to residential communities. By 2015, Afghanistan mentioned that it faced financial challenges in implementation. But in its report to the 10 th EST Forum, it noted that the private sector was being engaged to provide some urban mass transport services.
Bangladesh	Dhaka is heavily focused on developing its public transport system. Although traditional public transit operators are resisting change, and improved public transport is often hampered by constraints in built-up areas, two mass transit projects, including BRT Line-3 and Mass Rapid Transit MRT-6 are under construction, and aim to be completed within five years. Feasibility studies for another two MRT lines are underway, but no progress has been reported, and high-occupancy buses have been added to Dhaka’s fleet. Reform of the bus sector and begging of construction of the MRT-1 are expected by 2020. The City of Sylhet has made efforts to plan a public transport system around the city outskirts to allow for easier cross-city transport, but required private investment at the time of reporting at the 8 th EST Forum.
Bhutan	Public transportation has played an important role in Bhutan’s urban areas and has been upgraded during the period of the Bangkok 2020 Declaration. All the twenty districts and some blocks are connected by public transport, and the frequency of urban public transport is increasing steadily. In 2010, urban transport services in Thimphu were expanded with old buses being replaced by 12 more modern and comfortable Toyota coaster buses, and 2 buses were introduced in Phuentsholing. Since the 6 th EST forum, Bhutan had reported the exploration of BRT or even LRT projects, but they have been deferred due to the high costs of buses and trains, especially compared to the low population density of the country. Meanwhile, a pre-BRD system has been researched for Thimphu City that would see 9 diesel buses (to be converted to hybrid-electric in the future) operating through the city every 10 minutes. Bhutan is also exploring upgrading taxi services from conventional cars to electric vehicles as a means of reducing their pollutant emissions. During the 10 th EST Forum period, buses have been procured through government funding, three private bus operators have been engaged, and a pre-feasibility study for LRT has been completed with assistance of UNDESA/UNCRD

Brunei Darussalam	At the 7 th EST Forum, it was reported that Brunei has introduced park and ride facilities for facilitating residents to use public transport at the Brunei National Hospital. Bus stop facilities had been improved to be sheltered, and more were installed, and a new central bus station and bus terminal were under construction in 2013. In 2014, it was reported that there were only 105 buses operating in the country and a very small number of taxis as public transportation, when Bus Rapid Transit was identified as optimal for the Sultanate above MRT and LRT. Under government plans, the current bus network will be expanded to create a feeder system to support the new sections of the BRT system, which itself will be made up of four bus lines. The total network is expected to span 48 km of bus lanes across the Brunei-Muara district. Approximately 126 BRT buses will make 29,000 trips during peak morning hours and 228,000 journeys per day. The first line is scheduled to open in 2020, while completion of the network is expected by 2035. School traffic is responsible for almost 1/5 of motorized road traffic in Brunei, contributing to peak hour congestion. The National Transport Plan proposes improvement of public transport, an expanded national school bus system, promotion of walking and cycling, education and training of parents, staff and children, and other efforts to decrease reliance on personal cars for school commuting.
Cambodia	Cambodia reported a shortage of properly managed public transport in the country at the 5 th EST forum. The country faced a poorly managed traffic network, absence of buses, no LRT/MRT and long-distance public transit was privately operated. The country identified re-introduction of bus services and a study on mass transit alternatives as priorities at the 6 th EST Forum, and the introduction of buses was realized and reported at the 8 th EST Forum, with 10 buses operating at 36 stops.
P.R. China	Public transport in the larger cities of the P.R. China is well developed. Many larger cities have upgraded public transit from an informal industry to bus and metro services with fixed routes and schedules. Beijing city has the objective of ensuring inner-city residents need to walk no longer than 10 minutes to access a subway station, and are rapidly expanding the subway system to become what is now the longest in the world. Likewise, MRT systems are expanding in cities across the country, including BRT systems, subway and elevated/LRT systems and bus networks. China has implemented a large number of electronic public transit card systems which, in some cities, are even inter-connected for convenient use of frequent travelers.
Indonesia	Public transport development is a key piece of Indonesia's EST strategy. Even before the Bangkok 2020 Declaration, Indonesia reported planning and construction for BRT in 7 cities besides Jakarta. During the 6 th EST Forum, it was reported that 14 cities had implemented a transit system in Indonesia. At the 9 th EST Forum, it was reported that Jakarta had begun operating the Transjakarta Busway, connected with feeder services, and was undertaking train facility improvement to ensure safety, cleanliness, comfort, efficient ticketing, and special wagons for female passengers. Public transit has been enshrined in the country's National EST Strategy and as part of the National Action Plan for GHG Emission Reduction. Jakarta is currently building a mass rapid transit system, which will have the capacity to carry about 400,000 passengers per day, and Jakarta aims to have 60% of people using public transit by 2029. (http://asia.nikkei.com/Politics-Economy/Economy/Skepticism-clouds-Jakarta-s-car-congestion-fix). According to a July, 2016 report by the KPPIP, Indonesia now aims to develop BRT in 29 cities and MRT in 6 metropolises and 17 large cities. (Wahyu Utomo and Ranier Haryanto, 15 July 2016), and according to Indonesia's report to the 10 th EST Forum, 19 cities outside Greater Jakarta have implemented BRT systems.
India	India has reported many improvements to public transport in the country. During the 6 th EST Forum, India reported that 21 BRT projects were underway, including purchase of 15260 buses in 61 cities. The National Mission for Sustainable Habitat focused on ensuring high quality transit, and the Jawaharlal Nehru National Urban Renewal Mission aimed to set up a Unified Mass Transit Authority (UMTA) as well as city-specific Special Purpose Vehicles for managing public transport. The Mission also emphasized bus prioritization at intersections and dedicated lanes for buses. Standard Service Level Benchmarks have been established for public transport facilities. During the 7 th EST Forum, India reported that it aimed to replicate the metro experience on urban buses. Buses were being standardized, and 14,000 buses were on the road, with 500 more cities to be covered by public transit in 2013-2014. Metro railway was also described. Delhi, and Bangalore had operational metro systems, while Mumbai, Kolkata, Chennai,

	Hyderabad, Jaipur and Cochin all had proposals underway. During the 8 th EST Forum, India reported that rural areas were a focus of public transport, and policies were being rolled out to address this issue.
Japan	Japan is a world leader in public transportation, and this leadership has developed over time. However, its development was aggressive even before the Bangkok 2020 Declaration. Yet at the 5 th EST Forum, Japan noted that private car use was at an all-time high, and restoration of public transit was needed in order to maintain transport linkages, promote sightseeing and manage environmental issues. The report featured comprehensive coordination of local railroads, BRT, Bus, LRD and improved transfers. The report also emphasized “Realizing ‘a city where convenience of walking is effectively utilized’ by properly dividing the roles of various transportation methods including walking, cycling, vehicles and public transport”. Toyama City saw increases of users by 2.1 times on weekdays and 3.8 times on weekends by improving tram tracks and creating Japan’s first full-scale LRT. The 6 th EST Forum report featured upgrades to public transit interchanges. Standardization and Interoperability of public transit IC cards was reported on at the 7 th EST Forum, and at the 9 th EST Forum, Japan communicated the goal of using public transport vehicles to promote low GHG emission vehicles (even lower than privately-owned vehicles) while improving convenience, reconstruction and expansion of the network.
Republic of Korea	Republic of Korea reported at the 5 th EST Forum that it had a target to shift 55% of trips to public transport by 2012. The strategies it reported at that time included better intermodal transfer, introduction of light rail transit, and improvement of buses including BRT introduction and interoperability of transport cards – the “One Card All Pass”. The government also introduced the concept of the “Public Transport Only Zone”. The plan for public transport was expanded at the 6 th EST Forum, noting that urban rail would be expanded to 1,054km by 2012, and that bus services would be improved, including construction of bus transfer system in service areas on expressways, and expansion in the use of BRT in major cities and the Seoul Metropolitan Area. Republic of Korea introduced the concept of “Transit Malls” during the 7 th EST Forum, in the cities of Daegu, Seoul and Busan, which expand sidewalk space and limit traffic to public transit vehicles only. Seoul established a master plan for the dedicated districts of public transportation and operated a pilot project. Republic of Korea’s report to the 9 th EST took a more aggressive approach, with the theme, “Make Drivers Uncomfortable, Passengers Comfortable”. The report noted that public transit services were still not adequate for demand, leaving people standing on buses (which is illegal on Republic of Korea highways). The country committed to diversion of bus passengers to rail, simplification of bus routes, construction of regional transfer centers, providing bus information online, operating double-deck buses along some busy routes, establish a control tower, and rationalize fares.
Lao PDR	Lao PDR has put attention on public transport since the 5 th EST Forum. An Urban Transportation Master Plan with public transit improvements was implemented, including bus routes, park and ride car parks, small, comfortable and energy-efficient buses, and a commitment to have two bus routes within 150 meters of any point in the core area with buses running every 5-6 minutes. JICA has supported implementation of the Urban Transport Master Plan through support to procure 42 “45 seat” buses, and three years of technical cooperation. The Vientiane Sustainable Urban Transport Project (2014-2020) was funded, and a pilot e-Tuktuk transport project in Luangprabang was featured in its presentations.

Malaysia	<p>Malaysia had developed numerous plans for public transport before the 5th EST Forum. It reported that the Tenth Malaysia Plan (2011-2015) featured developing a Rakyat-Centric Public Transport System and implementation of the clean air action plan, and public transportation was featured in the National Automotive Policy, National Green Technology Council, Promotion of Public Transport and National Key Results Areas. Integrated transport terminals, LRT lines, and train services were all featured, and a goal to increase modal share for public transport from 12% to 25% by 2012 was stated, based on initiatives to install Bus Right of Ways, increased coverage, improved rail capacity, improved integration and intermodal facilities, etc. A target to improve accessibility such that 75% of population would live within 400m of a public transport route was described during the 6th EST Forum, and bus improvements including integrated smart ticketing and performance standard monitoring were introduced.</p> <p>The 7th EST Forum report featured drop and ride facilities, electronic journey planners, a centralized taxi service system and an integrated cashless payment system. The 9th and 10th EST Forum reports saw extensions of these concepts – a public transport program largely in place. Yet the country still faces challenges achieving its targeted mode share of 25%, meaning that more work will need to be done. (http://gtp.pemandu.gov.my/gtp/Improving_Urban_Public_Transport-@-GTP_2@0_Improving_Urban_Public_Transport.aspx)</p>
Maldives	<p>The bridge network connecting the Capital Island, Airport and Hulhumale Island will have public transport network provisions included, and public bus service will be developed for Hulhumale Island. Other islands, such as Villingili Island, where there are few private vehicles, make use of electric taxis, as reported at the 9th EST Forum. Public transport has primarily taken the form of ferries, which connect the islands. A series of national provincial and atoll ferries allow residents to travel between islands when necessary. At the 9th EST Forum, the Addu City Atoll was reported to be developing a road and bridge network connecting its four main islands, and a bus network to connect ferry terminals.</p>
Mongolia	<p>Bus According to the 2030 Master Plan, a public transport system will be developed including a Bus Rapid Transit (BRT) system including the refurbishment of existing buses and the addition of new routes. Further details of this plan include introduction of GPS technology, increasing number of electric vehicles and launching “huge capacity” public transport in Ulaanbaatar (6th EST) 2012-2020 a \$169M project to build special road autobus service, improve road mobility management, electronic ticket and bus registration (6th EST) (7th EST country report) In the period 2008-2010 Mongolia launched a 1,5B turug project to assemble vehicles domestically. They reported assembling 15 busses, 11 trolley busses, 1 duo bus. In 2008-2011 32 electric transport vehicles were assembled domestically. A goal of 400 busses was set in 2009. (6th EST) A BRT system has now received financing from the ADB and detailed planning is underway (10th EST Forum).</p> <p>Rail Light rail transit was considered to operate on existing railways in Ulaanbaatar City and connect satellite towns. In the long term, this route will be upgraded to a LRT Metro system. The LRT Metro system slated to be completed by 2020 was postponed in 2015.</p>

Myanmar	<p>Yangon BRT launched in February 2016 (http://yangonbuspubliccompany.com) that includes a pre-paid card that is bought from an employee on the bus. Public transportation projects include:</p> <ul style="list-style-type: none"> • Yangon-Mandalay Railway Rehabilitation and Modernization Project • Comprehensive Development Project for Yangon Central Railway Station Area • Upgrading Yangon-Nay Pyi Taw- Mandalay highway • Tram services in Yangon CBD area • Fees exemption for public transport buses and city buses • Bus with a high level of Service (BHLS) • Bus Rapid Transit (BRT) (9th EST Forum report) • Construct inter-city transport system from cities (Yangon, Mandalay, Nay Pyi Taw) to the other Regions and States with new passenger buses. (9th EST)
Nepal	<p>During the 5th EST Forum, Nepal noted that its public transportation system was disorganized and primarily owned and operated by the private sector. At the same time, it mentioned that old vehicles were being replaced, and public transport vehicles were being replaced with low or zero emission vehicles, funded by the GEF. The Kathmandu Sustainable Urban Transport program supported two pilot routes for public transport, as well as the rationalization of public transport. At the 7th EST forum, Nepal reported progress in organizing public transport, and that one public transport route had been selected as a result of GEF piloting. A study for an elevated transport system in Kathmandu was completed, and Sajha Transport was reintroducing mass transport. According to the report to the 8th EST, the country planned to enforce an integrated fare system for public transport based on distance, and Smart card tickets were introduced. Barrier-free buses were also planned. During the 9th EST forum, public transport planning had been completed for 8 primary routes, 16 secondary routes and 42 tertiary routes, with bureaucratic restructuring to support. And in the report to the 10th EST Forum, Nepal reported that it had completed District Transport Master Plans, that public transport services had been rolled out along 7 routes in Kathmandu Valley and Kathmandu City by Sajha Yatayat, and that rural access program was underway. Media reports also indicate that night public transport service was to become available on several routes in the Kathmandu Valley, enabling night-shift workers to have safe and reliable transport (http://kathmandupost.ekantipur.com/news/2017-02-15/sajha-yatayat-begins-night-bus-service-in-valley.html). Nepal has made important progress in public transportation roll-out over this period.</p> <p>Cable car projects have also been cited as public transport projects, but primarily focused on the tourism industry, as well as the hydropower construction industry.</p>
the Philippines	<p>Public transit has improved dramatically, especially for the Philippines' major cities, as reported in EST reports. The 5th EST Forum report focused on expansion of Manila's MRT and LRT systems, as well as BRT for Metro Manila, Cebu and Davao. Integrated ticketing was also under development. The 6th EST Forum report focused on a Mega Manila Public Transport Planning Support System, Public Transport Strategic Plan for Metro Cebu and a Sustainable Urban Transport in Davao City Plan. Meanwhile, Metro Manila's LRT 1, Line 1 North Expansion, Line 2 MRT and North Rail line reconfiguration were underway, with BRT development in Cebu City. The 7th EST Forum maintained these public transport projects, while facing resistance from private-sector transit operators. At the same time, 2-stroke tricycles were replaced. The 8th EST Forum expanded the list of rail and BRT programs under way, and the 10th EST Forum report reports that some legal bottlenecks related to BRT have been resolved, projects are being constructed in Cebu, Metro Manila, and Point-to-Point Buses have been launched to shorten the time commuters need to take daily.</p>

Pakistan	Pakistan's report to the 5 th EST forum noted that mass transit systems and fleet management practices were a major national EST policy objective. The country was pursuing comprehensive concession agreements and exclusivity of routes for operators of clean energy buses, improving safety for operators, and creating flexible fare structures for operators, with bus implementation the top priority for urban transport. The 6 th EST Forum report noted that CNG buses were being procured for mass transit. By the time of the 7 th EST Forum, Pakistan reported that public transport pilots operating in BRT, intercity bus services, railways, etc. The BRT projects in Lahore and Islamabad, along with proposed projects in Karachi and Peshawar were featured in the 8 th EST Forum report, with Pakistan's first urban rail project (in Lahore) featured as a new project for the 9 th EST Forum. The Karachi Transportation Improvement Project featured a mix of projects along various corridors to be completed in 2030. Further projects were discussed in the report to the 10 th EST Forum.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	At the 5 th EST Forum, Singapore noted that it aimed to make public transport a choice mode, integrating the public transport system, giving priority for buses, expanding the rapid transit system network and capacity, and enhancing the travel experience and safety. The plan focused on centralized bus network planning, distance-based fares, integrated hubs and integrated land use and transport planning. The country targeted 278 km of rail by 2020, and aimed to enhance the commuter experience by providing real-time bus arrival panels, bus services maps, SMS for bus arrival information, a mobile phone app, website, premium bus services and an integrated ticketing system. At the 6 th EST forum, Singapore noted that its public transport operations are self-funded, That the public benefit from a world-class transportation system, with fares that amongst the lowest in the world. This was accomplished in part by a next-generation national transport fare clearinghouse system. At the 8 th EST Forum, Singapore expanded on its public transport plans including a rail development plan, addition of trains, signaling upgrades and re-sleepering of tracks, a bus service enhancement programme, and transition to government contracting model for bus services, allowing public bus services to be more responsive to changes in ridership and commuter needs.
Sri Lanka	Sri Lanka started the Bangkok 2020 Declaration period with a high, but quickly falling, mode share of public transit, and the challenge of maintaining levels of service while expectations grew, and private cars became more accessible. Even during the 5 th EST Forum, Sri Lanka reported that it was considering BRT, upgrades to its fleets and upgrading of bus terminals. Park and Ride systems were introduced and reported to the 6 th EST Forum. A JICA-assisted study on Colombo transport corridor identified potential public transport upgrades and was reported at the 8 th EST Forum along with detailed maps of potential transport routes as well as intermodal hubs. The transport master plan was realized with the help of many international partners. Progress was reported in Sri Lanka's report to the 10 th EST Forum, citing planned projects including revision of bus routes in Colombo metropolitan area, and introduction of shuttle bus feeder routes.

Thailand	<p>Thailand has encouraged public transit for nearly a decade, beginning in 2008 with free selected bus routes (non-air conditioned) in Bangkok and trains throughout the country. The BRT reduced its fare to attract riders. Bangkok has a well-developed MRT system, with plans to expand the service to 12 lines at a length of 509 km by 2029 by constructing LRT and Monorail. The BRT system consists of 10 routes at a total distance of 200km. Meanwhile, park-and-ride system attract drivers to leave their cars at distant locations and take the train into the city, thus relieving pressure from the road network. Public buses are a key platform on which to implement fuel switching, and the government plans to change over 3,000 buses and more than 300 engines from diesel to CNG to avoid diesel emissions. Bangkok has also implemented common electronic tickets for many forms of public transit in the region, although in 2015, it was reported that electronic tickets are often not interconnected between transport modes. (http://bk.asia-city.com/city-living/news/bts-new-promotional-fares-are-way-more-expensive-single-journey-tickets)</p> <p>Other pilot projects have been underway in Thailand. During the 7th EST Forum, public transport in Klaeng District of Thailand was reported on, where free public transit was provided on four minibuses, serving 300 students and 170 other users per day. The project saw reduced fuel consumption, reduced GHG emissions, and further encouraged people to engage in more physical exercise. The 10th EST Forum report notes that MRT is under construction in Bangkok.</p>
Timor-Leste	Timor-Leste has not yet reported on improvements to the public transport services.
Viet Nam	Public transport is a major focus of sustainable transportation in Vietnamese cities. Many cities in Viet Nam have set targets for public transport to increase modal share of 25-45% in the 2020-2030 period, while most communities currently sit at 10%. Ha Noi and Ho Chi Minh City have put major efforts into developing BRT and MRT systems and associated planning standards in place. Plans are in place to shift mode by reducing the number of motorbikes and cars on the road in Ho Chi Minh City and Ha Noi.
Goal-6: Reduce the urban transport mode share of private motorized vehicles through Transportation Demand Management (TDM) measures	
Afghanistan	Afghanistan's basic infrastructure still poses a significant problem to the development of EST, and therefore considerations for TDM have received less attention in planning to date. Although TDM is mentioned in the draft Air Quality Strategy, progress was not reported in 2015.
Bangladesh	Being a country where many people have low income, willingness to pay for transport is a key constraint to using price as a means of limiting transport demand. Yet, some initiatives have been taken. Road tolls, parking fees and fuel levies are meant to be charged to discourage automotive transport in cities. Working hours of government offices, financial institutions and educational institutions have been staggered to reduce road congestion during peak hours in urban centres, different off days for markets in urban areas have been introduced, and freight vehicles are prohibited from entering Dhaka during day time. Discussions have been had regarding the challenging policy of congestion charging in Dhaka. Sylhet City noted at the 8 th EST Forum that using its Master Plan, it was able to ensure that all new construction in the city would provide adequate parking facilities so as to avoid on-street or on-sidewalk parking. The 10th EST Forum report addressed issues of flexible working hours in government offices, financial institutions, educational institutes, etc.; different days off for markets in urban areas; freight vehicles prohibited from Dhaka during daytime, and CNG price is being increased.
Bhutan	Bhutan has taken some measures to manage the demand for transport. As an awareness-raising measure, World Environment Day (5 June) has been declared a "vehicle free" day in urban centers. On a more practical basis, parking fees have been introduced in Thimphu and Phuntsholing, and taxes, duties and green taxes have been levied on vehicle imports. By 2015, there was a ban on the import of second-hand vehicles implemented, outside a zero-tax policy for import of electric vehicles. However, the growth of the automotive population seems to continue relatively unabated.

Brunei Darussalam	Transportation demand management was not a key part of planning in Brunei Darussalam at the 7 th EST Forum. Yet the country was starting to feel the strain on its infrastructure from too many cars. Research on traffic congestion, and road safety was undertaken, with the aim of implementing recommendations under those two programmes. The Land Transport Plan identified several TDM measures to be incorporated in the transport system including as a minimum, a focus on parking management, land-transport integration, investment in public transport and physical and regulatory regulation of access to urban centres and other sensitive locations. One key TDM measure is to convince families to allow their children to commute to school by non-car means, including school buses or non-motorized transportation.
Cambodia	Cambodia identified the need to develop a clear roadmap to manage the demand for private transport use at the 5 th EST Forum, but has only been followed up with the development of a ring road to divert through traffic, reported at the 8 th EST Forum. The country's "Framework for the Decade" did not explicitly include traffic management as a pillar (9 th EST Forum).
P.R. China	Major cities in China are experiencing extreme traffic congestion. Beginning with a trial during the 2008 Olympic Games in Beijing, Beijing limited cars allowed on the road to even or odd license plate numbers developing on the day of the week. Today, Beijing allows any one vehicle to drive only 4 days of the work week. Furthermore, new license plate purchase has been capped in Beijing, forcing new car drivers to take place in a lottery, where many people wait more than a year to receive a license plate for cars, thus keeping them in the public transport or non-motorized transport system. Shanghai has utilized parking pricing and a vehicle plat auction system, and other cities across China have made use of other similar mechanisms to limit the number of cars entering the road transport system. In recent years, Beijing has undertaken major efforts in the design of a potential congestion charge for areas of the city, but has not been implemented due to lack of consensus between stakeholders on this issue. Other cities are reportedly watching to see Beijing's experience before implementing their own congestion charges.
Indonesia	Indonesia's National EST strategy focuses on ERP / Road Pricing, Parking policy and private car-use disincentives for TDM, and has enshrined these concepts in its National Action Plan for GHG Emission Reduction. This action plan outlined 12 cities of Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin to target parking management as a strategy to reduce car use. Meanwhile, congestion charging and road pricing was proposed for Jakarta and Surabaya, combined with adequate mass rapid public transport systems. Reports from 2016 indicated that although policies are in place, parking management still requires detailed implementation work. (http://www.id.issworld.com/en/people/our-stories/parking-management). And although the policy discussion on ERP/road pricing or congestion charging has gone ahead, it has faced technical and governance challenges and not yet been implemented. Jakarta has, however, implemented an odd-even license plate limiting system along 5 major roads in the city as a means of controlling congestion (http://asia.nikkei.com/Politics-Economy/Economy/Skepticism-clouds-Jakarta-s-car-congestion-fix). Indonesia reported in its 10th EST Forum report that it would continue restricting vehicles on an odd-even basis until electronic road pricing was rolled out.
India	According to India's National Mission for Sustainable Habitat, the country plans to manage transport demand by using technology, regulating road use, and parking and fiscal measures, and transport demand management is also a component of the National Transport Development Policy. (6 th EST Forum report). It was also reported that the National Mission for Sustainable Habitat would address the issues of taxation, parking and congestion charges and service norms to reduce demand for transport. During the 7 th EST Forum, India reported that the current status of transport planning at that time was overwhelmingly supply-side focused, though parking policy was still under development. A transportation demand management toolkit and a demand assessment module were under development at that time. By the end of 2015, the Delhi government announced that each private car and two-wheeler would be allowed on the city's roads only every other day in order to reduce vehicles on the road and pollution. (http://www.hindustantimes.com/delhi/delhi-vehicles-with-odd-even-number-plates-to-ply-on-alternate-days/story-Cr9i3ERsnsTJVP8ikdDm6N.html)

Japan	Japan has considered TDM from many dimensions. During the 5 th EST Forum, it introduced the concepts of Mobility management, which uses awareness to promote voluntary changes in mobility such as moderate use of public transport and bicycles; and, eco commuting, where offices would appoint a person to be in charge of coordinating commuting by providing public transit route maps and timetables, etc. In its report to the 7 th EST Forum, Japan noted that TDM is mostly reliant on awareness, and was related to Goal 19. Financial support would be provided to approved awareness plans, as well as to optimization of public transport distribution in urban areas. Japan added park & ride projects to its mix of TDM strategies reported at the 8 th EST Forum
Republic of Korea	In 2010 at the 5 th EST Forum, Republic of Korea introduced congestion charges, restriction on total traffic volumes and reduction of parking availability as its major TDM strategies. These were expanded upon at the 6 th EST Forum, noting congestion charges, car-sharing, eco-driving and IT-based remote working as possible strategies, while exploring the possibility of Green Transport Zones, traffic volume caps by region, and public transport-focused urban development. The concept of traffic-induced charges for large-scale distribution facilities in major cities was introduced during the 7 th EST forum, and a comprehensive approach to TDM was introduced at the 9 th EST Forum, including Traffic congestion charges, car “rest days” based on license plate number, parking controls, NMT promotion, lane distribution between modes, public transit promotion, traffic generation charges to businesses, and flex time and flex place strategies for working. The government planned to rationalize parking fares and strengthen parking standards, introduce area-based congestion charges and maximize ICT for transport demand management.
Lao PDR	Lao PDR reported that TDM was an important strategy for EST in its report to the 5 th EST Forum, and expanded on this at the 6 th EST Forum, reporting that is was implementing EDM measures to reduce trips into the core area, encouraging public transport usage, revising parking arrangements (including fees) and improving enforcement, improving pedestrian facilities and light-controlled pedestrian crossings, improved lighting and control centers and protecting the environment in the historic core area with pedestrian priority areas. The plan also featured a park and ride car park at the east and west ends of the core.
Malaysia	TDM was first discussed in Malaysia’s reports in the context of the Greater KL/Klang Vally Land Public Transport Masterplan, underlining objectives and strategies for TDM measures. Measures mentioned in the plan include prioritizing bus, taxi and NMT modes in road planning, encouraging telecommuting and flexible work hours, advertising campaigns, parking controls, fuel price policy and road pricing or congestion charging, after public transport services are in place. ((http://gtp.pemandu.gov.my/gtp/Improving_Urban_Public_Transport-@-GTP_2@0_Improving_Urban_Public_Transport.aspx). However, government websites now only feature parking control and management and implementation of journey planners as current active TDM actions. (http://gtp.pemandu.gov.my/gtp/Improving_Urban_Public_Transport-@-GTP_2@0_Improving_Urban_Public_Transport.aspx)
Maldives	Maldives reduces demand for automotive transportation with several mechanisms, reported at the 7 th EST Forum. First, there are regulations in force to limit the number of cars allowed on each island, although control mechanisms are needed. Furthermore, no vehicle days have coincided with public holidays, where the public comes out to walk on the streets.
Mongolia	The government has reported three key initiatives to reduce transportation demand (7 th EST): <ul style="list-style-type: none"> · State workers (~15K people) will use public transport · Private cars are restricted according to plate number digits in downtown area during weekdays · Development of school bus services, not common in Mongolia.

Myanmar	<p>In the 6th EST, Myanmar reported a series of TDM strategies to calm traffic and attempt to shift people to other modes:</p> <ul style="list-style-type: none"> · Applying one-way system on some busy roads · Restricting slow vehicles to run in the stipulated areas · 3 ton above trucks are not allowed entering the down-town area · On some main roads, vehicles are not allowed to stop and park at the daytime as well as at night; · " The Outer right Lane " of the road is specified for buses · Some area are specified as “no horn zone” in the target townships · Collection of tax for parking · Installation of CCTV and Cameras for monitoring of traffic infractions <p>CCTV cameras have been installed to control traffic in major cities such as Mandalay and Yangon. All townships in the country collect toll fees and vehicle taxes are collected according to policy (7th EST Forum report). Myanmar imposes fines for causing road congestion and collects toll fees on the expressway. (8th EST Forum Report) Fines have been increased dramatically over the last 2 years.</p> <p>Yangon City Development Committee has planned to implement parking in CBD and to build a multi-storied car parking in urban area, and 1/3 of traffic signals are to be upgraded in Yangon (9th EST Forum report). Finally, The Motor Vehicle Law passed in September 2015. According to Myanmar's report to the 10th EST Forum, the Yangon Transport Authority has now been set up, and YBS is being implemented in Yangon City.</p>
Nepal	<p>At the 5th EST Forum, Nepal reported that it had received funding for traffic management support as part of the Kathmandu Sustainable Urban Transport project, and that it was upgrading traffic management and organizing public transport as a means of reducing demand for transport. During the 6th EST Forum, a JICA study for Kathmandu Valley traffic management was to come underway. Congestion pricing policy was also being researched. At the 7th EST, Nepal reported that it had started traffic management, and that the functions of transport infrastructure and transport management had now fallen under the same ministry. However, in its report to the 10th EST forum, Nepal reported that the rapid increase in vehicle population was presenting many challenges to sustainable transportation. Internet research indicates that Sajha Yatayat, a public transportation bus system in Nepal, had begun long-haul bus service to Baglung, Gorkha, Birgunj and Lumbini in late 2016 (http://kathmandupost.ekantipur.com/news/2016-11-14/sajha-yatayat-expands-bus-service.html).</p>
the Philippines	<p>The Philippines initially focused on toll roads as a means of managing demand for transport, having piloted tolls in 8 major roadways as reported at the 7th EST Forum. At the 8th EST Forum, the toll road network had expanded to 321.3km, and car-free day and car-pooling were under development. At the 9th EST forum, the report focused on Transport Network Companies and Vehicles (using online reservation systems) as a means of shifting people away from using their own private vehicles, and parking levy policies were under consideration. Metro Manila has also put a moratorium on petitions for exemption from the areas' Unified Vehicular Volume Reduction Program, which limits the days on which certain vehicles may drive on Manila's roads according to license plate number.</p>
Pakistan	<p>Introduction of parking fees was reported as an TDM outcome during the 5th EST Forum for Pakistan, with construction of parking facilities considered in the 8th EST Forum report, along with staggering of working hours, especially for schools, to moderate peak traffic times. In its report to the 10th EST Forum, Pakistan reported that it had linked fuel prices with international oil prices as an NMT measure, and started to promote provision of dedicated buses for institutions. The government is currently developing a national transport policy.</p>
Russian Federation	<p>The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.</p>

Singapore	Road usage management (TDM) was reported to be a Key Strategy for EST and a People-Centered Land Transport System by Singapore at the 5 th EST Forum, aiming to reduce vehicle population growth rate, and leverage technology to optimize road capacity. Singapore reported that it had reviewed a vehicle quota system and enhanced off-peak car system, as well as new technologies for electronic road pricing. Furthermore, a parking guidance system, electronic regulatory signs, junction cameras, expressway monitoring and advisory system and signalized pedestrian crossings had been installed to help manage road use. In its report to the 10 th EST Forum, Singapore noted that it would reduce its vehicle growth rate under the quota system from 0.5% to 0.25% per year from February 2015, with a view to reducing growth to zero. Furthermore, a next-generation Electronic Road Pricing system based on a global navigation satellite system is being developed and could be implemented around 2020.
Sri Lanka	Sri Lanka has been reporting on some TDM since before the Bangkok 2020 Declaration, including the launch of a car pool concept with top 10 companies in Sri Lanka, as well as a park and ride program and encouragement of flexible working hours, all reported during the 5 th EST Forum. During the 8 th EST Forum, the country reported that TDM strategies would be established when the Urban Transport Master Plan for Colombo Metropolitan Region and Suburbs was implemented (by 2020, 2025 and 2035). The report to the 9 th EST focused on enhanced parking facilities in the core including strict compliance on minimum parking facilities in new buildings, and fee levying for parking. In the country's report to the 10 th EST, it was confirmed that parking management was being done through metering, and a carbon tax was being considered along with a bus priority lane pilot project.
Thailand	By the time of the 7 th EST Forum, Thailand had not reported specific projects for TDM as part of its EST strategy other than promoting inter-city rail as a means of reducing demand for private vehicle transport. This concept has not been thoroughly discussed in documents related to development or projects. Media reports from 2016 that the Ministry of Transport may use congestion charges, increased parking fees or other strategies to reduce congestion in Bangkok. (http://www.bangkokpost.com/learning/advanced/1044013/traffic-congestion-drivers-may-pay-to-enter-central-areas)
Timor-Leste	Timor-Leste has reported that it will improve taxi service as well as develop more transport regulation and law enforcement to control traffic, reduce pollution and minimize accidents.
Viet Nam	Major cities in Viet Nam have experienced heavy traffic for many years, and with car ownership often considered a sign of success, congestion is getting worse. In 2010, Ho Chi Ming City proposed a plan for congestion charging for cars entering the city, including 36 automated toll booths and specialized cameras to recognize car number plates along with other technologies to charge fees. Although the plan has not yet been implemented, the plan has appeared in the media as recently as December 2016. Additionally, Hanoi has recently invoked a ban on motorcycles from other provinces entering the city. According to the plan, by 2020, the number of motorbikes will be limited during the weekend in the Old Quarter, and by 2021, motorbikes from other provinces will be banned. Taxis from other provinces may also be banned in the city, if a legal basis can be formed. These bans should be accompanied by public transport increases, with plans to serve 25% of transport demand by 2020, using 15 to 20 new bus routes and over 500 new buses. (http://www.dtinews.vn/en/news/024/47225/hanoi-ban-on-motorbikes-from-other-provinces-sparks-controversy.html)
Goal-7: Achieve significant shifts to more sustainable modes of inter-city passenger and goods transport	
Afghanistan	Inter-city transportation is a key focus of Afghanistan's transportation planning. The Extractive Resources Corridor Program has a special focus on rail connectivity, and the construction of highways between cities was prioritized according to the report to the 7 th EST forum. During the 8 th EST forum, it was reported that work was ongoing on major highways, including a national-level ring high way linking all major cities and main border crossings, with a feasibility study of rail network expansion underway. No progress was reported by the time of the 9 th EST forum in Kathmandu. The security situation for ground transport has also encouraged progress in air connectivity in the country.

Bangladesh	Bangladesh has very good opportunities for inland water transport, and has completed a water route surrounding Dhaka which is in operation. A high-quality inland water transport serve from Dhaka to the southern region has also been introduced, and there are a number of inland container ports. Yet dredging to keep these and newer services operational is expensive, detracting from further development. Rail services between Dhaka and important cities has been enhanced, and double lining of some rail track has been initiated, making freight movement more convenient. By 2020, 350 km of new rail track and double rail lines between Dhaka and Chittagong will be completed, and commuter train services will be increased. Installation of high-speed passenger rail has even been explored. Finally, highway corridors are being upgraded from 2-lane to 4-lane, and the three busiest national highway corridors will be upgraded by 2020, making passenger and freight movement between cities easier. Intercity bus terminals are in place at the periphery of cities with connections to city centers in place.
Bhutan	Roads and air are the primary means of inter-city travel in Bhutan. The rugged terrain of the country means that other forms of transport may be very difficult or expensive to install and operate safely. Even the 2040 Integrated Strategic Vision notes that rail will be difficult to achieve in the near future. Although discussion have been ongoing for Indian Rail to come to Bhutan, it seems that delays have occurred, pushing the possibility of rail even further into the future. Ropeways have been mentioned as a way of transporting certain commodities in sensitive areas, and inter-modal facilities such as warehouses, cold storage, inland container depots and dry ports are potential means of improving inter-city goods movement. Finally, the government has been advised to introduce taxi incentives for new large trucks that are fuel efficient and emission standard compliant. The country reported for the 10th EST Forum that it had completed design and tendering of a dry port.
Brunei Darussalam	There is little information regarding inter-city transport in Brunei Darussalam. This could be because of the small land area of the country. Some mention of rail to other parts of Borneo was explored in a Land Transport White paper, but it was found that the costs would be too high given Brunei's small population.
Cambodia	During the 8 th EST forum, Cambodia reported that there was work on-going on ring roads and railway improvement as well as construction to facilitate motilities of goods and people. Internet research suggests that passenger service from PhnomPenh and Sihanoukville in the south resumed in 2016 (http://investvine.com/passenger-trains-revived-cambodia-14-year-hiatus/), a western line to Thailand is opening in phases (http://www.voanews.com/a/cambodia-takes-first-step-in-connecting-regional-railways-105662543/166537.html), and other lines are under discussion.
P.R. China	P.R. China has reported that institutional reform, connection between seaport and railways and planning comprehensive transport terminals are important foci of goods transport. Logistics parks have become a major effort in urban planning, especially intermodal terminals between inter-city transport and inner-city transport, allowing for better vehicle utilization, and online platforms and telematics have allowed for better coordination of freight movement so that more efficient modes can be used. Meanwhile, China has rolled out the world's largest high-speed rail network to improve rail transport for passengers. Although times for long-distance trips are still longer than flights, rail times have been cut in half or less for most trips. Old low-speed passenger rail lines have been investigated for potential use as express inter-city delivery service. Many of these programs have yet to be perfected, but are all under development for China as well as for export to other places in the world.
Indonesia	Since the 5 th EST Forum, Indonesia has reported on the development of rail and bus systems through between cities. In 2010, the country aimed to revitalize railways, build a new network, double tracks, convert diesel locomotives to electric, construct airport railways and monorail systems for cities. According to the KPPIP, Indonesia plans to develop new rail tracks in Java, Sumatra, Sulawesi and Kalimantan including 2,149 km of inter-urban railway. The country will build 24 new sea ports and 60 crossing ports, and 15 new airports including cargo facilities in 6 locations. Finally, Indonesia aims to construct high-speed rail from Jakarta to Indonesia. While ground-breaking took place in January 2016, the project still faces challenges, especially in acquiring land.

India	India reported to the 8 th EST forum that it would undertake construction of more expressways and dedicated rail freight corridors as well as a Delhi-Mumbai corridor with gas highway. Besides this report, there is little information in India's reports to the EST Forum process on inter-city transport. Reports from the World Bank indicate that India is moving ahead with a dedicated freight rail corridor to facilitate faster and more efficient freight transport. (http://www.worldbank.org/en/news/press-release/2016/10/21/government-of-india-world-bank-sign-usd650-million-agreement-for-eastern-dedicated-freight-corridor-project), which is expected to result in significant GHG emission reductions on a unit of freight basis.
Japan	During the 7 th EST Forum, Japan reported three major initiatives for inter-city transport: promotion of modal shift, promotion of low carbonization of freight using railways beginning in 2012, and the Shinkansen Railway Development Program to continue network development. At the 8 th EST Forum, Japan reported that it would support transport operators to purchase fuel-efficient trucks so as to reduce CO ₂ emissions from freight movement. It also reported that the government would offer partial funding for purchasing 31ft container trains for railway freight businesses. During the 9 th EST Forum, Japan expanded its efforts to promote EV, Fuel Cell, Hybrid and high-speed CNG trucks for cleaner freight. In Japan's report to the 10 th EST Forum, it described the impact of the Total Logistics Efficiency Act, and that modal shift from truck to rail or waterway could be approved. The Shinkansen network continued its expansion.
Republic of Korea	At least since the 5 th EST Forum, Republic of Korea has reported on providing subsidies to encourage mode shift from truck to rail. The country targeted 15% rail and 22% coastal shipping by 2012. The country also targeted improved high-speed rail, extending the system to 363km by 2012 and improving alignment to accommodate 200-230 km/h speeds. Rail services would be electrified. During the 6 th EST Forum, the country aimed to complete construction of the 2 nd phase of the Honam high speed rail by 2014 and to speed up existing railways. Coastal shipping was encouraged with finance guarantees from the Korea Credit Guarantee Fund, and port facility fees were reduced. During the 7 th EST Forum, Republic of Korea reported that it would implement a double-tracked railway inland project, develop an integrated ticket system for express/intercity bus, and real-time location information using GPS, and connect BRT systems between urban and suburban areas.
Lao PDR	Lao PDR reported during the 5 th EST Forum that it was upgrading existing port facilities as part of the Mekong River Integrated Management Project, and during the 7 th EST forum that a comprehensive study on logistics system was being undertaken with support from JICA, and that transport logistics was one of the five thematic areas of the Land Transport Master Plan in Lao PDR. However, mode shift was not specifically mentioned in Lao PDR presentations.
Malaysia	The National Green Technology Council took on promotion of rail-based transport especially for freight movement as a goal before the 5 th EST Forum, indicating that this policy has been part of Malaysia's planning for many years. Increasing the capacity of rail transport was also a national key result area. During the 7 th EST Forum, Malaysia reported that infrastructure is largely in place, but would be upgraded and that high speed rail from Kuala Lumpur to Singapore was in the planning stages. A roadmap for logistics development was reported at the 8 th EST Forum. The 10th EST Forum report noted that a National Logistic Masterplan was in place.
Maldives	Maintaining a high quality bus and ferry network are the key means of ensuring sustainable transportation in Maldives. Although automobile population is growing, most transportation is still done by sustainable modes across the country. Automobile population is a challenge that the country will face, however.
Mongolia	The 2030 Master plan states that light rail transit will operate on existing railways in Ulaanbaatar City and connect satellite towns. However, this system was also likely postponed in 2015 along with the Ulaanbaatar city light rail. The government reports implementing a direct road network system between Ulaanbaatar city and 21 aimag /administrative units/ to connect them centers by 2016. (7 th EST Forum report) In its report to the 10th EST Forum, Mongolia reported on the establishment of a master plan for mineral resources and infrastructure development and financing requirements of Mongolia, and planned to connect Ulaanbaatar with 21 provincial centers with paved road by 2017, becoming more sustainable and comfortable for inter-city travel.

Myanmar	<p>During the 7th EST Forum, Myanmar reported that it had been developing Dawei, Kyaukpyu and Thilawa special economic zones and deep-sea ports linked with these corridors and highways. Regarding Freight Transport, a feasibility study was carried out in Yangon and Mandalay City, and construction was reported to be planned for 2015. Regarding Passenger Transport, a feasibility study was finished to upgrade Yangon-Mandalay rail transport and will be completed between 2015 and 2020. (8th EST)</p> <p>According to the 9th EST Forum report, number of feasibility studies have been carried out on public transport in Myanmar including BRT for Mandalay, rail projects, dry ports in Yangon and Mandalay, international airports and for upgrades of existing infrastructure. These have been done in parallel with development of a program called MYT-Plan, which promotes ICT and infrastructure to handle increased transport demand.</p>
Nepal	<p>The concept of an electric trolley and electric railways for Nepal have been researched since at least the 5th EST Forum. However, given that basic infrastructure challenges exist, the focus of funding has been consistently on road maintenance and upgrades. At the 6th EST Forum, Nepal noted the completion of its Pokhara Electric Railway study, and had made legal improvements to Roads Board Nepal. The country noted that it would develop expressways to improve speed under a PPP model, and bypasses and ring-roads were being built or improved in several cities to allow through-traffic to avoid busy urban areas. During the 7th EST Forum, road widening was underway, with more than 100 km widened in the Kathmandu valley. This process continued with the widening of the East-West highway to four lanes underway during the 8th EST Forum, and 30 km of railway under construction. The Kathmandu-Nijgargh Fast Track expressway also remains under discussion and design – the highway would shave over 150 km distance from every trip between Kathmandu and the India-Nepal border. However, challenges remain. At the end of 2016, JICA reported that Japan had signed an ODA Loan Agreement with Nepal to build the Nagdhunga Tunnel which will reduce congestion along Nepal’s major trade route and reduce distanced travelled by several kilometers. (https://www.jica.go.jp/english/news/press/2016/161222_01.html)</p>
the Philippines	<p>Beginning at the 7th EST Forum, the Philippines noted that its inter-city passenger and goods transport sustainable systems were largely in place. Projects included a Nautical highway system with featured RORO ferry network for seamless movement of large vehicles from ferries to land port. A planned integrated Luzon Railway would include an airport express link by high-speed train, and redevelopment of PNR lines in Luzon; Inland water transport would connect the Manila Bay coast and Laguna Lake to the existing Pasig River Ferry System; and, the High Standard Highway Development Plan would focus on debottlenecking inter-city high networks. By the 9th EST Forum, the RORO project was noted as fully completed, and PPP finance was sought for a North-South Railway project, Regional airports development, operations and maintenance, a Davao Sasa Port Modernization Project, and Integrated Transport System projects. By the time of the report to the 10th EST Forum, the North-South Railway project (south line) is up for NEDA board approval; an ongoing feasibility study is underway for a Mindanao Railway Project, a Central Spine RORO project is being developed and implemented through PPP finance, and the Pasig River Ferry has been integrated and relaunched in December 2016.</p>
Pakistan	<p>Pakistan has focused on rejuvenation of its rail system as a means of improving freight and passenger inter-city transport. Pakistan reported at the 7th EST Forum that 37 new railway infrastructure project were planned for 2013. The 9th EST Forum report indicated that 7,700 km of track were in use, with international links to India, Iran and Afghanistan – although rail freight was only responsible for 4% of freight and 6% of passenger traffic (with most using on-road). The report noted that speed increases were being investigated for Main Line 1 (1800 km), and that train traffic from ports had improved 5 times from 2 years earlier. Pakistan has also long focused on fleet managers to maintain vehicles and monitor fuel consumption (at least since the 5th EST Forum), and according to the report to the 10th EST Forum, Pakistan launched a program called “Improving Fuel Efficiency in the Trucking Sector” to demonstrate best practices in the trucking sector for modernizing the truck fleet. Inter-city transport is an area of high priority for Pakistan.</p>
Russian Federation	<p>The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.</p>

Singapore	Singapore reported at the 8 th EST Forum that it had made an agreement with Malaysia to build a high-speed rail link from Singapore to Kuala Lumpur. In addition, there were plans to develop a Rapid Transit System between the northernmost train station of the Thomson-East Coast Line and Johor Bahru in Malaysia. Tendering was underway for the high speed rail project according to Singapore's report to the 10 th EST.
Sri Lanka	By the time of the 5 th EST Forum, Sri Lanka had reported improvements to the rail system to allow for better inter-city transport, including upgrades to lines, reconstruction of lines destroyed by war and improvements to signaling and level crossings. Use of inland waterway transport was also reported around Colombo City, as was improved cargo transportation by train. Better quality bus and train services for passenger freight and train and inland water transport were again mentioned during the 7 th EST Forum. The 8 th EST Forum report discussed a plan for installation of an interprovincial bus terminal at the intermodal hub proposed at Fort/Pettah, along with rail, monorail and BRT access. At the 9 th EST Forum, waterways remained a topic of discussion, even though only a few pilots had been carried out in the past. Electrification of rail as well as a ring road to divert through traffic from the Colombo city center was proposed. The report to the 10 th EST Forum notes that a railway strategic plan 2015-2020 was prepared, and that freight transport between ports and major cities could be undertaken by rail, but also that domestic airport development was underway. Sri Lanka aimed to upgrade its bus system and passenger coaches for intercity rail, and sought to upgrade its railway tracks.
Thailand	Thailand has investigated a number of ways to improve inter-city transportation, especially through rail. During the 5 th EST Forum, the country reported improvements to its intercity rail connections, and expansion from single to double tracks for some segments. During the 6 th EST Forum, it was reported that Thailand currently services 4,346 km of railway, with plans to double track 767km of track, improve sleepers, buy new locomotives and improve train-road barriers. By 2013, the Ministry of Transport had resolved to build 1,500km of high-speed rail, but this proposal was cancelled, and the plan to improve existing services went ahead. A proposal for a China-Thailand high-speed rail line has been discussed since 2014, and after many discussions, bidding has been underway, and in early 2017, a 3.5km test track will be built, followed by a 256km high-speed railway from Bangkok to Nakhon Ratchasima. The 3.5 km test track has already revealed challenges with incompatible standards between China and Thailand, but it is said that China is resolving these issues (http://www.bangkokpost.com/news/general/1191621/thai-chinese-train-faces-design-delay). Internationally, the railway would link with a China-Lao PDR railway, allowing Bangkok to Vientiane travel in just 4 hours, and continue on to Kunming. (http://shanghaiist.com/2016/12/20/china-thailand-railway.php) The route would also connect Lao PDR to ports and industrial zones in Thailand's east. In 2017, Thailand began negotiations with Malaysia on a potential high-speed rail connection. (http://asia.nikkei.com/Politics-Economy/International-Relations/Thailand-Malaysia-to-start-talks-for-high-speed-railway)
Timor-Leste	In its report to the 9 th EST Forum, Timor-Leste indicated that inter-city transport is basic, and requires paved road infrastructure. A national road development project, 2014-2020 was described, as well as a Southern Coast Project Highway Suai-Beaco to support development of the petroleum industry. The report to the 10 th EST forum indicates that new airports and ports will be built.
Viet Nam	Inter-city transport has been a focus issue for Viet Nam, and by the 7 th EST Forum, had identified a need to develop port and railway infrastructure for the country. During the 8 th and 9 th EST forum, it was reported that the Ministry of Transport had approved an action plan to reinforce inter-city linkages and to raise the capacity and efficiency of different transport modes, and according to the national railway master plan, an external railway network linked with seaports and border countries will be constructed, along with high-speed passenger rail connecting to the Pan-Asia High Speed Rail Network being supported by the PRC and partners. While inland water transportation is still very important for the economy of Viet Nam, it is gradually being replaced by truck transport, which was an issue noted at the 8 th EST Forum, with a proposal to increase the loading capacity of trucks. However, as of the 9 th EST Forum in 2015, many of these proposals still required implementation
Goal-8: Diversify towards more sustainable transport fuels and technologies	
Afghanistan	Several proposals and plans have been developed to encourage conversion of vehicles to CNG and LPG, but by the 9 th EST forum, it was noted that the country faced the challenges of lack of policies and strategies on PPPs to help implement this plan.

Bangladesh	With resources in off-shore natural gas, Bangladesh has focused on CNG as a more sustainable fuel than gasoline and diesel. The National Land Transport Policy from 2004 placed emphasis on CNG, and now many vehicles, especially rickshaws and public transport vehicles, use this fuel. Some urban areas have explored the waste-to-fuel fuel chain, and electric power is being introduced to rickshaws. Waste-to-fuel has been researched in Bangladesh, but requires policy and investment to undertake waste management practices that may render useful quantities of gas.
Bhutan	As a very small market, Bhutan has had challenges in importing cleaner fuels. During the 5 th and 6 th EST forums, Bhutan reported on plans to import biodiesel and bioethanol into the country to reduce the environmental impacts of transportation, but in later years, this initiative was no longer mentioned, and it likely proved difficult to secure supply of these fuels. However, Bhutan is known to have great hydroelectric resources that could provide clean electric transportation, and the government has taken some initiative to push this clean technology. By the 9 th EST forum, the country reported having 91 EVs – 0.12% of the total vehicle fleet; 6 quick charging facilities, zero tax on import of electric vehicles, and exploration of replacement of taxis with EV taxis. In 2016, the World Bank produced scenario analyses and detailed policy support concepts for rolling out EVs in Bhutan. However, as nearly 70% of imported fuel is diesel, and EVs currently do not easily replace heavy duty diesel vehicles, the impacts of electrification may not be as large as expected. Still, these efforts will be key to improving sustainability of personal transport in the country. As of the 9 th EST forum, it was reported that a network of electric charging stations along road system and cities was being built, and EV operators reported that even more would be necessary to provide quality transport services using electricity.
Brunei Darussalam	Brunei is an important supplier of crude oil in Southeast Asia and also has its own refining capacity. As a result, it is able to provide very cheap petrol and gasoline domestically, leaving little incentive for a change in fuels or automotive technologies. There has some been some promotion of hybrid and small vehicles, but little information is available about electrification of transportation in the country.
Cambodia	Cambodia has not substantially reported on alternative vehicle or fuel technologies at the EST Forums.
P.R. China	P.R. China has emphasized fuel diversity as a means of energy security for many years. In the early 2000's bioethanol was promoted as a low-carbon fuel additive, until 2009 when the fuel's relationship with land use change was discovered, and expansion was basically capped. Yet, P.R. China still has a focus on developing cellulosic ethanol. Waste-based biodiesel is also a potential fuel that has not been widely accepted in China as a very low-carbon alternative fuel for the diesel sector. Meanwhile, natural gas has expanded dramatically. The China Automotive Technology and Research Center (CATARC) notes that supply of natural gas has been vastly expanded in China and is no longer a limitation on consumption, with refueling stations in an increasingly comprehensive network across the country, and many public bus systems are increasingly powered by natural gas. However, natural gas vehicles are starting to be displaced by electric vehicles. In 2015, sales of natural gas vehicles fell nearly 30% compared to 2014, and the sales of electric vehicles nearly doubled those of natural gas vehicles. China has established a world-famous push for electrification of the transport system and has rolled out incentives for EV sales and production to varying success. Increasing numbers of urban buses rely on battery electric drive, garbage collection trucks and street sweepers can be powered by batteries as well. Finally, in many cities with license plate restrictions, private EV cars can receive license plates in a priority sequence. China aims to see 2 million EVs sold in 2020, with 25% of auto sales by 2025. The challenge for EV in China is that much of the country's power is still from coal-fired electric power plants. P.R. China needs to undertake vast grid and primary power reform in order to facilitate the transfer to a truly clean EV transport system.

Indonesia	As early as 2008, Indonesia reported beginning to use natural gas for land transportation, especially for public transportation. During the 5 th EST Forum, the country stated that 1667 converter kits had been installed, with 450 units planned for 2010. Yet natural gas pricing, supply, investment, infrastructure and public opinion were headwinds to further development. At the 6 th EST, an update noted that 400 kits were installed in 2011, and at the 7 th EST Forum, the National Implementation Action Plan for GHG Emission Reduction was presented, noting that converter kits would be installed in taxis and public transportation using gasoline at the rate of 1,00 per year in 9 cities. Indonesia's goals and strategies also focused on alternative energies and emphasizing electric and hybrid cars. The UNEP's Partnership for Clean Fuels and Vehicles reports that Indonesia now provides fiscal incentives for EV sales (luxury tax exemption), and infrastructure programmes are underway. Furthermore, the Transjakarta BRT is serviced by 335 CNG buses and 91 diesel buses with recent upgrades to new Euro III or CNG buses. CNG three-wheelers are sold by Bajaj Auto via credit financing scheme to three-wheeler owners. (Clean Air Asia Vehicle Inspection and Maintenance in Asia Policy Profile: Indonesia, 2016)
India	India has made efforts in the alternative fuel and vehicles space. During the 7 th EST Forum, it reported that as part of an economic stimulus package, Delhi had improved its bus fleet, the largest CNG bus fleet in the world at the time. By the 8 th EST Forum, India reported that CNG supply had extended to more than 60 cities and auto LPG to 270 cities; 5% blending of ethanol had been made mandatory in gasoline, and biodiesel made from non-edible Jatropha oil had been emphasized. Furthermore, future plans at that time included a Delhi-Mumbai corridor with gas highway. In 2015, India established the "Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) (India, Ministry of Heavy Industry and Public Enterprises, March 13, 2015, http://www.fame-india.gov.in/ViewNoticationDetails.aspx?RowId=5) program which offered direct subsidies on the retail price of eligible vehicles.
Japan	Japan has been a world leader in the introduction of new automotive technologies and energies. During the 6 th EST Forum, Japan introduced its subsidies for hybrid vehicles, CNG vehicles and clean diesel vehicles, electric vehicles and plug-in hybrid vehicles on the Japanese market. The network of battery charging facilities was also introduced, including signage, online location system, and the CHAdeMO charging standard. Japan introduced the concept of Micro Mobility at the 7 th EST forum, including pilot programs, community design and promotion. New vehicle type promotion, especially for EVs was to be done through local government and freight operators with fleets that would induce participation of other municipalities and business operators. During the 8 th EST forum, Japan reported that it aimed to see 50 to 70% of car sales in 2030 to be next generation fuel-cell and EVs, and introduced tax breaks and subsidies for creating demand and supporting R&D. Micro mobility was also featured, and development of fuel cell buses, EV buses and fuel supply stations was discussed. During the 9 th EST Forum, Japan reported that it had expanded its efforts to fuel cell forklifts and fuel cell waste collection vehicles, and that when promoting new vehicles, reduction in tax and other benefits would be according to the environmental benefits realized by the vehicle purchased. The government also targeted about 100 fuel supply stations derived from renewable energy by 2019.
Republic of Korea	Although Republic of Korea has targeted public transport and NMT as its main strategies for EST, it has also mentioned new vehicle technologies in its plans. The country's report to the 5 th EST introduced the benefits and challenges of hybrid cars, biofuels, EVs and fuel cell vehicles, and the government aimed to set safety standards and enact enabling laws and financial support. The 6 th EST Forum report described strategies to develop core technologies such as batteries for EVs, construction of more charging facilities, and offering purchase incentives to consumers. Car sharing of EVs was featured in the 7 th EST Forum report.
Lao PDR	Lao PDR, with the support of JICA, began a 4-year pilot project focusing on Vientiane and Luangprabang to pilot electric tuktuks with implementation until 2014 (6 th EST Forum report). According to the report to the 9 th EST Forum, the project was still operating in 2015, with new EV stations constructed, 14 3-wheeled EVs and 2 battery exchange stations, as well as 2 Mileto electric motorbikes. During the 7 th EST forum, Lao PDR also noted that clean fuels was part of the EST strategy in the country, but no further details were available. A biodiesel program was introduced in 2011 featuring a B5 blend of palm oil biodiesel, with plans to introduce B10 nationwide. Electric vehicles were on the agenda at the 9 th EST Forum for Malaysia, where it described its electric vehicle infrastructure roadmap, and plans to allow EV registration and licensing.

Malaysia	The National Automotive Policy was introduced in 2006 and reviewed in 2009 new policies include promotion of hybrid and electric vehicles and development of related infrastructure. Measures include a number of financial incentives for manufacturers of vehicles. Natural gas vehicles have been promoted since 1989, with 43,078 vehicles on the road (5 th EST Forum report). Malaysia’s report to the 6 th EST Forum clarified financial measures encouraging hybrid and electric vehicles, and described a test fleet of electric vehicles to be implemented in September 2010. And 2000 electric buses would be deployed by 2020. Electric vehicles were on the agenda at the 9 th EST Forum for Malaysia, where it described its electric vehicle infrastructure roadmap, and plans to allow EV registration and licensing. The report to the 10 th EST Forum indicated that the National Green Technology Master Plan also promotes the use of biodiesel.
Maldives	Maldives has encouraged the use of electric vehicles on many resorts as well as on some smaller islands. It has also eliminated duty for imported electric vehicles, while motorized vehicles have seen import duties increased between 100 – 200%, as reported in the 9 th EST Forum. During the 6 th EST Forum, it was reported that the National Strategy for Sustainable Development (2009) targeted for not less than 10% of transport fuel to consist of biofuels, with the possibility to increase to 20% by 2020. During the 7 th EST Forum, it was reported that biofuels were being tested for boats, and solar-powered boats were being tested by the private sector. However, in a 2015 research paper on sustainable growth, it was noted that no biofuel mandate had yet been applied in Maldives, although it was still on the political agenda (Marcu, Andrei et al. “Country Case Study – Maldives: Climate for Sustainable Growth”. November 2015. Centre for European Policy Studies.)
Mongolia	The government reports an initiative for increasing green facilities and transferring public transportation towards natural gas fuels. Under the “Eco-92” initiative Bioethanol has been sold 10% cheaper than imported fuel by PETROVIS LLC and ORGIL Oil LLC since 2009. In 2010, the government stated a goal to provide 30% of all fuel stations in Ulaanbaatar with bioethanol, and to reach a goal of bioethanol sales making up 5 percent of the total fuel market of Ulaanbaatar .(5 th EST). The UNIGAS LLC, established in 2004 in partnership with Japanese Sumitomo Corporation, ICHITAKA LLC and New Tel Card LLC placed auto equipment of liquefied petroleum gas next to PETROVIS service stations. Through the Clean Air Fund: 3,5 billion tuggrugs was used to replace fuel use of 400 large capacity buses to use liquefied gas, and 500.0 million tuggrugs to install toxic smoke filters for 942 small capacity vehicles, 485 large capacity buses and 59 police and security vehicles. (6 th EST) The government also reported a goal for January 1, 2012 improve filling station to support only using gas in the majority of buses and convert 400 buses with large capacity to combined consumption of diesel and liquefied gas., and install filters for toxic smoke in 1500 vehicles. (7 th EST). There are currently about 15,000 vehicles using LPG in Mongolia (passenger cars and small trucks). However, Mongolia still suffers of poor quality of imported fuel, and no CNG distribution network. (10 th EST Forum report)
Myanmar	Myanmar has reported the encouragement of CNG vehicle use city transportation vehicles since the 6 th EST Forum, and by the 7 th EST Forum, reported that city buses may only run on CNG. The replacement plan was still underway as reported at the 8 th EST Form. E-bikes were reported to be in use in Myanmar during the 9 th EST Forum. Yangon has implemented a horn-free zone to reduce noise pollution.
Nepal	Nepal has long focused on trying to clean up vehicles. In its report to the 5 th EST Forum, Nepal stated that it had a policy to replace old vehicles and upgrade public transport vehicles to low emission or zero emission vehicles. During the 6 th EST Forum, Nepal was considering a subsidy for electric vehicles and expressed interest in electric railways to make use of its potential hydropower resources. This trend continued in the 7 th EST Forum, with initial preparation of policy and guidelines in the National Transport Policy for electric vehicle support underway. By the 8 th EST Forum, Nepal reported that its Eco-Friendly Vehicle and Transport Policy 2014 had been approved/adopted, aiming for EVs or renewable energy-based vehicles to make up 20% of the stock by 2020, and custom duty waived for EVs. At the same time, a November 2014 Cabinet policy aimed to scrap public vehicles more than 20 years old. In the report to the 9 th EST Forum, Nepal expanded the EV policy by stating that it encouraged private sector involvement in EV manufacture, but details were not given. Custom duty exception was clarified that duty would be only 10% for electric three-wheelers, and 200% (previously 250%) for buses. Nepal also reported that it was shifting away from mini and minibuses for public transport by prohibiting their registration. In Nepal’s report to the 10 th EST Forum, it noted that it was developing a tram concept for the capital city, but was challenged in that all

	fuel is imported, meaning that it has little control over its fuel supply, and that there is insufficient electric power supply to ensure adequate electric transportation. These are challenges for the future.
the Philippines	CNG, LPG and electric vehicles have been the focus on technology switching in the Philippines. At the 5 th EST Forum, the Philippines reported on encouraging alternative fuels and modes of transport, and had updated its Biofuels Act – including harmonization of biofuel blends (E10). The distribution system for CNG was also being improved. During the 6 th EST Forum, it was reported that research was underway to replace diesel jeepneys with LPG motors, and an electric vehicle program focused on battery swapping for jeepneys in Makati city was underway as well as an electric tricycle project. The report to the 7 th EST Forum focused on LPG engines for Jeepneys and taxis as well as CNG roll-out for public transport vehicles. Biofuels were also promoted as a non-fossil alternative to petroleum fuels. These programs were expanded upon in the 8 th EST Forum report, adding the “Green Frog Zero Emission Transport” program, and the “Green Frog Hybrid Bus”. Finally, at the 10 th EST Forum, the report focused on ensuring that new buses and jeepneys that are Euro IV compliant, or use clean alternative fuels with better emissions than required; alternative fuel vehicles have been exempt from the moratorium on franchise applications previous set forth; Senate Bills have been signed to support and promote the use of alternative fuels; A project of the Department of Energy aims to transform the tricycle industry by providing e-trikes. As of early 2016, 3000 e-trikes had been supplied. The 9 th EST Forum report saw the tax concession for hybrid vehicles expanded to EVs, with the country aiming to grow the EV fleet quickly. A time of use tariff for EV charging was also introduced. The report to the 10 th EST also featured electrification of the rail system.
Pakistan	Since at least the 5 th EST Forum, Pakistan has focused on CNG has a favored alternative fuel to diesel and petrol. In its report to the 8 th EST Forum, it noted that it was the highest user of CNG in the world, but also that hybrid vehicles were coming to the market. Pakistan incentivized conversion to CNG by supporting a price differential between petrol and CNG, and by 2010 had already 2.4 million CNG vehicles on the road. Pakistan reported that it had the most number of CNG refueling stations in the world in its report to the 9 th EST, with 3.5 million vehicles on the road, or about 50% of the 4-wheel population.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	By the time of the 5 th EST Forum, Singapore had been trialing diesel hybrid buses, researching fuel cell buses, and had set up an EV taskforce with tax exemptions to facilitate an EV test-bed. The country added a “Singapore Autonomous Vehicle Initiative” to its report to the 8 th EST Forum, which assesses the potential opportunities and challenges that the technology offers to Singapore. Singapore will launch an EV car-share program by mid-2017. These programs continued to be reported in the report to the 10 th EST Forum.
Sri Lanka	Sri Lanka was already supporting alternative fuels and vehicles at the beginning of the Bangkok Declaration period. At least as early as the 5 th EST Forum, the country reported that it would gradually eliminate two-stroke engines, including eliminating the import of engine parts from 2011. The report also noted that biodiesel and hydrogen were being explored. Sri Lanka reported that it would lower taxes on hybrid vehicles during the 7 th EST Forum, ushering a world-famous market for hybrid vehicles. Alternate fuels were also mentioned as being promoted. At the 8 th EST Forum, data suggested that more hybrid vehicles were registered in the country than petrol and diesel combined. This report also featured a low carbon scenario that would utilize biofuels, and promoted the benefits to the regional economy and new employment through use of biofuels.
Thailand	In 2008, over 60% of Thailand’s fuel consumption was diesel, followed by 29% gasoline, 4.3% LPG, and others. By 2013, the vehicle populations of different fuels were 70% gasoline, 25% diesel and approx. 5% LPG and others. However, diesel vehicles operate considerably more frequently than most gasoline vehicles, meaning that fuel consumption of diesel is still likely very high. Thailand has focused on conversion of public transit buses from diesel to CNG, aiming to replace over 3500 buses and engines. During the 7 th EST Forum, Thailand reported that biodiesel B5, B10 and ethanol-blended gasoline (E10, E20 and E85) were largely on sale in the market, therefore displacing fossil diesel and gasoline. Stratias Advisors, in its report, “Increased Conversion to Natural Gas Vehicles in Asia – Global Alternative Fuels Webinar, March 17, 2016), reported that in 2016, 3.3% of Thai vehicles operated on natural gas, and this rate had plateaued. But the CNG refueling station monopoly has ended, and CNG prices have been de-

	regulated, meaning there is more possible expansion of this market, particularly if the price of diesel increases over time. Thailand has also approved an electric vehicle policy (National Innovation System Development Committee, 2015), that supports procurement of EV buses and EV bus market development, tax exemption for EV component import that cannot be produced in Thailand, EV import, and EV industry development in Thailand. By 2036, there is a plan for 1.2 million PHEV/BEV vehicles on the road, with 690 charging stations, smart charging and vehicle-to-grid infrastructure. (Global Trend and Thai Policy on Electric Vehicle, Electric Vehicle Associate of Thailand, 1 June 2016).
Timor-Leste	Timor-Leste is dedicating resources to alternative automotive fuels and technologies. During the 9 th EST forum, it indicated that biogas and biodiesel were supported, while solar power, hydro power and wind power might be supported to produce renewable electricity. In its report to the 10 th EST Forum, the country described a small pilot project to support electric taxis.
Viet Nam	Viet Nam has been a strong supporter of cleaner alternative fuels. During the 5 th EST Forum, the country reported on the development of technical standards for blending of ethanol with gasoline and biodiesel with diesel – each of which can improve engine efficiency and reduce fossil fuel dependency. Progress continued, with E5 (5% ethanol in gasoline) fuels being sold in 7 provinces by 2013, and E5 and E10 being made available from December 1 2015 and December 1 2017, respectively – displacing up to 5% of fossil fuel demand. At the same time, CNG buses were piloted in Ho Chi Minh City, and electric sightseeing minibuses in Ha Noi, with the aim of 20% of buses and taxis using CNG and LPG by 2020, and 80% by 2050, as reported at the 9 th EST Forum.
Goal-9: Set progressive, appropriate, and affordable standards for fuel quality, fuel efficiency, and emissions	
Afghanistan	In 2010, Afghanistan noted that it was subject to very poor fuel quality, but that it had established oil quality control labs at border crossings. In the meantime, the country has introduced Euro 3-compliant fuel quality standards for imported gasoline, matched with a plan for Euro 3 emission standards to be applied to all imported gasoline vehicles. During the 8 th EST Forum, it was noted that standards for tailpipe emissions of vehicles would be approved and implemented with private sector participation, but by 2015, the country noted that it lacked vehicle emission test technologies. The most recent update of the PCFV in December 2016 indicates that diesel Sulphur levels are still reaching up to 10,000 ppm, far above limits for Euro-type emission standards.
Bangladesh	As air pollution increased across the country, with transportation identified as a major source, Bangladesh has taken a number of measures to clean up its fuels and vehicles – particularly the introduction of CNG as a major fuel for the country. A roadmap is now in place to reduce sulfur in diesel fuels to 500 ppm by 2016, 350 ppm by 2020 and 50 pm by 2023 – which is certainly improvement from 5000 ppm before 2014. Meanwhile, proposals are in place for nation-wide implementation of Euro 3 for registration of new petrol/CNG vehicles by 2019 (and Euro 4 for Dhaka and Chittagong), and Euro 4 nationally in the period afterwards – and Euro II for heavy-duty vehicles to 2019 and Euro III at some point in the following period. Two-stroke petrol and 3-wheelers have been replaced by CNG vehicles, and the ages of import vehicles have been restricted so as to ensure incoming vehicles are more likely to meet emission standards. Yet to date, there is no evidence of fuel consumption standards for vehicles developed – and this will be an important next step for the country.
Bhutan	Bhutan currently provides diesel fuel of 500 ppm sulfur content – making up 70% of transport fuel in the country. While fuel quality is said to be monitored frequently, it would be ideal to have a plan in place to provide 50 or 10 ppm diesel fuel in the near future to significantly reduce particulate matter and black carbon emissions. Currently, second hand vehicles are not allowed to be imported into the country, ensuring that new vehicles, in principle, are of the best available technology. Between 2004 and 2007, the country made an advance in emission standards, requiring vehicles to meet Euro 2/II standards and making CO emission standards tighter for petrol vehicles, and opacity standards tighter for diesels. The country still lacks a plan progressively tighter fuel quality and emission standards for the transport sector.

Brunei Darussalam	In 2010 at the 5 th EST Forum, Brunei Darussalam reported that gasoline-powered vehicles met the Euro 1 and 2 standards, and diesel-powered vehicles only needed to meet the Euro I standard. While at the 7 th EST forum, the country targeted having all new vehicles meet the Euro IV standard, according to the UNEP's July 2016 update of the PCFV, Diesel vehicles still only needed to meet the Euro I standard, and petrol vehicles only needed to meet Euro 2. It has been reported that the country plans to meet the 50 ppm Sulphur level in fuels by 2016, but the PCFV suggests that diesel is still supplied at 500 ppm by the end of 2016, and petrol at 1,000 ppm sulphur. Brunei Darussalam is currently planning a fuel economy policy for its transport sector. According to a report released by the Economic Research Institute for ASEAN and East Asia (September 2016), the transport sector currently consumed around 430,000 tons of oil equivalent in 2013, and a proposed fuel economy policy would see fuel consumption rise to only about 490,000 tons of oil equivalent by 2040, a 31.7% reduction from the business-as-usual growth scenario. According to the Compendium of Energy Efficiency Policies of APEC economies (2015), Brunei Darussalam will aim to achieve 17.2 km/l (5.8 l/100km) by 2020 and 21.3 km/l (4.8 l/100km) by 2025 through the introduction of hybrid electric vehicles, electric vehicles, and fuel-efficient vehicles, as well as through the deployment of public transport.
Cambodia	According to the Partnership for Clean Fuels and Vehicles, Cambodia supplies diesel with 1500ppm sulfur, and petrol at 1000 ppm sulfur. The PCFV did not have data regarding emission standards. While stringent emission standards and regulation on air pollution were discussed at the 5 th and 6 th EST forums, no further information was reported. During the 5 th EST Forum, Cambodia noted that old vehicles were still used, that there was an unclear emission limit, and fuels ranged in quality.
P.R. China	P.R. China has put in place an aggressive and systematic set of fuel, emissions and fuel consumption standards. Nationwide, fuel provided for public consumption should meet 50 ppm sulfur for diesel and 50 ppm sulfur for petrol; 10 ppm by 2017. Emission standards are set at China 4/IV nationally, where Beijing requires China V now, and will require Beijing VI and 10 ppm sulfur by 2016, with nation-wide rollout of China V nationwide in 2017. P.R. China's fuel consumption standards are also strict and of world-class. The country currently reports an average of approximately 6.9 l/100 km for cars, with a target of 5.0 l/100 km by 2020. China has also rolled out fuel consumption standards for a variety of commercial and heavy-duty vehicles. Hong Kong Special Administrative Region of China is already supplying 10 ppm diesel and 50 ppm petrol, and requiring Euro 5 vehicles. Macao SAR is supplying 50 ppm diesel and petrol, with Euro 4 equivalent vehicles.
Indonesia	According to the Partnership for Clean Fuels and Vehicles (PCFV), average sulfur levels in diesel sold in Indonesia reaches 3500 ppm, although 500 and 50 ppm also available. Petrol is sold at 500 ppm sulfur. Euro 2 vehicle standards mandatory and Euro 4 is under discussion.
India	India currently supplying 350 ppm diesel and 150 ppm petrol, with 50 ppm fuels in 11 major cities. Bharat stage III vehicles are mandatory nationally and Bharat Stage IV in 11 major cities, with Euro 6 equivalent planned for April 2020. (Partnership for Clean Fuels and Vehicles, 2017). The Bureau of Energy Efficiency (BEE) and Power Ministry have developed a fuel economy standard that will come into force in April 2017 that will reportedly become stricter in the 2022-23 implementation phase requiring average emission ratings of 130 gCO ₂ /km in 2017 and 113 gCO ₂ /km in 2022, respectively.
Japan	During the 5 th EST Forum, Japan reported that its motor vehicle emissions standards were set in consideration of the Air Pollution Control Law, which sets the permissible limits of vehicle exhaust emissions. Limits for NOx emissions for gasoline vehicles were largely implemented by 1978 and made most stringent in 2008. Limits for NOx emission for diesel vehicles have decreased gradually over the same period of time. During the 6 th EST Forum, Japan discussed 2016 regulations, aiming for extremely low NOx and PM emissions in accordance with other leading jurisdictions and introduced exhaust regulations for off-road special vehicles. During the 7 th EST Forum, Japan introduced its Top Runner Approach to automobile fuel efficiency targets. Japan reported at the 9 th EST Forum that it would introduce the WMTC (Motorcycles) and WHDC (Heavy Duty) testing cycles in 2016, and the WLTP (Light duty) in FY2018, along with stricter vehicle efficiency regulations in FY2020. According to the Partnership for Clean Fuels and Vehicles, Japan supplies 10 ppm sulfur diesel and petrol. Euro 5/6 and V/VI equivalent standards are mandatory for new vehicles.

Republic of Korea	According to the Partnership for Clean Fuels and Vehicles, 50 ppm sulfur diesel and 10 ppm sulfur petrol is supplied in Republic of Korea, and new vehicles must meet the Euro 4/IV standards. "Clean Diesel" vehicles have been distributed in the country since 2005, according to the 5 th EST Forum report. This goal has not been comprehensively reported on through the EST Forum process.
Lao PDR	During the 6 th EST Forum, Lao PDR reported that it is not a member of UNECE convention, though it participates in ASEAN and JASICS meetings. During the 7 th EST Forum, the country reported that clean fuels and vehicles are part of its EST strategy, but no further details were mentioned. According to the Partnership for Clean Fuels and Vehicles, Diesel supplied in the country contains 2500 ppm sulfur and petrol contains with 500 ppm. No information was available on vehicle standards.
Malaysia	Malaysia had implemented Euro I standards for diesel vehicles and Euro 2 for petrol vehicles by the time of the 5 th EST Forum. The 7 th EST Forum report indicated that Malaysia intended to roll out 50 ppm sulfur petrol by 2015, with Euro 4 petrol cars to follow. Euro 3 emission standards for motorcycles were to be implemented in the 2014-2015 period. Malaysia continued to advance its policies through the 9 th EST Forum, where it aimed to implement the Euro 4 emission standard for petrol cars by 2018, and Euro V for diesel vehicles by 2020 (Euro 5 by 2025 for petrol cars). 50 ppm sulfur petrol will be supplied by 2018 (currently 500 ppm), and 10 ppm sulfur diesel will be supplied by 2020 (currently 500 ppm sulfur diesel).
Maldives	Information on fuel quality and vehicle emission standards is not available, but the National Strategy for Sustainable Development in 2009 aimed to reduce fleet-average CO2 emissions from light duty vehicles to 140 g/km by 2015. Data is not available on whether this was achieved or not.
Mongolia	According to the Partnership for Clean Fuels and Vehicles, 5000 ppm diesel is supplied in Mongolia, but no information was supplied for petrol. Fuels available are mostly Euro 2 and Euro 3 compliant but no clear national standards for fuel quality or vehicles. Mongolia passed a law that prohibits cars older than 12 years old and taxis older than 10 years old from operating on the road. According to the 10 th EST Forum report, Mongolia has decided to implement "Establishment of Plan for Producing Fuel using Domestic Raw Petrol in Sainshand City", funded by a soft loan from India. This project may help the country to produce cleaner fuel domestically. *Mongolia reported in its 10 th EST Forum report that it planned to introduce "Eco" labels on road vehicles and improve monitoring of vehicle fuel quality, as well as develop a draft law on custom tax remittal of environmentally non-friendly road vehicles as part of a joint resolution signed between the Ministry of Environment and Green Development, Ministry of Road and Transport, and Ministry of Justice.
Myanmar	According to the Partnership for Clean Fuels and Vehicles, 2000 ppm sulfur diesel supplied in Myanmar, and no information was available for petrol. Petrol is now reportedly unleaded. No information for emission standards was available.
Nepal	According to the Partnership on Clean Fuels and Vehicles, 350 ppm diesel and 150 ppm petrol is supplied in Nepal, given that all fuel is imported from India which is currently at Bharat III standards. Vehicles in Nepal are also rated at Euro 3/III.
the Philippines	According to the Partnership for Clean Fuels and Vehicles, the Philippines now supplies 50 ppm diesel and petrol to the market, and new vehicles must meet Euro 4 emission standards. This initiative was first reported on at the 6 th EST Forum. Tailpipe emission standards for CO and HC have been in place since at least the 5 th EST. During the 8 th EST forum, the Philippines reported that a road transport patrol had been set up to do roadside inspection and to intercept smoke belching vehicles. Furthermore, motorcycle/tricycle emissions testing standards were featured including new emission standards. New motorcycles and tricycles must meet the Euro 3 standard by 2015. A fuel consumption labelling scheme was also mentioned at this meeting.
Pakistan	As Pakistan focused on converting vehicles to CNG, it did not give significant attention to clean fuels and emission standards of vehicles. Pakistan's report to the 7 th EST Forum noted that pilot projects were underway for following the Euro II emission standards, but as of December 2016, the Partnership for Clean Fuels and Vehicles indicates that 5,000-7,000 ppm sulfur fuel was being supplied with no information on vehicle standards. The

	report to the 10 th EST Forum also indicates that this topic has not yet been addressed. Pakistan mentioned the topic of fuel economy standards in its 9 th EST Forum report, but no details were available.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore reported that it aimed to use cleaner fuels and more stringent emission standards for vehicles at the 5 th EST forum. It also reported on a performance-based vehicular taxation and rebate concept (feebate concept) to encourage consumers to buy green vehicles over their conventional equivalents. Singapore updated its fuel economy labelling scheme as well, making the labels mandatory on showroom cars so that consumers can make informed decisions. At the 6 th EST Forum, Singapore reported that it would adopt Euro V standards for new diesel vehicles as of 1 Jan 2014, and would supply required 10 ppm (or below) sulfur diesel by July 2013. The report also alluded to future adoption of Euro V/VI and 5/6 emission standards for both new diesel and petrol cars at some point in the future. It also reported that noise standards for new vehicles were tightened in October 2010, and for existing vehicles in 2011.
Sri Lanka	The Partnership for Clean Fuels and Vehicles reported in late 2016 that 2000 ppm sulfur diesel and 1000 ppm petrol is supplied in Sri Lanka, and that Euro 1 standards must be met for new vehicles. Yet the presentation to the 9 th EST forum suggested that 10 ppm sulfur diesel was introduced as a premium diesel in 2014, and that 350 ppm sulfur diesel would replace bulk diesel by 2016. It is unclear as to whether this has occurred or not.
Thailand	Thailand has been aggressive in its provision of cleaner fuel and strict emission standards for new vehicles. 50 ppm diesel supplied and 10 ppm petrol. Euro 4 emission standards are required for new cars and trucks, and Euro 5 by 2020 (10th EST Forum). Thailand has demonstrated the economic and health benefits of sulfur reduction in diesel, with the shift from Euro 3 to Euro 4 fuel resulting in savings of up to USD \$1.8 billion with less CO, NOx and PM emissions, lower health-care costs and fewer incidences of lung disease and respiratory illness. (http://cleanairasia.org/workshop-highlights/ as viewed on 5 February 2017). Thailand currently regulates fuel consumption using fuel economy labelling, which became mandatory in 2016. The “ECO sticker” label indicates the fuel consumption (on the NEDC cycle) of the vehicle, emission standard, and other information about the vehicle to allow consumers to decide about which vehicle they might purchase. (http://www.theicct.org/apec-vehicle-fuel-economy-labeling) Finally, the label contains information that informs driver about excise tax on the car based on the CO2 emissions of the vehicle. As of 2016, excise tax in Thailand for vehicles is based on CO2 emission rather than engine displacement (http://www.car.go.th/new/Excisecar)
Timor-Leste	According to the Partnership for Clean Fuels and Vehicles, all oil products are imported, no standards noted. However, in its report to the 10 th EST forum, the country indicated the need to regulate and control fuel quality.
Viet Nam	Viet Nam has been aggressive in its fuel quality and vehicle emission standard improvement targets. 500 ppm diesel and 500 ppm petrol are currently supplied with a target date for 50 ppm fuels of 2018. New cars and trucks assembled or imported into Viet Nam currently need to meet the Euro 2 standard and the Euro 4/IV standard in 2017 – aiming for Euro 5 in 2022. New motorcycles should meet the Euro 3 emission standard by 2017. Currently, the government has stated that gasoline-powered vehicles should be meeting this standard according to law, but media reports indicate that diesel vehicles may face challenges to meet the standard in 2017, and Euro IV compliant diesel faces supply challenges in the country, and industry has applied for a delay on implementation of these standards. (http://tuoitrenews.vn/business/39417/vietnam-transport-ministry-seeks-delay-to-emission-standard-upgrade). Meanwhile, fuel efficiency of vehicles is currently reported using a labelling system which was implemented for new vehicles which was identified as a priority in 2012, and implemented in 2015 for vehicles with less than 7 seats as reported in the 9th EST Forum.

Goal-10: Establish effective vehicle testing and compliance regimes	
Afghanistan	Afghanistan has been focused on the phase-out of old vehicles at least since the Bangkok 2020 Declaration was made in 2010. This recommendation was found again in its progress report to the 6 th EST forum, which was followed up by a very progressive report at the 7 th EST forum that annual safety inspections would be mandatory, and that vehicle registration renewal would be tied to standards compliance. The Vocational Training Institute was engaged to train private workshops for vehicle emission testing and certification, with the NEPA and Traffic Department monitoring the performance of those testing workshops. In 2014, it was reported that the I/M mechanism would be implemented with private sector participation, and that policies were being developed to phase out old commercial vehicles. By the 9 th EST forum, I/M was included in the Air Quality regulation instrument, and strategies were underway to contract the private sector to undertake I/M work under a PPP frame work – but financial and technological challenges were noted, and the report stated that these policies were still in the design and pilot phase.
Bangladesh	Inspection and Maintenance (I/M) are very important for ensuring that in-use vehicles meet safety and environmental standards. Bangladesh requires routine and period inspection of vehicles including through road-side emission inspection and at inspection stations, although 5 major vehicle inspection stations in Dhaka have been non-functional due to lack of experienced staff and inoperable software. Automation of vehicle inspection has been a goal of Bangladesh for many years, and in 2016, it was reported that fully automated vehicle inspection was kicked off at Mirpur, with the goal of spreading this technology to 62 outlying areas across the country if it is successful. Initially, only buses will be checked at the new centre.
Bhutan	Vehicles need to be tested on a periodic basis for emissions and road fitness, but few details are available on this process and it is not clear if plans are in place to improve this process over time. According to the report to the 10 th EST Forum, commercial vehicles such as passenger buses, taxis and trucks must undergo roadworthiness testing every six months, while non-commercial vehicles are once per year.
Brunei Darussalam	Brunei Darussalam has implemented vehicle inspection since 1992 including type approval for new vehicles and periodic inspection for in-use vehicles, annual inspection of vehicles of 7 years of age or more, and inspection every 6 months for heavy vehicles, taxis and buses older than 1 year. During the 7 th EST forum, it was reported that computerized vehicle inspection centers were being implemented, and that by 2014/15, all VICs would be privatized through a PPP mechanism. By September of 2016, 11 vehicle inspection centers were operational.
Cambodia	While old and poorly maintained vehicles have been identified as an issue, it was noted during the 8 th EST forum that in-use vehicles are not all inspected/maintained, and fuel and vehicle standards are not tied or matched.
P.R. China	P.R. China has implemented inspection and maintenance programs for many years, requiring cars and trucks to meet in-use emissions and operability standards on an annual basis. The Ministry of Environmental Protection operates a yellow label vehicle policy, which aims to phase out yellow label vehicles in certain municipalities, and eventually nationally. In Beijing, as a part of its increasingly tight strategy to reduce air pollution, cars that do not meet “China 3” emission standards are no longer allowed on Beijing roads during smog alerts. Although this policy has received public criticism, it is a means for Beijing to push for cleaner vehicles to be driven. Beijing will eliminate diesel vehicles that do not meet China IV and petrol vehicles that do not meet China 3 emission standards by 2020.
Indonesia	During the 7 th EST Forum, Indonesia reported that its National Implementation Action Plan for GHG emission Reduction would target the implementation of motor vehicle inspection at the city/district level. Testing should be undertaken every year, and vehicles that do not meet emission limits should not be allowed to operate. It is unclear if this has been fully implemented. Clean Air Asia reported in 2016 (Inspection and Maintenance in Asia – 2016) that Indonesia’s enforcement of emission standards is decentralized, implemented by local police, utilizes some roadside testing with citizen reporting, and fines are collected by government. The system to ensure repair is decentralized, privatized and locally implemented, and government accredits independent inspection centres as well as inspection centers linked to maintenance centers. However, compliance with emission inspection is voluntary in the country, and during the 9 th EST Forum, it was reported that due to the voluntary nature of the program, there was little awareness of vehicle owners to do the tests and avoid air quality hazards.

India	India has established emission standards for in-use spark and compression ignition engines, and during the 7 th EST Forum reported that it would utilize PPP finance to improve maintenance of urban transport systems, but otherwise has not reported on I/M policies through the EST Forum process since 2010. In 2014, an NGO-sponsored study reported that there was no effective mechanism in India to ensure that vehicles comply with their original emission standards. (Lakshmi CS et al. 2014. Establishing a national in-use vehicle testing programme in India. Shakti Sustainable Energy Foundation. http://shaktifoundation.in/wp-content/uploads/2014/02/National-in-use-vehicle-testing-programme-in-India.pdf).
Japan	Japan's inspection and maintenance system has largely been put in place. At the 7 th EST Forum, Japan noted that the government confirms compliance with safety and environmental standards by inspecting vehicles regularly. It also reported that in accordance with the Guideline for Total Emissions Control, some local governments are to implement measures for the emissions of in-use vehicles in order to achieve EQSs at all monitoring stations by 2015.
Republic of Korea	ROK reported in its report to the 7 th EST Forum that inspection systems were implemented in 2006 to verify diesel vehicles' exhaust gasses and to verify small and mid-sized truck low-emission engines. The country also promotes scrappage of old vehicles and provides subsidy to install emission reduction devices on diesel vehicles. Other information on the I&M system in Republic of Korea has not been reported through the EST Forum process.
Lao PDR	Vehicle emission control and inspection and maintenance of vehicles was first mentioned as an EST project during the 5 th EST Forum, and expanded upon at the 6 th EST Forum with a report that a Master Plan on Traffic Safety Park and Vehicle Inspection Centers was underway, based on a 2011 MOU signed between DOT and KOLAO.
Malaysia	Inspection of commercial vehicles every six months has been mandatory since at least the 5 th EST Forum. Inspection is performed by Puspakom, a private operator that has been given key performance indicators to meet, ensuring continuous improvement (7 th EST Forum report). By the 9 th EST Forum, it seems that private vehicles should be inspected regularly, particularly if they are used, and the vehicle registration system was being upgraded. The country noted that I/M program needed to be improved for all fleet operators and service centres/workshops (10 th EST Forum Report)
Maldives	Nothing was reported in this Goal.
Mongolia	In 2011 government announced intention to purchase equipment to determine amount of toxic smoke and substances from vehicles. (6 th EST) In 2012 it announced 24 vehicle diagnostic inspection centers in all aimags /administrative units/ to control emissions of vehicles and road safety requirements (7 th EST). At the 10 th EST Forum, Mongolia reported that a laboratory for certification and assurance of vehicle testing equipment was being established in Ulaanbaatar City.
Myanmar	During the 7 th EST Forum, Myanmar reported that new cars would be inspected after three years, and every year after that, with the smoke standard fixed at 50% Bosch unit. The country reported at the 8 th EST Forum that commercial vehicles should be inspected annually, and the Road Transport Administration Department was conducting an old vehicle scrappage program starting in September 2011. Some cities had installed multi-testing lanes in cooperation with the private sector. Engineers needed to be trained. During the 9 th EST Forum, it was reported that vehicles are inspected in accordance with the Motor Vehicle Law of 2015 and the 1989 Motor Vehicle Rules, although absence of motor vehicle by-laws was hindering the process in some places. In the most recent EST Forum report, Myanmar reported that exhaust emission testers were installed in some cities, that engineers were being recruited and trained, computerized vehicle registration and driver licensing systems were coming into place, that ASEAN standards for vehicle emissions were being tested for, and that an RFID system was being implemented.

Nepal	Nepal has reported that it would begin operating Vehicle Fitness Testing Centres since the 8th EST Forum. However, media reports indicate that although facilities have not been built, they are not yet in operation due to lack of trained technicians (http://www.myrepublica.com/news/11171). Clean Air Asia's report, "Vehicle Inspection and Maintenance in Asia: Status and Challenges 2016" notes that vehicle inspection is not linked to registration renewal, meaning that these systems may not be effective for reducing emissions. Nepal noted in its report to the 10th EST Forum that Certificate of Pollution has been implemented, and that plans were under development to test emissions and vehicle conditions every four months for public transport vehicles and each year for private transportation.
the Philippines	The Philippines has reported at each EST forum on I&M progress in the country. At the 5 th EST Forum, it reported on rolling out Phases 1 and 2 of a motor vehicle inspection in 11 regional Motor Vehicle Inspection Centers. An Anti smoke belching drive and "Ligtan Hangin" advocacy campaign were also described. The 6 th EST Forum report also focused on I&M – reporting on the setting up of government and private sector-maintained and operated inspection lanes, with Public transport inspection rolling out by January 2014, private vehicle inspection vehicles rolling out by January 2012 and another public transport facility coming online in January 2014. The Philippines reported that 35 lanes were in operation across the country, with aims to expand to heavy motor vehicles, light motor vehicles and motorcycles to all regions and key cities of the country. This task was reported as "complete" at the 9 th EST forum, although the 10 th EST Forum report listed it as a task underway. The newest initiative is to undertake Motor Vehicle Type Approvals for new vehicles entering the Philippines to ensure road worthiness and standards compliance.
Pakistan	In its report to the 5 th EST Forum, Pakistan mentioned educating vehicle and fleet owners on maintenance, promoting phased tune-ups of vehicles and energy efficient driving practices by Transport and Registration authorities, and upgrading of existing Motor Vehicle Examiners into monitoring and service providers, administered by provincial and district governments. The Energy Conservation Fund invested in modern maintenance and repair shops with the private sector. The 6 th EST Forum report noted that private sector inspection and certification scheme was being launched, favoring PPP, and phased installation of emission control/tune up equipment on a PPP basis at retail outlets of oil companies. The 7 th EST report indicated that inspection and maintenance was largely in place, citing a Punjab Vehicle Inspection and Certification system, the Motor Vehicles Rules of 1969, and National Environmental Quality Standards (NEQS) for exhaust emissions cited. The 8 th report to the EST Forum, however, indicated that there was a shortage of skilled workers, lack of equipment and an improperly evolved system in place. The 8 th EST Forum reported that the Vehicular Emission Testing Station (VETS) was established in 1997, and is the only financially self-sustainable testing station in the country. Furthermore, three mobile units have worked since 2001 (VETS Peshawar), and the Mingora Station started in 2005-2005. The EPA plans to establish VETS in DI Khan, Bannu, Kohat and Mardan. The update to the 10 th EST Forum indicates efforts are still underway, with a Punjab computerized vehicle inspection facility which many bus companies are using, that finance was available to facilitate SMEs to undertake inspection and maintenance, and that emission testing centres in the Federal Capital and four Provincial Capitals were established with the help of GIZ.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore has long had a mandatory periodic inspection system in place, including a chassis dynamometer smoke test in testing facilities as well as roadside visual enforcement. Singapore reported that it was implementing an early turnover scheme to encourage owners of diesel commercial vehicles to replace their old, polluting vehicles with new cleaner models during the 8 th EST Forum.
Sri Lanka	Sri Lanka has been testing on-road vehicles at least since the 5 th EST Forum, where it introduced its mandatory testing program that is tied to license renewal. 200 vehicle emission testing centers had been given licenses to test. The 6 th EST Forum report also illustrated the roadside testing and testing lanes in Sri Lanka, and subsequent reports noted its ongoing operation.

Thailand	Vehicle inspection has long been required for registration and renewal. All cars more than seven years old and motorbikes older than five years are to be tested every year for roadworthiness. Testing centers are privately owned and certified to give certifications. Inspection and maintenance programs use the new automotive emission standards as reference, but as reported to the 7 th EST Forum, vehicle inspection for license renewal is decentralized and therefore difficult to ensure quality. More recent data is not readily available. The 10th EST Forum Report noted that although standards are in place, they are difficult to implement by inspection centers.
Timor-Leste	During the 9 th EST Forum, Timor-Leste reported that it had prioritized facilitating conditions and regulations for vehicle importation, especially new and second-hand cars produced in the last 5 years, but no details on testing were indicated.
Viet Nam	With the development of more stringent emission standards for vehicles in Viet Nam, it was reported during the 7 th EST Forum that inspection stations were being built, and by the 9 th EST Forum reported that a network of over 100 inspection stations to perform safety and exhaust gas examinations for in-use automobiles had been built. However, reports including the “Energy Efficiency and Climate Change Mitigation in the Land Transport Sector” report by the ASEAN-German Technical Cooperation noted that equipment at these stations was often poorly calibrated, test procedures were outdated, and inspectors had limited capacity, thus limiting the effectiveness of this inspection and maintenance regime.
Goal-11: Adopt Intelligent Transportation Systems (ITS)	
Afghanistan	Afghanistan has not identified a strategy for adoption of ITS
Bangladesh	Bangladesh has been upgrading its systems to allow for a greater role of ICT in its transport systems. Selected bus and rail routes accept electronic payment with smart cards, digital number plates and smart card drivers licenses have been introduced, electronic toll collection systems have been introduced and variable messaging signs have been introduced in Dhaka city. The country aims to operate the MRT line 6 and BRT line 3 on a full ITS system, and manage 4 major junctions electronically in Dhaka city for better traffic management. Yet many challenges remain – lack of infrastructure is a nagging problem, and existing operators of public transportation and toll booths resist change. In its 10th EST Forum report, Bangladesh noted that traffic information is on the radio in Dhaka, ETC has been installed on major bridges, and a central traffic control station is in place. In order to facilitate electric fare systems, a clearing house at DTCA has been established.
Bhutan	ITS is a challenge for Bhutan at this time, and as of 2015, it was reported that the use of ITS in all forms is non-existent. The Bhutan Transport 2040 Integrated Strategic Vision indicates that efforts should continue in developing ITS for improved road safety, but no details are available.
Brunei Darussalam	Network Management and Control System (NMCS) under the Intelligent Transport Systems Implementation Plan will provide the overall picture of travel conditions, respond to accidents, incidents and other disruption and provide real-time information to users and agents. The plan also includes Brunei Transport Management and Control Centre (BTMCC) and integrating fares, ticketing and payment collection with the plan capital cost set at \$13 million. Other ITS-related programs include the implementation of speed warning devices on commercial vehicles, which are mandatory. These devices allow a driver to be fined for speeding.
Cambodia	No specific mention of ITS or related technologies and practices were mentioned in Cambodia’s reports to the ETS Forums.
P.R. China	Cities in the P.R. China are increasingly integrating information platforms including GIS, traffic information, traffic and public transport information, policies, etc. Governments and private companies alike are pushing information to transport users through real-time telematics and guidance systems for cars and trucks, digital maps and other municipal services. Chinese cities make vast use of video camera data, cell phone data, big data analysis and other technological systems to monitor, predict and manage traffic to improve efficiency and functionality of the transport system.

Indonesia	During the 6 th EST Forum, Indonesia reported that ITS is a strategic initiative for EST in the country, focused on optimization of traffic management, electronic toll collection, support for pedestrians with electronic controls and support for public transport through BRT priority. This strategy was strengthened through its inclusion in Indonesia's National Action Plan for GHG Emission Reduction – it's NAMA, where it specifically aimed to construct as many as 13 packages for intersection coordination, giving buses priority at intersections, and shifting more trips from private vehicles to public transport. ITS is also a key component of objectives such as parking management and congestion charging and road pricing. By the 9 th EST Forum, it was reported that ITS would be adopted for electronic road pricing in Jakarta. During the 10 th EST Forum, Indonesia reported that 28 cities had implemented ATCS, while Jakarta, Tangerang, Bogor, Depok and Bekasi have implemented ATCS but are not yet interconnected. This will happen according to the Mater Plan Transportation Greater Jakarta.
India	ITS is a focus of India's National Urban Transport Policy (2006), and from a national perspective, is encouraged to integrate multi-modal systems (6 th EST Forum). India has established Standard Service Level Benchmarks for ITS facilities in urban transport, and has established a core group on ITS. During the 7 th EST Forum, India reported that buses for city transport would contain ITS features, and that ITS for traffic management toolkits were under finalization. The EBTC (2012) identified development of the Golden Quadrilateral (connecting Delhi, Mumbai, Chennai and Kolkata) as a growth opportunity for automated technologies, and that New Delhi, Bangalore and Pune were utilizing standalone ITS applications such as automated parking systems, electronic toll collection, automated traveler information systems and intelligent signal control. (ebtc.eu/pdf/120913_SNA_Snapshot_Intelligent-transport-systems-in-India.pdf)
Japan	ITS has been an important part of Japan's transport system for many years. At the 5 th EST Forum, Japan reported that vehicles have integrated on-board car navigation systems including road-to-vehicle two-way communication to allow cars to receive information, make payments, navigate and offer new future services. The "Smart Way" Service offers congestion and blockage information to drivers to improve safety and driving efficiency. The service started in 2009. The service also facilitates more efficient logistics. At the 6 th EST Forum, Japan reported on ITS Spots, which provide 2-way communication with Smart Ways, and reported that there were 1,600 ITS spots nationally. By the time of the 8 th EST Forum, Japan reported that it was using ITS spot data to introduce ETC 2.0. The country was also demonstrating advanced support for idle reduction by optimizing traffic light timing.
Republic of Korea	Republic of Korea's ITS development plan was reported during the 6 th EST Forum to focus on TDM, in the form of ITS for road management, encouragement of "high-pass" electronic toll collection, and an integrated transport information center. This was expanded upon in the country's report to the 7 th EST Forum, where it described that ITS facilities would be expanded to include ramp metering and monitoring of all national highways and cities nationwide. A pilot project called "Building Smart Highway, R&D, Technology development" was undertaken, and "High-Pass" ETC was expanded to improve traffic flow. The country aimed to undertake a national project to build Advanced Traffic Management Systems and Traffic Information Centers at local governments, and to expand ITS infrastructure on national highways and urban roadways to 500 miles by 2013, with connections to major "u-City" building projects. During the 9 th EST Forum, Republic of Korea reported that it would improve traffic signals for better trips, and maximize the use of ICT for better TDM.
Lao PDR	Lao PDR noted during the 7 th EST forum that a preliminary survey on ITS was completed in 2012.
Malaysia	Malaysia began reporting on ITS at the 7 th EST Forum, discussing information distribution via radio, TV, SMS and smart phone applications. It aimed to roll out public transport operator monitoring system, a journey planner and integrated cashless payment systems the next year. Until the country's report to the 10 th EST forum, there were no further updates, but the country now reports that the Ministry of Works plans to establish an ITS management center, and real time information systems are being rolled out through the Journey Planner app.
Maldives	Although some ideas have been discussed at previous EST forums for ITS systems, such as mobile phone based reservation systems, it is not clear that these have been implemented. Little other information on ITS systems in Maldives has been reported.

Mongolia	In 2016, the Asian Development Bank (ADB) announced it will finance \$500K for policy and advisory technical assistance (PATA) for an ITS development plan for Mongolia. The main objective of the technical assistance (TA) is to identify ITS service needs to improve road safety management and operation. The TA will cover an ITS development and implementation plan for urban and regional road transport, public transport and logistics, ITS architecture and standards for future integration, and interoperability of the systems implemented. In 2016, national standards on toll gates, transport control centers and service facilities along main roads was approved, and a smart card electronic fare collection system was introduced in Ulaanbaatar city public transport. (10th EST Forum Report)
Myanmar	Planning was underway during the 7 th and 8 th EST Forum periods, but by the 9 th EST Forum, Myanmar reported that CCTV cameras had been installed to control traffic major cities such as Mandalay and Yangon, periodic announcements of the traffic situation were made over FM radio in Yangon, and a “b-Smart” system had been installed along the Yangon-Nay Pyi Taw-Mandalay highway. The 10th EST Forum report revealed that telematics were being used and controlled by the traffic control center to monitor the safety of passenger coaches on the Yangon-Mandalay Expressway, and Yangon City was implementing a central control center fo monitor traffic flow.
Nepal	Nepal began reporting on ITS development during the 8 th EST Forum when it described that it would implement embossed number plates and smart card driver licenses and blue books. The report to the 10 th EST Forum noted that traffic management is a component of the Kathmandu Sustainable Urban Transport Project, and media reports indicate that ITS systems would be installed at 26 major junctions at 37 points throughout Kathmandu to better manage traffic. (http://kathmandupost.ekantipur.com/news/2016-05-24/kathmandu-to-adopt-intelligent-traffic-system.html).
the Philippines	The Philippines has focused on public transport in its ITS reporting for the EST Process. During the 7 th EST Forum, it was reported that a contactless and integrated automatic fare collection system for LRT lines 1 and 2 and MRT 3 was under development, replacing single journey and stored value tickets. By the 9 th EST forum, this task was fully completed, and was starting to be rolled out to some bus lines. A transportation database was also under development during this period. At the 10 th EST Forum, the Philippines is reporting that an online application with real-time traffic updates in Metro Manila is being developed including 10 major routes.
Pakistan	By the 7 th EST Forum, Pakistan reported that an ITS surveillance system on intercity roads was in place, and an ITS-based traffic management model was developed for Karachi. At the 8 th EST Forum, Pakistan reported that Lahore metro fares would be collected electronically, that real-time user information was provided, and that the Islamabad metro would also improve its ITS system in this way. Pakistan’s report to the 10 th EST Forum indicates that electronic fare systems will be used on all 5 BRT systems, as well as on railways and electronic user charge system on all motorways expressways and highways.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore’s ITS has been in place since 2014, relying on a number of technologies including a parking guidance system, electronic regulatory signs, junction cameras, expressway monitoring and advisory system and signalized pedestrian crossings had been installed to help manage road use to meet diverse needs, enhance travelling experience with smarter interactivity, create a safe and secure roadway environment, and envision a sustainable and environmentally friendly ITS. The program is called “Smart Mobility 2030”. Singapore also has launched MyTransportSG, a smartphone app that provides real-time information on bus arrival times, traffic conditions and news and road pricing rates.
Sri Lanka	Sri Lanka’s ITS efforts were first reported at the 7 th EST Forum, indicating that the country desired to automate toll gates and implement electronic fare collection systems. Sri Lanka’s report to the 9 th EST Forum indicated that the country would undertake further ICT development and integrate it with the transportation system, and in the country’s 10 th EST Forum report, Sri Lanka noted that buses would be fitted with GPS tracking systems and electronic toll collection systems would be rolled out as they had received policy approval.

Thailand	Thailand is adopting an ITS strategy to increase safety and mobility of travelers and the movement of goods. Traffic information platforms were reported during the 7 th EST Forum, allowing passengers and drivers to plan their routes and avoid traffic. Online freight platforms have been utilized and are enjoying increased promotion by the government, as reported during the 9 th EST Forum, and Single Window e-Logistics is being developed to improve import-export border processes and reduce truck idling at borders. In 2014, traffic control systems had been employed in 6 cities, with plans to expand to more cities in the future, and bus route information was available from internet and mobile devices. Thailand has comprehensive digital maps of many of its cities, allowing for more data layers to be included for communicating to transport system users.
Timor-Leste	Timor-Leste has not yet reported on ITS through the EST Forum process.
Viet Nam	ITS is being implemented in Viet Nam, and the country is becoming more aware of the benefits of an ITS system. Smart cards for public transport were investigated for Ha Noi as reported during the 7 th EST forum, and digital mapping projects were reported for the 8 th and 9 th EST Forums, and by mid-2012, black box devices were required to be installed in trucks and passenger vehicles to better manage transport systems and ensure proper records of vehicle behavior have been kept - by 2016, media reports indicated that in 2016, vehicles with a capacity of 7-10 tons would have to install black boxes before 1 January 2017, as well as trucks with 3.5 – 7 tons. Black boxes were also to be installed on garbage trucks in HCM City to supervise trash management. While these were policies in the past, media reports indicate that they will be strictly enforced from July 2016. http://www.thanhniennews.com/society/black-box-rule-could-face-enforcement-snags-2292.html . Meanwhile, it was reported during the 8 th and 9 th EST forums that Viet Nam had implemented some highway ITS management, including video monitoring and other technologies.
Goal-12: Achieve improved freight transport efficiency	
Afghanistan	By the time of the 9 th EST forum in 2015, Afghanistan had not identified strategies for improved freight efficiency
Bangladesh	A key strategy for improved freight transport in Bangladesh is the use of waterways. Ashuganj River Port has been declared a port of call, and the Patgaon inland port connects Chittagong sea port. Dredging is undertaken at river ports, landing stations and channels to ensure navigability. Rail freight is being encouraged across the country as well. Linkages are expected between the east and southwest zones of the country by 2020, and Bangladesh Railway will be linked with international rail networks. Yet highways are still heavily relied upon for freight transport. In the road freight sector, greater organization of the freight industry has taken place. Some container terminals and depots are in operation to increase containerized freight traffic, and private sector logistics companies have emerged. The concept of green freight has been adopted at a national level, but work needs to be done to define how it will be implemented. One city, Sylhet, reported that it had constructed a central truck terminal in order to centralize activities of trucks that were entering the city. In its 10 th EST Forum report, the country noted that Green Freight had been adopted as a concept at the national level, that a number of container terminals/depots were in operation, and an increase was observed in the number of containers used by private and public operators.
Bhutan	As of the 9 th EST Form, the freight sector in Bhutan was largely private and unregulated. However, with discussions of rail connection to India ever on the agenda, there has been more discussion of inland container depots and dry port construction to serve a future with more complex logistics services for the country.
Brunei Darussalam	Brunei's report to the 7 th EST forum mentioned plans to upgrade the road network for more efficient freight transfer, and the Brunei Land Transport Master Plan expands on this through Policy EC5, which would see the establishment of a Strategic Freight Network by 2025, improving access to industrial areas and international gateways, ensuring diversion of freight from urban centres, residential areas and other sensitive locations, as well as incorporating supporting facilities such as vehicle parking, servicing, and navigation. The Plan also mentions the enabling of multi-modal mobility for freight and even the possibility of an inter-district railway line to supplement the Coastal Highway route that could also support freight movement. Action on this plan has not been reported in the media.
Cambodia	No specific mentions of initiatives to improve the efficiency of freight movement have been made in Cambodia's reports to the EST Forum process.

P.R. China	China has made efforts to make its goods transport more efficient and cleaner. In addition to a continuous improvement of vehicle emission standards and retiring of old, dirty and inefficient freight vehicles, and upgrading of fuel quality, China has implemented drop-and-hook pilot projects that allow for more efficient loading and unloading of trailers and avoidance of engine idling, established the China Green Freight Initiative under the Ministry of Transport (aiming to promote clean technologies and practices in China, Chinese freight transport companies have been certified under the Green Freight Asia label, established a green technologies catalogue under the Ministry of Transportation, established electronic freight exchanges, undertaken pilot projects in green freight technologies such as higher quality tires, lightweight trucks and trailers and aerodynamic equipment. Yet there is still resistance on the part of the private sector to invest in efficient and clean technologies, and hesitance on the part of the government to subsidize these technologies and practices, leading to an impasse that has yet to be overcome on a broad basis. The Chinese government also has yet to reform its laws and standards with respect to trailer and vehicle sizes – often, efficient technologies and practices change the dimensions of a trailer or vehicle slightly, and without flexible operational standards, these technologies would violate road safety laws or standards.
Indonesia	Indonesia has been known as having some of the least efficient logistics in the world, with the cost of logistics as high as 24% of GDP, compared to 7 or 8% in developed economies. Green freight and logistics has been reported as part of Indonesia’s urban EST strategy, including a Freight Improvement Programme, but few details have been reported through the EST Forum process. In November 2016, the World Bank approved a \$400 million loan for logistics reform (http://www.worldbank.org/en/news/press-release/2016/11/02/indonesia-400-million-approved-for-logistics-reform) and the government has reportedly opened the logistics sector to foreign investment, with the aim of reducing its logistics costs to 19% of GDP by 2020 (http://jakartaglobe.id/business/indonesia-logistics-costs-can-match-asian-peers-two-decades-roland-berger/).
India	India’s National Transport Development Policy has a focus on freight-related planning interventions to ensure a sustainable modal mix, and during the 9th EST Forum, India reported that it had planned construction of more expressways and dedicated rail freight corridors for more efficient freight movement. Significantly, India has established a government enterprise called the Dedicated Freight Corridor Corporation of India, which undertakes planning and development, mobilization of financial resources and construction, maintenance and operation of dedicated freight corridors (http://dfccil.gov.in/dfccil_app/Home). India will build dedicated freight-only rail lines connecting Delhi, Mumbai, Chennai and Kolkata with World Bank support that will not only improve speed, but by using electric power may also reduce GHG emissions. (https://www.worldbank.org/en/news/feature/2017/02/07/green-signal-faster-development-indias-new-freight-corridor).
Japan	Japan began reporting on freight in the context of reconstruction after the Great East Japan Earthquake. At the 6 th EST Forum, it reported that railways were recovered in an integrated manner and by using existing facilities, and disaster prevention functions were added to transport and logistics facilities. At the 7 th EST Forum, Japan reported that it had an Act on Advancement of Integration and Streamlining of Distribution Business, and furthermore provided funding for implementation of large CNG trucks to transport operators through the Model Program on Low-Carbonization of Mid-Range Distribution Transport. Japan reported at the 10 th EST Forum that the Act mentioned above was revised. The revised law focused on potential labor shortage, and potential solutions, for example, modal shift from truck to rail or ship, and improvement of one-stop procedures to limit time and resources spent on paperwork. (http://www.mlit.go.jp/report/press/tokatsu01_hh_000248.html)
Republic of Korea	Republic of Korea enacted its “Sustainable Transport and Logistics Development Act” in 2009, providing a basis for greener goods transport. The country aims to shift freight to rail and coastal shipping using subsidies (5 th EST Forum), reduce port facility rental fees, establish green ports, identify and spread exemplary cases of CO2 reduction with a green logistics certification system (6 th EST Forum), improve port logistics information systems and revise port logistics automation system information regulations and set up RFID-based logistics systems and IT-based marine transport information system (7 th EST Forum).

Lao PDR	CO2 reduction on freight transportation was a topic of discussion by Lao PDR at the 6 th EST Forum, where it reported that digital tachographs (black boxes) were installed on 2 small trucks for 3 months as a pilot project with the support of the Ministry of Economy, Trade and Industry of Japan. According to the Lao PDR report to the 7 th EST, transport logistics are a theme of the Land Transport Master Plan in Lao PDR, and a comprehensive study on the logistics system in Lao PDR was carried out with the assistance of JICA.
Malaysia	Malaysia has focused on improvement of efficiency of ports operation, national single window to reduce bureaucratic time, electrified double track rail, and port and logistics solutions in Westport (7 th EST Forum). By the 9 th EST Forum, seminars on eco logistics were being delivered to freight operator. In its report to the 10 th EST Forum, Malaysia has featured its National Logistics Masterplan, with 5 strategic shifts to improve logistics and trade facilitation.
Maldives	No information has been reported by Maldives at previous EST forums on concepts for more efficient goods movement. There is increasing awareness that freight vehicles are causing congestion in Male, and strategies may be needed to relieve congestion.
Mongolia	<p>*Existing International air operations for Ulaanbaatar will be relocated to Zuunmod (New Ulaanbaatar International Airport) 50km south of the central business district by Q1 of 2017 with a direct air to freight line.</p> <p>*<i>Southern Bypass</i> In the 2030 UBMPs the corridor unpaved roads to the south of Bogd Khan mountains will be developed as a southern bypass of the city centre road network and giving direct access to the logistic centres at Zuunmod, proposed new international airport and the western suburbs. Presently freight operations account for approximately 75% of available train paths on the single track line. If the southern freight bypass is constructed, the number of available train paths for local passenger service within Ulaanbaatar will increase significantly.</p> <p>*With support from the Asian Development Bank (ADB) Mongolia will build a state-of-the-art road/rail linked logistics facility in Zamiin Uud. The new terminal will have modern customs and quarantine facilities and road and rail access which will reduce transit times, expand capacity and improve staff productivity. Originally scheduled for completion in 2015, the center is now slated for a 2018-2019 completion.</p> <p>*A logistics center was established at the Zamyn-Uud border crossing with China.</p>
Myanmar	According to the 9 th EST Forum report submitted by Myanmar, inland ports were being planned including the purchase of new inland vessels, improved navigation channels, navigation aid equipment along rivers, upgraded rail infrastructure and the use of new cargo trucks from cities to other regions and states. The 10 th EST Forum report describes plans to create container handling capacity along inland waterways, and Myanmar Railways is inviting the private sector investment for freight transportation including container freight and fuel trains.
Nepal	While freight transport was not addressed in earlier EST Forums, by the 8 th EST Forum, Nepal reported that it had established Integrated Check Posts at key border areas to facilitate faster freight transfer, and a dry port had been built at Larch along the Nepal-China border to be opened in 2016 in order to facilitate more efficient truck use there. While in Nepal's report to the 10 th EST Forum, it stated that no action had been taken yet, it noted that in the coming years, freight would need to be made more affordable and the syndicate system of freight equipment ownership and management would need to be abolished in order to make orderly progress.
the Philippines	The Philippines began reporting on freight at the 9 th EST Forum, focusing on the Davao Sasa Port Modernization Project. This has been followed up in its report to the 10 th EST Forum with a report on the development of the National Logistics Master Plan, led by the Department of Trade and Industries. The Philippines also aim to carry out an Efficient Freight Management ICT system in the coming years.

Pakistan	Pakistan's first mention of freight practices was at the 6 th EST Forum, where it stated that minimizing freight transportation would have moderate transportation effects, compared to improving fuel economy and minimizing commuting to work and school. It's 7 th report to the EST Forum noted that administrative restructuring and infrastructure for the development of Pakistan rail, developing loading/unloading points, and driving market reform in the agriculture goods transport sector were underway. Although the mode share of rail was extremely low in Pakistan for freight (4%), rail was being upgraded and promoted for long haul, as presented at the 8 th EST Forum, along with incentives provided for more efficient, multi-axle trucks. At the 9 th EST Forum, Pakistan reported on its National Trade Corridor Program from 2000 that aimed to upgrade capacity and extend the network of national highways along the trade corridor, which if implemented would result in 50% reduction in travel time, 10% decrease in road transport costs, and 70% reduction in road fatalities. Pakistan also reported that train traffic was increasing, with a 5 times increase in trains setting off from ports than from two years prior (2 trains to 10 trains). Pakistan's freight sector upgrades were taking shape in it's report to the 10 th EST Forum, where it reported that the old trucking system was being replaced, and a complete renovation of railways including track, engine and blocks was near completion. Regulations were also being developed and enforced regarding vehicle dimensions and other standards.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	The government of Singapore did not report on this goal through the EST Forum Process.
Sri Lanka	Sri Lanka aimed in its 5 th EST report to shift more cargo from road freight to rail freight in order to improve environmental performance, as well as to make better use of inland waterways. During the 9 th EST Forum, Sri Lanka reported that private sector companies were forming networks so as to realize economies of scale in their operations, and in its report to the 10 th EST Forum, Sri Lanka reported that procurement of container carriers was underway, continued dry port construction was being investigated and preliminary work for new railways had begun.
Thailand	Thailand has proven to be a key partner for Green Freight in Asia. The country is a participant in the Greater Mekong Subregion Core Environment Program of the ADB, and has strong industry associations, such as the Federation of Thai Industries, to support policy development and implementation through training of drivers and transport companies. A green freight project was started as reported during the 7 th EST Forum. In 2015, Thailand launched a Green Freight Initiative to work initially with 15 small to medium-sized truck companies to improve their fuel efficiency by financing and testing technologies, eco-driving and improved logistics management. (http://www.gms-eoc.org/news/thailand-looks-to-green-freight-for-economic-and-environment-gains). In 2016, the country undertook a Logistics and Transport Management Project as well as a Logistics and Transport Management Application (LTMA) Project to improve freight efficiency, and plans to promote LTMA software, transport energy management systems and logistics ESCO financing to freight companies in the 2016-2021 period. Thailand currently has a target to encourage 200 freight companies to improve their energy efficiency, educate 400 drivers about eco-driving and defensive driving, pilot a transport energy management system in 100 freight companies, and establish an ESCO mechanism to provide assistance to road transport companies. Furthermore, all trucks are to have GPS installed by law. Plans are in place to begin using such data for energy-saving purposes. (http://www.gms-eoc.org/uploads/resources/955/attachment/Day%201-Green-Freight-Thailand.pdf)
Timor-Leste	Freight, especially for import and export functions, is being addressed in Timor-Leste. During the 9 th EST Forum, the country reported that it sought to engage private sector participation to facilitate trade, and the report to the 10 th EST forum contains plans to construct a port and airport on the southern coast, implement an Oecuse special zone maritime transportation system, and upgrade Dili airport and new port.

Viet Nam	<p>Viet Nam is a key partner for Green Freight in Asia. With goods transport volume increasing year on year, infrastructure has come into focus, as well as vehicle quality. During the 7th EST Forum, Viet Nam reported that it had begun a green freight transport project, with the Greater Mekong Subregion Core Environment Program of the ADB. Viet Nam has participated in the Climate and Clean Air Coalition's Global Green Freight Action Plan program, and has undertaken workshops in green freight with many international partners, and released a number of high-level decisions to focus on the logistics industry including:</p> <p>*Decision of the Prime Minister number 169/QĐ-TTg dated 22 January 2014 on the development of logistics service in transport sector to 2020. *Decision of the Prime Minister number 318/QĐ-TTg dated 04 March 2014 on the strategic development of transport service up to 2020 and orientation to 2030.</p> <p>Workshops on eco-driving, as well as long-term goals for an East-West Economic Corridor have supported these efforts. By 2016, it was reported that the Department of Roads of Viet Nam had established an action plan for developing Green Freight Transport including:</p> <ul style="list-style-type: none"> · Improvement of online freight exchange · Develop eco-driving materials and integrate them in national driving curriculum · Develop a mechanism and regulation for labelling Green Transport · Build capacity of official staff and policy makers to develop green freight · Encourage private sector to participate in green freight · Enhance awareness by community and enterprises. <p>(Updates of Green Freight Initiatives in Asia: Viet Nam Country Report. Regional Workshop on Green Freight and Logistics in Southeast Asia, June 2-3, 2016, Bangkok)</p>
Goal-13: Adopt a zero-fatality policy	
Afghanistan	<p>Road safety is an important initiative in Afghanistan's transportation planning. In the 6th EST forum, the country reported that it was planning and improving road lighting, and has reported even greater ambitions in following EST forums including strict regulations to enforce driver licensing and insurance and standards in road design and construction, and working on speed control for roads. It has been noted that Kabul does not have traffic lights, but it is unclear if this situation has been improved upon in the following years.</p>
Bangladesh	<p>Bangladesh has a National Road Safety Council, an accident research institute at one of Bangladesh's top engineering universities, the country has updated its road transport policy – including an axle load control station operation policy, and vehicles are regularly inspected. 209 black spots have been identified on national highways, and a road safety action plan was put into place from 2014-2016. Trauma centers have been established near highways to assist with post-collision care, and doctors and paramedics are trained to handle road transport injuries. Although driver training is carried out by numerous regulators and service providers, Bangladesh still suffers from fatalities due to inadequate awareness of transportation safety, and poor habits of vehicle drivers and pedestrians alike. Sylhet City is attempting to raise awareness among residents about traffic rules, and cooperating with police to improve enforcement of traffic laws. The City observed significant reductions in traffic accidents between 2007 and 2014.</p>
Bhutan	<p>Transportation accidents are still a major public health concern in Bhutan. Although the country has implemented policies for zero tolerance traffic violations on Fridays, and has rolled out activities under the Road Safety Decade Action Plan (launched in 2011), aiming for less than 5 fatalities per 10,000, the 2040 Road Safety Strategy aims for a much more comprehensive plan including establishment of a road safety board, developing a road safety action plan, improving road design, and other key steps. During the 9th EST Forum, Bhutan claimed a major win from its road safety plan, with the number of motor vehicle crashes steadily declining year-on-year, and the number of injuries declining from 2011 as well, with fatalities below their maximum level in 2011.</p>

Brunei Darussalam	With an increasing auto population, Brunei Darussalam has increased traffic fatalities. As a result, in its 7 th EST Forum report, it reported amendments to Road Traffic (driving license) regulations, ensuring that commercial drivers must have a Class 3 driving license for at least 1 year and be 21 years of age or older. The driving curriculum was improved, bus drivers are required to attend Defensive Driving courses, and training and test driving facilities have been added or upgraded. In 2013, a demerit system was implemented to identify high-risk drivers who may cause danger to other road users. Finally, speed warning devices were required for commercial vehicles. The Sultanate noted that in 2013, it would implement interchanges and traffic calming measures but noted that finances and infrastructure and facilities still created challenges.
Cambodia	Throughout the EST process of the Bangkok 2020 Declaration, road safety has been a major recurring theme for Cambodia. In 2010, road conditions were noted as poor, with poor infrastructure and maintenance. Driving without helmets, and distracted driving was mentioned, along with overloading of commercial vehicles, and 4.8 traffic fatalities per day reported. Campaigns focused on helmet and mirror use by road users, seatbelt use, road sign respect, speed enforcement by police, and alcohol testing at night. By the time of the 9 th EST forum, the road traffic death rate was 14.7/100,000, with speeding and drink-driving being the leading causes of death, and data suggesting that as the number of registered vehicles increased steadily, road deaths per 10,000 vehicles decreased, from 18.1 in 2007 to 7.9 in 2015. Yet compared to Lao PDR and Vietnam, Cambodia still suffered more road deaths as a proportion of population and vehicle proportion. By the 9 th EST forum, Cambodia had identified major times and locations of traffic fatalities, and emphasized that young people are a growing group of victims of this preventable tragedy. Cambodia has undertaken new social marketing campaigns, workshops, and awareness raising of drink driving risks and helmet wearing, and in January 2015, rolled out a new road traffic law mandating helmet use, and increasing fines significantly for riding motorcycles without helmets and drink driving. Faced with a tragedy, Cambodia is scaling up its efforts through enforcement, motorcycle safety clothing, data collection on alcohol and drink driving, and legislation and tax policy.
P.R. China	The World Health Organization reports that over 58,000 people are killed every year due to road traffic crashes (2015), and this is the leading cause of death for people aged between 15 and 44 years of age. Pedestrians, motorcyclists and cyclists account for a majority of those fatalities. The introduction of e-bikes in China has been very good in terms of reducing emissions, but with no official recognition of the status of e-bikes, little or no training or licensing for e-bikes, and rapidly increasing commercial use of e-bikes and e-three-wheelers for delivery where speed is demanded, fatalities and injuries are increasing dramatically. Speed and drink-driving, however, are still the primary risk factors. China has set a goal to reduce road fatalities by 32% (per 10,000 vehicles) by 2020. Dalian and Suzhou have been identified as pilot cities for implementation of the RS10 Road Safety initiative funded by Bloomberg Philanthropies that aims to reduce speeds and drink-driving through targeted enforcement, increased penalties, public awareness and better laws.
Indonesia	Indonesia experiences a high rate of road-related fatalities, and has acknowledged this risk in its EST forum reports. Safe driver training has been implemented in Indonesia for public transport drivers at least since it was reported at the 6 th EST Forum. During the 9 th EST Forum, Indonesia reported that it would establish a zero-fatality accident roadmap, but it is unknown if this has been released. In its 10 th EST Forum report, Indonesia noted that it was implementing its National Plan of Road Safety (2011, 2035), Established a zero-fatality accident road map, and was operating an Indonesia safety driving centre.
India	Safety has been reported on since the 6 th EST Forum by India in the context of the Bangkok 2020 Declaration. The National Transport Development Policy – Urban Transport identifies safety as an aspect of focus for its 2030 aspirations. India’s report to the 7 th EST identified that Road Safety and Safety audit toolkits were under finalization, that road safety Standard Service Level Benchmarks were in place, and recommended that a commission be established for urban transport safety, ensuring multi-departmental action. According to the Global Status Report on Road Safety 2015 (World Health Organization, 2015), India had achieved “best practice” legislation for seat-belt implementation, the Government has pledged to apply UN-equivalent crash-test standards for front and side impact in two phases for passenger cars, the World Bank has established a minimum three-star target for all road users as part of new road design, but the country had not set targets for road fatalities or non-fatal accidents (p. 310). During the 9 th EST Forum, India reported that accident rates and road fatalities remained high.

Japan	<p>During the 5th EST Forum, Japan reported that traffic fatalities had fallen below 5,000 for the first time in 57 years after falling for nine consecutive years. This decrease was attributed to seat-belt laws, eradication of drinking and driving, promotion of eco-driving, road improvements, and other measures such as identification of accident-prone areas and making improvements. At the 6th EST Forum, Japan reported that it was seeking to disaster-proof safety facilities such as traffic signals. At the 7th EST, Japan reported that an Automobile Liability Security System was in place, ensuring that liability insurance for all automobile owners was mandatory. Japan reported at the 8th EST Forum that on community roads, pedestrians are prioritized, and traffic-calming measures were put in place. It also reported that the Japanese government implements indemnity services for victims of uninsured or unidentified automobiles. At the 10th EST Forum, Japan's report indicated that amongst G7 countries, Japan has the highest number of pedestrian and bicycle rider fatalities, with half of the accidents occurring within 500m from their homes, indicating that there is still more work to do. According to the Global Status Report on Road Safety 2015, Japan enjoys low rates of traffic fatalities, but still lacks international best practices in speed management, drink-driving and child-restraints, while implementing best practices in helmet and seat-belt use. According to the report, Japan has excellent traffic death registration data.</p>
Republic of Korea	<p>Republic of Korea reported briefly on safety in its report to the 6th EST forum, emphasizing the safety of public transport, and construction of safe bicycle facilities and EV charging facilities. In its report to the 7th EST Forum, the country reported that it aimed to reduce traffic casualties by 10% annually and expand a supply of digital driving recorders for commercial vehicles as well as enhanced safety inspections. The country also began providing assistance to victims including relief measure for hit-and-run victims. The country aimed to provide specialized rehabilitation services for victims as well as counseling services for the families of victims, as well as a comprehensive assessment of regional transport safety and an advanced project to identify traffic "black spots". According to the Global Status Report on Road Safety 2015, Republic of Korea has a traffic fatality rate of 12 per 100,000 population, higher than other developed economies, but lower than middle-income countries, indicating a need to improve policy in this area. According to the report, the Republic of Korea has excellent traffic death registration data.</p>
Lao PDR	<p>Road traffic safety was reported as one of the five theme areas of the Land Transport Master Plan in Lao PDR during the 7th EST Forum, as well as a part of the country's EST strategy. According to the Global Status Report on Road Safety 2015, Lao PDR's traffic fatality rate is moderate compared to other countries of similar economic development level. Implementation of helmet laws is good, but speed limits, drink-driving law, seat-belt law, child restraint law have received low ratings for enforcement. According to the report, Lao PDR does not report traffic death registration data.</p>
Malaysia	<p>According to the Global Status Report on Road Safety 2015, the country suffers a high traffic fatality rate of 24 per 100,000 population. The country has national speed laws, drink-driving laws, motorcycle helmet laws and seat-belt laws (for front seat occupants only), but lacks a child restraint law. All these laws have been enforced to a "moderate" level. According to the report, Malaysia does not have eligible traffic death registration data available. Malaysia reported at the 7th EST Forum that it had implemented several laws and had participated in the international Road Assessment Program (iRAP) pilot study. It also was preparing its Road Safety Plan (2011-2020) and was implementing an automated enforcement system to reduce speed and red light violations. The 8th EST Forum report aimed to reduce the number of road fatalities compared to BAU by 50% by 2020, and aimed to introduce mandatory rear seat belt wearing, and also introduced the Road Safety Plan of Malaysia (2014-2020).</p>
Maldives	<p>At the 6th EST forum, Maldives reported that its National Strategy for Sustainable Development (2009) aimed to halve road transport deaths by 2015, although further information on this target has not been reported. Road safety in the Maldives is not included in major international reports on road safety.</p>

Mongolia	In the 8 th EST, Mongolia reported that a MCC (Millennium Challenge Corporation) project for SIN (Safety Information Network) is under way. In 2012 Mongolian Government Resolution No. 146 to the 2012-2020 adopted a national strategy to ensure traffic safety. A major initiative is to reduce deaths from road traffic accidents and the number of injured people by 50%. (8 th EST). According to the Global Status Report on Road Safety 2015, Mongolia suffers a high rate of traffic death at 21 per 100,000 population. While the country has enacted traffic safety laws, enforcement is rated as poor. According to the report, Mongolia does not have eligible traffic death registration data available. During the 10 th EST Forum, however, Mongolia reported that Parliament had approved a new Law on Traffic Safety which was amended in 2017, and had developed and enforced progressive safety standards such as helmets for motorcycles, requirements on child seats in cars, and procedures for auditing traffic safety, etc.
Myanmar	According to the Global Status Report on Road Safety 2015, Myanmar suffers a high traffic death rate of 20.3 per 100,000. The country lacks seat-belt laws, child restraint laws, and laws on mobile phone use while driving and drug-driving laws. The country's motorcycle and speed laws are moderately enforced. According to the report, Myanmar does not have eligible traffic death registration data available. In order to address this problem, Myanmar created the National Road Safety Action Plan and developed a National Road Safety Committee (7 th EST Forum report). Numerous campaigns were established to raise awareness, testing for drivers and vehicles was improved, and during the 9 th EST Forum, Myanmar committed to "halve the fatality rate by 2020". Myanmar has also started imposing fines on passengers not wearing seat belts in 2016. According to the 10 th EST Forum report, Myanmar had established a National Road Safety Council, a Road Safety Council in regions and states, and was implementing seat belt laws for drivers and passengers, mandatory helmet laws, drink driving laws, mobile phone safety laws. The country was upgrading driver tests, creating a road accident hotline, adding road safety to school curriculum, etc. Many programs are coming into place.
Nepal	Although Nepal had not reported on safety in earlier years, by the 8 th EST Forum, it reported that it had adopted a Nepal Road Safety Strategy 2013-2020, introducing speed controls, improving driver licenses and producing separate licenses for public drivers, identified the Ministry of Physical Infrastructure and Transport as the lead agency, committed to a Road Safety Council by 2015, and increased enforcement against drunk driving. At the 9 th EST Forum, Nepal had reported on its Nepal Road Safety Strategy and <i>Action Plan</i> , noting that road safety audits would be required on all strategic roads, that the Road safety council had been established, that a Road Safety Act was under development, and that amendments to other acts related to safety were underway, and that 75 km of crash barriers were being built in "black spot" areas in hilly roads. Bringing the system forward in the report to the 10 th EST Forum, Nepal noted that it had improved speed control, launched new driver licensing technology, implemented compulsory vehicle registration and third party insurance, and that passenger insurance and compensation for accidents would be included within the price of transportation tickets. Nepal has shown consistent effort and improvement in the area of road safety policy.
the Philippines	In the WHO's Global Status Report on Road Safety 2015, the Philippines was noted as having good data on traffic death registration, along with many developed countries. While traffic fatalities both increased and decreased between 2004 and 2013, they appeared to be on an upward trajectory, meaning that attention to this sector was necessary. In order to address road safety, the Philippines has developed road safety training modules for local use, implemented trainers' training in Manila, and undertaken regional road safety training programs. The country also established the Center for Research on EST which has a safety component. In the private sector, the Philippines-Global Road Safety Partnership Program was listed as important (5 th EST Forum). During the 7 th EST Forum, the Philippines noted that an Integrated Road Accident Database System was under development. The 9 th EST Forum reported on the increased insurance requirements for accidents and the acquisition of breathalyzers to enforce drunk driving laws. Finally, at the 10 th EST Forum, the Philippines is reporting that it is crafting an Implementation Rules and Regulations for speed limiters and issue guidelines for road safety, as well as a Data for Road Incident Visualization Evaluation and Reporting System (DRIVERS) to collect and report data on crashes to identify crash black spots, determine economic costs of accidents, and monitor effects of interventions.

Pakistan	<p>Pakistan reported at the 6th EST Forum that it would remove carriers on rooftops of buses and wagons as a safety measure, ensure adequate pedestrian crossing facilities, and implement preventative and curative measures to minimize road accidents. The report to the 7th EST forum featured improved drivers licensing and improvement of post-accident care systems, as well as the establishment of vehicle inspection and certification system in Punjab. Pakistan’s report to the 10th EST Forum says that road safety is included in the draft National Transport Policy in Pakistan, including a national steering committee. National Road Safety Council at the Minister’s level exists and will start functioning. Five topics are featured, based on the pillars of the Global Plan of the Un Decade of Action:</p> <ul style="list-style-type: none"> · Road Safety Management · Make roads and roadsides safer · Safer vehicles · Safer users (Drivers, Motorcycles, Pedestrians, etc.) · Post-crash care <p>Pakistan plans to launch a comprehensive road safety plan in collaboration with the ADB. The T.A. has been approved and a consultant has begun work.</p> <p>According to the Global Status Report on Road Safety 2015, Pakistan is one of the ten most populous countries, but it has not implemented any best practice legislation for road safety – most traffic safety laws are rated as poorly enforced. The country has no eligible death registration data available, but traffic death rates are estimated to be moderate at 14.2 per 100,000 population. Pakistan lacks a child restraint law.</p>
Russian Federation	<p>According to the Global Status Report on Road Safety 2015, Russia has implemented international best practice legislation in the areas of helmets, seat-belts and child restraint, and has good traffic fatality registration data available. Traffic laws enjoy a good rating for enforcement. Yet, the country suffers a moderately high traffic fatality rate of 18.9 per 100,000.</p>
Singapore	<p>According to the Global Status Report on Road Safety 2015, Singapore enjoys a very low traffic fatality rate of 3.6 per 100,000 population. The country has implemented best-practice legislation which is enforced to a high degree. According to the report, Singapore has good traffic fatality registration data available. Singapore has a Pedestrian and Cyclist Safety Committee, and has identified “Silver Zones” for making selected areas safer for senior citizens. According to Singapore’s report to the 10th EST Forum, 9 silver zones have been created since 2014, and 12 more are planned by 2018.</p>
Sri Lanka	<p>Sri Lanka noted in its report to the 5th EST Forum that 1 in 50 deaths was believed to be in road accidents, a high rate, and the economic costs of accidents were also high at Rs 30 billion per year (USD 260m in 2010). The report to the 7th EST Forum noted that Sri Lanka was focusing on mandatory seat belt laws and awareness, as well as the establishment of a National Road Safety Policy and National Road Safety Council. In its presentation of the Urban Transport Master Plan for Colombo Metropolitan Region and Suburbs at the 8th EST Forum, Sri Lanka stated that a low carbon development option focused on public transport would result in lower economic losses due to accidents compared to a BAU scenario. The increased role of road safety councils and their integration with police stations was detailed at the 9th EST Forum, as well as improved law enforcement, speed limits and improved education and awareness of drivers, and heavy fines for drunk drivers have been imposed. Progress continued to the 10th EST Forum, with updates reported to the national road safety action plan (2016-2020), and the introduction of a demerit system for drivers that break traffic laws. According to the Global Status Report on Road Safety 2015, Sri Lanka has a high traffic fatality rate of 17.4 per 100,000. The country implements best practice legislation except for national child restraint laws, but enforcement in speed and drink-driving laws is rated as moderate, while others are good. According to the report, Sri Lanka does not have eligible traffic fatality data available.</p>

Thailand	Thailand's roads are ranked as the second most lethal in the world after Libya's by the World Health Organization, with 24,000 people killed on roads annually. High speeds and drink driving are noted as the top reasons for road fatalities, and 73% of those killed are motorcycle drivers. (http://www.bbc.com/news/world-asia-38668335) While Thailand has established programs under the title of "Decade of Action for Road Safety", recent reports suggest that they have not been successful, though according to the World Health Organization's Global Status Report on Road Safety 2015, deaths seemed to be plateauing in 2012. (http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/). Lack of awareness about traffic laws, outdated traffic laws, and slack enforcement are noted as possible reasons for the high levels of traffic deaths and injuries. (http://www.chiangraitimes.com/road-safety-in-thailand-should-be-a-permanent-national-agenda.html), and the Prime Minister has taken note to strengthen safety laws, including measures such as vehicle GPS tracking systems, stricter speed limits, and eliminating certain categories of vehicles from the road. (http://m.startribune.com/thai-pm-plans-driving-crackdown-after-deadly-van-crash/409629725/?section=world)
Timor-Leste	According to the Global Status Report on Road Safety 2015, Timor-Leste suffers a moderately high traffic fatality rate of 16.6 per 100,000, although the report notes that eligible fatality data is not available for the country. Timor-Leste has enacted best practice legislation and a road safety strategy is funded in the national budget, but enforcement of laws is poor. During the 7 th EST forum, Timor-Leste reported that it subscribed to the 3 zero's concept. The report to the 9 th EST forum indicated that many traffic accidents are unreported, and therefore statistics may not be reflective of reality. Finally, during the 10 th EST Forum, the country reported that it is in the process of modernizing its traffic control and monitoring systems to improve safety.
Viet Nam	Traffic fatalities have been described by some officials as "like a war" by government officials in Viet Nam, requiring swift and strict action. The National Traffic Safety Committee noted that in the first half of 2013, 4,163 people had been killed and 12,171 injured, with many injuries caused by high speed. Viet Nam rolled out its "black box" requirement to record information about drivers including the speed and direction of their cars or trucks in order to remind drivers about their responsibilities, but it has only been in 2016 when this policy became more strictly enforced. At a conference in 2017 chaired by the Deputy Prime Minister and Chairman of the National Committee for Traffic Safety, it was reported that in 2016, 8,685 people died in traffic (20% lower than 5 years previously), with over 19,000 injured, with 67% involving motorcycles and 50% involving people 27-50 years old. Given the high-level support to this cause, it is hoped that through stricter enforcement of laws, reduction of alcohol consumption, and better education of young people, that traffic safety can be improved. Viet Nam is targeting traffic fatalities to be fewer than 7,300 per year. (http://e.vnexpress.net/news/news/in-vietnam-traffic-accidents-kill-more-people-than-pandemic-diseases-3503638.html)
Goal-14: Promote monitoring of transport health impacts	
Afghanistan	Afghanistan has conducted an emission inventory for 2005 and was undertaking an update during the 7 th EST forum reporting period – including an update of the burden of disease report. In 2010, it was noted that 31% of air pollution was attributable to transportation. The country reported at the 8 th EST forum, that it faced several challenges in updating data, including that it lacked capable human resources, time series data on level of air pollution, time series data on health of the population, and insufficient financial resources. Optimistically, health impacts from transportation emissions were one of the priority focuses of the proposed Air Quality Strategy. The 2015 report did not include any update, but the report to the 10 th EST Forum suggest that an air quality management program has been introduced.
Bangladesh	Bangladesh's Clean Air and Sustainable Environment (CASE) project has implemented continuous air quality monitoring by 11 stations in Dhaka, Chittagong, Rajshahi, Khulna, Barisal, Sylhet, Gazipur, and Narayangang. Roadside monitoring stations have been under operation, and systems are in place to monitor automotive noise and tailpipe emissions. Finally, a 5-year project under CASE was established to strengthen institutional and regulatory frameworks for air quality management to help improve the environment in major cities. Yet, road users remain unaware of the risk to health of transport-originated air pollution, and non-compliance by transportation owners and workers is common.
Bhutan	There is little information available on the public health impacts of transportation in Bhutan, with funding support and expertise needed to generate progress in this goal.

Brunei Darussalam	There is little information available on monitoring of the health impacts from transport emissions and noise currently implemented. The National Land Transport Plan includes a headline policy noting that local air and noise quality must be improved through new technology and behavioural change. This could also be achieved through mode shift, low sulphur fuel and noise regulations along with electric or fuel cell buses.
Cambodia	Cambodia noted in its report to the 5 th EST forum that little was known about the issue of health and the environmental impact of transport emission, and emphasized the need for stakeholders to analyse this problem at the 6 th EST Forum. This was also mentioned at the 8 th EST forum.
P.R. China	Although some NGOs have determined the health impacts of transportation-related pollution in Chinese cities, there has been little work to publicly promote monitoring of health impacts from transportation emissions and noise. While many pollution reduction projects are justified with public health as the main reason for implementation, details of health impacts of transport pollution are not readily identified.
Indonesia	Indonesia has reported during the 5 th EST Forum, that the 1992 Blue Sky Program aims to control air pollution including mobile source pollution through city evaluation awards. Evaluation criteria include ambient air quality, vehicle exhaust emissions and transport management systems. Outcomes from this program have not been reported through the EST Forum process. According to Indonesia's report to the 10th EST Forum, the MoEF introduced activities to monitor impacts of vehicle emissions related to health.
India	Throughout the EST Forum process, India has not reported specifically on monitoring of health impacts of transportation, although during the 9 th EST forum, it was recommended that studies be undertaken on environmental impact, health impact and toxicology related to the apportionment of emission sources.
Japan	No information was discovered reported to the EST Forum process regarding this goal from Japan.
Republic of Korea	Although Republic of Korea has reported on vehicle testing, it has not focused on air pollutants in its EST Forum process reporting, nor has it reported on monitoring of health impacts. Republic of Korea aimed in its report to the 7 th EST Forum to revise laws and regulations related to the Green Growth Basic Act and Clean Air Conservation Act, but revisions were aimed at GHG emission reduction.
Lao PDR	Lao PDR has not reported on this goal during the period since the Bangkok 2020 Declaration.
Malaysia	Malaysia set up a Secretariat to develop, implement and coordinate a National Environmental Health Action Plan to focus on air pollution and its health impacts. Reported in its 8 th EST Forum report, it noted that there was an inadequate understanding of human exposure to traffic emissions. In its report to the 10th EST Forum, Malaysia noted that reserach was being undertaken on air pollution-related diseases, and systematic studies were being conducted on major health impacts.
Maldives	The Maldives National Strategy for Sustainable Development (2009) has the objective to reduce pollutant emissions from transport to levels that minimize effects on human health and/or the environment, but data has not been reported on policy or technology options, or timelines or specific target levels of pollution.
Mongolia	In the 7 th EST Country report, Mongolia reported that there were no specific projects on monitoring the health impacts from transport issues. However, it did report that it would take the following actions in 2013: <ol style="list-style-type: none"> 1. Develop State policy on auto transport 2. Renew regulation on auto transport inventory Improve law regulation on environment and health sector impacts from auto transport, aligning with environmental requirements. Actions have been taken to quantify pollution sources in Ulaanbaatar City, as well as to implement a clean air program. (10th EST Forum Report)
Myanmar	Myanmar reported at the 7 th EST Forum that it had reformed and assigned the National Environmental Conservation Committee in April 2011 to address health and transport. The Ministry of Health has issued its National Health Policy, and vehicle emission limits that can impact on health issues and environmental issues were to be developed. A program was underway to deregister and replace vehicles that emit above limits.

Nepal	During the 5 th EST Forum, Nepal reported on its ambient air quality issue, and that air quality brought challenges for public health. A study was underway during the period of the 8 th EST Forum of the impact of air pollution on health in Kathmandu, Bhaktapur and Lalitpur. This research may have spurred a number of initiatives reported in the 10 th EST Forum report that while not directly addressing health, will be required to reduce emissions over time.
the Philippines	Beginning at the 9 th EST Forum, the Philippines reported on the design of an Advanced Traffic and Pollution Monitoring System that could be used to monitor health impacts of transportation. In the report to the 10 th EST Forum, the Philippines reported on the development of an Emission Factor Development, aiming to accurately capture the emission profile of the vehicle fleet and provide data, information and tools for improved management of air pollution from mobile sources. Recognizing the health impact of transportation, the Philippines has rolled out several vehicle management schemes such as replacement of 2-stroke tricycles, Jeepney replacement to LPG and others.
Pakistan	Pakistan reported that it would set up air quality monitoring stations at appropriate locations at 7 th EST Forum, and would implement Euro II standards for fuel and vehicles as well as phase out two stroke engines and introduce 4-stroke CNG. In its report to the 10 th EST Forum, Pakistan wrote that a mitigation plan, strategies and programme are being developed. The Metro Bus project should have significantly reduced emissions, attributed to the avoidance of using personal vehicles by 9% of current commuters on the Metro bus, and another 668 small public transport vehicles.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore conducted studies to assess the economic impacts of air pollution, which serve as bases for the derivation of mitigation strategies covering fuel quality, new and in-use vehicles. (8 th EST Forum report)
Sri Lanka	Sri Lanka estimated that pollution was responsible for 5,000 premature deaths per year in the country at the 5 th EST Forum, but thereafter requested assistance in evaluating this risk, and has monitored air quality in certain locations for awareness-raising.
Thailand	While Thailand has reported that transportation is a source of 75% of CO, 80% of NO _x and 54% of PM in Bangkok at the 7 th EST Forum, it has not made specific reports linking health to transportation in subsequent years. Thailand has demonstrated the economic and health benefits of sulfur reduction in diesel, with the shift from Euro 3 to Euro 4 fuel resulting in savings of up to USD \$1.8 billion with less CO, NO _x and PM emissions, lower health-care costs and fewer incidences of lung disease and respiratory illness. (http://cleanairasia.org/workshop-highlights/ as viewed on 5 February 2017).
Timor-Leste	No information has yet been reported on monitoring of the health impacts from transport emissions and noise in Timor-Leste.
Viet Nam	Viet Nam is currently building its resources for monitoring health impacts from transport emissions. In 2010, a National Environment Report (cited in the 2013 “Towards Development of Strategic Directions for the Promotion of EST in Viet Nam by 2020” report), comprehensive data was presented on the concentrations of pollutants and noise along major roads across a sample of cities. The Ministry of Health tracks statistics, and air pollution in Ha Noi was cited as the reason for having high prevalence of respiratory disease than Ho Chi Minh City.
Goal-15: Establish country-specific air quality and noise standards	
Afghanistan	Afghanistan introduced a National Ambient Air Quality Standard in 2011, and the Ambient Noise Quality Standard (as part of the Noise Pollution Control Regulation) was in process in 2012. By the 9 th EST forum, Afghanistan had accomplished the establishment of the National Ambient Air Quality standard, the National Ambient Noise Quality Standard, and one continuous monitoring station had been established, with plans of expanding the monitoring system in Kabul in 2015. But the country did face a lack of financial resources to expand the monitoring network, and need for technical support in operating the existing continuous monitoring system.

Bangladesh	The Clean Air and Sustainable Environment (CASE) project has been a key initiator of air quality and noise standards, and air quality standards are in development. Meanwhile, Bangladesh monitors PM, ozone, SO ₂ , NO _x and CO at continuous air monitoring stations, and an air quality and noise standard is being enforced by the BRTA. A noise standard has also been established and enforced.
Bhutan	Bhutan has industrial air pollution standards in place, but not for noise. While helicopters were not allowed in 2011, the Civil Aviation Strategy in the Transportation 2040 Integrated Strategic Vision suggest opening up helicopter services for search and rescue, emergencies and charter services in the future. Bhutan has installed air quality monitoring stations in four municipal areas, and plans to expand this coverage to all 20 districts by 2018.
Brunei Darussalam	During the 7 th EST Forum, Brunei noted that it had been regulating emissions and noise through computerized vehicle inspections. The National Land Transport Plan notes the importance of implementing noise and fuel sulfur standards so as to protect air quality, but air quality standards are not noted.
Cambodia	Cambodia communicated the need to monitor ambient air quality and roadside air quality and to formulate emission standards at the 5 th EST Forum. It also discussed a lack of parameters in the Sub-decree on Air Pollution and Noise Disturbance Control, noting the need to address these issues through People and Environment Friendly Transport Infrastructure Development. These needs, however, were not followed up on in subsequent EST forum reports.
P.R. China	With air pollution becoming a key topic of headlines on the front pages of P.R. China and around the world, the government of China has taken strong action to identify pollution sources, create plans for pollution reduction, and develop standards and procedures for acute pollution events. In 2013, the Action Plan on Prevention and Control of Air Pollution was released by the State Council of the P.R.C. as guidance for national efforts to prevent and control air pollution for the present and near future. Air quality targets were identified for the Jing-Jin-Ji region, Yangtze River Delta Region and Pearl River Delta region, where the levels of fine particulate matter will be cut by 25%, 20% and 15% respectively, with annual concentration of PM _{2.5} kept at or below 60 micrograms per cubic meter. This will be achieved through reduction in coal consumption, reduction in iron and steel-making capacity, controlling the numbers of vehicles on roads, and increasing non-fossil fuel energy. The plan also mentions developing pollution controls for off-road equipment including construction machines and ships, and even researching the development of congestion charging and low emission zones for cities – a suggestion repeated by members of the CPPCC. Yet, the China Academy of Sciences notes that although the public perception is strong that cars are the main source of smog, there may be other more important sources.
Indonesia	The Indonesia Ministry of Environment and Forestry issued a ministerial regulation on noise (rule 14/2003) according to Indonesia's report to the 9 th EST Forum. In Indonesia's report to the 5 th EST Forum, the Blue Sky Program description includes voluntary standards for ambient air quality. The country is revising its ministerial decree on noise as well as regulations on air quality control.
India	India reported at the 6 th EST Forum that the country already had national air quality standards for 12 pollutants, and by the time of the 9 th EST reported that it would strengthen its air quality monitoring stations. It also reported that continuous monitoring was being undertaken in 16 cities with 50 stations, and that 650 operating stations covering 175 cities/towns were operational, with 700 stations sanctioned.
Japan	During the 5 th EST Forum, Japan reported that it already had 1987 continuous air quality monitoring stations working in accordance with the Air Pollution Control Law. During the 6 th EST Forum, details emerged that that Japan's targets for reduction of NO _x and PM in ambient air were set in 2000, with targets for 2010. These targets were achieved, and new targets were set for 2015 and 2020. Japan reported at the 7 th EST Forum that air quality monitoring data was made available in real-time online, and that the Noise Regulation Law required systematic and constant monitoring of motor vehicle traffic noise by local governments. This data and simulated sound propagation pathways are made public annually.
Republic of Korea	Republic of Korea reported that it had implemented the "Total Air Pollutant Load Management" in industrial sites since 2008, with about 300 companies participating by 2012. The country had also implemented an emission trading system, and exhaust gas controls. (7 th EST Forum report).

Lao PDR	Ambient air quality monitoring and management were mentioned during the 5 th and 6 th EST Forum reports by Lao PDR, but specific details were not outlined. Traffic noise management was mentioned as part of the EST strategy in Lao PDR during the 7 th EST Forum.
Malaysia	Malaysia's Clean Air Action Plan is part of the tenth Malaysia Plan (2011-2015), aiming to reduce emissions from vehicles, reduce haze, and build institutional capacity and public awareness. (5 th EST Forum Report). The country had a network started in 1995, collecting air quality and noise data to be used as supporting data for the formation of air quality standards and guidelines. Ambient noise monitoring started in 2012. (7 th EST Forum Report). In its report to the 10 th EST Forum, Malaysia described its New Ambient Air Quality Standard with interim targets in 2018 and full implementation by 2020.
Maldives	Specific air quality and noise targets for Maldives have not been reported at EST Forums. The International Association for Medical Assistance to Travelers notes that Maldives only has one air pollution monitor reporting to the World Health Organization, and that particulate matter levels are generally "low". (https://www.iamat.org/country/maldives/risk/air-pollution)
Mongolia	The National Committee on Air Pollution Reduction was established in 2012 under the Office of the President of Mongolia with the first meeting occurring on December 1, 2016 (7 th EST, 24). The 7 th EST reported that under the "New Reconstruction Midterm Development Program" 2010-2016 was a goal to decrease air pollution in Ulaanbaatar city 50% by 2016. In addition, below are a selection of Mongolia's air and noise quality standard laws (8 th EST country report) <ul style="list-style-type: none"> · MNS 4585:2007 Ambient Air Quality Standard. · MNS 6342:2012 Air quality. Hazardous waste incineration emission, its permitted limit; · Noise standard: MNS 17.5.1.21:1992 Transport noise standard and its methodology of measurement.
Myanmar	Myanmar's report to the 8 th EST Forum indicates that the Environmental Conservation Department, established in 2012, was developing environmental quality guidelines based on International Finance Corporation guidelines. The ADB was providing technical assistance for this process.
Nepal	Air quality has been an issue in the Kathmandu Valley for many years, and during the 5 th EST Forum, Nepal reported that ambient air quality standards would require upgrading, and that air quality monitoring should be outsourced. An advance was reported at the 9 th EST with the Kathmandu Sustainable Urban Transport Project components, which included air quality to help inform project objectives. While it was not discussed in recent EST Forums whether or not Nepal had upgraded its air quality standards, in the 10 th EST Forum report, Nepal noted that it had established three monitoring stations.
the Philippines	The Philippines reported during the 7 th EST Forum that Air Quality Standards, DAO 2013-13 establishing guidelines for PM2.5, Noise standards, and ambient air monitoring and reporting standards were under development. Later EST Forum reports did not report on whether or not these were completed. However, a web search indicates that these standards have been rolled out with a timeline for increasing stringency. (http://denr.gov.ph/news-and-features/latest-news/1267-denr-sets-standards-for-fine-particle-pollutants.html). The standards are not for compliance purposes, but for evaluating the quality of outdoor air.
Pakistan	Pakistan reported that ambient air quality monitoring squad and stations have been established by city government during the 7 th EST Forum, and at the 8 th EST Forum reported that air pollution had been monitored at 26 different traffic junctions in Peshawar city, revealing that CO emissions exceeded WHO standards, and dust levels exceeded WHO standards by 10 times. Pakistan also reported that the Environmental Protection Agency has established a state-of-the-art Central Laboratory for Environmental Analysis (CLEAN) for analyzing environmental pollutants as well as toxicity. During the 10 th EST Forum, Pakistan reports that national air and water quality standards have already been promulgated, and smoke, CO and noise standards for vehicles are in place.

Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore has a comprehensive ambient air quality standards and monitoring regime in place including long-term targets for 2020 (8 th EST Forum report).
Sri Lanka	Sri Lanka reported on ambient PM10 levels compared to a national standard during the 6 th EST Forum. Sri Lanka reported that it is monitoring air quality standards in some locations, but lacks equipment and technical experience (9 th and 10 th EST Forum Reports)
Thailand	General air quality standards were established in Thailand in 1995, and updated in 2007, with ambient PM2.5 limits updated in 2010. (http://www.pcd.go.th/info_serv/reg_std_airsnd01.html) Noise standards were implemented in 1997, and noise standards for vehicles were implemented in 2003. (http://www.pcd.go.th/info_serv/en_reg_std_airsnd04.html)
Timor-Leste	No specific updates were made on air quality standards through the EST Forum process, but in its report to the 10 th EST Forum, Timor-Leste indicated that it would acquire technology for assessment and monitoring of air quality and noise.
Viet Nam	Viet Nam has made progress on developing air quality standards for its cities. While no report was made on such a plan during the 7 th EST forum, by the 9 th EST forum, Viet Nam reported that it had developed: <ul style="list-style-type: none"> - National Technical Regulation on Ambient Air Quality was adopted on 25 October 2013 - National Technical Regulation on Environment in Ha Noi city dated 5 September 2014 - Report on national air quality
Goal-16: Implement sustainable low-carbon transport initiatives to mitigate global climate change	
Afghanistan	Afghanistan became a party to the Kyoto Accord in 2013, and submitted its INC before the 7 th EST forum. Technical assistance had been sought to introduce projects under the CDM including the transport sector. In the 8 th EST Forum, it was reported that a DNA framework had been developed, and plans were in place to register at least two projects with the CDM Executive Board (although it is not clear if these were transport-related), and a project proposal to be financed under the Climate Fund would be developed. At the 10 th EST Forum, the country reported that it has implemented a climate change institutional framework under the government structure.
Bangladesh	Bangladesh has been assertive in developing climate change plans. The Bangladesh Climate Change Strategy and Action Plan 2009 is in place, as is the Bangladesh National Adaptation Program of Action. Diesel buses and minibuses are being converted to CNG (which could be made from municipal waste, if plans are able to go ahead), and electric auto rickshaws are being introduced in secondary cities. However, it is the introduction of MRT and BRT systems that should shine most brightly in Bangladesh's plans to reduce GHG emissions from the transport sector. Efficient public transportation by rail is significantly more efficient than many other forms of urban transport, and high-occupancy vehicles also make important contributions to emission reductions, especially if they are used at full capacity.
Bhutan	Bhutan has submitted its second National Communication and GHG inventory, where it was reported that the transport sector accounts for the highest energy-related GHG emission (44%) in Bhutan. A NAPA report has been submitted, a Low Carbon Emission Strategy Assessment and a Technology Needs Assessment was completed identifying transport as the second highest priority sector. An Action Plan for Clean Air and Sustainable Mobility is under proposal for Thimphu, but it is unclear as to whether it has been created or not. While it is hoped that electrification of transportation could result in up to 30% reduction in GHG emissions from the transport sector, support is still required in terms of technology, capacity and funding. Operators of electric vehicles in the country have noted that there are not enough charging stations to provide reliable transportation, and that the government may need to take initiative above the private sector for rolling out a more comprehensive network to achieve its goals.

Brunei Darussalam	Brunei Darussalam had not reported on any initiatives to combat global climate change through low carbon transport initiatives by the 7 th EST forum, but had submitted its INDC to the UNFCCC in advance of the Paris Climate Agreement, noting that the transport sector was one of the country's largest contributors of GHGs at 1.17 Mt CO _{2e} of the country's total 3.31 Mt CO _{2e} inventory in 2010. The country plans to reduce its carbon dioxide emissions during morning peak hour vehicle use by 40% by 2035 compared to BAU, while also implementing fuel economy policies and promoting electric or hybrid vehicles and implementing the other measures noted in its National Land Transport Plan.
Cambodia	Cambodia has not made substantive remarks on this goal in its reports to the EST Forums.
P.R. China	China is taking increasing actions in sustainable low-carbon development to mitigate the causes of global climate change and to fortify national energy security. Primarily, this is being accomplished through a strong fuel consumption standards for passenger and heavy-duty vehicles, but is also being accomplished through promotion of fuel switching, freight efficiency, mode shift in cities, transport demand management, and promotion of NMT by both public and private sectors. China has submitted plans to the UNFCCC to see an overall reduction of CO ₂ emissions per unit of GDP by 40-45% below 2005 levels by 2020, increase the share of non-fossil fuels in primary energy consumption to around 15% by 2020, and increase forest coverage and forest stock.
Indonesia	Indonesia has, since the 5 th EST Forum, made low carbon transportation a priority and has progressively developed policy such as the National EST Strategy and National Implementation Action Plan for GHG Gas Emission Reduction in Land Transportation which have been developed as a unilateral NAMA. Not only have detailed national action plans been developed, but Indonesia also has reported detailed data on energy consumption and emission sources for the country, allowing for more pointed reduction strategies.
India	India has taken a comprehensive approach to low carbon transport. During the 6 th EST Forum, India reported that transportation is included in its National Action Plan on Climate Change, and that a national policy was in place for public transport sensitive to climate change. In 2016, India was developing an inter-urban rail NAMA with the Asian Development Bank as a partner (http://www.transport-namadatabase.org/inter_urban_rail_nama_india/), was undertaking policy study in support of a fuel efficiency standard for India, and Low-Carbon Comprehensive Mobility Plans were being developed in Rajkot, Udaipur and Vishakhapatnam, along with a guidebook (http://transport-namas.org/projects/t-nama-countries-iki/india/).
Japan	Even at the point of the 5 th EST Forum, Japan reported that its CO ₂ emissions from the transport sector peaked in 2001, and by 2008 had approximately returned to the level of Japan in 1990, the base year determined in the Kyoto Protocol. In the 6 th EST Forum, Japan aimed to achieve a low-carbon society, and to utilize Sustainable City Planning to build a low-carbon transport system. During the 7 th 8 th and 9 th EST Forums, Japan reported that it had prepared its 5 th National Communication and a 2010 GHG Inventory, followed by its 6 th National Communication and 2012, 2013 GHG inventories.
Republic of Korea	One of the major focuses of Republic of Korea's green transport development program is to reduce GHG emissions. The country cited its continuous updating of comprehensive action plans for green transportation and improvement of in-depth policy alternatives since 2009; division of responsibility between central and local governments for fundraising and strengthening partnerships with the private sector; and expansion of "bus quasi-public operating systems" in local governments, encouragement of bike riding, and establishment of green transport cities. The country has undertaken successive GHG inventories. The Republic of Korea continues to support TOD development, comprehensive green transport systems (public transportation-pedestrian-bike), green freight, etc. (7 th EST Forum report).
Lao PDR	Lao PDR is currently in the development of an initial/preliminary concept for a NAMA on Master Plan on Comprehensive Urban Transport of Vientiane with JICA as a partner. The project is comprised of a road network development plan, public transport development plan, and a transport management plan. The project could avoid 191 kt of CO ₂ /year by 2025 with costs rated at USD 105 million until 2020. (http://www.transport-namadatabase.org/master-plan-on-comprehensive-urban-transport-of-vientiane-lao/). During the 9 th EST forum, Lao PDR reported that a low

	carbon transportation study had been undertaken in partnership with JICA from 2012-2013, evaluating the expected climate outcomes of introducing EV to Lao PDR.
Malaysia	According to Malaysia's report to the 10 th EST Forum, the Ministry of Energy, Green Technology and Water is finalizing the country's "National Green Technology Mater Plan" which includes the transport sector. Public transport, private transport and cleaner fuel are the primary means of reducing GHG emissions. The country will continue to promote public transport use, biodiesel (B10), CNG and electric vehicle roll-out. Malaysia is currently in the development of an initial/preliminary concept for a NAMA on energy efficient two-wheelers in Malaysia with GIZ as an international partner. Mitigation impact could be 6 Mt cumulatively between 2017 and 2027, but further details are not available. (http://www.transport-namadatabase.org/towards-energy-efficient-two-wheelers-nama-ee2w-in-malaysia/)
Maldives	In the Maldives National Strategy for Sustainable Development (2009), Goal 5 was to develop a Carbon Neutral Transport System. Specific objectives were to achieve a balanced shift towards environment friendly transport modes and to bring about a sustainable transport and mobility system, to establish an integrated public passenger transport service by 2010 (which was achieved by the time of the 6 th EST Forum), to reduce emissions from the light duty car fleet to 140g/km by 2015, and to increase the level of biofuels in transport fuel to 10% by 2015 and potentially 20% by 2020. Public transport has seen the most action, as it is rolled out on and between islands that are being serviced by bridges (report to the 9 th EST). As of October 2016, Maldives' Nationally-Determine Contribution aimed to have economy-wide emissions reduced by 10% below BAU by 2030 (unconditional) and up to 24% (conditional), but no specific targets or measures were mentioned for the transport sector ("Nationally-Determined Contributions Offer Opportunities for Ambitious Action on Transport and Climate Change". SLoCAT, October 2016.)
Mongolia	As reported in the 8 th EST: <ul style="list-style-type: none"> · The National Action Programme on Climate Change (NAPCC) was approved by Parliament in 2011 and intends to meet UNFCCC obligations and commitments, establishing national policy and strategy to tackle the adverse impacts of climate change and to mitigate GHG emissions. - Phase 1 (2011-2016), strengthen national mitigation and adaptation capacities, set up legal, structural and management systems and improve community and public participation. - Phase 2 (2017-2021), implement climate change adaptation measures and start concrete greenhouse gas mitigation actions. · Pilot research project "Strategies for Green Public Transport in Mongolia" as port of GGGI to study opportunities promote clean energy technologies for the public transport and enhanced inspection rules and regulation for vehicle emission control. <p>Low carbon partnership agreement was signed between Mongolian and Japanese Government in January 2013. - Challenges to the plans cited include lack of international and regional cooperation in low carbon transport initiatives, lack of financing and that Mongolia is a small market for implementing carbon finance projects in the transport sector.</p>
Myanmar	The Ministry of Energy initiated the Clean Fuel Program and made efforts to reduce CO ₂ emission by increasing natural gas utilization in industrial sector and power generation, as well as by converting gasoline, diesel & LPG vehicles to CNG vehicles. (7 th EST Forum report). According to the 8 th EST Forum report, the Myanmar Climate Change Alliance was established in 2013, a National Adaptation Program of Action was launched in 2012, and the Myanmar Energy Policy would soon be released.

Nepal	Nepal first reported on aspirations to control GHGs at the 6 th EST Forum, with no detail mentioned. The country reported that GHG emission from the transport sector were increasing during the 8 th EST Forum, and envisaged undertaking activities to reduce emissions including mode shift, conversion of public vehicles to renewable energies and utilizing mass transit, reduce congestion and improve engine utility, promote NMT, educate the public on the advantages of clean energy transport, and create awareness amongst local and national stakeholders. These were to be enshrined in Local Adaptation Plans for Action (LAPAs) in Nepal. By the 10 th EST Forum, Nepal's report noted that Nepali pollution standards had been defined and implemented, and that hydropower should be quickly developed to power electric vehicles and to otherwise develop eco-fuels to reduce GHGs from transport.
the Philippines	The Philippines have established a National EST Strategy that is consistent with the Bangkok 2020 Declaration and is rolling out many of the low-carbon initiatives indicated. Specifically, the report to the 9 th EST Forum saw Green airport upgrades, and reported on a full concept under development for a Jeepney+ NAMA to transform Road-based Public Transport in the Philippines, and the Philippines's INDC submitted to the UNFCCC indicates that transport will be an area of GHG emission reduction. Philippines is now taking leadership in developing a monitoring framework and harmonized approach for indicators on energy and GHG emissions in the transport sector for the ASEAN Land Transport Working Group, and is the project proponent of the Sustainable Mobility for Passengers and Goods in metropolitan regions of ASEAN Member states. The Philippines are preparing to complete and institutionalize a GHG Inventory Team in the transport sector.
Pakistan	Pakistan has been a major promoter of CNG vehicles and has focused on this effort as one of its major projects on climate change and national security. Pakistan reported to the 7 th EST Forum that it was also generating carbon credit/certified emission reduction projects. Pakistan's report to the 9 th EST Forum focused on the PAKSTRAN project, an initiative of UNDP-GEF and the Government of Pakistan to provide technical assistance to reduce the growth of energy consumption and GHG emissions. Fuel economy standards were also said to be explored during this reporting period. Rail-based mass transit, new transport system and renovation of railways were all cited as major climate-oriented projects.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	According to Singapore's report to the 8 th EST Forum, the country has implemented a Carbon Emissions-Based Vehicle Scheme, a fee-bate program to incentivize car owners to buy cars with lower CO ₂ emission ratings. Singapore has also considered transport emissions in its GHG inventory, part of the National Communication to the UNFCCC in 1994 and 2000.

Sri Lanka	<p>Sri Lanka is developing a NAMA called the Sustainable Transport within Colombo Metropolitan Area (8th EST Forum report). This plan, focused on GHG emission reduction relies on transport corridor development, public transport, multi-modal transport hubs, fuel switching, and other strategies. (http://www.transport-namadatabase.org/sustainable-transport-within-colombo-metropolitan-area-cma/). Sri Lanka's report to the 10th EST Forum summarizes its other efforts:</p> <ul style="list-style-type: none"> · National Action Plan for Harita (Green) Lanka Program · Colombo Low Carbon urban transport study was completed · INDC action plan was prepared with the coordination of Environment Ministry · National climate change policy was formulated · Climate change secretariat was established under Ministry of environment · SL Sustainable Energy Authority is functioning mainly to promote the use of sustainable and renewable energy sources · SL carbon Fund Ltd is in operation as a state-owned private company to facilitate clean development mechanism in Sri Lanka · NAMA were prepared under the direction of UNFCC
Thailand	<p>Beginning at the 7th EST Forum, Thailand took the important step of beginning to report on the contribution of the transport sector to national GHG emissions, key sources in the transport sector, and projected GHG emissions based on different scenarios, allowing for greater planning to occur. EST was mentioned specifically in Thailand's INDC, and that transport would be a major focus of China's climate change mitigation efforts. A road-to-rail modal shift for both freight and passenger transport, including extensions of MRT, construction of double-track railway and improvement of bus transit was cited in the INDC, and a vehicle tax scheme based on CO2 emission was approved, to become effective in 2016. The tax scheme replaces engine displacement as the framework for excise tax on vehicles, and especially focuses on the compatibility of vehicles with high ethanol blend fuels, as well as hybridization. (http://www.car.go.th/new/Excisecar). Thailand has registered a NAMA called "People-centered urban Mobility in Thailand", but details are not available. (http://www.transport-namadatabase.org/people-centred-urban-mobility-in-thailand-thailand-mobility-nama/). Thailand also has a "Master Plan for Sustainable Transport System and Mitigation of Climate Change Impacts" (10th EST Forum)</p>
Timor-Leste	<p>Timor-Leste indicated during the 9th EST Forum that it had undertaken a GHG inventory as part of its INC report, indicating that transport and energy emissions make up a large proportion of the country's emissions, although the absolute amount is relatively small. The country reported that renewable energy programmes had been launched, supporting biogas, solar energy, biodiesel, hydropower and wind energy. During the 10th EST Forum, Timor-Leste indicated that a small investment had been made in electric taxis to reduce GHG emission reduction.</p>
Viet Nam	<p>Viet Nam's reporting on GHG emissions from the transport sector has advanced. While in the 2010-2013 period, no mentions of GHG emissions were made in the EST reports, by the 8th EST forum, work was being undertaken on an inventory of GHG emissions from the transport sector, and a Working Group was established in 2016 under the Ministry of Transport to assess road, rail, air maritime and inland navigation emissions. With transport being responsible for about 20% of the country's total energy-based emissions, it is also a focus area of Viet Nam's Intended Nationally Determined Contributions (INDC). The INDC targets 8% emission reduction compared to BAU by 2030, and increase transport modal share from <10% at present to 25-30% by 2020. (ccap.org/assets/Vietnam-Bus-NAMA_Vietnam_FinanceSummit2016_20-5-2016.pdf). This is being supported by a Low Carbon Bus NAMA that will involve improved bus technology, improved operational efficiency, and system improvement. The NAMA, supported by UNDP, GIZ and KfW, is expected to have an 18.4 Mt CO2 mitigation potential by 2030. (http://www.transport-namadatabase.org/low-carbon-bus-nama-vietnam/).</p>
Goal-17: Adopt social equity as a transport planning and design criteria	

Afghanistan	Social equity is an important design criteria for transport planning. Improvement of the road network is an ongoing priority of the government, and during the 8 th EST forum reported that improvement continues to maximize the facilities for poor and low income populations, and was reported to be largely in place, although facing insufficient financial resources.
Bangladesh	The National Integrated Multimodal Transport Policy is the driving policy addressing issues of improved quality, safety and security for all, especially for women, the disabled and senior citizens. While funding is a major constraint, efforts have been made to reserve priority seats in public transport, elevators have been installed at some food bridges for easier crossing, and special bus services for women and students have been introduced. These special bus services have been introduced several times over the years and have had difficulty persisting over time. It is hoped that the BRT and MRT services, when they are introduced will have even better services for different groups of people in Dhaka.
Bhutan	Social equity is an important goal for Bhutan, but challenges exist because people living in remote areas either have to pay high fares for transportation or are altogether deprived of quality transport as bus operators are hesitant to travel to places with low population density. At the same time, a massive road network expansion program is in the works to provide better access to remote areas, and some highways are being doubled. Finally, reserved seats have been made available for people with special needs in urban buses.
Brunei Darussalam	Brunei Darussalam's primary approach to equitable transportation is to impose only minimal fees for public transport use, and providing facilities for disabled people in commercial areas. The National Land Transport Plan notes that the fuel subsidy weakens the viability of public transport, thus reducing this approach to equitable access to mobility.
Cambodia	The thematic area of gender perspectives has been considered by Cambodia in its progress on EST strategies at the 5 th and 6 th EST Forums, but there has been no further mention in subsequent reports.
P.R. China	During the 7 th EST forum, China reported that no action had been taken thus far on social equity as a planning design criteria in the development of transport initiatives. Yet many provisions are in place for disadvantaged groups. Most public transport has reserved seating for people with mobility challenges; new subway stations are typically equipped with elevators or stairway elevators for disabled riders, and sidewalks are often ramped at intersections to ensure that people who have challenges to step up can safely use sidewalks. Yet, enforcement and use of social equity in all planning and design is still sometimes lacking.
Indonesia	Nationally speaking, Indonesia's focus on equity reported during through the EST process has focused on facilities for disabled people in connection with non-motorized transport. However, little other information on equity in the transport sector has been reported. Locally, Surakarta City has aimed to provide special seats on public transit for disabled, pregnant women and the elderly, as well as assistance for boarding the bus. A national accessibility movement in 2015 was initiated to ensure access for elderly and disabled people, and Transjakarta provides transport for women and disabled people.
India	In its National Transport Development Policy, India's approach for 2030 includes social and environmental aspects of transportation, including safety, security, universal accessibility, and vehicle and fuel technology (6th EST Forum). During the 7th EST Forum, India reported that it was finalizing a toolkit for public transport accessibility, and by the 9th EST Forum, the country reported that it was becoming more aware of rural areas having poor access to reliable and efficient transport, indicating a need for change, and media reports in 2016 indicated that the central government including the Road Transport Ministry and Rural Development Ministry would cooperate to liberalise permitting to allow for motorcycle taxis, e-rickshaws and jugaads to serve as public transit vehicles in rural areas, and encourage entrepreneurship and improve connectivity through rural public transit, including through grants. Operators awarded grants could include self-help groups of women, Dalits and tribal grounds belonging to Below Poverty Line families (http://timesofindia.indiatimes.com/india/Ministries-come-together-to-boost-rural-transport/articleshow/52560759.cms). The Accessible India Campaign also promotes universal accessibility to transport, and in a new mandatory initiative, CCTV cameras, GPS tracking systems and emergency buttons are beginning to be installed on public buses to ensure safety of women and other vulnerable groups (http://www.voanews.com/a/india-rolls-out-buses-equipped-with-safety-features-for-women/3346766.html).

Japan	<p>While barrier-free transport facility objectives were set in 2000 for barrier free rail, bus and road transport, at the 6th EST Forum, Japan reported that new objectives to 2020 were set at a higher level to deal with the change of social conditions surrounding elderly and people with disabilities. Furthermore, Japan reported that it was promoting a new concept of building towns utilizing compact public transportation, giving consideration to the elderly, children, women and disabled persons in guidelines for reconstruction in response to the Great East Japan Earthquake. In its 8th EST Forum report, Japan reported modal shift towards low-carbon public transportation as a measure of social equity. The 9th and 10th EST Forum reports focused on advanced topics such as:</p> <ul style="list-style-type: none"> · Promotion of making public transport facilities, and buildings barrier-free. · Promotion of prioritized, integral barrier-free design in the region. · Promotion of “psychologically barrier free” society. · Preparation of personnel development programs, promotion of spreading public awareness of displaying baby carriage marks, etc. <p>As well as a revision of the basic act on promoting the facilitation of movement (10th EST Forum Report).</p>
Republic of Korea	<p>Accessibility and social equity have been core to transport system design in Republic of Korea. At least as early as the 5th EST forum, Republic of Korea focused on NMT transport, and its report to the 7th EST Forum focused on accessibility, universal design of city transport, enactment of the Act on Promotion of the Transportation Convenience of the Mobility Disabled, and training for public transit employees on the rights of disabled persons to use public transit. The country also introduced low-floor buses and call taxis for the disabled in Seoul. The Republic of Korea aimed to expand its supply of low-floor buses to 20% in rural areas and expand accessibility projects to consider the disabled in the designation of school zones, etc.</p>
Lao PDR	<p>Gender and transportation have been mentioned as projects under EST during the 5th and 6th EST forum reports by Lao PDR, and “Social equity and gender perspectives” were included as the EST Strategy in Lao PDR reported at the 7th EST Forum.</p>
Malaysia	<p>The NKRA projects are focused on purchasing new Universal Access buses, new LRT trains and KTM commuter trains with universal access features, PIDS, priority seats for persons with disabilities, elderly and pregnant women. Standards are under development for buses, rail stations and terminal in partnership with relevant community groups (7th EST Forum report). The program has largely been rolled out.</p>
Maldives	<p>While the Strategic Action Plan of Maldives (2008-2013) focuses on equitable distribution of wealth, specific measures for social equity have been specifically addressed in EST reports. Maldives has reported on the importance of walking and cycling on many islands, as well as ensuring strong public transit networks for residents.</p>
Mongolia	<p>According to the 8th EST and (22) there are two key laws that apply to disabled and special-needs people and transportation. MNS 5682: 2006 – Technical requirements for pedestrian and disabled sidewalks MNS 6056: 2009 - Planning roads for pedestrians and people with disabilities (1) For vulnerable groups of the population, current and future planning/construction will incorporate roads, entrances, exits and stairways for the disabled. (8th EST) However, anecdotal evidence suggests that the majority of public transportation and walkways are not accessible yet. (http://theubpost.mn/2016/05/09/people-with-disabilities-how-much-support-does-mongolia-really-give-them/)</p>
Myanmar	<p>During the Myanmar’s report to the 8th EST Forum, it reported that Rail Infrastructure including easy access for the disabled and elderly would be implemented. During the 9th EST Forum, Myanmar reported that the IWT under the Ministry of Transport was providing daily ferry services between Yangon and Dala for the welfare of people facing poverty.</p>

Nepal	<p>During the 5th EST Forum, Nepal reported that in fact its public transport system was not inclusive. While this goal was not mentioned in the intervening years, in its report to the 10th EST Forum, Nepal reported that three initiatives have been implemented according to the 13th and 14th plans:</p> <ol style="list-style-type: none"> 1. Provision of seat reservation and rental facilities to senior citizens and persons with disabilities 2. Provision of seat reservations and arrangements to women. 3. Initiation of low price fare for disabilities and elderly, through enabling concession in the fare and promote affordability of transport systems for low-income groups through initiation of concessions in fare. <p>Media reports indicate that 30 barrier-free buses with ramps at the rear door had been procured and finally on the road by September 2016. (https://gloalkhabar.com/featured/nepals-first-disabled-friendly-buses-to-hit-kathmandu-roads-soon/). It was also reported in the media that Sajha Yatayat public transport system would begin night service to serve night-shift workers and passengers, operating from 8:30pm – 11:30 pm. (http://kathmandupost.ekantipur.com/news/2017-02-15/sajha-yatayat-begins-night-bus-service-in-valley.html).</p>
the Philippines	<p>While social equity was not a focus of earlier EST Forum reports, beginning at the 9th EST Forum, the Philippines reported on public transport discounts for senior citizens and Persons with Disabilities (PWDs), as well as designated coaches for women, senior citizens, and PWDs. By the 10th EST Forum, the Philippines noted that Point to Point buses had been rolled out with low floors and build-in ramps for PWDs to facilitate more efficient transport.</p>
Pakistan	<p>Pakistan reported to the 8th EST Forum that exclusive transport for women in Punjab and KPK had been implemented as a project of societies from female university students. Female police were also expected to be inducted by 2014-15. Pakistan’s report to the 10th EST Forum noted that senior citizens and women would have special provisions in the newly developed mass transit systems, and that universalization of laws relating to inclusion of all segments of society would be carried out in the coming years.</p>
Russian Federation	<p>The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.</p>
Singapore	<p>According to Singapore’s report to the 8th EST Forum, all rail stations in Singapore offer barrier-free access to platforms through lifts and ramps. Pedestrian overhead bridges are being fitted with lifts, and by 2020, all public buses will be wheelchair-accessible. Seniors may be given more time to cross streets at signal lights (Green Man Plus scheme), and Silver Zones provide safer roadway environments for seniors. Singapore also provides fare concessions for the less privileged in addition to those with disabilities, children, students and seniors.</p>
Sri Lanka	<p>In Sri Lanka, seats are reserved on buses and trains for clergy, pregnant women and the disabled (6th EST Forum report). The 9th EST Forum report stated that walkways were being optimized for the visually impaired.</p>
Thailand	<p>Social equity has been an ongoing key component of Thailand’s 2011-2020 Transport and Traffic Development Master Plan. During the 7th EST Forum, it was reported that special policies were in place for persons with disabilities and the elderly, but few details were available. Research in 2013 suggested that in Bangkok, high-priced MTR tickets made high-speed and efficient transport inaccessible for economically disadvantaged people, and that the high prices for high-speed rail tickets may also be a challenge to those who cannot afford them when the lines are launched. (http://www.tccc.or.th/the-future-of-thai-transportation-planning/)</p>
Timor-Leste	<p>While Temor-Leste has subscribed to the 3 ZEROs initiatives, and made accessibility a goal of the Transport sector’s “Master Plan 2015”, in the report to the 10th EST Forum, the country reported that there is need to improve infrastructure for different genders, the elderly and disabled, including walking paths, gardens, access to workplaces, etc.</p>

Viet Nam	Fare reductions on public transport for the disabled and elderly were reported in the 7 th EST Forum, followed by the “Circular of Ministry of Transport number 39/2012/TT-BGTVT dated 24 September 2012 about policies for the disabilities to use different transport modes” which summarized government policies towards disabled people, including the right to use priority seating on buses, reduced fares, and to receive assistance where necessary. (http://www.moj.gov.vn/vbpq/lists/vn%20bn%20php%20lut/view_detail.aspx?itemid=28005)
Goal-18: Encourage innovative financing mechanisms for sustainable transport	
Afghanistan	Financing has been an ongoing challenge for Afghanistan in devising and implementing its sustainable transport objectives. One area of specific mention in 2010 was that the foreign community was not particularly interested in supporting EST development in the country; in 2012, it was noted that financial institutions were not supporting clean vehicle promotion policies. Other plans all faced financial pressure. Public-Private Partnership (PPP) mechanisms were being researched to support I/M facilities, but finance and expertise in PPP management was lacking; furthermore, World Bank support was sought for planning and development of an improved railway network in Afghanistan. By the 8 th EST forum, the country planned to initiate a feasibility study on carbon market finance for transportation projects.
Bangladesh	Innovative financing policies are developing in Bangladesh. The concept of PPP has progressed from draft version in 2014 to being enshrined in a PPP law that was passed in September 2015, with the support of the Public-Private Partnership office under the Prime Minister’s Office. Meanwhile, tolls are coming into place in bridges and some highways, parking fees and policies are coming into effect in urban areas, and a Board for the Road Fund has been formed to determine how to utilize revenue earned from road users, especially on road maintenance and enhancement.
Bhutan	Bhutan has great need for financing in its public infrastructure programs. Although several programs have been established with MDBs, private sector funding has been sought through PPP mechanisms to help pay for projects. However, due to the limited market size of Bhutan, the private finance markets have not taken a large interest in projects. Other income has generated through parking fees in urban areas, and tax on fuel already in place.
Brunei Darussalam	The National Land Transport Plan identifies Brunei Darussalam’s fuel subsidy as a major impediment to the development of public transportation and other environmentally sustainable approaches to transportation. The plan notes that there are strong economic, social and environmental arguments consistent with wider Government policy to ensure that consumers increasingly pay the full opportunity cost of their travel behaviour by removing the current fuel subsidy. This has proved politically controversial, however, especially in the context of economic slowdown in the country. The Plan recommends a full study be completed on the full costs to society of the fuel subsidy.
Cambodia	Cambodia has not reported on this goal to the EST Forums.
P.R. China	China has used subsidies for new energy vehicles, subsidies to public transport and subsidies to clean technologies and fuels as the primary means of encouraging change at the individual level towards sustainable transport. Parking fees and road tolls are also used to attempt to control transport demand and recoup costs. At the infrastructure level, low-cost financing is available. PPPs have been used increasingly in greenfield transportation projects, with over USD 25 billion invested through PPP mechanisms in such projects in 2014, mostly through build-operate-transfer agreements. By 2014, most private sector contribution was financed through short-term bank loans, often backed by government guarantees, but Beijing recently raised USD 1 billion for its subway system with three-year and five-year notes (Wong, 2014). China is currently undertaking a massive reform of its credit system to provide more confidence to institutional investors to participate more in PPP projects. (Wong, C.M. (2014, November 14). Beijing infrastructure prices \$1b bond. FinanceAsia. Retrieved from http://www.nanceasia.com/News/392094,beijing-infrastructure-prices-1b-bond.aspx)

Indonesia	In 2015, Presidential Regulation No. 39/2014 was revised to encourage more foreign investment in infrastructure development. In the transport sector, foreign ownership of seaport facilities increased from 49% to 95% during a PPP concession period (KPPIP, 2016). Indonesia is also forming its development bank mechanism, merging the PT Sarana Multi Infrastructure non-bank financial institution with the Indonesia Investment Center to enable better access to municipal financing (social infrastructure), and to grow infrastructure and priority areas by lowering risks to the private sector and make less feasible government projects more attractive. Additionally, the KPPIP has been developed to undertake pre-feasibility studies, determine priority projects, determine funding schemes, and monitor and debottleneck projects so that they can be financed and rolled out.
India	India reported during the 6 th EST Forum that it had established the Urban Transport Fund, meant to institutionalize fiscal and funding mechanisms to ensure financial sustainability of investments as part of its National Mission for Sustainable Habitat. India successfully created the Sustainable Urban Transport Programme, which was supported by the GEF, World Bank and UNDP to support EST development in India. During the 7 th EST Forum, India also reported that it would fund bus procurement under an economic stimulus package.
Japan	Japan's financing efforts are mostly in-place. The country reported not only using public funds for reconstruction (6 th EST Forum), but also private funds, PPP and PFI financing methods.
Republic of Korea	In its report to the 7 th EST Forum, Republic of Korea described that it collected transportation, energy and environmental taxes to secure investment funds for transportation infrastructure. It also described the collection of traffic induction fees for commercial logistics centers that increased traffic pressure in urban areas. During the 6 th EST Forum, the country also described loan guarantees to encourage nearshore ship construction. Other innovative financing strategies have not been introduced through the EST Forum process by Republic of Korea.
Lao PDR	In addition to cooperation with international funders, Lao PDR has also cooperated with MOE-Japan to develop a NAMA on transport in Lao PDR, and has sought out carbon credit funding in 2012 through the CDM.
Malaysia	Malaysia established its Green Technology Financing Scheme in the Malaysia budget 2010, and the budget was increased up to 2013. This fund includes efforts for the transport sector (7 th EST Forum report). A Sustainable Mobility Fund for Public Transport Infrastructure development was established and reported in the 9 th EST Forum report, and a PPP Unit coordinates PPP projects.
Maldives	In the 9 th EST Forum, Maldives reported that it had made use of import duty adjustments to encourage electric vehicle import and discourage internal combustion motorized vehicles. Furthermore, international finance had been utilized to construct the China-Maldives Friendship Bridge project.
Mongolia	The 6 th EST reports the following financing methods for transport programs: <ul style="list-style-type: none"> · Issue "Eco" stickers for all vehicles in Ulaanbaatar. Revenue from "Eco" stickers will be spent on traffic safety and prevention. · Exempt liquefied gas use vehicles from special taxes, but impose high taxes on diesel fuel use heavy load trucks. · Increase transportation-based taxation each year except for vehicles using liquefied, bioethanol and biodiesel fuel. The 10 th EST Forum report indicates that parking revenue will also be used to fund sustainable road and transport infrastructure.
Myanmar	No specific EST financing initiatives have been introduced by Myanmar through this process. During the 10 th EST Forum, Myanmar reported that it was working with the private sector to implement airport upgrades and other transportation investments, but the means of this investment was not clear.
Nepal	Since the 5 th EST Forum, Nepal has had dedicated funding for road maintenance, managed by the Roads Board Nepal. Nepal also reported GEF funding for upgrading public transport fleet at that time. A one door policy for maintenance funds was reported at the 6 th EST Forum, and PPP financing was hoped to be available for developing expressways for reasonable speed in 2012. Cable cars in Pokhara were also meant to be financed with a PPP model.

the Philippines	The Philippines have seen progressive action in finance for EST. The 5 th EST Forum reviewed the Special Vehicle Pollution Fund; the 7 th EST Forum report featured the Rod User's Tax Law – Special fund for air pollution control, which placed 7.5% of the revenue in the Special Vehicle Pollution Control Fund. At the 9 th EST Forum, the Philippines reported that PPP projects were being rolled out including for the North-South Railway Project and Integrated Transport System (South and Southwest Terminals Projects).
Pakistan	Pakistan has gradually implemented innovative financing mechanisms for EST in the country. PPP financing models were built up from an administrative perspective, and utilized to expand the vehicle inspection and maintenance system in the country (6 th EST Forum report); In the 7 th EST Forum, a Green Fund was meant to be established to incentivize clean fuels and vehicles, involving the State Bank of Pakistan for Green Financing of the Transport Industry. It was noted in the 8 th EST Forum report that nearly all of Pakistan's public transport system was owned and operated by the private sector in an intermediate form of PPP such as BOT. Underground parking in Karachi was also constructed on a BOT basis, and it was noted in the 9 th EST report that the yellow line of the Karachi Transportation Improvement Project would be built under a PPP model. The 10 th EST Forum report indicated that the National Highway Authority under the Ministry of Communications had developed regulations for the mechanism of financing in the form of BOT and BOO, and that both local and international investors were looking at the opportunity favorably.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore has not reported on this goal through the EST Forum process.
Sri Lanka	Sri Lanka has built up capacity to access carbon finance for implementing cleaner transportation, and encourages PPP projects to be implemented, although the private sector is slow to become involved (report to the 10 th EST Forum).
Thailand	Thailand has focused on several innovative financing mechanisms for sustainable transport and to achieve some measure of Transport Demand Management. One key transformation is the excise tax system for cars, which introduced in 2016, is based on CO2 emissions and ability to utilize renewable transport fuel than engine displacement. The national green freight program is introducing a very innovative ESCO financing scheme, which would allow truck fleets to gain finances for implementing efficiency technologies, and pay back loans or investment with the energy savings they have earned over time. High-speed train projects are being financed using international investment, and PPP mechanisms were reported during the 7 th EST Forum.
Timor-Leste	Although several projects were listed as funded by World Bank-GEF, ADB and other ODA loans in Timor-Leste's report to the 9 th EST Forum, construction of the Dili New Port was reported in the report to the 10 th EST Forum as having been done via a PPP investment model.
Viet Nam	Viet Nam has seen an increase in the number of Build-Operate-Transfer projects in the transport sector, and is now developing projects for accessing climate finance under its Clean Bus NAMA. However, the country still lacks experience in setting up financing mechanisms for sustainable transport infrastructure and operations.
Goal-19: Encourage widespread distribution of information and awareness on sustainable transport	
Afghanistan	Afghanistan has had a ancient public awareness campaign for EST, but has been called "ancient" for a number of years, with a promise to continue the public awareness campaign.
Bangladesh	Awareness of sustainable transportation has been cited as a major issue preventing the successful implementation of many of the other EST goals in Bangladesh. For many years, all transportation acts, policies and guidelines have been available on websites, and policies are prepared through a consultative process. Since 2014, it was reported that trainings, campaigns, radio and television would be used to promote more sustainable

	transportation. The next step is to ensure that academic materials are available for schools for youth to learn more about how to be safe and environmentally sustainable in transportation.
Bhutan	Bhutan has an ongoing media campaign to promote EST, but sufficient EST capacity is also required for the Transport, Environment and Roads sector.
Brunei Darussalam	As Brunei began the process of developing its new National Land Transport Plan, it became obvious that public awareness would be necessary to encourage the public to take low carbon travel modes, utilize eco-driving practices, support a shift to new fuels and technologies and overall participate in EST over the subsidized car culture currently in place. The Plan recommends green travel awareness campaigning giving as an example, eco-driving, developing a Green labelling program for consumers, initially for new vehicles, but extended to second-hand vehicles, and securing effective data collection and monitoring of the fleet.
Cambodia	Cambodia focused on road safety for its awareness program at the 5 th EST Forum, focusing on awareness and consciousness when driving, to use helmets, mirrors and sidewalks, and to respect road signs and signals. Increasing awareness of the impact of particulate matter on health was motivating Cambodia to undertake research on this topic. It was noted at the 8 th EST that a grant was awarded by the UN DESA to promote awareness and capacity on aspects of EST in Cambodia. This came in the form of training and workshops on drafting of the EST strategy. During the 9 th EST forum, Cambodia expanded this description into broader public awareness, particularly of road safety, via social marketing, awareness workshops, press conferences and journalist training.
P.R. China	Public awareness about sustainable transportation has been galvanized by recent bouts of air pollution, and made stronger through public campaigns such as “green mobility” advertisements in cities. High-tech infrastructure such as high-speed trains and well-designed BRT systems across the country attract people who wish to travel in a modern and convenient way without facing traffic, and the China Green Freight Initiative of the Ministry of Transport makes frequent campaigns to convince road freight carriers to incorporate new technologies and practices to reduce their fuel consumption and emissions.
Indonesia	In addition to its many programmes about building up low-carbon and environmentally sustainable transport infrastructure, Indonesia utilizes opportunities such as “No Car Day” and “Public Transport Day” to raise awareness about EST. Indonesia has also implemented Smart Driving training for public transport operators that focuses on energy saving, safety and emission reduction. During the 7 th EST Forum, it was reported that the country aims to train and socialize 50,000 people per year in smart driving. Indonesia has also rolled out car labelling including fuel consumption and CO ₂ emissions per 100km (7 th EST Forum report).
India	According to its report to the 7 th EST Forum, India was providing central assistance to local governments at the rate of up to 80% for preparation of awareness campaigns. The country was funding the training of trainers and practitioners in EST practices, supporting the Annual Conference and Exhibition on Urban Mobility India, developing the Institute of Urban Transport to support ministry initiatives, and supporting 4 Centres of Excellence in Urban Transport. India also reported that it developed a national cycling policy along with public bicycle project toolkits, product design and specifications for public bike schemes, and financing. Finally, India reported that it holds annual awards for excellence in urban transport.
Japan	Japan’s programs for awareness of EST have largely been in place for the period of the Bangkok 2020 Declaration. Namely, these programmes have included (1) 10 Eco-Driving Tips, promoting eco-driving every November, (2) Promotion of “Smart Move” – 5 approaches encouraging use of public transportation, using bicycles and footpaths, promotion of car sharing, bike sharing and other means of transport, innovation in long-distance travel, and recommendations of eco-driving and driving eco-friendly cars. (3) Human development – training human resources for leading local EST measures and awards of excellence; and (4) Database development for previous EST measures and outcomes for sharing with interested local communities.

Republic of Korea	Republic of Korea has many programs in place to encourage more sustainable transportation awareness. It actively promotes walking and cycling with campaigns, urban design and public transport. Urban planning channels people to use NMT practices. Transit information has been made available online and at transit facilities, and as it reported at the 9 th EST Forum, it aims to make drivers uncomfortable while making passengers more comfortable.
Lao PDR	Public awareness was mentioned as part of Lao PDR's strategy and action plan for EST during the 5 th , 6 th and 7 th EST Forums.
Malaysia	Malaysia has implemented many awareness campaigns on EST. At the 7 th EST Forum, it reported that it held an International Conference on Sustainable Mobility (2010), an Electric Vehicle Roundtable, and established a Promotion and Public Awareness Working Committee reporting to the Green Technology and Climate Change Council chaired by the Prime Minister. The country aimed to undertake continuous awareness raising. Numerous government and non-governmental organizations undertake this work. In its report to the 10 th EST, Malaysia noted that it established the Malaysian Green Technology Corporation to plan, promote and implement green initiatives.
Maldives	Maldives makes use of public bus and ferry networks and campaigns such as "no car days" to promote sustainable transportation. Pilot projects on various clean technologies are being undertaken, and boat shows are organized every one or two years through collaborative efforts of the government and private sector, where innovative technologies may be demonstrated (7 th EST Forum Report).
Mongolia	Most of the initiatives and master plans (e.g. NAPCC) include provisions for distribution of information and educating the public, and EST Forum reports state that the government encourages their distribution.
Myanmar	Myanmar reported during the 5 th EST Forum that it had held exhibitions, competitions and lectures on road safety, as well as lectures along city bus lines, driver training schools and high schools. More recently there have been public campaigns to encourage seat belt usage. (http://www.myanmarinternationaltv.com/news/road-safety-awareness-campaign-wearing-seatbelt)
Nepal	Nepal has generally not addressed this goal since the Bangkok 2020 Declaration, but in the 10 th EST Forum, it reported that environmental awareness was being addressed in school curriculum, and that media was encouraged to report on EST information.
the Philippines	During the 6 th EST Forum, the Philippines introduced the concept of Green Cities to promote EST. The report to the 7 th EST Forum focused on formulation of the National EST Strategy, and the 8 th EST Forum report focused on road transport patrol. By the 9 th EST Forum, the Philippines noted that it was releasing messaging on EST projects for public communications, and finally at the 10 th EST Forum, a major public information campaign was launched on the website of the Department of Transport, television, radio and newspaper to demonstrate the state of the country's transportation system and effects of traffic and pollution. Furthermore, the Build Build Build (BBB) Portal was launched to provide real-time monitoring and provide the public with information on the priority infrastructure projects of the current administration.
Pakistan	Pakistan launched a major public awareness campaign called PAKSTRAN which in addition to having one component about EST incorporated, is itself a website with information about many different initiatives of the government in the area of transport (8 th EST Forum report). Additionally, Karachi reported that it had improved driver training programs, implemented an awareness program on road safety for school children and the general public, and had inducted traffic wardens to supplement and compliment traffic police. IUCN-Pakistan had undertaken a public awareness and institutional capacity on EST concepts as reported in the 9 th EST Forum, and awareness campaigns on all upcoming mass transit projects was anticipated in the report to the 10 th EST Forum.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.

Singapore	Singapore published its Land Transport Master Plan in 2013 with the key message of making public transport the choice mode of travel through better service, more connections and a more livable and inclusive community. The Sustainable Singapore Blueprint was published in 2009, including key message for a progressive shift of emphasis from private motorized vehicles towards active mobility and greener vehicles. (8 th EST Forum report). Singapore has also implemented mandatory fuel consumption labeling on new cars (5 th EST forum report).
Sri Lanka	Sri Lanka mentioned that Matale holds a “Vehicle Free Day” in its report to the 5 th EST Forum, and holds regular awareness raising lectures and events along with published materials to promote EST (6 th EST Forum report). On-road seatbelt wearing awareness signage has been used (7 th EST Forum report), and the road safety committees cooperate with police services to raise awareness of road safety overall (9 th EST Forum report). As of the 10 th EST Forum, Sri Lanka reports that it is building up an IT platform to distribute information about EST.
Thailand	Strategy 6 of Thailand’s EST Master Plan (2013-2018) is to promote public awareness of the environment. This has been done in Thailand through promotion of EST infrastructure such as public transport and shared bike systems/bike lanes, training of passenger and freight vehicle drivers in eco-driving practices, green freight and vehicle labelling, pilot projects and other practices.
Timor-Leste	Timor-Leste’s report to the 10 th EST Forum notes that awareness raising to the public on friendly and safe transportation are underway, and children and youth are being educated on traffic systems and safe transport.
Viet Nam	With motorcycle and car ownership seen as a sign of success, or simply necessary, for many people in Viet Nam, awareness about environmentally sustainable transportation is still low. The Ministry of Transport released the “Decision of Ministry of Transport number 4088/QD-BGTVT dated 12 December 2013 about the action plan for sustainable development for the period of 2013 – 2020” and the country is also focused on the green growth for period of 2016 – 2020; responsible climate change for 2016 – 2020 in the hopes of raising more awareness. Meanwhile, green freight and eco-driving has been improved through workshops on eco-driving in the country.
Goal-20: Develop dedicated and funded institutions that address sustainable transport-land use policies	
Afghanistan	According to Afghanistan’s report to the 8 th Regional EST Forum, institutions were largely in place to address sustainable transport-land use policies. The legal system on ESIA was in place and was being upgraded, capacity enhancement activities on strengthening ESIA procedures were being initiated, and plans were in place to continue these enhancements – yet the country lacked professional capacity in the field of ESIA planning, implementation and monitoring.
Bangladesh	Bangladesh is building up institutions for land use policies and transportation. From an education standpoint, 17 motor driving training institutes are in place, and several training institutes for land-use have been set up under the Ministry of Land. In its 10 th EST Forum, it was reported that the Dhaka Transport Coordination Authority has been created to act as a unitary body responsible for land use and transport planning, and several training institutes have been established for land use and transport planning.
Bhutan	As of the report of the 9 th EST forum, Bhutan did not have one office or officials dedicated to EST.
Brunei Darussalam	The National Land Transport Plan and 2015 Land Transport White Paper recognize that current institutions are not adequate for implementing integrated transportation planning, and propose to create an executive agency called Transport for Brunei that coordinates the detailed planning, construction, operation, maintenance and monitoring of all land transport infrastructure and services in Brunei. Meanwhile, the Centre for National Transport Statistics would lead the framework and depository for transport data, surveys and statistics for undertaking research and monitoring the implementation of transport policy and measures. Finally, a Green Vehicle Technology Office is recommended, while establishing closer joint work with the private sector.
Cambodia	Cambodia has not reported on having a specific agency responsible for EST.

P.R. China	As part of China's efforts to reduce GHG emissions and fuel consumption it has instituted energy saving and emission reduction programs in many ministries of the national government. This has had the effect in some cases of coordinating transport-land use EST policies, but lack of communication between government departments and agencies sometimes leads to conflicting standards, practices or outcomes of financial incentive plans.
Indonesia	Indonesia has established interlinking policies and laws that help to implement EST. Presidential Regulations form the legal basis for national policy, and the country aims to improve local implementation through capacity building, improved funding mechanisms and demonstration projects. The MoEF has executed a Blue Sky Program since 1992 that aims to control air pollution, including from mobile sources. The KPPIP has been established to facilitate PPP finance and reduce bottlenecks in government projects.
India	India reported during the 8th EST Forum that urban transport is not listed in the Constitution of India, meaning that responsibilities for transport are distributed by mode. The Ministry of Urban Development has issued a National Urban Transport Policy (2006) with the aim of bringing about comprehensive improvements in urban transport services and infrastructure, and the GEF, UNDP and World Bank-supported Sustainable Urban Transport Project has been aimed at achieving a paradigm shift in India's urban transport systems in favour of sustainable development (http://pib.nic.in/newsite/PrintRelease.aspx?relid=113626) including strengthening and building capacity of national, state and city governments in planning, financing, implementing, operating and managing low carbon transport systems, and assisting states and cities to prepare and implement certain green transport projects.
Japan	Japan's governance for EST has been in place even before the Bangkok 2020 Declaration. The National Institute for Land and Infrastructure Management, MLIT, has conducted funded research on (1) Reduction of CO ₂ emissions from Road Transportation, (2) Research of Implementation and Promotion of Life-Cycle Assessment of Social Capital.
Republic of Korea	<p>According to the Republic of Korea's report to the 5th EST Forum, the Presidential Committee on Green Growth is an inter-ministerial coordinator tasked with implementing the Framework Act for Low-Carbon Green Growth. Meanwhile, The Ministry of Land, Infrastructure and Transport is responsible, based on a Special Act on Metropolitan Regional Transport Management, for long-term basic plans on vision and strategy and 5-year mid-term implementation plans. It provides grants related to Metropolitan Regional Transport Projects such as Roads (50%), Rail (70%), Transfer centers (30%) and BRTs (50%). It also manages laws and regulations related to urban transport, TDM, Public transport cards, and parking lot and space availability. Regional governments (Seoul and Incheon) plan and implement transport projects within their jurisdictions, Gyeonggi-do has 27 cities and 5 counties which share responsibilities of transport projects and management, and the Metropolitan Transport Association deals with cross-jurisdictional transport issues. (Reported at the 9th EST Forum).</p> <p>Laws enacted supporting EST include:</p> <ul style="list-style-type: none"> · Act on the Support and Promotion of Utilization of Mass Transit System · Promotion of the Use of Bicycles Act · Act on Promotion of the Pedestrian's Safety and Convenience · Act on Promotion of the Transportation Convenient of the Mobility Disadvantaged · Urban Traffic Improvement Promotion Act · National Transport Efficiency Act · Act on the Development and Utilization of Railway Station Areas.
Lao PDR	According to the Lao PDR report to the 6 th EST Forum, the Division of Transport Techniques and Environment (DTE) was established in 2008 to support EST. The National Strategy and Action Plan on Environment and Transport, Lao PDR was screened in May 2011 by the Deputy Prime Minister and was awaiting official endorsement. The draft EST strategy was officially submitted to the Lao PDR government, which would consider the proposal during the cabinet meeting in 2015 (9 th EST Forum report).

Malaysia	Malaysia has reported numerous agencies addressing EST in the country, and various laws and regulations guiding its roll-out. As of the 7 th EST Forum, Malaysia noted that Environmental Impact Assessments would be a compulsory requirement for major transport projects.
Maldives	While strategies and plans have been put in place at the national level, it is not clear if environmentally sustainable transportation has its own dedicated institution besides the Ministry of Transport and Communication, Ministry of Environment and Energy or Ministry of Housing and Infrastructure.
Mongolia	The 8 th EST reports that the MOTI (Mongolian Transport Institute) will be established as a government research institute to promote sustainable and integrated transportation system – legislation process is scheduled by the end of 2013. The 10 th EST Forum Report indicated that EIA had been completed for major transport projects
Myanmar	According to the 9 th EST Forum report, a number of ministries are responsible for EST development, although it was the Ministry of Transport that took the coordination role for the MYT_Plan that includes an environmental framework for transportation.
Nepal	Throughout the EST Process since the Bangkok 2020 Declaration, Nepal has not addressed this goal. It should be noted that EST inputs have been prepared by the Ministry of Physical Infrastructure and Transport (8 th EST Forum), and jointly by the Ministry of Urban Development and Ministry of Population and Environment for the 10 th EST Forum, indicating some leadership in this area. However, the Report to the 10 th EST Forum indicates that this goal has not yet been addressed.
the Philippines	The Philippines have been strong on developing institutions for EST support. At the 5 th EST Forum, the country reported that it had a Special Vehicle Pollution Control Fund, it had established a Center for Research on EST (CREST), as well as the Presidential Administrative Order No. 254, on the Formulation of a National Environmentally Sustainable Transport Strategy. By the 9 th EST Forum, the Philippines had established its Environmentally Sustainable Transportation Initiatives Unit (ESTIU) aiming to complete guidelines and processes for project approval and fund access. Finally, in its report to the 10 th EST Forum, Philippines noted that the ESTIU had begun to receive funding under the General Appropriations Act of the Department of Transport, improving its organizational sustainability.
Pakistan	Pakistan has a number of agencies and ministries responsible for EST implementation. The Lahore Transport Company and the Pakstran Company were noted as important ones in Pakistan's report to the 8 th EST Forum, with the JICA-funded Karachi Circular Railways initiative also noted. Pakistan was at that time undertaking EIA on the Pak-China Economic Corridor as well as the Karachi to Lahore Motorway Project. The report to the 10 th EST Forum also noted that a road safety secretariat had been established by the Ministry of Communications.
Russian Federation	The Russian Federation has not submitted reports to the EST Forum process, so there is no data to report.
Singapore	Singapore's Land Transport Authority has been responsible for reporting on EST achievements, but there are other ministries and authorities involved. Singapore highlighted EIAs that have been conducted for major transport infrastructure projects as a type of governance system for EST in its reports to the 8 th and 10 th EST Forums.
Sri Lanka	There are several ministries and agencies responsible for EST in Sri Lanka. The report to the 10 th EST Forum indicates that steps are being taken to implement EIA for transportation projects where applicable

Thailand	<p>During the 6th EST forum, Thailand reported that it had launched a Sustainable Transport Committee Chaired by the permanent secretary of the Ministry of Transport. Furthermore, it had launched a National Transport Master Plan (2011-2015) and an Environmentally Sustainable Transport Master Plan (2013-2018), focusing on 6 major strategies:</p> <ul style="list-style-type: none"> · Upgrading capability of agencies and personnel for the development of an EST system · Establish appropriate plans and mechanisms for interfacing and monitoring transport and transport work plans/measures/projects and move them forward to implementation · Establish comprehensive and interconnected transport infrastructure · Efficient transport management for sustainability and GHG reduction · Transport R&D and adoption of environment-friendly innovations and technologies · Promote public awareness of the environment.
Timor-Leste	<p>According to Timor-Leste's report to the 7th EST Forum, the Ministry of Transports and Communications is responsible for EST policies and implementation. It produced a "Master Plan-2015" that was reported at the 9th EST Forum. During the 10th EST Forum, it has been reported that the government and National University have initiated cooperation on climate change and biodiversity inventories, and it reported that public administration was being decentralized to municipalities in order to reduce public servant travel.</p>
Viet Nam	<p>As of the 9th EST forum, there were no dedicated and funded institutions for addressing sustainable transport-land use policies and implementation, although a Law on Environmental Protection had been passed in 2014 that should strengthen efforts.</p>

Annex 2: Country Progress Point Allocations

Country	Self-reported sum of points	Progress-adjusted sum of points
Afghanistan	37	37
Bangladesh	45	47
Bhutan	39	40
Brunei Darussalam	42	42
Indonesia	38	40
Japan	62	65
Malaysia	56	58
Mongolia	40	42
Myanmar	39	40
Nepal	37	39
Pakistan	43	45
Singapore	58	60
Sri Lanka	39	41
Thailand	44	46
the Philippines	41	45
Timor-Leste	40	40
Viet Nam	41	44