

Eighth Regional EST Forum in Asia

(Integrated Conference of BAQ2014 and Intergovernmental Eighth Regional EST Forum in Asia)

“Next Generation Solutions for Clean Air and Sustainable Transport -Towards a Livable Society in Asia”
19-21 November 2014, Colombo, Sri Lanka

Country Report

(Draft)

<Singapore>

This country report was prepared by Singapore as an input for the Eighth Regional EST Forum in Asia. The views expressed herein do not necessarily reflect the views of the United Nations.

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Country EST Report

a) Name of the Country: Republic of Singapore
b) Name, Designation and Line Ministry/Agency Respondent:
**Rohaya Saharom, Deputy Director, Pollution Control Department,
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**c) List other Line Ministries/Agencies contributing to preparation of
the Country Report: Land Transport Authority**

With the objective of demonstrating the renewed interest and commitment of Asian countries towards realizing a promising decade (2010-2020) of sustainable actions and measures for achieving safe, secure, affordable, efficient, and people and environment-friendly transport in rapidly urbanizing Asia, the participating countries of the Fifth Regional EST Forum in Asia discussed and agreed on a goodwill and voluntary declaration - **“Bangkok Declaration for 2020 – Sustainable Transport Goals for 2010-2020.”** Subsequently, at the Seventh Regional EST Forum held in Bali in 2013, the participating countries adopted the **“Bali Declaration on Vision Three Zeros- Zero Congestion, Zero Pollution and Zero Accidents towards Next Generation Transport Systems in Asia”** reinforcing the implementation of Bangkok 2020 Declaration (2010-2020) with emphasis to zero tolerance towards congestion, pollution and road accidents in the transport policy, planning and development. Bali Vision Three Zeros calls for a paradigm shift in thinking on the role of motorization and mobility in realizing sustainable development in Asia.

The objective of the Country Reporting is to share among international community the voluntary progress/achievements/initiatives include various challenges faced by countries in implementing each of the underlined goals of the Bangkok 2020 Declaration to realize the Bali Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia. This would help development agencies, donors, development banks in assessing the sustainable transport needs and challenges to better devise their existing as well as future capacity building programs and operations in sustainable transport areas.

It would be also very useful to share any major initiatives, including mega transport projects, transport master plans, special transport corridor development, expansion of railways and rail route developments, etc. which attach due importance to *Bali Vision Three Zeros – Zero Congestion, Zero Pollution, and Zero Accidents*.

Timeline for submission by 1 October 2014

by email to: est@uncred.or.jp

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration		
I. Strategies to <u>Avoid</u> unnecessary travel and reduce trip distances				
“Avoid” Strategy	1	Formally integrate land-use and transport planning processes and related institutional arrangements at the local, regional, and national levels	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input checked="" type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Balancing various land use needs amidst land constraints and growing population and economic activities.
	Examples of pilot projects and/or policies developed or under development – include URLs where relevant Singapore’s Master Plan and the Concept Plan provide a comprehensive and integrated planning framework. They help balance the various many land use needs, such as housing, industry, recreation, transport, and community facilities within Singapore’s land constraints, and take into account all major land needs in collaboration with relevant government agencies in Singapore. The latest, Master Plan 2014, was released recently. http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan&p2=Introduction-to-Master-Plan			
	Important actions you will carry out in 2014~2015 On-going work to implement Master Plan 2014.			

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Avoid” Strategy	<p>2 Achieve mixed-use development and medium-to-high densities along key corridors within cities through appropriate land - use policies and provide people - oriented local access,</p> <p>and actively promote transit-oriented development (TOD) when introducing new public transport infrastructure</p>	<p>Any action had been taken so far?</p> <p><input type="checkbox"/> Not yet</p> <p><input type="checkbox"/> Some (design – piloting)</p> <p><input type="checkbox"/> Largely in Place</p> <p><input checked="" type="checkbox"/> Fully Completed</p> <p>(Please Check the box)</p>	<p>Challenges faced in implementation:</p> <p>NA</p>
		<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • The strategy is captured in the Master Plan (see Goal 1). • Specific transit-oriented developments include Integrated Transport Hubs, that are interchanges or rail stations that are designed to connect between public transport modes, are co-located with residential and commercial developments, and contain amenities such as food and shopping. There are already six in operation and this number will double over the next decade. <p>http://www.lta.gov.sg/content/ltaweb/en/public-transport/system-design/integrated-transport-hubs.html</p>	
		<p>Important actions you will carry out in 2014~2015</p> <p>Another three ITHs are targeted to be completed by end 2015.</p>	

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Avoid” Strategy	3 Institute policies, programmes, and projects supporting Information and Communications Technologies (ICT), such as internet access, teleconferencing, and telecommuting, as a means to reduce unneeded travel	Any action had been taken so far? √ Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant NA	
		Important actions you will carry out in 2014~2015 NA	
II. Strategies to <u>Shift</u> towards more sustainable modes			
“Shift” Strategy	4 Require Non-Motorized Transport (NMT) components in transport master plans in all major cities and prioritize transport infrastructure investments to NMT, including wide-scale improvements to	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) √ Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
	pedestrian and bicycle facilities, development of facilities for intermodal connectivity, and adoption of complete street design standards, wherever feasible	<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • <u>National Cycling Plan</u>. Plans to add off-road cycling paths to all public housing towns by 2030, together with expansion of bicycle parking facilities at rail stations and other public places, as well as promotion of cyclist education. A network of 700 km is to be developed by 2030. Plans are also in the works to develop 6 inter-town cycling routes to the CBD. A town (Ang Mo Kio) has been chosen as a ‘model’ cycling and walking town, to be retrofitted for enhanced NMT user experience. National Cycling Plan initiatives are described in: http://www.lta.gov.sg/content/ltaweb/en/green-transport/integrating-cycling-with-public-transport.html • <u>Walk2Ride</u>. Sheltered walkways will be built to trip-generating developments (residential, commercial, healthcare facilities etc) within a 400m radius of Mass Rapid Transit (MRT) stations and within 200m of bus interchanges and light rail stations. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=7c3a9b8f-c421-45fd-9b35-400b139c2cff <p>Description of above two programmes are in the Land Transport Master Plan 2013: http://www.lta.gov.sg/content/ltaweb/en/about-lta/what-we-do/ltmp2013.html</p>
		<p>Important actions you will carry out in 2014~2015</p> <p>On-going work on above initiatives.</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Shift” Strategy	5 Improve public transport services including high quality and affordable services on dedicated infrastructure along major arterial corridors in the city and connect with feeder services into residential communities	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
		<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • <u>Rail Development Plan</u>. Two new MRT lines and extensions of three existing lines planned to complete by 2030, bringing the length of our rail network to 360km and achieving a rail density comparable to London today. • <u>Addition of trains, signaling upgrades and re-sleepering</u>. Improvements to the two oldest lines (North-South and East-West Lines) through addition of trains, upgrades to the signaling system, as well as re-sleepering of tracks. With additional trains, this shortens headway and increases rail capacity. • <u>Bus Service Enhancement Programme</u>. Government is partnering Bus Service Operators (BSOs) to increase public bus fleet capacity substantially over the next five years, and to shorten headway during peak periods. In addition, two new categories of routes have been added: Peak Period Short Services, which ply between transport hubs and residential developments at peak periods, and City Direct Services, which are express bus routes from selected towns into the CBD. <p>Description of above programmes are in the Land Transport Master Plan 2013: http://www.lta.gov.sg/content/ltaweb/en/about-lta/what-we-do/ltmp2013.html</p> <ul style="list-style-type: none"> • <u>Transition to Government Contracting Model (GCM) for Bus Services</u>. With the transition starting in 2014, the model will enable public bus services more responsive to changes in ridership and commuter needs, as well as inject more competition into the industry, thereby raising service levels for commuters over time. <p style="text-align: right;">7/28</p> <p>http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=28fca09a-bed6-48f4-99d4-18eeb8c496bd</p>

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		<p>Important actions you will carry out in 2014~2015</p> <p>On-going work on described programmes.</p> <p>For the Government Contracting Model (GCM), three packages of bus services will be progressively tendered out, starting from the second half of 2014, for implementation from the second half of 2016</p> <p>http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=c645d50b-36ca-4cff-a6f7-38f5bcb5fa49</p>	
“Shift” Strategy	<p>6 Reduce the urban transport mode share of private motorized vehicles through Transportation Demand Management (TDM) measures, including pricing measures that integrate congestion, safety, and pollution costs, aimed at gradually</p>	<p>Any action had been taken so far?</p> <p><input type="checkbox"/> Not yet</p> <p><input type="checkbox"/> Some (design – piloting)</p> <p><input checked="" type="checkbox"/> Largely in Place</p> <p><input type="checkbox"/> Fully Completed</p> <p>(Please Check the box)</p>	<p>Challenges faced in implementation:</p> <p>NA</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
	reducing price distortions that directly or indirectly encourage driving, motorization, and sprawl	<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • <u>Vehicle Quota System (VQS)</u>. Singapore has been implementing the VQS since 1990, which caps the growth of vehicle population. Under VQS, each vehicle requires a Certificate of Entitlement, a limited number of which is allocated to vehicle buyers through regular market bidding. http://www.lta.gov.sg/content/ltaweb/en/roads-and-motoring/owning-a-vehicle/vehicle-quota-system/overview-of-vehicle-quota-system.html • <u>Electronic Road Pricing (ERP)</u>. Electronic Road Pricing (ERP) has been in place since 1998 to charge motorists for the use of congested roads. Rates vary based on deviation from optimal speeds on priced roads, and are charged via short-range radio communication from the gantry to the in-vehicle unit (IU) which holds a stored value card.

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		Important actions you will carry out in 2014~2015 <ul style="list-style-type: none"> • Reduction in vehicle growth rate under the VQS to 0.25% (2015). The vehicle growth rate has been adjusted downwards from 0.5% to 0.25% from February 2015. • A tender to develop the next generation ERP system based on Global Navigation Satellite System (GNSS) technology was called in Oct 2014. The new system is expected to be implemented around 2020. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=a4d12754-2022-4b63-a878-eac0127a17ac	
“Shift” Strategy	7 Achieve significant shifts to more sustainable modes of inter-city passenger and goods transport , including priority for high-quality long distance bus, inland water transport, high-speed rail over car and air passenger travel, and priority for	Any action had been taken so far? <input type="checkbox"/> Not yet <input checked="" type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
	train and barge freight over truck and air freight by building supporting infrastructure such as dry inland ports	<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <p>Singapore and Malaysia have committed to building a high-speed rail (HSR) link from Singapore to Kuala Lumpur by 2020. In addition, there are plans to develop a Rapid Transit System (RTS) link between the northernmost train station of the upcoming Thomson-East Coast Line (TEL) and Johor Bahru in Malaysia. Bilateral discussions and feasibility studies are ongoing.</p> <p>HSR: http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=d02bb6fc-7794-4c5b-9839-6b5fabea8fe1</p> <p>RTS Link: http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=0pt1z213cvn5f2h2t1ti39b4tjkckorbk76uh7r32nykq33d1n</p> <p>Important actions you will carry out in 2014~2015</p> <p>On-going work on feasibility studies.</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration		
III. Strategies to <u>Improve</u> transport practices and technologies				
“Improve” Strategy	8	Diversify towards more sustainable transport fuels and technologies , including greater market penetration of options such as vehicles operating on electricity generated from renewable sources, hybrid technology, and natural gas	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Lack of public awareness, limited technology knowledge by the public and higher vehicle costs, as compared to vehicles using conventional fuels and technologies.

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		<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • Incentive schemes are in place to encourage or assess the feasibility of adoption of vehicles with more sustainable technology, such as: • <u>Early Turnover Scheme</u>. A scheme to encourage owners of diesel commercial vehicles to replace their old, pollutive vehicles with newer, cleaner models http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=a2e65429-fed7-4290-8c8c-5fea0a4a101d • <u>Electric Vehicle (EV) Task Force (EVTF)</u>. An inter-agency taskforce was set up to test different commercially available EVs and charging technologies in Singapore's environment and road conditions, and to assess the feasibility and conditions for mass adoption of EVs. http://www.ema.gov.sg/Electric_Vehicles_Test_Bed.aspx • <u>Singapore Autonomous Vehicle Initiative (SAVI)</u>. A programme was set up to provide a technology platform to test-bed autonomous vehicle (AV) technology, applications and solutions, and to assess the potential opportunities and challenges that AV has for Singapore. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=29525082-5265-4139-bc3b-0241a4639d46

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
		Important actions you will carry out in 2014~2015 Review of the various monetary incentive schemes to enhance public ownership, such that they remain relevant.	
“Improve” Strategy	9 Set progressive, appropriate, and affordable standards for fuel quality, fuel efficiency, and tailpipe emissions for all vehicle types, including new and in-use vehicles	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Resistance from the industry, in view of potential cost impact and lack of available technology for the compliance.
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant Existing legislations for fuel quality and tailpipe emission standards for in-use and new on-road vehicles are generally in place.	
		Important actions you will carry out in 2014~2015 Review of the existing legislations to keep up with the developments internationally and regionally.	

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Improve” Strategy	10 Establish effective vehicle testing and compliance regimes, including formal vehicle registration systems and appropriate periodic vehicle inspection and maintenance (I/M) requirements, with particular emphasis on commercial vehicles, to enforce progressive emission and safety standards, resulting in older polluting commercial vehicles being gradually phased-out from the vehicle fleet, as well as testing and compliance regimes for vessels	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Cost impact to the public when inspection and maintenance frequencies are increased.
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant Existing periodic vehicle inspection and maintenance requirements are in place, in which the frequency is dependent on vehicle type and age.	
		Important actions you will carry out in 2014~2015 Review the inspection frequency of older commercial vehicles based on international benchmarking and considering the contribution of PM and NO _x (an ozone precursor) emissions from these vehicles.	

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“Improve” Strategy	11 Adopt Intelligent Transportation Systems (ITS), such as electronic fare and road user charging systems, transport control centres, and real-time user information, when applicable	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input checked="" type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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		<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • <u>MyTransport.SG</u>, a smartphone application which provides real-time information on bus arrival times, traffic conditions and news, road pricing rates. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=c5d18b82-35d7-413d-a535-17c5bc616633 • <u>Intelligent Transport System (ITS)</u>. The Land Transport Authority and the Intelligent Transportation Society Singapore (ITSS) launched the ‘Smart Mobility 2030’ in Aug 2014. The ITS Strategic Plan seeks to leverage ITS initiatives to provide high quality information 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. These allow transport users to make informed decisions on-the-go, in a safe and sustainable land transport system. http://www.lta.gov.sg/content/ltaweb/en/roads-and-motoring/managing-traffic-and-congestion/intelligent-transport-systems/SmartMobility2030.html
		<p>Important actions you will carry out in 2014~2015</p> <p>On-going work on above initiatives.</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Improve” Strategy	12 Achieve improved freight transport efficiency, including road, rail, air, and water, through policies, programmes, and projects that modernize the freight vehicle technology, implement fleet control and management systems, and support better logistics and supply chain management	Any action had been taken so far? <input checked="" type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant NA	
		Important actions you will carry out in 2014~2015 NA	

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
IV. <u>Cross-cutting</u> strategies			
13	Adopt a zero-fatality policy with respect to road, rail, and waterway safety and implement appropriate speed control, traffic calming strategies, strict driver licensing, motor vehicle registration, insurance requirements, and better post-accident care oriented to significant reductions in accidents and injuries	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input checked="" type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA
“Cross-Cutting” Strategy		Examples of pilot projects and/or policies developed or under development – include URLs where relevant <ul style="list-style-type: none"> • <u>Pedestrian and Cyclist Safety Committee</u>. The inter-agency committee has been set up to review the adequacy of road safety provisions. http://www.lta.gov.sg/content/ltaweb/en/roads-and-motoring/road-safety-and-regulations/PCSC.html • <u>Silver Zones</u>. The programme is being rolled out to make selected estates safer for the senior pedestrians to use roads. Measures include traffic-calming design and reduced speed limits. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=e3228575-1f3b-4a48-a72b-49047df2da5f 	

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		Important actions you will carry out in 2014~2015 Ongoing work on above initiatives. Four more Silver Zones are targeted to complete by 1Q 2016.	
14	Promote monitoring of the health impacts from transport emissions and noise, especially with regard to incidences of asthma, other pulmonary diseases, and heart disease in major cities, assess the economic impacts of air pollution and noise, and devise mitigation strategies, especially aiding sensitive populations near high traffic concentrations	Any action had been taken so far? <input type="checkbox"/> Not yet <input checked="" type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Budget and manpower considerations.
“Cross-Cutting” Strategy		Examples of pilot projects and/or policies developed or under development – include URLs where relevant In-house studies were previously done 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.	
		Important actions you will carry out in 2014~2015 Embark on a more holistic and whole of government approach involving the respective transport and health authorities to assess the economic impact of air pollution on public health.	

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“Cross-Cutting”	<p>15 Establish country-specific, progressive, health-based, cost-effective, and enforceable air quality and noise standards, also taking into account the WHO guidelines, and mandate monitoring and reporting in order to reduce the occurrence of days in which pollutant levels of particulate matter, nitrogen oxides, sulphur oxides, carbon monoxide, and ground-level ozone exceed the national standards or zones where noise levels exceed the national standards, especially with regard to environments near high traffic concentrations</p>	<p>Any action had been taken so far?</p> <p><input type="checkbox"/> Not yet</p> <p><input type="checkbox"/> Some (design – piloting)</p> <p><input checked="" type="checkbox"/> Largely in Place</p> <p><input type="checkbox"/> Fully Completed</p> <p>(Please Check the box)</p>	<p>Challenges faced in implementation:</p> <p>Inability to meet the WHO Final Air Quality Targets in the long term for SO₂, PM_{2.5}, PM₁₀ and ozone.</p>
		<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <p>Existing health-based, cost effective and enforceable air quality and noise standards are in place, which have also taken into consideration the WHO guidelines.</p>	
		<p>Important actions you will carry out in 2014~2015</p> <p>To relook at the WHO Final Air Quality Targets that Singapore has set to meet in the long term, together with the various initiatives that Singapore has drawn up in the various areas for cleaner air.</p>	

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“Cross-Cutting” Strategy	16 Implement sustainable low-carbon transport initiatives to mitigate the causes of global climate change and to fortify national energy security , and to report the inventory of all greenhouse gases emitted from the transport sector in the National Communication to the UNFCCC	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: Consumers’ purchasing decisions, technological advances and the progress in Singapore’s overall mitigation efforts on climate change.
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant <u>Carbon Emissions-Based Vehicle Scheme (CEVS)</u> : The scheme was implemented in January 2013 as part of Singapore’s National Climate Change Strategy (2012). It is a feebate scheme which provides incentives to switch to cars with lower CO ₂ emissions and imposes surcharges on purchasers of high-emitting cars and taxis. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=05f62616-f38f-432c-88c6-632019094ec2 Contributions from the transport sector have also been considered in Singapore’s GHG inventory, which form part of the NC to the UNFCCC in 1994 and 2000.	

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
		Important actions you will carry out in 2014~2015 Review of the monetary schemes, considering the various challenges in the implementation and as part of the UNFCCC's requirements, the NC to the UNFCCC will be done once every 2 years, moving forward, instead on an ad-hoc basis.	
“Cross-Cutting” Strategy	17 Adopt social equity as a planning and design criteria in the development and implementation of transport initiatives, leading to improved quality, safety and security for all and especially for women, universal accessibility of streets and public	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
	<p>transport systems for persons with disabilities and elderly, affordability of transport systems for low-income groups, and up-gradation, modernization and integration of intermediate public transport</p>	<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <ul style="list-style-type: none"> • <u>Barrier-free accessibility.</u> All rail stations in Singapore offer barrier-free access to platforms through lifts and ramps. More pedestrian overhead bridges in busy areas are being fitted with lifts. By 2020, all public buses will be wheelchair-accessible, from over half the fleet today. The Green Man Plus scheme allows a senior pedestrian to be given additional time to cross the road on the green man signal. <p>Description of the above is provided in the Land Transport Master Plan 2013: http://www.lta.gov.sg/content/ltaweb/en/about-lta/what-we-do/ltmp2013.html</p> <ul style="list-style-type: none"> • <u>Fare concessions for less privileged.</u> The Fare Review Mechanism Committee (FRMC) recommended in 2013 fare concessions to be given to the low-income group as well as persons with disabilities, in addition to those already in place for children, students and senior citizens. This has since been implemented. <p>http://www.mot.gov.sg/news/FRMC%20Report%201%20Nov.pdf http://www.mot.gov.sg/News-Centre/News/2014/New-Concession-Schemes-for-Workfare-Beneficiaries-and-Persons-with-Disabilities-from-6-July-2014(1)/</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
		Important actions you will carry out in 2014~2015 Green Man Plus will be rolled out to another 500 pedestrian crossings by 2015. Seventeen more pedestrian overhead bridges will be fitted with lifts by 2016.	
“Cross-Cutting” Strategy	18 Encourage innovative financing mechanisms for sustainable transport infrastructure and operations through measures, such as parking levies, fuel pricing, time-of-day automated road user charging, and public-private partnerships such as land value capture, including consideration of carbon markets, wherever feasible	Any action had been taken so far? √ Not yet <input type="checkbox"/> Some (design – piloting) <input type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant NA	
		Important actions you will carry out in 2014~2015 NA	

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Cross-Cutting” Strategy	19 Encourage widespread distribution of information and awareness on sustainable transport to all levels of government and to the public through outreach, promotional campaigns, timely reporting of monitored indicators, and participatory	Any action had been taken so far? <input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Challenges faced in implementation: NA

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration
	processes	<p>Examples of pilot projects and/or policies developed or under development – include URLs where relevant</p> <p><u>Land Transport Master Plan (LTMP) 2013</u>: LTMP was published in 2013, with the key message of making public transport the choice mode of travel through better service, more connections and a more liveable and inclusive community. http://www.lta.gov.sg/content/ltaweb/en/about-lta/what-we-do/ltmp2013.html</p> <p><u>Sustainable Singapore Blueprint (SSB)</u>: The Sustainable Singapore Blueprint (SSB) was first published in 2009 to detail the initiatives to ensure sustainable growth over the next two decades. It has also been updated recently to support the diverse needs and growing aspirations of Singaporeans. Sustainable transport initiatives are highlighted, with a key message for a progressive shift of emphasis from private motorized transport towards active mobility (public transport and non-motorized transport (NMT) modes) and greener vehicles. http://app.mewr.gov.sg/web/ssb/index.html</p>
		<p>Important actions you will carry out in 2014~2015</p> <p>NA</p>

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Goal No.	Goal Description	Voluntary Progress/Achievements/Major Initiatives, including any transport master plans, development of special transport corridors, in Implementing the Bangkok 2020 Declaration	
“Cross-Cutting” Strategy	20 Develop dedicated and funded institutions that address sustainable transport-land use policies and implementation, including research and development on environmentally-sustainable transport, and promote good governance through implementation of environmental impact assessments for major transport projects	Any action had been taken so far?	Challenges faced in implementation:
		<input type="checkbox"/> Not yet <input type="checkbox"/> Some (design – piloting) <input checked="" type="checkbox"/> Largely in Place <input type="checkbox"/> Fully Completed (Please Check the box)	Budget considerations
		Examples of pilot projects and/or policies developed or under development – include URLs where relevant <ul style="list-style-type: none"> • <u>Environment Impact Study (EIA) for the Cross Island Line (CRL)</u>. An EIA for the portion of the major rail line to be developed, CRL, around the Central Catchment Nature Reserve would be conducted. The EIA findings, along with other considerations such as transport connectivity and land use compatibility, will guide the decision on CRL’s alignment. http://www.lta.gov.sg/apps/news/page.aspx?c=2&id=d4160c85-6165-4049-b6d2-a6a28cb25de7 	
Important actions you will carry out in 2014~2015		NA	