Climate Action and Resilience in Transport

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11th November, 2020 – Berlin/Bangkok
Global Scenarios for Transport: The need to decarbonise

Source: SLOCAT 2018
Cut global emissions by 7.6 percent every year for next decade to meet 1.5°C Paris target - UN report

CO$_2$ Emissions reduction on transport reduced, but not on track with 1.5°C Paris target
The new uncertainty due COVID-19

• Transport behaviour change: travel reduction through home office and avoiding air travel
• Transport behaviour mode shift: Aversion to public transport, increase car-use
• Fuel use for passenger cars peaks due to lower improvements of fuel efficiency
• Lower fuels prices could lead to less attractiveness of electric vehicles
The scale of our challenges

Source: https://techquartier.com/wp-content/uploads/2020/04/Flatten_the_Curve.jpg
NDC 2015 - Lack of integrated transport and climate plans

76% of the submitted 165 NDCs highlight the transport sector as a mitigation source.

Only 8% of NDCs propose transport sector emission reduction targets.

Majority (about 65%) of the 356 proposed mitigation measures in NDCs represent ‘Improve’ strategies.

Source: SLOCAT, 2016
## National Determined Contribution (NDC), Long Term Strategies (LTS) and Transport Policies - 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Type of submission (NDC)</th>
<th>Long Term Strategy (LTS)</th>
<th>Transport related policies referenced*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Updated First NDC</td>
<td>YES</td>
<td>Plan for Global Warming Countermeasures (2016) (NDC 2020);</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Updated First NDC</td>
<td>NO</td>
<td></td>
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<tr>
<td>Vietnam</td>
<td>Updated First NDC</td>
<td>NO</td>
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*Source: Dalkmann 2020*
## Avoid-Shift-Improve in NDCs/LTS

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<tr>
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<tr>
<td>Japan</td>
<td>S-I</td>
<td>A-S-I</td>
<td>A-S-I</td>
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<tr>
<td>Mongolia</td>
<td>I</td>
<td>I</td>
<td>Not submitted</td>
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<tr>
<td>Singapore</td>
<td>S-I</td>
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</table>

Source: Dalkmann
AVOID – Strategies in NDC and LTS

• Thailand included plans to “avoid” transport in their 2013 strategy by developing an integrated strategy between land-use and transport in some of their major cities.

• Japan highlights in their LTS the establishment of a Mobility-As-A-Service (MAAS) as a major strategy to reduce carbon emissions.

• Singapore created its vision towards a 20-minute township and a 45-minute city

• Singapore is restricting motorisation and set ambitious goals for mode share to limit the use of cars to one of 10 trips.
Visualisation of Singapore’s AVOID Strategy: 20-Minute Towns and 45 Minute City

Source: Prime Minister’s Office Singapore (2020)
SHIFT Strategies in NDC and LTS

• Investment in bus and rail based public transport is a major strategy in all five submissions accept Mongolia.

• Singapore has a focus on walking, cycling and public transport within its LTS. An overarching target of 80% mode share provided by walking, cycling and public transport is setting very ambitious plans for the future.

• Thailand’s plan includes extensions of mass rapid transit lines, construction of double-track railways and improvement of bus transit in the Bangkok Metro area.

• Several countries cover not only passenger transport, but also freight as a key source of CO₂ emission. Thailand, in its Environmentally Sustainable Transport Plan, proposes ambitious actions to promote road-to-rail modal shift for freight.

• In Vietnam, the existing North-South railway line will be upgraded while more surveys will be conducted to find feasible plans for a high-speed railway line.

• Japan highlights the importance of rail freight as well as improving logistic efficiency.

• Mongolia highlights a plan to shift the coal export transportation from “auto transportation” to rail transport.
IMPROVE STRATEGIES in NDC and LTS

• Improving fuel and vehicle efficiency as well as electrification are key strategies in the five Asian countries which have already submitted their updated NDC.

• In Thailand, a vehicle tax scheme based on CO₂ emissions was approved and became effective at the beginning of 2016 after the first NDC.

• In Vietnam there is a plan to encourage buses and taxis to use compressed natural gas and liquefied petroleum gas (LPG); implement management solutions for fuel quality, set emissions standards; and improve vehicle maintenance.

• The electrification of the passenger car fleet is in the heart of Japan’s, Singapore’s, Vietnam’s and Thailand’s strategy. Singapore aims to phase out internal combustion engine vehicles by 2040, and have all vehicles running on cleaner energy.

• In Japan electric cars already comprise 30% of car sales during 2020. They are paying particular attention in their long term strategy to “well to wheel” emissions. In their long-term strategy, they aim to reduce GHG emissions per vehicle by 80% compared to 2010 and ultimately want to reach a zero-emission target in the second half of the century.

Source: Dalkmann 2020
Further Key Observations

• Only Japan had set a separate transport target

• While all countries included adaptation as a major part of the updated NDC submission, there was almost no reference to transport specific challenges.

• Japan, Singapore, Thailand and Vietnam carried out detailed stakeholder processes described in the updated NDCs.

• Singapore, paid particular attention to public awareness including creating a very visual Long Term Strategy document

• Vietnam and Thailand used the EST Process to prepare their NDC
Long term Strategy Singapore

Enhanced 2030 
Nationally 
Determined 
Contribution (NDC)

Peak emissions at 
65 MtCO_{2e} 
around 2030

Based on current projections, this will allow us to achieve a 35% reduction in emissions intensity from 2005 levels by 2030.

Adoption of Advanced Low-Carbon Technologies

- e.g. Carbon capture, utilisation and storage, use of low-carbon hydrogen

Effective International Collaboration

- e.g. International climate action, regional power grids, market-based mechanisms

Source: Prime Minister's Office, Singapore (2020)
Lessons learned from NDC/LTS Asia submissions

1. Align LTS with NDC submission. Create a long term vision aligning with shorter term policies.
2. Set specific transport related target and sub-goals.
3. Create detail policies which are part of the NDCs and align with the goals.
4. Balance the transport decarbonising strategy to use AVOID, SHIFT and IMPROVE measures.
5. Identify specific challenges for the transport sector and create a transport related strategy for resilience.
6. Coordinate and formulate the NDC including all ministries
7. Ensure the NDC is well communicated to the general public as well as all stakeholder groups
8. Ensure transport related policies are linked with other policies (e.g. energy)
Response to recovery

“So not to build back, but to build forward.”

https://www.ft.com/video/c28e5efb-a8f4-45ed-b26b-18e87a38c94c
Enhance NDC through COVID-19 investments

**PLATFORM for REDESIGN 2020**

Online Platform on Sustainable and Resilient Recovery from COVID-19

Countries:

- Bulgaria
- Chile
- China
- Costa Rica
- Estonia
- Greece
- Indonesia
- Japan
- Latvia
- Lithuania
- Mauritius
- Mexico
- Morocco
- Myanmar
- Nepal
- New Zealand
- Pakistan
- Panama
- Russia
- Slovak Republic
- Spain
- Sweden
- Switzerland

https://platform2020redesign.org/
## Policies, measures and action on climate change in the context to COVID-19 recovery

<table>
<thead>
<tr>
<th>Country</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>Improving Kabul City Transport System</td>
</tr>
<tr>
<td>Bhutan</td>
<td>The fiscal stimulus includes the implementation of an economic contingency plan aimed at helping different sectors, including farm road infrastructure construction.</td>
</tr>
</tbody>
</table>
| China     | • Integrated development planning of higher quality transportation in the Yangtze River Delta  
            • Promoting electric vehicles in rural areas  
            • Catalogue of new energy vehicle models for energy saving use vehicle and vessel tax reduction and exemption  
            • Announcement on relevant policies for exemption of vehicle purchase tax for new energy vehicles  
            • Program encouraging civilians to use more public transportation and bicycles instead of personal vehicles or taxis (Green travel plan)  
            • Rewards program facilitating the phase-out of high emission diesel vehicles in Greater Beijing Area |
| Indonesia | • Biofuel for transportation  
            • Improvement of energy efficiency (including transportation system)  
            • Potential of e-vehicle development                                                                                       |
| Japan     | Initiatives toward Zero Emission Shipping                                                                                      |
| Nepal     | Investment for electric transportation in Nepal, thereby significantly reducing greenhouse gas (GHG) emissions from the transport sector (E-Mobility). |
| Pakistan  | National Electric Vehicle Policy: In order to mitigate the negative impacts of automobile sector on environment and giving a boost to the economy, Government of Pakistan has approved its National Electric Vehicle Policy targeting a 30% shift to electric by 2030. |
| The Philippines | • Implementation of the Public Utility Vehicle Modernization Program  
                      • Opening of bike lanes in major thoroughfares (Metro Manila)  
                      • The Department of Transportation is pushing for the passage of the Philippine Economic Stimulus Act of 2020 to provide immediate financial assistance to workers and businesses affected by the pandemic. |

Source: MOE 2020, ADB 2020
Employment Multipliers for Investment in the Transport Sector

Source: IEA 2020
<table>
<thead>
<tr>
<th>Measures</th>
<th>Public Transit</th>
<th>Walking and Cycling</th>
<th>National Roads</th>
<th>Aviation</th>
<th>Freight and Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance long-term sustainability of services and assets</td>
<td>Develop financing structures for adjusted service plans catering to reduced post lockdown demand.</td>
<td></td>
<td>Continue to improve road safety and road maintenance for all users.</td>
<td>Explore restructuring of aviation industry to share demand risks appropriately between the public and private sectors.</td>
<td>Restructure the logistics supply chain to enhance resilience.</td>
</tr>
<tr>
<td>Mainstream measures as part of overall pandemic-resilient response and operation plan</td>
<td>Mainstream contactless payment and systems.</td>
<td>Mainstream temporary measures to expand capacity for walking, cycling, and emergency services in future pandemic the response and operations plan.</td>
<td>Mainstream temporary traffic measures in road design standards to accommodate permanent or temporary increased capacity for nonmotorized transport or emergency lanes.</td>
<td></td>
<td>Mainstream contactless processes and systems for embarking and disembarking for international travel.</td>
</tr>
<tr>
<td>Institute transformative change.</td>
<td>Integrate contactless payment with other e-payment platforms.</td>
<td></td>
<td></td>
<td>Integrate digital platforms to facilitate ecommerce and urban logistics. Explore “Mobility As A Service” for last mile delivery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explore Mobility as a Service (MaaS)</td>
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</table>
Enhance NDC through COVID-19 investments

COP26 Postponed

Bonn, 1 April 2020 - The COP26 UN climate change conference set to take place in Glasgow in November has been postponed due to COVID-19.

Source: https://unfccc.int/news/cop26-postponed
Enhance NDC through COVID-19 investments

✓ Review current NDC: Where to accelerate, increase investment, commitments.
✓ Identify specific needs based on COVID-19 to maintain services (e.g. Public transport)
✓ Enable long-term planning and quick wins (e.g. SUMP – pop cycling ways)
✓ Consider coherent reporting under UNFCCC
Many thanks for your attention!

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