The Intersection of Transparency, LTS, and Transportation in Asia

Session 1: Transportation Sector Landscape and LTS Development

8 September 2020
T-LTS Project Overview

• Sponsored by USAID, the Transparency and Long-Term Strategies (T-LTS) project supports countries in developing transparent long-term strategies (LTS) for low-emissions development.

• Key activities include trainings related to LTS, developing best practices, and providing country support from September 2019 – September 2021.

• The project goals are to:
  • Develop and enhance the understanding and capacity of countries in long-term modeling and forecasting of low-emission development alternatives.
  • Empower countries to address current or future long-term low-emissions planning requests.
Our Team

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Training Overview

1. Transportation, Transparency, and LTS
2. Pathways for Low Emissions Planning
3. Modeling, Data, and Scenarios
4. Developing an LTS “Action Plan”
Objectives

By completing this session, participants will:

• Understand the basic concepts of transparency and LTS.
• Understand how transparency and LTS apply to the Paris Agreement.
• Understand how transparency and LTS complement transportation planning.
• Be able to apply transparency and LTS concepts to country-specific transportation planning efforts.
Transparency
What Is Transparency?

- Documentation and reporting of information (i.e., data, models, assumptions) that underpins target setting, scenario planning, and monitoring.

- Example: When developing an LTS, projections should clearly document the technology and policy assumptions used for emissions estimates.
Why Is Transparency Important?

- Transparency is key to making LTS targets credible for outside observers.
- It enables the tracking of progress towards reaching mid-century greenhouse gas (GHG) reduction targets.
- It supports decision making for sustainable development activities, promoting the efficient use of resources.
Benefits of Transparency

Transparency has many benefits and supports multiple objectives.

- Good governance
- Free and competitive markets with favorable investment climates
- Country pathways to self-sufficiency
- A shared vision for development and enhanced public trust
- Proper utilization of development assistance
- Consistent standards across countries

Transparency Supports
The transportation sector is important because GHG emissions are growing across Asia: transport is projected to contribute 31% of global GHG emissions in 2030 (compared to 19% in 2006).

Robust data, methodologies, and models are needed to design effective transportation plans and mitigation measures.

Accurate and transparent methods enable decision-makers to prioritize actions and allocate resources appropriately.

Increased transparency can increase confidence in projects and attract investment for transportation and infrastructure projects.

Source: ICF
Example of Transparency in Planning

- 17 Parties have submitted an [official LTS to the UNFCCC](#).
- The United States released its LTS plan in 2016.
- The plan is accompanied by [documentation](#) of the data, assumptions, models, references, outputs, and other relevant supporting information.
- This type of documentation is an example of a best practice.

*Source: U.S. Government*

*Countries can improve their data, documentation, and methodology incrementally to improve transparency over time.*
Example of Transparency in Planning Cont.

IV. Transportation Sector Assumptions

The transportation sector is divided into freight and passenger classes, each of which contains on-road technologies such as cars, trucks, and motorcycles and off-road technologies such as trains. Intensity and capital expenditure assumptions were developed for this report for a suite of on-road technologies in the passenger and freight classes. These include liquid, hybrid liquid, and battery-electric vehicle (BEV) technologies. The reference scenario adds electric vehicles to the freight sector in GCAM. Capital cost, vehicle intensity, and load factor assumptions for these vehicles are presented in Table 9, alongside conventional liquid-fueled vehicles for comparison. In addition, the Smart Growth scenario assumes significantly lower transportation demand in the passenger and freight sectors. These assumptions, and the Reference assumptions, are presented in Figures 3 and 4.

Table A.10: Selected transportation sector costs, Reference and Advanced Technology Scenarios

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Reference Technology</th>
<th>Advanced Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2020</td>
<td>2035</td>
</tr>
<tr>
<td>CAPEX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck (0-2.7t)</td>
<td>1.14</td>
<td>1.14</td>
</tr>
<tr>
<td>Track (2.7-4.5t)</td>
<td>1.25</td>
<td>1.25</td>
</tr>
<tr>
<td>Track (4.5-12t)</td>
<td>1.35</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Figure A.3: Passenger VMT trajectories for Reference and Smart Growth scenarios

Describes assumptions
Includes and compares to a reference case
Includes modeling outputs
Includes multiple time periods
Example of Transparency in Planning Cont.

Describes methods and models

Includes formulas and definitions of variables

Provides data sources

Table 1: Sources of Forest Area and Inventory Data

<table>
<thead>
<tr>
<th>Region</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>Kuusela (1993)</td>
</tr>
<tr>
<td>Russia</td>
<td>Russia: Forest Account (2004)—See Solberg et al. (2005) for a discussion of this data.</td>
</tr>
<tr>
<td>Canada</td>
<td>Lowe et al. (1994); Updated with Canada’s National Forest Inventory in 2010. See: <a href="https://nfi.nfis.org/home.php">https://nfi.nfis.org/home.php</a></td>
</tr>
</tbody>
</table>

Addendum C: Algebraic Structure of the Carbon Modeling

This section describes how carbon is calculated in the Global Timber Model. As previously mentioned methods for calculating carbon follow the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance (Penman et al., 2003). Carbon is tracked in four basic pools: aboveground carbon, slash, marketed products, and soils. Aboveground carbon is calculated on any given hectare in the model as:

\[
\text{Carb}_{t\times a} = [V_{A,t}(Z_{A,t})] \cdot [W_{D}^t] \cdot [\text{BEF}] \cdot [R_t] \cdot [\text{CF}].
\]  

(1.25)
Long-Term Strategies (LTS)
What Is a Long-Term Strategy?

- A long-term strategy (LTS) is a policy tool used to help countries identify development priorities and pathways that help achieve mid-century greenhouse gas (GHG) reduction targets.
- LTS encompasses climate and development goals.
- LTS defines pathways for achieving those goals.
- LTS may be associated with the terms “mid-century plans” or “Long-Term Low Emissions and Development Strategies (LT-LEDS).”

*LTS are not a new framework that needs to be created, but rather builds on a country’s existing priorities and planning systems.*
Why Is a LTS Important?

- LTS helps countries set a vision and prioritize short- and mid-term actions.
- LTS informs development of national plans, sector plans and/or subnational activities.
- LTS can evolve over time to become more comprehensive and more ambitious in terms of GHG reductions and other sustainability goals.

Source: Pixabay
Elements of an LTS

LTS include different elements depending on the goals and/or needs of a country.

- GHG reduction targets
- Implementation pathways
- Monitoring and improvement process
- Sectoral objectives
- Adaptation objectives
- Long-term vision or goal
Elements of an LTS

There are variations of an LTS, depending on the capability and resources of a country.

- A LTS does not have to include every single element.
- There are different levels of comprehensiveness of an LTS.
- Comprehensiveness can be built up over time.

Adapted from GIZ and New Climate Institute
National LTS Example: U.S.

- The United States LTS outlines a vision for 2050, as well as interim targets.
- The LTS includes specific strategies for different sectors, including transportation (pp. 53-58).
- It analyzes historical and current data for each sector, offers a long-term vision, and identifies innovation opportunities to achieve the vision.
- The LTS considers multiple strategies including energy efficiency, fuel switching, decarbonizing electricity, CO₂ removal technologies, and more.
National LTS Example: U.S.

- Transportation decarbonization strategies include:
  - Increasing fuel efficiency
  - Developing low-carbon transportation fuels and vehicles
  - Reducing vehicle miles traveled (VMT)

Source: U.S. Government
Similar Long-Term Plan Example: India

Pathways to Deep Decarbonization in India

- Though not an official LTS, it has similar features:
  - Analyzes two development scenarios (conventional and sustainable) for India to transition to a low carbon economy.
  - Models the scenarios to 2030 and 2050.
  - Considers climate and development goals and potential pathways to achieve them.
Low Carbon Development: A Paradigm Shift Towards a Green Economy in Indonesia

- Though not an official LTS, it has similar features:
  - Analyzes a low carbon pathway up to 2045.
  - Findings will be implemented into the upcoming national 5-year plan.
  - Considers climate and development goals and potential pathways to achieve them.
  - Models multiple scenarios.
Similar Long-Term Plan Example: Indonesia

- The LCDI High Scenario results in emissions reductions of 43% by 2030.
- It also boosts average annual GDP to 6% from 2019-2045.
- A WRI analysis highlights the need for long-term planning to avoid risks that are missed in 5 to 10-year plans.

Source: BAPPENAS
LTS, Transparency, and the Paris Agreement
Paris Agreement Provisions

- The **Paris Agreement** is a U.N. agreement signed by 195 countries in 2015.
  - Aims to limit global temperature rise to <2°C above pre-industrial levels while fostering sustainable development.
- Signatory countries *shall* submit a **Nationally Determined Contribution (NDC)**.
  - Are country-specific mitigation and adaptation efforts.
  - Account for capabilities and socio-economic realities of each country.
  - Provides foundation for climate action.
- Countries *should* strive to submit a **long-term, low GHG strategy**.
**LTS and NDCs Under the Paris Agreement**

LTS and NDCs are closely related planning tools for low-emissions development.

<table>
<thead>
<tr>
<th><strong>Long-Term Strategies (LTS)</strong></th>
<th><strong>Nationally Determined Contributions (NDCs)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td>Defines specific GHG emission reduction targets and more detailed implementation plans</td>
</tr>
<tr>
<td></td>
<td>Defines the national vision and development priorities for a country, and links this vision and priorities to emissions pathway</td>
</tr>
<tr>
<td><strong>Timeframe</strong></td>
<td>2030</td>
</tr>
<tr>
<td></td>
<td>2050</td>
</tr>
<tr>
<td><strong>Frequency of Update</strong></td>
<td>Parties are invited to submit a LTS in 2020 with no requirement for revisions</td>
</tr>
<tr>
<td></td>
<td>Parties are required to communicate and update NDCs every five years</td>
</tr>
</tbody>
</table>
Relationship Between LTS and NDCs

- **LTS** sets a mid-century vision (*Where do we want to be?*).
  - Provides insights on the near-term actions needed to achieve long-term goals.
- **NDCs** define short- and medium-term policies and actions (*How will we get there?*).
  - Sets the 5 to 10-year goals and implementation plans.

Sets trajectory for each NDC

Accomplishments inform LTS revisions
Alignment of LTS and NDC Process

LTS and NDCs can inform each other and/or be developed in tandem.

Adapted from GIZ and New Climate Institute
The Paris Agreement calls for an Enhanced Transparency Framework (ETF), a uniform system for countries to periodically report on climate progress.

ETF sets a higher standard for disclosure of data, methodologies, and assumptions.

LTS and NDCs have overlapping transparency needs (i.e., data, modeling capacity, and methodologies).
LTS and Sustainable Transportation
Considering Transparency and LTS in Transport Planning

LTS should inform transport planning and vice versa

- The transportation sector plays a significant role in terms of a country's GHG emissions, air quality, and quality of life.
- The transportation sector needs to engage in both near-term and long-term planning.
- Transportation ministries will need to support a country's overall response to the ETF—better documentation and higher frequency of reporting is needed.
How Transport Sector Plans Contribute to LTS

- A national LTS can be translated down to short- and medium-term transportation plans.
- Existing transportation plans can inform the development of LTS.
- LTS and national transportation plans can inform and should be informed by local plans.
Co-Benefits of Sustainable Transportation

Energy Security
- Diversification of energy supply
- Lower energy costs
- Less imported fuel

Economic Development
- Increased private investment
- Local job and value creation
- Better income opportunities

Environmental Protection
- Better air quality
- Less soil degradation
- Climate protection
- Noise reduction

Improved Quality of Life
- Better road safety
- Fewer health risks
- Time savings

Adapted from GIZ

Source: BAPPENAS
Example of Transport Planning in LTS

- In 2019, China released its *Outline for Building China’s Strength in Transport*.
- The purpose of the plan is to make China a global transport leader.
- The outline offers a vision through 2050 and a roadmap to achieve it.
- The plan consists of 2 phases supported by 9 key actions.
- The 2050 vision is translated down into medium- and short-term plans.

Source: Sustainable Transport in China
Closing Remarks
Key takeaways:
- Transparency is key to making LTS targets credible, tracking progress towards goals, and supporting decision making.
- LTS helps countries set a vision, help prioritize short- and mid-term actions, and can evolve over time to become more comprehensive.
- Transparency and LTS are related to Paris Agreement objectives and obligations.
- Transparency and LTS are integral to transport planning.
Preparing for Session 2

In Session 2, we will be discussing *pathways for low emission mobility planning*.

To prepare for this session, consider what transportation activities exist in your country and if any sustainability goals are associated with them. For example, do any of them contribute to the UN Sustainable Development Goals?
## Additional Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Watch Country Profiles</td>
<td>Climate Watch</td>
<td>An overview of existing climate data, plans, commitments, policies, and more.</td>
</tr>
<tr>
<td>INDC Registry</td>
<td>UNFCCC</td>
<td>An overview of all submitted NDCs.</td>
</tr>
<tr>
<td>Communication of Long-Term Strategies</td>
<td>UNFCCC</td>
<td>A registry of all submitted national LTS plans.</td>
</tr>
<tr>
<td>Sustainable Development Methodology</td>
<td>ICAT</td>
<td>A guide for policymakers to develop and assess sustainable development goals.</td>
</tr>
<tr>
<td>Sustainable Development Goals Transport</td>
<td>SLoCaT</td>
<td>A review of how sustainable transport is related to Sustainable Development Goals.</td>
</tr>
<tr>
<td>Making Long-Term Low GHG Emissions Development Strategies a Reality</td>
<td>GIZ</td>
<td>A guide for policy makers developing an LTS.</td>
</tr>
</tbody>
</table>
Thank you