Technology Executive Committee

Synthesis of transport-related information from technology needs assessments of developing countries

Work of the TEC on technology road maps

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Chair of the Technology Executive Committee
What are technology needs assessments?

• Developing countries conduct TNAs to identify country-driven priorities for mitigation and adaptation technologies

• TNAs identify needs for new equipment, techniques, and practical knowledge and skills, to mitigate greenhouse gases and adapt to adverse impacts of climate change

• TNAs encourage developing countries to prioritize technology needs that can form the basis of environmentally sound technology projects and programmes.

• Following the TNA, Technology Action Plans (TAPS) are developed to begin implementing priorities.
More than 90 countries have submitted TNAs since 2001

- Applying rich methodologies
- Identifying technology priorities
41% of mitigation energy sector TNAs included transport

- Out of that more than 25% of Parties prioritized:
  i. **technologies relating to fuel switching**, such as electric or liquefied natural gas vehicles, and
  ii. **modal shifts**, such as mass rapid transit road or rail systems.
## Transport actions identified by countries in their TAPs

<table>
<thead>
<tr>
<th>Policy, law and regulatory</th>
<th>Infrastructure</th>
<th>Fuel switch from fossil to innovative modes</th>
<th>Technical and emission efficiency</th>
<th>Information and awareness</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revise transport policy, laws, regulations</td>
<td>Upgrading physical infrastructure</td>
<td>Diffusion of urban mass transport</td>
<td>Introduction of &quot;green&quot; vehicles</td>
<td>Set up vehicle technical and emission control centers</td>
<td>Intelligent transport systems</td>
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<td>Refinement of policies to promote public transport</td>
<td>Accommodate pedestrian facilities</td>
<td>Electrification of railway system</td>
<td>Development of smart car facilities</td>
<td>Implementation of emission control standards</td>
<td>Creation of awareness on low emissions transport modes</td>
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<tr>
<td>Review policy and legal framework</td>
<td>Creation of infrastructure including walkways and sidewalks</td>
<td>&quot;Innovative fuel&quot; buses for public transport</td>
<td></td>
<td>Enhance vehicle inspection and maintenance</td>
<td>Car pooling &amp; park and ride systems</td>
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<td>Establishment of a tax system for low occupancy vehicles</td>
<td>Sign boards and info displays by main roads</td>
<td>Establish a multi-modal transport system</td>
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<td>Promotion of emission control equipment facility</td>
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<td>Regulations for car pooling and transit</td>
<td>Increasing security of parking lots, improving existing infrastructure</td>
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<td></td>
<td>Sharing awareness on efficient driving modes</td>
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<td></td>
<td>Creation of a back up systems in case of interrupted power supply</td>
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Bonn climate change conference May 2016
Co-benefits of the TNA process

• Countries benefit from technology needs identified under the TNA and TAP processes, including transport related needs and actions, which can:

  i. Provide support for preparation of nationally determined contributions (NDCs) and adaptation plans,

  ii. Show how mitigation transport technologies can support national economic, social and environmental goals.
What is a technology road map (TRM)?

- Strategic planning tool serving as a coherent basis for increasing technology development and transfer activities, providing a common (preferably quantifiable) objective, time-specific milestones and a consistent set of concrete actions; developed jointly with relevant stakeholders, who commit to their roles in the TRM implementation

  ➢ **In some cases, a TRM can be similar to a TAP, as both are planning tools for implementation of action**

Some TRMs on transportation reviewed

- Technology roadmap electric and plug-in hybrid electric vehicles, IEA, 2009
- Roadmap for electric vehicles technology in Ireland – Sustainable Energy Authority of Ireland, 2011
- Roadmap for rechargeable energy storage system onboard electric drive buses, USA, 2010

TEC Brief: *Using roadmapping to facilitate the planning and implementation of technologies for mitigation and adaptation* (October 2013)
Thank you!

More information about the TEC at:
www.unfccc.int/ttclear/tec

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