3(b) Environmentally sustainable transport systems and services

ESCAP/CTR/2020/3 of 31 August 2020

Transport Division
ESCAP, Bangkok
Energy consumption, emissions and air pollution

- Energy consumption in the transport sector growing at higher rate in Asia
- Motorization rate almost doubled in last decade
- Road accounts for 75% of CO2 from the transport sector
- Transport accounted for 13.5% of CO2 emissions from fuel combustion in the region
- High growth of per capita transport emissions in Asian countries
- Renewable share of energy consumed by transport sector 10% in 2017
- Deployment of electric vehicles, Example: China- public transport
- Progressive fuel economy and emissions standards
Urban transport

- Growth of urbanization and motorization
- Different forms of public transport
- Integrated urban transport plans
- Integration: physical, service and fare
- Infrastructure for non-motorized transport
- Sustainable Urban Transport Index (SUTI)
- Improve accessibility, quality & reliability
- Low-cost solutions
- COVID-19 impacts on mobility

Mode share of active mobility in Asia-Pacific cities, %

Freight modal shift

• High share of freight transported by road
• Asia-largest railway networks, navigable inland waterways and coastal countries
• Modal shift from road to railway, inland water transport or coastal shipping
• Policies to increase the attractiveness and competitiveness of the desired modes
• Fiscal and regulatory measures
• Investment in railways and inland waterways
• Improving the efficiency of road freight transport operations
Innovations and smart transport systems

• Wider application of ITS to enhance efficiency and sustainability
• Adoption and application of smart transport systems vary among countries
• Guidelines and regulations to ensure interoperability and compatibility
• Regional road map for smart transport systems
• Application in urban and national context
• Innovations: Electric mobility, autonomous vehicles
• Contactless payments and fare integration
• Many examples of environmental benefits of smart transport technologies
Transport & nationally determined contributions

Source: ESCAP calculations based on data from Partnership on Sustainable, Low Carbon Transport, Transport Knowledge Base database.
Policy options for environmental sustainability

• Energy efficiency and renewable energy
• Vehicle emissions and air pollution
• Urban public transport systems
• Active mobility
• Freight modal shift
• Innovation and smart transport systems
• Environmentally sustainable construction practices
• Transport and the nationally determined contributions
• Regional collaboration
• Avoid-Shift-Improve Framework- various mitigation strategies
• Achievement of SDG targets 7.3, 9.1, 9.4, 9.a, 11.2 and 13.1
Issues for consideration

• Review the challenges and opportunities and policy options to enhance environmental sustainability of transport systems

• Strengthen regional cooperation on environmental sustainability of transport systems and services:
  • Developing evidence-based policies
  • Inclusion of emissions reduction targets and strategies in NDCs
  • Adopting and using smart transport systems

• Consider the dimensions of environmentally sustainable transport systems and services for inclusion in the next phase of the Regional Action Programme, 2021

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