State of Emissions and Introduction to UNDA Project on Measurement of Transport CO2 Emissions

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UN Mandates

- **Global**
  - Rio+20, focus on three pillars of sustainability
    - Economic
    - Social
    - Environmental
  - Millennium Development Goals, 8
  - Sustainable Development Goals (beyond 2015)
  - Kyoto Protocol – new protocol

- **Regional**
  - Regional Action Programme for Transport Development, 2012-2016
    (Ministerial Conference on Transport, 2012)
  - Sustainable transport development
    (10 Thematic Areas)
Rio+20 Outcome (Transport)

- Transport and mobility are key to Sustainable Development
- Efficient movement of goods and people
- Energy efficient multimodal transport system
- Clean fuels and vehicles
- Integrated approach to planning
- Affordable and sustainable transport
- Sustainable transit transport - need of landlocked and transit countries
- Capacity development
CO2 Emissions

CO2 emission - World

- Electricity and Heat: 41%
- Other energy industry use: 11%
- Manufacturing and Construction: 21%
- Transport: 5%
- Other sector: 22%

CO2 Emissions, 2010

- ESCAP, 1844.31 mil tons, 27%
- Rest of World, 4911.50 mil tons, 73%
Emissions by modes

CO2 emission: By Mode of Transport, ESCAP

- Aviation
- Road
- Rail
- Others

Million tons of CO2

Share of CO2 emissions by modes

CO2 emission: By Mode of Transport, 2010 ESCAP

- Aviation: 0.78%
- Road: 83.30%
- Rail: 13.21%
- Others: 2.71%

83.30%
Thailand CO2 emissions

CO2 emission - Thailand

- Electricity and Heat: 33%
- Other energy industry use: 7%
- Manufacturing and Construction: 6%
- Transport: 31%
- Other sector: 6%

Transport CO2 emission - Thailand
Million tons of CO2

Year:
- Rail
- Road
- Aviation

2000: 45.00
2001: 46.00
2002: 47.00
2003: 48.00
2004: 49.00
2005: 50.00
2006: 51.00
2007: 52.00
2008: 53.00
2009: 54.00
2010: 55.00
Mitigation policies

- Integrated transport and urban transport planning
- Public mass transportation- Bus Rapid Transit, Metro, LRT, Bus
- Promotion of Non-motorized transport- walkways, cycle lanes, pedestrian zones
- Travel demand management
  - Reducing need to travel – *compact city planning vs satellite cities*
  - Managing vehicle growth
  - Parking policies
  - Road pricing- discouraging use of private vehicle
  - Car free zones
- Technology
  - Clean and Green fuels
  - Energy efficient modes
  - Electric vehicles
  - Alternate clean energy
  - Use of ITS
- Maintenance of transport infrastructure
- Drivers training
UNDA Project objectives:

Joint project among –Five UN Regional Commissions, UNECE leading

- Raise awareness about the need to measure transport emissions
- Enhance cooperation among member countries
- Develop a model for emission assessment (freely available)
- Assist in making informed decision for planning for sustainable transport development
- Model capable to evaluate various policy options to reduce CO2 emissions in the inland transport sector
- Assist users/policy makers in the selection of the most appropriate and effective mitigation measures
UNDA Project Activities

- Global Review of emissions models, data, mitigation policies
- Model for assessment of Inland Transport CO2 Emissions (Vensim- system dynamics)
- Tools for Policy Simulation (to be available through the web)
- Pilot assessment in selected countries
- Regional capacity building activities
- National piloting workshops
Progress

- International Review and Expert Meeting, April 2012, Geneva
- Global Review of emissions models, data, mitigation policies
- ForFITS Model- *For Future of Inland Transport Systems*
- User Manual
- Available through project website: [http://www.unece.org/trans/theme_forfits.html](http://www.unece.org/trans/theme_forfits.html)
- Pilot national workshops, use/calibration of model – 2013
  - ECLAC, Chile, 26-29 August 2013
  - ECE, Geneva, 13 September 2013
  - ESCAP, Regional, 26-27 September 2013
  - ECE, Geneva, 8-10 October 2013
- Capacity building workshop activities in five regions
- Identify further pilot countries and partners
National workshop programme

23 September 2013

Morning
- Opening
- Introduction to UNDA project on measurement of emissions and mitigation policies
- Overview of state of inlaid transport emissions in Thailand
- Introduction to ForFITS Model

Afternoon
- Data needs and demonstration/simulation of the model to evaluate mitigation policies

24 September 2013 (ESCAP IT LAB)
- ForFITS Model: Technical session
Thank you

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