

***Working Party on Rail Transport SC2
Climate Change Mitigation, ForFITS***
Item 11 (b) of the draft Agenda
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Evaluating CO₂ emissions in inland transport and climate change mitigation

The UNDA project on measurement and mitigation of transport sector emissions

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2008 **Call for funds** by the UNECE Transport Division on the UN Development Account (UNDA)

2009 **Project endorsed** by the UN General Assembly

Duration: 3 years (January 2011 – December 2013)

Leading agency: UN ECE (Economic Commission for Europe)

Implementing entities: ECA, ECLAC, ESCAP & ESCWA (other UN Regional Commissions)

2010 **Project document**

Major phases and activities of this three-year project defined

Main objective: enhanced cooperation & planning for sustainable transport

Main focus: capacity building

Target: policy makers and technical experts

Project leveraging on the **development of a modelling tool (called ForFITS)** meant to be freely available for all UN Member States) capable to assist users in the selection of the most appropriate and effective measures to reduce CO₂ emissions in the inland transport sector (including road, rail and inland waterways)

2011 Project launched

Tasks and responsibilities of UNECE and other Regional Commissions defined in **ToR**
Development and distribution of a **questionnaire** to provide inputs for the preparation of a *global status report*, containing a review on existing statistical data, policy measures and assessment tools concerning CO₂ emissions in transport

2012 International Expert Meeting (IEM) (April) to disseminate information, share experiences, identify possible synergies with other stakeholders

Peer-review workshop to discuss the draft *global status report* and to give feedback on a **draft methodology** of the ForFITS tool (April)

Finalisation of the *global status report* (October)

Release of the **prototype version of ForFITS** (December)

2013 Release of the **advanced prototype of ForFITS** (2nd quarter)

Development of a **user manual** (also containing methodological information) (2nd and 3rd quarter)

Finalization of the ForFITS model (Summer)

Application in pilots, awareness-raising, capacity-building and training workshops (3rd and 4th quarter)



ForFITS

Model requirements

Key requirements

Allow the estimation/assessment of emissions in transport
Allow the evaluation of transport policies for CO₂ emission mitigation

Convert information on transport activity into fuel consumption and CO₂ emission estimates considering the influence of the demographic and socio-economic context, including policy inputs

Be developed as a software tool

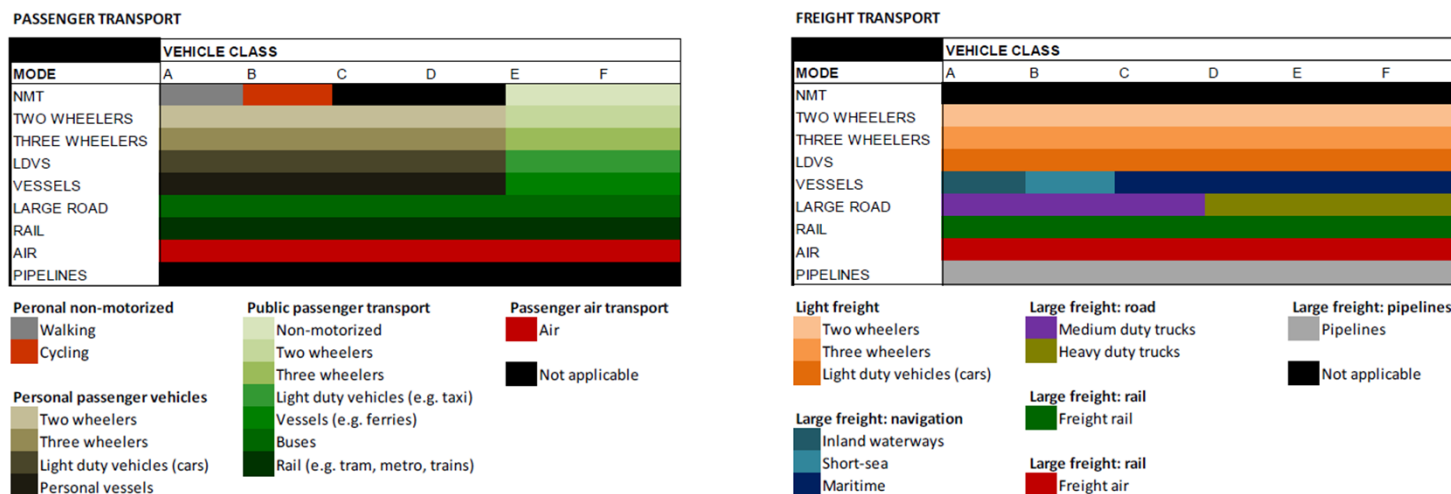
Be freely available for users (e.g. national and local governments, general public)

Be developed between 2011 and 2013

Sectoral model (focused on inland transport only): we do not expect it to target the evaluation of overall effects on the economic growth

ForFITS model Coverage

- Passenger and freight transport **services**
- Two different **areas** (e.g. to define the transport systems: urban, non-urban, non-spec.)
- Nine transport **modes**: non-motorized transport, two wheelers, three wheelers, light road vehicles, medium and heavy road vehicles, rail, navigation (inland, short-sea and deep-sea/martime), air and pipelines
- Different vehicle subsets within each mode (organized in six **vehicle classes** – A to F) (figures)



- 31 **powertrain technologies** (e.g. internal combustion engines, hydraulic hybrids, electric hybrids, plug-ins, fuel cell, electric)
- 10 **fuel blends**, some of which are associated with specific modes and/or powertrains

A wide set of default data are included in the ForFITS Excel file

These default data are used to characterizing several parameters of the ForFITS model

They concern the following input categories:

M Data absolutely required

Corresponding to the minimum data requirements

A Inputs expected to be introduced by the user

The default value in ForFITS is for guidance only

This category includes policy inputs that allow exploring different scenarios

B Input containing technical information (e.g. technological potential and costs by powertrain)

These data may be maintained unchanged

The defaults are set on the basis of research activities involving literature reviews and statistical analyses (further information on this is provided in the relevant section of the ForFITS manual)

C Inputs on structural characteristics of the model

Unless the users acquired significant experience with the model, these inputs shall not be modified: changes to these inputs will result in significant modifications to the model behaviour

Who may be interested in using ForFITS?

- Someone willing to understand the transport system he is concerned about (typically a geographical region), its impacts in terms of energy consumption and CO₂ emissions
- Someone having access to a sufficient amount of statistical information
- Someone having some degree of specific competence (transport, transport policies, energy policies, environmental policies)
- Someone having sufficient financial means to support his/her ambitions
- Someone from...
 - a national administration and/or a local government
 - an Inter-Governmental Organization
 - a Non-Governmental Organization
 - an Academic institution and/or a consulting company
 - the industry sector (company/corporation, industry association)

Beyond the project

ForFITS was conceived with the primary objective to evaluate contextually transport activity, energy consumption and CO₂ emissions

- Local, national, international applications possible
- Flexible with respect to data needs

The application of ForFITS can leverage on existing information, increasing the value already generated by their collection

ForFITS has the potential to become an important asset for the UN and its Member Countries

The UNECE Transport Division seeking stakeholders interested in the establishment solutions providing opportunities to maintain and further develop the model



Links and contact information

Links

Project web page

http://www.unece.org/trans/theme_forfits.html

User manual, including methodological information

http://www.unece.org/trans/forfits_user_manual.html

Contact information

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