

PROJECT

ECOSTAND

ECOSTAND - Coordination Action for creating a common assessment methodology and joint research agenda with Japan and the USA on ITS applications focusing on energy efficiency and CO2 reduction

Funding: European (7th RTD Framework Programme)

Duration: Nov 2010 - Oct 2013

Status: Complete with results

Total project cost: €864,378

EU contribution: €720,000



Call for proposal: FP7-ICT-2009-6

[CORDIS RCN : 97443](#)

Background & policy context:

In current policies and research frameworks of the European Union, considerable emphasis is placed upon the environmental impacts of road transport and the promotion of measures which can help to reduce these impacts. One of the primary concerns is climate change and therefore, reducing emissions of CO₂ and other greenhouse gases.

Policy makers in Europe, Japan and the USA share a conviction that the application of information and communication technology (ICT) in the field of transport, commonly referred to as Intelligent Transport Systems (ITS), can make a significant contribution to improving energy efficiency and reducing CO₂ emissions.

Growing numbers of so-called "Green ITS" applications and services are currently being developed. These are specifically designed to reduce emissions or other environmental impacts. Nevertheless, many intelligent transport systems developed with other primary objectives (e.g. improving traffic efficiency or enhancing safety) may also have an impact on emissions.

If future ITS investments and policy decisions are to be made on the basis of sound and detailed knowledge, then it will be essential to understand which applications are the most effective at reducing CO₂ emissions, and in which context (and combination) they have the most beneficial effect.

Different assessment methodologies and models are in use in different countries and regions, but this renders the comparison difficult of results from different studies and hampers decision making. A standard international assessment methodology would ensure that knowledge on ITS impacts is acquired using a rigorous, systematic approach.

Objectives:

The overall objectives of ECOSTAND are to provide the necessary support to permit the agreement on a common methodology for assessing the effects of ITS on energy consumption and CO₂ emissions. This will enable future ITS investments and policy decisions to be made on the basis of sound and detailed knowledge of their environmental impacts.

ECOSTAND favours a continuous dialogue between the EU, Japan and USA on the assessment of ITS, permitting a high quality EU contribution to the definition of a joint research agenda and an agreed assessment methodology and actively stimulating cooperation between the three regions.

Furthermore, ECOSTAND will stimulate the exchange of information on state-of-the-art modelling techniques and simulation tools, and will promote the definition of a common agenda for future research in this area.

Methodology:

The project will involve a three-step-process, beginning with a short preparation phase, followed by two rounds of symposiums and ending with a joint technical report. In the preparation phase a review of best practice will be carried out, together with a relationship-building exercise in order to ensure the attendance and cooperation of key experts at the symposiums.

In each round of symposiums three events will be organised, with one in each of the main regions covered by this project (the EU, Japan, and the USA). Each round of the symposiums will culminate in the production of a separate Policy Advice Report. The theme of the first Report will be Preliminary Findings and Research Agenda and the theme of the second Report will be Road Map and Recommendations. The final output of the project will be the EU contribution to a Joint Technical Report with Japan and the USA.

Parent Programmes:

[FP7-ICT - Information and Communication Technologies](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek Tno

Address:

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Organisation Website:

<http://www.tno.nl>

EU Contribution: €96,376

Partner Organisations:

Transport & Mobility Leuven

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Organisation Website:

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EU Contribution: €84,530

Trl Limited

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Organisation Website:

<http://www.trl.co.uk>

EU Contribution: €89,131

Ptv Planung Transport Verkehr Ag

Address:

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Germany

Organisation Website:

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EU Contribution: €85,332

Swarco Mizar Srl**Address:**

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Institut National De La Recherche Sur Les Transports Et Leur Securite**Address:**

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EU Contribution: €0

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EU Contribution: €106,351

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Organisation Website:

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EU Contribution: €89,542

Peek Traffic B.v.**Address:**

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Netherlands

EU Contribution: €84,209

Technologies:

Information systems
Sustainable urban mobility planning

Development phase: Research/Invention

Key Results:

The study does not yet demonstrate any final results, as it is still ongoing. However, since the start of the project three symposiums have already been held:

First ECOSTAND Symposium

The first symposium took place in Vienna, Austria from 30 June - 1 of July 2011. This ITS Energy Symposium involved presentations of example projects on the assessment of ITS from the three regions and a discussion on the types of models being used. The sub-topics were discussed in a bilateral session between the Japanese & the European experts. The main focus of discussions at this first symposium was on the different ITS applications that are used in the various regions and the reference situation that needs to be used for further cooperation. The understanding of the different approaches in emission modelling was also improved and this subject was further investigated at the next meeting.

Second ECOSTAND Symposium

The second symposium took place in Orlando, USA on 20 October 2011. The symposium addressed the aspects discussed in the Vienna 2011 symposium. The progress was reviewed and the next steps were identified. The first part of the symposium focused on the preparation of the joint technical report. Part of this technical report is the framework which is needed to assess the suitability of ITS applications and their respective types of models. The aim was to reach agreement on the categorisation of ITS applications and the reference models. The second part of the symposium involved break-out groups focusing on the three most important topics at this stage; traffic modelling, emission modelling and validation.

Third ECOSTAND Symposium

The third symposium was held in Washington, USA on 24-25 January 2012. The reference models of the three European-proposed application categories (i.e. energy efficient Intersection Control, eco-routing for commercial fleets and eco-driving) were presented, including challenges such as: human and engine behaviour modelling cooperative systems and penetration learning effect details of traffic control algorithms. All parties agreed that positive and negative effects expected for these applications as well as other issues should be included in the reference models, and will use the proposed single shared syntax for all future descriptions. Examples of validation methodologies in Europe and Japan were presented. The use of probe data and its connection to CO2 emissions was discussed in the context of a common validat

Strategy targets

- An efficient and integrated mobility system
- Innovating for the future: technology and behaviour

Documents:

 [Inception report and state-of-the-art review \(Other project deliverable\)](#)

Cooperative, connected and automated transport, Other

STRIA Roadmaps: specified

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Digitalisation, Societal/Economic issues

Geo-spatial type: Other