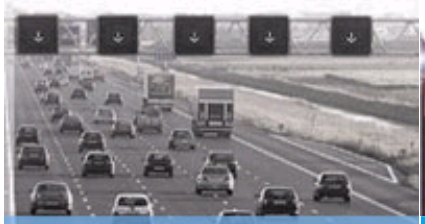


European Journal of Transport and Infrastructure Research
(ISSN 1567-7141)

Journal information
Editorial board
Back issues
Instructions to authors
Search EJTIR

EJTIR Alert service
Subscribe to the EJTIR Alert service

print deze pagina

Land-use/transport Interaction Models as Tools for Sustainability Impact Assessment of Transport Investments: Review and Research Perspectives

Karst T. Geurs* and Bert van Wee**

*Netherlands Environmental Assessment Agency, National Institute for Public Health and the Environment
Bilthoven
The Netherlands
Email: karst.geurs@rivm.nl

**Faculty of Technology, Policy and Management
Delft University of Technology
Delft
The Netherlands

Full text pdf

Abstract

Interest in the appraisal of the sustainability impacts of transport policies has grown the last few years, expressing the need for a balanced treatment of economic, environmental and social impacts. This paper represents a first step in creating a framework for Sustainability Impact Assessments; it will also review operational land-use/transport interaction models as assessment tools. An in-depth analysis of the potential impacts of land-use and transport policies, and scenarios, on the economy, society and the environment will present new challenges to land-use/transport interaction models. The first challenge is related to modelling behaviour: i.e. the model should estimate land-use, transport and accessibility impacts in a theoretically sound and consonant manner, and consistently link the full set of (long-term) land-use and (short-term) travel-behavioural responses to these policies. The second challenge is to improve methodologies to (better) include the wider (macro-)economic effects and the passive values. The third challenge is to generate more knowledge for understanding ecological and social impacts, and for the development of related indicators and methodologies to calculate them. A fourth, and final, challenge is related to the presentation and integration of the sustainability impacts, not only including the economic, ecological and social impacts, but also finding the 'right' balance between them. Although recent model developments facilitate a far more comprehensive analysis than is common practice today, there is certainly a need for theoretical and practical research for conducting Sustainability Impact Assessments of land use and transport policies and scenarios.

Key words: sustainability impacts, transport policy appraisal, land-use/transport interaction model

Received: August 2003
Accepted: June 2004

This article has appeared on paper in: European Journal of Transport and Infrastructure Research, Vol. 4, No 3 (2004), pp. 333-355.