



TOP TEN

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Category: Road

Country: Belgium

Research Area 2: Green Mobility and Decarbonisation

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Modelling an Integrated Approach for Policy Evaluation towards Sustainable Mobility Adaptation

The increasing number of cars on the roads and the variety of new mobility options resulting from innovative technologies together with the disruptive potential from shared services all have major policy implications. This project aims to study the effectiveness of behavioural intervention policies to encourage car users to replace private vehicles with shared mobility facilities and sustainable alternative fuels. The potential air quality impact of these changes will later be calculated using CO-PERT emission estimation software. An integrated transport-emissions model is developed, which will estimate emissions from private transportation and their environmental impacts by combining a discrete-continuous model (vehicle quantity, vehicle type and vintage, kilometres travelled) with COPERT and Open life cycle analysis software. This model will be developed and validated using mobility data in Belgium. Different mobility policies and regulation scenarios will be studied with the developed model to better understand the chain between changes in household vehicle composition and usage to air quality and environmental impacts. The model will estimate the emissions on a sample of households and behavioural factors based on household choices of number, type and usage of cars. The innovative aspect of the project is the effects forecast of various mobility policies, combined with their environmental and health impact assessment. The results will be useful for improving the evaluation of environmental impacts and localisation of polluting emissions linked to household mobility, while facilitating urban air quality and environmental policy interventions.

