Tradable driving rights: an effective travel demand management tool for maintaining accessibility and sustainability (435-12-212)

Funding: National (Netherlands)
Duration: Jun 2013 - May 2017
Status: Complete

Objectives:
This proposal will focus on urban travel demand management methodologies and propose the strategies of managing transport network mobility and reducing congestion and emissions with tradable driving rights (TDRs). Methodological developments are focused on the analyses of travel decisions of individuals under implementation of TDR schemes, traffic flow modelling and algorithms design and the mechanism of market under TDRs. Social and spatial equities in the multiple user-classes (with different values of time) network models with TDRs are further discussed, and sustainable transport system with TDRs are designed and case studies will be implemented in typical areas of Beijing of China and typical cities in the Netherlands with support of transport management departments of local governments. Currently, it has carried out a license plate based restriction in the urban areas of Beijing, which can be considered as a simple version for the TDR scheme.

This proposal will extend the effectiveness of the license plate based restriction with the introduction of the term of “tradability”. Therefore, innovative and interoperable travel demand management strategies will be brought, which will also bring low carbon futures by improving the efficiency of vehicle use. This proposal will bring many open and potential value avenues of further studies, and provide a sustainable transport development patterns responding the needs of citizens and supporting transport policy development.

Parent Programmes:
NWO - The Netherlands Organisation for Scientific Research (NWO)

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STRIA Roadmaps: Smart mobility and services
Transport mode: Road transport
Transport sectors: Passenger transport, Freight transport
Transport policies: Societal/Economic issues
Geo-spatial type: Other