scatter	*Sprawling cities and transport: from evaluation to recommendations*	

Dear colleague,

this mail is to keep you informed about the European Commission co-founded research project SCATTER.

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Newsletter n. 1 - February 2003

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1. General presentation

This is the first newsletter of the Scatter research project. The project is part of the "City of Tomorrow and Cultural Heritage" Key Action of the European Commission EESD (Energy, Environment and Sustainable Development) Fifth Framework Programme and started in January 2002.

The aim of the SCATTER project is to analyse the mechanisms and effects of urban sprawl, to quantitatively evaluate measures aiming to control the phenomenon and to provide practical recommendations and guidelines to local authorities on how to design efficient policies to tackle urban sprawl,

especially in the case of cities implementing new suburban public transport services.

The partners involved are STRATEC sa (Belgium), the Centre for Advanced Spatial Analysis CASA – University College London (United-Kingdom), Steinbeis Transfer Centre Applied System Analysis - STASA GmbH (Germany), LT Consultants Ltd (Finland), Trasporti e Territorio - TRT Srl (Italy), the *Centre d'Etudes sur les Réseaux, les Transports, l'Urbanisme et les Constructions publiques* - CERTU (France), the *Centre d'Etudes Techniques de l'Equipement de l'Ouest* - CETE de l'Ouest (France), and STRAFICA Ltd (Finland). The Commission project officer is Eric Ponthieu (DG Research).

2. Project objectives

Urban sprawl is widespread in Europe. In a growing number of cities, population and employment in central areas is declining while increasing rapidly in suburban and peripheral areas. This induces a high level of car use and, usually, congestion on roads with access to city centres. To limit the damage caused by urban sprawl in terms of congestion, air pollution and energy consumption, many European cities are implementing (or planning to implement) suburban public transport services, such as heavy or light rail.

But by improving accessibility, they create an incentive for a new wave of urban sprawl. Therefore, in parallel with these new public transport services, accompanying measures have to be elaborated and implemented, in order to prevent, mitigate and control the sprawl phenomenon.

The SCATTER project tackles the issue in which land use and transport are closely mixed. The key aim of the project is to promote sustainable development. In addressing transport, land-use and environment in an urban context, SCATTER covers the most important threats to the well-being of the majority of European citizens.

More information about the project can be found on the website: http://www.casa.ucl.ac.uk/scatter/

3. Overall methodology

The approach followed consists in :

· *first stage* : improving the understanding of the mechanisms of sprawl and its effects. This first stage includes (i) a state-of-the-art review of urban sprawl effects, (ii) a systemic analysis of urban sprawl on the basis of interviews of experts and local/regional authorities in 6 case cities (Bristol, Brussels, Helsinki, Milan, Rennes, Stuttgart), and (iii) a statistical analysis of time series data in these 6 cities;

· *second stage* : reviewing and assessing policy measures aiming to wrestle urban sprawl. This second stage includes (i) a review of policies, including policies experienced in the USA, (ii) a critical analysis of institutional barriers and solutions, (iii) a quantitative assessment of the efficiency of policies (as regards the control of urban sprawl), on the basis of simulations carried out with land-use/transport integrated models, in 3 case cities (Brussels, Helsinki, Stuttgart);

· *third stage*: setting up recommendations for local and regional authorities. Three tasks will be carried out in this third stage: (i) provide general recommendations to European cities faced with urban sprawl; (ii) design an "urban sprawl monitoring tool" intended for local/regional authorities; (iii) set up a practical programme of policy measures for the 6 case cities.

Currently, the first stage has been finished. Results from the interviews and from the statistical analysis in the 6 cities are available now. The review of policies is in progress.

4. Urban Sprawl: State of the Art Review

The first deliverable of the project - D1 "State of the Art Review of Urban Sprawl Impacts and Measurement Techniques" - was approved by the Commission services and is now available on the project web site.

Urban sprawl is a multi-dimensional phenomenon, and hence, requests a multi-dimensional definition. The main dimensions constituting "urban sprawl" are discussed in this report : low density, uncoordinated growth, variety of urban forms, spatial segregation of land uses, etc. Also negative and positive effects of sprawl are listed and discussed, including the effects on urban structure, built forms, economy, social aspects, transport (mobility and accessibility), environment (energy consumption, pollutant emissions, etc.).

(click here to download D1)

5. System Analysis of Urban Sprawl by Experts

This is the second deliverable produced by the Scatter project - D2 "System Analysis of Urban Sprawl by Experts, in the case cities" - and approved by the Commission.

It discusses about the qualitative analysis of the phenomenon.

The purpose of this report is to detect and understand the context in which urban sprawl occurred, the mechanisms involved, the effect that urban sprawl had on transport and environment, the relevance of sprawl on decisional agenda of local authorities and the actual role of planning interventions. A common interview canvas was designed to reach this aim, and local experts in land-use and transport planning as well as local authorities have been interviewed. This analysis was performed on the six case cities of Bristol, Brussels, Helsinki, Milan, Stuttgart and Rennes (24 interviews at all).

Some common factors emerged in the 6 case cities and were analysed, related to the perception of the causes, the level of awareness regarding urban sprawl, and the awareness of institutional barriers to the implementation of policies.

(click here to download D2)

6. Statistical Analysis in the case cities

A third deliverable – D3 "Statistical analysis in the case cities" about the quantitative analysis of the phenomenon is on approval by the Commission. The objective of this task was to define statistical indicators to identify and quantify urban sprawl, and to apply this analysis framework to the 6 case cities. The developed statistical framework consists of:

- a specially designed generalised shift-share analysis;
- a new concentration measure, called H- measure;
- the application of local spatial autocorrelation statistics;
- as well as the interpretation of classical measures and some basic indicators shown on maps.

The document presents a statistical analysis, for each case city, of the features and effects of urban sprawl, based on time-series data.

7. Work in progress

Currently, 2 tasks are in progress: (i) first, a review of all types of policies which could contribute to control urban sprawl : transport policies, legal and regulatory land use measures, land use plans and schemes, tax and pricing policies, urban design strategies, housing policies; (ii) a critical analysis of institutional barriers and innovative ways of cooperation between institutions and players.

Many thanks for your attention,

The SCATTER consortium