

# asset

ASsessing SENSitiveness to Transport



[www.asset-eu.org](http://www.asset-eu.org)

## ASSET Newsletter 3

September 2009

Mapping of Transport Sensitive Areas

### Introduction

The aim of the research reported on in this newsletter is to support the identification and mapping of transport sensitive areas in a pan-European context within the ASSET project. The general aim of ASSET, co-funded under the 6<sup>th</sup> European Research Framework Programme, is to analyse potential policy instruments for the protection of Transport Sensitive Areas (TSAs) and their applicability to different TSA categories. In previous newsletters, see <http://www.asset-eu.org>, we reported on our work to develop a working definition and indicators for TSAs and on extraordinary policy measures for different types of TSAs with examples from case studies. This newsletter reports on the results of the identification and mapping of transport sensitive areas which are documented in the Deliverable 3. All project results and deliverables can be downloaded from our website (<http://www.asset-eu.org>).

**Final Conference:** The ASSET final conference will be held on October 21<sup>st</sup> in Brussels and will present the project results, case studies and the functionalities of the WebGIS tool. Policy conclusions will be drawn and discussed.

Participation is free but limited, and places will be assigned on a first come-first served basis. Upon explicit request, we can consider the possibility of refunding participation expenditures. Should you wish to attend, please contact Irina for more details. ([irachieru@isis-it.com](mailto:irachieru@isis-it.com))

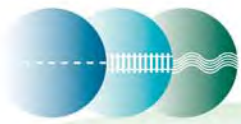
### Review Definition of Transport Sensitive Areas

A transport sensitive area (TSA) is an area where the presence of a transport route deteriorates the quality of the area clearly more than the presence of the same transport route in another area because the local impacts caused are particularly high. This occurs where either the vulnerability of the environment against transport impacts is particularly high (= environmentally sensitive areas, SAs) or where a transport activity produces exceptionally high pressures due to local circumstances like meteorological or topographic conditions (= transport affected areas, TAAs). In our first newsletter, we reported on our work to develop such a set of criteria and indicators for identifying TSAs. We considered all modes of transport and assessed these against selected sensitivity measures. Finally we identified different types of TSA. These were categorized in terms of effects relating to: noise pollution, air pollution, accidents and infrastructure.

### Mapping Overview

The focus of the mapping work in ASSET is to analyse, demonstrate and visualise the spatial implication of impacts from transport activities in relationship to the distribution of sensitive areas. Hot-spots are highlighted as places where areas of high impact coincide with areas of high sensitivity. It is important to remember that the assessment of sensitivity to impacts from transport should be seen as a screening tool, targeted at providing an overview at coarse level and envisaging pan-European coverage. The resulting tools for mapping TSAs has been implemented as a WebGIS tool which can be accessed from the menu on our web site or directly under:

**Final Link to mapping tool: <http://www.asset-eu.org/>**



## Indicator Mapping

To create maps identifying TSA, a review of the indicators developed in WP2 was undertaken, in the light of availability of comprehensive and harmonised map data for the area of the European Union. The criteria and thresholds for sensitive areas are used to produce maps of the SAs, TAAs and TSAs for Europe. This visualises the consequences of the definitions of different thresholds (for policy makers) and highlights hotspots and areas of specific conflicts. The initial step in constructing maps of TSAs is to create single indicator maps regarding sensitive areas (SA) and transport affected areas (TAA). The indicators for which maps are available are:

### Sensitive Areas

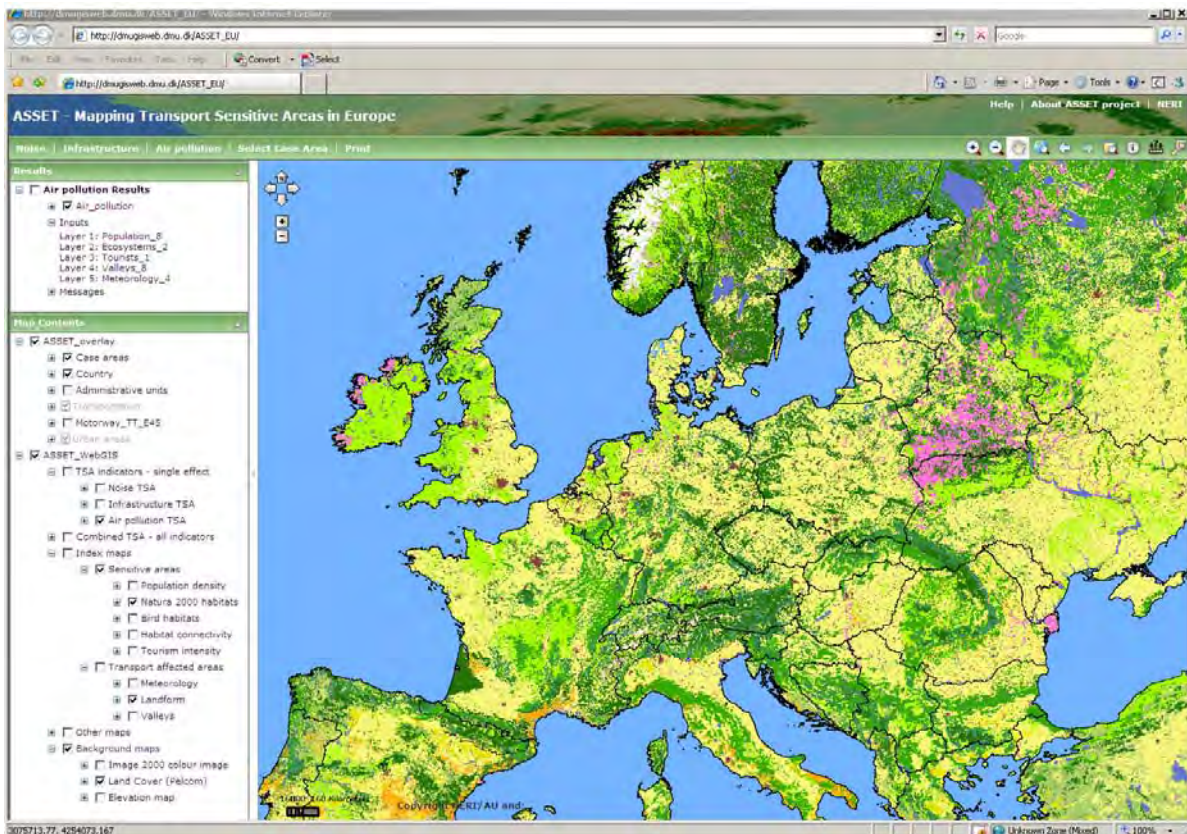
- Population density
- Natura 2000 habitats
- Bird habitats
- Habitat connectivity
- Tourism intensity

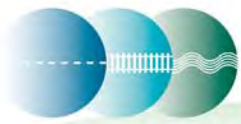
### Transport Affected Areas

- Meteorology
- Landform
- Valleys

## Mapping Transport Sensitive Areas

To create maps of transport sensitive areas (TSA), indicator maps reflecting sensitive areas (SA) and transport affected areas (TAA) have been combined, by adding indicator maps reflecting continuous values like population density, distance etc. This approach leads to single indicator maps displaying sensitive or not sensitive areas as well as enabling assessment of degrees of sensitivity. Furthermore, the user can use the interactive mapping tools for creating combinations of indicator maps according to their own priorities.



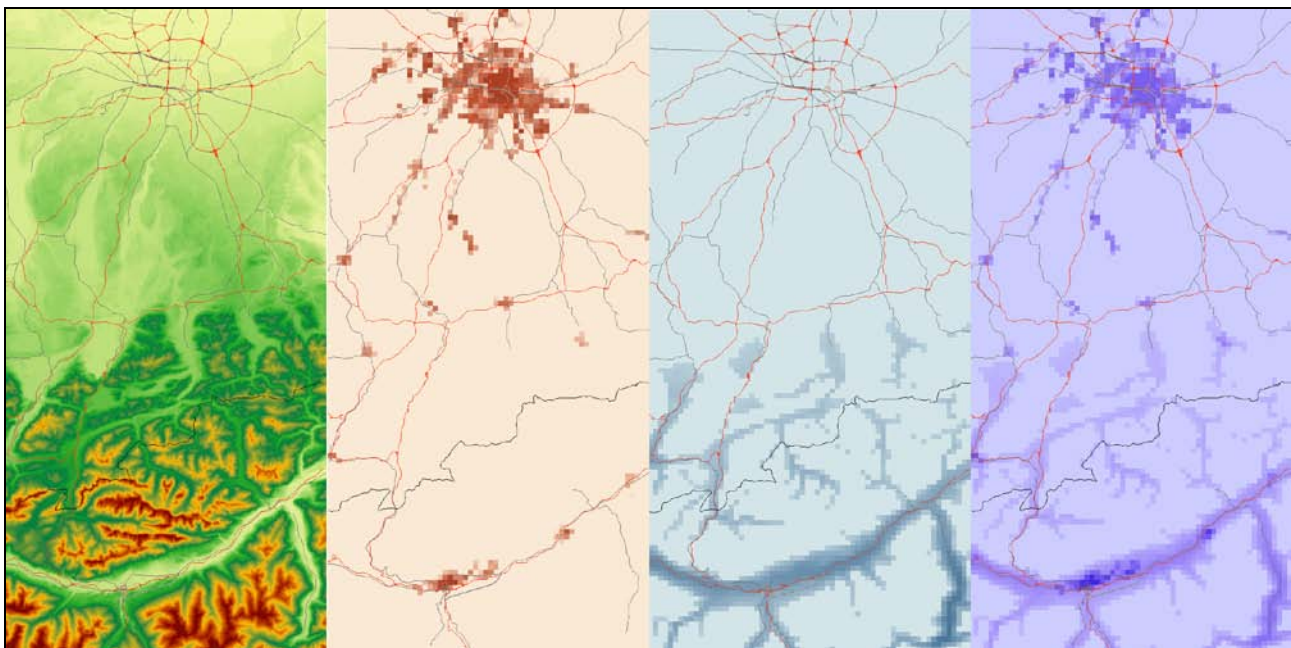


## Using the WebGIS tool

The map below depicts an example produced for the area between Munich to the North and the Alps around Innsbruck to the South, using the interactive map combination and print functions of the WebGIS tool. All maps are overlaid by transportation network of main roads and railway lines. The interactive map compilation tools can be found in the upper left part of the window, just below the header image. Furthermore, a help facility explaining all features in detail is available in the uppermost right corner.

### Images from left to right show

- Elevation map,
- Sensitivity due to population density,
- Potential higher pressure due to valleys in the alpine region,
- TSA as combination computed by adding maps of population density and valleys.



## Deliverables (all available from the ASSET website ([www.asset-eu.org](http://www.asset-eu.org)))

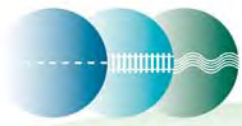
Deliverable 1: Sessa C., Enei R., Siegele J., Scholz A. (2008) ASSET (Assessing Sensitiveness to Transport) D1: Definition of transport sensitive areas and classification. Rome

Deliverable 2: Lieb, C., Suter, S. Sánchez, A., Mateos, M. Ohlau, K., Sieber, N., Munier, B., Jensen, S. S., Hansen, K. M. (2008) ASSET (Assessing Sensitiveness to Transport) D2: Identification and assessment of sensitiveness, Bern

Deliverable 3: Munier, B, Hansen, K., Fuglsang, M., Viuf, P., Martin, B., Ortega, E., Mancebo, S., Arce, R., Sieber, N., Ohlau, K., (2008) ASSET (Assessing Sensitiveness to Transport) D3: Mapping of Transport Sensitive Areas. Copenhagen.

Deliverable 4: Gühnemann, A., Kimble, M., Chernyav'ska, L., Scholz, A., Siegele, J., Enei, R., Ohlau, K., Sieber, N., Ramos, B., Dostal, I., Dufek, J., Monigl, J., Berki, Z., Lieb, C., (2009) ASSET (Assessing Sensitiveness to Transport) D4: Analysing Policy Instruments. Leeds

Deliverable 5: Niklas Sieber (ed), Katrin Ohlau, IER et al (2009). ASSET (Assessing Sensitiveness to Transport) Description of the Results of the Case Studies, Stuttgart



## Consortium

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### Imprint

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