

## Sustainability impact assessment: tools for environmental, social and economic effects of multifunctional land use in European regions (SENSOR) -

The Integrated Project SENSOR aims to produce Sustainability Impact Assessment Tools (SIATs) that will be used to predict the impacts of European land-use policies. SENSOR's SIATs will be delivered to the European Commission (EC) and will be used as part of the Impact Assessment (IA) process, as set out in the Impact Assessment Guidelines by the European Commission. The principal focus of the project is the development of a computer-based SIAT, defined as a knowledge-based model that integrates a range of *ex-ante* model results to assess the impacts of user-defined European policy scenarios. Module 7 of the project, coordinated by Forest Research's Social and Economic Research Group, carries out end-user and institutional analysis, the analysis of sustainability issues in European regions, and has developed a 'Framework for Participatory Impact Assessment' (FoPIA) to complement the model-based SIAT.



### Background

To ensure the accuracy, relevance and uptake of the SIATs produced by SENSOR, Module 7 partners are engaged in a range of research activities at European and case study levels:

- end-user analysis – to determine end-user requirements for the SIATs
- institutional analysis – to analyse the institutional environment in which the SIATs will operate
- regional analysis – to analyse sustainability issues in case study areas to ensure adequate sensitivity in the design of SIATs and to develop stakeholder-inclusive methods for assessing the local impacts of policies, as a complement to the model-based analyses of impacts on the European scale

### Objectives

This research aimed to:

- contribute to the design and delivery of SIATs through a targeted programme of social scientific research involving stakeholders at European and regional scales

- develop participatory approaches to land-use related IA that can be used to assess the local and regional impacts of European policies

### Methods

Research at European level (end-user and institutional analysis) involves semi-structured interviewing, stakeholder workshops and meetings with individuals and groups from among policy makers and decision makers in Brussels.

Research at regional level entails background profiling of sustainability issues, involving desk-based research and semi-structured interviews with key stakeholders. The implementation of the FoPIA involves the phased application of a range of methods, including:

- semi-structured interviews with key national and regional policy stakeholders to analyse policy implementation and potential land-use change impacts
- stakeholder workshops involving the qualitative and quantitative analysis of criteria, indicators and sustainability limits

## Findings -

The end-users were identified by the EC as its desk officers in Brussels engaged in the IA process. Analysis has identified three levels of applicability for Impact Analysis tools:

- superficial: a tool at this level does not require reprogramming and works for a wide range of policies; it could be used immediately by trained desk officers
- intermediate: this level requires approximately two months' work to programme and run the tool for a particular policy area
- strategic: at this level the tool is being developed and programmed for one or more policy areas and used over successive years to contribute at particular points in the development of specific policies

In fact, desk officers are likely to contract out analysis involving complex modelling, often through the EC's in-house research facility, the Institute for Prospective

Technical Studies (IPTS), at Ispra and Seville. Further work in Seville has examined the use of IA tools by IPTS.

At a regional level, the analysis of sustainability issues resulted in profile reports for all case study areas (Eisenwurzen, Malta, Silesia, Western Estonia, the High Tatras, Valais and Lusatia). Building on the outputs of this profiling work, the FoPIA was implemented to assess the impacts of bioenergy policy (in Silesia, Lusatia and the High Tatras) and biodiversity policy (in Malta and Western Estonia). This process not only yielded Sustainability Impact Assessments for two policy cases, but also demonstrated the ethical and instrumental value of participatory approaches to IA. As such, project partners were able to commend the FoPIA to the European Commission as a powerful method for stakeholder-inclusive sustainability impact assessment of land-use policies in European regions.

## Recommendations

More than 200 IAs are currently carried out by the EC annually, often on a very tight time schedule, therefore the scope for complex analysis is limited. Modelling studies at IPTS can evolve over time through informal studies not linked to specific IAs and therefore not bound by their timescales, and this is likely to be the way in which IA tools develop. Tools that are complex, and conceal assumptions that can be criticised by an external expert, will present a political hazard during the political negotiations surrounding the construction of an IA.

Research in case study areas has clearly demonstrated the need to complement the analysis of policy impacts at the European scale with regional-level analyses. The development and implementation of the FoPIA, for example, has shown how the involvement of regional stakeholders can improve both the accuracy and the legitimacy of IA. In particular, the assessment of sustainability criteria as a dimension of the IA process has shown how sustainability priorities experienced at the political periphery can usefully inform policy design at the political centre.

### Partners

The Module 7 partners are: Forest Research (UK), MacAulay Institute (UK), Brandenburg University of Technology Cottbus (DE), Cemagref (FR), Wageningen University (NL), Malta Environment and Planning Authority (MT), Tartu University (EE), Aberdeen University (UK), Humboldt University (DE).

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### Reports and publications

Deliverable report 7.2.1: Report on institutional analysis for SIA use by policy makers.

Deliverable report 7.2.2: Report on framework and methods for institutional design and recommended participatory processes for policy makers.

Deliverable report 7.3.1: Sustainability issues in 'sensitive area case studies' identified through case study profiles.

Deliverable report 7.4.1: Recommendations for Sustainability Impact Assessment based on stakeholder-inclusive analysis of policy cases in sensitive area case studies. -

Deliverable report 7.4.2: Final report on stakeholder-inclusive SIAT validation. -

Deliverable report 7.4.3: Report on EC level testing of SIAT outputs. -

Helming, K., Perez-Soba, M. and Tabbush, P. (eds) (2008). *Sustainability Impact Assessment of Land Use Changes*. Springer, Berlin. -

Morris, J., Camilleri, M. and Moncada, S. (2008). *Key sustainability issues in European sensitive areas – a participatory approach*. In Helming, K., Perez-Soba, M. and Tabbush, P. (eds) *Sustainability Impact Assessment of Land Use Changes*. 451–470. Springer, Berlin. -

Deliverable reports available on request. -