

Agriculture, Forestry and Land Use - WP4

Methods and Tools for Integrated Sustainability Assessment



Overview

Agriculture and forestry are increasingly a major concern in the context of sustainable development. As an economic sector they are responsible for providing vital necessities out of seemingly finite resources in a world of ever increasing population. Furthermore they employ relatively vulnerable sections of the population that are either protected at considerable cost in most developed countries or are subject to considerable risk of hardship in most of the developing world. Beyond these pressing general considerations, land use is a considerable economic activity in its own right that impacts on a wide range of other issues. Notable among these is the issue of climate change where alternative land uses have differential impacts in contributing to greenhouse gas emissions but also offer opportunities for abatement as sinks or by providing alternative renewable energy sources (biomass, bio-liquid fuels etc). Agriculture and forestry also have a major impact on the natural environment by making demands on scarce land and water resources and by affecting biodiversity.

Objectives

The objective of the research is to develop and apply a methodology for carrying out ISA in the agriculture, forestry, land-use sector. It builds on projections based both on business-as-usual scenarios (unsustainable) and on clusters of policies that are designed to enhance sustainability. Its ultimate aim is to enable the performance of integrated policy assessment that, while keeping agriculture, forestry and land use as the focal point both in terms of policies and objectives, also addresses wider concerns in the fields of the economy, the environment, ecosystems, sustainable energy systems and transport etc.

Activities

- Identification of relevant measurable SD target indicators in all domains analysed
- Definition of agriculture/forestry/land-use (AFLU) policy instruments
- Construction of integrated baseline scenario using extended AFLU models, as well as other modified models (see WP8)
- Risk assessment associated with baseline. The stochastic model developed in WP8 will be calibrated to reproduce expected values consistent with the integrated baseline and used to carry out probabilistic assessment on key variables

About the MATISSE project

MATISSE aims to achieve a step-wise advance in Integrated Sustainability Assessment (ISA) of EU policies. The core activity of MATISSE is to improve the tools available for conducting Integrated Sustainability Assessments. The case studies provide the real-world contexts within which the ISA methodology and tools can be assessed. Stakeholders have a central role within ISA.

What is ISA?

Integrated Sustainability Assessment (ISA) is a cyclical, participatory process of scoping, envisioning, experimenting, and learning through which a shared interpretation of sustainability for a specific context is developed and applied in an integrated manner, in order to explore solutions to persistent problems of unsustainable development.

Other Briefing Sheets

- Conceptual framework for ISA
- Current Use of ISA Policies and Tools
- Dematerialisation Case Study
- Water Case Study
- Environmental Technologies Case Study
- Using and Improving Existing ISA Tools
- Developing New ISA Tools
- Dissemination

- Policy scenario analysis using the different models and taking the baseline as a reference
- Integrated policy assessment using the tool developed in WP8. This task also involves the participation of stakeholders from the European Commission and other bodies practising sustainable development policy exploration particularly in the AFLU area. The experimenting stage of the ISA depends to a large extent on responses from such stakeholders

Products

- A state-of-the-art review of sustainability concerns in the AFLU area and a set of measurable sustainability indicators
- An analysis of current policies in the domain of AFLU and the identification of policy instruments designed to improve sustainability
- Integrated baseline scenario involving the use of the whole suite of models
- Risk assessment associated with the baseline and a data set with appropriate software enabling "a la carte" risk analysis
- Policy analysis scenarios emphasising sustainability impacts and costs
- Integrated policy exploration with emphasis on pay-offs between objectives and associated policy mixes

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MATISSE



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Find more information at www.matisse-project.net



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