

Sustainable or not? The roles and limitations of user involvement in setting reference levels for indicators via computerized tools

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Key requirements of computerised tools for impact assessment are that they must be open, generic and transparent. Selected examples are SIAT, SEAMLESS-IF, EURuralis. SEAMLESS-IF operationalizes a set of sustainability indicators for the assessment and comparison of ex-ante agricultural and environmental policy options. SIAT analyses the impact of user defined land use related policy options on regional sustainability issues. EURuralis is a toolbox with data and models on four major scenarios designed to support interactive discussions and decision making on the future of rural areas in the EU27. In order to interpret indicators and assess the impact of different policy options on the sustainability of agricultural systems, adequate reference levels are crucial. It has been proven that the involvement of participatory groups is essential in developing the integrated tools. Furthermore, the computerised tools are built in a way that they enable interactive visualisation of sustainability indicators. Furthermore, by allowing users some choice in terms of indicator selection, particular metrics that are components of the overall sustainable development concept can be isolated and examined. The paper starts with a review of the approaches used to establish reference levels for indicators followed by a discussion on the role of institutions in setting reference levels via legislation as well as societal pressure. The paper provides

illustrations from selected tools on the possibility of interactive visualizations of indicators of sustainability. It concludes with a discussion on (a) how additional flexibility can be introduced by allowing users to define weighting factors in so-called composite indicators of sustainability (where economic, social and environmental dimensions are integrated into an index-number) with a cautionary note on the statistical limitations of permitting different weights within a composite index and (b) the applicability of such frameworks to situations outside of Europe for example in sustainability studies in developing countries (www.lupis.eu).

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