Flexible decision support for sustainable development: the SUSTAIN framework model -
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Sustainable transport planning necessitates a rethinking of traditional decision making. This is conventionally supported by
cost-benefit analysis (CBA) that systematically quantifies and compares the various benefits and costs generated by a
transportation project or policy. Generally, CBA has been found less useful for the handling and assessment of multiple,
often conflicting objectives or criteria like environmental or social issues intrinsically difficult to quantify. Therefore, it is
necessary to broaden the decision making process beyond merely economic factors. The Danish research project on
Sustainable National Transport Planning (SUSTAIN 2012-2016) seeks, among other things, to develop a flexible decision
support model (tool) to include and assess sustainability planning criteria in a socio-economic framework, which makes up
the SUSTAIN Framework Model (SFM). The SFM comprises two parts, namely a process part consisting of stakeholder
involvement and an analytical tools part consisting of an Excel-based software model. The latter employs the use of CBA,
multi-criteria decision analysis and risk analysis techniques enabling the assessment of non-quantifiable impacts within a
decision support context. The concept of a planning workshop is introduced as relevant for dealing with the various
strategic elements not included in the CBA. Moreover, SUSTAIN is rooted in cross-disciplinary sustainability research that
recognises that a transition towards sustainability must involve normative, analytical and strategic considerations to be
successful. The paper concludes that the SFM can contribute to the analytical dimension. Thus, the framework model
allows for the appraisal of planning criteria (indicator sets) in a socio-economic appraisal setting for national sustainable
transport planning which enhances both the concept and principles of sustainable development while at the same time it
provides a flexible decisionsupport tool for policy-makers.

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