

Supporting Decision Making at the Regional Scale;
An approach to put soil information in a stakeholder context

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Decision making at the regional level requires information that includes tradeoffs between different economic and environmental objectives. Soil evaluation at the regional scale has nowadays moved beyond the stage of static representations in terms of suitabilities to the stage of scenario development. Agronomic simulation models used for these scenarios can potentially be linked to other economic and environmental models. For an effective communication of these scenarios to stakeholders, indicators need to be identified that condense the information in quantifiable measures. Examples are the concentration of agrochemicals in the groundwater, economic returns or the degree of soil erosion.

Stoorvogel et al. (2004) presented a methodology for an integrated analysis of tradeoffs between economic and environmental indicators. This Tradeoff Analysis Methodology, in which agronomic, environmental and economic models were linked, has now been applied in different regions all over the world. Outcomes of the analyses have been presented in tradeoff curves, risk diagrams or maps and have been discussed with stakeholders.

Evidently, the Tradeoff Methodology itself is also subject to tradeoffs with respect to the use of financial resources and the quality of the outcome. Financial and data constraints ask for decisions that need to be made such as selecting the appropriate models and the need for additional surveying. These decisions need to be evaluated with respect to the questions that are asked by policy makers and regional representatives.

The TOA methodology uses data on soils, climate and socio-economic parameters. For soil data, Minimum Data (MD) approaches have been developed that closely approximate approaches in which elaborate techniques are used. We have implemented an MD approach for the different regional studies and have found these to be well applicable in some cases. We will present a transparent step-wise approach to assist in deciding whether an MD approach is potentially suitable.

- Stoorvogel, J.J., Antle, J.M., Crissman, C.C. and Bowen, W., 2004. The Tradeoff Analysis Model: Integrated Bio-Physical and Economic Modeling of Agricultural Production Systems. *Agricultural Systems*, 80: 43-66.
- www.tradeoffs.nl