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Stream valleys and the coast, a reconnaissance soil-landscape analysis

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The Council of Earth Sciences of the KNAW, the Royal Dutch Academy of Art and Sciences, started in 2008 a working group to discuss the low awareness of Dutch geoheritage and the operationalization of the geodiversity concept for modern sustainable spatial planning. More than forty earth scientists participated in the workgroup. Both authors of this poster were part of the organizing committee. The development of a new planning tool, based on the seven soil functions of the EU Soil Directive (2006) was proposed for a modern multi-functional and sustainable approach towards spatial planning.

For reconnaissance purposes, two simplified examples were developed to illustrate the possibilities of the approach. The coastal example became part of the report, the stream valley example was never published. Both examples are presented in a short cross-table format on this poster. The Dutch stream valleys first were divided into five valley types according to present land-use and management. Next, it was recorded how each valley type performed on each of the seven EU soil functions. The results show that the majority of the stream valleys, probably more than 90 %, are mono-functional and directed at high agricultural production, which has an adverse effect on all the other soil functions in the area (and areas and waters outside the valley area studied).

Along the coast the importance of the beach as a sea defence buffer and an economic tourism asset clearly showed. This is of course nothing new, but in spatial planning the economic role of tourism and especially the important role of the beach in sea defence are normally overlooked. The cross-tables of the EU soil functions show to be a good and simple tool to promote insight and discussion towards a more sustainable and multi-functional landuse.

The KNAW report was presented to the Minister of the Environment in 2009, with the recommendation that the approach needed further development. Due to political shifts and government reorganisation the functional soil-landscape approach of the EU Soil Directive still awaits further development. In the meantime investments in technical mono-functional sustainable land management solutions prevail. Also present-day scientists prefer to work on mono-functional soil-landscape issues, urged by the need to publish in peer reviewed articles and by the fact that research programmes sponsored by the government address mono-issued problems.

Literature

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