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Abstract book

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The EcoVisie decision support system tool for ecosystem management in Flanders

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EcoVisie is developed in a collaboration between AMINAL (Environment, Nature, Land and Water Management Administration), the Institute of Nature Conservation and the Research Institute for Knowledge Systems (The Netherlands). It is part of the Environment Policy program of the Flemish government, under the theme 'Loss of Biodiversity'. Creating larger units of nature and increasing the total nature area by means of nature development in floodplains are policy options for the near future. Four steps can be distinguished.

1. The exploration of the potential of floodplains for the development of nature under different abiotic boundary conditions;
2. The experimentation with, and elaboration of a vision for nature in which the highest possible value for nature should be achieved under the given social preconditions;
3. The socio-economic and environmental evaluation, in which the vision for nature is weighted against the other spatial functions in the area;
4. The factual implementation of the visions in the area.

The present version of EcoVisie provides most of its support in step 2. The instrument is to be used in the preparation and evaluation of visions relative to the development of ecosystems in floodplains, based on abiotic conditions, zoning constraints, and management options. The visions for ecosystems are formulated from the nature's point of view. It combines spatial information relative to the abiotic, environmental, zoning, and management constraints into a single map in a fully iterative and interactive manner. In the course of the exercise, this map evolves to become the ecosystem-vision of the area. The evaluation of the final vision, and the consequences of different choices for actions are translated into a number of indicators displayed on maps or presented in the form of tables. Indicators include: management costs, management subsidies, ecological value, value perceived by humans, number of species, type of species, distribution of species, etc.

The main function of the DSS system is analysis: the system carries out complex, technical calculations, and visualizes and compares the results. For the policy maker and the manager of the area also its communication function is of great importance: the system presents the visions in the form of maps and thus brings them across to the public in an attempt to gain support, possibly in interactive sessions.

The Decision Support System EcoVisie is generic and can be used for Flemish valleys and indeed for any other type of natural area for which the required geographical information is available. In the first phase the system is developed for the 'Vallei van de Zwarte Beek'. Moreover, the system is developed in such a way that it can be expanded with other models, including (dynamic) spatial models.