LANDS: Land-use and climate change

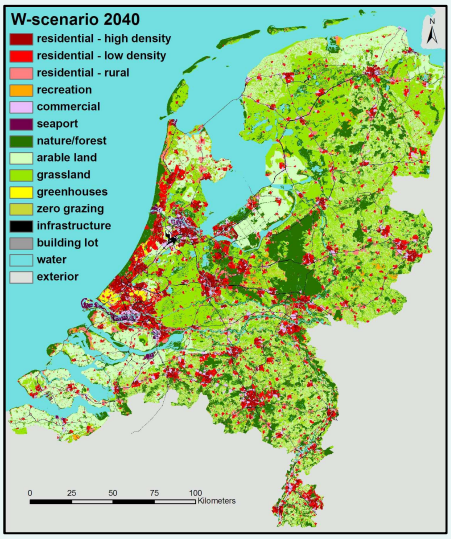
Integration of sector-specific climate adaptation measures with the Land Use Scanner

THE APPROACH

Climatic changes are expected to have important implications for land-use patterns, especially in coastal areas and river basins. In the Netherlands, the research program ‘Climate changes spatial planning’ aims to develop an adequate and timely set of policies for mitigation and adaptation to cope with the impacts of climate change. This is done in a series of related research projects dealing with, for example, climate scenarios, water management and adaptations in agriculture, nature and inland navigation. Within the research program the LANDS project identifies climate-change driven land-use developments and integrates these into balanced national visions and regional solutions.

Important research questions in this respect are:

- which possible changes are to be expected in the Dutch land-use system as a consequence of climatic changes?
- what spatial adaptation and mitigation strategies are to be developed to minimize this potential impact of climate change to the various societal sectors (agriculture, nature, residences)?
- to what extent will the proposed sector-specific adaptation and mitigation measures offer the potential for synergy or conflict at the local level?



MORE INFORMATION

For more information please consult:

www.spinlab.vu.nl/lands or email ekoomen@feweb.vu.nl

THE RESULT

The LANDS project produces the following components to integrate the results from the other projects in the research program:

- a scenario framework, that consistently combines assumptions related to climate, population, economy and society, forms the common ground for the various adaptation- and mitigation measures;
- a detailed, calibrated land-use model that integrates the sector-specific adaptation measures into simulations of future land use;
- a set of indicators and visualisation applications that supports pinpointing the possible synergies and conflicts in (combinations) of land use.

3D-Visualisation in Google Earth

Currently, the project has resulted in a seriously revised version of the Land Use Scanner model that offers an integrated view on all types of land use, dealing with urban, natural and agricultural functions. The model now offers the possibility to use a 100x100 metre grid, covering the land surface of the Netherlands in more than 3 million cells. This resolution comes close to the size of actual building blocks and allows for the use of homogenous cells that describe the single land-use type that dominates a cell.

The LANDS project is carried out a by large group of researchers from many fields of expertise located at the Vrije Universiteit (SPINlab, Institute for Environmental studies and Faculty of Economics), Wageningen University and Research Centre and the Netherlands Environmental Assessment Agency.