



PHOTO SHUTTERSTOCK

New model shows effect of nitrogen deposition on nature

Wageningen Environmental Research has developed a mathematical model to determine the effect of nitrogen deposition on plants and types of vegetation.

Critical deposition values have already been calculated for each type of habitat that is sensitive to nitrogen, such as old oak forests or fen meadows. When nitrogen is deposited there, it causes deterioration in the nature quality. The new model calculations show the speed with which that happens. 'There turn out to be big differences between habitat types and plant species,' says the Wageningen ecologist Wieger Wamelink. The nature in some habitat types also seems to deteriorate before the critical deposition threshold is reached. That is only logical, says Wamelink, as the critical value is an average

and does not refer to the precise response of a particular plant species to nitrogen. Even so, he thinks it is too soon to use the model for policy decisions, for example about agriculture in a certain nature area. The model is not yet good enough for that, as was shown by a check using field data collected by the research centre B-Ware. Wamelink will therefore spend the next three years doing follow-up studies. 'We have already included the effect of temperature, precipitation and soil type in our model but we want to add factors like nature management.'

Info: wieger.wamelink@wur.nl