



Model predicts future for nature

A new model created by WUR scientists calculates how climate change and nitrogen will affect nature areas as habitats.

Models for this kind of forecasting already exist. 'But they usually only reckon with the changing climate,' says ecologist Wieger Wamelink, first author of the article. 'We are combining climate change with nitrogen deposition. And our model is based on field observations.'

Wamelink and his colleagues took a large number of plants in Europe and correlated their presence in an area with environmental variables in that

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area. Between them, these variables determine the chances of a species occurring.

This produced a formula with which developments in nature areas can be forecast.

Wamelink did this for two nature areas in the Netherlands. The result provides few surprises. The more nitrogen is deposited, the less suitable an area is for typical species for the habitat.

What *is* surprising is that climate change has hardly any effect. 'The biggest effect is caused by nitrogen,' says Wamelink. Actually, climate change can even increase biodiversity a bit. But he warns against optimism. 'We have used a moderate climate scenario, in which precipitation increases. In reality, it's been getting drier in recent years. And hotter. Then you lose a lot of species.' RK