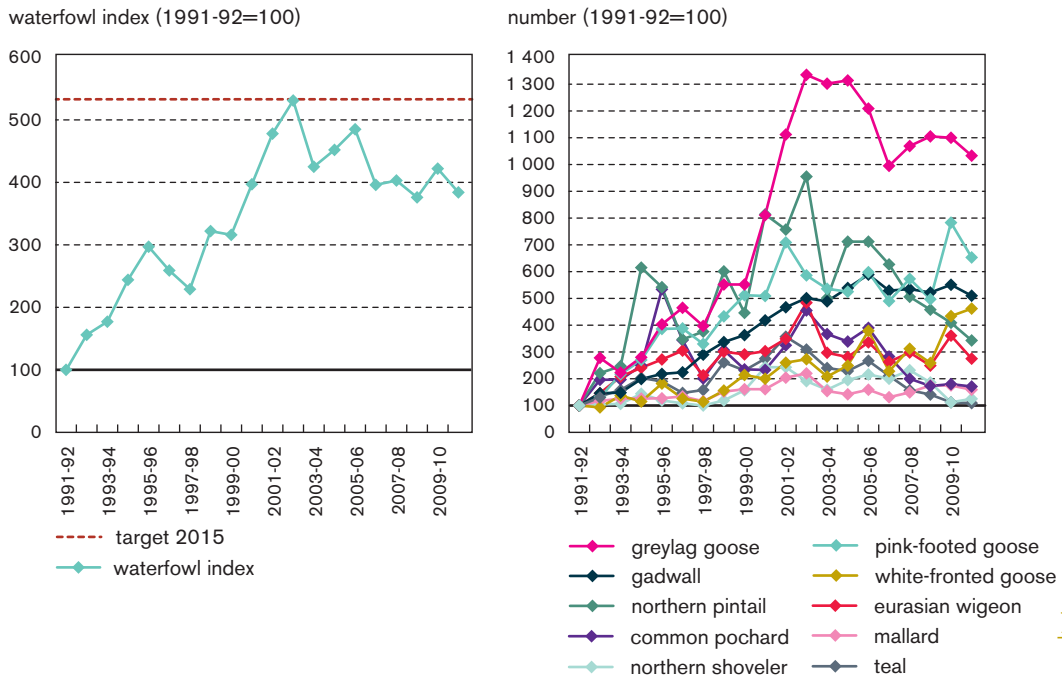
☹ Index of overwintering waterfowl

PACT 2020 DPSIR



Source: Natuurindicatoren 2012, INBO, www.biodiversityindicators.be

Increasing trend since 1991 but slight decrease since 2005

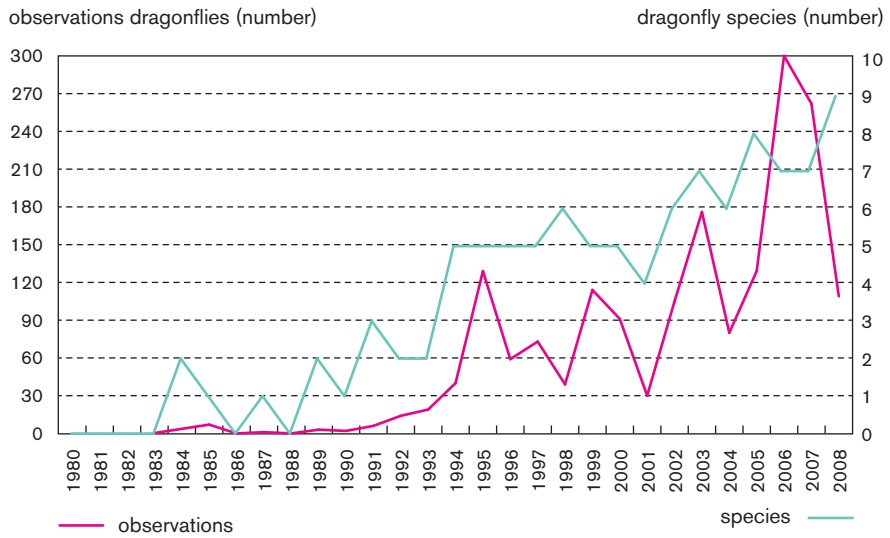
The index of overwintering waterfowl is based on the change in the number of the 10 most important species of geese and ducks in Flanders (determined on the basis of six mid-monthly counts per winter).

The number of waterfowl has increased by a factor of five between the winter of 1991-1992 and the winter of 2002-2003. Thereafter a slight decreasing trend established itself that is, however, not the same for all species (ranging from stable to a decrease). With an index figure of 384 in 2012, 78 % of the plan target for MINA plan 4 (2011-2015) has been achieved. This target is to improve the state of endangered and protected species groups by 10 % in 2015 compared to 2005-2006.

The trend for waterfowl in Flanders is a combined effect of the developments at Northwest European level and of regional and local factors. In Northwest Europe nearly all species of geese and duck have increased during the past 20 to 30 years. This is a consequence, on the one hand, of a better protection of species and wetlands, and on the other of an increased availability of food. After an increase lasting for years, a levelling out or reversal of this positive trend has been noticeable more recently for a large number of species. Furthermore, the trends in Flanders are at least partly determined by local changes in, amongst other things, water quality, human activities and nature management and development. These factors can have a large influence on the capacity of areas for waterfowl, mainly via changes in the food supply (as found recently along the Zeeschelde). Climate change may also play an increasing role in regional changes in numbers and distribution.

☹ Trends in Southern European dragonfly species

DPSIR



Source: Natuurindicatoren 2012, INBO, www.biodiversityindicators.be

Impact of climate change on nature

In Flanders, there is growing evidence of the current impact of climate change on nature. Some migratory birds are arriving earlier from the south. Some butterflies and dragonflies fly earlier in the season and their flight period also lasts longer.

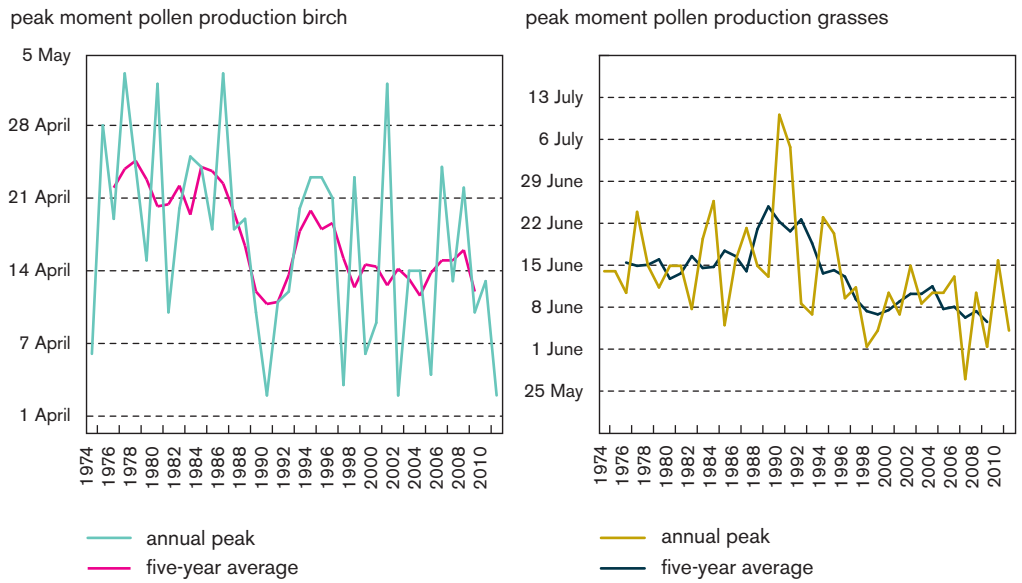
There are spatial as well as temporal shifts. Southern and South-eastern species extend to the North. This is also the case for different species of dragonflies. The main distribution area for these species is in Mediterranean Europe and even further away in Africa and Asia. No populations of these species came to Northwest Europe until 1990. The figure shows the evolution in the number of observations of nine species of dragonfly and the number of Southern dragonfly species since 1980.

Despite annual fluctuations, the graph shows how since the early 1990s the number of observations for all species is gradually increasing. The annual fluctuations are often due to weather conditions (persistent bad or good weather during the mid-May to end-August period), which translates directly into the number of observations. In 2006, the number of observations was the highest since records began. Some species, such as the fire dragonfly and the damselfly, which used to be just nomads here, have now established a number of populations in Flanders.

As well as this increase in species richness, whether temporary or permanent, there has been a decrease in other species in Flanders caused, for example, by the temporary drying up of meres, their breeding habitat. This can bring about changes in the species community, with less selective species increasing, and species with high demands in terms of the quality of their habitat decreasing and being likely to disappear from Flanders.

😐 Peak moment for pollen production in birch and grasses

DPSIR



Source: Natuurindicatoren 2012, INBO, www.biodiversityindicators.be

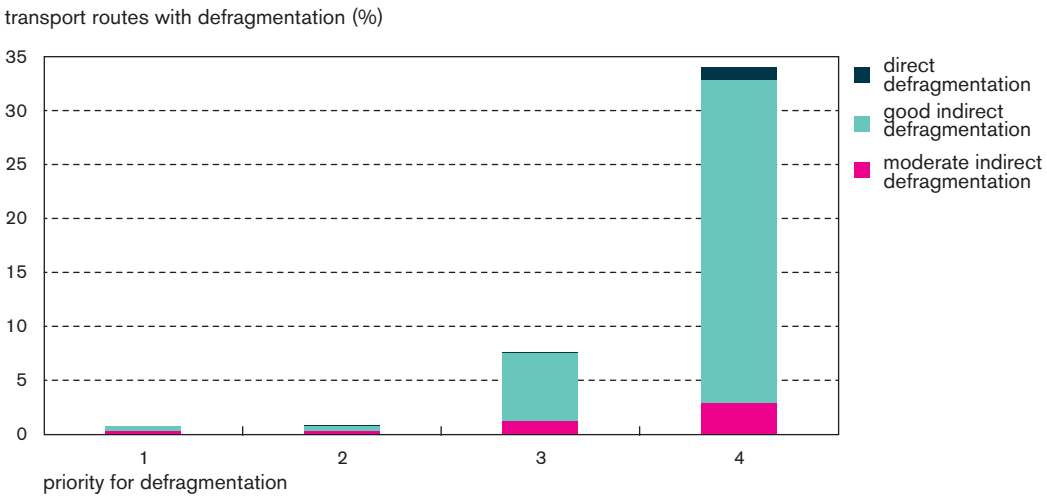
Impact of climate change on nature

This indicator considers the evolution of the peak moment for pollen production in birch and various kinds of grasses. Since 1974, the Scientific Institute for Public Health has measured the concentration of pollen from birch and different grasses in the air at Uccle. This is the day with the highest value (= peak moment) for pollen from birch and grasses plotted over time. The figure shows clearly that large annual fluctuations are occurring.

The trend for the five-year average for birch seems to indicate a clear advance occurring over the years. The peak for birch appears to fall during 1975-1985 at around 21 April, while it was more than a week earlier between 1995 and 2011. The peak has remained much the same over the past 10 years. The trend for the five-year average for grass species also seems to indicate a clear advance occurring over the years. The peak falls around 8 June during 1975-1985, while it was a week earlier between 1995 and 2011. The statistical trend shows that in the period 1974-2011 the annual peak for both birch and the grass species advances by one day every three years.

Defragmentation along Flemish transport routes

DPSIR



Source: Natuurindicatoren 2012, INBO, www.biodiversityindicators.be

Defragmentation still very limited

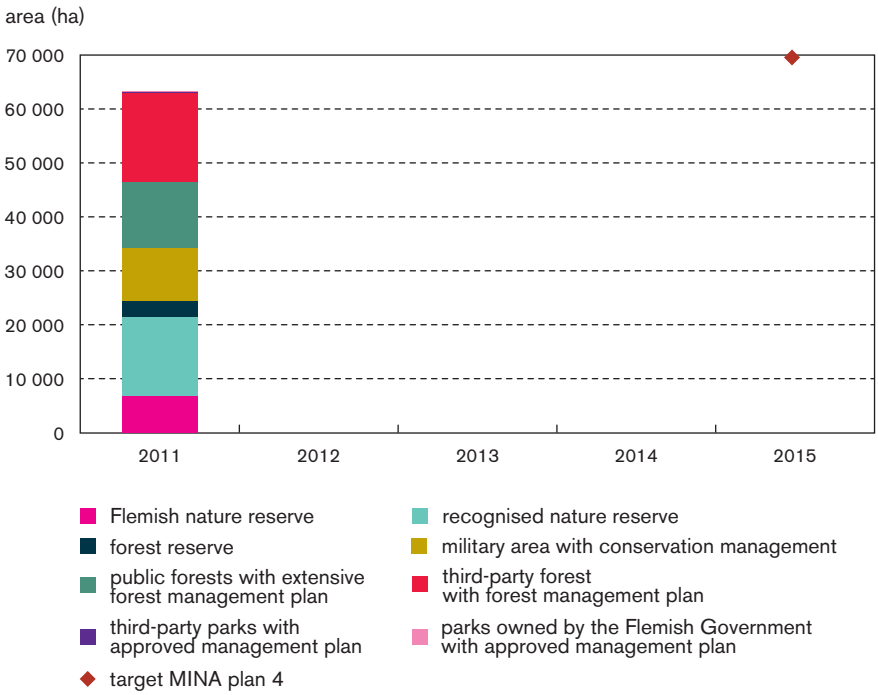
The many transport routes in Flanders are dividing the landscape into ever smaller fragments and causing all manner of problems for nature. The Flemish Agency Roads and Traffic has, as one of its five strategic objectives, the reduction in the damage to the environment and nature, even though mobility is increasing. Through its continuing attention to nature and the environment, the Agency is contributing to the achievement of the MINA plan of the Flemish Government. The avoidance of and reduction in fragmentation by the transport infrastructure plays a very important part. An exact target for the number of kilometres of defragmentation has not yet been defined.

The indicator for defragmentation along transport routes shows the quantity and quality of current defragmentation along Flemish motorways, main roads, secondary roads, connecting roads, railways and canals. The development of the indicator has also seen the adoption of a number of criteria, which reflect the overall quality of existing defragmentation projects: direct defragmentation (= zone for a fauna passage) and medium to good indirect defragmentation (= route with guide grid). This makes it possible to further improve the completed projects on the basis of evaluation.

The indicator shows that the number of kilometres of defragmentation along Flemish roads - places where work is being done on the fragmentation by creating fauna passages – is still very limited. Currently, some 3.6 % of 1 200 km of transport routes with low to very high priority for defragmentation have medium to good defragmentation for a particular group of animals. This is 34 % for the very high priority, 8 % for the high priority and 1 % each for the normal and lower priority transport routes.

Area with conservation management (plan period MINA-plan 4)

PACT 2020 DPSIR



Source: Natuurindicatoren 2012, INBO, www.biodiversityindicators.be

90 % of the plan target achieved

According to the definition in MINA plan 4 (2011-2015), this indicator includes Flemish nature and forest reserves, recognised nature and forest reserves, military areas with a nature protocol, public forests with a management plan approved in accordance with criteria for sustainable forest management, forest belonging to third-parties and having a management plan approved in accordance with criteria for sustainable forest management, and parks belonging to the Flemish Government or third-parties and having a management plan approved in accordance with the principles of harmonic park and green area management. Unlike the indicator in MINA plan 3/3+, this includes only the areas with an approved management plan. Nature areas not yet recognised as nature reserves, managed by non-governmental organisations, are not part of the indicator. At the start of the plan period (2011), the area with effective nature management was 63 329 ha or 90 % of the plan target.

With 26 % the forests owned by third-parties and having an approved management plan, form the largest percentage of this area. Recognised nature reserves also make up a large portion of the area (23 %). These are followed by public forests with a management plan approved in accordance with sustainable forest management criteria (19 %), military areas with a nature protocol (16 %) and Flemish nature reserves (11 %). The number of Flemish nature and forest reserves (5 %) and parks, both public and private domains, with a management plan approved in accordance with the principles of harmonious park and green area management (± 1 %) are limited.