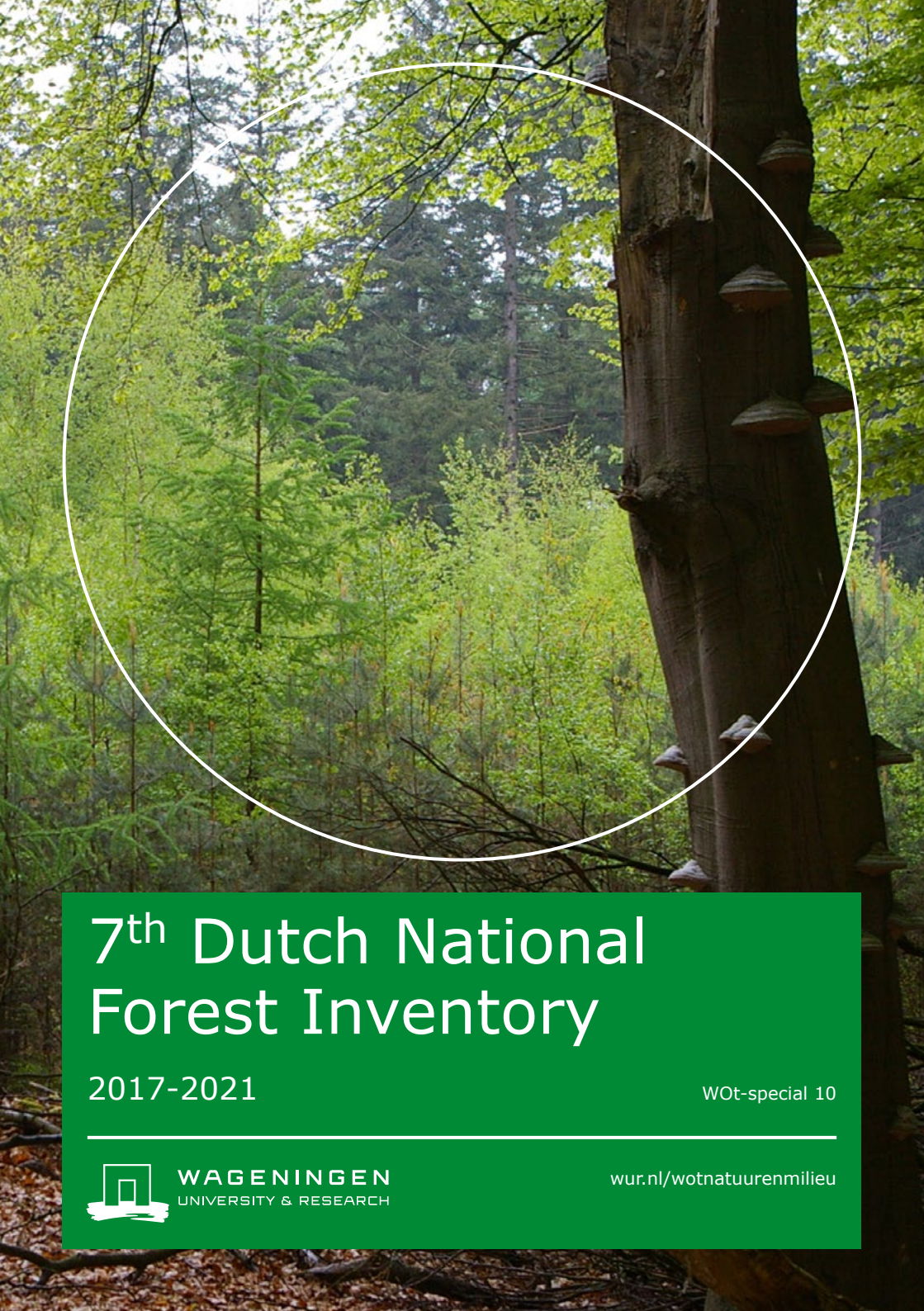


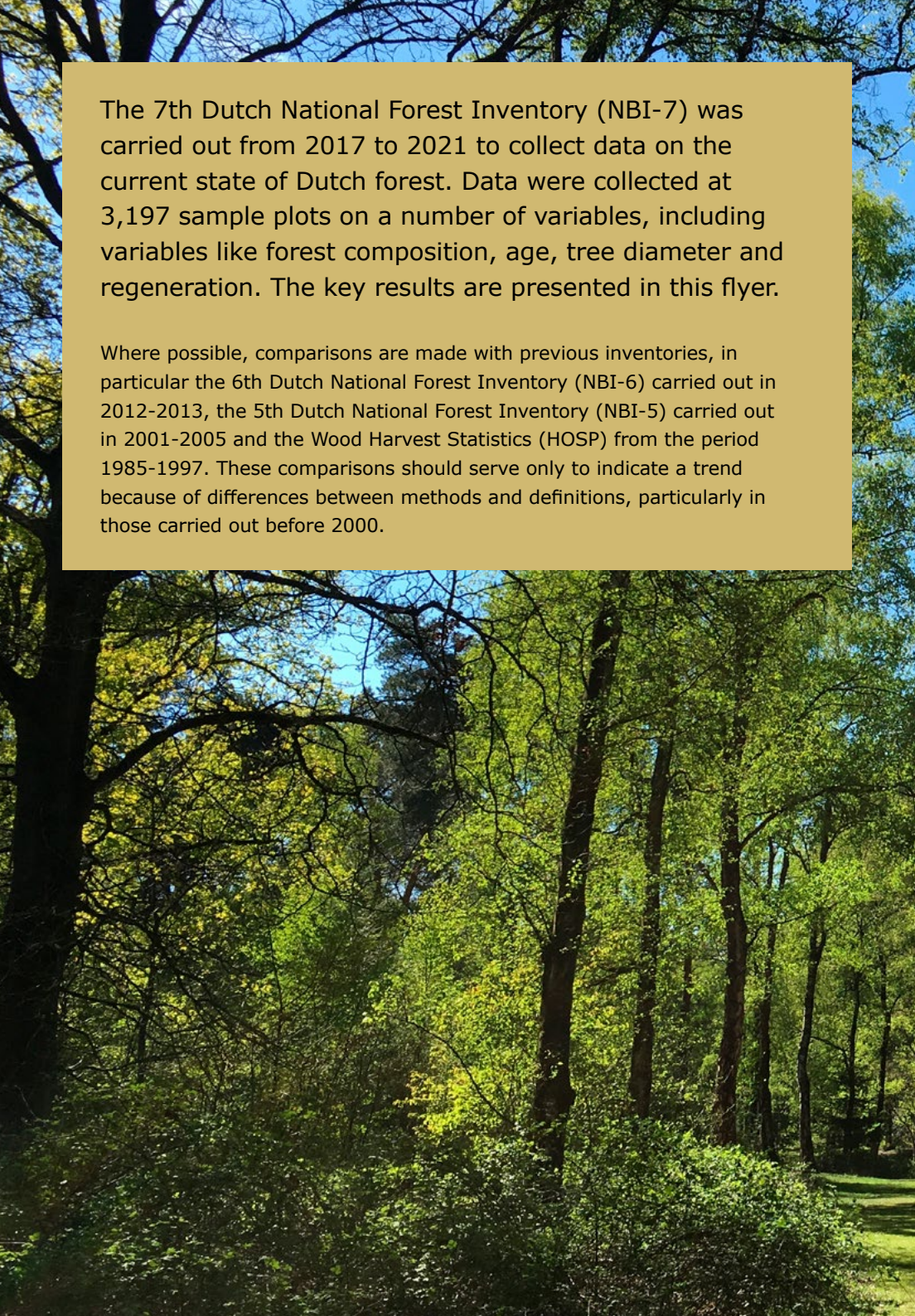
7th Dutch National Forest Inventory

2017-2021

WOt-special 10

WAGENINGEN
UNIVERSITY & RESEARCH

wur.nl/wotnatuurenmilieu



The 7th Dutch National Forest Inventory (NBI-7) was carried out from 2017 to 2021 to collect data on the current state of Dutch forest. Data were collected at 3,197 sample plots on a number of variables, including variables like forest composition, age, tree diameter and regeneration. The key results are presented in this flyer.

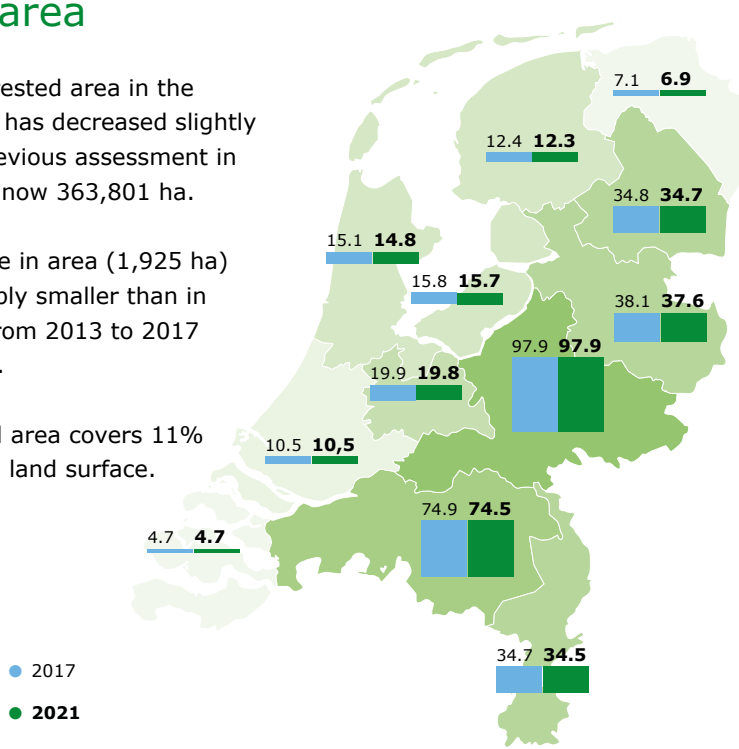
Where possible, comparisons are made with previous inventories, in particular the 6th Dutch National Forest Inventory (NBI-6) carried out in 2012-2013, the 5th Dutch National Forest Inventory (NBI-5) carried out in 2001-2005 and the Wood Harvest Statistics (HOSP) from the period 1985-1997. These comparisons should serve only to indicate a trend because of differences between methods and definitions, particularly in those carried out before 2000.

Forest area

The total forested area in the Netherlands has decreased slightly since the previous assessment in 2017 and is now 363,801 ha.

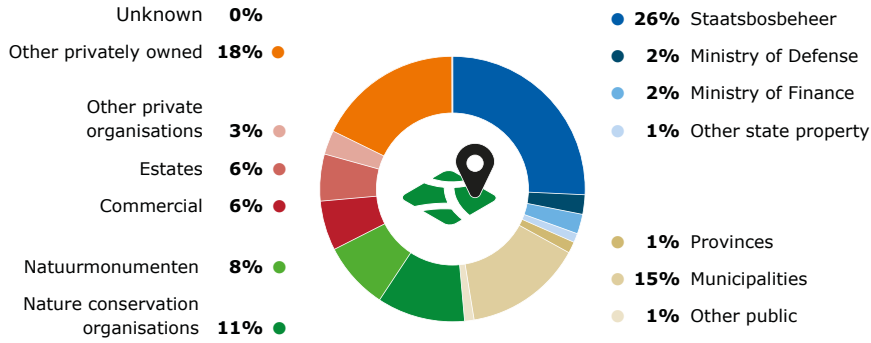
The decrease in area (1,925 ha) is considerably smaller than in the period from 2013 to 2017 (10,186 ha).

The forested area covers 11% of the Dutch land surface.



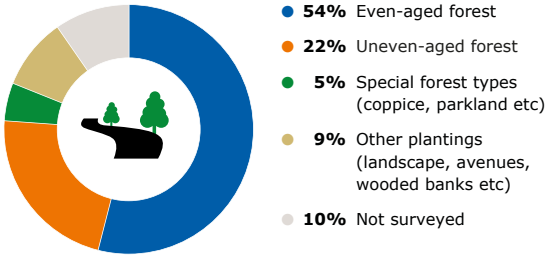
Ownership

The ownership situation has not changed much since the previous inventory. Staatsbosbeheer (the Dutch State Forest Service) remains the largest forest owner, with a share of 26%.



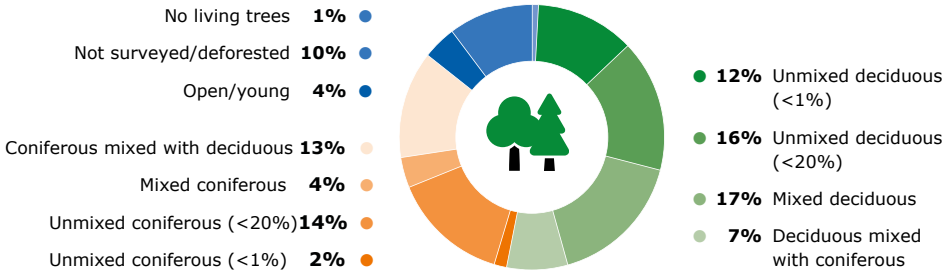
Management type

Over half of the Dutch forested area consists of even-aged stands, although the proportion of uneven-aged stands has increased considerably (from 15% in NBI-6 to 22% now), and the proportion of even-aged stands has decreased (from 61% in NBI-6 to 52% now).



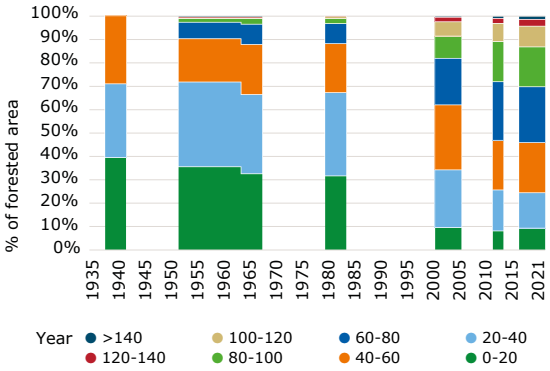
Species composition

Dutch forests are becoming increasingly mixed, at the expense of single-species coniferous stands. For the first time since surveys began, more deciduous than coniferous trees have been recorded.



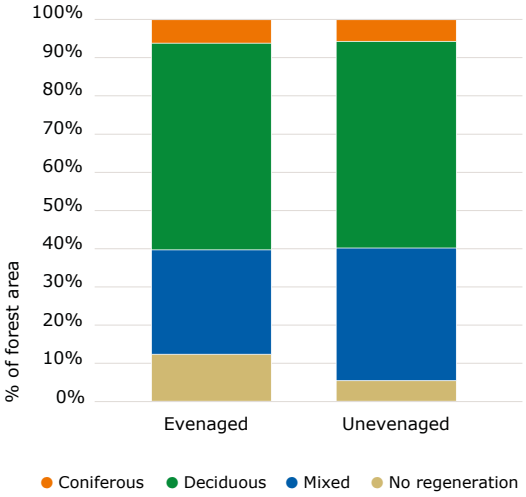
Age

On average, the Dutch forested area has been ageing since the Second World War and large trees are becoming increasingly common. The average age of coniferous stands is now 71 years, while the average age of deciduous stands is 60 years. Since the first forest inventory, held in 1938-1942, the proportion of young stands (<20 years old) has decreased from 40% to 9% now.



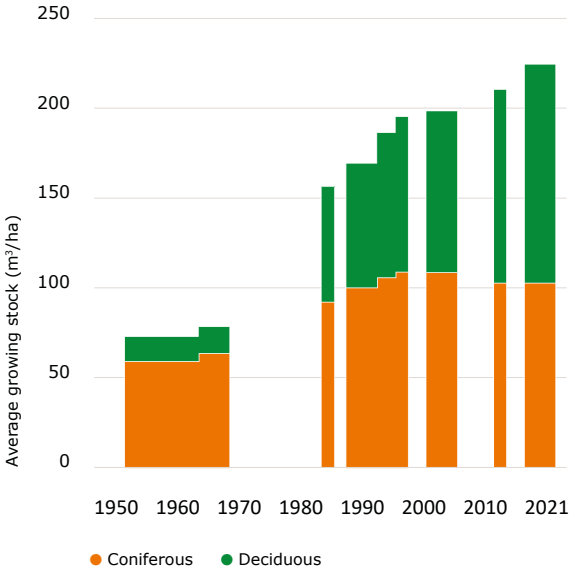
Regeneration

Natural regeneration was also recorded in the NBI-7 (trees with a diameter at breast height of <5 cm, but taller than 50 cm). On most plots regeneration from broadleaved species was found, only on 6% of the plots the regeneration consisted of coniferous species only.
A significant finding was the regeneration of black cherry, an invasive exotic species, on more than a third of the sample plots.



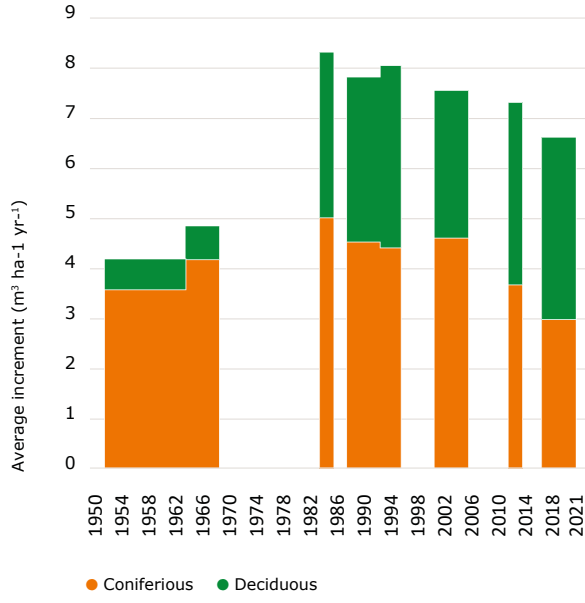
Standing stock

The growing stock volume increased from 198 m3/ha in 2001-2005 to 224 m3/ha in the NBI-7. The amount of standing dead wood increased from 4.6 to 10.0 m3/ha and lying dead wood increased from 5.4 to 9.2 m3/ha.
The proportion of almost all coniferous species in the growing stock decreased, causing the share of coniferous species to decrease from 55% in 2001-2005 to 46% now. An exception to the increase in deciduous species in the growing stock is ash, which is declining due to ash dieback disease.



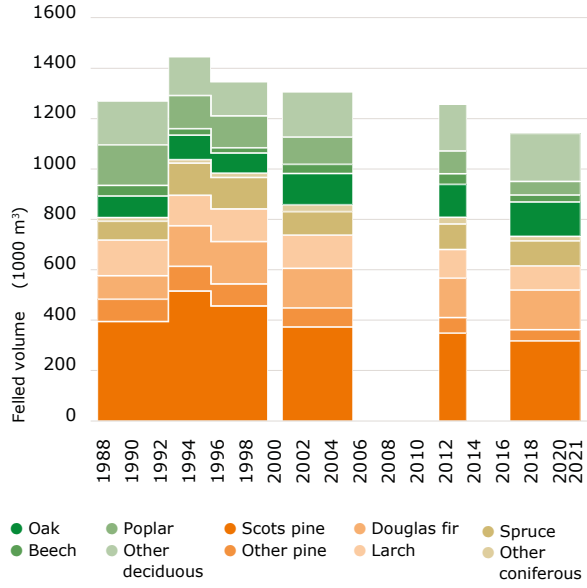
Increment

The average increment decreased slightly from 7.2 m^3 ha^{-1} yr^{-1} in the NBI-6 to 6.6 m^3 m^3 ha^{-1} yr^{-1} in the NBI-7. The decline in Douglas fir and ash is particularly noteworthy. Douglas fir probably suffered from drought stress, while for ash the decline is a direct consequence of ash dieback disease. Other coniferous species also appeared to have been affected by drought, as the increment in coniferous forests decreased from 8.1 m^3 ha^{-1} yr^{-1} in the NBI-6 to 7.0 m^3 ha^{-1} yr^{-1} in the NBI-7.



Harvest

An estimated 1.15 million m^3 wood is felled each year in Dutch forests (from 3.4 m^3 ha^{-1} yr^{-1} in the NBI-6 to 3.1 m^3 ha^{-1} yr^{-1} in the NBI-7). Roughly two-thirds of this volume is felled in coniferous forests and one-third in deciduous forests. In general, deciduous species make up a smaller portion of the felled volume than is to be expected on the basis of the area and increment of deciduous trees. The opposite is true for coniferous species.



About this publication

WOt-special 10 is a publication by the Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu), part of Wageningen University & Research. This publication contains the key results of the 7th Dutch National Forest Inventory. The publication is based on WOT report 142 'Zevende Nederlandse Bosinventarisatie; Methoden en resultaten'.

Publication: WOt special 10, Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu)
Authors: Mart-Jan Schelhaas, Sandra Clerkx & Bas Lerink
Design: Wageningen University & Research, Communication Services
Photography: Jan den Ouden (cover), Shutterstock

p-ISSN 2667-1255 / e-ISSN 2667-1263, DOI: 10.18174/576640,
BAPS-project number: WOT-04-009-046

P.O. Box 47, 6700 AA Wageningen | T +31 317 48 54 71 | E info.wnm@wur.nl

This publication can be downloaded free of charge from www.doi.org/10.18174/576640 and via www.wur.nl/wotnatuurenmilieu

The WOt specials series is published by the Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu), part of Wageningen University & Research. WOt specials contain the results of research in a form that is readily accessible to the target group. They pay particular attention to the social debate that is the reason for the research and within which it takes place and to the policy relevance and potential scientific relevance of the results. Research by the Statutory Research Tasks Unit for Nature & the Environment is financed by the Ministry of Agriculture, Nature and Food Quality (LNV). WOt-special 10 was produced in conformity with the Statutory Research Tasks Unit for Nature & the Environment Quality Management System.

The mission of the Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu) is to carry out statutory research tasks on issues relating to nature and the environment. The tasks support the Dutch Minister of Agriculture, Nature and Food Quality, who is responsible for these issues. We produce data on agri-environment, biodiversity and soil topics to compile reports as part of national and international obligations, and we contribute to reports by PBL Netherlands Environmental Assessment Agency, such as the Assessment of the Dutch Human Environment.