The wolf in National Park De Hoge Veluwe: *favourable* conservation status?

On the impact of an exemption to be granted on efforts to maintain wolf populations in their natural range at a favourable conservation status

Photo: National Park De Hoge Veluwe

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Content

3. Range, population, and habitat of wolf

3.1 Introduction

This chapter discusses the (sub)populations of wolves in Europe, the development of wolf numbers in the Benelux countries and Germany, the wolf's habitat in the Netherlands, why the Park does not suffice as a sustainable habitat for the wolf, and what future prospects can be outlined for striving for the favourable conservation status of the wolf in the Netherlands and Europe.

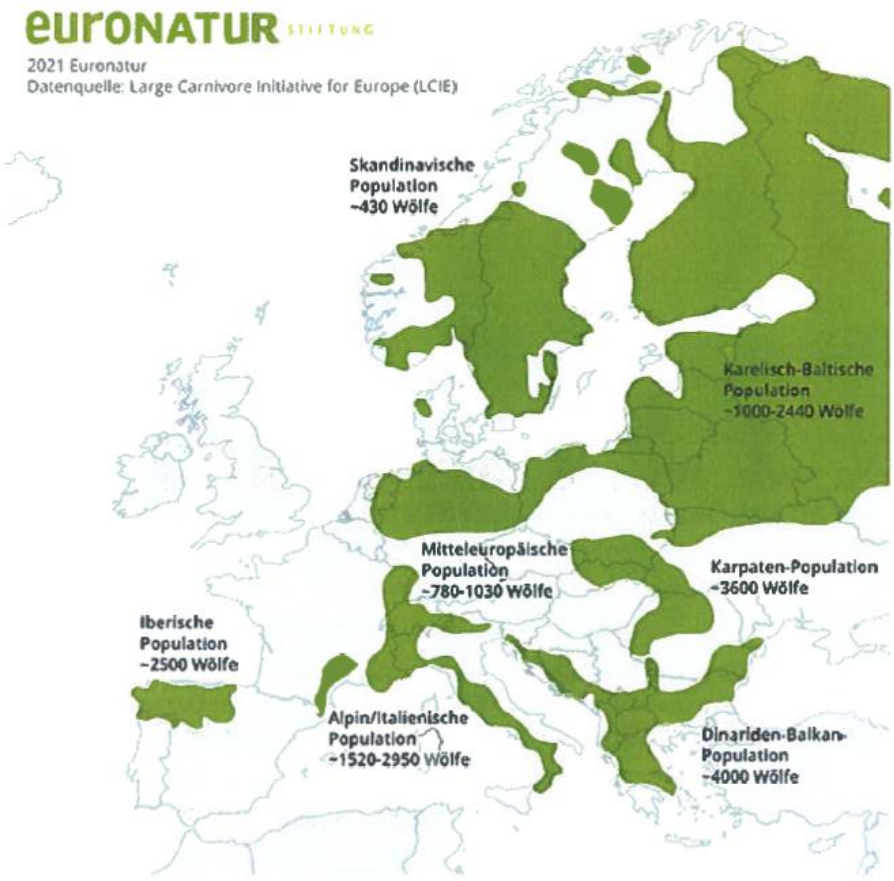
The Netherlands is too small to accommodate a population of wolves that is large enough to achieve a favourable conservation status even in the longer term on its own. This is indicated, among others, by the Association of Provinces of the Netherlands (*Interprovinciaal Overleg*, hereinafter:'IPO') (IPO, 2019) and was recognised by the European Commission some time ago, recommending that Member States arrive at joint management plans at the level of cross-border sub- and/or subpopulations (Boerema, Freriks, & Brink, 2021).

It is unclear when the favourable conservation status of the wolf in Europe will be reached. Different reports that include different starting points can be found on this. If different populations continue to expand and have regular genetic exchange, they may be merged and the criterion for maintaining genetic diversity may be more easily met (Jansman, et al., 2021).

Wolves in the Netherlands belong mainly to the Central European lowland (sub)population. This subpopulation consists mainly of Polish-German wolves with animals now also coming from Denmark and Belgium. Most wolves appearing in the Netherlands from this population are from Germany (Jansman, et a!, 2021). According to Gula et al (2009), the Baltic (sub)population is linked to the Central European one. The report commissioned by the European Commission by Tack et al (2019) also assumes that the Baltic and Central European (sub)populations are linked.

The 'Interim wolf report' of 15 June 2022 prepared on behalf of BIJ12 states that one of the wandering wolves is an offspring of a wolf pair, with the father coming from Alpine population and the mother from Central European population. This is quite rare; a mixing of two subpopulations has only recently occasionally been observed in Germany (Bijl2, 2022). Two wolves from the Alpine population were also previously reported in the Netherlands (Jansman, et al., 2021). This reflects an active exchange between different (sub)populations in continental Europe.

Figure 1 below shows the different wolf (sub)populations as identified in Europe in 2021.



Figuur 1: overzicht wolven(sub)populaties zoals in 2021 in Europa geïdentificeerd.

The number of wolves within the Benelux countries and Germany has been steadily increasing since 2010/ 2011, see Table 1 and Figures 2, 3 and 4. In at least one region in Germany, the ecological carrying capacity has now been reached (Jansman, et al., 2021).

Table 1 Development of wolf territories Benelux and Germany belonging to the Central European (sub)population. source: https://www.biil2.nl/onderwerpen/faunazaken/diersoorten/wolf/verspreidinR-wolf-in-de-benelux/

Jaartal	Roedels	Paren	Individuen	Voortplanting in aantal roedels	Aantal jongen
2010/11	7	7	6	7	35
2011/12	14	6	4	11	57
2012/13	18	12	3	16	63
2013/14	25	12	3	23	102
2014/15	32	19	6	31	135
2015/16	47	21	4	45	175
2016/17	60	24	3	57	219
2017/18	77	42	3	71	276
2018/19	105	43	13	102	395
2019/20	132	46	13	118	443
2020/21*	159	29	21	151	565

**De data voor 2021 loopt tot mei en betreft alleen cijfers vanuit Benelux en Duitsland, gegevens uit andere aangrenzende landen waartoe de wolven behorend bij de Centraal Europese (sub)populatie voorkomen zijn niet voor handen.*

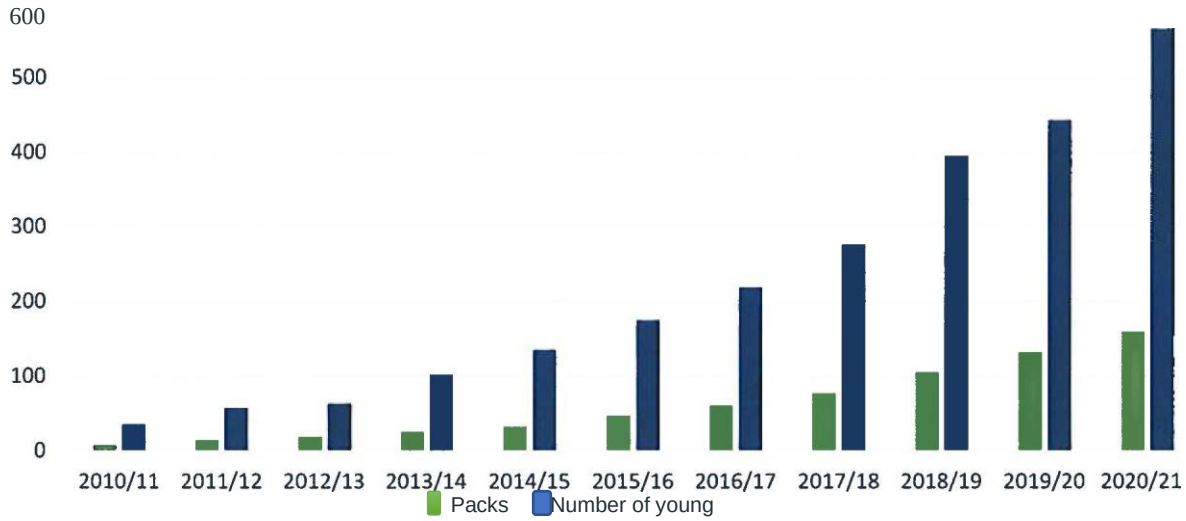


Figure 2 Overview of number of packs and young born in Benelux and Germany from 2010/2011.
The data for 2021 runs through May and concerns only figures from Benelux and Germany, data from other neighbouring countries where wolves belonging to the Central European (sub)population occur are not available.

Figure 3: Wolf territories Benelux and Germany in 2010/2011; the blue dots are a pack, the red a pair and the yellow an individual wolf. Source: https://www.biH2.nl/wolven-in-de-benelux/?locale=nl.
These are only figures from the Benelux countries and Germany; figures from neighbouring countries where wolves present also belong to the Central European (sub)population are not available.

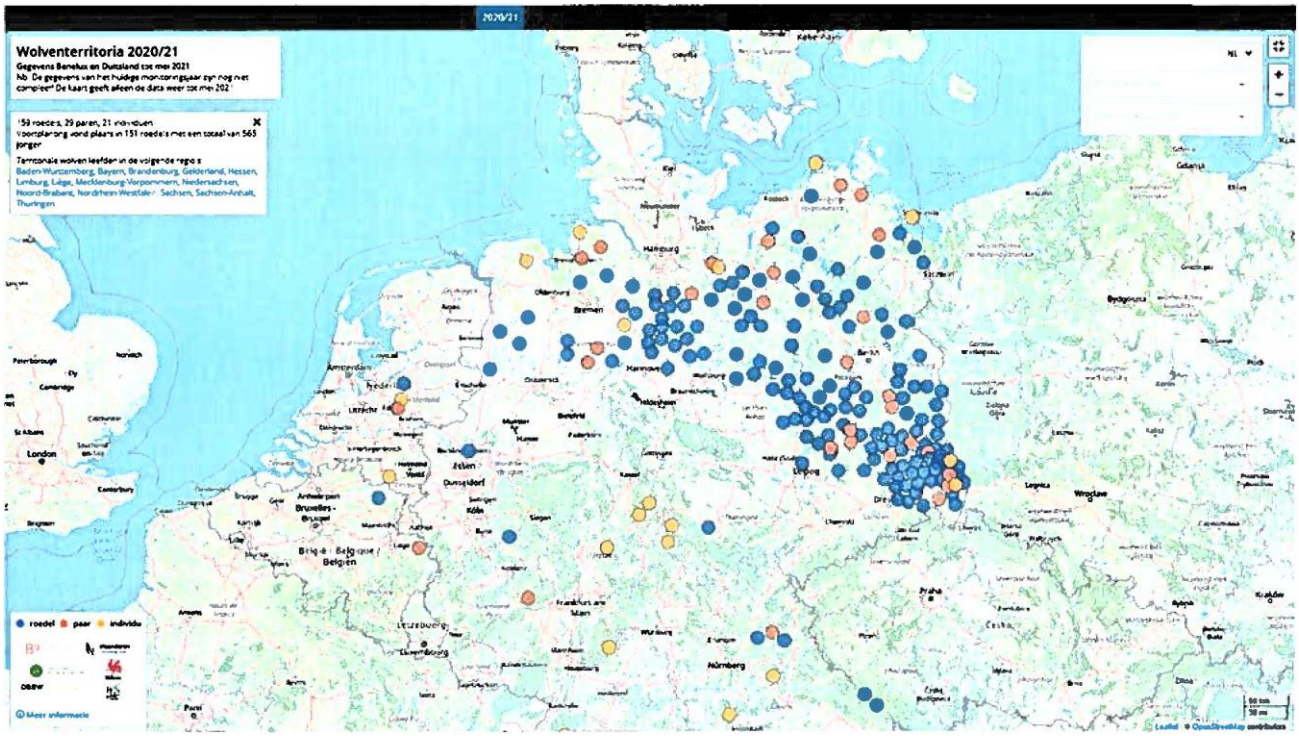


*Figure 4: Wolf territories Benelux and Germany 2020/2021 *; the blue dots are a pack, the red a pair and the yellow an individual wolf. Source: https://www.biil2.nl/wolven-in-de-benelux/?locale=nl The data for 2021 runs until May and concerns only figures from Benelux and Germany, data from other countries where wolves belonging to the Central European (sub)population occur are not available.*

3.2 Veluwe - The Netherlands

The number of wolves in the Netherlands, similar to the Central European (sub)population, is still increasing. This growth is determined by immigration, reproduction, and mortality. The aforementioned interim report of BIJ 12 once again identified the presence of a number of established wolves in the Netherlands during the period from 17 February to 30 April 2022. Besides the packs on the Veluwe, one wolf pair is also present in our country in the Drenthe/ Fryslân region. In addition, at least 11 wandering wolves roamed in various places in our country. Three wolves were found dead; two by collision and one dead wolf was found under suspicious circumstances (Bijl2, 2022).

BIJ12's Interim wolf report of 1 November 2021- 16 February 2022 already revealed that the various sightings show that the established pack on the North Veluwe is fully on the move within the entire territory and has also been seen several times on the Central Veluwe. The pack covers large distances in that process. Several descendants of the North Veluwe pack are looking for their own territory, according to observations of pellets and camera images (Bijl2, 2022a).

The wolf population on the Veluwe now consists of:

- A pack on the North Veluwe. After a female wolf was first identified in May 2018, in January 2019 a male was identified as well, and the first young was officially identified February 2021. (At 12, 2022b) An oral communication from July 2022 also mentions a sighting of several young from this pack in 2022.

- A pack on the Central Veluwe. A female wolf was identified here in October 2019 and a male in December 2019. In a message dated 28 June 2022 from BIJ12, 2 wolf cubs are reported. Although it has not yet been established who the parents are, the location makes it very plausible that this is the second pack in the Veluwe and thus in the Netherlands. (At 12, 2022c)
- A pack on the southeastern Veluwe. A male wolf has been identified here since September 2020 and a female since May 2021. A verbal communication from June 2022 mentions several wolf cubs, which also means there is a third pack on the Veluwe (and in the Netherlands).

In fact, according to Maurice La Haye of the Mammalian Society (Zoogdiervereniging), there is almost no room left on the Veluwe (Omroep Gelderland, 2022). According to him, the limit is reached when all suitable habitats are occupied. "*On the Veluwe, the growth is at its end,"* he says. According to La Haye, the Veluwe has room for 3 to 4 packs. Perhaps elsewhere in Gelderland a place can still be found for a wolf pair. The Mammal Society expects that if there are too many wolves together, this will lead to fewer cubs: *"In the worst case, wolves will kill each other. But for now, things are still going well in Gelderland."* (Omroep Gelderland, 2022) Given the trend of the current numbers, it seems that there are already 3 packs established on the Veluwe in which breeding is taking place.

3.3 The Park

Since the Kröller-Müller couple's purchase at the beginning of the last century, the Park has been fully fenced by a fine-meshed grid, which two meters high and buried in 30 to 40 cm. According to the specifications of BIJ12, the outdoor grid thus meets the qualification 'wolf-proof' (BIJ12, 2022d). This was also recognised by the Gelderland Provincial Executive when it established the wolf habitat on the Veluwe. In doing so, the Park was not designated as a wolf habitat because of the (deer-proofing) fencing, which reasonably wolves cannot be expected to pass through (Gedeputeerde Staten van Gelderland, 2019). Figure 5 shows the current wolf habitat in Gelderland – designated by the province of Gelderland.

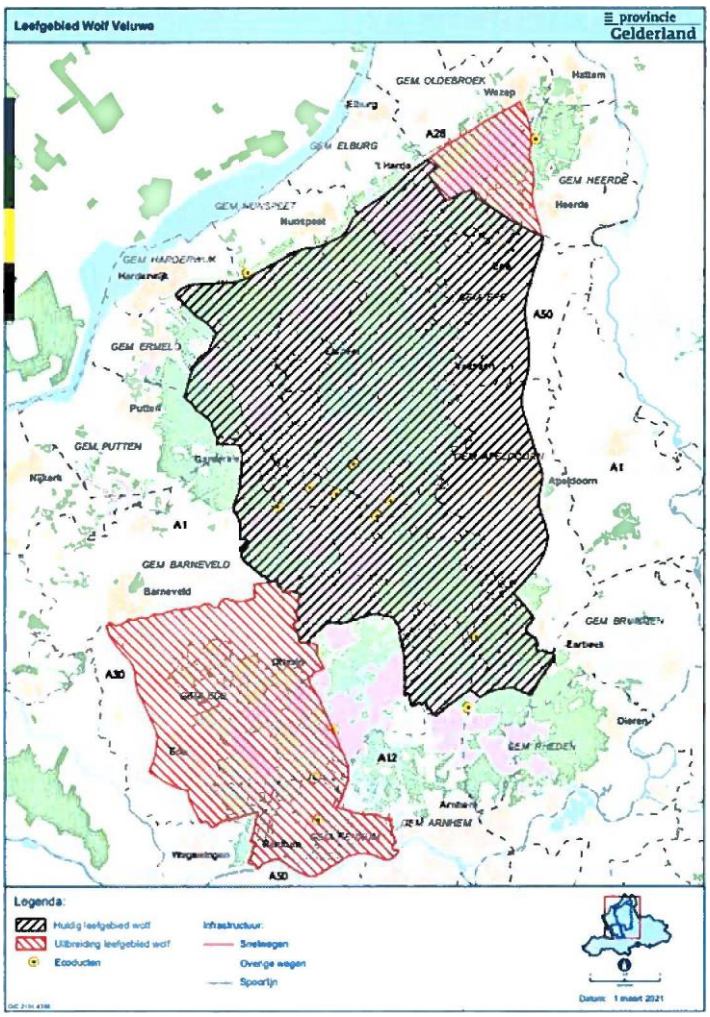


Figure 5 : Wolf habitat(l March2021) Source: https://media.gelderland.nl/Kaart_met_het_leefgebied_van_de_wolf_ee2d76b934.pdf

The Park is fenced and covers about 54 km^2. This is too small to function as a separate habitat for the wolf. Various studies assume an area of at least 200 km2 for a wolf territory. Depending on the amount of nature and prey density of an area, an expected range of at least 80 km^2 to a maximum of 400 km^2 is indicated for wolf territories in the Netherlands, with an average of 200 km^2. (Jansman, et al., 2021)

The wolves present within the Park are cut off from their conspecifics by their presence in the Park: the transboundary metapopulation. As a result, they cannot participate in gene exchange with the rest of the wolf population. Since wolves are social group animals, the living situation of wolves in the Park is a counter-natural situation (Jansman, et al., 2021) from (Stabler, et al., 2020) (Haber, 1996). The natural behaviour of young adult wolves is to leave their pack during the dispersal phase in search of their own territory and then start their own pack. This natural behaviour cannot take place in an enclosed habitat, even within a larger area. Additionally, within a fenced habitat of limited size like the Park, if reproduction takes place, the subpopulation present is directly subjected to inbreeding.

3.4 Management and protection of wolf populations in Europe

Within Europe, protection of wolves is interpreted differently. This mainly depends on the differening status in the Habitats Directive (Annex IV or Annex V species) per country or region. In a number of European countries or regions, the wolf is allowed to be managed. That means that the killing of the wolf takes place within a set of management measures, which are compatible with a favourable conservation status or the pursuit thereof. This is the case in Estonia, Latvia, Lithuania, Bulgaria, Poland, Slovakia, in the Spanish area north of the Duero River, in the Finnish reindeer protection area, and in Greek territory above the 39th parallel. (Annex2, 2022e)

In the surrounding and other European countries, exemptions are applied for and granted to counteract, among other things, damage to livestock farms, if no other satisfactory solution exists. France, Hungary, Croatia, Romania, Slovenia and Sweden, among others, regularly grant such exemptions, on the basis of which shooting licences are authorised (At 12, 2022e).

Sweden

Liberg et al. (2015) show in their report that the wolf population in Sweden is experiencing growth despite high mortality due to illegal poaching, shooting, and traffic casualties. This report indicates that achieving the favourable conservation status for the wolf depends more on the possibilities of genetic exchange with other (sub)populations, than just strictly speaking growth of the population itself. The Swedish wolf population has a survival rate of 0.71, which corresponds to the survival rates of North American wolf populations.

The Swedish-Norwegian population consists of about 400 wolves, 90% of which are found in Sweden. In both Sweden and Finland, the wolf is hunted in the northern reindeer area (Habitats Directive Annex V), with an annual shooting rate of 40-80 animals (Everaets, et al., 2018).

The Swedish Environmental Protection Agency, based on the report by Liberg et al (2015), states that with 600 individuals and the possibility of interchange with other subpopulations per generation, the minimum favourable conservation status of the wolf population in Sweden has been reached and limited shooting within this is legal.

France

In their report, Boerema et al (2021) describe how France deals with population management of wolves at the national level. Despite the fact that the wolf's conservation status has not yet been reached in France, within France the possibility of shooting is weighed against another starting point, namely the MVP (Minimum Viable Population).

This unit is based on a scientific opinion from the Office National de la Chasse et de la Faune Sauvage and described in the 2017 expert paper on the future of the wolf population in France (Duchamp, et al., 2017) "Member States should aim to achieve the ECF (État de conservation favorable) for populations that lie wholly or partly within national borders, and the Directive does not specify that the ECF can be assessed at supranational level. Nor does the directive explicitly state how long a population

must remain a viable part of its natural habitat, but the preamble suggests on the very long term. Thus, the population must maintain genetic diversity to preserve its evolutionary potential and avoid extinction. Thus, in Case C- 383/09, European Commission v French Republic, the CJEU established the long-term viability of hamster populations in Alsace by stating that "no population of this species in Alsace reaches the minimum viable population threshold (=MVP) applicable to it, estimated at 1 500 individuals".

In France, based on previously mentioned scientific advice, a minimum viable population threshold ('MVR') of at least 500 animals is assumed for wolves. If a population consists of 500 animals or more then there is sufficient certainty that the population is capable of long-term survival. This MVP has been chosen as the starting point for authorising the maximum annual killing of wolves in France. From the moment it is determined, based on annual censuses, that 500 or more wolves live within France, this is considered an effective population size to maintain a demographically viable population. In the 2017 collective expertise, scientists expected two growth scenarios: either exponential growth, on the order of +12% per year, or slow growth, on the order of 5% per year. The 2019 ONCFS/MNHN memo (Dreal Rhone Alpes, 2019) mentions that in France, given the latest population size estimates, exponential growth of the population is still in place in 2019, and that limited depopulation with a ceiling to be set annually will not prevent the population from continuing to grow, but will result in a 'stable, low-growth population'.

In France, there were already about 530 individual wolfs in 2019, divided into 80 packs (Dreal Rhone Alpes, 2019). Based on this, an annual cull of about 90 animals was authorised. After the last summer census in 2021, the French wolf network calculated that the wolf population in France already consists of at least 145 so-called wolf areas (permanent presence zone - ZZP), within which there are 128 established packs. In total, at the end of summer 2021, the estimate is at least 620 individuals (loupfrance, 2022). This suggests that – despite the authorised shooting - the wolf population in France is still managing to expand well.

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