

This review is made with the scope to contributing to the current debate about wolf conservation in Europe.

Title: Uncertain and outdated data should not be used to push for the downgrading of European wolf (*Canis lupus*) populations. Some comments on Blanco & Sundseth (2023)¹ report for the European Commission.

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Introduction

A report submitted to the European Commission by Blanco and Sundseth in December 2023, was used as a scientific benchmark to propose the downgrading of the wolf (*Canis lupus*) from a “specially protected species” (Appendix II) to a “protected species” (Appendix III) in the Bern Convention. This revision could also require the downgrading of the wolf in the Habitats Directive from Annex IV (species requiring strict protection) to Annex V (species whose collection in nature and exploitation could be subject to management measures), thus making the wolf a *de facto* huntable species. Blanco and Sundseth report is a summary of currently available wolf population data, which are, however, partial and imprecise, and should not be used to call for the downgrading. The report, in any case, does not recommend any revision of the protection status of the wolf. Here we offer a review of the Blanco and Sundseth report as a contribution to a critical evaluation of the downgrading proposal, which, as we believe, cannot be based on any scientific evidence.

Comments on Blanco & Sundseth (2023) report for the European Commission.

Upon completion of the downgrading procedures from the status of a strictly protected species (Article 19), under the Annex V of the Habitat Directive wolves could be killed without the need for derogations if the population’s “favourable conservation status” (FCS) is not affected (Article 14). FCS cannot be established by decree independently of the best available scientific

¹ N2K Group EEIG, Blanco, J. C. and Sundseth, K., *The situation of the wolf (canis lupus) in the European Union – An in-depth analysis*, 2023. Link: <https://op.europa.eu/en/publication-detail/-/publication/5d017e4e-9efc-11ee-b164-01aa75ed71a1/language-en>

data, which, however, are not currently available. The downgrading proposal filed by the European Commission on 7 March 2025 was explicitly based on the Blanco & Sundseth report, December 2023 (BS23), commissioned by the European Commission itself. The BS23 report is mainly a desk review of existing data published by Boitani et al. (2022), an LCIE report that had previously been submitted to the Bern Convention. Additional information was submitted by scientists and experts to the European Commission by 22 September 2023, or collected from regional and national authorities, official web pages; scientific and technical literature and “consulting national experts”. The Commission explained that this data collection exercise was not a public consultation but a targeted request for input from relevant stakeholders. However, of the 19,000 emails received in response to the call, over 98% wanted to express an opinion on the subject, rather than submit data. In response to a complaint by ClientEarth against the Commission, the European Ombudsman (EO24) opened an inquiry into how the Commission carried out what it referred to as “a targeted data collection” on the impact of the wolf population in the EU. The reliability of the published data and new evidence on wolf population abundance and distributions is doubtful. The BS23 report has not been peer reviewed, does not express any justification for the downgrading, and does not indicate downgrading as a valid solution to improve coexistence.

The core of the BC23 report is shown in Table 2.4.1, which presents “*the latest information on wolf population in EU Member States*”. As stated by BC23: “On 17 November 2023, the information gathered from the above was sent to the Ministries of Environment of the Member States for review”. Thus, it seems that the final assessment/approval of the dataset was political rather than expertly assessed. The data in Table 2.4.1 are mainly rough numbers, not reliable estimates. A statistical estimate must be based on reliable quantitative data and must be expressed in terms of mean and standard error. The error indicates the uncertainty of the estimate and is necessary to evaluate its precision and reliability. In Table 2.4.1 only four out of 27 countries (Finland, France, Italy and Sweden) show some kind of statistical estimates. In Spain there were “>2100” wolves shown, but how many more are there than 2100? The evaluation of wolf trends was entirely based on “*information provided by the Member States competent authorities*”. As correctly stated by BS23: “It is important to note however that there is no consistent or common approach towards assessing trends in wolf populations across the EU. Across the European Union, it is difficult to establish the overall trends”. In the BS23 report, trends are expressed as guesses in purely qualitative terms: increasing, stable or decreasing, which are not informative enough to evaluate the Favourable Reference Values of the wolf populations.

All the information in Table 2.4.1 is biased by the heterogeneity of the source data, because:

- trends may change depending on the longer/shorter period of the surveys;
- population sizes depend on population delimitation, and “*double counting of transboundary packs has not been corrected*” (BC23);
- assessments of population size and distribution procedures are not standardised;
- some countries estimate the number of wolves; others count the number of reproductive pairs and packs; conversion factors from packs to individuals are difficult Boitani et al. (2022);
- wolf numbers change during the annual biological cycles; wolf numbers in late winter might be half or the less wolf numbers in late spring;
- in hunted populations, population size may vary before and at the end of the hunting season;
- data from countries are not comparable and not directly summable without appropriate quality controls.

Table in S2 Appendix in Di Bernardi *et al.* (2025; attached), explains some of the causes of heterogeneity of the source data. Estimates of proportion of wolf range/population size were obtained by variable combinations of 24 different monitoring methods used in 34 European countries. Some countries qualified their estimates just as > or <. Some of them (11/34) qualified exclusively or almost exclusively with > or <: i.e., Albania; Austria; Bulgaria; Denmark; Latvia; Netherlands; Norway; Portugal; Serbia; Sweden; Ukraine. Thus, it is not clear how much of the wolf range and population size has been really covered by each monitoring method. Obviously, the reliability itself of the different methods is highly variable. For instance, information from hunter observations (used in >75% estimates in Romania) and questionnaires (covering the major portion of wolf range/population estimates in Albania, Bosnia, Montenegro, Slovak, Slovenia, Ukraine), are not reliable enough. Some of these countries are the most active in asking for downgrading (Latvia and the other Baltic countries), while they were inputting the less reliable data.

Those fuzzy estimates are in sharp contrast with heavy hunting plans already active or proposed by some EU countries. Latvia, for instance, plans to harvest “*about 50–60%*” of the wolf population annually, including pups and pregnant females, according to the government’s Action Plan for Grey Wolf *Canis lupus* Conservation and Management. So, fuzzy estimates are already used to implement destructive wolf removal plans.

We have no doubts that the number of wolves in the EU is increasing. However, we do not believe that the reported increase rates have been based on reliable and verified empirical data:

- 11,193 wolves estimated by LCIE in 2012;
- 19,400 wolves estimated by Boitani et al. (2022);
- 20,300 wolves have been estimated in 2023 by BS23;
- 21,500 individuals by 2022 (Di Bernardi et al. 2025)

Clearly, there has been an increase in wolf population over the decade since 2012. However, while the estimate by Di Bernardi et al. 2025 is only slightly larger than the total number summed up by BS23, they are only marginally different from the total estimate of Boitani et al. (2022) and which the EC accepted when it chose not to support downlisting of wolves under the Bern Convention in 2022. Categorically, this marginal increase in wolf numbers was insufficient to warrant downlisting in 2024. Moreover, the BC23 report itself provides contrary evidence, as it points out based on already known data that *"half of the wolf populations observed in Europe (19) are in an unfavourable conservation status (with 16 unfavourable-inadequate (U1) and three unfavourable-bad (U2)), and that ... the conservation status of the wolf under the Habitats Directive is not uniform across the EU"*.

Despite the obvious approximations and discrepancies in these data sources, and despite a European Parliament resolution (EP24) recommending the EU Commission to ensure that *"Member States use appropriate monitoring methods for each of the different large carnivore species to allow for the compilation of high-quality, comparable and standardised data for an effective assessment of population levels"*, the data assembled by BC23 has been used as a benchmark by the European Commission to push the Standing Committee of the Berne Convention to approve the downgrading of the wolf.

However, the BC23 report fails to highlight clearly enough the weakness and unreliability of the available data, which are useful to implement the necessary improvements in monitoring methods, but that should not be used to support any review of the wolf's protection status. According to the ECJ Council Decision 2022/2489 *"Based on current data, lowering the protection status of all wolf populations is not justified from a scientific and conservation point of view"*. Moreover: *protected species that have achieved a favourable conservation status "must be protected against any deterioration of that status"* (Case C-601/22, WWF Österreich, para. 44, and Cases C-473/19 and C 474/19, Föreningen Skydda Skogen, para. 65 and 66).

Claims by the European Commission that that downlisting would address socio-economic conflicts, like livestock damage, lack robust evidence - as is evidenced by the collation of data on wolf damage on livestock in the EU member states in Table 3.3.1 of BC23. As it is, BC23 admits that sheep depredation by wolves represents an annual killing of only 0.065%, and that in some of the German federal states with the highest number of wolves, the frequency of wolf attacks on livestock has decreased significantly in recent years, which was associated with the use of adequate preventive measures. BC23 note that depredation levels are lower in areas where wolves have never disappeared.

BC23 also note that the existing rules on derogations make it possible to balance different interests against the conservation aims of the Directive. As many have argued, this effectively allows Member States to take action to address specific challenges to livestock - such as bold wolves or susceptible geographical locations or practices – by using derogations of the strict protection regime of Annex IV and thus without the need for downlisting protection. Moreover, a recent study interviewing farmers in Northern Greece identified that wolves frequently became scapegoats for deeper rooted issues such as economic disadvantages, policy deficiencies, and rural depopulation (Petridou & Kati, 2025). Farmers who implemented more effective preventive measures had a lower perception of wolves as a major problem.

References

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the S2 Appendix. Estimates of the percentage of wolf range / population covered by each monitoring method for 34 European countries.

Di Bernardi C, Chapron G, Kaczensky P *et al.* (2025). S2 Appendix. Estimates of the percentage of wolf range / population covered by each monitoring method for 34 European countries

Country	Camera traps: Min number of individuals	Camera traps: Detection of reproductive units	Camera traps: CMR estimate of population size	Snow tracking: Min number of individuals	Snow tracking: Detection of reproductive units	Snow tracking: Track count index	Non-invasive genetics: Min number of individuals	Non-invasive genetics: CMR estimate of population size	Observations: Detection of reproductive units (observation of pups)	Observations: Hunter observation index	Scat surveys: Identify rendezvous sites	Scat surveys: Confirm presence/scat density index	Howling surveys: Confirm reproduction	Howling surveys: Confirm presence	Damage statistics: Confirm presence	Damage statistics: Damage statistics index	Hunting bag: population reconstruction based on age/sex structure of harvest	Questionnaire: Presence info for a region	Questionnaire: Unconfirmed estimates for region	Opport: presence sign collection: Presence info at different levels of certainty	Opport: presence sign collection: Public observation index	Habitat suitability modelling & density extrapolation	Radio-telemetry to estimate average range size or movement distances	Expert «guesstimate»
Albania	<10						>75		<10		<10				>75			50-75		<10		>75		>75
Austria		<10					>75													>75				
Belgium	>75	>75					>75		>75															
Bosnia and H.	10-25	10-25	Unkn	<10	Unkn	Unkn	Unkn	Unkn	Unkn		<10	Unkn	<10	<10	25-50	Unkn	<10	25-50		Unkn	Unkn	Unkn	Unkn	<10
Bulgaria	<10	Unkn		Unkn	<10	Unkn	Unkn	Unkn	Unkn	>75	<10	<10	<10	<10	<10	Unkn	>75	Unkn	Unkn	10-25	<10	>75	Unkn	>75
Croatia		50-75		25-50	25-50	25-50	25-50	25-50	25-50		<10	10-25			>75	>75		Unkn		50-75		>75	25-50	
Czech Rep.		>75			>75		50-75		<10			>75	25-50	25-50						>75				
Denmark	>75	>75					>75		>75											>75				
Estonia		10-25			>75	>75					10-25				>75		50-75						<10	
Finland		10-25		25-50	25-50	>75	>75		>75			25-50			<10		>75			>75			10-25	
France	>75	>75	>75	50-75	50-75	50-75	>75	>75	<10				>75		>75					>75	>75			
Germany	>75	>75					50-75		10-25			>75			>75					>75			<10	
Greece	10-25	10-25		<10							<10	<10	10-25	<10	>75			10-25	10-25	10-25			<10	
Hungary	>75	10-25		>75			>75		Unkn	Unkn	Unkn	Unkn	Unkn	Unkn				<10	<10	10-25	<10			50-75
Italy		10-25		10-25			25-50	>75				>75	10-25							>75		10-25		
Kosovo																								25-50
Latvia				<10												<10	>75							>75
Lithuania																	>75			10-25				
Luxembourg															>75	10-25				>75				
Montenegro				25-50							10-25				<10				>75					
Netherlands	Unkn	Unkn	Unkn				Unkn	Unkn	>75	Unkn	Unkn	>75	Unkn	Unkn	>75	Unkn		Unkn	Unkn	>75	Unkn			Unkn
North Mac.																						>75		
Norway		>75		>75	>75		>75	>75	>75						>75					>75				
Poland							10-25	10-25								>75	>75					>75		
Portugal	>75	>75					10-25		>75		>75	>75	>75	>75	>75									
Romania	50-75	50-75	50-75	50-75	>75	>75	25-50	25-50	<10	>75		<10		>75	>75	>75						>75	<10	
Serbia	<10	<10			<10				<10						>75		>75	<10	<10	>75	>75		<10	>75
Slovak Rep.				10-25	10-25		10-25	10-25						>75	>75	>75			>75	>75				
Slovenia		Unkn					>75	>75	Unkn		10-25		>75	>75	>75			>75					<10	
Spain		10-25							25-50				50-75										<10	<10
Sweden					>75		>75	>75																
Switzerland		10-25			<10		>75		10-25		10-25		25-50	10-25	>75	>75				>75				
Türkiye																						>75		10-25
Ukraine		<10		>75	<10							<10					<10	>75						

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