

## Getting the numbers right to better protect the brown bear in Romania

*Developed in partnership with ACDB Romania*

Researchers<sup>1</sup> from the NGO and academic field recently demonstrated that the brown bear population is unrealistically high in the Romanian official census. The data presented by the Ministry of Environment suggests that the populations in certain counties in central Romania increased almost four times faster than observed anywhere else in the world. In these counties, which also have a high number of hunted bears, the bear population showed an unnatural growth of up to 50%<sup>2</sup>. This data is in contrast to the more biologically realistic estimates of the grey wolf and Eurasian lynx, species with lower economic value than the brown bear's.

The above-mentioned study prepared by scientists from the University of Bucharest, Ohio University, Simon Fraser University, Raincoast Conservation Foundation and the Association for Biodiversity Conservation Romania comes as new confirmation of an issue observed by conservation organisations in Romania over the past few years and in several regions of the country.

For instance, in 2014, WWF-Romania and ACDB found<sup>3</sup> that the growth rate for the brown bear in Maramures, close to the Ukrainian border, was estimated at over 10% for the period 2009-2010. Although Maramures still boasts large and compact forested areas, this is uncommon natural growth for the brown bear and higher than the rate registered in Sweden, which has the most spectacular population growth over the recent years in Europe (4.7%). Experts looked at official data in more detail and interviewed several stakeholder groups with a role in managing the bear population (hunting units, protected area managers, environmental protection institutions). WWF and ACDB found unrealistic or vague numbers, with no scientific backing, and which in some cases are also contradictory. In these conditions, an accurate evaluation of the present conservation status of the bear and the formulation of clear objectives for the management of species are not possible.

Since 2014, WWF-Romania also participates in the evaluations of wild fauna in the south-western Carpathians, conducted by hunting units and representatives of the several protected areas from that region which spread over 4 counties<sup>4</sup>. From the very beginning WWF noticed that the majority of hunting units report the same number of bears each, usually a number which exceeds the biological and ecological thresholds of the species and also the optimum level for an area (see figures below)<sup>5</sup>. In 3 of the analysed counties, the number of bears exceeds the biological and ecological limits at least 2-3 times. Managers of hunting units admit to the fact that animals are not all resident in their respective units and so they might be counted several times. In some of the cases (in the counties of

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<sup>1</sup> Popescu, V.D., Artelle, K.A., Pop, M.I., Manolache, S. and Rozyłowicz, L., 2016. (Online first) *Assessing biological realism of wildlife population estimates in data-poor systems*, Journal of Applied Ecology, DOI: 10.1111/1365-2664.12660, <http://onlinelibrary.wiley.com/doi/10.1111/1365-2664.12660/abstract>

<sup>2</sup> University of Bucharest – Centre for Environmental Research and Impact Studies. *A Shot in the Dark: wildlife management driven by unrealistic wildlife data*, [http://www.ccmesi.ro/?page\\_id=1643](http://www.ccmesi.ro/?page_id=1643)

<sup>3</sup> Pop, I.M. and Papp, C.R., 2014. *Short analysis of the brown bear (Ursus arctos, Linnaeus, 1758) population and its management in the North-Western part of the Romanian Eastern Carpathians*, Acta Musei Marmorosiensis, Geology Division – Geography – Nature Sciences - Mineralogy, Maramureş Museum, Sighetu Marmăţiei, vol. IX., p. 293-300

<sup>4</sup> Caras-Severin, Hunedoara, Mehedinti, Gorj

<sup>5</sup> Berchi, G.M./WWF-Romania, 2016. *Evaluations of the bear, wolf, lynx and wild cats populations in the South-West of Romania*, quoting official data from the county environmental protection agencies

Hunedoara and Gorj), neighbouring hunting units report the same (high) number every year, giving the impression that the bear and other game species populations (e.g. wolf) are not following a natural dynamic at all, either positively, or negatively.

Expert studies<sup>6</sup> estimate a minimum range of 50-270 square kilometres (5.000 - 27.000ha) necessary in the Carpathians for the brown bear. Then how come in the county of Hunedoara, a symptomatic case, hunting units reported 29 individuals on an area of 11.368 ha?! The same with the county of Gorj, where 6 hunting units reported over the last 3 years between 21-30 individuals on an area not bigger than 150 square kilometres.

WWF-Romania carried out long discussions with the hunting units and local authorities in Caras-Severin and in the end populations were reduced not only for bears, but also for wild cats, wolves and lynx. Thus, in 2016 populations are down by 22.7% for bears, 7.67% for wolves, 22.23% for lynx and 22.49% for wild cats in this county. Even so, numbers still exceed the optimum range, while lynx and wild cats are under the optimum number.

All of above-mentioned cases point to the fact that management decisions are largely influenced by the profitability of hunting and not by objectives related to the protection of species, although the bear, lynx and wolves are strictly protected at national and European level through the Habitats Directive (Natura 2000). It seems that wildlife population assessments are performed by game managers on behalf of the public authority for the sole purpose of setting hunt quotas and justifying the hunt to the EU institutions. Where evaluations are eventually being reconsidered it is because of a long negotiation effort made by conservation organisations and not following a correction of data through field checks or, indeed, a correction of the counting method itself which is old and flawed.

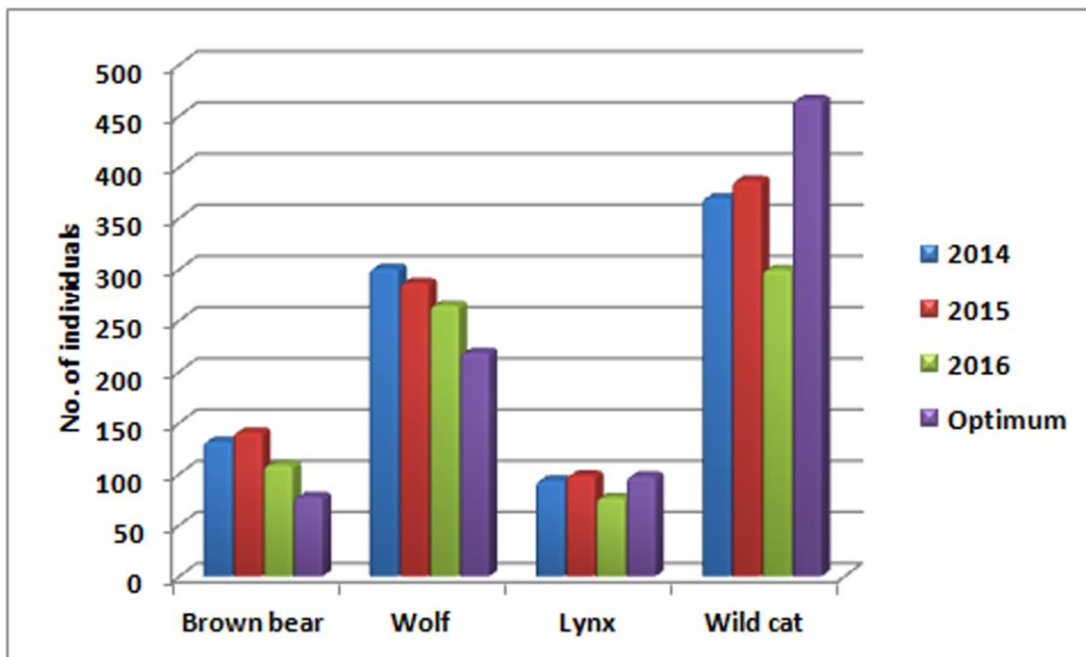


Fig. 1. Population of bears, wolves, lynx and wild cats in the county of Caras-Severin

<sup>6</sup> Fiňdo, S., Skuban, M. and Koreň, M., 2007. *Brown bear corridors in Slovakia. Identification of critical segments of the main road transportation corridors with wildlife habitats*, <http://www.carpathianwildlife.sk/index.php/publications>

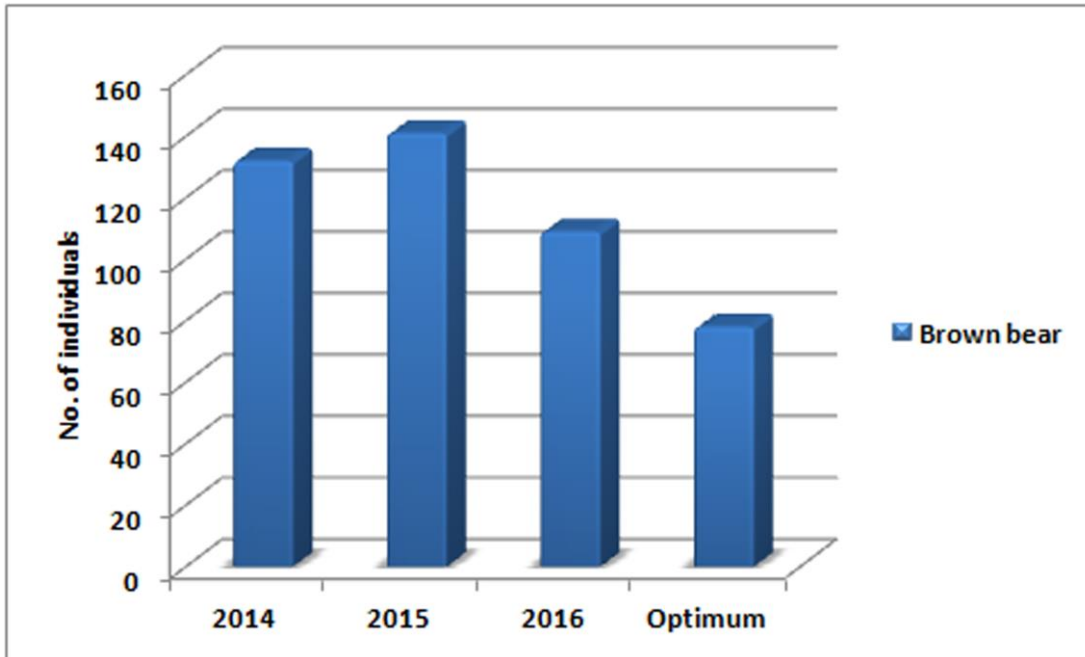


Fig. 2. The bear population in the county of Caras-Severin

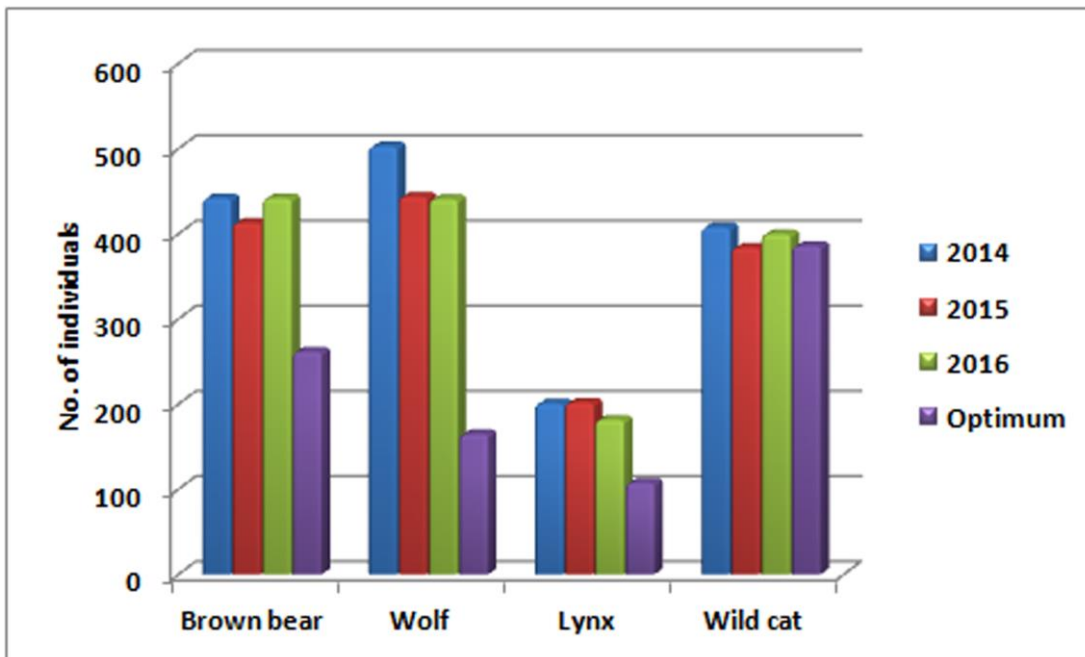


Fig. 3. Population of bears, wolves, lynx and wild cats in the county of Hunedoara

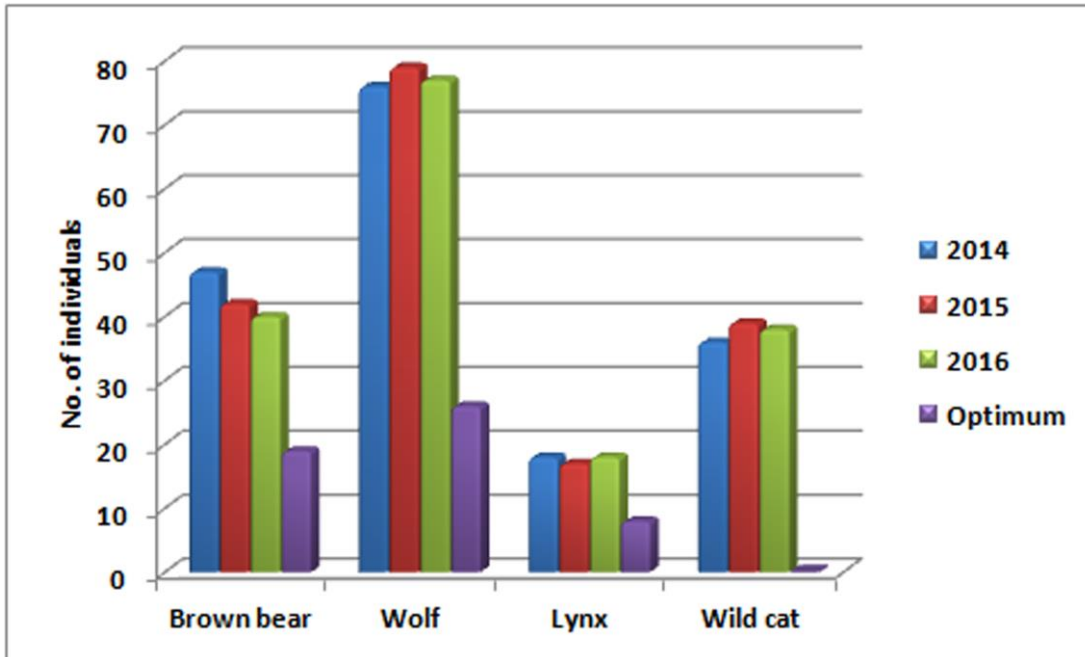


Fig. 4. Population of bears, wolves, lynx and wild cats in the county of Mehedinți

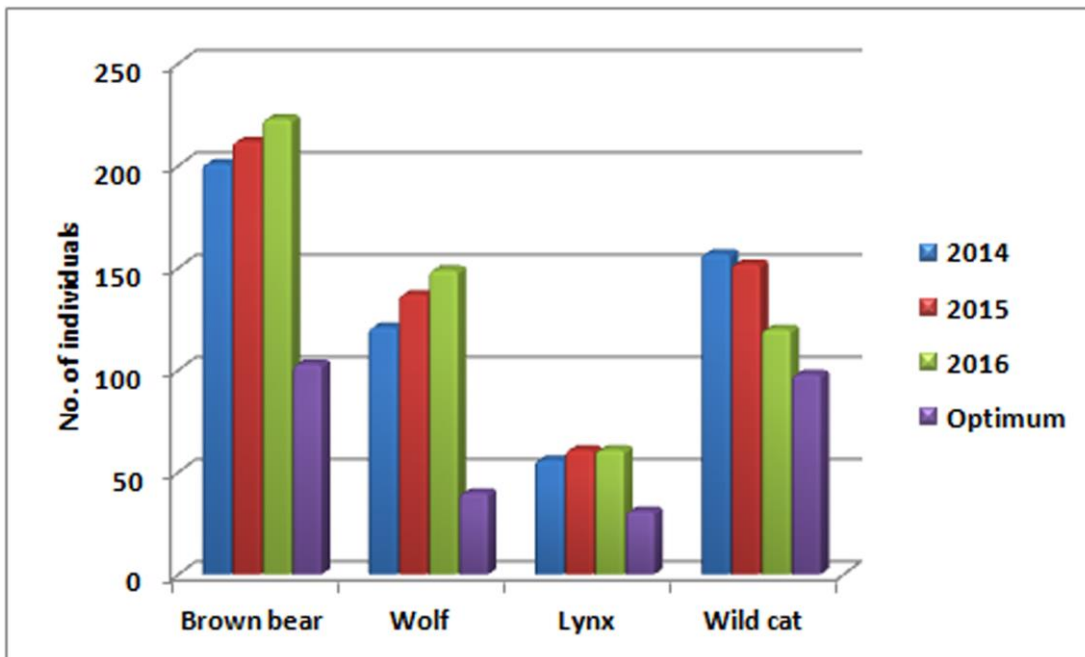


Fig. 5. Population of bears, wolves, lynx and wild cats in the county of Gorj

### What is wrong with the counting system

In Romania, the counting system is based on counting the tracks of animals at game management unit level and not at a regional level. This system has been applied since the middle of the last century and it was a good system for several decades. However, the original method has been altered over time. Game managers are now using different practices to count the bears on the game territory which disregard the biological and ecological characteristics of the species. The process seems to be a merely administrative endeavour meant to fill out papers, but without any scientific root. A reflection on the suitability of the method cannot be followed through and accurately done as the size of errors is still unknown at national level.

The requirement of a good monitoring system is to offer information about the population at population level, not at game unit level. To the best of our knowledge and as stated here, the measures used today have little to do with the conservation of the species, but more with the hunting of it. The EU accepts hunting as a management tool and this makes sense only if the measuring and monitoring system is a robust one. The Habitats Directive is a toolbox helping decision-makers to improve landscape conditions and ecosystem functionality. Based on this Directive, several projects in Romania have proposed new ideas to improve the monitoring system and small steps have been made.

### **What can be done to produce more accurate data**

The most important step is to switch from a game unit counting methodology to a regional and long-term monitoring system, to extend the counting/monitoring to cover all seasons, incorporating habitat variables and using new methods such as DNA analysis. This should be accompanied by the following principles:

- Quality control of data should be done by independent entities as part of the decision-making process
- Higher transparency in the whole process of establishing the size of the large carnivores populations
- Better access to data owned by different governmental/public institutions for scientists

More funding would also be needed to follow through this process. The total sum would highly depend on the chosen (improved) methodology, number of animals and other variables.

### **Examples of good practices and bad practices**

The situation described above is not unique to Romania, with uncertainty about populations being a reality in wildlife management, along with the influence of non-biological considerations. Wildlife conservation in Romania and also in Europe appears more and more to be a matter of political debate and not a matter of fieldwork and science-based decisions.

Romania is in a special position in the EU given it still hosts approximately 45% of the European brown bear population and 40% of the wolf population. Thus, challenges as well as responsibilities are proportionately higher.

Some of the European states leading the way in more correctly monitoring wildlife populations are the northern EU countries, such as Finland, Norway or Sweden. The exact number of individuals is not known in these cases either, but the estimations are much closer to reality.

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