

Science for Environment Policy

Large carnivores are making a comeback in Europe

Wolves, bears, lynx and wolverines are rising in number in Europe, new research shows. Thanks in part to pan-European legislation, at least one of these species is now present in most mainland countries. The researchers say their study confirms that humans and wild predators can successfully live alongside each other.

By the early 20th century, large carnivores had been exterminated from most of Europe. They are one of the most difficult groups of species to conserve, partly due to the deep-rooted hostility in human culture towards these animals, which are perceived to negatively affect livelihoods, such as those in agriculture. Ecological and political factors also create challenges; large carnivores need large areas of land, and so their conservation needs to be planned and coordinated on a very wide, international scale.

This study, partly funded by the EU¹, shows that large carnivores represent a conservation success story in Europe. The researchers gathered data on the numbers and distribution of brown bears (*Ursus arctos*), the Eurasian lynx (*Lynx lynx*), grey wolves (*Canis lupus*) and wolverines (*Gulo gulo*) in every European country except Belarus, Russia, Ukraine and very small countries, such as Andorra. The data came from the [Large Carnivore Initiative for Europe](#) and other experts.

Collectively, these four species occupy 1 529 800 km², or one third, of mainland Europe. Most populations are now recovering from historically low levels recorded during the 1950s–1970s, and no medium or large populations are declining. Key results include:

- Brown bears are present in 22 countries. There are ten distinct populations comprising 17 000 individuals. All populations are relatively stable or slightly expanding, but a few remain critically small. Only 45–50 bears live in the Alps, for example, compared with 7 200 in the Carpathians.
- Wolves are present in 28 countries. There are about 12 000 individuals, in ten populations. Most populations are increasing in size, although the Spanish population is now on the verge of extinction with just 6 individuals recorded in 2012.
- Lynx live in 23 countries, with 9 000 individuals. Ten of the eleven populations are stable but the Balkan population is decreasing.
- Wolverines only live in Finland, Norway and Sweden, in two growing populations with a current total of around 1 250 individuals.

All are in human-dominated landscapes, and mainly outside protected areas. This contrasts with many other regions of the world, such as North America and southern Africa, where a 'separation model' is used in conservation. This keeps predators apart from humans in protected, and often fenced-off, areas.

Such an approach would not be possible in Europe, where protected areas are too small to accommodate viable populations. However, this study shows that the 'co-existence model' used here works successfully on a continental scale and that these species have adapted to life alongside humans. In fact, there are now twice as many wolves in Europe as in the contiguous US (lower 48), despite being half the size and twice as densely populated.

The coexistence strategy's success has also relied, in part, on humans re-adapting to life with these carnivores. Traditional livestock protection measures, such as guard dogs and night-time enclosures, have been revived, while new protection techniques, such as electric fences, have also helped.

Furthermore, the researchers point to the importance of pan-European legislation which has protected large carnivores, particularly the Council of Europe's [Bern Convention](#)² and the EU's [Habitats Directive](#)³.



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1. This study was partly conducted under the European Commission contract 070307/2012/629085/SER/B3. For more information on the project, see: http://ec.europa.eu/environment/nature/conservation/species/carnivores/conservation_status.htm

2. www.coe.int/t/dg4/cultureheritage/nature/Bern/default_en.asp

3. http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm