A vision for population management plans

The goal of population management plans is to provide a coordinated framework for management of the individual carnivores that constitute a biologically meaningful population irrespective of how many administrative units (counties, federal states, countries) they cover. This coordinated framework aims to set some basic principles and general goals for the management of the population, while allowing for locally adapted solutions within the different parts that fall within the different administrative units. This approach is referred to as “freedom within frames”. It is based on the understanding that Europe is a diverse continent, both in terms of human culture and ecology. Therefore, there is no universal approach for large carnivore conservation that can work in all circumstances. Rather, the approach must be tailored to the local social and ecological conditions and the status of the large carnivore population. The guidelines which have been developed include detailed recommendations for both the process by which the population level management plan should be developed and on the content. Some of the most important issues that need to be addressed concern (1) ensuring that the connectivity within the population is enhanced or maintained, (2) ensuring the connectivity with other populations is also enhanced or maintained, (3) ensuring that total mortality levels are sustainable.

Best practices – how to conserve carnivores

Successful conservation of large carnivores in Europe requires a flexible and pragmatic approach. There are many different situations that can arise, however there are a number of issues that constantly occur in most populations. The first concerns depredation on domestic livestock. Depredation rates can be serious in situations where natural prey is scarce and where livestock are grazed in carnivore habitat without any form of protection. Depredation causes an economic loss for farmers and can create negative attitudes towards large carnivores. There are many methods that can be used to protect livestock from large carnivores. The most widely used today are modern electric fences and the traditional shepherd – livestock guarding dog system. If used correctly these methods can greatly reduce depredation, however, their introduction may require some restructuring of livestock husbandry. A second issue concerns competition with hunters for game. There are over 5 million hunters in Europe, and wild ungulates constitute a highly prized and valuable quarry for hunters. These species are also the natural prey of wolves and lynx. The impact that large carnivore depredation has on the availability of harvestable game for hunters can vary from the insignificant to the dramatic. In all cases, the presence of large carnivores requires that hunters re-evaluate their quotas to take predation into account. One of the most controversial aspects of management concerns hunting and lethal control of large carnivores. In practice, there is no reason why large carnivores cannot be harvested in the same way as other game species provided their populations are sufficiently large and well monitored. In fact, in many parts of Europe their acceptance by the rural public may depend on their being harvested. Even in areas where they are not hunted, lethal control may be needed in a range of circumstances. In all cases where large carnivore populations are subject to deliberate human-caused mortality there is a need to establish effective regulatory and monitoring systems.

Carnivores and Natura 2000

Compared to many other threatened or endangered species large carnivores are very adaptable in their choice of habitats and are rather tolerant of human activities. They are able to exploit a wide range of habitats, including forests of many types, alpine tundra, shrublands, and in some cases even agricultural lands. Therefore, within Natura 2000 sites it is unlikely to be large carnivores that place the greatest demands on management or restrictions of human land-use. Maintaining forest cover and abundant wild ungulate prey is most important for wolves and lynx. For bears, it is important to ensure that suitable trees that provide mast are maintained, as well as secluded areas for den sites.

In Natura 2000 sites where emphasis is placed on maintaining livestock grazing to conserve specific traditional landscapes there is a potential conflict between carnivores and livestock – which will require the modification of livestock husbandry. Individually, Natura 2000 sites are likely to only embrace the home ranges of some individual large carnivores. However, when viewing the entire network, these sites have the potential to make a major contribution to large carnivore conservation, especially if attention is paid to the matrix in which they are embedded such that connectivity is maintained.

The Large Carnivore Initiative for Europe (LCIE)

The LCIE is a Working Group within the Species Survival Commission (SSC) of the Word Conservation Union (IUCN). The LCIE functions as a focal point for a network of experts working on issues relevant for large carnivore conservation. The members of the LCIE include scientists from several disciplines, conservationists, and administrators. The LCIE works in three main areas:

1. Coordination and networking between projects run by LCIE working group members and partners;
2. Some specific LCIE working projects and products;
3. Inspiration and guidance to the wider conservation community.

The LCIE works with all relevant interest groups, including scientists, NGOs, government agencies and pan-European bodies like the Council of Europe and the European Commission. Activities include developing good conservation practice guidelines and position statements, holding and facilitating workshops, providing expertise on demand, and helping transfer knowledge and experience between different parts of Europe. In summary, our goal is to provide a technical platform of scientific and experience based expertise that the whole conservation community can draw on to help conserve large carnivores in Europe.

Information about the LCIE and Europe’s large carnivores can be found at:

www.lcie.org

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Large Carnivore Initiative for Europe
IUCN/SSC WORKING GROUP

LARGE CARNIVORES KNOW NO BOUNDARIES

The European populations of large carnivores at a glance

Carnivore conservation in 21st century Europe

From the point of view of large carnivores (gray wolves, Eurasian lynx, brown bears and wolverines) the early to mid 20th century was a close call. During this period their populations, which had once covered much of the European continent, had been reduced to small fragments by the combined impact of direct human persecution and habitat change. Just in time, the 1960's and 1970's saw a gradual change in public attitudes towards these species which lead to changes in attitudes, habitat and legislation in their favour. Since then their populations have rebounded mainly through natural expansion, but in some cases through reintroduction. Today, most populations of large carnivores in Europe are either stable or expanding. There are still a few small populations (especially bears) whose future is a cause of concern, but on a European scale the status of these species appears to be secure. Therefore, we are not at a stage where we are trying to save them from imminent extinction. Instead we are trying to find ways to achieve a sustainable coexistence with viable populations of these species in the shared landscape where we live, work and play. This is a bold experiment which has never been attempted before in Europe. Large carnivores have demonstrated time and again that they are able to live close to us, and to tolerate many of the dramatic changes that we have inflicted on the European landscape. The question remains if we are able to live with the large carnivores.

One thing is clear, achieving coexistence with large carnivores in modern day Europe requires careful planning and management of both large carnivores and human activities. Crucial to all management activities is that they occur at the right spatial scales and that they are coordinated. Luckily, there are two separate bodies of pan-European legislation, the Bern Convention administrated by the Council of Europe and the Habitat's Directive administrated by the European Commission, that have provided some continent wide coordination. However, if we are to move forward and really achieve sustainable coexistence there is a need to develop even more concrete and coordinated actions at the only level that really makes biological sense – the population. Recognising this, the European Commission has commissioned the Large Carnivore Initiative for Europe (LCIE) to produce a set of guidelines for developing population based management plans for large carnivores.

Conserving large carnivores – the need for a population approach

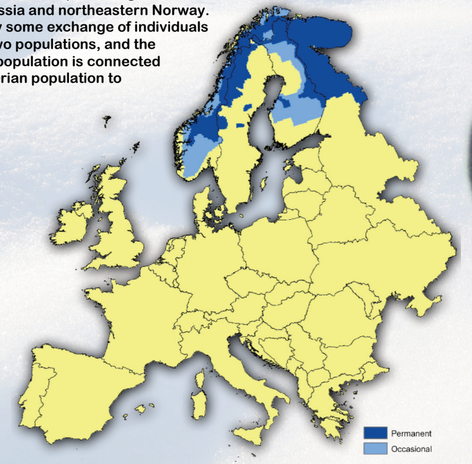
Large carnivores use very large areas – with single individuals ranging over territories of 100 to 2000 km^2. As a result they tend to occur at very low densities, and their populations function on massive scales of many thousand square kilometres. Young individuals can disperse over very large areas – with one wolf in Scandinavia having been documented to travel over 1000 km (as the crow flies). As a result they are very difficult to conserve on the traditional scales of protected areas and single countries. Of the 33 large carnivore populations that we have identified in Europe, only 4 are contained within the borders of a single country – and even these span multiple autonomous regions within federal states. If we are to ensure that populations of large carnivores in Europe reach and stay at favourable conservation status there is a need for different regions and countries to cooperate in the development of coordinated management plans for the biological units as they exist – units which in some cases span over 8 countries. This will require transboundary cooperation between EU and non-EU countries. It is an ambitious goal – but one which is necessary to guarantee the survival of these species in Europe for future generations.

Brown bears *Ursus arctos*

Distribution: 10 bear populations in Europe. Very small populations include the Cantabrian (northern Spain), the Pyrenees (France and Spain), the Alps (Italy), and Abruzzo (Italy). There are two medium sized populations, the Stara Planina (Greece) and the Rila Rhodope (Bulgaria - Greece). Large populations include the Dinaric-Pindos (Austria, Slovenia, Croatia, Bosnia & Herzegovina, Montenegro, Serbia, Albania, Macedonia and Greece), the Carpathian (Poland, Slovakia, Ukraine, Romania, Serbia), the Scandinavian (Norway, Sweden), the Karelian (northeastern Norway, Finland, Russia) and the Baltic (Estonia, Latvia, Belarus, Russia).

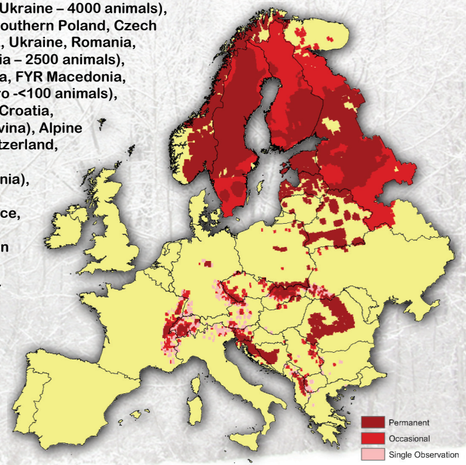
Wolverine *Gulo gulo*

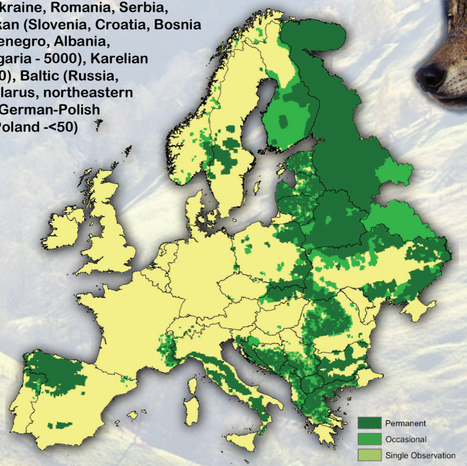
Distribution: Northern Europe in two main populations; the Scandinavian population (750 individuals) covering Norway, Sweden and northwestern Finland, and the Finnish-Russian population (450 individuals) covering Finland, northwestern Russia and northeastern Norway. There is probably some exchange of individuals between these two populations, and the Finnish-Russian population is connected to the larger Siberian population to the east.



Eurasian lynx *Lynx lynx*

Distribution: 8 populations, including the Scandinavian (Norway, Sweden, northeast Finland – 2000 animals), the Northeastern (Finland, western Russia, Estonia, Latvia, Lithuania, northeastern Poland, Belarus, northern Ukraine – 4000 animals), the Carpathians (southern Poland, Czech Republic, Slovakia, Ukraine, Romania, Hungary and Serbia – 2500 animals), the Balkan (Albania, FYR Macedonia, Serbia, Montenegro -<100 animals), Dinaric (Slovenia, Croatia, Bosnia & Herzegovina), Alpine (France, Italy, Switzerland, Germany, Austria, Lichenstein, Slovenia), Jura-Vosges (Switzerland, France, Germany) and the Bavarian-Bohemian (Germany, Czech Republic, Austria).



Wolves *Canis lupus*

Distribution: 10 populations. Northwestern Iberia (Spain and Portugal - 2400), Sierra Morena (southern Spain - 50), Alps (France, Italy and Switzerland – 130-160), Italian (Italian peninsula – 500-800), Carpathian (Czech Republic, Slovakia, southern Poland, Ukraine, Romania, Serbia, Hungary - 5000), Dinaric-Balkan (Slovenia, Croatia, Bosnia & Herzegovina, Serbia, Montenegro, Albania, FYR Macedonia, Greece, Bulgaria - 5000), Karelian (Finland, western Russia - 750), Baltic (Russia, Estonia, Latvia, Lithuania, Belarus, northeastern Poland, Ukraine - 3600), and German-Polish (eastern Germany, western Poland -<50) and Scandinavia (Norway, Sweden – 130-150).