



## Challenge the abuse of science in setting policy

The misuse of wolf research by Swedish politicians should be a warning to all biodiversity scientists, says Guillaume Chapron.

As the northern winter takes hold, Sweden is preparing for its largest ever wolf hunt. The country has been trying to hunt significant numbers of the animals for years — in the face of a European law that lists them as a strictly protected species — and it looks as though it will now succeed.

The situation is particularly alarming for me because the government has incorrectly used my academic research to make its case that the wolf population has recovered.

Political tensions over recovering populations of large carnivores are common in Europe. But the wolf issue in Sweden is unique because scientific knowledge and how it is interpreted have become central to justifying hunting. The conservative Swedish government has been playing with scientific findings for political reasons. It has claimed that its decisions are supported by the research it asked me to produce — but they are not — and it has cherry-picked others' findings. The situation is at odds with the popular view of the supposed respect that Nordic countries have for evidence-based environmental sustainability.

There are about 400 wolves in central Sweden and the population is heavily inbred: all the wolves are descended from a handful of animals that have arrived from Finland since the 1980s. The European Habitats Directive, which protects the wolf (*Canis lupus*), does allow for limited culling to prevent serious damage to livestock. But there is consistent political pressure to reduce wolf numbers further. For example, hunters complain that every year the wolves kill a few hunting dogs, which run free as their owners target moose.

Beginning in 2010, the Swedish government claimed that annual wolf hunts, which aimed to slash numbers to 210 animals, would persuade hunters to support plans to import unrelated wolves from Finland or Russia and make the population more genetically diverse. However, although the hunt went ahead, disease fears scuppered translocation of the foreign animals.

In following years, the annual hunts faced various legal challenges, and by 2013, the government had a new scientific justification. It said that hunting was the single most effective way to immediately solve the wolf population's genetic problems. Shooting the most inbred wolves, the government pointed out, would at a stroke decrease the inbreeding coefficient of the population.

I told the Swedish authorities that this was a deliberately short-sighted idea because the only way to decrease inbreeding in the long run is to bring in new genes. A complementary and risky proposal to translocate captive-bred pups into wild litters failed too. That year's hunt began anyway, but was halted by the Swedish courts.

Despite vitriolic letters from the European Commission calling on Sweden to make sure that the wolf population reaches Favourable Conservation Status (FCS) — a mandatory benchmark of a recovered and thriving population — the Swedish government did not give up. Late last year, it ditched its genetic concerns — the only reason it had given to support the hunt just twelve months before — and simply declared that the wolves had reached FCS.

This is where my research was misused. In 2012, the Swedish government gave me 30 days to prepare a population viability analysis of the wolves. This is a demographic measure of how close the population is to extinction, and crucially, is a separate measure from FCS, which relates to recovery. To avoid misinterpretation of my work, which excluded genetic aspects, I made sure to write on multiple occasions in the report that it could not be used to estimate FCS. Several reviewers of the report also stressed this point.

Yet the government still misused my report to claim that the wolf population in Sweden had reached FCS, as a cover to permit further hunting.

As preparations for this year's hunt continue, legal protection for the wolves is harder to find. Realizing that scientific evidence will be a constant obstacle, the government has changed the law to effectively make large-carnivore-hunting decisions exempt from legal challenge. Furthermore, it opposed mention of the need for research on FCS in a forthcoming European action plan for large carnivores, arguing that the Swedish parliament had voted on FCS so there was no need for such research. When my project 'Claws & Laws', which is aimed at exploring FCS, was funded by the independent Swedish Environmental Protection

Agency, some politicians made known their uneasiness with the work.

I am concerned that Sweden's misuse of my research and its flouting of European regulations will set a dangerous precedent in biodiversity conservation. The distortion of science has been very subtle and technical in this case, and the wolves will not be eradicated, but it is important to highlight because it may be the first of many examples. Preserving biodiversity can generate conflict because it places limits on development, traditions and other human activities. Ecological science will probably have a more important role in these disputes in the future.

With increasing calls to make policy science-based, political abuse is likely to become more common. Even if it damages their careers, and makes their names toxic, academics must be prepared to identify the unethical use of scientific knowledge and expose such abuse by politicians. ■

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