

The disappearance of vultures can have unforeseen consequences, including for humans

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Bred in captivity: The lamb vulture population has increased in recent decades thanks to successful breeding programs. Credit: [Sara Asu Schroer](#)

Vultures are often associated with death, but some vulture species are themselves at risk of extinction. What can their fate tell us about the interaction between humans and the natural world in our time?

When vulture populations in India suddenly started collapsing at the turn of the millennium, the consequences were far-reaching and unforeseen. Wild dogs took over the vultures' job of eating carrion, the dog population exploded, and there was a marked increase in the number of people being bitten by dogs and contracting rabies.

A group of researchers from the University of Bath in the U.K. and the Institute of Economic Growth in India concluded that the loss of vultures cost India over USD\$30 billion, according to the Norwegian newspaper Dagens Næringsliv (dn.no).

"Never before have humans had such a strong influence on the life on earth as in our current era. We are in the middle of what many people are calling the 'sixth extinction,'" explains Sara Asu Schroer.

Unlike the previous five major mass extinctions that slowly, occurred over millions of years, in the different geological eras, the sixth extinction, which is being caused by [human activity](#), is taking place over a matter of a few centuries.

"It is important to understand that when species, such as vultures, disappear from ecosystems, it can have vast and unforeseen consequences, also for us humans," Schroer says.

Dramatic decline in animal populations

Schroer is head of the research project Living with Vultures in the Sixth Extinction, where she explores the complex links between humans and vultures, and what is being done to preserve them in Europe.

The world's animal populations have plummeted by 69% since 1970, according to WWF's 2022 Living Planet report.

Among those in peril are the world's vulture populations, which have completely died out in several places.

The populations in Asia and Africa are the worst affected, while Europe is described as one of the last vulture strongholds—thanks in large part to various vulture conservation initiatives.

"Vultures are scavengers that live off the carcasses of wild and [domestic animals](#). The fact that they live in such close interaction with humans and domestic animals makes them an interesting case for investigating how the relationship between humans and wild animals is affected by the fact that landscapes are increasingly being shaped by human activities," says Schroer.

Vultures also act as a "sentinel species." This means that the health of vultures is an indicator of the health of the ecosystem as a whole.

In her research, Schroer wants to understand the ideas, values and motivations of the people involved in vulture management and conservation measures.

"Since [climate change](#) and the environmental crises we are currently facing are anthropogenic, it is very important to include perspectives from the social sciences and the humanities in work to understand—and try to resolve—[environmental problems](#)," she points out.

Successful reintroduction of the bearded vulture in the Alps

There are over 20 species of vultures in the world, including condors, which only live in North and South America. Europe is home to four native breeding vulture species—the Egyptian vulture, griffon vulture, cinereous vulture and bearded vulture.

So far, Schroer's research has primarily focused on the management of bearded vultures and griffon vultures.

Bearded vultures live in remote mountain areas such as the Alps and the Pyrenees, where they feed on carrion. Griffon vultures breed in large colonies, which can consist of up to hundreds of birds, and often range over open landscapes.

"Because griffon vultures occur in large groups and live near inhabited areas, they are far more visible than bearded vultures. Both have been hunted and have become endangered in most of their habitats in the past," says Schroer.

Since the late 1970s, there have been several breeding and reintroduction programs in Europe aimed at bringing the birds back to places where they have died out.

"The rewilding of bearded vultures in the Alps is an iconic example of the successful reintroduction of a species into the wild by releasing birds bred in captivity. However, breeding vultures in captivity is no easy task. The birds have a relatively long period of maturation, they may not want to mate with their allocated breeding partner, and they produce only one or two chicks a year. So breeding takes a lot of patience and determination," Schroer explains.

What is threatening vultures?

Historically, vultures have often been viewed as a threat by hunters and

farmers, and have been hunted, both legally and illegally. In the 1970s, Europe started introducing more stringent environmental legislation, which has benefited vultures through, among other things, a ban on hunting. More recently, however, new threats have started to emerge.

"A major problem in Europe is indirect poisoning through vultures feeding on poisoned carcasses that have been left out to kill predators such as wolves. Other common threats are veterinary drugs, toxins in the environment and lead ammunition," says Schroer.

The reason why the vulture population in India suddenly collapsed was that farmers started giving the anti-inflammatory drug diclofenac to livestock in the 1990s. The vultures could not tolerate the medicine they ingested when they ate the carcasses and died shortly afterwards.

"Another big problem—and not just for vultures, but for birdlife in general—is the rapidly evolving renewable energy infrastructure, such as wind turbines and cables," says Schroer.

Human and animal health are interconnected

Land-use change, resulting in habitat destruction, is the main driver of biodiversity loss today. One consequence of wild animals losing and being driven from their natural habitats is that they start living closer to humans.

"This means that the health of humans and domesticated animals, and the health of wild animals, are becoming more closely interlinked. A good example of this is the correlation between the outbreak of mad cow disease and the decline of the vulture populations in Europe," says Schroer.

Bovine spongiform encephalopathy (BSE), more commonly known as

mad cow disease, was first detected in the U.K. in the mid-1980s. BSE developed as a result of the use of ground offal and bones of sheep and other domestic animals in cattle feed.

Following the BSE outbreak, a ban was introduced on farmers leaving animal carcasses out, as they might be a source of infection.

No one thought about the consequences of this ban for vultures, and they began to starve. Some farmers even claimed that hungry vultures started attacking their livestock.

After pressure from, among others, conservation organizations, the legislation was amended, such that farmers could leave carcasses out, in compliance with special rules. In addition, feeding stations, known as "vulture restaurants," were also established.

"I think this example illustrates how we must learn to recognize that everything is connected to everything else in life. It is not possible to find sustainable ways of living if we think in isolated categories and address issues such as public health and environmental protection, for example, separately. COVID-19 is a good example of this. We humans are not outside the ecosystem, we are part of it," says Schroer.

Seabirds moving to the city

Schroer claims that studying the coexistence of [vultures](#) and humans in Europe up close provides useful knowledge about a number of general problems of our time.

"For example, in Norway we are seeing an alarming decline in seabird numbers."

Lack of food, which in turn can be linked to climate change and

overfishing, are believed to be the main cause. As a result, kittiwakes are moving into urban areas. They use rooftops like cliffs and make their nests there.

"This is leading to new conflicts and challenges in human-dominated environments," says Schroer.

Provided by University of Oslo

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