Why the world needs vultures

For the past six months, news around the world have been dominated by a coronavirus pandemic that has infected and killed millions of people. As countries and their citizens impose various lockdowns to reduce the spread of this pandemic, economies falter and the social construct of humanity is beginning to fail. Yet few solutions proposed to date to curb the pandemic have paid any attention to the wildlife that may well prevent such an outbreak of disease in the first place: vultures.

Vultures are large birds that eat dead animals. No carcass is too disgusting for them, and by removing rotting animal flesh from the landscape they reduce the substrate on which pathogens can thrive, or the pool of viruses that may have initially killed that now dead animal. With vultures efficiently cleaning up carcasses of even large animals, the risk of pathogens spreading to other live animals (or possibly humans) may be considerably lower. But vultures themselves are in desperate trouble.

Egyptian Vultures cleaning up a carcass on the Balkan Peninsula

Vultures are in trouble around the world

Vulture populations around the world have declined dramatically, not because their main food is a natural cesspit of viruses and bacteria, but because humans routinely add substances to this food that kills even the hardiest of vultures.

In South Asia, a painkiller drug given to moribund cattle killed >99% of vultures in just over a decade. In Africa and Europe, people lace animal carcasses with poison and either purposefully or accidentally kill hundreds of vultures. In Europe, fears about the outbreak of a livestock disease led to the wholesale removal of livestock carcasses from the countryside, and while having no food is

marginally better than having poison in your food, vulture populations in Europe have suffered from this lack of food imposed by human regulations.

Carcass of a poisoned White-backed Vulture in Africa

Some vultures migrate across continents

Being exposed to any one of these threats in different continents is bad enough, but some vulture species actually migrate across continents and therefore experience the whole smorgasboard of threats. Of the four vulture species that breed in Europe, the smallest species – the Egyptian Vulture – is a regular long-distance migrant that breeds in southern parts of Europe and migrates in early September to wintering grounds in Africa.

Based on miniature tracking devices we now know exactly where and when Egyptian Vultures travel between breeding and wintering regions. In eastern Europe, the birds first fly around the Aegean Sea, across Turkey, head south through the Middle East, and then follow the Red Sea to main concentration areas in Ethiopia. This 5000 km journey is hazardous at the best of times, and many human obstacles exist that cost the odd vulture's life.

Egyptian Vulture with a satellite transmitter used to track their migration

Key threats to Egyptian Vultures along their flyway

Since 2016, a BirdLife International alliance led by the Bulgarian organisation BSPB has investigated the threats facing Egyptian Vultures in 13 countries across 3 continents. After three years of painstaking work to document the various ways how Egyptian Vultures are inadvertently (or deliberately) killed, we now have a clear idea which threat is the most critical problem in which country. You can learn more about our work during an online event on International Vulture Awareness Day on 5th Sept 2020.

One of the most widespread threats that occurs in almost every country along the flyway is poisoning: typically, some rural livestock herders who may have lost livestock to a wolf, hyena, feral dog or another predator will add some lethal pesticide to a carcass to kill the predator that threatens their livestock. Vultures – uniquely skilled to find dead bodies as their main food source – consume the poisoned carcass and inadvertently suffer a gruesome death. This threat is the biggest problem on the Balkan Peninsula, in Saudi-Arabia, and in Ethiopia.

Egyptian Vulture poisoned near its breeding grounds on the Balkan Peninsula

An equally widespread and unintentional threat is power infrastructure. Poorly designed poles that allow birds to simultaneously touch a live wire and a conducting part of the pole lead to instant death from electrocution; other lines or wind turbines can be difficult to see and large birds collide with them and get killed. This threat is particularly widespread in Ethiopia, Turkey, Saudi-Arabia and Egypt.

Egyptian Vultures and other large birds get electrocuted on hazardous powerlines in Ethiopia

Besides getting inadvertently killed by poison or by infrastructure, Egyptian Vultures also get shot directly. This threat is greatest in Nigeria and neighbouring countries where there is a large market demand for vulture parts, and in some countries in the Middle East that have a 'tradition' of hunting migratory birds. The threat of illegal killing affects millions of migratory birds every year, and although Egyptian Vultures are targeted rarely, being shot adds to the many other threats that these birds have to negotiate along their flyway.

Juvenile Egyptian Vulture trapped for sale on a market in Lebanon

Solutions exist for some threats

Some of the threats could be easily fixed. Poorly designed power infrastructure can be retrofitted to be safer for birds, or governments and international funding agencies could simply invest in safer designs in the first place. Direct persecution and the use of poisonous substances are already illegal in many countries, but these laws are often not enforced. For now, the team has started to use dogs to detect and remove poisoned carcasses from breeding areas in the Balkans.

Powerlines can be insulated to reduce the risk of electrocution

Any measures to save Egyptian Vultures will benefit many other large birds as well, especially other vulture species. The core wintering areas in Ethiopia are frequented by several other globally threatened vulture species, and migration routes across the Middle East are used by millions of migratory birds. Even if the project reduces only a few threats to Egyptian Vultures, many other species will benefit.

Will saving vultures help with a pandemic?

Having healthy vulture populations around the world will ultimately benefit people as well. In South Asia, feral dog numbers have increased since vultures have vanished, and while dogs also scavenge carcasses, they are less effective than vultures and can transmit rabies to people. No armada of vultures will stop a viral pandemic once the virus has discovered humans as a host. However, vultures may well clean up any animal carcass before a hapless person may stumble across it and contract a virus that has hitherto only spread among wildlife. The SARS-Cov2 virus that caused the global coronavirus pandemic of 2020 probably did not spill over to humans from such a chance encounter of an animal carcass, but the next zoonosis may well do so. Let's give vultures a chance to protect us from this possibility.