

## SPOTLIGHT ON CLIMATE CHANGE

### Europe not prepared for rapidly growing climate risks

Europe is the fastest warming continent, and climate risks are threatening its energy and food security, ecosystems, infrastructure, water resources, financial stability and people's health. According to a new assessment by the European Environment Agency, many of these risks have already reached critical levels and could become catastrophic without urgent and decisive action. As many measures to improve climate resilience require a long time, immediate action may be needed to address even those risks that are not yet critical. Southern Europe is particularly at risk from wildfires and impacts of heat and water scarcity on agricultural production, outdoor work and human health. Flooding, erosion and saltwater intrusion threaten Europe's low-lying coastal regions, including many densely populated cities.

Source: European Environment Agency (2024) [eea.europa.eu/en/newsroom/news/europe-is-not-prepared-for](https://www.eea.europa.eu/en/newsroom/news/europe-is-not-prepared-for)

### Great Barrier Reef in trouble

For the fifth time in the past eight summers, huge swathes of the Great Barrier Reef are experiencing extreme heat stress that has triggered yet another episode of mass coral bleaching, the most conspicuous impact of unusually high temperatures. Bleaching happens when marine heatwaves disrupt the relationship between corals and their photosynthetic symbionts, tiny organisms that live inside the corals' tissues and help power their metabolism. Severe bleaching is often fatal, whereas corals that are mildly bleached can slowly regain their symbionts and normal color after the end of summer. Before 1998, coral bleaching on the Great Barrier Reef was infrequent and localized. But over the past decades, bleaching has increased in frequency, severity and spatial scale. The latest event was entirely predictable, as ocean temperatures continue to rise because of ongoing global heating. The only long-term way to protect corals on the Great Barrier Reef and elsewhere is to rapidly reduce global greenhouse emissions.

Source: *The Conversation* (2024) [theconversation.com/the-great-barrier-reefs-latest-bout-of-bleaching-is-the-fifth-in-eight-summers-the-corals-now-have-almost-no-reprieve-225348](https://theconversation.com/the-great-barrier-reefs-latest-bout-of-bleaching-is-the-fifth-in-eight-summers-the-corals-now-have-almost-no-reprieve-225348)

### Climate crisis could escalate negative human–elephant interactions

A new study finds that climate change could lead to more frequent negative human–elephant interactions in the future. The study analysed known hotspots to predict how the risk and severity of human–elephant conflicts could change amid alternative futures: one with high greenhouse gas emissions and greater deforestation, human population and agricultural expansion, the other with less reliance on fossil fuels, greater conservation of forests and a lower agricultural footprint. According to the projections, in a more sustainable future, human–elephant interactions will remain relatively stable, whereas worsening climate change and agricultural expansion will heighten the risk. Efforts to prevent conflict will need to be adapted to the specific local situations.

Sources: *Proceedings of the National Academy of Sciences of the United States of America* (2024) [doi.org/10.1073/pnas.2311111121](https://doi.org/10.1073/pnas.2311111121) & *Conservation International* (2024) [conservation.org/blog/study-as-climate-crisis-escalates-so-too-could-human-elephant-clashes](https://www.conservation.org/blog/study-as-climate-crisis-escalates-so-too-could-human-elephant-clashes)

### Diverse habitats help salmon weather unpredictable climate changes

Researchers have examined the impact of a large watershed restoration effort on the abundance and climate resilience of three Chinook salmon *Oncorhynchus tshawytscha* populations in tributaries of the Sacramento River in the USA. The three core populations vary in their life history traits such as the timing of their juvenile migration, growth rates and food preferences. For example, some juvenile salmon migrate to the ocean in their first year, whereas others spend a year growing in freshwater first. That timing may benefit them in some years but leave them more vulnerable in others, for example if there is a drought. The fish benefit most when they have access to a mosaic of interconnecting habitat from streamside vegetation to open floodplains, the researchers found. This requires restoring diverse habitat areas at the landscape scale and returning salmon to historical habitats from which they have long since disappeared. Such landscape-scale habitat restoration efforts are crucial for the successful long-term recovery of not just salmon but other vulnerable species in a rapidly changing climate.

Sources: *Ecosphere* (2024) [doi.org/10.1002/ecsp.4000](https://doi.org/10.1002/ecsp.4000) & *Science Daily* (2024) [sciencedaily.com/releases/2024/03/240314171501.htm](https://www.sciencedaily.com/releases/2024/03/240314171501.htm)

### Extinction risk and climate change

Past climate change has been responsible for countless extinctions during Earth's history. But little is known about which factors make species more or less resilient to such change, and how the magnitude of climate change affects extinction risk. A new study analysed the fossil record of marine invertebrates over the past 485 million years. Using over 290,000 fossil records covering more than 9,200 genera, researchers collated a dataset of key traits that may affect resilience. This information was then used to develop a model to understand which factors were most important in determining extinction risk during climate change. Species occupying climatic extremes (e.g. in polar regions) were particularly vulnerable, as were animals that could only live in a narrow temperature range. However, range size was the strongest predictor of extinction risk: species with larger geographic ranges were significantly less likely to go extinct. Body size was also important, with smaller-bodied species more likely to become extinct. These results could help inform conservation strategies by identifying species most at risk.

Sources: *Science* (2024) [doi.org/10.1126/science.1271111](https://doi.org/10.1126/science.1271111) & *University of Oxford* (2024) [ox.ac.uk/news/2024-03-08-new-study-reveals-insight-which-animals-are-most-vulnerable-extinction-due-climate](https://www.ox.ac.uk/news/2024-03-08-new-study-reveals-insight-which-animals-are-most-vulnerable-extinction-due-climate)

### Global warming is affecting hibernation in bats

Global warming is altering the physiology and behaviour of hibernation in bats, according to a 20-year study on a colony of 17,000 common bent-wing bats *Miniopterus schreibersii* in Spain. Usually, in temperate latitudes bats accumulate large fat reserves during autumn to prepare for hibernation, which normally runs from mid December to late February. But now, adapting to milder and shorter winters, bats accumulate less fat, shorten their hibernation periods and leave their winter shelters sooner. These changes could alter their migration pattern. Global change is also affecting the bats' arrangement in their winter shelter, as their hibernation chamber takes longer to cool down. The bats thus choose colder spaces near the entrance of their shelter and are exposed to a higher risk of predation. Additionally, with a shorter hibernation, bats start their activity earlier than in previous years and reach their spring destination sooner, which could be problematic if a late cold spell hits in spring.

Sources: *Scientific Reports* (2024) [doi.org/10.1038/s41598-024-57111-1](https://doi.org/10.1038/s41598-024-57111-1) & *EurekaAlert!* (2024) [eurekaalert.org/news-releases/1036709](https://www.eurekaalert.com/news-releases/1036709)

## INTERNATIONAL

### Satellite images reveal four unknown emperor penguin colonies

Satellite images have helped to reveal four previously unknown colonies of emperor penguins in the Antarctic. During winter, colonies of thousands of emperor penguins live and breed on the frozen sea ice of the Antarctic coast. Melting ice caused by climate change is now forcing these colonies to relocate to more stable breeding grounds, and researchers regularly monitor where they move using satellite images. Against the bright white snow, the hordes of penguins and their guano stains stand out as brown splotches on the landscape. Three of the colonies that researchers spotted on the Brunt ice shelf were small, with fewer than 100 birds. But the fourth group, a colony that scientists believed had vanished, had more than 5,000 birds. This brings the total number of known emperor penguin colonies in Antarctica to 66. However, some researchers predict that the species could be extinct by the end of the century. In 2023, at least 19 penguin colonies had total breeding failures due to ice melt, causing a mass die-off of chicks.

Source: *New Scientist* (2024) [newscientist.com/article/2413815-four-new-emperor-penguin-colonies-have-been-discovered](https://www.newscientist.com/article/2413815-four-new-emperor-penguin-colonies-have-been-discovered)

### Mice eradication project planned on a remote island

A large mouse eradication project is planned on Marion Island, where there are more than a million of the rodents, which were accidentally introduced to the island 200 years ago and are breeding rapidly. The Mouse-Free Marion project will see up to six helicopters drop 550 t of rat poison, which is harmless to other animals, across the island. The sub-Antarctic Indian Ocean island is home to globally significant populations of nearly 30 bird species. Stowaway house mice arrived on seal hunter ships in the early 1800s, introducing the island's first mammal predators, and rising temperatures have seen the mouse population soar in the last few decades as their breeding season has been extended. They are feeding on invertebrates and seabirds, which are unable to defend themselves. It is estimated that without action, 19 seabird species will disappear from the island in 50–100 years. If successfully funded, the project is planned to commence in 2027.

Source: *Sky News* (2024) [news.sky.com/story/mice-have-overrun-a-remote-island-and-are-feasting-on-seabirds-now-they-face-extermination-13095718](https://www.sky.com/story/mice-have-overrun-a-remote-island-and-are-feasting-on-seabirds-now-they-face-extermination-13095718)

### Billions of years of evolutionary history at risk

Experts have outlined a roadmap to save 102 billion years of threatened evolutionary history, in the world's first study of how future extinctions could forever change the vertebrate tree of life. The study underscores the peril faced by jawed vertebrates (mammals, birds, amphibians, reptiles and the majority of fish species), with billions of years' worth of evolution currently at risk of being lost. By looking at the extinction risk of > 70,000 species and the unique evolutionary history they represent, the team were able to identify the species whose protection would save the greatest amount of evolutionary history. They flagged turtles, tortoises and fish as the groups most in need of conservation action. Fourteen of the 25 species identified are fish, and 16% of the top 25 were turtles and tortoises, despite this group making up only 0.5% of all jawed vertebrates. The roadmap provides vital guidance for decision-makers working towards global biodiversity goals.

Sources: *Nature Communications* (2024) [doi.org/mm25](https://doi.org/10.1038/s41467-024-5125-2) & *ZSL* (2024) [zsl.org/news-and-events/news/102-billion-years-evolutionary-history-risk](https://www.zsl.org/news-and-events/news/102-billion-years-evolutionary-history-risk)

### Thousands of humpback whales starved after marine heatwave

A study estimating humpback whale numbers in the North Pacific Ocean from crowdsourced photos reveals a sharp 20% decline from 2012 to 2021 after decades of slow population growth. The decline coincided with a massive marine heatwave during 2013–2016. The unprecedented intensity of the heatwave was almost certainly the result of global warming, and the findings suggest that around 7,000 whales starved to death because of it. Whale populations are typically assessed by methods such as ship surveys, where the number spotted in one area is extrapolated to estimate the overall population. This study is the first to exploit data from an international collaborative project called Happywhale, where anyone can submit photos via a website or app, along with the time and location of the sighting. Artificial intelligence is used to identify individuals from the photos, based on the shape of their tail flukes and pigment patterns. Overall, nearly 800,000 photos have been submitted to the project, allowing more than 100,000 individual whales to be identified worldwide.

Sources: *Royal Society Open Science* (2024) [doi.org/mn3c](https://doi.org/10.1098/rsos.240133) & *New Scientist* (2024) [newsscientist.com/article/2419289-thousands-of-humpback-whales-starved-to-death-after-marine-heatwave](https://www.newscientist.com/article/2419289-thousands-of-humpback-whales-starved-to-death-after-marine-heatwave)

### Citizen scientists contribute vital information about seahorses

Researchers from Project Seahorse have identified and reviewed new findings related to 35 of the 46 seahorse species found worldwide, all of them provided via the iSeahorse programme. The programme allows citizen scientists—members of the public and non-professional or amateur researchers—to submit information about sightings of seahorses in the wild, including the species of seahorse, time and place of the observation, habitat and water depth, plus photographic evidence if available. Analysing 7,794 validated iSeahorse observations from 96 countries and across 35 seahorse species, posted from 2013 to 2022, researchers gained valuable insights. For example, observations of Coleman's pygmy seahorse *Hippocampus colemani* indicated that the species' geographical range is much larger, its habitat more diverse and its depth range shallower than previously known.

Sources: *Journal of Fish Biology* (2024) [doi.org/mpw9](https://doi.org/10.1111/jfb.50000) & *Project Seahorse* (2024) [projectseahorse.org/citizen-scientists-contribute-vital-information](https://projectseahorse.org/citizen-scientists-contribute-vital-information)

### Researchers pitch global targets for wetlands conservation

Chinese researchers have pitched global targets for wetlands conservation that could inform national biodiversity strategies. Targets for expanding protected wetland areas globally under 'conservative', 'moderate' and 'ambitious' scenarios were described in an article published in early 2024. Under these scenarios, an additional 9, 42 and 56% of wetlands should be protected, respectively, the researchers said. This would mean protecting 1.5–4.5% more of each continent's area under the ambitious target. Research on wetlands is urgently needed, but because of methodological and data issues, no targets for wetlands on a global scale have yet been published. Several separate indicators already exist for wetland extent, overall biodiversity and human impact, but the researchers stress that all three must be considered simultaneously for the prioritization of wetland conservation. Most countries have no laws for wetland conservation, with scattered policies across different departments. The researchers therefore propose an assessment model to identify wetland conservation projects and set conservation targets for the optimization of global wetland protected areas.

Sources: *Communications Earth & Environment* (2024) [doi.org/gtckgm](https://doi.org/10.1038/s43247-024-00668-6) & *Carbon Pulse* (2024) [carbon-pulse.com/248686](https://www.carbon-pulse.com/248686)

## EUROPE

**Monumental step to save seabirds**

Puffins, kittiwakes, razorbills and other threatened seabirds have been thrown a lifeline, after decades of campaigning have finally succeeded in stopping industrial sand eel fishing in the English North Sea and in all Scottish waters. The decision comes after > 25 years of campaigning by conservationists, which called out the practice as one of the contributors to seabird decline. Many seabirds, including puffins, rely on sand eels to feed their chicks. But climate change and over-fishing have vastly depleted sand eel populations, with a devastating knock-on effect on seabirds. A 2023 census found that more than half the seabird species breeding on British and Irish coasts have declined over the last 20 years. In Scotland, which is home to over half of UK seabirds, this figure rises to 70% of species in decline. Ending the industrial fishing of sand eels is just one necessary step in the effort to safeguard seabirds as they face additional threats from climate change, bird flu and poorly planned offshore marine development.

Source: RSPB (2024) [rspb.org.uk/whats-happening/news/sandeel-campaign-success-in-england](https://rspb.org.uk/whats-happening/news/sandeel-campaign-success-in-england)

**Scientists raise the alarm for harbour porpoises**

Researchers are highlighting the challenges faced by harbour porpoises in Danish coastal waters and in the western part of the Baltic. The harbour porpoises in this area are considered part of a single population, referred to as the Belt Sea population, genetically different from populations in the North and Baltic Seas. In 2012 and 2016, there were approximately 40,000 porpoises, but by 2022, only 14,000 remained. Threats including bycatch from net fishing, deoxygenation, pollution and a lack of fish are contributing to the decline of the population, which is shrinking by 2.7% annually. Researchers are especially focused on the threat that commercial fishing poses, as limiting net fishing will quickly reduce the bycatch of harbour porpoises and give the population time to heal. While populations of herring and codfish are able to quickly bounce back, harbour porpoises only have one calf per year, meaning it takes many years for a harbour porpoise population to grow and stabilize. It is the calves who usually get caught in the nets from fishing vessels.

Sources: *Frontiers in Marine Science* (2024) [doi.org/10.3389/fmars.2024.1240307](https://doi.org/10.3389/fmars.2024.1240307) & *Science Daily* (2024) [sciencedaily.com/releases/2024/03/240307110730.htm](https://sciencedaily.com/releases/2024/03/240307110730.htm)

**Giant sequoias are thriving in the UK landscape**

Imported giant sequoia trees are well adapted to the UK, growing at rates close to their native ranges and capturing large amounts of carbon during their long lives, finds a new study by University College London and the Royal Botanic Gardens, Kew. The research found that redwood trees *Sequoiadendron giganteum* can potentially pull an average of 85 kg of carbon out of the atmosphere per year. Introduced to the UK 160 years ago, this is the first time the trees' growth rate and resilience in the country have been analysed. Researchers compiled the first dedicated map of giant sequoias in the UK, with nearly 5,000 individual known trees. They used terrestrial laser scanners to map the trees in 3D, enabling them to measure the heights and volumes accurately. There are around half a million redwoods in the UK and more are being planted. The species is categorized as Endangered on the IUCN Red List, with fewer than 80,000 giant sequoias remaining in the wild in their native California range.

Sources: *Royal Society Open Science* (2024) [doi.org/10.1098/rsos.240125](https://doi.org/10.1098/rsos.240125) & *University College London* (2024) [ucl.ac.uk/news/2024/mar/giant-sequoias-are-rapidly-growing-feature-uk-landscape](https://ucl.ac.uk/news/2024/mar/giant-sequoias-are-rapidly-growing-feature-uk-landscape)

**Enhancing human-wolf coexistence in northern Portugal**

A livestock guard dog programme overseen by Rewilding Portugal has reached a milestone, with the 101st dog handed over to a local farmer. Studies estimate that the Portuguese population of the Iberian wolf currently totals 250–300 animals, divided in two by the Douro River. The subpopulation north of the Douro is larger and more stable, but south of the river there are only a handful of scattered packs. A lack of natural prey means these packs prey on livestock, causing conflict with farmers. The livestock guard dog programme provides dogs free of charge to local farmers to enable them to better protect their herds from predation. The dogs are handed over to livestock owners as puppies, sourced from litters of existing guard dogs. This enables them to be integrated into flocks and herds, and to create a strong bond with the animals they are protecting. Although the dogs have not completely stopped wolf attacks, the method has generally been effective: many farmers have not experienced any predation since receiving a guard dog.

Source: *Rewilding Portugal* (2024) [rewilding-portugal.com/news/101-guard-dogs-enhancing-human-wolf-coexistence-in-northern-portugal](https://rewilding-portugal.com/news/101-guard-dogs-enhancing-human-wolf-coexistence-in-northern-portugal)

**Green lights on fishing nets could reduce bycatch of sea turtles**

Bycatch in fishing gear is one of the biggest threats to sea turtles. But these creatures are particularly sensitive to green light, making them less likely to get caught up in fishing nets fitted with green LED lights. Around Cyprus, fishers leave long stretches of net on the seabed overnight in seagrass habitats, and often find drowned turtles entangled in the nets. Because fish stocks are in decline, fishers are using more nets, making bycatch more likely. Since 2014, a team of marine biologists have been trialing ways to reduce turtle bycatch using lights in nets as a deterrent. A recent study suggests the lights can reduce bycatch by c. 40%. Thousands of the battery-powered NetLights have been given to 50 fishers in Cyprus as part of a trial. Fishers indicated they would be most likely to use the lights if costs were subsidized or if the adoption of bycatch reduction technology was a legal requirement. Ideally, the lights should be smaller, lighter and more buoyant so that they can replace the floats used to stand the nets in the water, without adding more bulk. Rolling out more NetLights and monitoring their effectiveness could improve turtle survival.

Sources: *Fisheries Research* (2024) [doi.org/10.1016/j.fishres.2024.100000](https://doi.org/10.1016/j.fishres.2024.100000) & *The Conversation* (2024) [theconversation.com/green-lights-on-fishing-nets-could-slash-bycatch-of-sea-turtles-says-research-225072](https://theconversation.com/green-lights-on-fishing-nets-could-slash-bycatch-of-sea-turtles-says-research-225072)

**Artificial intelligence analyses bird sounds for Somerset conservation project**

Conservationists in the UK are using artificial intelligence to identify and monitor bird populations by recording their songs. Somerset Wildlife Trust is restoring peatland at a former dairy farm, with hopes to make the area a better habitat for wetland species. There are four microphones deployed in the 81-ha site, listening out for birdsong, which is subsequently analysed by artificial intelligence. The Trust then uses the information to monitor bird populations and how they are changing. Since the project started in 2022, the researchers have accumulated 1.3 million species recordings, with the most common birdsong recorded on the site coming from wrens, jackdaws and goldfinches. Geoff Carss, CEO at Wilder Sensing, who developed the technology for the project, said: 'We take a species like the robin and take hundreds of recordings, feed them into the machine learning model and over time you have a big library of these things.' It only takes about 30 seconds for the technology to attribute a sample of birdsong to a species.

Source: *BBC* (2024) [bbc.co.uk/news/uk-england-somerset-68272632](https://bbc.co.uk/news/uk-england-somerset-68272632)

## AFRICA

**Giant tortoises return to Madagascar after 600 years**

A 6-year project to return giant tortoises to the wild in Madagascar could result in thousands of the megaherbivores repopulating the island from which they were wiped out by hunters 600 years ago. The Aldabra giant tortoise *Aldabrachelys gigantea* is the second-largest species of tortoise in the world. It can live for c. 100 years and is particularly social, coming together in large numbers to forage and sleep. In 2018, work started to reintroduce the tortoise to the Anjajavy Reserve in the north-west of the island. The first group of 12 giant tortoises were brought in from the Seychelles and fitted with transponders before being released. They have been reproducing successfully, with 152 tortoises hatching since the reintroduction. The hatchlings are taken to a tortoise nursery initially and then returned to the wild once their carapace is large enough to protect them from predators. Reintroducing the tortoise will help restore the island's forests, grassy woodlands and shrublands.

Source: *The Conversation* (2024)

[theconversation.com/madagascar-giant-tortoises-have-returned-600-years-after-they-were-wiped-out-221615](https://theconversation.com/madagascar-giant-tortoises-have-returned-600-years-after-they-were-wiped-out-221615)

**Road to recovery: 21 black rhinoceroses relocated in Kenya**

Twenty-one eastern black rhinoceroses *Diceros bicornis michaeli* have been successfully relocated to a new safe haven in Kenya, over an 18-day period. Experts from the Kenya Wildlife Service and its partners tranquilized 11 female and 10 male rhinoceroses, which were transported by lorry to their new home in Loisaba, a conservancy in Laikipia. The newcomers—comprising three individuals from Nairobi National Park, six from Ol Pejeta Conservancy and 12 from Lewa Conservancy—will form the nucleus of a new breeding population. Black rhinoceroses were once numerous in Loisaba, but years of intensive poaching took a severe toll and according to local elders they were locally extinct by the mid 1970s. However, the habitat itself remains ideal, so the reintroduced rhinoceroses should thrive provided they receive adequate protection. The long-term future of this Critically Endangered subspecies hinges on re-establishing viable breeding populations in some of its former strongholds across East Africa.

Source: *Fauna & Flora* (2024) [fauna-flora.org/news/21-black-rhinos-hit-the-road](https://fauna-flora.org/news/21-black-rhinos-hit-the-road)

**Death toll rises to seven in Malawi elephant relocation project**

In July 2022, more than 250 elephants were moved from Liwonde National Park in southern Malawi to the country's second largest protected area, Kasungu, in an operation led by Malawi's National Park Service and two NGOs: The International Fund for Animal Welfare (IFAW) and African Parks. The movement of elephants was among the largest of its kind ever attempted. In a tragic turn of events, in the days after the translocation, two people were killed by elephants in the area the animals were moved to, and a third person was killed in September that year. Communities warned of increasing conflict with the elephants and a community leader accused the wildlife NGOs of caring more about animals than people. An electric fence to protect people at the edge of the Park had not been completed, he said, highlighting that the elephants had been moved from a protected area that already had a fence. Now, a further four people have been killed by elephants in Kasungu, bringing the total fatalities to seven, with areas of the fence still incomplete.

Source: *The Guardian* (2024) [theguardian.com/environment/2024/feb/16/prince-harry-malawi-elephant-relocation-project-dead-aoe](https://theguardian.com/environment/2024/feb/16/prince-harry-malawi-elephant-relocation-project-dead-aoe)

**Pioneering Maasai women ending all-male leadership of the land**

In Mara Ripoi conservancy in Maasai Mara, Kenya, women are taking up roles that give them a say in community life and protecting the land they depend on. This wildlife reserve is one of a few in which some of the key decision-makers are Maasai women, who are carving out space in a domain long dominated by men. Two-thirds of Africa's protected land lies outside national parks, and conservancies are designed to protect those vital habitats. A conservancy is formed on land that is collectively owned and managed by Indigenous communities—such as the Maasai—and set aside for protection. The community earns income by partnering with wildlife tourism companies, which pay rent. Maasai societies are highly patriarchal, and governance of the conservancies is typically solely in the hands of men. In Ripoi, however, three of the 10 governing conservancy committee members are women, giving them a say in decisions, for example on cattle grazing zones and financial matters. Despite this progress, the women in Ripoi call for more female leadership and employment opportunities within Maasai Mara conservancies.

Source: *The Guardian* (2024) [theguardian.com/environment/2024/jan/31/maasai-women-kenyan-wildlife-reserve](https://theguardian.com/environment/2024/jan/31/maasai-women-kenyan-wildlife-reserve)

**Good news for vultures in Ghana**

Researchers surveying Mole National Park, Ghana's largest protected area, have recorded three Critically Endangered vulture species nesting there. During 2020–2022, researchers spent 31 days in Mole searching for vultures, covering c. 761 km<sup>2</sup> on foot and in trucks. They estimated populations of 29–36 hooded vultures, 25–73 white-backed vultures and 3–4 white-headed vultures, and identified six, 10 and one nest, respectively. This marks the first observation of nesting hooded vultures in the Park and the first report of white-backed and white-headed vulture nests in the country. Although they did not spot Rüppell's vulture, which is also Critically Endangered, the researchers believe the species may be a rare visitor to the Park during the dry season, based on photographs taken by other scientists. Across Africa, vultures are threatened by poisoning, habitat loss, collision with power lines and hunting for trade in vulture parts that are used in traditional practices.

Sources: *The Journal of Raptor Research* (2024) [doi.org/mm28](https://doi.org/mm28) & *Mongabay* (2024) [news.mongabay.com/2024/02/endangered-vulture-species-nesting-in-ghana-is-rare-good-news-about-raptors](https://news.mongabay.com/2024/02/endangered-vulture-species-nesting-in-ghana-is-rare-good-news-about-raptors)

**First record of single orca hunting great white shark**

Orcas, also called killer whales, are known to often hunt together, surrounding their prey and combining their intelligence and strength. However, in 2023, off the coast of South Africa, researchers observed for the first time an attack of a lone orca on a great white shark. The male incapacitated and killed a 2.5-m long juvenile great white shark and consumed its liver; the attack lasted < 2 min. The remarkable efficiency of the predation event highlights the hunting skills and experience of the orca. Notably, another adult male killer whale, a constant traveling companion of the first, was observed nearby but was not involved in the predation. The following day, a second carcass of a larger eviscerated white shark (c. 3.5 m in length) washed ashore in the vicinity, indicating that the predation of white sharks was no isolated incident in the area. The observation raises critical questions about the impact of killer whale predation on shark populations in South Africa. The displacement of several shark species because of killer whale presence in the area may have implications for potential trophic changes in the marine ecosystem.

Sources: *African Journal of Marine Science* (2024) [doi.org/mj5p](https://doi.org/mj5p) & *Science Daily* (2024) [sciencedaily.com/releases/2024/03/240302171519.htm](https://sciencedaily.com/releases/2024/03/240302171519.htm)



## AMERICAS

### New species of dwarf deer in the Andes

A new species of deer has been discovered in the Andes Mountains in Peru, the first new cervid to be described in South America for > 60 years. The species has been named *Pudella carlae* to honour Peruvian biologist Carla Gazzolo. It belongs to a group of small deer referred to as pudu. Found only in the Andes, these dwarf deer occur from the chilly rain-soaked paramo grasslands down into the thick cloud forests below. After seeing some unfamiliar tiny deer in the wild, the team visited a museum to take measurements and study the colour patterns of pudu specimens. They also analysed genetic variations between these and material collected in the field. The fur of the new species is a rustier brown than that of its relatives, and it has a paler head and ears. At c. 38 cm tall and weighing 7–9 kg, its size lies between that of the other two known pudus. The new species also has a unique distribution, living in the Huancabamba Depression, a broad and arid river valley that divides the Andes in northern Peru.

Sources: *Journal of Mammalogy* (2024) [doi.org/10.1093/mamm/35.3.400](https://doi.org/10.1093/mamm/35.3.400) & *BBC Wildlife Magazine* (2024) [discoverwildlife.com/animal-facts/mammals/new-species-of-deer-discovered-in-andes-mountains](https://discoverwildlife.com/animal-facts/mammals/new-species-of-deer-discovered-in-andes-mountains)

### Concern increases for Mexico's vaquita

A thriving illegal online trade in the swim bladders of Vulnerable totoaba fish is driving the Critically Endangered vaquita *Phocoena sinus* to the brink of extinction. The species occurs only in a small area of Mexico's Gulf of California. It is estimated as few as 10 individuals remain, with the population devastated in the past decade as a result of being caught in illegal gillnets set to capture totoabas. The swim bladders are in high demand in China and other Asian countries as a symbol of wealth and for their purported medicinal value. In a recent report, the Environmental Investigation Agency (EIA) stated that the illegal trade now appears to be flourishing on social media. The report reveals that trade activity and quantities of swim bladders advertised exceeded those of previous years, indicating that wildlife traffickers have resumed business as usual since the Covid-19 pandemic. Urgent, strategic and collaborative efforts are needed to end the illegal totoaba trade and give the vaquita a chance to recover.

Source: *Environmental Investigation Agency* (2024) [eia-international.org/news/illegal-fish-bladder-trade-could-sound-the-death-knell-for-the-last-10-vaquita-porpoises](https://eia-international.org/news/illegal-fish-bladder-trade-could-sound-the-death-knell-for-the-last-10-vaquita-porpoises)

### U.S. Coast Guard launches traffic control for whales

The U.S. Coast Guard has launched a new 4-year pilot programme called the Cetacean Desk, which intends to keep whales and vessels safely apart and reduce underwater noise. It acts like air traffic control, but in the busy waterways of the Salish Sea, which has seen a resurgence of marine mammals. Modelled on Canada's Marine Mammal Desk, the programme aims to give mariners near real-time data about the location of whales through the existing WhaleReport Alert System. Whale sightings are entered on to a map by the Coast Guard staff on the desk, or automatically populated with reports from two apps or the Orca Network web form. Mariners can access the map and receive notifications from the Coast Guard, so they know when to slow down or change course. Officials hope the programme will reduce ship strikes and underwater noises, helping protect threatened whale species from potentially deadly collisions and the disruption of their communication. The data collected will also be available for researchers tracking whale migration patterns.

Source: *Phys.org* (2024) [phys.org/news/2024-02-coast-traffic-whales-washington-state.html](https://phys.org/news/2024-02-coast-traffic-whales-washington-state.html)

### Rewilding in Argentina helps giant anteaters return to southern Brazil

Recent giant anteater sightings in Rio Grande do Sul state indicate the species has returned to southern Brazil, where it has been considered extinct for more than a century. The species has been spotted on camera traps > 10 times since August 2023, although scientists are unsure whether the records are of the same or different individuals. Experts concluded that the giant anteater ventured across the border from the Iberá Park in north-eastern Argentina, where a rewilding project has released around 110 individuals back into the habitat. Giant anteaters play an important role in their ecosystems, controlling insect numbers, creating watering holes through digging and providing prey for large felids. The species is categorized as Vulnerable on the IUCN Red List but is considered extinct in several countries and specific regions. The recent sightings emphasize the importance of rewilding projects. Organizations across Brazil are working to protect and maintain giant anteater populations, including campaigning for safer highways to prevent wildlife-vehicle collisions that can lead to local extinctions.

Source: *Mongabay* (2024) [news.mongabay.com/2024/02/rewilding-in-argentina-helps-giant-anteaters-return-to-south-brazil](https://news.mongabay.com/2024/02/rewilding-in-argentina-helps-giant-anteaters-return-to-south-brazil)

### Protected area policies in Mexico spark conflicts with Indigenous groups

The creation of the UNESCO-listed Calakmul Biosphere Reserve in Mexico's Campeche region > 30 years ago has led to a long-standing conflict with Indigenous residents who argue the government restricted their livelihoods, despite promises of support and land titles. According to researchers, overemphasis on easily quantifiable targets, such as the size of protected areas, is hindering attention paid to other elements of conservation policy including socioeconomic factors, equitable management, human rights and participation of Indigenous and local communities. Mexico has committed to support the goal to protect 30% of Earth's land and waters by 2030 to comply with Target 3 of the Kunming–Montreal Global Biodiversity Framework. Although the framework mentions the need for equitable and effective management, the design of locally relevant indicators remains a challenge because it can be hard to quantify the achievement of targets related to human rights and social impacts.

Sources: *Environmental Science and Policy* (2024) [doi.org/10.1016/j.envsci.2024.03.001](https://doi.org/10.1016/j.envsci.2024.03.001) & *Mongabay* (2024) [news.mongabay.com/2024/03/global-protected-area-policies-sparks-conflicts-with-mexico-indigenous-groups](https://news.mongabay.com/2024/03/global-protected-area-policies-sparks-conflicts-with-mexico-indigenous-groups)

### Finches released in the Galapagos

Five species of native finches were released in Floreana Island in the Galapagos in February 2024. This followed the removal of invasive species, which was necessary to make the island safe for native plants and animals to once again flourish. After more than a decade of planning, removal of invasive species began in October 2023 and was completed in December 2023. During this time, the finches were held safely in the island's lowlands and highlands, under the careful watch of park rangers and conservationists. All of the released finch species are essential to Floreana's ecosystem, acting as pollinators, seed dispersers and insect population control. A total of 170 finches were released into the highlands and 340 into the lowlands of Floreana, among them medium tree-finches, small ground-finches, medium ground-finches and cactus finches. A few individuals were fitted with radio transmitters, so that researchers can track their movements and gather vital data to inform future conservation work.

Source: *Island Conservation* (2024) [islandconservation.org/press-release-finches-released-in-the-galapagos-signal-triumph-for-floreana-island-restoration-project](https://islandconservation.org/press-release-finches-released-in-the-galapagos-signal-triumph-for-floreana-island-restoration-project)

## ASIA & OCEANIA

### Queensland shark netting programme sparks controversy

In 2023, > 700 marine animals, including nine dolphins, were killed in Queensland, Australia, as a result of the state's shark culling programme. Aimed at reducing shark bites, the programme uses nets and drum lines to capture and kill species perceived to pose a risk to people, such as white and tiger sharks. However, it also inadvertently traps other animals. The issue gained attention with the circulation of drone footage showing a tiger shark being euthanized after being caught in a drum line. Queensland's shark control measures have been in place since the 1960s. Critics argue that the approach is outdated and that there is no scientific evidence proving these measures effectively reduce shark bites. In 2023, the drum lines caught 614 non-target animals, including 11 humpback whales, two dugongs, 12 dolphins and 38 turtles. More than 400 of these died. Since 2014, the programme has resulted in the deaths of 15 Critically Endangered grey nurse sharks, 92 dolphins, two whales and 273 rays.

Source: *The Guardian* (2024) [theguardian.com/australia-news/2024/jan/11/queensland-shark-nets-drum-line-sea-life-animals-deaths-statistics-controversy-dolphins-fish-killed](https://www.theguardian.com/australia-news/2024/jan/11/queensland-shark-nets-drum-line-sea-life-animals-deaths-statistics-controversy-dolphins-fish-killed)

### The dream to bring back the platypus to Adelaide

Declared extinct on the South Australian mainland since the 1970s, there are now plans to reintroduce the platypus to the Torrens River in Adelaide. Historically referred to as 'The City of Stenches', Adelaide's effluence and other pollutants took their toll on the Torrens throughout the 19th century, degrading the river to the point of ecological disaster. Throughout the last 20 years, conservationists have worked hard to regenerate the Torrens through strict waste management and reconstruction of the waterway. In 2023, the Endangered purple-spotted gudgeon, a crucial indicator species signalling a habitat's suitability for platypuses, was successfully reintroduced into the Torrens. Naturally, the next step was to explore the possibility of reintroducing the platypus. The hope is that a healthy platypus population can be established in the Torrens in the next few years.

Source: *The Guardian* (2023) [theguardian.com/environment/2023/dec/24/monotreme-dreams-the-plan-to-reintroduce-platypuses-into-adelaides-once-noxious-river](https://www.theguardian.com/environment/2023/dec/24/monotreme-dreams-the-plan-to-reintroduce-platypuses-into-adelaides-once-noxious-river)

### Island development could be 'death sentence' for isolated tribe

Academics from around the world have urged India to cancel a huge construction project on Great Nicobar Island, warning it could be 'a death sentence' for the Shompen hunter-gatherer people who live there. The USD 9 billion port project, planned to transform the Indian Ocean island of 8,000 inhabitants, includes the construction of an international shipping terminal, airport, power plant, military base and industrial park, and will also develop tourism. Between 100 and 400 Shompen live on Great Nicobar, a thickly forested 900 km<sup>2</sup> island. The Shompen rely on the rainforest for their existence and have little contact with the rest of the world. Scholars have warned that the community could die from disease if they come into contact with outsiders. There is little mention in the government's plans of what will happen to the Shompen and the Nicobarese people, other than to state that Indigenous People can be relocated 'if required'. Construction of the port in Galathea Bay could begin before the end of 2024.

Source: *The Guardian* (2024) [theguardian.com/global-development/2024/feb/07/india-port-airport-power-plant-military-project-great-nicobar-island-death-sentence-shompen-indigenous-people-warning](https://www.theguardian.com/global-development/2024/feb/07/india-port-airport-power-plant-military-project-great-nicobar-island-death-sentence-shompen-indigenous-people-warning)

### A new era for bird conservation in Central Asia

Governments along the Central Asian Flyway have committed to secure the passage of migratory birds in 30 countries from Siberia all the way to the Maldives. The historical initiative was adopted unanimously at the UN Convention on Migratory Species Conference of the Parties 14 (CMS CoP14) and will bring together governments, stakeholders and NGOs. Inclusive collaborations such as these are vitally important for the billions of birds that make long journeys in search of food and breeding grounds. Major migration routes host several hundred bird species and are known as flyways. Although the shortest of the global flyways, the Central Asian Flyway encompasses diverse landscapes such as the Himalayan mountains, freezing tundra, vast deserts of Arabia and the open waters of the Indian Ocean. Populations of over 240 species of migratory birds are in decline in the Central Asian Flyway, with 48 species categorized as being of conservation concern globally.

Source: *BirdLife* (2024) [birdlife.org/news/2024/02/17/the-government-of-india-leads-a-new-era-for-bird-conservation-in-central-asia](https://www.birdlife.org/news/2024/02/17/the-government-of-india-leads-a-new-era-for-bird-conservation-in-central-asia)

### Bhutan expands protected area network with new biological corridor

Bhutan has declared a new Biological Corridor-9 (BC-9), which connects Sakteng Wildlife Sanctuary and Bumdeling Wildlife Sanctuary, home to iconic species such as the snow leopard, red panda and Ludlow's Bhutan glory, an Endangered species of butterfly. The establishment of BC-9 completes the Bhutan Biological Corridor Complex (B2C2) in the east of the country, which forms a major conservation landscape including five national parks, four wildlife sanctuaries, one strict nature reserve and nine connecting biological corridors. BC-9 is expected to ensure animal movement, enhance conservation attention and preserve 124 species of birds, 25 species of mammals and 227 species of plants.

Source: WWF (2024) [www.panda.org/?10630966/Bhutan-expands-protected-area-network-with-new-biological-corridor](https://www.panda.org/?10630966/Bhutan-expands-protected-area-network-with-new-biological-corridor)

### New populations of Skywalker gibbons found in Myanmar

Skywalker gibbons *Hoolock tianxing* were first described in 2017, with the only confirmed population comprising 150 individuals in Yunnan Province, China. These primates are adapted to life in the tree-tops and do not swim, so rivers tend to form natural barriers that restrict their movements and dictate their distribution. Based on local river geography, the distribution of the Skywalker gibbon had been hypothesized to extend into Myanmar, and this has now been confirmed, thanks to techniques including acoustic monitoring and analysis of DNA samples taken from chewed plants. The research team confirmed 44 groups of Skywalker gibbons in Myanmar, and although the numbers of individuals in these groups are not yet known, evidence suggests that the largest population of Skywalker gibbons may be among them. Sources: *International Journal of Primatology* (2024) [doi.org/mpx5](https://doi.org/mpx5) & *Fauna & Flora* (2024) [fauna-flora.org/news/a-new-hope-previously-unknown-skywalker-gibbon-populations-found-in-myanmar](https://fauna-flora.org/news/a-new-hope-previously-unknown-skywalker-gibbon-populations-found-in-myanmar)

All internet addresses were up to date at the time of writing. The Briefly section in this issue was written and compiled by Emma Sinnett, Julia Hochbach and Martin Fisher, with additional contributions from Caroline Kerbyson. Contributions from authoritative published sources (including websites) are always welcome. Please send contributions by e-mail to [oryx@fauna-flora.org](mailto:oryx@fauna-flora.org).