Briefly

INTERNATIONAL

International Women's Day Celebrations

Evidence shows that empowering women is the single biggest force for positive change in the world today, and therefore integrating them into conservation empowers the entire environmental movement. To celebrate International Women's Day on 8 March 2018 many organizations highlighted the role of women in environmental conservation. The Nature Conservancy shared the stories of some of their female leaders, including women restoring the natural defenses—coral reefs and mangroves—that once buffered the shorelines of Grenada island to protect it from rising sea levels, developing innovative mechanisms to promote sustainable seafood in Belize, and protecting Mongolia's vast grasslands for a more sustainable future for the country. Female conservationists from various backgrounds have encouraged more women to join the sector, including the founder of the Madagascar Whale Shark Project, the former Director General of IUCN, and Fauna & Flora International's Business & Biodiversity Director.

Source: The Nature Conservancy (2018) nature.org/newsfeatures/pressreleases/international-womens-day.xml, & *Conservation Careers* (2018) conservation-careers.com/conservation-jobs-careers-advice/celebrating-role-women-conservation-international-womens-day-2018/

Changing migrations could threaten ecological processes worldwide

Analysis of satellite-tracking data for 803 individuals across 57 species has found that mammals in areas with a comparatively high human footprint only travelled on average half to one-third as far as those in areas with a low human footprint. Data tracking animals' movements over timescales of up to 10 days were correlated with a Human Footprint Index that uses metrics such as population density and the presence of roads to determine the degree to which humans have impacted an area. The finding that mammals in landscapes used intensively by people travel far less than those in remote areas was consistent across dozens of species worldwide. Animals may be unable to move, hemmed in by roads or unsuitable habitat, but others may choose to stay in areas with available crops or water sources. Conservationists are concerned that altered migrations and reduced movement could impact ecological processes such as seed transport, nutrient cycling, predator–prey interactions and disease transmission.

Source: Nature (2018) nature.com/articles/d41586-018-01240-w, & *Science* (2018) https://doi.org/10.1126/science.aam9712

Environmental defenders suffering at the frontline

In 2017, 197 defenders of land, wildlife or natural resources were killed, a fourfold increase since records were first compiled in 2002. Research has shown that in 2017 almost four people per week were killed and most fatalities were in remote forest areas of developing countries, particularly in Latin America. Extractive industries were identified as one of the largest drivers of violence and mining conflicts accounted for 36 killings, several of which were linked to a growing global demand for construction materials. Agribusiness was the greatest driver of violence. Demand for soy, palm oil, sugarcane and beef has seen plantations and ranches encroach further into indigenous territory and communal land. In Africa, the greatest threat to environmental defenders came from poachers and the illegal wildlife trade. Brazil experienced 46 killings, making it the deadliest country for defenders in 2017, but researchers warn that many murders go unreported.

Source: The Guardian (2018) theguardian.com/environment/2018/feb/02/almost-four-environmental-defenders-a-week-killed-in-2017

Study reveals global rise in emerging invasive alien species

According to a recent study up to 16% of all animal and plant species have the potential to become invasive alien species. Analysis of c. 46,000 first recorded sightings of established alien species, spanning the past 5 centuries, has revealed that between 2000 and 2005 one in four alien species introductions had never been recorded as alien before. Researchers are stressing the importance of early detection and eradication measures to control the spread of emerging alien species. In the past species were introduced to new regions via the transport of commodities, but this latest study confirmed that new trade networks and environmental change are contributing to the increasing number of introductions. Alien species can become invasive species. An example is the Asian hornet *Vespa velutina*, which was introduced to western Europe where it has decimated honey bee colonies.

Source: IUCN (2018) iucn.org/news/species/201802/new-research-reveals-global-rise-emerging-invasive-alien-species

Over half of the world's oceans are being fished

Satellite data from more than 70,000 ships has enabled researchers to estimate that between half and three-quarters of the world's seas are being fished by commercial vessels, far less than a previous estimate of 95%. The data came from anti-collision beacons on ships, which recorded specific vessel movements from 2011 to 2016. In 2016 these ships travelled more than 460 million km and their satellite tracking data has identified several fishing hotspots in the South China Sea, and coastal areas of Europe, East Asia and South America. The data show that more than 55% of the ocean area is currently fished but, when accounting for areas with poor satellite coverage, this number could be as high as 73%. Researchers suggest that large areas could be designated as marine reserves without too great an economic cost to coastal and high-seas fisheries, which are crucial for global food security.

Source: Science (2018) sciencemag.org/news/2018/02/fishermen-are-harvesting-more-half-world-s-oceans, & *Science* (2018) https://dx.doi.org/10.1126/science.aar7613

Population of North Atlantic right whales could face extinction

The North Atlantic right whale is expected to finish its breeding season without any new births and, following a record number of deaths in 2017, experts warn that without conservation efforts the species will face extinction. There are estimated to be as few as 430 North Atlantic right whales remaining, including just 100 potential mothers. Researchers observing the whale population off the east coast of the USA have not recorded a single mother–calf pair this winter. Federal research indicates that 82% of premature deaths are caused by entanglement in fishing line, primarily the strong ropes used by the New England lobster industry. Crab fishing in Canadian waters is another cause of fatalities. Researchers are calling for the US government to regulate fishing gear and for industries to explore

options that enable fishermen to track and gather lobster pots without using roped buoys.
Source: The Guardian (2018) theguardian.com/environment/2018/feb/26/north-atlantic-right-whale-extinction-no-births-fishing

Report shows impact of climate change on local extinction risk

Analysis of the impact of climate change on nearly 80,000 plant and animal species in 35 of the world's most diverse and naturally wildlife-rich areas has revealed that up to half of these species could face local extinction by the turn of the century. If there is a 4.5 °C rise in global mean temperature, without a drop in emissions, climates in some areas are predicted to become unsuitable for many species. The report estimates that up to 90% of amphibians, 86% of birds and 80% of mammals could potentially become locally extinct in the Miombo Woodlands in southern Africa. The Amazon could lose 69% of its plant species, in south-west Australia 89% of amphibians could become locally extinct, and in Madagascar 60% of all species are at risk of localized extinction. Under a 2 °C global mean temperature rise the risk of local extinction decreases from c. 25% to 20%, if species are able to move to new locations.
Source: WWF (2018) wwf.panda.org/?324471/Half-of-plant-and-animal-species-at-risk-from-climate-change-in-worlds-most-important-natural-places, & *Climate Change* (2018) https://doi.org/10.1007/s10584-018-2158-6

Land degradation threatens human well-being on a vast scale

A report approved by 129 national governments has found that land degradation is undermining the well-being of two-fifths of the world's population. According to the study conducted by the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, land degradation is already affecting more than 3.2 billion people and as available land decreases and populations increase, the problem will only become harder to tackle. Over 3,000 sources facilitated an assessment of vegetation loss, forest clearance, wetland drainage, grassland conversion, urban sprawl, pollution and their impacts on human health, wealth and happiness. Researchers estimate that land degradation costs more than 10% of annual global GDP in lost ecosystem services such as carbon sequestration and agricultural productivity. The report warns that consumers, companies and governments need to reduce excessive consumption, particularly of beef, and that farmers need to increase productivity rather than clear more forests and wetlands.
Source: The Guardian (2018) theguardian.com/environment/2018/mar/26/land-degradation-is-undermining-human-well being-un-report-warns

Women are more likely than men to be affected by climate change

According to UN figures 80% of people displaced by climate change are women, and the 2015 Paris Agreement includes a specific provision for the empowerment of women, recognizing this disproportionate impact. Globally, women are also more likely to experience poverty and to have less socio-economic power than men, making recovery from disasters that affect jobs, housing and infrastructure more difficult. In central Africa, where up to 90% of Lake Chad has disappeared and dry seasons are lasting longer, the women of indigenous nomadic groups are having to walk much further to collect water and support their families. Women's roles as primary care-givers and providers of food and fuel in some areas can make them more vulnerable when flooding and drought occur. The UN has emphasized the need for gender sensitive responses to the impacts of climate change but the average representation of women in national and global climate negotiating bodies is below 30%.
Source: BBC News (2018) bbc.co.uk/news/science-environment-43294221

EUROPE

Renewables made more electricity than coal in Europe in 2017

For the first time, the amount of electricity generated by renewables in Europe has outpaced supplies from coal sources. A review of the European energy market has found that wind, solar and biomass generation supplied 679 terawatt hours, whereas coal contributed 669 terawatt hours. Just 5 years ago, coal generation was double that of renewables in the region. Output from wind farms in the UK has increased by 45% between 2016 and 2017 and over the past 7 years the UK has increased its renewable energy generation to cover a 22% drop in its coal-generated power. The distribution of renewables across Europe is fairly uneven however, with the UK and Germany accounting for 56% of renewables growth in the past 3 years. In 2017 the Netherlands, Italy and Portugal all announced schemes to eventually phase out coal but many Eastern European countries, such as Poland and the Czech Republic, which rely heavily on coal, have no such plans.
Source: New Scientist (2018) newscientist.com/article/2159883-renewables-made-more-electricity-than-coal-in-europe-in-2017/

One-fifth of Europe's wood beetles at risk of extinction

An IUCN study has found that almost one-fifth of Europe's wood beetles are at risk of extinction because of a widespread decline in ancient trees. Wood beetles are vital sources of food for small mammals and bats, and for birds such as nut hatchers, woodpeckers and treecreepers. Healthy wood beetle populations require large volumes of dead and decaying wood; some species only lay their eggs in cavities containing mould that takes hundreds of years to form, but logging threatens the future of these beetles. Assessment of 700 species of beetle found that 18% of saproxylic beetles that depend on dead and decaying wood for some of their life cycle are now categorized as threatened. A further 13% of insects are considered Near Threatened and researchers warn that extinctions could have knock-on effects for ecosystems.
Source: The Guardian (2018) theguardian.com/environment/2018/mar/05/a-fifth-of-europes-wood-beetles-at-risk-of-extinction-as-ancient-trees-decline

Pine martens suppress grey squirrel numbers

Research in the borders, central belt and highlands of Scotland has found that grey squirrel numbers fall in areas with growing pine marten populations. Pine martens were hunted for their fur and as predators of poultry and game birds but legal protection has allowed their numbers to grow to a few thousand in Scotland. DNA analysis of squirrel and pine marten hair caught in 200 nut-filled feeders has found that in areas where pine martens were more common, the number of grey squirrels was lower and the number of red squirrels was higher. Grey squirrels were much more likely than red squirrels to visit feeders in areas where pine martens were common, perhaps because they do not have similar predators in their native range and are unaware of the threat posed. The confirmation that grey squirrels are easier prey for pine martens indicates that pine martens could be used to suppress the invasive grey squirrel.
Source: The Guardian (2018) theguardian.com/environment/2018/mar/07/return-of-pine-martens-could-save-britains-red-squirrels-say-scientists, & *Proceedings of the Royal Society B* (2018) https://doi.org/10.1098/rspb.2017.2603

UK government confirms ban on ivory sales

The UK government will introduce a ban on the sale of ivory of all ages, not only those items produced after a certain date, making it one of the toughest bans in the world. The maximum available penalty for breaching the ban will be an unlimited fine or up to 5 years in jail. Following the approaches of the USA and China, some items will be exempt from the ban. Exemptions include items comprising less than 10% ivory by volume and made before 1947, some musical instruments, exceptionally rare items that are more than 100 years old, and commercial activities to, and between, accredited museums. These exemptions are far narrower than those in force in other countries, the US federal ban for example exempts all items with up to 50% ivory content and all items older than 100 years old.
Source: UK Government (2018) gov.uk/government/news/government-confirms-uk-ban-on-ivory-sales

Pollution threatens UK seagrass meadows

A study has found that excessive amounts of nitrogen present in sewage and livestock waste are damaging seagrass meadows around the British Isles. Research at 11 locations in the UK, 10 of which were located in European marine protected sites, found that nitrogen levels in leaves of seagrass were 75% higher compared with those analysed from other regions around the globe. Seagrass meadows are important for stabilizing coastal sediments, preventing coastal erosion and providing nursery habitats for marine animals such as seahorses in Studland Bay. Seagrass meadows are also vital for controlling atmospheric carbon but high levels of nitrogen-rich pollution have encouraged the growth of marine algae on the surface of the seagrass leaves, starving them of light and preventing photosynthesis. A mobile app, the Seagrass Spotter, has been launched to enable the general public to record and upload observations of seagrass meadows to the researchers' database.
Source: BBC News (2018) bbc.co.uk/news/science-environment-43087785

Dutch cow dung overload affecting the environment

The c. 1.8 million dairy cows in the Netherlands produce so much manure that there is not enough space to dispose of it safely. Approximately 80% of dairy farms produce more dung than they can legally use on their land, and some farmers illegally distribute excess manure on fields. As a result, the country is breaking EU regulations on phosphate levels designed to prevent groundwater contamination, and high levels of ammonia emissions are affecting air quality. The Dutch government now pays farmers compensation to reduce cow numbers and although dairy lobbyists disagree with the need to decrease numbers, political support for the industry appears to be waning. WWF Netherlands is calling for a 40% cut in cow numbers over 10 years to make the dairy sector sustainable, citing the fact that the country has the second lowest biodiversity in Europe after Malta, with only 15% of its original biodiversity left.

Source: The Guardian (2018) theguardian.com/environment/2018/feb/16/dutch-cow-poo-overload-causes-an-environmental-stink

Pesticides are drastically reducing bird numbers in France

Recent data reveal that bird populations across the French countryside have fallen by a third over the last decade and a half. According to annual censuses the meadow pipit, a migratory songbird, has declined by nearly 70% and populations of the common white throat, the ortolan bunting and the Eurasian skylark have declined by at least a third. Researchers believe the intensive use of pesticides on monoculture crops in France is causing insects to disappear, depleting the main food source for many bird species. Further research has indicated that flying insects have declined by 80% across Europe but sales of pesticide in France continue to rise. Figures from a national survey indicate that the decline in numbers gathered pace in 2016 and 2017, and researchers are concerned as populations of different bird species are declining at the same rate. Even generalist species that thrive outside agricultural landscapes are suffering similar declines.
Source: The Guardian (2018) theguardian.com/world/2018/mar/21/catastrophe-as-frances-bird-population-collapses-due-to-pesticides

Italy designates a new Ramsar site

The Trapani and Paceco Salt Ponds in western Sicily have been declared a Wetland of International Importance, making it Italy's 56th Ramsar site. The biodiversity of the area has benefited from the traditional production of sea salt and the site is a vital wetland for birds crossing the 140-km-wide Strait of Sicily during their migrations to and from Africa; 224 species of bird have been recorded at the Trapani and Paceco Salt Ponds, including many threatened species such as the Endangered saker falcon and Egyptian vulture *Neophron percnopterus*. This unique area, complete with ancient mills used in salt production, has remained intact despite the threats of development and urbanization.
Source: Ramsar (2018) ramsar.org/news/italy-designates-trapani-and-paceco-salt-ponds

Pioneering plan to phase out emissions

The government of the Balearic Islands, an archipelago off eastern Spain, has announced a plan to phase out greenhouse gas emissions by 2050. The islands are already experiencing the effects of climate change, water bills have surged as droughts and storms become more frequent, and warming waters have caused seasonal jellyfish plagues and degraded marine ecosystems. Under the new green manifesto solar panels will be installed on all buildings with roof spans of $> 1{,}000\ m^2$, coal plants will be phased out and by 2035 all car hire fleets on the islands will be electric. From 2025 all street and road lighting will be replaced by LEDs and new diesel cars will be taken off the market in Ibiza, Majorca, Menorca and Formentera. The question of whether Madrid or Spain's regions exercise responsibility for energy policy will determine the success of the scheme.
Source: The Guardian (2018) theguardian.com/environment/2018/feb/15/balearics-launch-pioneering-plan-to-phase-out-emissions

NORTH EURASIA

Russia announces new protected area

The New Siberian Islands nature reserve in Sakha (Yakutia) Republic will be the largest land and marine reserve in Russia and the second-largest protected area in the country. The reserve is located in the New Siberian Islands archipelago and the adjacent water areas of the Laptev and East Siberian Seas and will cover 6 million ha, of which almost 5 million ha are marine areas. The reserve will include areas of the Russian Arctic as well as part of the New Siberian Islands Polynya, an area of water that remains ice-free throughout the year and therefore supports a multitude of marine life. The New Siberian Islands Polynya is home to bearded seals, beluga whales and breeding areas for Laptev walrus and polar bears. The reserve also contains the world's largest mammoth graveyard and remains of the northernmost long-term encampment of humans in the Stone Age.
Source: WWF (2018) wwf.panda.org/wwf_news/successes/?324934/Russia-protects-vast-tract-of-Arctic-land-and-sea

Azerbaijan to create first Marine Protected Area in the Caspian Sea

Azerbaijan is expanding the under-resourced Gizilaghaj State Reserve to form a national park that will include the first Marine Protected Area in the Caspian Sea, the world's largest inland body of water. The State Reserve was established in south-eastern Azerbaijan in 1929 and is recognized as a Wetland of International Importance but the inaccessibility of the area has resulted in little law enforcement and poachers have thus operated with impunity. The new national park will be managed by a designated management authority and plan, and greater accessibility will enable research and sustainable tourism activities. The Marine Protected Area will cover approximately one third of the 100,000 ha park and will protect six key marine species including the Beluga sturgeon and the Caspian salmon, which were fished to near extinction during the 1970s and 1980s.

Source: IUCN (2018) iucn.org/news/protected-areas/201802/azerbaijan-create-first-marine-protected-area-caspian-sea

North Aral Sea showing signs of successful restoration

Water from the two rivers feeding the Aral Sea, once the world's fourth-largest freshwater lake, has been diverted for cotton cultivation since the 1950s. The lake has shrunk to 10% of its original size, as the North Aral Sea in Kazakhstan and South Aral Sea in Uzbekistan, with only one out of 20 native fish species surviving in the increasingly salty waters. Thanks to a nearly USD 86 million restoration project financed mainly by the World Bank, the situation in the North Aral Sea has improved. An eight-mile dam was constructed in 2005, resulting in an increase in water levels of $>$ 3 m after 7 months, a goal that was expected to be reached after 3 years. Many fish species have returned and with them commercial fishing and some prosperity in the region. But concerns are being raised about overfishing, particularly illegal fishing during the May–July breeding season.

Source: National Geographic (2018) news.nationalgeographic.com/2018/03/north-aral-sea-restoration-fish-kazakhstan/

NORTH AFRICA AND MIDDLE EAST

Migratory birds face extinction in Iran

Conservationists warn that 1 million wild birds are being killed illegally in Iran's Fereydunkenar wetlands. Species at risk include the Critically Endangered Siberian crane *Leucogeranus leucogeranu*, white-headed duck *Oxyura leucocephala*, red-breasted goose *Branta ruficollis*, northern lapwing *Vanellus vanellus* and raptors such as falcons. The Fereydunkenar, Sorkhrud and Azbaran lagoons provide habitat for species that winter there but local hunters are now targeting the area. It is estimated that 3,000 birds are being killed daily, to sell at local markets, and researchers are concerned that on an annual basis this could amount to half of the number of waterbirds that visit the site. Poaching in Fereydunkenar has decimated the western population of the Siberian crane, of which there is only one remaining member. Transparent plastic nets are used to catch dozens of birds in a single haul and, whilst the killing is illegal, armed poachers are resisting attempts by wildlife rangers to enforce existing laws.

Source: The Guardian (2018) theguardian.com/environment/2018/feb/25/one-million-birds-killed-illegally-iran-wetland-wildlife-site

SUB-SAHARAN AFRICA

Camera traps reveal rare species in Nigerian national park

During 2015–2017 camera traps in Nigeria's Gashaka Gumti National Park captured $>$ 50,000 images of the Park's wildlife. Images included the first photographic evidence of leopards in the park, the first-ever record of a giant pangolin in Nigeria, and the exceptionally rare Nigeria-Cameroon chimpanzee. The chimpanzee is threatened across its range in Cameroon and Nigeria and its population is down to fewer than 9,000 individuals, of which c. 1,000 are thought to live within the borders of the Park but there hasn't been a population survey in 20 years. Camera traps also recorded images of the African golden cat and researchers believe this may be the only significant population of the felid remaining in Nigeria. The park is considered to be a national treasure but is increasingly under pressure from poaching.

Source: BBC News (2018) bbc.co.uk/news/science-environment-42993333

Sudan, the last male northern white rhino, dies

Sudan, the world's last male northern white rhino died at the age of 45 years at Ol Pejeta Conservancy in Kenya on 19 March 2018. He had suffered from an infection in his leg for a few months, and with his condition worsening significantly, the decision was made to euthanize him. The last northern white rhino to be born in the wild, he was moved to Dvůr Králové Zoo in the Czech Republic in 1975, at c. 2 years old. In 2009, when the sub-species was extinct in the wild, Sudan and three other northern white rhinos were relocated to Ol Pejeta Conservancy, with support from Fauna & Flora International and the Kenya Wildlife Service, in the hopes that the environment would provide them with favourable breeding conditions. This was not successful, and scientists now hope to preserve the northern white rhino with a combination of in-vitro fertilization using frozen northern white rhino eggs and sperm and surrogacy by female southern white rhinos.

Source: Ol Pejeta Conservancy (2018) olpejetaconservancy.org/the-last-male-northern-white-rhino-dies/

Good news for the world's largest tropical peatland

The Cuvette Centrale peatland complex covers $>$ 145,500 km² across the Republic of Congo and the Democratic Republic of Congo and is estimated to hold c. 30 billion t of carbon, making it globally important for climate mitigation. Ministers from the Republic of Congo, the Democratic Republic of Congo and Indonesia have now signed the Brazzaville Declaration to protect these relatively undisturbed peatland forests. The Declaration represents a commitment to peatland protection, restoration and sustainable management. Damaged peatlands currently contribute almost 6% of global anthropogenic CO_2 emissions and, in the UK alone, damaged peatlands release almost 3.7 million tonnes of CO_2 equivalent each year. Peatlands are the largest natural terrestrial carbon store and are critical for preserving global biodiversity. The signing followed a meeting of the Global Peatland Initiative that showcased management practices that could be used to preserve precious peatlands in the Congo basin.

Source: IUCN (2018) iucn.org/news/climate-change/201803/ministers-commit-protecting-world's-largest-tropical-peatland

A first for protected areas in Zambia

Nsumbu National Park in Zambia's Northern Province covers c. 2,020 km² and is home to species that include the African elephant *Loxodonta africana*, blue duiker *Philantomba monticola* and sitatunga *Tragelaphus spekii*. The national park is under pressure from overfishing, poaching, agricultural encroachment, deforestation, land and soil degradation and,

increasingly, climate change. Soil erosion, sedimentation of freshwater systems, the intensity of weather events, and the frequency of water shortages and fires are all risks expected to be exacerbated by climate change. The Department of National Parks and IUCN have now developed a Climate Change Framework Strategy and Action Plan for the park that is designed to integrate climate change issues into park planning processes. The plan will be implemented through the park's General Management Plan and is designed to strengthen the climate resilience of the park, surrounding Game Management Areas and the local communities who depend on the landscape for their livelihoods.
Source: IUCN (2018) iucn.org/news/protected-areas/201803/zambia-endorses-its-first-ever-climate-change-framework-and-action-plan-protected-area

Conservationists call for CITES listing for South African abalone

A report issued by TRAFFIC reveals Hong Kong imports c. 90% of all dried South African abalone *Haliotis midae*, despite restrictions on wild harvest. Abalone is a delicacy in Cantonese cuisine and is widely used in celebratory meals to mark events such as the Chinese New Year. According to the report, 65% of South African dried abalone imports to Hong Kong in 2015 were illegally sourced and trafficked. South Africa has implemented a number of regulatory measures to protect falling abalone populations but as a result illicit trade routes have altered. Instead of exporting poached abalone directly to Hong Kong, traffickers are now smuggling the abalone through neighbouring countries, such as Mozambique and Zimbabwe, before re-exporting the product. South African abalone is not protected under Hong Kong law, meaning that there is no course of legal action available to stop the sale of poached abalone once the product reaches the market, a problem which could be resolved with a CITES listing.
Source: TRAFFIC (2018) traffic.org/home/2018/2/8/poached-abalone-from-south-africa-is-flowing-into-hong-kong.html

New breeding site for one of the world's rarest birds. . .

Until recently the Critically Endangered white-winged flufftail *Sarothrura ayresi* was thought to breed only in Ethiopia but camera-trap images have revealed a new breeding site in South Africa. Middelpunt Wetland was previously thought of as an area for visiting white-winged flufftails only but 125,000 camera-trap images now show at least three clutches, and at least two mating attempts, of white-winged flufftails. Little is known about this secretive species but it is thought that they breed at the Berga Wetland in Ethiopia during July and August before traveling to the high-altitude wetlands in eastern South Africa from November to March. Current estimates suggest there are fewer than 250 mature white-winged flufftails and numbers are declining. Overgrazing by cattle, burning and conversion for agriculture, and the build-up of pollution in wetlands threatens the survival of the species.
Source: BirdLife International (2018) birdlife.org/worldwide/news/rewrite-bird-books-new-breeding-site-found-one-worlds-rarest-birds

. . . but avian flu halts research in South Africa

The South African Department of Environmental Affairs has announced that researchers are prohibited from handling seabirds in South African coastal colonies as authorities attempt to halt the spread of an avian flu outbreak. The unprecedented moratorium will remain in place until 1 June, with a re-evaluation scheduled for mid May. Veterinarians initially detected H5N8 avian influenza virus in Endangered African penguins *Spheniscus demersus* in the Western Cape but it is also affecting birds including terns, Cape cormorants *Phalacrocorax capensis* and peregrine falcons *Falco peregrinus*. Fewer than 100 birds have tested positive for the virus so far, with the swift tern *Thalasseus bergii* being hit the hardest. The impact of the virus on wild seabirds is not yet well understood and, although it isn't possible to prevent avian flu circulating in seabirds and wildlife, halting research does reduce the risk of spreading the virus artificially.
Source: Nature (2018) nature.com/articles/d41586-018-03951-6

Seychelles swap national debt for new marine parks

In the first scheme of its kind, the Seychelles will create two new marine parks in return for a large amount of its national debt being written off. As part of the conversion of national debt, the Seychelles committed to increasing its marine protection to 30% of its Exclusive Economic Zone and ensuring representation of all marine habitats. The protected areas include the Aldabra archipelago, which supports populations of giant tortoises, dugongs, hawksbill turtles, tiger sharks, humpback whales and manta rays. The marine park around Aldabra covers 74,000 km² and all extractive activities, from fishing to oil exploitation, are prohibited. Local fishers are, however, concerned by the immediate impacts of fishing restrictions. Together the new protected areas cover 15% of the Seychelles ocean and, if successful, the scheme could become an example for other countries, such as Grenada, considering similar swaps.
Source: The Guardian (2018) theguardian.com/environment/2018/feb/22/debt-for-dolphins-seychelles-create-huge-new-marine-parks-in-world-first-finance-scheme, & *The Nature Conservancy* (2018) nature.org/ourinitiatives/regions/africa/wherewework/seychelles.xml

Mosquito nets are being used as fishing nets

A survey of 113 respondents living in malarial areas reported 94 observations of mosquito net fishing around the tropics, with most coming from Africa. Distributing free or subsidized mosquito nets is one of the most effective ways to combat malaria but use of these nets for fishing could be particularly unsustainable as the fine mesh catches a high proportion of juvenile fish. The study found that in Madagascar people are using mosquito nets to fish along much of the country's coastline and inland waters. The majority of reports were of people on foot using a single net but in some instances several nets were sewn together and deployed from boats. Tackling this problem whilst ensuring people are protected against malaria will be exceptionally difficult and will require working closely with local communities.
Source: New Scientist (2018) newscientist.com/article/2159911-people-are-using-mosquito-nets-for-fishing-and-thats-a-bad-idea/

43% of Madagascar's freshwater species at risk of extinction

A new IUCN report has assessed the extinction risk of 653 species of freshwater fish, molluscs, dragonflies, crabs, crayfish, shrimps and aquatic plants in Madagascar and the surrounding Indian islands, finding that 43% of these species are threatened with extinction. This is twice the level of threat documented across Africa as a whole. More than half of the species of fish and 151 species of dragonfly assessed in this study are endemic to Madagascar, and many freshwater species are vital to the livelihoods of the Malagasy people. Freshwater species help provide clean water, support commercial and artisanal fisheries, and freshwater plants are used to make baskets. Unsustainable agricultural practices including the slash-and-burn approach, mining and dam construction, and overfishing, are threatening freshwater species and their habitats. The study identified and mapped

23 freshwater Key Biodiversity Areas to help focus future conservation action.
Source: IUCN (2018) iucn.org/news/species/201803/almost-half-madagascar's-freshwater-species-threatened-–-iucn-report

SOUTH AND SOUTH-EAST ASIA

Which coffee plantations are best for bird diversity?

Globally, coffee production is shifting towards growing more robusta than arabica. Arabica has a sweeter, softer taste than robusta and previous research has shown that shade-grown coffee such as arabica can harbour substantial levels of biodiversity. Research in coffee agroforests in India's Western Ghats has found that avian assemblages around arabica plantations were more species rich, but areas of robusta supported higher densities of several sensitive bird populations such as frugivores. In addition, fewer pesticides are typically used in the more disease-resistant robusta farmlands. The study found a total of 79 forest-dependent species in the coffee plantations surveyed, including the Alexandrine parakeet *Psittacula eupatria,* grey-headed bulbul *Pycnonotus priocephalus* and Nilgiri wood pigeon *Columba elphinstonii.* Shifts between coffee species can transform entire landscapes and researchers are recommending that certification efforts prioritize maintaining native canopy shade trees.
Source: Wildlife Conservatioon Society (2018) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/11066/Birds-and-Beans-Study-Shows-Which-Type-of-Coffee-Plantations-are-Best-for-Bird-Diversity.aspx

Leopards reduce risk of rabies in Mumbai

In India c. 20,000 people die of rabies each year, mainly infected through bites from feral dogs that carry the disease. As leopards are encroaching into cities and preying on these feral dogs however, the risk of people catching rabies is lowered. Research on the diet of leopards living in Sanjay Gandhi National Park, on the outskirts of Mumbai, revealed that 40% of the average leopard's diet consists of feral dogs. It is estimated that the park's 35 leopards eat 1,500 dogs per year, preventing approximately 1,000 bite incidents per year and 90 potential rabies cases. The study also noted 19 other studies describing leopards eating feral dogs in Asia and Africa but further research is needed to determine whether they bring the same benefit. Whilst the major challenges of living alongside leopards remain, including attacks on livestock and people, this research focused on an unexpected advantage of leopards in urban areas.
Source: New Scientist (2018) newscientist.com/article/2163166-leopards-that-live-in-cities-are-protecting-people-from-rabies/

Reducing human–elephant conflict in world's largest refugee settlement

The Kutupalong-Balukhali refugee settlement in Bangladesh is home to c. 560,000 refugees who have fled the violence against the Rohingya people in Myanmar. The site was previously forest land and is situated on a main migratory route for Asian elephants between Myanmar and Bangladesh. Elephants always follow traditional corridors and a recent survey found that as many as 45 elephants could currently be active around the site. Since the influx of refugees into Bangladesh started, there have been at least 10 fatalities resulting from human–elephant encounters in the main settlement, and incidents are expected to rise. The Asian elephant is classified as a Critically Endangered species in Bangladesh, with just 268 remaining. A partnership between IUCN and the UN High Commission for Refugees will implement immediate measures such as Elephant Response Teams and watch towers as well as clearly marking elephant corridors and conducting awareness campaigns.
Source: IUCN (2018) iucn.org/news/bangladesh/201803/unhcr-iucn-launch-plan-prevent-human-elephant-conflict-bangladesh-refugee-settlement

Cambodia's last leopards could face extinction

The last breeding population of Indochinese leopards *Panthera pardus delacouri* in Cambodia is at risk of extinction, as the population declined by 72% over 5 years. The population represents the last remaining leopards in Cambodia, Laos and Vietnam, and increased levels of poaching, especially indiscriminate snaring for bushmeat and the illegal wildlife trade, have decimated numbers. The study revealed one of the lowest concentrations of leopards ever reported in Asia, with a density of one individual per 100 km^2 in Cambodia's Eastern Plains Landscape. The Indochinese leopard has lost 95% of its historical range throughout South-east Asia and is expected to be categorized as Critically Endangered later this year. The study also found that the primary prey of the leopards was banteng, a wild species of cattle weighing up to 800 kg, making this the only known leopard population whose main prey weighs more than 500 kg, more than five times the leopard's mass.
Source: University of Oxford News (2018) ox.ac.uk/news/2018-03-02-new-study-confirms-cambodias-last-leopards-brink-extinction, & *Royal Society Open Science* (2018) https://doi.org/10.1098/rsos.171187

World's most trafficked mammal receives further protection

The state of Sabah in Malaysia has given the Critically Endangered Sunda pangolin *Manis javanica* the highest level of protection under national legislation. The species is now listed in the Totally Protected category of the state's wildlife law, which prohibits hunting, collection or trade in the animal and provides significantly higher penalties for traffickers. Under the new law Sunda pangolin traffickers could receive a minimum 6-month jail sentence upon conviction or a fine of up to USD 60,000. The Sunda pangolin has been considered Totally Protected in Peninsular Malaysia since 1972 and in Sarawak since 1998, but until this announcement hunting of the species was allowed with a permit in Sabah. Sabah has been in the spotlight as custom officers recently seized 13 t of pangolin scales from just two shipments and in 2011 close to 5 t of skinned pangolins were seized from a boat off Sabah waters.
Source: TRAFFIC (2018) traffic.org/home/2018/2/13/critically-endangered-sunda-pangolins-finally-receives-the-h.html

Borneo's orangutan population in dramatic decline

Research reveals that during 1999–2015, 148,500 Critically Endangered orang-utans were lost from Borneo's forests. The population halved over the study period and there are now estimated to be 70,000–100,000 orang-utans left on Borneo. Conservationists are predicting that without renewed conservation efforts the numbers could fall by at least 45,000 in the next 35 years. Orang-utans are notoriously elusive so population estimates are based on ground and helicopter surveys of nests that orang-utans build in the trees. The study identified 64 separate groups of orang-utans on the island, but only 38 are thought to comprise more than 100 individuals, the minimum that is considered viable for a group. Whilst the steepest percentage losses occurred in regions where the forest had been cleared for palm oil and acacia plantations, more orang-utans were killed by hunters or farm workers.
Source: The Guardian (2018) theguardian.com/environment/2018/feb/15/dramatic-decline-in-borneos-orangutan-population-

as-150000-lost-in-16-years, & *Current Biology* (2018) https://doi.org/10.1016/j.cub.2018.01.053

World first for rhinoceros hornbills in Malaysia

In July 2017 a wild pair of rhinoceros hornbills *Buceros rhinoceros* nested in an artificial nest box for the first time. Categorized as Near Threatened, rhinoceros hornbills nest in tree cavities made by other species such as woodpeckers and sun bears. The birds are unable to create cavities themselves and, as many large cavity-bearing trees in the region have been cleared for agricultural expansion and logging, artificial nest boxes have been installed to encourage breeding. In 2013 a pilot project installed five artificial nest boxes in Kinabatngan, Malaysian Borneo, but just one species of hornbill used the nesting boxes. Despite the success of a wild pair of rhinoceros hornbills raising a chick in one of the artificial boxes, further work is needed to ensure the boxes are used by other hornbill species such as the oriental pied hornbill *Anthracoceros albirostris* and the Critically Endangered helmeted hornbill *Rhinoplax vigil*.

Source: BirdLife International (2018) birdlife.org/worldwide/news/world-first-rhinoceros-hornbills-give-artificial-nest-box-seal-approval

EAST ASIA

Chinese soldiers assigned to plant trees. . .

As the People's Liberation Army downsizes, significant numbers of soldiers are being tasked with non-military missions, including planting trees. The current forested area in China stands at 21% but the country hopes to increase forest coverage to 23% of the total landmass by the end of the decade. Over 60,000 troops have been mobilized to help meet the target of planting an area of forest covering 84,000 km² by the end of 2018. The majority of troops will be dispatched to Hebei province, which encircles Beijing, as the heavily polluted province has pledged to raise its total forest coverage to 35% by the end of 2020. The armed police force has a specially designated forestry branch to patrol and exercise jurisdiction in forested areas such as the northeastern Greater Khingan mountain range in Heilongjiang and Inner Mongolia provinces.

Source: Asia Times (2018) atimes.com/article/china-re-assigning-60000-troops-plant-trees/

. . . and China moves to protect coastal wetlands

China's State Oceanic Administration has announced that it will dramatically curb commercial development of coastal wetlands, a statement that conservationists working to protect the habitat of migratory birds have been waiting to hear. The agency will only approve coastal wetland development that is important for public welfare or national defence and unauthorized projects will be demolished. China's coastal wetlands are vital for migratory birds but over the past several decades more than half of the country's marine wetlands have been converted for development. Almost 500 species of migratory birds rely on these wetlands but, because of development, c. 10% of the species that use the East Asian–Australasian Flyway, including the The Critically Endangered spoon-billed sandpiper, are threatened with extinction.

Source: Science (2018) sciencemag.org/news/2018/01/china-moves-protect-coastal-wetlands-used-migratory-birds?utm_campaign=news_daily_2018-01-30&et_rid=378170378&et_cid=1821013

Jaguar fangs destined for growing Chinese medicine trade

According to recent research, a growing illegal trade in jaguar fangs in South America is linked to Chinese construction projects in developing countries. Once local people become aware of the interest Chinese construction workers have in animal bones and body parts an illicit trade is established, with workers often sending items back to relatives in China, for use in traditional medicine. The scale of the problem is vast, as Chinese companies have construction projects in more than 60 countries in the developing world. Projects include an 835-mile-long railway in Angola and a six-lane, 680 m long bridge in Tanzania. The trade is particularly problematic in South America where it is thought that more than 100 jaguars may have been killed in less than 1 year to supply trade with China. As tiger parts, which are also prized in Chinese traditional medicine, are becoming scarcer, the market is opening up for organs from other large felids, including jaguars.

Source: The Guardian (2018) theguardian.com/environment/2018/mar/04/jaguars-killed-for--fangs-chinese-medicine-trade

Invisible East China Sea oil spill threatens marine life

An oil tanker transporting 136,000 t of ultra-light crude oil, known as condensate, to South Korea has sunk after a collision with another cargo ship. Fishing continued in the area after the collision but condensate is highly toxic and there are concerns over possible contamination of seafood and marine life. The tanker carrying the condensate is thought to have drifted up to 100 nautical miles after the collision before sinking and according to experts this is the first time petroleum product of this type has spilled in such a vast quantity. The region includes crab, squid, yellow croaker and mackerel fisheries but samples of fish taken within 4–5 nautical miles of the sunken ship have shown traces of petroleum hydrocarbons, suggesting possible condensate contamination. Experts fear that action from the Chinese government to prohibit fishing was too slow.

Source: BBC News (2018) bbc.co.uk/news/science-environment-43142538

Hong Kong passes law to end all domestic ivory trade

Hong Kong, the largest ivory market in the world, has voted to ban its domestic ivory trade by 2021. Once in force the Hong Kong Ivory Ban Bill will also increase the maximum penalty for wildlife crime offences to 10 years. The vote comes just 1 month after China closed all of its ivory markets and factories on the mainland and it was expected that Hong Kong's position as a preferred market for illegal ivory would only intensify following China's ban. The new legislation will help prevent this trend but close monitoring and regulation is essential to prevent laundering of ivory to the still open markets in Hong Kong. Conservationists are calling for governments across Asia to follow the examples of China and Hong Kong as evidence shows that domestic ivory markets in Vietnam, Cambodia, Lao PDR, Japan and Myanmar are increasingly catering for Chinese visitors.

Source: Mongabay (2018) news.mongabay.com/2018/02/hong-kong-votes-to-ban-ivory-trade-by-2021/, & *WWF* (2018) wwf.panda.org/wwf_news/?322130/Hong-Kong-ivory-ban-is-now-law-WWF-says-its-time-to-close-all-Asian-illegal-wildlife-markets

The Democratic People's Republic of Korea joins the Convention on Wetlands

The Democratic People's Republic of Korea has become the 170th contracting party to the Convention on Wetlands, which will come into force in the country in May 2018. On joining the Convention the Democratic People's Republic of Korea has designated the Mundok Migratory Bird Reserve and the Rason Migratory

Bird Reserve as its first two Ramsar sites. The Mundok Migratory Bird Reserve supports globally threatened birds such as the red-crowned crane *Grus japonensis,* hooded crane *Grus monacha* and swan goose *Anser cygnoides*, of which it hosts c. 50% of the world population. The Rason Migratory Bird Reserve in the far north-east of the country comprises three lakes that are separated by reed beds and marshes. The site supports a number of threatened waterbird species including the white-naped crane *Antigone vipio* and far eastern curlew *Numenius madagascariensis.*
Source: Ramsar (2018) ramsar.org/news/the-democratic-peoples-republic-of-korea-to-become-the-170th-contracting-party-to-the

NORTH AMERICA

Polar bears are in more trouble

A recent study has provided the best assessment of how much energy polar bears *Ursus maritimus* need. Researchers tracked nine free-ranging females on sea ice near the northern coast of Alaska during spring, the bears' prime hunting season. As well as attaching GPS video collars and activity trackers in April 2014, 2015 and 2016, the team monitored changes in the animals' body mass over 8–11 days. On average, the bears needed almost 12,325 kilocalories per day, 1.6 times more energy than previously thought and the equivalent to one adult ringed seal every 10–12 days. Almost half of the tracked bears did not catch enough food and lost 10% of their body mass over about 10 days. As rising sea temperatures thin the sea ice it is carried faster on the ocean surface, meaning that a bear has to expend more energy to remain in the same spot.
Source: Nature (2018) nature.com/articles/d41586-018-01501-8, & *Science* (2018) https://doi.org/10.1126/science.aar6723

Action needed to halt 'America's wildlife crisis'

According to a recent report compiled by the National Wildlife Federation, American Fisheries Society and the Wildlife Society, one-third of species in the USA are vulnerable to extinction. Data analysis revealed that 150 US species have already become extinct and a further 500 species have not been recorded in recent decades. More than 1,270 species are listed as at risk under the Endangered Species Act, including leatherback sea turtles and rusty patched bumble bees but the report warns that the actual number of threatened species is far higher than this formal listing. The analysis revealed that 40% of freshwater fish species are now vulnerable or endangered, a third of bat species have experienced major declines in the past two decades and amphibians are disappearing from their home ranges at an annual rate of c. 4%. Conservationists are calling for a major funding boost for species recovery plans.
Source: The Guardian (2018) theguardian.com/environment/2018/mar/29/us-wildlife-extinction-species-report

CENTRAL AMERICA AND CARIBBEAN

Queen conches under pressure in the Caribbean

Research has revealed a widespread decline and ageing population among the conches of the Exuma Cays Land and Sea Park, a marine protected area in the Bahamas. Conches are central to the culture and economy of the Bahamas. Exports of conch meat bring in an estimated USD 3.3 million per year but overfishing continues to threaten the survival of the species. Conches do not reach sexual maturity until 3–5 years of age and, because they reproduce in large spawning groups, if densities drop below c. 47 adults per ha, breeding will not occur. In addition to the pressures of overfishing, the team researching the decline of conches during 2011–2016 think that the success of the protected area could have caused an increase in predators that target juvenile conches. It is also possible that juvenile conches are not recruiting to the Park from outside, and the Park population is dying of old age.
Source: Mongabay (2018) news.mongabay.com/2018/02/queen-conch-dying-out-in-the-bahamas-despite-marine-parks/

SOUTH AMERICA

Progress for indigenous reserves in Peru after 15-year process...

15 years ago the Yavari-Mirin and Yavari-Tapiche reserves in Peru's Loreto region were proposed but never established. If created the two reserves together would cover > 2.5 million ha in some of the remotest areas of the Peruvian Amazon and would protect indigenous peoples living in isolation. In December 2017 a government Multi-Sector Commission voted to 'recognize the existence of indigenous peoples in isolation' in both the proposed reserves, and recommended that a Supreme Decree law doing the same is promulgated. Recognition of the existence of indigenous peoples in isolation binds the state to protecting their fundamental rights but further study and another Supreme Decree are required before these reserves can be established. The landmark vote in 2017 was prompted by data from overflights, fieldwork and testimonies that evidenced the presence of indigenous peoples in isolation in both reserves, which are threatened by oil and logging concessions, the creation of a new national park and proposed highways.
Source: The Guardian (2018) theguardian.com/environment/andes-to-the-amazon/2018/feb/28/peru-moves-huge-new-indigenous-reserves-amazon

...and deforestation in the Peruvian Amazon dropped in 2017...

Analysis of satellite images has revealed that deforestation in 2017 declined by 13% from 2016 in the Peruvian Amazon. Data show that 143,425 ha were lost during 2017, however. Researchers remain concerned over the state of Peru's forest as the analysis also revealed new forest loss hotspots including in north-eastern San Martín and in the Nieva District. The analysis identified the five most deforested areas in Peru, which are spread throughout the country's Amazonian regions, from Madre de Dios in the south, to Ucayali and Huánuco and San Martín in the centre, to the Santa María de Nieva in the northern Amazonas region. In these areas advancements in satellite imagery and deforestation alert systems have enabled researchers to identify small- to medium-scale ranching, large-scale oil palm cultivation and gold mining as the main drivers of deforestation.
Source: Mongabay (2018) news.mongabay.com/2018/02/deforestation-in-the-peruvian-amazon-dropped-13-percent-in-2017/

...but study reveals surge in small-scale deforestation in Amazon rainforest

Recent research using the Global Forest Change dataset, which can detect losses in tree cover at a scale of 30 m, has revealed a shift from large- to small-scale deforestation events across the Amazon. Data from 2001–2014 show that 96.4% of forest loss patches were smaller than 6.25 ha and in Brazil the average patch size had shrunk since 2004 to 15.6 ha. The data indicate that 34% of areas of forest loss in the Brazilian Amazon were smaller than 6.25 ha, meaning that they may have been too

small to be detected by the PRODES monitoring system, which had recorded celebrated declines in deforestation in the Brazilian Amazon. Researchers recommend that Brazil implement a year-round, high-resolution dataset to combat deforestation as small-scale forest losses are more difficult to monitor and control.
Source: Mongabay (2018) https://news.mongabay.com/2018/02/amazon-rainforest-hit-by-surge-in-small-scale-deforestation-study-finds/

Good news for jaguars in Bolivia

Jaguars currently occupy just two-thirds of their pre-1900 range between the semi-arid scrub forests of Mexico and the flooded forests of the Amazon. Conversion of forest for development and agriculture, as well as killings in response to the loss of livestock, continue to reduce numbers of one of the top carnivores in the tropical Americas. From the mid 1800s to the present, the population of jaguars has declined to an estimated 60,000 individuals. It's not all bad news however, as the Wildlife Conservation Society has recorded jaguar populations growing at an average annual rate of nearly 8% across sites in Latin America during 2002–2016. Bolivia's Madidi National Park has seen a three-fold increase in jaguar density, a result in part to the support Wildlife Conservation Society provided to the Tacana and other local people in securing land rights, reducing deforestation in their territory and maintaining suitable habitat for jaguars.
Source: WCS (2018) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/11117/Good-News-for-Jaguars.aspx

Red knot numbers drop in Tierra del Fuego

In January 2018 an aerial survey of rufa red knots *Calidris canutus* in Tierra del Fuego revealed 9,840 birds, a 25% decrease compared to January 2017 and the lowest recorded since surveys began. The surveys were conducted by the Western Hemisphere Shorebird Reserve Network, who had hoped that the increase of 15% between 2016 and 2017 would continue. For this migratory species, Delaware Bay on the Atlantic coast of the USA is the last opportunity to feed before flying back to Tierra del Fuego. At this stopover the birds feast on horseshoe crab eggs, ideally doubling in weight to complete their migration and begin breeding on arrival, but in May 2017 low water temperatures delayed the crabs' journey ashore to breed and the red knots missed a vital food source. There is a need to work with a network of stopover and feeding sites, including Important Bird and Biodiversity Areas, to minimize the impact of such events.
Source: BirdLife International (2018) birdlife.org/worldwide/news/red-knots-plummet-25-one-year-tierra-del-fuego

Four million ha added to Chile's parklands

The president of Chile has announced the creation of two new national parks, increasing the country's national parks by 38.5%. As a result national parks will account for 81.1% of Chile's protected areas. The federal government contributed c. 3.5 million ha of federally owned land to the newly designated parkland and American philanthropist Kristine Tompkins provided c. 0.4 million ha. The parks are not contiguous but will cover an area featuring volcanoes, rainforests, grasslands and fjords. The expanded park system has the potential to generate USD 270 million in revenue per year and Chile hopes to use ecotourism in the region to help employ 43,000 people. There are also plans underway to connect 17 national parks with a 1,500-mile tourist route, the Ruta de los Parques, which would offer activities including mountaineering, sea kayaking and wildlife viewing.
Source: National Geographic (2018) news.nationalgeographic.com/2018/01/chile-new-national-parks-10-million-acres-environment/

PACIFIC

Fiji designates its second Ramsar site

The new site, Qoliqoli Cokovata, covers over 134,000 ha of fishing grounds on the north coast of Vanua Levu, Fiji's second largest island. The site forms part of the third longest continuous barrier reef system in the world, known locally as Cakaulevu or the Great Sea Reef. At > 260 km in length, Cakaulevu is one of the five marine priority conservation areas in Fiji and Qoliqoli Cokovata has been identified as the most biodiverse heart of this reef system. Hawksbill, leatherback, loggerhead and green turtles all use the area for foraging and nesting. The extensive seagrass beds and coastal mangroves also provide important habitats and nursery grounds for finfish, molluscs and sea cucumbers, which support both local communities and the national economy. The communities who live on the adjacent coast and nearby islands will retain their custodial ownership over the fishing grounds.
Source: Ramsar (2018) ramsar.org/news/exceptional-new-coastal-ramsar-site-for-fiji

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Mega-colonies of penguins discovered in Antarctica. . .

Huge colonies of Adélie penguins have been found on the Danger Islands in the Weddell Sea, on the east side of the Antarctic Peninsula. On-the-ground counts and aerial photographs from drones revealed 751,527 pairs of penguins totalling more than 1.5 million birds. In October 2017 just two chicks had survived from a colony of 40,000 Adélie penguins at Petrel Island, a few thousand kilometres west of the Antarctic Peninsula, but satellite images dating from 1959 reveal that the newly discovered mega-colonies on the eastern side have remained stable. The size of these colonies could prompt an expansion of the proposed Weddell Sea Marine Protected Area which, covering 1.8 million km^2, would ban all fishing in a vast area of the Weddell Sea and around the Antarctic Peninsula. The proposed Marine Protected Area has the support of several countries and will go before a conference of the Antarctic nations in October.
Source: The Guardian (2018) theguardian.com/environment/2018/mar/02/mega-colonies-of-15-million-penguins-discovered-in-antarctica

. . . but decline in krill threatens Antarctic wildlife

Researchers warn that a combination of climate change and industrial fishing is threatening krill numbers in Antarctic waters and consequently penguin populations could decline by almost a third by the end of the century. According to a 2018 report, climate change could reduce krill size by up to 40% in some areas of Antarctica's Scotia Sea causing a drastic reduction in predator numbers. As well as being a key source of food for whales, penguins and seals, krill remove carbon dioxide from the atmosphere by consuming carbon-rich food near the surface. Trawlers can harvest vast quantities of krill and the global krill industry is predicted to grow 12% per year over the next 3 years to meet a growing global demand for krill-based products. Climate change is thought to be the main threat to krill populations, which have now declined by 80% since the 1970s.
Source: The Guardian (2018) theguardian.com/environment/2018/feb/14/decline-in-krill-threatens-antarctic-wildlife-from-whales-to-penguins

Government announces AUD 60 million rescue package for Great Barrier Reef...

The Australian government has pledged AUD 60 million, in addition to the AUD 50 million announced in April 2016, to help save the Great Barrier Reef. The rescue package will be spent over 18 months and AUD 36.6 million will be dedicated to supporting farmers in reducing runoff from their properties, as there is a strong link between water pollution and crown of thorns starfish outbreaks, which decimate reefs. The April 2016 funds, which constituted phase three of the federal government's Reef Trust, allocated AUD 19.3 million to support cane farmers to improve nutrient, irrigation, pesticide and soil management, and AUD 23.7 million to improve grazing land management. The most recent fund will include research on developing resilient coral and will also enable the number of Marine Park Authority vessels targeting outbreaks of the crown of thorns starfish to increase from three to eight, as well as increasing the number of reef officers monitoring compliance.

Source: The Guardian (2018) theguardian.com/environment/2018/jan/22/great-barrier-reef-to-get-60 m-rescue-package-from-government

... but endangered shellfish reefs require urgent attention

A study led by the Nature Conservancy Australia has revealed that the number of reefs formed by Australian flat oysters *Ostrea angasi* has declined 99%, from 118 found in historical records to just one. Similarly, the number of reefs formed by rock oysters *Saccostrea glomerata* has declined 90%, from 60 known historical locations to just six surviving reefs. Researchers studied fishing records and indigenous middens to determine the locations of historic shellfish reefs and found that shellfish reefs in Australia have declined by up to 99% since British colonization. The decline of these overlooked ecosystems is concerning as a 1 ha oyster reef can filter 2.7 billion l of seawater per year, removing toxins such as nitrogen and phosphate, boosting local fish numbers and also stabilizing the banks of estuaries where they are found. Conservationists are calling for shellfish reefs to be included on Australia's threatened ecosystem list under the Environment Protection and Biodiversity Conservation Act 1999.

Source: The Guardian (2018) theguardian.com/environment/2018/feb/15/marine-scientists-urge-protection-for-endangered-shellfish-reefs

Trees stop absorbing carbon in extreme heat...

A year-long study of Parramatta red gum *Eucalyptus parramattensis* has revealed that trees release water through their leaves as an evaporative cooling system but photosynthesis, and thus the uptake of carbon, stops during extreme heatwaves. Six trees were grown at ambient temperature and six others were exposed to the 3 °C increase in mean annual temperatures predicted for Australia before the end of the century. At 12 months researchers induced 4-day heatwaves across all 12 capsules. Trees were starved of water for a month leading up to each heatwave and during the artificial heatwaves afternoon temperatures reached 43 °C. Whilst trees in the warmer pods grew 30% faster than those at ambient temperatures, during heatwave periods all trees maintained water loss and stopped photosynthesis at peak temperatures. Further research will be conducted to see if this response is consistent across tree types as heatwaves are predicted to become more frequent and severe.

Source: The Guardian (2018) theguardian.com/science/2018/jan/31/australian-trees-sweat-to-survive-extreme-heatwaves-researchers-reveal

... and Australia undergoes a land-clearing crisis

A growing livestock industry combined with a failure to introduce and enforce adequate restrictions is causing large-scale deforestation in Australia. Projections indicate that by 2030, 3 million ha of untouched forest will have been cleared in eastern Australia, with much of the land clearing occurring in Queensland. During 2015–2016, 395,000 ha of native vegetation were cleared in Queensland, 33% more than in the previous year. Queensland clears more land each year than the rest of Australia together and deforestation in the area drives pollution into rivers that feed into the Great Barrier Reef. About 85% of Australia's plants and 84% of its mammals are endemic to Australia but approximately three-quarters of the country's plants and animals recognized by the government as threatened have habitat loss listed as one of their main threats. WWF estimates that clearing of habitat kills 45 million animals each year in Queensland alone.

Source: The Guardian (2018) theguardian.com/environment/2018/mar/05/global-deforestation-hotspot-3 m-hectares-of-australian-forest-to-be-lost-in-15-years

Could relocation save one of Australia's Endangered frogs?

Northern corroboree frogs are found only in cold, mountainous areas of the Australian Capital Territory and New South Wales, with just 20 and 1,000 individuals left in the wild, respectively. The chytrid fungus has caused a sharp decline in numbers of this black and yellow frog but researchers hope that introducing individuals to lower elevations could help them reach sexual maturity earlier, boosting populations of this Endangered amphibian. At high elevations frogs hibernate, at lower elevations with warmer temperatures the frogs have a longer window to feed and grow each year, meaning that they could reach sexual maturity at 1–2 years of age rather than 3–4. Researchers are currently exploring whether the advantages of a lower elevation would give individuals a better chance of breeding before becoming affected by the chytrid fungus, which predominantly kills adult frogs.

Source: The Guardian (2018) theguardian.com/environment/2018/feb/20/moving-endangered-northern-corroboree-frogs-may-help-save-species

Indigenous rangers use app to preserve unique species

For the first time in Australia a threatened species recovery plan has been co-designed with Aboriginal knowledge and management practices. The greater bilby *Macrotis lagotis* is categorized as Vulnerable by the Australian government but upcoming baseline surveys conducted by Aboriginal rangers will provide data for a new national recovery plan. Twenty ranger groups from organizations in the Northern Territory and Western Australia will use a bilingual tracking app to record signs of the greater bilby including tracks, scats, diggings and burrows. The Bilby Blitz programme will cover millions of ha in central Australia and the app, which is currently available in Warlpiri and English, will be expanded to include other central desert languages such as Pintupi, Warlmanpa and Arrente. Currently less than 40% of Australia's nationally listed threatened species, including the greater bilby, have recovery plans in place.

Source: The Guardian (2018) theguardian.com/world/2018/mar/20/bilby-blitz-indigenous-rangers-use-bilingual-tracking-app-to-preserve-species

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