



Action

THE MAGAZINE FOR WWF MEMBERS

SUMMER 2022

INSIDE
WIN OUR PLANET
LIVE TICKETS

PAGE 30

FORESTS OF LIFE

How you're helping
to restore unique
habitats in Borneo

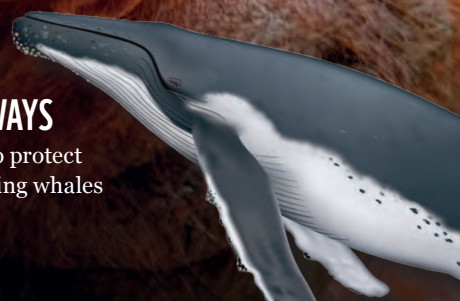


BUILDING FOR THE FUTURE

Sustainability begins at home, explains
Grand Designs' Kevin McCloud

WHALE SUPERHIGHWAYS

Together, we're helping to protect
blue corridors for migrating whales



“WHALES ARE ENCOUNTERING GROWING THREATS FROM HUMAN ACTIVITY”

Humpback whales and other wildlife that inhabits Antarctica and the Southern Ocean are on the front line of the climate crisis. In the face of rapid change, we need to understand which areas to protect from existing or emerging threats

COUNTING SOUTHERN OCEAN GIANTS FROM SPACE



Many of the world's largest whales migrate thousands of miles every year to feed on krill in the rich waters of the Southern Ocean. But as Antarctic sea temperatures rise and krill is increasingly harvested by humans, the race is on to learn more about these marine giants, so we can better protect them. Studying whales isn't easy – the Southern Ocean is vast, remote and, at certain times of the year, inaccessible. We supported British Antarctic Survey to try counting whales using very high-resolution satellite imagery. We discovered that images taken from space can help estimate whale

population densities and are more cost effective than traditional ship-based surveys. The use of this technology to study whales is still in its infancy, but could help us to map the critical areas where they feed and breed, and monitor changes in their populations. The results of the trial will help develop a network of marine protected areas in the Southern Ocean. It's also vital that we safeguard whales on their migratory routes between these areas, as the threats they face increase. Read more about our new report highlighting their hazardous journeys on page 20. Rod Downie, WWF's chief polar adviser

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A round-up of all you've helped us achieve in recent months		Migrating whales face all sorts of dangers as they cross the oceans. Our new report highlights the threats and calls for urgent action. By Derek Niemann		Solve our crossword and you could win a copy of <i>Earthshot</i>	
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Environment news, including a new commitment from Wales		Our <i>Call of the Wild</i> podcast host Cel Spellman chats to Kevin McCloud about the easy ways we can make our homes sustainable		They may be big, but it's harder to count rhinos than you might think, says Kanchan Thapa	
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Borneo's forests, home to orangutans and other wildlife, have suffered decades of destruction. But our mission to 'protect, produce and restore' will help build a better future. By Paul Bloomfield		We're celebrating an exciting long-term project to reintroduce wild tigers to Kazakhstan, where they once roamed.			
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We're helping to estimate snow leopard numbers in the western Himalayas so these majestic big cats can be better protected. Image by Sascha Fonseca		You could win tickets to <i>Our Planet Live In Concert</i> or a copy of <i>The Green Planet</i> book			

MEET THIS ISSUE'S GUEST CONTRIBUTORS



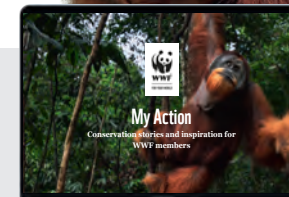
KEVIN MCCLOUD is a designer, TV presenter and Fellow of WWF, and is also a guest on the new series of our *Call of the Wild* podcast. "We're part of a bigger ecosystem and it's far cleverer than we are," he says.



ROBECCA JUMIN is head of conservation for Sabah at WWF-Malaysia. Sabah is the site of an ambitious forest restoration plan. "Orangutans are now often seen in the area, using the planted trees for food and shelter," she says.



DR KANCHAN THAPA is the head of wildlife programmes at WWF-Nepal. He says: "The rhino count may sound simple, but this adventure is physically and mentally exhausting, and sometimes dangerous."



VISIT MY ACTION

You're invited to discover our brilliant new online home for conservation news and stories for members, **My Action**. Visit the site to learn more about the issues we explore in each edition of *Action*, and to enjoy **exclusive photo galleries, videos and other interactive content**. Check for regular updates at **myaction.wwf.org.uk**

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EXTRA!

To find out more, scan the QR code when you see this box.



My Action

**YOU HELPED
RECORD NEW SPECIES
IN COLOMBIA**

With your support, scientists explored an untouched area of the Colombian Amazon, discovering a wealth of wildlife and several previously unknown species. The team of 27 researchers conducted the first-ever biodiversity survey along the Guainía river. During the expedition, they recorded 106 species of fish, including one unknown to science, as well as four families of butterflies, 26 species of amphibians, 19 reptiles, 18 bats, 211 birds and 540 plants, including at least three new species. They even found a tiny, little-known marsupial that had never been collected in Colombia before: the bushy-tailed opossum. The expedition also recorded sightings of endangered pink river dolphins – 36 adults and two calves – and collected data on the animals’ habits and habitats. ■



**YOU HELPED
WIN A LANDMARK
COURT CASE FOR
THE AMAZON**

Thanks to you, we’ve won a historic legal victory. A state court in Brazil has vetoed a new law that would have reduced the size of two protected areas in the state of Rondônia by almost 2,200 sq km – larger than Greater London. The law would have legitimised illegal cattle ranches, many of which were established through violent invasions and land clearances. But after a legal challenge, made possible with your support, judges vetoed the new law. They ruled that the state has a duty to protect the environment and stop illegal invasions. The state government will now have to guarantee the protection of these areas, remove the illegal ranchers and ensure the forest is restored. The ruling sets an important precedent for similar cases across Brazil. ■



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**“EVERY
SECOND
WE NEED
TO AGITATE
FOR CHANGE”**

ELLIE GOULDING,
WWF AMBASSADOR

**YOU’RE HELPING
PROTECT BLACK
RHINOS IN TANZANIA**

Mkomazi National Park, home to critically endangered black rhinos, is a crucial protected area in Tanzania. And thanks to you, we’re supporting the park’s work to protect the rhinos and other wildlife. Recent water shortages have increased the risk of human-wildlife conflict, so we’ve helped build two dams in nearby villages to provide a year-round supply of water for livestock and wildlife. The pandemic also saw an increased risk of poaching, so we’ve worked with the government and our partners to develop a rhino management plan – this includes fitting tracking devices and increasing the number of patrols. We also supplied equipment for the monitoring teams. Engaging local communities is key to the success of conservation projects, so we supported World Rhino Day events in Mkomazi last September to raise awareness. ■



© DIANA SHUMA / WWF-TANZANIA



**YOU HELPED
BOOST TIGER
POPULATIONS IN
NEPAL AND INDIA**

Thanks to you, tiger populations are rising globally. This is the lunar Year of the Tiger, and a big moment in tiger conservation. Though the 2010 TX2 goal of doubling tiger populations in 12 years may not be reached this year, some sites have shown what’s possible. In Bardia National Park in Nepal, the tiger population leapt from fewer than 20 in 2009 to almost 90 in 2018. And India’s Sathyamangalam Tiger Reserve is now home to around 80 tigers, up from 25 a decade ago. Later this year, tiger range countries will convene at the second Global Tiger Summit to strengthen efforts to increase the number and range of wild tigers. We’re not there yet, but it is possible – and with your help, we can do it. ■

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DISCOVER MORE

Learn more about these successes and other inspiring stories at myaction.wwf.org.uk



**WE’RE HELPING
SAVE RIVER DOLPHINS
FROM FISHING NETS
IN BORNEO**

Our colleagues in Borneo have come up with an amazing solution to prevent endangered river dolphins getting stuck in fishing nets. Electronic ‘pingers’ on the nets emit a warning sound that stops dolphins from approaching too closely. During a six-month trial on the Mahakam river, accidental catching of dolphins was reduced to zero. Fishers benefited too, with catches increasing by more than 40%. Just 80 Irrawaddy river dolphins remain in the Mahakam river, and entanglement in fishing nets has caused two-thirds of dolphin deaths over the past 25 years. WWF supporters helped our crowdfunding campaign raise enough money to fit pingers on all nets in the stretch of the Mahakam river where dolphins live. Now we want to get pingers on nets in other river dolphin habitats. ■

© CAMBODIA WWF / GERRY RYAN / WWF-GREATER MEKONG

**YOU HELPED
BUILD A NETWORK
OF NEW NATIONAL
PARKS IN CHINA**

Because of your support, giant pandas, Amur tigers and leopards will be better protected after China announced plans to create five new national parks. They’ll cover an area of 230,000 sq km – almost the size of the UK. Once completed, this network of protected areas will be the largest in the world. Until recently, China had a complicated system of parks, reserves and scenic resorts that offered little real protection against threats such as logging, poaching and development. The new unified management system will include the Northeast China Tiger and Leopard National Park, which joins up with Russia’s Land of the Leopard National Park on the other side of the Amur river to create a vast area of protected habitat for endangered tigers and Amur leopards. Thanks to your support, numbers of both are on the rise. ■



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Thanks to your membership, we can help protect wildlife and wild places. Here are some of the great things supporters like you have helped achieve

TOGETHER, WE DID IT!

WWF IN ACTION

How we're building a better world for wildlife and people

Imports of products such as soy and beef can have devastating impacts on threatened species such as jaguars, as well as risking the rights of Indigenous Peoples

WALES STEPS UP TO TACKLE DEFORESTATION

Wales has shown that a small country can be a global leader in tackling the climate and nature crisis, with the Welsh government announcing its determination to ensure Wales stops the importation of products linked to deforestation overseas

You've probably noticed that Wales has been used to help illustrate the scale of global deforestation – in 2020, for example, an area of primary (or virgin) forest more than twice the size of Wales was destroyed. But we don't often hear about the impact that Wales as a nation has on forests overseas.

So, last year, we worked with our friends at RSPB Cymru and Size of Wales to produce a report examining Wales's overseas land footprint. *Wales and Global Responsibility* revealed that an area

equivalent to 40% of Wales is used overseas to grow a handful of commodities imported into the country: palm oil, soy, beef, timber, cocoa, paper and rubber.

Most concerning is that 30% of this land is in countries where there's a high or very high risk of deforestation, habitat loss or social exploitation. This is putting pressure on 2,800 species threatened with extinction, fuelling climate change and risking a negative impact on the rights of Indigenous Peoples, local communities and workers.

In previous research, we've shown that the UK as a whole needs an area 10 times the size of Wales to meet its demands for imported commodities, but this was the first report to focus just on Welsh consumption. We shared the findings at an online event and during last

year's COP26 climate summit. We were privileged to be joined by Kerexu Yxapyry, a representative of the Indigenous Guarani people in Brazil, who gave an emotive talk on the impact soy production is having on her community.

As a result, the Welsh minister for climate change, Julie James, promised to deliver the recommendations in our report, and utilise the powers that the Welsh government has to make sure Wales doesn't contribute to deforestation overseas.

Now we need to make sure the Welsh government lives up to this commitment. And we need the rest of the UK to follow suit. Although last year's UK Environment Act aims to tackle deforestation resulting from products we import, it contains gaps and loopholes that allow habitat destruction and human rights violations to continue.

WALES A GLOBAL FOOTPRINT



Our *Wales and Global Responsibility* report revealed hard-hitting facts about the country's overseas land footprint – and called on the Welsh government to take urgent action to minimise the environmental effects of its imports



84% of palm and 73% of soy was produced in countries at significant risk of deforestation, habitat conversion and human rights violations.



An area equivalent to 40% of the size of Wales (823,000 hectares) was required overseas to grow Welsh imports of cocoa, palm, beef, leather, natural rubber, soy, timber, pulp and paper in an average year between 2011 and 2018.



Changes in land use to produce Welsh imports emitted 1.5 million tonnes of CO₂ per year – that's equivalent to 22% of Welsh transport emissions.



2,800 species are threatened with extinction in the high-risk countries that export commodities to Wales, including orangutans in Indonesia and jaguars in Brazil.

NEWS IN BRIEF



© ANDREW PARKINSON / WWF-UK

MAKING A DIFFERENCE IN THE DALES

Since we launched our Wild Ingleborough restoration project in the Yorkshire Dales last year, we've planted over 65,000 trees and protected 62 hectares of blanket bog. Over 200 hectares of land are now under restoration. Our partners have been conducting surveys in the landscape to see how it's responding, and a programme of engagement activities is enabling local people to get involved. We couldn't have made this progress without local volunteers and our members who've generously donated to the project. Thank you!

NEWS IN NUMBERS

15

Fifteen secondary schools in the UK and Ireland took part in our Plant + by Finer

Diner initiative with our partner Sodexo, which promotes planet-friendly, plant-based meals. Between January and April 2022, some of the meat-based meals on the canteen lunch menus in these schools were substituted with tasty plant-based alternatives. Student ambassadors talked to their peers about sustainable eating and helped catering staff hand out samples.

£14,822

January saw hundreds of you 'brave the chill' for WWF. We watched cold-water dippers, ice bath plungers and freezing shower scrubbers take on our chilly challenge. Ronan Keating's dunk in an ice bath atop Broadcasting House even featured on *The One Show*! We've loved seeing everyone's posts across social media. Together, you raised nearly £15k to help protect our world – hopefully you felt some health benefits, too!

NEWS IN BRIEF



DROUGHT RELIEF IN KENYA

We’ve launched an emergency response to support people and wildlife suffering from drought in northern Kenya. After more than two years of low rainfall, the situation is so severe that Kenya’s president has declared it a national emergency. Livestock and wild animals such as giraffes are dying, and there’s increasing conflict between animals and people due to scarce water resources. As well as sending water and fodder to meet the immediate needs of people and animals, we’re supporting them to recover and become more resilient in the future – for example, by digging new boreholes and water pans, restoring healthy soils and introducing sustainable farming practices.



ELLIE GOULDING’S EARTH HOUR CHALLENGE

On 26 March, 192 countries and territories around the world took part in Earth Hour, with over 60 landmarks switching off their lights. Thousands of people got involved across the UK – spending time in nature, joining the Facebook event, or listening to the new series of our podcast, *Call of the Wild*. New WWF ambassador Ellie Goulding encouraged the public to make a difference by living more sustainably and reducing their carbon impact at home as part of challenges on the My Footprint app.

IT’S TIME FOR AN ENERGY REVOLUTION

A new UN climate report shows that we’re almost out of time to limit global warming to 1.5°C

Climate change is already harming people and nature across the globe, with the most vulnerable suffering most. Emissions are at record levels and our planet is still heavily dependent on fossil fuels – but it’s not too late.

With the window for action getting smaller, the latest report by the Intergovernmental Panel on Climate Change (IPCC) highlights the need to scale up solutions that can limit global warming by transforming sectors including energy, industry, agriculture and land use, buildings and transport.

Although solutions to cut greenhouse gas emissions are already available in all sectors – from solar power and energy-saving tech to electrified transport, greener buildings, plant-based diets, and protecting and restoring nature – more needs to be done to phase out fossil fuels. The IPCC report offers glimpses of possible futures, with investment in lower-emissions pathways that result in fewer climate-related impacts and more sustainable development.

“Around 20 countries have shown they can reduce emissions through policy and

economic measures, which have boosted energy efficiency, reduced rates of deforestation and increased renewable energy and low-carbon transportation,” says Dr Stephanie Roe, our global climate and energy lead scientist, and a lead author of the report. “Some countries’ reductions are consistent with limiting warming to 2°C, but none are yet on track for 1.5°C.”

Our climate change chief adviser, Dr Stephen Cornelius, says: “This report shows that while some sectors are heading in the right direction, climate change is moving faster than we are.

“We will miss the crucial goal of limiting global warming to 1.5°C unless we dramatically scale up climate solutions to rapidly cut greenhouse gas emissions. This means investing at scale in powering our societies more efficiently – and leaving no one behind. Every moment, every policy, every investment, every decision matters to avoid further climate chaos.”

We need an energy revolution to tackle the climate crisis. By investing in our future now, we can protect people and nature. We’re calling on world leaders to heed the warnings and urgently deliver on their climate promises.



The distinctive Popa langur was named for Mount Popa where it was found. Sadly, it’s already under threat, with fewer than 250 thought to exist

MEKONG MYSTERIES

Meet the Popa langur, a species of monkey previously unknown to science, caught on camera on Mount Popa in Myanmar

It’s one of 224 new species of animals and plants discovered in the Greater Mekong region in 2020, as revealed in our latest update from the region. They include 155 plants, 35 reptiles, 17 amphibians and 16 fish.

The Popa langur, the only newly described mammal, could soon find itself on the endangered list. It’s thought that only around 200–250 of these exist, and their habitat is under threat.

Other new discoveries include the crescent moon spadefoot frog (noticed because of its distinctive loud calls), an iridescent snake and a unique succulent bamboo. The latter is so unusual that scientists had to create a new genus for it.

The Greater Mekong – covering Cambodia, Laos, Myanmar, Thailand and Vietnam – is a biodiversity hotspot, home to iconic species including tigers and Asian elephants. Since 1997, scientists have discovered more than 3,000 new species in the region, and it’s likely that many more remain unknown.

With habitat loss, hunting and illegal wildlife trade posing a growing threat, these discoveries underline the urgent importance of protecting nature in the region.

“WE’RE DOING OUR BIT FOR NATURE”

For Valli, childhood visits to her grandparents’ farm in Shropshire inspired a lifelong love of nature

“It was an idyllic place to be,” she says. “They had pigs, dogs, goats and even a tame pheasant called Peggy! I loved the animals and running through the woods. Mum taught me the names of all the beautiful wildflowers. Those visits were so special. That’s where it all began.”

Valli’s passion for nature, ignited more than half a century ago, still burns brightly. Now living in Rotherhithe in London, the retired civil servant and her husband, Pip, take great joy in the wildlife on their doorstep. “When I walk to the Tube along the canal, it’s teeming with wildlife, especially birds, which I love to feed,” says Valli. “If there are children there, I explain that I use swan and duck food, as it’s better for them than bread, in the hope that those children learn something about nature.”

It was this love of nature, and concern for the next generation, that inspired Valli and Pip to leave WWF a gift in their wills. “I don’t want the next generation to look back and say:



A gift in your will can help us protect the natural world for future generations

‘Look what they did to the planet,’” Valli says. “The way forward is to live in harmony with nature and the wildlife around us.”

Gifts in wills, like Valli and Pip’s, are hugely important to WWF. They help us plan for the future and strengthen our work to protect the natural world, so that future generations can continue to enjoy it.

To find out more about including a gift to WWF in your will and make a lasting gift to the planet like Valli and Pip have, call the gifts in wills team on **01483 412153** or email **stewardship@wwf.org.uk**

My Action

SEE MORE!

See more of the new discoveries at **myaction.wwf.org.uk/gallery-mekong-species**



FORESTS OF PLENTY

For decades, vast swathes of northern Borneo's lush forests – home to orangutans and other endangered creatures – were degraded and destroyed. Now, with your support, we're working to build a better future for the wildlife and people of Sabah

Since 2007, WWF has helped to restore forest in Sabah's Bukit Piton Forest Reserve, which is an important habitat for orangutans. We've helped replant more than 2,200 hectares with about 346,000 trees, and orangutans have been seen using the restored areas – a positive sign that restoration efforts are working

WORDS: PAUL BLOOMFIELD | IMAGE: © GETTY

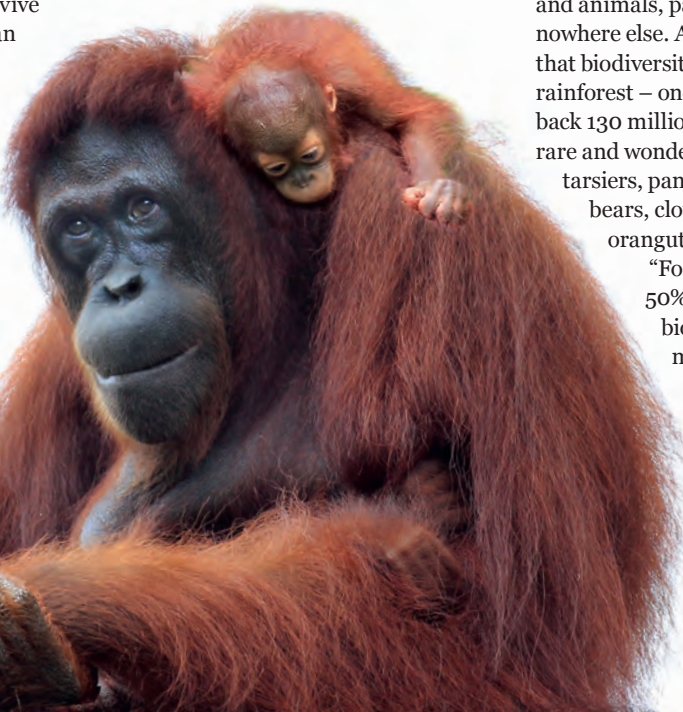


Sabah is home to more than 3.8 million people, many of whom depend on these landscapes for their livelihoods

Once upon a time, there was a family of orangutans on Borneo. These gentle red apes lived peacefully in the rainforest. By day they munched fruit, leaves and bark; at night they slept high in the canopy in comfortable nests woven from branches and leaves. Then the loggers arrived and began cutting down the trees, before even bigger areas were cleared to plant oil palms.

You might imagine that what follows is a horror story. After all, the Bornean orangutan is critically endangered, its numbers plummeting by nearly two-thirds from an estimated 288,500 in 1973 to just 104,700 today. Only 11,000 wild individuals are believed to survive in Sabah, Borneo's northernmost Malaysian state. A major factor in their decline has been widespread destruction of this great ape's habitat: between 2002 and 2020, Sabah lost 339,000 hectares of primary rainforest – around 10% of the total – to logging, fires and unsustainable clearance for oil palm plantations.

But in the ongoing tale of our orangutan family, the next chapter is still being written. And, thanks to your support, we're hopeful the story for these magnificent primates, along with the island's other wildlife and its people, will be more like the fairy tale this article first appeared to promise.



There are around 11,000 Bornean orangutans in Sabah, mainly living in forests that were previously logged for timber and are now protected. These elusive apes help keep forests healthy by dispersing seeds



My Action

DISCOVER MORE

Get the facts on palm oil and find out how to shop responsibly: myaction.wwf.org.uk/palm-oil-explainer



Sabah's forests are brimming with wildlife, store huge amounts of carbon and provide resources for millions of people. They're among the world's most richly biodiverse ecosystems, and we can't afford to lose them

Malaysia is one of the few 'megadiverse' countries, home to huge numbers of plants and animals, particularly species found nowhere else. And Sabah is a jewel in that biodiversity crown, epitomised in its rainforest – one of the world's oldest, dating back 130 million years – harbouring such rare and wonderful creatures as elephants, tarsiers, pangolins, hornbills, gibbons, sun bears, clouded leopards and, of course, orangutans. But that's far from all. "Forests still cover more than 50% of Sabah, but our rich biodiversity encompasses marine as well as terrestrial habitats," explains Rebecca

"SABAH'S RAINFOREST IS ONE OF THE WORLD'S OLDEST, DATING BACK 130 MILLION YEARS"

Jumin, head of conservation for Sabah at WWF-Malaysia. "The state has some 300,000 hectares of mangroves, which play a critical role in regulating the world's climate by storing significant quantities of carbon."

PRODUCTIVE LAND

Importantly, though, Sabah is also home to more than 3.8 million people, many of whom depend on these landscapes for their livelihoods. Increasingly over the past four decades, their income has derived from palm oil, which is hugely important to Sabah's economy. Today, oil palm plantations cover more than 1.5 million hectares, or one-fifth of Sabah's land area. In 2020, they produced 4.65 million tonnes of crude palm oil, yielding an estimated revenue of 12.5 billion Malaysian ringgits (around £2.2 billion).

Oil palm plantations have been linked with issues including deforestation and, thus, the loss of wildlife habitat and release of ▶

IN THE WILD FOREST

It's not just orangutans that depend on Borneo's forests. Other species benefit from our work in Sabah



BORNEAN ELEPHANT

The smallest subspecies of endangered Asian elephant has a longer tail, larger ears and straighter tusks than its mainland cousin. It's believed fewer than 1,500 wild individuals survive in Sabah.

PROBOSCIS MONKEY

This endangered primate, endemic to Borneo and found in Sabah's mangrove forests and riverine swamps, is known for the male's pendulous nose, which is thought to attract females.



SUN BEAR

The smallest bear species likes to climb trees in search of food – fruit, birds, termites and other insects. It's also famously fond of honey.

BORNEAN BANTENG

A graceful, beautiful species of wild cattle, the banteng is now endangered and largely confined to isolated forest reserves in Sabah – Tabin Wildlife Reserve is a stronghold.



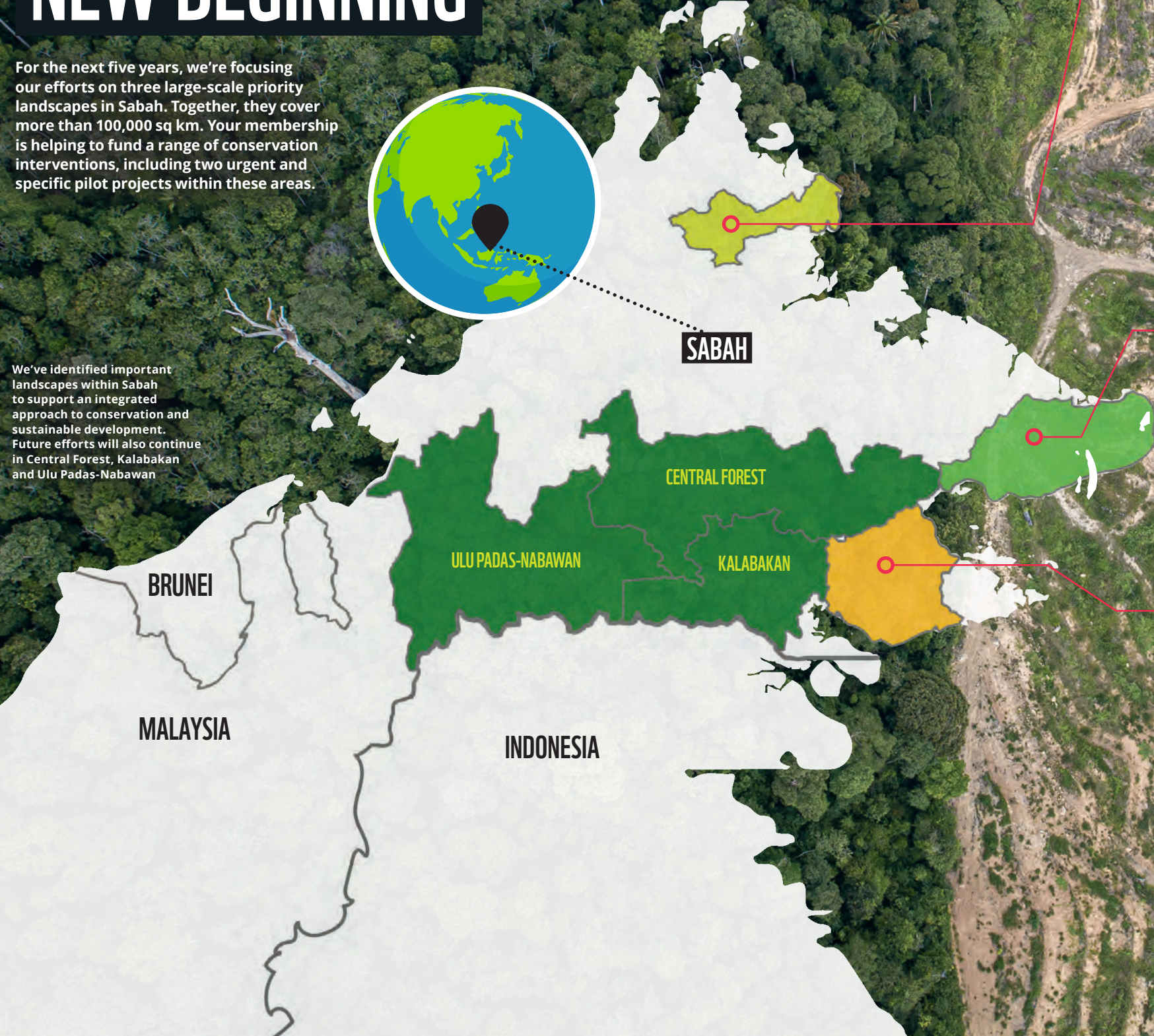
SUNDA CLOUDED LEOPARD

Adorned with gorgeous 'cloud' markings, this vulnerable, secretive, nocturnal cat is the top predator of Borneo's rainforest, feeding on monkeys, pigs and even small deer.

PLANTING A NEW BEGINNING

For the next five years, we're focusing our efforts on three large-scale priority landscapes in Sabah. Together, they cover more than 100,000 sq km. Your membership is helping to fund a range of conservation interventions, including two urgent and specific pilot projects within these areas.

We've identified important landscapes within Sabah to support an integrated approach to conservation and sustainable development. Future efforts will also continue in Central Forest, Kalabakan and Ulu Padas-Nabawan



LOWER SUGUT

The lower reaches of the Sugut river basin, spanning more than 2,000 sq km in north-eastern Sabah, are dominated by protected forest reserves and large oil palm plantations. The landscape hosts Bornean orangutans, bantengs and, in mangroves and habitats close to water, proboscis monkeys. We're working to show how land-use planning can help minimise deforestation and help inform infrastructure and agricultural developments.

PILOT PROJECT

A five-year programme to restore mangroves covering some 300 hectares will secure suitable habitat for a range of wildlife, including proboscis monkeys and nurseries for fish and other aquatic life. It will also help us to understand how much carbon can be absorbed through restoration.



TABIN

This 1,200 sq km wildlife reserve is home to northern grey gibbons, sun bears and some 1,200 Bornean orangutans – the largest population in the eastern lowlands. It's largely surrounded by oil palm plantations. We're working with partners to halt the decline of the banteng population, and hope to create a corridor linking with Silabukan Forest Reserve to reconnect orangutan and elephant populations, and help reduce conflict between elephants and people.



TAWAU

Elephants, orangutans, helmeted hornbills, clouded leopards and banteng live in Tawau Hills Park and the adjacent Ulu Kalumpang Forest Reserve, centrepieces of this landscape spanning more than 4,000 sq km. However, more than 50% is covered by oil palms. We're working with Sabah Forestry Department and other government departments to reduce forest degradation, safeguard the habitat and improve water catchment capacity for local communities.

PILOT PROJECT

With your support, we aim to restore 300 hectares of damaged and fragmented forest between Mount Wullersdorf Forest Reserve and the main Tawau Hills area initially. We'll be planting 20,000 trees to create an ecological corridor that will enable orangutans, elephants and other animals to move more freely to find food and mates. The trees could also potentially sequester large amounts of carbon.



“WE BELIEVE THE PALM OIL INDUSTRY CAN DEVELOP SUSTAINABLY”

stored carbon. But it's important to recognise that the crop isn't inherently 'bad'. Indeed, it can be highly efficient: the value of edible vegetable oil produced by a hectare planted with oil palms is five times that of the same area planted with sunflowers.

We believe that the palm oil industry can develop sustainably. So does Sabah's government. In 2015, it declared a vision that within 10 years 100% of its palm oil output should be certified to the international standards of the Roundtable on Sustainable Palm Oil (RSPO).

A SHARED VISION

Dovetailing with these aims, in 2020 we launched the Sabah Landscapes Programme. It was made possible with your support, and that of partners including Unilever and Beiersdorf (Nivea), and is based on a 'living landscapes' approach, working with government departments, the private sector and local communities.

Together, we identify shared sustainability goals, then put in place planning, policies and conservation measures to enable wildlife and people to thrive alongside oil palm plantations. The idea is to foster a culture in which forests, wildlife and rivers are protected, crops are produced sustainably, and fragmented forests are restored and reconnected. In short: protect, produce, restore.

We've already achieved success with the 'protect' pillar. "Our work helped lead to the designation of Tabin Wildlife Reserve, and the Danum Valley and Maliau Basin Conservation Areas," explains Rebecca. "Today, our teams provide technical support, with activities such as orangutan and elephant population surveys, helping steer planning, and identifying areas of high conservation value that should be protected from further development."

Crucially, we want palm oil production to be more sustainable, measured by RSPO certification, and to allow forests and wildlife to flourish within palm oil-producing landscapes. That doesn't just mean being ►



Sustainable palm oil production benefits not just wildlife but also the people who work on the plantations



Elephants are often seen wandering around palm oil plantations, eating the trunks of felled oil palm trees



SUCCESS STORIES

PROTECTING TRUSUN SUGUT

After decades of destructive logging, we helped push for Trusun Sugut Forest Reserve to be reclassified as a fully protected forest, safeguarding orangutans, bantengs, clouded leopards, proboscis monkeys and other incredible wildlife.

PRODUCING PALM OIL SUSTAINABLY

We've helped to set up a cooperative in Tawau to support medium-sized oil palm plantations that are becoming RSPO certified. It currently has more than 300 members, who collectively manage about 16,000 hectares.

RESTORING WILDLIFE CORRIDORS

The creation of a wildlife corridor by Sabah Softwoods in the Tawau landscape, following recommendations by WWF, has secured the passage of forest elephants through plantation areas, reducing conflict with people and cutting crop losses by around 99%.



We're working with a 600 sq km oil palm plantation to establish a wildlife corridor linking two forest reserves, which will help elephants access larger foraging grounds

better for biodiversity, though of course that's important. It has to work for people, too.

"Certification alone will not save orangutans," observes Rebecca. "It applies only within oil palm plantations rather than across wider natural habitats. But it does make operations more efficient, possibly increasing production and income, without the need to expand the area planted. It also addresses issues such as environmental pollution, human rights, working conditions and soil protection," she adds.

Certified producers must protect areas of high conservation value or high carbon stock within their land, prevent illegal hunting, and maintain vegetation along river banks – so degraded streams must be restored to reduce pollution and erosion, and to create habitat and wildlife corridors. And certified producers are prohibited from clearing new areas of forests.

Smallholders can find it costly and difficult to improve sustainability and achieve certification, so we're also working with the state government to help them overcome these challenges, including implementing group certification schemes. These efforts are

"WE'RE CREATING CORRIDORS WITHIN PLANTATION LANDSCAPES TO CONNECT FRAGMENTED FOREST PATCHES"

effective only in tandem with the protection of conservation areas and, importantly, the restoration of damaged habitats to a level in which wildlife can thrive.

REPLANTING FOR THE FUTURE

One example is our pilot project at Bukit Piton Forest Reserve, a patch of the Ulu Segama-Malua landscape degraded by fires and logging. Between 2007 and 2019, we planted more than 340,000 trees over 2,200 hectares. Some were hardy species that can cope with full sun and poor soil. They create the shade needed by others we planted, such as fruit trees that provide food for wildlife. "Orangutans are now often seen in the area, using the planted trees for food and shelter," reports Rebecca. "The presence of youngsters is a sign the habitat is improving."

Another kind of restoration involves planting trees to create habitat corridors within plantation landscapes to connect fragmented forest patches with larger forest blocks. For example, we've supported local partner Sabah Softwoods in establishing a corridor between Ulu Kalumpang Forest Reserve, Tawau Hills Park and the larger Ulu

Segama Forest complex, allowing elephants access to more substantial foraging grounds.

This is one element of Sabah Softwoods' strategy to avoid conflict between elephants and people. Additionally, with advice from WWF, settlements and young oil palm trees have been fenced off, while elephants are able to access parts of the plantation where any damage they might cause would be negligible, such as areas of mature trees. As a result, crop damage has been reduced by around 99%, and incidences of human-wildlife conflict have also plummeted.

As well as protecting wildlife, our Sabah Landscapes Programme also aims to enhance the livelihoods of the state's people and increase the resilience of its ecosystems to the impacts of climate change.

"Palm oil can be an efficient crop that benefits the people of Sabah and the rest of the world," Rebecca concludes, "and it can be produced in areas that safeguard our amazing biodiversity."

So this story might have a happy ending after all – for the orangutans, for Sabah's people and for the other amazing wildlife that calls these precious landscapes home.

PLEASE HELP BRING SABAH'S FORESTS BACK TO LIFE

If you'd like to do more to support our work in Sabah, an extra gift will help protect the needs of people, wildlife and forests long into the future. Your donation could boost our efforts in the two pilot project areas. For example:

- £10** could help pay for a pair of binoculars, enabling our teams to track the movements of orangutans and other wildlife
- £20** could go towards a camera trap, providing vital insight into the array of wildlife living in the forests
- £50** could pay for 50 native tree seedlings, including fruit trees that provide food for orangutans
- £100** could help fund a field assessment to identify key areas for the creation of ecological corridors, helping orangutans and other wildlife move more freely

You can help to protect Sabah's future. Donate today at www.wwf.org.uk/forests-of-plenty





ROOF OF THE WORLD

This stunning photo highlights the snow leopard's harsh but beautiful mountain home – and the challenges of protecting this elusive cat

A snow leopard scans for prey across the jagged peaks of the Ladakh mountain range in India. Thick snow blankets the ground, but the big cat's dense coat and furry footpads keep it warm. The cold is more of a challenge for photographers and scientists, who struggle to find snow leopards in the harsh landscape. "My images are the result of 50% preparation and 50% luck," photographer Sascha Fonseca explains. "My camera traps captured more than 100 images of leopards over the years, but only a few were this spectacular."

Given the freezing conditions, it's not surprising that so little is known about snow leopards. Our 2021 report revealed that more than 70% of their habitat remains unexplored, and this hampers efforts to protect them. India is a priority landscape for these far-ranging cats, so we're helping the state government in Arunachal Pradesh in the western Himalayas to estimate the population living there. The results will help us build a more accurate picture and develop better strategies to protect the ghost of the mountains.

My Action

DISCOVER MORE

See behind the scenes of Sascha's stunning photography:
myaction.wwf.org.uk/gallery-sascha-fonseca





Humpback whales can travel great distances during their seasonal migration. Some animals migrate 5,000 miles between summer feeding grounds and winter mating and calving areas in tropical waters

PROTECTING WHALE HIGHWAYS

Human activities – from industrial fishing to ship strikes and noise pollution – are creating a hazardous and often fatal obstacle course for the world's migrating whales. Our new report highlights the growing dangers – and calls for urgent action to safeguard the oceans

A thousand years after Viking seafarers named the ocean the 'whale road', WWF and marine scientists have laid out a new map of the planet. It could be a motorists' atlas, thick bands representing motorways, thinner strings the connecting A-roads. Except that every road has a blue background. These are the marine superhighways along which the world's largest whales migrate. And they do so at huge risk.

The routes on our map (see overleaf) were created from data gathered from more than 1,000 whales. They were tracked by satellites on journeys taken over 30 years using data supplied by more than 50 research groups. And what journeys! The great tails

of baleen and toothed whales power them across enormous distances to find shifting sources of food. A giant humpback migrates from polar seas to the tropics and back, covering almost as many miles as the circumference of the Earth in less than two years.

WHALE ROADS

Different places are important at different times of the year for different things; perhaps a seasonal bounty of zooplankton, or a nursery for the young. The track of each individual is plotted by a thin line – the thickness of the bands testifies to the consistency of the paths taken by so many whales.

This migration map is a vital part of a new report, *Protecting Blue Corridors*,

which provides a comprehensive look at whale migrations across all oceans. It reveals how whales are encountering multiple and growing threats from human activities in their critical ocean habitats – areas where they feed, mate, give birth and nurse their young – and along their migration superhighways, or 'blue corridors'. A collaborative analysis by WWF and leading marine mammal scientists from Oregon State University, the University of California Santa Cruz and the University of Southampton, it describes a situation that has become perilous.

Humankind's rapacious exploitation of the world's oceans has led to six of the 13 great whale species being classified as endangered or vulnerable, ►

Whales move across ocean basins as they travel between feeding and breeding sites, in and out of international and national waters. Some migrations are seasonal, some are year-round

BLUE CORRIDORS

For the first time, marine mammal scientists are able to present a global view of blue corridors for whales, combining satellite tracking data from more than 1,000 tags. They help uncover the whales' migration patterns and critical habitats.

- LEGEND
- SATELLITE TRACKS
 - MIGRATION DIRECTION
 - MIGRATION CORRIDORS
 - INTERNATIONAL SEAS
 - NATIONAL SEAS



FIN WHALES
(Balaenoptera physalus)
IUCN Status: Vulnerable
Length: 17–20m
Population: ~100,000



RANGE MAPS



BOWHEAD WHALES
(Balaena mysticetus)
IUCN Status: Least concern
Length: 13–15m
Population: ~10,000



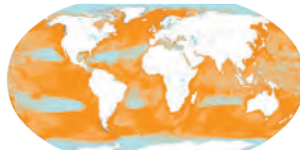
GRAY WHALES
(Eschrichtius robustus)
IUCN Status: Least concern
Length: 12–14m
Population: ~27,000



NORTH ATLANTIC RIGHT WHALES
(Eubalaena glacialis)
IUCN Status: Critically Endangered
Length: 13–16m
Population: ~350



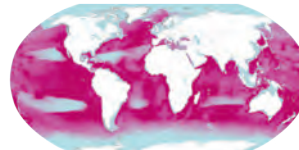
HUMPBACK WHALES
(Megaptera novaeangliae)
IUCN Status: Least concern
Length: 13–16m
Population: ~84,000



SOUTHERN RIGHT WHALES
(Eubalaena australis)
IUCN Status: Least concern
Length: 15–18m
Population: ~13,600



SPERM WHALES
(Macrocephalus physeter)
IUCN Status: Vulnerable
Length: 11–20m
Population: ~350,000



BLUE WHALES
(Balaenoptera musculus)
IUCN Status: Endangered
Length: 24–26m
Population: ~5,000–15,000



HUMAN
(1.65m)

HOW WHALES' FEEDING HABITS SUPPORT OCEAN HEALTH



In the Southern Hemisphere every year, many whale species migrate south to feed on the tiniest of prey – shrimp-like crustaceans called Antarctic krill. A new study shows that whales feeding in the Southern Ocean eat nearly a third of their own body weight in krill every day

Equally astonishing is the discovery that the whales inadvertently farm the krill. After whales consume iron-rich krill, they excrete plumes of nutrient-rich faeces, providing food for microscopic plants called phytoplankton that in turn feed the krill. And krill-chasing whales churn up krill droppings, manuring the water with iron to encourage yet more growth.

Human activity is threatening this sustainable way of life. Climate change is resulting in krill distribution shrinking southwards. In parts of the Southern Ocean, the Antarctic sea ice on which krill nurseries depend is melting. And there's growing international interest in krill fishery. This is a concern, particularly where it overlaps with the feeding grounds of whales, penguins and other species.

"Krill are the superheroes of the Southern Ocean," says WWF's polar adviser, Rod Downie. "They're at the centre of the food web above the ocean floor, and they help to draw down and store vast quantities of carbon too. But they face grave threats. That's why we're working with our partners to better understand the role of krill in the carbon cycle, and how their distribution is changing. This will help us press for better protection for critical krill habitat."

Watch our new film about the role of krill at wwf.org.uk/the-mighty-krill



even after decades of protection. Approximately 300,000 cetaceans (whales, dolphins and porpoises) are killed each year as a result of fisheries bycatch – entanglement in fishing gear such as nets and lines. Still more are snared by 'ghost gear' – the discarded, lost or abandoned fishing gear that litters the sea. One of the world's most endangered species is the North Atlantic right whale, with just 335 individuals surviving. And 288 of those animals appear to have been caught in fishing gear at least once in their lives. How many more died unnoticed?

ATTACKED FROM ALL SIDES

There is a frightening crossover between whale superhighways and shipping lanes. Traffic rose fourfold between 1992 and 2012, and the rate is increasing. And there's only one winner in a collision between a whale and a 500,000-tonne supertanker.

Extra sea traffic, seismic surveys, military sonar and industrial activity, such as drilling for oil, have all contributed to underwater noise levels doubling each decade since the 1960s – a catastrophe for animals that have evolved to use sound as their primary sense. Unable to hear or vocalise over this din, whales are

▲ Gentle giants including fin and humpback whales can be frequent visitors to UK seas. But our waters are fraught with risk, from ship strikes to the effects of noise pollution

▼ High seas that are beyond national jurisdictions make up two-thirds of the Earth's oceans, yet no overarching treaty exists to protect vulnerable species such as humpbacks in these waters

deprived of their ability to communicate over tens or even hundreds of miles. What's more, as climate change heats the ocean, it's causing shifts in both abundance and distribution of prey. Add the scourge of toxic chemical contamination and plastic pollutants filling their stomachs uselessly, and it's easy to understand why whales are in such grave danger. So what can be done?

"We can protect the critical habitats where whales feed, breed and mate, but they still must migrate past obstacles and threats to get to those places," warns WWF's chief marine adviser, Dr Simon Walmsley. "If we're trying to protect humpbacks, it's no good focusing on the Arctic or the Antarctic and doing

nothing about their migration route in the middle. Any network of protected areas must not only consider critical areas, but also the pathways between them – and that requires international cooperation."

Marine protected areas, such as those in UK

waters, do offer legal protection, though we're still pressing for proper management to render them effective. But on the high seas, outside the jurisdiction of any nation, whales lack rights of passage. Across an astonishing 42% of the planet's surface, wildlife has no overarching legal protection whatsoever.

All this may be about to change. Patient cooperation between governments backed by conservation groups is bringing an international United Nations treaty – the Biodiversity Beyond National Jurisdiction Treaty – close to fruition. This agreement will oblige all states to act.

PROTECTING THE HIGH SEAS

"It's a game changer," says Simon. "There are currently no ways of establishing universally recognised marine protected areas in the high seas. The UN treaty will enable us to draw together all activities on the high seas, examine their impacts on biodiversity, and suggest measures that will help protect it."

"As a shipping superpower, the UK has the opportunity to show international leadership – and our new report will inform the process. It will take time, but we can deliver a robust mechanism for establishing

▼ The deadliest threat by far is entanglement in fishing gear, which kills an estimated 300,000 whales, dolphins and porpoises each year. What's worse, this is happening from the Arctic to the Antarctic. Here, a young minke whale has died with a fishing net tangled around its mouth



globally recognised networks of high-seas marine protected areas. And there are little things we can do now that, if applied globally, will have a huge effect. Nets can be fitted with sonic pinger-alerts that steer whales away from danger, and all nets could be tagged by law, so that discarded gear is traceable to the ship that dumped it. The technology exists for us to use modified ropes that break if a whale gets entangled. And ships could slow down. A slower ship makes less propeller noise and uses less fuel. They can also change course to avoid whales – the more data we have, the better the chance they have. A long voyage may take more time, but surely it's worth it."

Next year marks the 50th anniversary of a UK ban on whale imports, a move we were instrumental in bringing about. Previous generations fought to prevent cruelty to these intelligent beings. Today, we know there's another compelling reason why we must protect whales: each animal absorbs huge amounts of carbon, locking up as much as thousands of trees over its lifetime. When it dies and settles in the sediment for millennia, the whale gives a parting gift to the planet.

Their future is in our hands and our future is in theirs. ■





Designer **Kevin McCloud** is best known as the presenter of architectural TV show *Grand Designs*. In our new *Call of the Wild* podcast series, he explains why sustainability starts at home

What do we mean by a sustainable home?

There are 56 tonnes of carbon emissions related to the construction of a new home. It sounds a lot, but it's a tiny proportion of the building's emissions over its life. It's when we get in and we turn the lights on and we heat it – that's when its impact comes to bear. So best practice would be to build a super-insulated house that's got managed ventilation. And you might put some solar panels on the roof and generate some electricity, and you might even export some back to the grid. Before you know it, you have a zero-carbon house. As a society, we need to be moving towards that idea.

What are some of the small things people could be doing in their homes?

There are lots of tips like using draught excluders or putting extra insulation in the attic. Insulation pays for itself in two weeks, so it's worth it. Secondary glazing, which is much cheaper than double glazing, can give the thermal performance of standard double glazing. And the comfort level is just so much better with fewer draughts.

What are the best ways of sustainably heating your home?

My first rule is heat yourself, not your house – turn the boiler down. I'm wearing four layers because it's cold today. And there are types of heating other than conventional domestic heating, like infra-red, for example, which is more efficient as it just heats you.

Is it easy to find a green energy provider?

Yeah, there are several now. Some of them commit to buying only sustainable energy – that's energy produced by renewables. Others claim they're going to put all or some of their profits back into renewables. So find the scheme that suits you. The premiums are a bit higher, so you're paying more – but everybody's paying more for electricity now.

Are there other areas where we can make small changes that make a big impact?

Just being careful in every part of your life about not consuming too much – that does more for sustainability than anything else. So we can turn the lights off. And with the kettle, only heat as much water as you need. It's the same with the washing machine – do you need to do 15 half loads a week rather than three full loads? It's about how we use energy.

Should we be thinking about water, too?

Fresh drinking water isn't infinite. And water's needed to grow trees, it's needed to grow crops, it's needed in very large quantities to look after us in other ways, not simply for washing or flushing down the toilet. It's been great to see the legislation over the past 20 years demanding low-flush systems. We've gone from, I think, 150–170 litres per person per day domestic use, which is mainly flushing the toilet, down to new housing being about 110–120 litres per person per day.

How can we work with nature rather than against it?

I think the first thing we can do is start sharing. Lockdown taught us how important community is and the value of helping each other. I think the love that we feel for each other as human beings and how we express it is something so primal to who we are and what we are. And we don't dream of exploiting the people we love – we want to cherish them and see them flourish. Our love for the world is like our love for each other. We've just got to find it and show it.

THE WILD IS CALLING. IT'S TIME TO ACT.

To hear the interview in full, or listen to episodes from the new series, subscribe to our podcast. Just search for *Call of the Wild* wherever you listen to podcasts.

GREEN HOUSES

As a society, we need to move towards more sustainable housing, says Kevin, looking at options such as communal batteries to store electricity from renewable sources



RETURN OF THE TIGER

Reintroducing tigers to their former range is key to boosting their numbers globally. Now, we're preparing to welcome them back to Kazakhstan after an absence of more than 70 years

The Caspian tiger once roamed central Asia, from the Caspian Sea to north-west China. But around 70 years ago, the sound of its roar faded: this tiger population had become extinct. The Ili-Balkhash region of Kazakhstan used to be a stronghold for Caspian tigers. The dense forests and reed thickets that flanked the Ili river and its tributaries down to Lake Balkhash were full of prey. The big cats feasted on bukhara deer and wild boar, until decades of poaching and habitat loss made their prey scarce.

The last bukhara deer in Ili-Balkhash was seen in 1912. Meanwhile, as agriculture expanded and livestock increased, the military routinely shot the cats to protect the farmers' livelihoods. It's not clear exactly when the Caspian tiger died out in Kazakhstan, but the last record on the Ili river is believed to date from 1948.

Sadly, its fate is not unique. Over the past 300 years, tigers have disappeared from two thirds of the countries they originally called home. But, thanks to you, we've been working hard to help them recover. And, as we celebrate the year of the tiger, we're one step closer to our goal of doubling wild tiger numbers (known as TX2), thanks to a pioneering project to return the cats to their ancestral home in Kazakhstan.

CLOSE COUSINS

Amur tigers in the Russian Far East are genetically almost identical to the Caspian tiger and should thrive in central Asia. So WWF is working with the government of Kazakhstan to translocate cats from the far east of Russia to a newly designated nature reserve around Ili-Balkhash. Before the tigers can return, though, we must

▲ ABOVE: When the Ili-Balkhash Reserve's ecosystem can sustain a viable population, Amur tigers will be reintroduced here

▼ BELOW: Grigory Mazmanyants checks a camera trap. They're an essential tool for monitoring the reintroduced prey species and protecting the reserve

"THE RESERVE COULD SUPPORT UP TO 120 TIGERS WITHIN 50 YEARS"

restore the ecosystem, plant native forest and reintroduce their prey species.

"The reintroduction will take at least 15 years," explains Grigory Mazmanyants, director of WWF's Central Asia Programme. With our support, the government has already planted the first 2,100 native tree seedlings to restore the tiger's habitat, and planting will continue until 2024. Next, we must bring back the tiger's prey. The first group of bukhara deer was released into the reserve in 2019 and there are now around 100 individuals, which we're planning to double by 2025. Once there is sufficient prey, the Ili-Balkhash Reserve and its neighbouring sanctuaries will provide more than 10,000 sq km of prime tiger habitat – enough to support up to 120 of the big cats within 50 years.

WORKING TOGETHER

We're also helping local communities adjust to the idea of living alongside tigers again and ensuring the project benefits everyone. We're working together to develop ways to prevent conflict, and devising compensation schemes in case livestock is lost to tigers. Grazing management will help protect livestock and conserve the vegetation the bukhara deer need to sustain their populations. And as the ecosystem recovers, we're improving local law enforcement. New ranger centres have been built and teams of rangers are being trained to patrol the protected area. The reaction so far has been positive, says Grigory: "Locals are proud



The reintroduced bukhara deer are provided with supplementary food as they adapt to their new surroundings, and are monitored via satellite collars and camera traps

the bukhara deer are returning. No project can be successful without local people on your side."

We expect that at least 10 Amur tigers will be introduced from Russia's far east between 2025 and 2033, starting with three. A reintroduction programme in Evreiskaya province has already helped to establish a population of 20 tigers there.

With preparations going well, it's important to ensure history doesn't repeat itself. Grigory is confident. "Today, the tiger is a protected species. We're helping to create a magnificent reserve where nature is protected," he says. "Tourism is a potential source of income, so everyone can benefit from the tigers' presence. We have the opportunity to develop a sustainable future that supports people and tigers."

For Grigory, the return of the tigers is a dream come true: "I'm proud that we will make sure the tiger's roar is heard in these lands once more."

The Ili river starts in western China and flows to Kazakhstan, where it ends up in Lake Balkhash, one of the largest lakes in Asia

REINTRODUCING TIGERS TO KAZAKHSTAN

2018

STAGE 1

Restore habitat and prey



2025 - 2033

STAGE 2

Reintroduce wild tigers



2033+

STAGE 3

Monitor for 15 years





WIN!
TICKETS TO A
STUNNING LIVE
EXPERIENCE

OUR PLANET LIVE IN CONCERT

Win tickets to the spectacular live London show celebrating Earth's wonders

Following the success of *Our Planet* on Netflix, our stunning documentary series has been reimagined as a live show with a full orchestra and exclusive narration by Sir David Attenborough – and we have a pair of tickets to give away to one lucky WWF member.

The breathtaking visuals that tell the story of the world's natural wonders and iconic species will be showcased on a giant screen, featuring phenomenal lighting and outstanding sound from a 44-piece live orchestra. This special event is hosted by series composer and Academy Award-winner Steven Price.

Our Planet Live will visit Dublin and London in October and we're working closely with each venue to minimise the environmental impact of the event. Profits from the show will go to support WWF's initiatives that complement *Our Planet*.

You can watch the trailer for this spectacular show at www.ourplanetinconcert.com – then, for your chance to win a pair of tickets for the London event, follow the instructions below and mark your entry 'Our Planet Live'. Alternatively, you can buy tickets from www.ourplanetinconcert.com.

DISCOVER THE WONDER OF PLANTS

Win a copy of *The Green Planet*

The world of plants is surprising and highly complex. Sir David Attenborough revealed some of their secrets in the BBC's recent *The Green Planet* series. Now you can dive deeper into the fascinating stories behind the flowers, shrubs, trees and other plants that surround us in *The Green Planet: The Secret Life of Plants*, the book accompanying the series.

Discover the wealth of adaptations that have allowed plants to thrive in every corner of our planet, from inhospitable deserts and frozen mountainsides to steamy swamps and lush jungles. You'll also learn how they form relationships with other plants and interact with the animals around them. Naturalist Simon Barnes reveals a world where plants are aggressive, competitive and dramatic.

We've got three copies of the book to give away, each worth £25 and courtesy of BBC Books. For your chance to win, follow the instructions in the box on the right and mark your entry 'The Green Planet'.

HOW TO ENTER ACTION GIVEAWAYS

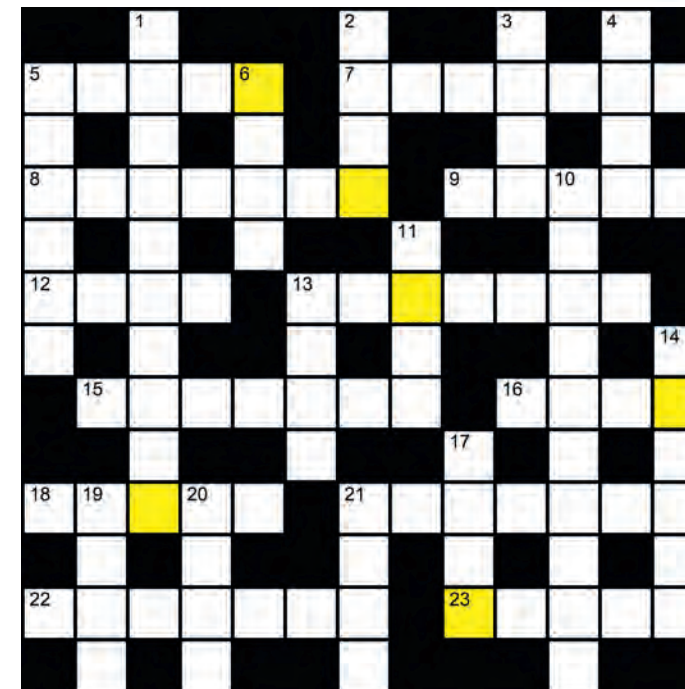
Send an email with your name, address and phone number, along with *Our Planet Live* or *The Green Planet* Competition in the subject line, to competition@wwf.org.uk

Alternatively, post your entry to **Action Magazine, WWF-UK, Living Planet Centre, Rufford House, Brewery Road, Woking, Surrey GU21 4LL.**

Only one competition per entry. Closing date: Friday 5 August 2022. For full terms and conditions, visit: www.wwf.org.uk/compters

CROSSWORD

Solve our puzzle and you could win a copy of *Earthshot* by Colin Butfield and Jonnie Hughes (John Murray Publishing, RRP £20)



WWF ACTION CROSSWORD 51: Summer 2022. Compiled by Aleric Linden

After solving the crossword, take each letter from the shaded squares (going from left to right and top to bottom) to spell out the prize word. To be in with a chance to win, just send a postcard with the prize word to the address on page 30, or email it to competition@wwf.org.uk. The closing date is Friday 5 August 2022.

Clues across

- 5 Male whales (5)
- 7 _lynx, the world's most endangered cat (7)
- 8 Take a sustainable approach to rubbish disposal (7)
- 9 Microbes that can cause disease (5)
- 12 Currencies such as the peseta and lira made way for it (4)
- 13 Millions of tonnes of this synthetic are dumped in our oceans each year (7)
- 15 Sustainable _ , investment concept that's favourable to the environment (7)
- 16 Ozone-destroying chemicals once common in aerosols (4)
- 18 World or sphere (5)
- 21 Mosquito-borne tropical disease (7)
- 22 _gas, a fossil fuel (7)
- 23 Golden snub _ monkey, endangered species of China (5)

Clues down

- 1 Critically endangered African animal, victim of poaching for its horns (5,5)
- 2 Africa's longest river (4)
- 3 See 13 down
- 4 Oil plantations, a threat to the orangutans of Borneo (4)

- 5 A hotspot for biodiversity in south-east Asia, the world's third-largest island (6)
- 6 Acronym for Special Areas of Conservation (4)
- 10 Vast tropical ecosystem covering much of the Amazon basin (10)
- 11 Tidal _ , potentially destructive ocean surge (4)
- 13 & 3 down Needle-bearing evergreen, a popular source of softwood (4,4)
- 14 Sunda _ tiger, Indonesia subspecies (6)
- 17 Narrow Scottish valley (4)
- 19 _ acid, car battery type (4)
- 20 _ corridors, colourful name for the migration superhighways of whales (4)
- 21 How global warming is causing Arctic ice to disappear (4)

Spring 2022 answers

Prize word: CORAL
Across 1. Living 7. Coop 8. Yorkshire 9. Acre 10. Grass 11. Farm 12. Bees 14. Hemp 15. Orca 17. Marsh 19. Seal 21. Pesticide 22. Loch 23. Bengal
Down 1. Layer 2. Viruses 3. Nest 4. Ocean 5. Tourism 6. Siberia 11. Far East 13. Emperor 14. Heating 16. Alpha 18. Shell 20. Fire

NOTES FROM THE FIELD

Greater one-horned rhino numbers have increased in Nepal, but counting them remains tricky



A RHINO RECKONING

I'm at my desk reviewing footage of Nepal's 2021 rhino count. I hit 'play' and hear the sounds of a shrill whistle, and the call: "Number 16! Number 16!" I'm transported to another time and place: March 2005, Chitwan National Park. My first rhino count. It's 8am and I'm manoeuvring through the misty forest on an elephant. Our team is Number 32. Slowly but surely, we make our way through the elephant grass, which can be seven metres high. Suddenly my walkie-talkie beeps.

"Number 32, this is Number 33. A rhino is headed in your direction, please check and note the animal description. Over."

Then I see it, just 10 metres away. An adult male. Two metres tall, prehistoric body, armour-plated skin, hooked horn. I note its features, along with the date and time. My first rhino counted in my maiden rhino count. I counted three that morning. The whole expedition – 33 teams – counted 15 in the day.

LOOK CLOSELY...

I've been part of five rhino counts since, but the process remains much the same: teams systematically combing through rhino habitat blocks over a month, counting the rhinos they see. The count begins at 6am and finishes by midday. The rest of the day is spent setting up camp, cooking for up to 200 people, reviewing data and planning the next day. We track the team's movements using GPS, looking out for any gaps or double-counting.

The rhino count may sound simple, but it's physically and mentally exhausting. In places, the dense vegetation can make it difficult to spot rhinos or identify their features. Over the course of 25 days on my first expedition I counted 10 rhinos. In total, 409 rhinos were recorded nationally that year, 372 of them in Chitwan National Park. It was the lowest population figure since the Nepalese government started counting rhinos in 1994.

But since then, rhinos have made a remarkable recovery. Their numbers have increased at every count since, and are now close to double the number from my first count 16 years ago. That brings me immense joy and satisfaction. Last year, Nepal recorded a total of 752 rhinos – 694 in Chitwan National Park. That's a tribute to the commitment and hard work of the Nepalese government and the local communities living in the buffer zone around the park – and to you, for your support.

Kanchan Thapa

Head of wildlife programmes, WWF-Nepal

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