



DO IT  
FOR YOUR  
PLANET

# Action

THE MAGAZINE FOR WWF MEMBERS

SPRING 2017

WIN!  
A DOLPHIN  
RESEARCH TRIP  
IN SCOTLAND  
See page 30

## A KING IN WAITING

How you're helping to secure a future for lions



### RIVERS FULL OF LIFE

Meet the people you're helping to protect the world's greatest rivers and their rich wildlife

### CELEBRATE EARTH HOUR

10 ways you can enjoy this global celebration and make a difference for our beautiful planet

### PANDA PROMISE

How you're helping to give everyone's favourite black-and-white bear a boost





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OUR **LIVING PLANET REPORT 2016** WARNED THAT THE WORLD MAY BE FACING THE BIGGEST EXTINCTION OF WILDLIFE SINCE THE DINOSAURS. BUT WE CAN TURN THINGS AROUND...

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## A WARM WELCOME



Welcome to your spring 2017 issue of *Action*. I wanted to take this opportunity to personally introduce myself to you – our valued members.

It's a great privilege to join WWF-UK as chief executive – a fantastic organisation with hugely expert and committed staff, and incredibly loyal supporters like you.

WWF has an urgent and truly global mission for a planet where people and nature can thrive in harmony. As our *Living Planet Report 2016* highlighted, the need for action is greater than ever, with huge pressures on habitats and even more species facing extinction. The statistics are shocking: unless we act now, wildlife populations will decline by 67% by 2020. You can read more about this in our *Living Planet Report* story on page 9.

I believe it is possible to turn things around, and your support is crucial to this. We can all play an integral role in enabling long-term change towards sustainable living, and nature – on which we all depend – must be front and centre of our efforts.

Thank you again for all that you do to support our work.

Tanya Steele, WWF-UK chief executive

Iceland's untamed landscapes epitomise a key challenge of the 21st century – to maintain nature in all of its many forms and functions, and to create an equitable home for people on a finite planet

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## MEET THIS ISSUE'S CONTRIBUTORS



**POUL HOVESEN**  
Poul manages more than 5,000 ha of high-yielding crops in Norfolk using a sustainable farming strategy. He says: "We need to respect Mother Nature and the soil."



**CHRISTY WILLIAMS**  
Christy is country director at WWF-Myanmar. He says: "To me, there's no sight more beautiful than a big tusker walking across a forest glade. This is why we do what we do."



**MICHAEL KAELO**  
Michael is the chief community officer for the Mara Lion Project, which we support. He says: "To me, lions are like the Maasai people. They are warriors, with courage and strength."

## GET IN TOUCH

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COVER: LION BY TOM WAY; INSET IMAGES © THOMAS CRISTOFOLETTI/ROOM FOR WWF-UK | NATURE PL

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# TOGETHER, WE DID IT!

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

## 1 ANTARCTICA

### YOU HELPED SECURE PROTECTION FOR THE ROSS SEA

Thanks to you, more than 1.5m sq km of the Ross Sea around Antarctica will be protected, following a landmark deal agreed by the Commission for the Conservation of Antarctic Marine Living Resources. The Ross Sea is home to one third of the world's Adélie penguins and a quarter of all emperor penguins, as well as three distinct types of orca. For years, we've been working to secure the protection of this globally important marine habitat, with your support. It's now been agreed to protect the Ross Sea by establishing a marine protected area which includes no-take marine reserves and research zones that only allow limited research fishing of krill and toothfish. The new measures extend for only 35 years, so the next generation of scientists and conservationists will need to work to extend these in the future.

**DID YOU KNOW?**  
The Ross Sea is now the world's largest marine protected area



"After nine years, I leave WWF-UK at a time when our influence has never been stronger. This is thanks in no small part to the lifeblood of the organisation: you, our generous supporters. Thank you!"

DAVID NUSSBAUM,  
FORMER CHIEF EXECUTIVE



These crime-fighting dogs are the fifth batch of 'super sniffers' trained to detect poachers in India

## DID YOU KNOW?

41 wildlife sniffer dog squads work across India

## 6 INDIA

### YOU HELPED INCREASE WILDLIFE SNIFFER DOG SQUADS

Thanks to you, another 16 dogs and 32 handlers have graduated from TRAFFIC India's sniffer dog training programme. They'll be a vital asset in our efforts to combat wildlife crime and poaching in the country. At a ceremony in Gwalior, the dogs gave a magnificent display of the skills they learned during their rigorous nine-month training regime. TRAFFIC is an alliance between WWF and the International Union for the Conservation of Nature. The new recruits will join 25 sniffer dogs already deployed across India to detect illegal wildlife products and track down poachers. These dog squads have been responsible for at least 150 wildlife seizures, 100 arrests and for recovering snares, weapons and illegal wildlife products such as tiger skins and bones, ivory and pangolin scales. With your help, we'll continue tackling India's illegal wildlife trade by expanding the number of dog squads and other initiatives.

1.5M SQ KM

The new protected area in the Ross Sea covers 1,550,000 sq km – more than six times the size of the UK

## 2 RUSSIAN FAR EAST

### YOU HELPED SHARE KNOWLEDGE ABOUT AMUR LEOPARDS

With your support, we helped Russian and Chinese scientists to share and compare Amur leopard camera trap images for the first time. The whole population of Amur leopards lives in forests that straddle the border between north-east China and the far east of Russia. The big cats travel between the two countries, so it's vital we gain a clearer picture of their numbers and movements. Last August, we supported the first joint monitoring project between scientists from Russia's Land of the Leopard National Park (where our adopted leopard, Narva, lives) and Beijing Normal University. The teams registered 89 different adult Amur leopards in the camera trap photos that were recorded in Russia and China between 2013 and 2015.



## 3 RUSSIA

### YOU HELPED SECURE A MORATORIUM ON OIL DRILLING IN THE RUSSIAN ARCTIC

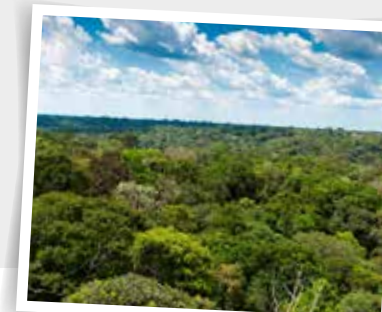
Last September, the Russian government announced a temporary suspension of offshore oil development in the Arctic. With your support, we've been campaigning for governments to protect the Arctic against the worst effects of climate change and exploitation. More than 80,000 supporters signed a WWF petition in 2015, which urged oil giants to suspend drilling in the Russian Arctic for 10 years to reduce the negative effect on the environment. "The moratorium is a first, but important step towards environmental security in the Arctic," said WWF-Russia's Alexey Knizhnikov. "We're sure our petition helped to secure this outcome." We hope the Russian government will take this opportunity to redirect financial support away from risky offshore development in the Arctic.

## 4 BRAZIL

### BRAZIL STANDS AGAINST CLIMATE CHANGE

We're delighted the Brazilian government has ratified the global climate deal signed in Paris in 2015. We hope this will encourage other countries to follow suit. According to the United Nations, Brazil currently emits about 2.5% of the world's carbon dioxide and other polluting gases. But over the past decade, Brazil has reduced its emissions thanks, in part, to efforts to slow deforestation in the Amazon. Sky Rainforest Rescue – which many of you supported – has helped to keep one billion trees standing in the Amazon and to fund our policy team's work with the Brazilian government.

**FIND OUT MORE** about climate change progress on page 8



## 5 MALAYSIA

### 24 LIVE PANGOLINS RESCUED FROM WILDLIFE TRADER

We're congratulating Sabah Wildlife Department for contributing to the successful prosecution of a smuggler found with 24 live pangolins. The man was apprehended last February, during a routine vehicle check in Sabah, Borneo, organised by WWF-Malaysia's anti-poaching team and the department. They found the critically endangered animals crammed in cages, along with a 900g sack of pangolin scales. They were destined to be killed for their meat or scales, which are used in traditional Asian medicine. Instead, they were rescued, rehabilitated and released back into a forest reserve in Sabah and the man was fined over £4,700. Thanks to you, we're working with TRAFFIC, the wildlife trade monitoring network, to reduce demand for illegal wildlife products such as pangolin scales, to increase anti-poaching patrols, and to push for tougher penalties on wildlife crime.





## TROUBLING TIMES

**Bornean orang-utans are in trouble. Since the 1950s, much of their habitat has been destroyed and their numbers have declined dramatically. But, together, we can help safeguard these gentle giants and their forest home.**

Between 1990 and 2004, orang-utans in Borneo lost more than 40,000 sq km of habitat to oil palm plantations – that’s an area twice the size of Wales. Last year, they were reclassified as ‘critically endangered’ by the IUCN, an indication of how perilously close to extinction these great apes are. Orang-utans cannot live without the forest. And the forest – not to mention all the rare wildlife and people that depend on it – cannot thrive without them.

This stunning photo by Tim Laman was the overall winner of the Wildlife Photographer of the Year 2016 competition. It perfectly illustrates the orang-utan’s incredible arboreal abilities and connection with its forest home.

Here, an orang-utan climbs a fig tree, high above the rainforest canopy of the Gunung Palung National Park, in West Kalimantan, one of the few protected orang-utan strongholds in Indonesian Borneo. The young male clings to a strangler fig that entwines the tree as he climbs 30 metres straight up to feast on fresh figs. Tim knew the hungry ape would keep returning until the fruit was finished, so he climbed up the fig tree a few days before this image was taken and positioned his remote-controlled cameras to capture the orang-utan’s face from above and the magnificent rainforest beyond.

This breathtaking image reminds us of why forests are so crucial to some of the world’s most endangered species. So we’re working with Borneo’s government to increase the area of protected forest, establish wildlife corridors and promote sustainable palm oil production.

You can help by adopting an orang-utan at: [www.wwf.org.uk/orangadopt](http://www.wwf.org.uk/orangadopt)

See more incredible images from Wildlife Photographer of the Year 2016 at: [www.nhm.ac.uk](http://www.nhm.ac.uk)



# WWF IN ACTION

Our recent challenges and triumphs for wildlife and the environment

The Paris Climate Change Agreement is our best chance to tackle the issue of climate change and save the planet



## CLIMATE CHANGE

## A NEW ERA FOR CLIMATE ACTION STARTS NOW

**WE'RE CELEBRATING the fact that the historic Paris Agreement on climate change has entered into force, and over 120 nations have ratified the agreement.**

Last October, the international treaty to address climate change, known as the Paris Agreement, met the minimum requirements for it to enter into force after the European Union joined China, India, Brazil, the US and many other countries in formally ratifying the treaty.

This means that as of the end of 2016, 121 nations, which together account for more than 80% of the world's greenhouse gas emissions, are now committed to limiting the rise in global temperatures.

It all happened sooner than anyone could have imagined after the deal was agreed at the Paris Climate Conference (COP21) in December 2015. Following decades of international wrangling, it gives the world hope that global leaders are now serious about dealing with the climate challenge.

With your support, we've worked tirelessly to achieve this outcome. Stephen Cornelius, WWF-UK's chief adviser on climate change, said: "The momentum is great – now well over half the countries in the world have ratified. We urge the others to do so as quickly as possible and for all of them to redouble action to fight

climate change."

An important part of the Paris Agreement is the commitment from countries to ensure that the average global temperature stays well below a 2°C increase on pre-industrial levels, and to try and limit the increase to 1.5°C. This will significantly reduce the risks and impacts of climate change.

But even a 1.5°C increase will result in large and disruptive climate impacts, particularly for poor and vulnerable communities, as well as already fragile ecosystems (see right).

That's why we need to take urgent action now to reduce greenhouse gas emissions. For example, we can rapidly phase out the use of fossil fuels

and replace them with clean and secure renewable energy. We can use less energy by making our home heating and transport more energy-efficient. We can stop deforestation. And we can change the way we produce and consume food.

Limiting the temperature rise won't be easy, so we need governments, businesses, leading experts and supporters like you to help us drive the changes.

### HOW YOU CAN HELP

■ Switch off your lights for WWF's Earth Hour at 8.30pm on 25 March and show your support for action on climate change. Find out more at: [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)

# 1.5°C

Countries signed up to the Paris Agreement have agreed that they will try to limit the global average temperature rise to 1.5°C, rather than 2°C, above the pre-industrial level

Half a degree may not sound much, but it would:

- Keep sea level rise 10cm lower by the end of the century
- Reduce the risks of severe degradation to coral reefs
- Ensure shorter tropical heatwaves
- Limit a reduction in yields of crops like wheat and maize
- Curb the loss of available fresh water in the Mediterranean region



Find out more on our blog: [wwf.org.uk/parisblog](http://wwf.org.uk/parisblog)



WWF ambassador Sir David Attenborough gave a rousing address at our Living Planet Lecture

## LIVING PLANET REPORT

## IT'S IN OUR HANDS: BUILDING A RESILIENT PLANET

**OUR Living Planet Report 2016 warned that the world may be facing the biggest extinction of wildlife since the dinosaurs. But we can turn things around.**

The report – which is produced in partnership with the Zoological Society of London – is the world's leading, science-based assessment of the health of the planet. It tracks thousands of species' populations and examines how the way we live our lives is affecting nature.

For years, scientists have been warning that human actions are pushing life on Earth towards a sixth mass extinction. And they suggest we're entering a new era in Earth's history – the Anthropocene – in which humans rather than natural forces are driving planetary change. Evidence in our report shows this is a real threat. Between 1970 and 2012, populations of vertebrate species (mammals, birds, fish, amphibians and reptiles) declined, on average, by 58%. The report predicts that by 2020, these wildlife populations are on course to decline by an average of 67% from 1970 levels, unless urgent action is taken.

Extinction rates are now thought to be running at more than 100 times their natural level due to activities including deforestation, unsustainable

agriculture and the illegal wildlife trade.

We're depleting our natural resources – fresh water, clean air, fertile soils – at a faster rate than they can replenish themselves, putting our own future at risk. Our ambassador Sir David Attenborough spoke at our inaugural Living Planet Lecture last year. He noted: "In my lifetime I have seen something of the marvellous range of wild species with which we share the planet. But due to the changes which today afflict the world, no one born tomorrow will have the opportunity to see such variety. We must surely do all we can to protect what remains."

By understanding the impact we're having and what's driving it, we can reverse the decline in wildlife populations, and avoid a mass extinction. With your support, and by working with government and business, we can create a resilient planet for people and nature.

You can watch the full lecture at: [wwf.org.uk/lprlecture](http://wwf.org.uk/lprlecture)

### ACT NOW #FOROURPLANET

■ Sign up to tell the government you want them to take ambitious action to protect our environment, at home and overseas: [wwf.org.uk/lpr](http://wwf.org.uk/lpr)

The Living Planet Index measures the abundance of terrestrial, freshwater and marine wildlife populations. It shows that between 1970 and 2012:

# -38%

Terrestrial populations have declined, on average, by 38%

# -81%

Populations of freshwater wildlife have declined by an average of 81%

# -36%

Marine populations have declined, on average, by 36%



© WWF-UK



For the first time on record, wind turbines – such as these near Glasgow – have generated more electricity than was used in the whole of Scotland on a single day

CLIMATE CHANGE

## SCOTLAND MEETS CLIMATE TARGET SIX YEARS EARLY!

**IN JUNE last year, the Scottish government published its climate figures for 2014. They showed that Scotland had met its 2020 target to reduce greenhouse gas emissions by 42%, six years early!**

Thank you to all our WWF supporters who have been campaigning for action to reduce our emissions. Every nation must play a part, and we're delighted that Scotland is leading the way by shifting its electricity generation away from fossil fuels and towards renewables. But there's still a long way to go to avoid the worst impacts of climate change. Unfortunately, transport emissions have hardly changed since the 1990s, and only a tiny fraction of the heat for our homes and businesses comes from renewable sources.

Strong action to reduce emissions not only tackles climate change and helps protect the people, habitats and species feeling its impacts. It can also create jobs in the renewables sector, warmer homes from more affordable and cleaner heat sources, and less polluting travel options, such as cycling and electric vehicles.

The Scottish government is bringing forward new climate legislation this year, and has published a draft climate action plan to show how it will meet future climate targets. We're calling for ambitious, strong and transparent plans to make sure we continue to be climate leaders.

Find out how you can help at: [wwfscotland.org.uk](http://wwfscotland.org.uk)

## DEFEND EUROPE'S LEGACY?

THE UK government is set to release a 25-year Environment Plan that will shape the future of our country over the coming decades, and could transform the UK's environment.

Think about your beloved wild places – the beaches you visit in summer, the colours of autumn woodlands, the rivers that snake across the landscape. Think about the quality of the air you breathe and the need to tackle climate change. Do you know most of the rules and regulations that protect our natural environment come from the European Union?

Now is the time to let the UK government know what's important to you, and call on them to go further and lead the world in setting standards that protect precious wildlife and wild places, both at home and abroad. Find out more and get involved at: [wwf.org.uk/ourfuture](http://wwf.org.uk/ourfuture)



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ACTION INTERVIEW

### ANDREW TRIGGS HODGE

Olympic rowing champion and WWF ambassador Andrew Triggs Hodge has a lifelong connection to fresh water. We asked him to share some of his favourite river experiences...

#### WHERE DID YOUR LOVE OF WATER SPRING FROM?

My love of and respect for water was born on the river Wharf in Yorkshire. As a child, it was a constant source of fuel for my imagination. I swam and played in it, canoed on it, caught fish and crayfish, and watched it flood. Every time I return home, I love to get back on its banks.

#### WHAT'S DAWN ROWING LIKE?

My fondest memories of rowing aren't from races or the Olympics: they're of the tranquillity of rowing along the tree-lined Thames at Molesey in Surrey, among the cork fields at Lake Avis in Portugal and above Victoria Falls on the Zambezi. Dearest of all is dawn breaking on Rudyard lake, in Staffordshire, where I started rowing. It was a crisp, frosty morning, there wasn't a breath of wind and, as we rowed through the mist, the water was like glass.

#### WHY DO YOU SUPPORT WWF?

We're all connected through a 'water web'. Respect for water is essential to looking after all aspects of this precious web. And raising awareness is the basis for increasing respect.

#### HOW CAN WE ALL HELP?

We need every person to take action! Try to reduce your water usage at home and consider the water that went into producing the products you buy. For example, beef is a staple of our diet, but it takes up to 8,000 gallons of water to produce just 1lb. So try to consider eating beef as a treat, not a staple. Our buying choices have the power to make companies work to save water.



African grey parrots are trapped for the illegal wildlife trade, but greater protection will hopefully keep them flying free

CONSERVATION

## CITES UNITES TO PROTECT WILDLIFE

**GOVERNMENTS HAVE agreed to provide greater protection to a host of threatened species and boost efforts to tackle wildlife trafficking.**

Over 180 countries are bound by the new agreements on wildlife trade, following the 17th conference of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) in South Africa last autumn.

With much of the world's wildlife threatened by poaching and unsustainable trade, governments united to urgently protect threatened species, and bolster the global response to illegal and

unsustainable wildlife trade.

Governments voted to maintain the international ban on trade in ivory and rhino horn, while adopting global bans on international trade in pangolins and African grey parrots. The conference also imposed strict controls on the international trade in silky and thresher sharks, devil rays, and on all species of rosewood tree.

With your support, WWF contributed to strong agreements by countries to put in place much-needed initiatives to control illegal trade in wildlife. Critically, governments agreed to monitor progress and respond with sanctions where there is inaction.

## CITES OUTCOMES

Many threatened species received greater protection, including the African grey parrot, thresher and silky sharks, and devil rays

Domestic ivory markets will be closed where they contribute to poaching or illegal trade

The international trade in all eight pangolin species in Africa and Asia was banned

NEWS IN BRIEF



### ROARING SUCCESS

In November we launched our Tiger Protectors campaign. The TV advert tells the story of an ordinary family who wake up to find a tiger in their home, injured by a poacher's snare. The beautiful big cat you see in the advert is entirely computer-generated. Ad agency JWT and special effects company MPC were really generous to help us produce a memorable advert which tells the compelling story of why tigers need us.

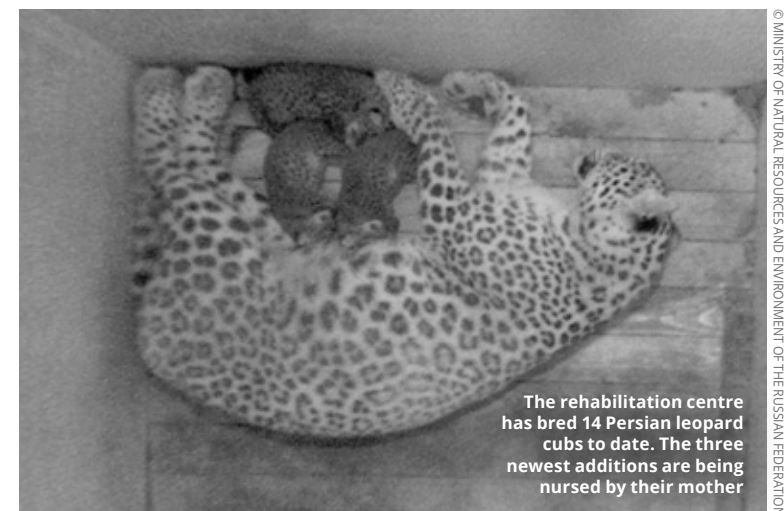
### NEW PALM OIL SCORECARD

Palm oil is in nearly half of all packaged products we buy in the supermarket, but growing it irresponsibly can devastate forests and wildlife. We scored 137 global companies on their use of sustainable palm oil in 2015, and found that while many British companies are leading the way, others are not doing enough. For more, visit [palmoilscorecard.panda.org](http://palmoilscorecard.panda.org)

PICTURE STORY

## THREE CHEERS FOR THREE CUBS

A BEAUTIFUL Persian leopard has given birth to triplets in a Russian breeding centre. The cubs are in good health and may one day be released into the wild as part of a reintroduction programme. Persian leopards are endangered globally and the population in this area dramatically declined during the 20th century. With support from WWF-Russia, the reintroduction centre was established in Sochi National Park to breed and train cubs to live independently so that, one day, they will repopulate the area. Last July, the first three graduates of the programme were released into Russia's Caucasus State Nature Biosphere Reserve. The leopards had reached sexual maturity, proven their hunting prowess and demonstrated a healthy fear of humans. They each wore a GPS collar so that we can track their progress.



The rehabilitation centre has bred 14 Persian leopard cubs to date. The three newest additions are being nursed by their mother

© MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT OF THE RUSSIAN FEDERATION



We're working with local communities to reduce the impact of farming on the Mara river. The water is now cleaner, supporting people and wildlife alike



# RIVERS OF LIFE

We all need fresh water to survive – wildlife and people alike. So at WWF, we're working hard to help protect freshwater habitats around the world. From Kenya to the Amazon, India to East Anglia, let's meet the people working with us to keep rivers healthy





We've helped Nancy to farm in a way that increases the productivity of her land and protects the Mara river

**WATER-SAVING TIP**

To save water and energy, fill your kettle with only the amount of water you need. Using a lid on saucepans will reduce the amount of water lost

**NANCY RONO  
MARA, KENYA**

From its source in the Kenyan highlands to its mouth in Lake Victoria, the Mara river sustains some of the most incredible wildlife on the planet. This area hosts one of nature's greatest spectacles, as tens of thousands of wildebeest, zebra and gazelle travel from the Serengeti in Tanzania to the Maasai Mara in Kenya, braving crocodiles lurking in the river and lions and leopards lying in wait.

It isn't only this stunning wildlife that depends on the Mara's life-giving waters. A growing human population relies on the river for drinking and growing crops too. But as more land is cleared for agriculture and root systems are removed, the fertile topsoil is washed away when it rains, clogging the river with sediment. Increasing demand for water to supply crops, livestock and industry has also seen too much water abstracted from the Mara. This has reduced water flows, degraded the ecosystem and affected local people.

Nancy Rono, a single mother with three young boys, farms an acre of steep land above one of the Mara river's tributaries. "My farm

used to be in bad shape, because of the water shortage," she says. "Before, the river was so dirty – all things were dumped there. This caused diseases and people got very sick."

With your support and through the HSBC Water Programme, we've been working with people like Nancy to make sure the Mara river can continue to provide enough clean water

for people and nature alike. To make her farming practices more water-friendly and prevent erosion, Nancy has planted avocado and banana trees on high ground, where they can absorb water, and napier grass as fodder for her cow at the borders of her land. Its root systems stop soil and vital nutrients from being washed into the river when the rains come.

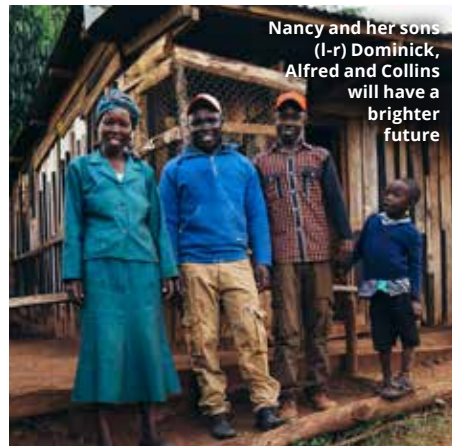
We've helped more than 500 farmers in Nancy's area to improve the way they manage their land – and it's made a big difference.

The river here is cleaner and free-flowing, and Nancy's farm is flourishing. She's even built a shop to sell her fresh produce. "Now my farm is in good shape, I can see the prospects are good," she smiles. "The income helps me to pay for the children's school fees. They're going to have a good life."

On average, each person in the UK uses around **150 litres** of water each day



Nancy talks to WWF-Kenya's Kennedy Onyango about increasing the productivity of her farm



Nancy and her sons (l-r) Dominick, Alfred and Collins will have a brighter future

**CHARLES GUIMARÃES  
ACRE, BRAZIL**

"My grandfather was a fisher of pirarucu in the 1960s," says Charles Guimarães, from Acre in the Brazilian Amazon. "He used to say there were lots of fish back then, but by the '90s, most of them had disappeared."

The pirarucu, or arapaima, is a prize for fishermen like Charles. Native to the Amazon, it's one of the largest freshwater fish in the world, growing up to three metres long. It's a valuable source of food and income for local families.

Unfortunately, years of overfishing have led to a drastic fall in numbers. Today, arapaima can only be fished if there's a strong management plan in place. But in remote parts of the Amazon, that's not easy to enforce.

Thanks to funds raised through Sky Rainforest Rescue, which many of you supported, we've given local people like Charles smartphones to monitor illegal fishing and help them rebuild fish populations.

"Responsible fishermen can take pictures of any unauthorised people fishing," explains

Charles. "Nowadays we can sync our smartphones with a computer and see all the information about who's fishing, which lake has most fish over the year, and identify the largest species in a particular lake."

As well as helping them to fish more efficiently and sustainably, this information enables Charles and his fellow fishermen to persuade others to conserve the area. Arapaima thrive in healthy rivers and lakes surrounded by forest. "We shared the information with local communities to persuade them not to deforest the edges of the lakes," says Charles. "Some people didn't believe there are still pirarucu here, but we proved them wrong. The number of pirarucu, and other smaller fish, has increased in these lakes. They can now be used to repopulate other lakes that aren't used for fishing."

We're supporting Acre's arapaima fishers to achieve Marine Stewardship Council certification. This will enable them to sell their produce into new markets and give them more incentive to conserve these Amazon giants. ▶

By 2050, demand for water is projected to grow by more than **55%**



Arapaima are an important food fish species for many communities. Our management initiative will ensure there's food for everyone



**WATER-SAVING TIP**

By running your bath just an inch shorter, you could save, on average, five litres of water

We've been helping local fishermen in Acre, such as Charles, to reduce poaching and manage harvesting of arapaima, so that fish stocks can increase





Tara and a growing number of conservation champions, the Ramganga Mitras, are helping to preserve the Ganges, one of the most sacred yet dirtiest rivers in the world

**“BEFORE WE GET TO HAVE A HEALTHY RIVER, WE HAVE TO CHANGE OURSELVES. IF WE’RE PART OF THE PROBLEM, WE’RE PART OF THE SOLUTION TOO. THE CHANGE BEGINS WITH US”**

**WATER-SAVING TIP**

Fix any dripping taps around your house or garden. A dripping tap can waste 15 litres of water a day, or 5,500 litres of water a year



**TARA DEVI  
RAMGANGA, INDIA**

To Hindus, the River Ganges or ‘Ganga’ is sacred, its waters cleansing and purifying. Tara Devi remembers the morning walks of her childhood along the banks of the Ramganga, one of the Ganges’ main tributaries – the clear, clean water, and the sense of health and peace it brought.

But things have changed. Industrial pollution, agricultural chemicals, sewage and waste have left the Ramganga’s waters anything but pure. As a community health worker, Tara sees the problems that poor water quality and sanitation bring every day, and as a farmer, she wants to do something about it.

“I’ve seen cucumbers grow to abnormal sizes with just a shot of fertiliser, and I’ve seen people suffer from lethal diseases because of polluted water,” she says. When WWF visited her community to demonstrate how industrial chemical fertilisers and pesticides could be replaced with natural alternatives made from

local ingredients, Tara decided to give it a try. Many were sceptical, including her husband. But that changed when they saw the results. “The first harvest, the roots were stronger and there was no disease. The yield was much

better – instead of 300 kilos, we had 400.” Now Tara has persuaded more than 65 other small farmers near her village to follow in her footsteps.

Tara is part of a growing movement we created with the help of the HSBC Water Programme – the Ramganga Mitras (‘friends of the Ramganga’). Around 4,000 people – from farmers and businesses to students – are working in their communities to bring the river back to life. “People have to understand

that our actions are polluting the river,” says Tara. “Before we get to have a healthy river, we have to change ourselves. If we’re part of the problem, we’re part of the solution too. The change begins with us.”

Of all Earth’s water, **2.5%** is fresh water, and of that, only 1% is available to use; the rest is locked in glaciers, ice caps and groundwater

**HOW WE’VE HELPED**

These successes would not have been possible without the support of the HSBC Water Programme, since 2012:

- ◆ 1,824 km of river and 537,239 hectares of wetland have been protected in five river basins
- ◆ In Kenya, 45,000 people have been empowered to improve the management of water resources in the Mara river basin
- ◆ More than 149,000 people have reduced their fishing or farming impacts with our help

© THOMAS CRISTOFOLETTI / WWF-INDIA

**POUL HOVESEN  
NORFOLK, ENGLAND**

East Anglia’s Broads, England’s largest wetland, cover just 0.6% of the UK, but are home to a quarter of our rarest and most endangered species – from bitterns and otters to swallowtail butterflies. A total of 66 species, such as the Norfolk hawk dragonfly, are unique to the area.

Feeding this watery landscape is a network of rivers, including iconic chalk streams such as the River Wensum. England is home to more than three-quarters of the world’s chalk streams, but only around 25% of them are in good health. The situation in this part of the country is especially dire, with 90% of rivers failing to meet European environmental quality standards.

Pollution from agriculture is a major factor. That’s why we’ve been working with farmers such as Poul Hovesen to develop and demonstrate good examples of sustainable and water-sensitive farming. It’s part of our EU-funded WaterLIFE project, and our partnership work with Coca-Cola. This is driving collaboration with farmers, businesses, communities and government to improve the health of rivers in England and Wales.

For the past 10 years, Poul has been trialling various methods to reduce the impact of agricultural pollution on local waterways, while maintaining the farm’s output and profitability. These range from relocating tracks and gateways to reduce run-off into rivers, to rainwater harvesting and planting wild flowers to attract wild birds and insect pollinators.

By rotating the crops he grows, and growing cover crops over winter to keep the nutrients in the soil, he’s managed to improve yields, while significantly reducing the need for man-made chemical fertilisers and pesticides – and their subsequent impact on the River Wensum.

Poul stresses that he’s no small-scale organic farmer. “We’re a 2,000-hectare, high-input, high-output business,” he says. “To begin with, a lot of people were concerned that we’d end up reducing agricultural yields, but it’s been quite the opposite. Now we have a lot of interest and visits from other farmers.

“I believe we can farm in a way that protects our watercourses, while ensuring food security for people,” he says. “We don’t need to close down agriculture to protect our environment. We can all work together, learn and get it right.”

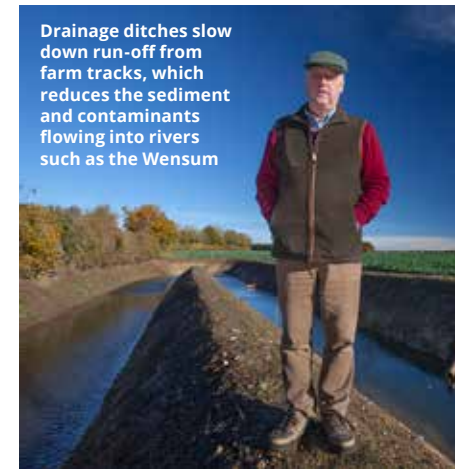
With our support, Poul has worked to improve the water quality around his farm by adopting sustainable farming practices



**WATER-SAVING TIP**

Remember to turn off the tap while brushing your teeth – a running tap wastes more than six litres per minute

Drainage ditches slow down run-off from farm tracks, which reduces the sediment and contaminants flowing into rivers such as the Wensum



© NEIL ALDRIDGE / WWF-UK

**HOW YOU CAN HELP**

We believe it’s possible to meet the water needs of both people and nature – if water is managed wisely. With your support, we’re helping to protect, restore and conserve freshwater resources in the UK and around the world.

But you’re not only helping people like Nancy, Charles, Tara and Poul. You’re also supporting our work with many governments, businesses and communities to secure new legislation that will better protect the world’s fresh water. And you’re enabling us to improve river basin and dam planning in key areas.

We all need fresh water for our survival. It’s vital for life to exist on Earth. If you’d like to do more to help, you can donate by visiting [www.org.uk/water](http://www.org.uk/water)



# PRIDE OF THE MARA

Lions and people in Kenya's Maasai Mara have always been intrinsically linked. With your help, we're working to ensure they maintain a peaceful coexistence

As top predators, lions play a crucial role in keeping the Mara ecosystem healthy. By protecting the lions' landscape, we're also helping the Maasai, who rely on local natural resources

© GETTY IMAGES / ANUP SHAH





Things get a lot tougher for male lion cubs when they reach adolescence



**“W**hen a lion roars,” explains Michael Kaelo, “it is saying: ‘this is my land, this is my land, this is my land!’” He pauses to watch the sun slip closer to the horizon. “To the Maasai,” he goes on, “a night without a lion’s roar is an incomplete night; it means something is missing.”

Michael should know. He was raised in the Maasai Mara, and used to encounter lions while walking to school. What’s more, he’s now chief community officer for the Mara Lion Project, which is supported by WWF. The son of a livestock herder, he’s uniquely placed to help the community meet the challenge of living with lions.

A recent spate of retaliatory attacks on the big cats means that Michael’s personal insight has become invaluable. “People and lions have always lived together,” he insists. “Now all we have to do is manage how this living together is done.” With the human population in the area doubling every nine years, this has never been more urgent.

The conflict between lions and the Maasai made headlines in December 2015 when the famous Marsh pride – stars of *Big Cat Diary* – was poisoned in retaliation for livestock killings. Three lions died. While this incident provoked outrage, Michael knows that the issue is a complex one. “I have livestock,” he explains. “I know how it feels to lose them.”

It’s hardly surprising that livestock herders sometimes feel aggrieved. Predators can do serious damage. Michael recounts one incident in which hyenas broke into a sheep



**“TO THE MAASAI,” SAYS MICHAEL KAELO, “A NIGHT WITHOUT A LION’S ROAR IS AN INCOMPLETE NIGHT; IT MEANS SOMETHING IS MISSING”**

All male lions must disperse from their birth pride at around the age of two, in order to establish a territory of their own. Mara lions disperse early, around 18 months, and many simply disappear

pen and killed more than 200 of the 240 animals inside. Such incidents can destroy livelihoods. “Lions are a threat,” confirms WWF-Kenya’s technical adviser, Drew McVey.

But the Maasai have long lived with this danger and, in the past, accepted that it came with the territory. “We were always taught that lions are an important part of our culture and that, without them, the Maasai people wouldn’t be happy,” explains Michael. He reflects on growing up with the big cats as neighbours. “Every evening as the sun went down we expected lions to roar,” he recalls. “It made us feel part of a bigger system than just humans. We’d hear lions and we’d feel that everything was OK.”

**A CULTURAL ICON**

Lions were once enshrined in Maasai culture through an initiation rite, in which a young man who killed a lion graduated as a moran, or warrior, thus acquiring standing in the community. Though this hunting is no longer legal, the association between lions and

courage is indelible. “This in itself inspired respect for lions,” Michael explains.

But today, with the relentless march of agriculture and development forcing people and lions into ever-closer proximity, the competition has grown more intense and the conflicts more bitter. Michael fears that, in the process, this ‘sense of respect’ risks being lost. “We Maasai used to hunt lions with spears,” he laments, bemoaning today’s more indiscriminate poisonings. “But killing a lion in a subtle way is easier than risking your life.”

Michael stands in the middle. He knows lions and he knows the people. His challenge, in this changing world, is to find ways in which the two can coexist without coming to blows. “Modernisation is coming,” he acknowledges, “and we must learn how to combine the old and the new.”

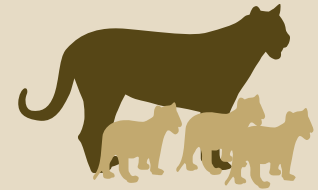


As chief community officer for the Mara Lion Project, Michael travels around, visiting local Maasai villagers



Michael and a colleague plan the day’s operation at HQ

**AGEING LIONS**



On average, a female gives birth to three cubs. At birth, the cubs are blind



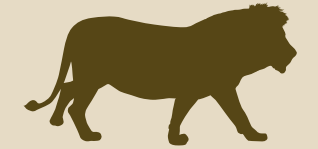
The cubs can crawl after two days and walk after three weeks



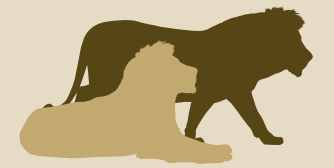
The females integrate their cubs into the pride at six to eight weeks’ old



The cubs are weaned at six to seven months



Males mature by three years when they’re ousted from their birth pride by the resident male



Sub-adult males wander nomadically for up to two years, often forming coalitions with their brothers (or more rarely with unrelated males)



At four to five years, males displace a male from another pride and breed with the females

Working with the Mara Lion Project, and with your support, Michael has identified simple, practical measures that make a big difference. Many Maasai families have circular bomas (livestock enclosures), traditionally built from thorn branches, into which animals are herded at night. When these bomas are not properly maintained, lions break in and steal livestock – or, conversely, panicked livestock break out and run into trouble. Moreover, inexperienced boys are today often left tending the herd.

**IMPROVING HUSBANDRY**

“Attacks are happening because of improper management of livestock,” Michael explains. On his community visits, he demonstrates how to build sturdier bomas by reinforcing them, and encourages back-up deterrents such as lighting fires and using scarecrows.

Meanwhile he’s working to increase awareness. Most people already know that killing a lion brings hefty fines and imprisonment – or both. But Michael

also wants local communities to appreciate the positives of having lions around: not only that the big cats are rooted deep in Maasai cultural heritage – and that once gone, that heritage dies with them – but also that they bring tangible benefits. He explains the ecology: how lions, as apex predators, are vital to the ecosystem and that by removing them, and thus allowing herbivores to proliferate, grazing is depleted for wild animals and cattle herders alike.

He describes, too, how people from around the world visit the Mara to admire its lions and how this tourism means revenue, whether from renting land or finding employment at the lodges. Jobs confer status on young Maasai who, in a former age, might have achieved the same prestige through killing a lion. “Today, there are other ways in which a boy can become a man,” Michael explains. He plays his own part, teaching a curriculum of wildlife activities in schools, aimed at inspiring the next generation of local conservationists.

Today, five Mara schools boast wildlife clubs, set up with the help of the Mara Lion



In order to claim a territory, a nomadic young male lion must fight the incumbent dominant male for it. Battles can be bloody – and only the strongest will win



Project, through which children can enjoy everything from tree planting to trips into the Maasai Mara National Reserve. These are helping dispel many of the old myths and fears about lions, and helping teach the positive and fun side of living with wildlife. It's on these visits that Michael's work is perhaps most rewarding. "Kids are so excited about the environment," he enthuses. "You see the expression on their faces when they spot their first lion! You feel their joy. You know the satisfaction that you've been able to touch a life." He understands that convincing the next generation is the key to success. "They are the leaders of tomorrow," he explains. "We challenge them to come up with ways to help us live with lions."

Michael's students have recently been able to witness the latest phase of this work. Last March, the team fitted GPS collars on seven lions to track their movements. This project has already provided key insights. Researchers know that 'problem' lions – those that resort to killing livestock – tend to be sub-adult males, typically between

two and four years of age. They have not yet established themselves in a pride so they wander widely, often into community areas. Gathering data in this way is vital to our conservation efforts. Research has already revealed that the Mara's resident male lions tend to enjoy an unusually long tenure – often presiding over their pride for around four to five years, compared with just two or three in the neighbouring Serengeti. This may explain why so many sub-adults are forced out to the reserve margins where they come into conflict with people. By targeting these males for collaring, the team is learning where and when they travel, and getting insight into why.

**INCREASING UNDERSTANDING**

Such information will not in itself resolve the conflict, admits Drew, but it is swelling a database of empirical science that will inform all future conservation initiatives. "Rigorous science is a resource on its own," he stresses. "It enables others to make sound decisions."

The collaring has practical benefits too. By monitoring the lions' movements, the

team can warn local communities when one is approaching their area. Results have also identified key road-crossing points – another threat to the cats – and, according to Drew, have shown "just how good lions are at hiding." This work would not be possible without your continued membership. Now tourist lodges are on board, sharing data with one another and their guests, the network of knowledge is extending even further.

Meanwhile, as the database continues to expand, Michael is out visiting the Maasai's homesteads and talking to his people. It's not always easy. "People can become bitter as a result of their losses," he admits. "When there have been cases of conflict, they expect something from you – some form of compensation. They feel that you're going to give them something back as a way of saying 'sorry' for their loss. We don't do that."

But if anyone can placate an angry livestock herder and help them see the bigger picture, it's one of their own; someone who knows their hardships, greets them respectfully – following Maasai protocol – and talks to them

## HOW TO COLLAR A LION



**STEP 1**

A team comprising a scientist, ranger and vet identifies a suitable sub-adult male lion. They wait for a moment when the lion is accessible and relaxed, then fire a tranquiliser dart. The lion usually retreats to cover before the sedative takes effect.



**STEP 2**

If the darting is successful, the lion will remain tranquilised for around 20 minutes. The team monitors its condition and collects biometric data and blood samples. A GPS collar is fixed around its neck, ensuring it fits properly and causes no discomfort.



**STEP 3**

The vet administers an antidote to awaken the lion. The team watches until the lion is fully recovered and back on its feet. The collars are pre-programmed to automatically drop off after one year.



Michael advises the local Maasai herders about how to keep their livestock safe from lions



In local schools, Michael teaches children about lions and their importance in the Mara ecosystem

with understanding. "I love my job because I know I'm making a difference," says Michael. And he's confident that his work is paying off. "We're increasing people's awareness and changing their lives."

Drew agrees, confirming that poisonings are now fewer and, today, when a lion becomes trapped inside a fence, the community is more likely to report it than to kill it. "People are beginning to feel the benefits," he confirms. "Michael and his team have done a great job in engaging the community."

There's still a long way to go. As a scientist, Drew studies population dynamics and succession rates. He knows that lions, as an indicator species, help measure the human footprint on the environment. And he appreciates that this project won't save lions on its own; it's only by working with partners – government, tourism, communities – that it will achieve its long-term goal of securing a future for the lions of the Mara.

For Michael, however, it goes beyond science. "To the Maasai, life is a composite of many elements," he reflects. "One is

our livestock. Another is the nature that surrounds us: wildlife, trees and mountains. I hope that in future we will see Maasai people living in harmony with lions once again. I hope we can create an environment where lions can be free and people can benefit."

These challenges may seem overwhelming. But with Michael and you, our incredible members, on his side, Drew is undaunted. "When you work with great people," he grins, "you can change lives."

## ADOPT A LION

As well as your membership, animal adoptions give a huge boost to our work. They help to fund the Mara Lion Project and its vital work with local communities to monitor lion movements and reduce conflict between people and lions. So why not become part of our pride today? Just visit: [www.org.uk/lionadopt](http://www.org.uk/lionadopt)



Thanks to decades of successful conservation work, wild panda numbers are starting to recover. But the population remains scattered and vulnerable, so there's still lots to be done

# PANDA

## A SYMBOL OF SUCCESS

Things are looking up for giant pandas, thanks to your support. But there's still much to do, as the black-and-white bear is not out of the woods yet

We've always had a special bond with giant pandas. So you can imagine our delight at the announcement last year that they're no longer officially endangered.

Last September, the giant panda was classed as 'vulnerable', rather than its previous status of 'endangered', on the International Union For Conservation's Red List of Threatened Species. The new listing came after the results of a census released last year, which found 1,864 giant pandas in the wild in China – a 17% increase in a decade.

While an increase in the overall population is fantastic news, our work with pandas is far from complete. Despite its new categorisation, the species remains at risk. Some panda sub-populations are decreasing, particularly those found in the smallest and most degraded areas of habitat, while others are very small and cut off from the rest of the population.

It's likely that climate change will reduce the size of the panda's bamboo forest habitat over the coming decades. Predictions suggest that the area of suitable habitat will fall by at least a third by the end of the century.

The panda's comeback is the result of decades of dedicated conservation – and thanks to your support, we've been at the heart of it. In 1980, WWF became the first international organisation invited to work in

China. Back then, pandas were in a bad way. Once found throughout China and northern parts of Vietnam and Myanmar, their range had dwindled to just six isolated mountain areas in the Chinese provinces of Gansu, Shaanxi and Sichuan due to expanding human populations and development. The first nationwide census in the mid-1970s had counted 2,459 giant pandas in the wild, but habitat loss coupled with poaching for their pelts saw numbers fall by 50% to 1,216 over the following decade.

### BACK FROM THE BRINK

We worked closely with the Chinese government to stop the panda's decline. Logging, poaching and trade in panda pelts were banned, and a network of panda reserves was set up to protect key areas of habitat. The next panda census, in 2000–04, estimated a population of 1,596, suggesting that our work was beginning to bear fruit.

Over the following decade, the Chinese government really ramped up conservation efforts to establish nature reserves where giant pandas can live, breed and move around safely. We helped set up 27 new reserves covering almost 12,000 sq km of panda habitat – an area the size of Yorkshire. We replanted bamboo in degraded areas, and ▶





By introducing a new design of beehives, we've doubled the income of local villagers in the Qinling mountains

helped create wildlife corridors linking protected areas. In total, the area used by pandas has increased by more than 10% since the third national survey and around two-thirds of the wild giant population now lives in secure protected areas.

At the same time, we worked hard to reduce the pressure on panda habitat. We've provided more than 6,000 households in giant panda areas with fuel-efficient wood stoves and biogas systems, which means they don't need to take so much wood from the forest. And we've helped local communities increase their incomes by implementing alternative livelihood projects, such as beekeeping.

### FACING FUTURE THREATS

While the overall panda population is growing, their future remains precarious. The population is divided into at least 33 groups or 'sub-populations', many of which are very small. No fewer than 24 groups are thought to be at high risk of becoming extinct locally. And the pandas' habitat could become more fragmented as new roads and other infrastructure are built in the region. That will restrict the bears' ability to move around to interbreed and feed, at a time when climate change is likely to reduce the area of suitable bamboo habitat.

That makes our efforts to preserve, restore and connect areas of panda habitat more crucial than ever. In recent years, we've helped remove more than 15 km of artificial

fencing and installed wildlife crossings under roads. We'll be using our experience to make sure that the needs of pandas and other wildlife are taken into account when planning and building new developments in the region.

A good example of how that can work in practice is the National Highway 108 through the Qinling mountains. Built in the 1970s, the busy road created an impassable barrier between two large panda populations. But in 2007, the road was rerouted through a tunnel, and by replanting and restoring bamboo habitat we helped to create a wildlife corridor linking the two populations. The work finally paid off when, in 2015, pictures from camera traps showed that pandas from both populations were interacting with each other.

With your support, we'll continue to protect pandas and their bamboo forest habitat – which also shelters countless other species, as well as preventing erosion and flooding and regulating water supplies for tens of millions of people downstream. Together, we'll make sure our famous panda logo remains a symbol of conservation success.

The panda's habitat is home to millions of people



## HOW YOU'VE HELPED PANDAS AND PEOPLE

**13** With our support, **13 nature reserves** have been upgraded to national status, which means they're entitled to more resources for conservation

**550** We've **donated** more than **550 infrared camera traps** to support monitoring efforts


**500** We've **planted** more than **500 hectares of bamboo** to restore degraded panda habitats and create new wildlife corridors

**6,000** We've helped more than **6,000 households** in giant panda areas to adopt **fuel-efficient wood stoves and biogas systems**

## HELP PROTECT PANDAS

You're already helping us to give wild giant pandas the boost they need, thanks to your membership.

But if you'd like to do more, please consider adopting a panda. Your contribution will help us to establish wildlife corridors and protect their bamboo forest home. Just visit [www.org.uk/pandaadopt](http://www.org.uk/pandaadopt)

 **Watch** remarkable camera trap footage of pandas at [www.org.uk/pandafootage](http://www.org.uk/pandafootage)



# 10 THINGS TO DO FOR EARTH HOUR

Sign up to show your support for action on climate change this Earth Hour, at 8.30pm on Saturday 25 March, and try these activities

## 1 TEACH YOUR FAMILY STARGAZING

Thanks to the dark skies overhead, woods and forests are often wonderful places to see the stars. The Forestry Commission offers a beginner's guide to stargazing in the forest, including fun activities, top tips and more at: [forestry.gov.uk/stargazing](http://forestry.gov.uk/stargazing)

## 2 ENJOY DINNER BY CANDLELIGHT

What could be more romantic than a candlelit supper? The Sustainable Restaurant Association is organising special Earth Hour evenings in locations around the country. Find your nearest participating restaurant and book at: [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)

## 3 TAKE A DRAMATIC TRIP TO THE THEATRE

Ambassador Theatres around the country are celebrating Earth Hour and inspiring their customers to make a change for our planet.

Find a participating theatre near you and add a little drama to your Earth Hour:

[wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)



## 4 SIGN UP 10 OF YOUR FRIENDS

To celebrate Earth Hour's 10th anniversary, why not ask 10 of your friends and family to sign up to Earth Hour 2017? You could even encourage your club or community to join in and organise something special to show the planet some love this Earth Hour. To find out more, just visit [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)

## 5 GO FOR A MOONLIGHT CITY PROWL

Last year, UK attractions from Big Ben to



Brighton Pier spectacularly switched off their lights for Earth Hour. To find out which landmarks are switching off in your area, visit our Earth Hour map, choose a good viewpoint and watch the great switch-off: [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)

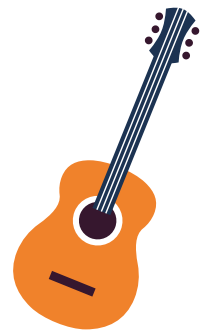
## 6 EXPLORE A FOREST AFTER DARK

The Forestry Commission England is running after-school events for families throughout March. Find an event near you on our Earth Hour map: [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)



## 7 MAKE SOME NOISE!

Calling all talented musicians! Could you hold a fundraising concert or gig to support and celebrate our brilliant planet – and share your great music at the same time? For tips and fundraising resources, visit: [wwf.org.uk/resourcesesh](http://wwf.org.uk/resourcesesh)



## 8 SEE HISTORIC SITES SWITCH OFF

The National Trust will be showing its support for Earth Hour by switching the lights off at key properties – so why not pop along? You can find out which ones are taking part on our Earth Hour map: [wwf.org.uk/myearthhour](http://wwf.org.uk/myearthhour)



## 9 MAKE YOUR OWN LANTERNS

Have fun with the family by making your own Earth Hour lanterns out of recycled materials, such as jars, and decorating them with tissue paper. Then share the pictures of your creations using [#EarthHourUK](https://twitter.com/EarthHourUK)



## 10 SHARE YOUR EARTH HOUR STORIES

We'd love to hear how you celebrated Earth Hour, and we'll feature the best stories and photos in a future issue. As a thank you, you'll be entered in a prize draw to win one of five sets of four tickets for the Coca-Cola London Eye. Send your stories marked 'Earth Hour Comp', with your name, address and phone number, to the address on page 3 or email them to [competition@wwf.org.uk](mailto:competition@wwf.org.uk) by 7 April 2017.

For T&Cs, visit [wwf.org.uk/compterm](http://wwf.org.uk/compterm)s





# OVER TO YOU!

We know you've done some really great stuff for us since the last issue of *Action*, so why not tell us about it? These are *your* pages – let's celebrate you!



## A GREEN CHRISTMAS

In the last issue of *Action*, you asked for our green Christmas tips. I use newspaper to wrap up my presents more ethically. I carefully choose a picture page that reflects the recipient's taste or hobbies – fishing for a fisherman, football for a fan, etc. Then I arrange the paper so that the image is on the top of the gift. The magazine supplements are excellent for smaller gifts. I tie up the parcel with coloured string, or other recycled trimmings I collect every year when the wrapping is torn off. A handmade label completes the job. This has proved to be a big family favourite. I do hope others will like it.  
**Margaret Bossom, Cambridgeshire**

## MY WILD HE'ART'

I am a 20-year-old watercolour artist with a passion for wildlife. I love to paint the creatures of our beautiful planet – they inspire me so much. I believe there's a lot we can learn from them. I started painting three years ago, when I found a paintbrush and it changed my life! I've always been a supporter of WWF. Without the charity's efforts, many wild species would be lost by now. We need more people to stand up and fight for threatened animals – they don't have a voice, but we do! I paint wildlife to try and shine a light on what's going on, to show people that if things don't change soon these creatures will be no more than just a memory.  
**Shannon Burns, Batley, West Yorks**

## FOR THE LOVE OF POLAR BEARS

I study music at the Royal Conservatoire of Scotland. And since I'm no runner and my baking is disastrous, I decided to busk traditional music at the 2016 Edinburgh Fringe Festival to raise money for WWF. I've loved polar bears ever since my uncle gave me a toy as a child. So I was delighted when I discovered I could help protect them by adopting a polar bear on Svalbard with WWF. I named my polar bear toy 'Helga'. Busking the Fringe for three weeks was tough, especially on days when the weather

was miserable. But every day I appreciated the amazing support of my family – especially my grandmother who helped me pay for an amplifier – and friends, who carried the WWF banners and gathered crowds to watch. I often visited WWF Scotland and am proud to support the work of such a great charity. Thank you for making sure the money goes directly to protect polar bears on Svalbard.  
**Callum Morton, Glasgow**



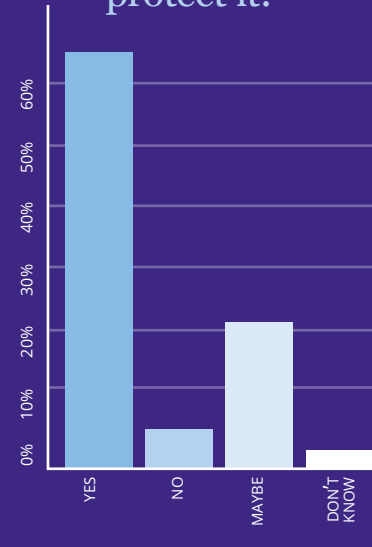
## READER POLL

### HAVE YOUR SAY!

Congratulations on a great issue of *Action* (autumn 2016). You asked 'Should we place an economic value on nature in order to protect it?' My answer is 'Yes'. I think it's sensible and your excellent article, *What nature does for us*, made a strong case for economic assessment of the value of nature. This information will be useful for discussion, debate and decisions in the civic arena – and for persuading businesses that it's in their best interests to protect nature. Does this take us down the wrong path? I think that if an economic assessment seems to us to undervalue some aspect of nature, then it is for conservationists to improve that assessment.  
**David Morris, Clwyd**

### THE POLL RESULTS

'Should we place an economic value on nature in order to protect it?'



## MAKING A DIFFERENCE

Nature is fundamental to our existence on this planet and it's vital that we preserve it. Nothing gives me greater pleasure than being somewhere wild, watching animals in their natural environment. There are many organisations dedicated to conservation, but I support WWF because it not only cares, it's effective too. WWF recognises that protecting our planet isn't about a single issue or approach. It's about animals, the environment, local people and even politics – so a holistic strategy is required. There's a lot to worry about in this world, so it's always good to hear about the progress WWF is making. I was thrilled to learn that tigers are starting to recover. As individuals it's easy to believe there's nothing we can do, but if we join together with WWF there is hope. By leaving a legacy, I hope to help WWF carry out its vital work in the future. I'd like to feel that in some small way I've made a difference.  
**Allison Hill, Teddington, Middlesex**



**i GIVE A GIFT THAT LASTS**  
There are many ways you can leave a legacy to WWF. To find out more, please contact Maria on **01483 412459** or [maria@wwf.org.uk](mailto:maria@wwf.org.uk)



## RUNNING WILD

I'm a trail runner. I like to hear the birds and smell the rain. So there was only one way to mark my 40th birthday – I decided to run 40 km every day for 40 days. After this momentous decision, it seemed only natural to raise money for a charity. When I asked my son which charity to support, he replied: "We need to help make the world a better place for nature." On 4 June 2016 I started running across the Surrey Hills. It was everything I imagined – euphoric (and painful), filled with wonderful friends and amazing views. On day 26 I ran to WWF-UK's Living Planet Centre, where I was greeted by a crowd of cheering staff! Nature was all around me, on every run, making me feel alive. And I'm so pleased I was able to make a small difference to the amazing work WWF does. There's little in this world that's more important than nature, and I will continue to support WWF for all my life, to help make the world a better place for my son. The Panda made me do it!  
**Sarah Rollins, Farnham, Surrey**

## JOIN THE FLOCK AND SING YOUR NEWS

We all love summer and the amazing wildlife it brings – so why not share your stories and photos of your favourite signs of summer? Email your letters and photos to [editor@wwf.org.uk](mailto:editor@wwf.org.uk) Because space is tight, please keep letters to 150 words. Though we read every one, we cannot acknowledge them and must reserve the right to edit them.





# WIN A TWO-DAY VOYAGE STUDYING UK MARINE MAMMALS

**WIN!  
A DOLPHIN RESEARCH TRIP**

A fantastic opportunity for six people to join a marine monitoring expedition off the west coast of Scotland

Three lucky winners will net a place for themselves and a companion\* on *Silurian*, the Hebridean Whale and Dolphin Trust (HWDT)'s research yacht, which was featured in your summer 2016 magazine. The team conducts surveys of whales, dolphins and porpoises in Hebridean waters, including WWF's adopted dolphins.

The winners will set sail from the Isle of Mull for two days, from 3–4 August 2017, to learn how HWDT scientists monitor the Inner Hebridean bottlenose dolphin pod and other marine species. You'll help with the survey and become 'marine mammal scientists' for two days. The prize includes food and accommodation on the yacht, but does not include transport to the Isle of Mull.

For your chance to win, please tell us, in 500 words, why you deserve a place on this trip of a lifetime. Mark your entry 'Silurian Comp' and send it to the address (below).

Please be aware, this is not a whale-watching experience – it's a scientific survey. No experience is needed as full training will be provided. Further details at: [wwf.org.uk/comptersms](http://wwf.org.uk/comptersms). As with all wild animals, sightings are unpredictable and there is no guarantee of seeing marine mammals during the trip. Find out more about HWDT's work: [whaledolphintrust.co.uk](http://whaledolphintrust.co.uk)

\*This competition is for over-16s only. Under-18s must bring a parent or legal guardian as their companion.

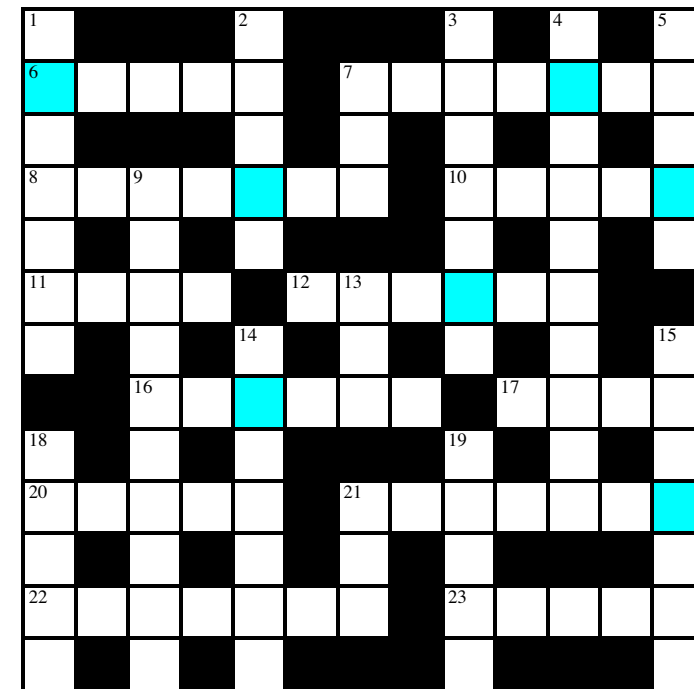


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## CROSSWORD

Solve our crossword and you could win a copy of *Freshwater Fishes of Britain*, worth £16.99



WWF Action crossword 35: spring 2017 issue. 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](mailto:competition@wwf.org.uk) The closing date is 17 March 2017.

### Clues across

- 6 \_ flooding, the possible result of sudden heavy rainfall (5)
- 7 Lake Müritz is located in which European country? (7)
- 8 Animal-watching holidays (7)
- 10 \_ whale, largest of the toothed whales (5)
- 11 The coast redwood is a notably tall species of what? (4)
- 12 Freshwater systems like the Ganges and Zambezi (6)
- 16 Greater one \_ rhinoceros, vulnerable species native to India and Nepal (6)
- 17 Cut down trees (4)
- 20 This 'giant' is Africa's biggest antelope (5)
- 21 They may be temperate or boreal (7)
- 22 Cleaner, in an environmental sense: more colourful too? (7)
- 23 One of the four species of giraffe along with northern, southern and reticulated (5)

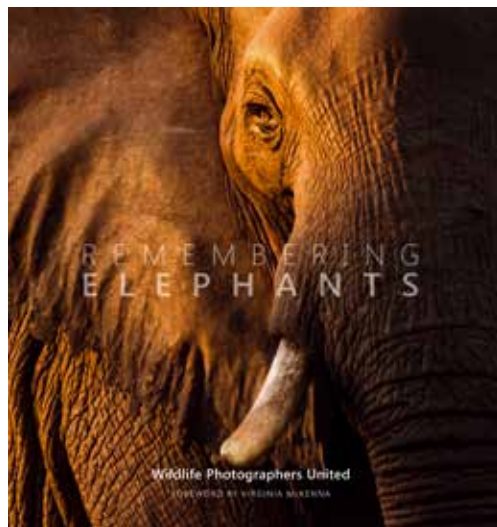
### Clues down

- 1 Carbon \_ , they allow businesses and individuals to compensate for their own environmental impact (7)
- 2 \_ World, the developing nations (5)
- 3 Plants commonly found on pampas, savannah and prairie (7)
- 4 These divide separate adjacent drainage basins (10)
- 5 \_ chimpanzees, endangered primates also known as bonobos (5)
- 7 Initials of the technology often used in collaring and tracking animals such as lions (3)
- 9 Rain and snow are the main providers of this vital resource (5,5)
- 13 Sea \_ , a crucial part of the polar bear's habitat (3)
- 14 How wind or water is removing soil, rock, etc (7)
- 15 Petroleum-derived material commonly used to make bags, bottles, etc (7)
- 18 Lough \_ , freshwater lake in Northern Ireland. By area, Britain's largest (5)
- 19 Wildlife \_ , the illegal trade in items such as ivory, rhino horns, tiger parts, etc (5)
- 21 Russian \_ East, home to most of the few remaining Amur leopards (3)

AUTUMN 2016 ANSWERS:  
Prize word: TOXIC.  
Across 1. Litter 5. Crack 9. Refineries 10. Cynad 11. Ocelots 13. Snow leopard 15. Extinct 17. Quake 20. Middle East 21. Asian 22. Factor 21. Mantled 23. Iran 24. Clean 25. Hybrids  
Down 2. Ivory 3. Tornado 4. Rift 6. Rural 7. Crested 8. Knock-on 12. Glacier 13. Sixties 14. Aquatic 16. India 18. Kyoto 19. Calf

## REMEMBERING ELEPHANTS

We have three copies of this spectacular photobook to give away



Imagine waking up one morning to find that, overnight, poachers had killed the last wild elephant in Africa. It's unthinkable, isn't it? But with around 20,000 elephants poached here every year, and numbers lower than ever, it's a genuine possibility. That's why more than 65 wildlife photographers have come together to produce the most beautiful book on elephants ever made – a memorial should the worst happen – and to do their bit to help protect these incredible animals for future generations. We have three copies, worth £45 each, to give away. Just send a postcard marked 'Elephant Comp' to the address (right).

## HOW TO ENTER ACTION GIVEAWAYS

Send your entry, along with your name, address and phone number, and the competition you wish to enter – e.g. Elephant Comp, Silurian Comp, etc – to **Action Mag, WWF-UK, Living Planet Centre, Rufford House, Brewery Road, Woking, Surrey GU21 4LL.**

Only one competition per entry please. Or send an email with your chosen competition in the subject line to [competition@wwf.org.uk](mailto:competition@wwf.org.uk). The closing date for the competitions is Friday 17 March 2017. For terms and conditions, visit [wwf.org.uk/comptersms](http://wwf.org.uk/comptersms)

## PROTECTING FUTURE GENERATIONS



© CHRISTY WILLIAMS



Even the biggest parents can have trouble keeping small offspring under control. Asian elephant families live in matriarchal herds with a complex social structure and sophisticated communication. The oldest female is the leader, so that the others can learn from her experience and accumulated

knowledge of their home range. Male calves live with their mothers until they're old enough to fend for themselves. But, like children, they don't always do as they're told.

I used to work in India's Terai Arc Landscape, an area of hills, forest and floodplains. One winter night in Rajaji National Park, I heard elephants passing in front of the Dholkhand field station on their way to the main forest camp. I turned on the GPS receiver to see if it was one of our collared groups, and picked up the signals of Mallika, the matriarch, and Tipu, a magnificent bull known for his large tusks. As I gazed out, sure enough, there was Mallika, strolling by unhurriedly, her daughter Malavika and a young calf at her heels. She paused and gave a long rumble ending with a grunt. She was calling to DivT, her son, a handsome, six-foot-tall youngster of about six or seven years old. But there was no response.

### FAMILY AFFAIRS

Moments later, Tipu the magnificent tusker strode into sight, his gait regal, his tusks gleaming white in the moonlight. Right behind him was DivT. The pair sniffed the ground where Mallika had stood. It was a memorable sight – the tallest and oldest tusker in Rajaji and his junior, separated by at least four feet in height and 40 years in age.

The peaceful scene was broken by another long rumble from Mallika, now some distance away. DivT, perhaps feeling all grown up in such imposing male company, ignored her. Enough was enough. Mallika's angry growl throbbed through the night air, her command unmistakable. And DivT – bravado gone – gave a short, frightened trumpet and scampered off at top speed to report to his mother.

This was typical of Mallika. She was a great matriarch and mother; gentle, yet firm when required. For me, the moment highlighted the strong bonds between an elephant family and how these are integral to the survival of its members.

*Christy*

Christy Williams, Asian elephant expert and country director, WWF-Myanmar



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**ACTION ON CLIMATE CHANGE**

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**IN YOUR NEXT ISSUE**  
**TIGER PROTECTORS + SHARED HERITAGE + YOUR STORIES**



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