

The Crystal

The Oceans and Plastic Pollution

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domestic ivory sales

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Park now the
world's most
carbon neutral

The Rivers
Responsible for 90
Percent of the Plastic
in the Oceans

Vision for 2037:
Tech hubs, smart
light poles and park
benches

Arctic permafrost thawing
faster than ever, US climate
study finds

Issue 1, February 2018

Editors Column

Welcome to the first edition of The Crystal Newsletter for 2018. This edition includes a new feature: a front cover page that we hope will enhance your enjoyment. We welcome your comments and environmental contributions. Please send them to the Editor on infor@blackcrystal.co.zw. If you no longer wish to subscribe to the Crystal then please email us with this instruction.

Thank you and happy reading!

Black Crystal Consulting is one of Zimbabwe’s leading reputable companies offering a quality service in environmental and socioeconomic consultancy services. Black Crystal Consulting believes in ***caring for the environment beyond today*** to ensure that biodiversity is maintained and that natural resources are not depleted for the next generation.

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Luambe National Park is now the world’s most carbon neutral



Luambe National Park in Zambia has recently achieved a conservation milestone as it became the most carbon neutral National Park in the world. Luambe’s carbon neutral status is a result of the USAID-funded Community Forests Program implemented by Bio Carbon Partners (BCP), in partnership with the Zambian Government. This world-first level of carbon neutrality means the emissions of all tourism and conservation management activities within with the park are offset, including all international tourist airline travel. ‘Platinum’ is the highest possible carbon rating available from BCP. The announcement comes just 18 months after the Lower Zambezi National Park–also in Zambia– achieved carbon neutrality from operations. This latest announcement from Luambe secures Zambia’s recognition as a global leader in carbon offsetting.

“Luambe’s carbon neutral status sets a great example for other protected areas in Zambia,” said USAID/Zambia Economic Development Office Director Jeremy Boley. “This status shows the world that Zambia takes emissions reduction seriously.” Luambe Camp voluntarily funded the carbon neutrality from their own internal revenues, investing in renewable energy sources and purchasing Verified Carbon Standard (VCS) audited forest carbon offsets generated within Zambia. Luambe Camp began operations in June 2017, and are committed to establishing a new level of environmental stewardship and sustainability. Mario Voss, Director of Luambe Camp, stated that “as a business that operates as a showcase and celebration of Luambe National Park’s unique beauty and biodiversity, it is crucial that we take responsibility for its conservation. We are passionate environmentalists and

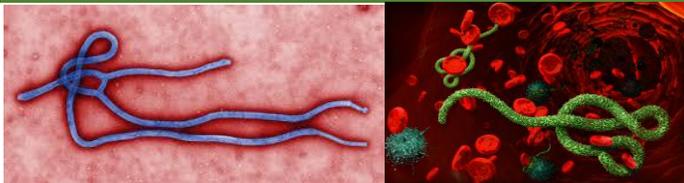
it is important to the whole Luambe Camp team that we can offer our guests a truly eco-friendly experience.”

Funds raised from REDD+ offset sales are reinvested into conservation and community development in buffer zone areas to national parks within Zambia. Most countries on earth have now signed up to the Paris Climate Agreement, and there are more signals towards innovative carbon conscious milestones and action. With experts agreeing that Africa is likely to be the continent most vulnerable to climate change, the leadership of Zambian tourism businesses and the Zambian Government agrees to operate with carbon neutrality and set a positive example throughout the continent.

Director of the Department of National Parks and Wildlife Mr Paul Zyambo, stated that “We are happy to partner with another innovative carbon-conscious achievement in the conservation and tourism sector in Zambia with partners like Luambe Camp and BCP. Luambe forms a part of Zambia’s famous Luangwa Valley and we hope that this showcases how special this area is, and why it is worth a visit.” Dr Hassan Sachedina, BCP’s CEO, added, “It is exciting that Zambia now has two of the world’s first carbon neutral parks, which are helping to conserve two of the most important biodiversity strongholds left in Africa. I am really proud to be partnering with these family-owned businesses raising the bar of how eco-tourism can include carbon offsetting.” We hope that this spurs more action globally to address climate change.”

Source: <http://blog.biocarbonpartners.com/>

Recent loss of closed forests is associated with Ebola virus disease outbreaks



Ebola virus disease (EVD) is a contagious, severe and often lethal form of hemorrhagic fever in humans. The association of EVD outbreaks with forest clearance has been suggested previously but many aspects remained uncharacterized. There have been 28,616 suspected, probable, and confirmed cases with a total of 11,310 deaths which were recorded in Guinea, Liberia, and Sierra Leone. Remote sensing techniques were used to investigate the association between deforestation in time and space, with EVD outbreaks in Central and West Africa.

Modeling, centered on 27 EVD outbreak sites and 280 comparable control sites, revealed that outbreaks located along the limits of the rainforest biome were significantly associated with forest losses within the previous 2 years. This association was strongest for closed forests (>83%), both intact and disturbed, of a range of tree heights (5–>19 m). The results suggest that the increased probability of an EVD outbreak occurring in a site is linked to recent deforestation events, and that preventing the loss of forests could reduce the likelihood of future outbreaks. This is highly significant research and could be used to prevent more deaths from EVD.

Source: <https://www.cifor.org/library/6636/recent-loss-of-closed-forests-is-associated-with-ebola-virus-disease-outbreaks/>

New: ‘AudioMoth’ device



The new AudioMoth’ device aims to deliver low-cost, power-efficient monitoring of remote landscapes. Mongabay, a UK-based researcher team, have developed a low-power, open-source acoustic monitoring device and they say it shows promise for monitoring wildlife and illegal activities being undertaken by people in remote places. The researchers say that the device, which is about the size of a matchbox, can be made for as little as \$43 per unit — a price that could be key to ensuring coverage across large landscapes and habitats, where numerous monitoring devices are required. The AudioMoth can be programmed to monitor wildlife populations by recording the calls of specific target species while at the same time serving as an alert system when the sounds of human exploitation: such as the blast of a shotgun or the roar of a chainsaw, are detected. The Audiomoth is a great new piece of technology.

Source: <https://thelivingstoneweekly.files.wordpress.com/2018/01/tlbw24jan18.pdf>

The Oceans and Plastic Pollution



Hundreds of thousands of sea turtles, whales, and other marine mammals, and more than 1 million

seabirds die each year from the ingestion and/or entanglement in manmade waste that is directly or indirectly disposed of in oceans, rivers, and other waterways. Most trash reaches the seas via rivers, of which approx.80% originates from landfills and other urban sources. This waste, has a high percentage of plastic which damages coral reefs and tends to accumulate in gyres (areas of slow spiraling water and low winds) and along coastlines.

According to Dr. Marcus Eriksen of The 5 Gyres Institute, there are 5.25 trillion particles of plastic pollution that weigh as much as 270,000 tons (2016). This plastic is taken by the ocean currents and accumulates in ocean gyres which become pollution dumps filled with plastic. One type of plastic that is of big concern in terms of ocean plastic pollution, are nurdles which are manufactured plastic pellets (a type of microplastic) used in the creation of plastic products. Billions of nurdles end up in the oceans each year, and it has been estimated that globally, around 10% of beach litter consists of nurdles.

The rubbish that litters the oceans is toxic to marine life, and humans. The toxins that are contained in plastic include diethylhexyl phthalate (carcinogen cancer causing), as well as lead, cadmium, and mercury. Plankton (small and microscopic organisms drifting or floating in the sea or fresh water), fish, and ultimately humans, through the food chain, ingest these highly toxic carcinogens and chemicals. Consuming the fish that contain these toxins can cause an increase in cancer, immune disorders, and birth defects in humans. Entanglement in plastic debris has been responsible for the deaths of many marine organisms, such as fish, seals, turtles, and birds. These animals get

caught in the debris and end up suffocating or drowning. Because they are unable to untangle themselves, they also die from starvation or from their inability to escape predators. Being entangled also often results in severe lacerations and ulcers. In a 2006 report known as Plastic Debris in the World's Oceans, it was estimated that at least 267 different animal species suffered from entanglement and ingestion of plastic debris. It has been estimated that over 400,000 marine mammals perish annually due to plastic pollution in oceans. Marine organisms get caught in



discarded fishing equipment (ghost nets) which are often made of synthetic materials such as nylon (plastic). These organisms can also get caught in the circular can plastic rings and if the animal continues to grow in size, the plastic cuts into their flesh and they will eventually die. Old fishing nets can also drag along the seabed, causing damage to coral reefs.

Sea turtles are one of the marine animals that are most affected by plastic pollution. Some turtle species consume jelly fish but

often mistake plastic bags for their natural prey. This plastic debris can kill the sea turtle by obstructing



their esophagus. Whales are also affected, most beached whales are found to have plastics in their stomachs. Plastic pollution does not only affect animals that live solely in oceans. Seabirds are also greatly affected. In 2004, it was estimated that gulls in the North Sea had an average of thirty pieces of plastic in their stomachs. Seabirds often mistake trash floating on the ocean's surface as prey. Their food source often has already ingested plastic debris, thus transferring the plastic from prey to predator. Ingested trash can obstruct and physically damage a bird's digestive

system, reducing its digestive ability and can lead to malnutrition, starvation, and death.



You can help by reducing your use of plastic whether it is refusing supermarket plastic bags, food wrapped in plastic and not buying plastic bottles of water. You can also raise awareness on plastic pollution and its effects, not only on ocean life but also on its effects on us as human beings. You could be saving a marine or human life in the process.

Permafrost in the Arctic is thawing faster than ever



The annual report recently released by the National Oceanic and Atmospheric Administration (NOAA) showed slightly less warming in many measurements than a record hot 2016. But, scientists remain concerned because the far northern region is warming twice as fast as the rest of the globe and has reached a level of warming that's unprecedented in modern times. The Arctic has traditionally been the refrigerator to the planet, but the door of the refrigerator has been left open. "2017 continued to show us we are on this deepening trend where the Arctic is a very different place than it was even a decade ago," said Jeremy Mathis, head of NOAA's Arctic research program and co-author of the report. Findings were discussed at the American Geophysical Union meeting in New Orleans. "What happens in the Arctic doesn't stay in the Arctic; it

affects the rest of the planet," said acting NOAA chief Timothy Gallaudet. "The Arctic has huge influence on the world at large."

Permafrost records show the frozen ground that many buildings, roads and pipelines are built on reached record warm temperatures last year nearing and sometimes exceeding the thawing point. That could make them vulnerable when the ground melts and shifts, the report said. Unlike other readings, permafrost data tend to lag a year. Preliminary reports from the US and Canada in 2017 showed permafrost temperatures are "again the warmest for all sites" measured in North America, said study co-author Vladimir Romanovsky, a professor at the University of Alaska in Fairbanks. Arctic sea ice usually shrinks in September and this year it was only the eighth lowest on record for the melting season. But, scientists said they were most concerned about what happens in the winter – especially March – when sea ice is supposed to be building to its highest levels.

Arctic winter sea ice maximum levels in 2017 were the smallest they've ever been for the season when ice normally grows. It was the third straight year of record low winter sea ice recovery. Records go back to 1979. About 79% of the Arctic sea ice is thin and only a year old. In 1985, 45% of the sea ice in the Arctic was thick, older ice, said NOAA Arctic scientist Emily Osborne. New research looking into the Arctic's past using ice cores, fossils, corals and shells as stand-ins for temperature measurements show that Arctic ocean temperatures are rising and sea ice levels are falling at rates not seen in the 1,500 years. And those dramatic changes coincide with the large increase in carbon dioxide levels in the air, the report said. 'Soul-crushing' video of starving polar bear exposes climate crisis, experts say. This isn't just a concern for the few people who live north of the Arctic Circle.

Changes in the Arctic can alter fish supply. And more ice-free Arctic summers can lead to countries competing to exploit new areas for resources. Research also shows changes in Arctic sea ice and temperature can alter the jet stream, which is a major factor in USA weather. This is probably partly responsible for the current unusual weather in the USA that brought destructive wildfires to California and a sharp cold snap to the south and east, according to NOAA scientist James Overland and private meteorologist expert Judah Cohen. "Overall, the new data fit with the long-term trends, showing the clear evidence of warming

causing major changes,” in the Arctic, said Pennsylvania State University ice scientist Richard Alley. Climate change is real.

Source:

<https://www.theguardian.com/environment/2017/dec/12/arctic-permafrost-sea-ice-thaw-climate-change-report>

Vision for 2037: Tech hubs, smart light poles and park benches

THE city of the future could be greener and feature futuristic tech hubs where automated cars use streetlights to recharge and mobile phones can plug into street benches. This is the vision of 2037 the Australian Institute of Landscape Architects (AILA) is sharing as part of its installation called ‘The Future Street’ project. The installation, currently on display in Sydney, shows off some of the most cutting-edge technology that has the potential to transform our streetscapes. It’s designed to showcase innovative ideas to make our cities, suburbs and towns more livable, productive, environmentally friendlier and healthier places to live.

Here are some of the highlights.

POWERED STREET BENCHES



Plug in to a park bench. There’s room to rest a laptop and flip open the cover to reveal charging stations.

Imagine going for a walk and then taking a break at a park bench, using it to charge your mobile or to plug in your laptop and work alfresco. Street Furniture Australia is showing off its park bench prototype that has electricity and USB outlets so people can charge their devices on-the-go. Industrial design engineer Shreyasi Mukerji said they hoped to launch the product next year. “You’ve got a surface to work on if you’re using a laptop and we wanted it to have a couch feel rather than a bench feel.”

DRIVERLESS SHUTTLE BUS

The EZ10 driverless electric shuttle is already operating in Darwin and can transport up to 12 people (six seated and six standing). It has no steering wheel and technically there is no front or back. The vehicle can travel up to

40km/h and is programmed to follow a specific route. EasyMile sales manager Alexandre Pequignot explained “it is operating on open roads in Darwin and takes people from a car park and transports them to an area with restaurants and cafes.” He described the vehicle as a “first and last mile” form of transportation and had potential to take people to and from transport hubs. “If the train station is too far way (to walk) people tend to drive instead and they tend to drive all the way to the office, which causes congestion and demand for parking,” he said. “It’s a shared and smart mobility solution.”



EZ10 driverless shuttle. Board a driverless shuttle as part of The Future Streets installation.

CHARGE YOUR CAR USING A STREET LAMP

ENE Hub lights are already popping up around Sydney and can feature a multitude of features. They can be modified to act as charging stations for electric vehicles, can have power outlets, an emergency help button, USB chargers, traffic lights, banners, speakers for music or announcements, Wi-Fi, 4G/5G, CCTV, colored lights and even hanging flower baskets.



Artist’s impression of The Future Street. Source: Australian Institute of Landscape Architects (AILA)

One of the other features of the installation is envisioning how our landscape could look if it was designed for people in mind, not cars. “A good street is a place that prioritizes people over cars and this is part of what the Future Street highlights,” Place Design Group executive director Chris Isles said. The AILA has developed three alternative visions: a “green” street, a “complete” street and a “smart” street. The aim for all three streets is to integrate green interactive spaces with technology and make the streets a destination worth visiting — not just a thoroughfare that

people pass through on their way to work or their next appointment.



What a Green Street could look like complete with relaxing spaces

PUTTING PEOPLE AHEAD OF CARS

The Green Street section shows what a landscape could look like if car access was removed, people were prioritized, there was cycling and public transport, and nature was reintroduced. It's essentially about healthy living and plenty of soft grass and trees. The Complete Street illustrates what a street could look like if cities balanced the importance of people and cars, it slows the car down, features vertical gardens and recycled materials. "This is a glimpse into what our streets could become, and how we could interact with our built environment in a more productive way. "It's about creating an enjoyable lifestyle," AILA chief executive officer Tim Arnold said.

Source:

<http://www.news.com.au/technology/innovation/inventions/vision-for-2037-tech-hubs-smart-light-poles-and-park-benches/news-story/ce2eaa00edf253f385fc4bc4098ad264>

These 10 Rivers Are Responsible for 90% of the Plastic in the Oceans



As plastic in the world's oceans continues to rise, researchers are pinpointing sources of pollution so that conservation efforts can stem the flow. Over the last six decades, according to one estimate, 9.1 billion tons of plastic has been produced worldwide and 7 billion tons of it

has ended up as waste. Much of that waste has ended up in our oceans. And, according to another estimate, more than 8 million tons of plastic is dumped into the sea each year.

Researchers from the Helmholtz-Center for Environmental Research in Germany, think they've nailed down a crucial detail about plastic pollution: how it gets into the ocean. The results were startling: just 10 river systems are responsible for 90% of the plastic flowing into the oceans. Their study was published in the journal *Environmental Science & Technology*. The problem of our plastic-filled oceans has been studied for years, but until now there has been little information on how the plastic gets there. Christian Schmidt, a hydrogeologist at the center who led the study, believes that to get plastic out of the ocean, we must first figure out how it is getting in. "For the ocean science community, it's important to understand how plastic debris spreads in the oceans," Schmidt said "[Until now] it has been sufficient to know that 80% of ocean plastic is generated from land, but current research is more directed to the sources of the problem."



There are extremely small plastic particles found in virtually every sea and river in the world. Plastic particles have even been found in the tap water of more than a dozen countries, including the US. Because plastic essentially never breaks down completely in the ocean, it is extremely harmful to marine ecosystems. It would be impossible to clean all the plastic already present in the ocean, Schmidt noted, so the only solution is to quickly reduce the input in the hope of preventing further harm. Schmidt and his colleagues analyzed 73 previous studies on aquatic systems around the world. Each study included information on the quantity of plastic that had been improperly

disposed of in various catchment areas — the location where rainfall flows into a river. The analysis included 240 individual water samples from 79 sites, covering 57 rivers.

Microplastics (particles less than five millimeters in length), were detected in 98.5% of catchment area samples and large plastic particles were found in 55%. The amount of waste that ended up in the ocean, the researchers found, corresponded to the amount of plastic found in a catchment area. And larger rivers made a much more significant contribution than smaller ones because the quantity of plastic per cubic meter of water was much higher in large ones. The results were startling: just 10 river systems are responsible for 90% of the plastic flowing into the oceans.



Eight are in Asia and two are in Africa. Ranked from the highest amount of plastic waste to the lowest, they are: the Yangtze River, Indus River, Yellow River, Hai He River, Nile River, Ganges River, Pearl River, Amur River, Niger River, and the Mekong River. The 10 river systems have several common characteristics. They run adjacent to large concentrations of people, where public awareness about proper waste disposal and recycling is poor, as well as not having sufficient waste infrastructure. According to Schmidt, even halving the amount of plastic waste in these rivers would be a major achievement.

“Implementing better waste management is of paramount importance, as well as reducing plastic inputs into the environment, including rivers,” Schmidt said. “But improving waste infrastructure should go hand in hand with actions to make people aware that whatever is dumped into rivers will not disappear. It will potentially end up in the oceans,” he said. Schmidt pointed to one effort in India that has banned the use of disposable plastic in the capital

of Delhi as a good example of how to reduce plastic pollution. But, he cautioned, more developed countries certainly aren’t innocent of polluting with plastic.

“In industrial countries, it is assumed that 2% of the waste is littered, despite a well-developed waste infrastructure.” Schmidt and his colleagues plan to find out how long plastic debris takes to reach the sea once it’s in our rivers, information that is crucial for understanding how to stop it. “One of our key questions is, ‘How long does plastic need to travel from the source to the oceans?’” he said. “This is important because, and I’m optimistic here, we will see actions to reduce inputs into our river systems soon, but it’s unclear how long it will take until we see an effect at the river mouths. It could be months, years or even decades.” The study highlights it would be a major breakthrough if action to reduce waste is concentrated at these 10 rivers, it would reduce up to 90% of the waste in the oceans.

Source: <https://www.seeker.com/earth/conservation/these-ten-rivers-are-responsible-for-90-percent-of-the-plastic-in-the-oceans>

Hong Kong votes to ban domestic ivory sales

Hong Kong has voted to ban ivory sales in a landmark move to end the infamous trade in the city. Lawmakers overwhelmingly vote for the bill to abolish trade by 2021.



Demonstrators including schoolchildren gathered outside the city’s legislature to protest against ivory sales holding up signs that read: “Do you really need ivory chopsticks?”

The Hong Kong ban follows China’s complete ban on ivory sales that went into effect at the end of last year. “Shutting down this massive ivory market has thrown a lifeline to elephants,” said Bert Wander of global advocacy group Avaaz. “Today is a great day for elephants. Hong Kong has always been the ‘heart of darkness’ of the ivory trade with a 670-tonne stockpile when international trade was banned in 1989,” said Alex Hofford of WildAid Hong Kong.

The three stages of the implementation of the ban include a ban on trade in hunting trophies and ivory dating from after 1975, when a global treaty regulating the trade took effect. It would later extend to ivory acquired before 1975, and finally traders would have to dispose of their stock by 2021. Penalties for offenders will be increased to a maximum fine of HK\$10m (\$1.3m) and 10 years' imprisonment.

Angry ivory traders have said they will be forced to close down their businesses and demanded the government compensate them for their stock – which lawmakers rejected. In the months ahead of the recent vote, the legislature heard tales of murder and suffering involving African park rangers who were shot dead while protecting elephants and others drowned or set on fire. African ivory is highly sought after in China, where it is seen as a status symbol, and used to fetch as much as \$1,100 a kilogram. Poaching in Africa has seen the elephant population fall by 110,000 over the last 10 years to just 415,000, according to the International Union for Conservation of Nature. But, the amendment will be phased out over three stages, a time period some conservationists say could be exploited as a loophole and be too late for African elephants which continue to be killed in huge numbers.

Source:

<https://www.theguardian.com/environment/2018/jan/31/hong-kong-votes-to-ban-domestic-ivory-sales>

World's First Electric Container Barges To Sail From European Ports This Summer



The world's first fully electric, emission-free and potentially crewless container barges are to operate from the ports of Antwerp, Amsterdam, and Rotterdam from this summer. The vessels, designed to fit beneath bridges as they transport their goods around the inland waterways of Belgium and the Netherlands, are expected to vastly reduce the use of diesel-powered trucks for moving freight.

Dubbed the “Tesla of the canals”, their electric motors will be driven by 20-foot batteries, charged on shore by the carbon-free energy provider Eneco. The barges are designed to operate without any crew, although the vessels will be manned in their first period of operation as new infrastructure is erected around some of the busiest inland waterways in Europe. In August, five barges - 52 metres long and 6.7m wide, and able to carry 24 20ft containers weighing up to 425 tonnes - will be in operation. They will be fitted with a power box giving them 15 hours of power. As there is no need for a traditional engine room, the boats have up to 8% extra space, according to their Dutch manufacturer, Port Liner.

About 23,000 trucks, mainly running on diesel, are expected to be removed from the roads as a result. At a later date, six larger 110m-long barges, carrying 270 containers, will run on four battery boxes capable of providing 35 hours of autonomous driving. Their use alone could lead to a reduction of about 18,000 tonnes per year of CO2, it is claimed. According to the latest statistics from Eurostat, 74.9% of freight in the EU is transported by road, compared to 18.4% by rail, and 6.7% along inland waterways, although the use of water routes has been rising.

The barges are being developed in the Netherlands with €7m in subsidies from the EU and additional funds from the ports involved. Port Liner believes it could produce about 500 barges a year to revolutionise the freight industry, although the electric motors and batteries could also be retrofitted into older boats. The company's chief executive, Ton van Meegen, told shipping industry trade journal the Loadstar that the barges would be the first in the world to sail on carbon-neutral batteries and that only the low bridges in the low countries prevented them from being loaded with more goods.

Source:

<https://www.theguardian.com/environment/2018/jan/24/worlds-first-electric-container-barges-to-sail-from-european-ports-this-summer#img-1>

We Buy Battery Scrap Or Old Batteries Paying “Cash” Instantly. You can deliver your Old Batteries to Chloride Zimbabwe or to, any Exide Express (formerly Battery Express branches or Victor Onions). Alternatively, Chloride can come and pick them up, contact number is +263 772 572204. You can Whatsapp, call or text, you can also mail at smushawedu@chloride.co.zw. Contact name is Shingi.

10 Facts About Pangolins on World Pangolin Day

Do you know what a pangolin is? Where it lives? Why it's so endangered? Most people don't. But World Pangolin Day, which falls on February 17, is a great place to start. So here are 10 facts—some fun, some not so fun—about one of the world's most vulnerable but least-known species.



- i. The word “pangolin” comes from the Malay word “penggulung,” which means “roller.” When it's threatened, a pangolin will curl itself into a tight ball, which is impenetrable to predators, but makes them easy prey for poachers.
- ii. There are eight pangolin species—four in Asia and four in Africa. Pangolins are found throughout much of southeastern and eastern Asia and the Indian subcontinent, and across sub-Saharan Africa. They occupy a diverse array of habitats including tropical forests, grasslands, savannas, and deciduous forests.
- iii. Pangolins are the only mammals that are covered in scales, which are made of keratin—just like our hair and finger nails.
- iv. Pangolins are the most trafficked wild animal in the world, with more than one million poached over the last decade. In Asia, pangolin scales, blood, and fetuses are used to purportedly treat conditions like liver problems, skin issues, palsy, and swelling, despite the fact that they lack any medicinal or therapeutic value. Pangolins also are considered delicacies in some Asian countries, with their meat selling for up to \$200 per kilogram. Secondary threats to pangolins include habitat loss and the African bush meat trade.
- v. Due to these threats, all eight species are listed on the International Union for the Conservation of Nature's

(IUCN) Red List as either Endangered (extremely high risk of extinction), Endangered (very high risk of extinction), or Vulnerable (high risk of extinction). All eight species are also listed under Appendix I—the highest level of protection—of the Convention on International Trade in Endangered Species (CITES), which bans all commercial trade in the species.

- vi. Now that pangolins in Asia have all but disappeared, the illegal trade is turning to African pangolins. Large shipments from African countries bound for China and Viet Nam are seized regularly.
- vii. Pangolins can consume up to 20,000 ants and termites a day (over 70 million a year) using their long, sticky tongues, which are often longer than their body when fully extended.
- viii. Pangolins are extremely vulnerable to stress, making them very difficult to keep in captivity. Most die within six months of capture.
- ix. Pangolins produce only one offspring per year, making it all the more difficult for the species to recover from poaching pressure.
- x. Pangolins have large, curved claws that they use for excavating ant and termite nests, as well as for pulling bark off trees and logs to find their insect prey.

These curious creatures may not have the iconic status of elephants or tigers—two other highly endangered species—but they are just as deserving of protection. Let's use World Pangolin Day to learn about them and spread awareness of their existence and vulnerability.

On the 17th of February Zimbabwe joined the rest of the world in marking World Pangolin Day as wildlife authorities step up efforts to help save the endangered “scaly ant-eater”. In Zimbabwe, pangolins were placed on the Specially Protected Species Schedule in 1975. Under the current legislation, the pangolin plus eight other mammals are afforded higher legal protection due to their cultural importance and rarity. Pangolins are protected by the Parks and Wildlife Act [20:14] Section 128, which details a mandatory imprisonment for a period not less than nine years on first conviction and on second or subsequent conviction, to imprison for a period of not less than eleven years. The themes for this year is “Pangolins are the pride of Central Africa and are increasingly being trafficked to Asia. Together, Let's Protect Our Pangolins!”

Source: <https://www.nrdc.org/experts/elly-pepper/10-facts-about-pangolins-world-pangolin-day>

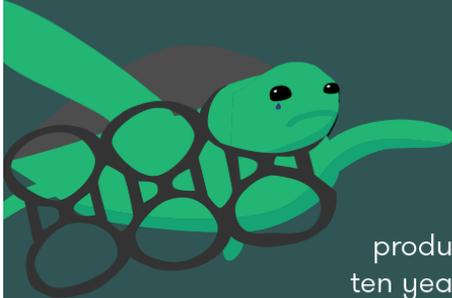
Plastic pollution



Plastics can remain in the environment for anywhere between

10 and **10,000** years.

Plastic stays in our environment because it **takes so long to break down**. Decomposer organisms love garden waste, rotting food and even roadkill, but they turn up their nose at plastic products.



- More plastic has been produced in the last ten years than during the whole of the last century.

- Plastic manufacturing can release greenhouse gases and toxic chemicals.
- Plastic never really goes away, it just breaks down into smaller pieces.
- Birds, fish, turtles and other sea life have been found with stomach-fulls of plastic.
- Microscopic pieces have even been found inside corals and clams.
- Almost 50% of plastics are used only once then thrown away.
- Less than 10% of plastics are recycled.



21,000

tonnes of plastic go into landfills in Australia each year

100,000

or more marine animals are killed each year due to plastic pollution

120,000

pieces of plastic pollute each square kilometre of the ocean (on average)

1,000,000

or more sea-birds are killed each year due to plastic pollution

1,000,000,000,000

(one trillion) plastic bags are used every year around the world