2021 IMPACT REPORT
We Stand for Wildlife®
MISSION
WCS saves wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature.

VISION
WCS envisions a world where wildlife thrives in healthy lands and seas, valued by societies that embrace and benefit from the diversity and integrity of life on Earth.

DISCOVER
We will use science to discover new knowledge, guide our conservation action, and inform policy decisions to scale up our impact.

PROTECT
We will protect and rewild priority species and wild places, and reduce the threats causing the loss of wildlife and wild places.

INSPIRE
We will inspire and engage people to care about wildlife and wild places by leveraging the power of our zoos and aquarium, and expanding digital platforms to reach a global audience.
Mending our broken relationship with nature is the defining challenge of our lifetime. The collapse of biodiversity, the climate crisis, and the pandemic have made that abundantly clear. These calamities result from the extreme and unsustainable pressure we are putting on our planet’s natural resources—endangering all living things, including ourselves.

We must find a new path that balances human needs with protecting and restoring nature—a path that actually harnesses nature’s immense power. To take just one example: we know that nature-based solutions, especially preserving intact forests, can provide nearly one-third of the climate action we need by 2030.

This is a moment when Wildlife Conservation Society (WCS) can make a vital contribution. We have been at the vanguard of conservation since 1895, when we made it our mission to save the earth’s wildlife and wild places through a unique mix of zoo- and field-based work.

WCS’s early Bronx Zoo-based efforts helped save an American icon—the buffalo—from extinction. Since then, we have saved many more species and helped create, manage, expand, and strengthen hundreds of protected wilderness areas around the world, working hand in hand with Indigenous and local partners and national and local governments in 60 countries. We have also connected more than 400 million visitors to nature at our four zoos and aquarium in New York City. And every year, we help train the next generation of scientists, educators, and conservationists; last year we published more than 400 articles in peer-reviewed scientific journals.

The results that we achieve every day—highlights of which we share in this impact report—give us hope for the future. But we could not do any of it without generous support from you and other donors, which we were profoundly grateful for during the challenging pandemic year. We hope that you are inspired by stories in the pages that follow about how you have helped WCS:

- Care for rescued animals at our five urban wildlife parks
- Reimagine zoo-based learning during the pandemic
- Devise promising new conservation strategies for lions, jaguars, elephants, whales, and sharks
- Advance efforts to ban the commercial trade in wildlife for human consumption
- Unlock the power of intact forests
- Protect Nature’s Strongholds around the globe

We also hope that the passion and dedication of our very diverse staff and partners around the world shine through when you read their profiles, which this year include a New York Aquarium marine mammal and bird keeper, an Indigenous ecotourism guide in Bolivia, a Robertson Big Cat Conservation Fellow from China, a Thai anti-poaching leader, and a Bronx Zoo admissions manager. They are the heart and soul of everything that WCS does.

As we chart a path forward for the next decade with our 2030 strategy, we are grateful that we can count on your partnership.

Thank you.

Alejandro Santo Domingo
Chair of the Board

Cristián Samper
President & CEO
THE THREE CRISSES OF OUR TIME

BIODIVERSITY LOSS
CLIMATE CHANGE
PANDEMICS

“The world is facing three major crises—they are all interrelated, with many of the same causes and solutions.”

—CRISTIÁN SAMPER
PRESIDENT AND CEO OF WCS

OUR SOLUTIONS

We face three interconnected crises: 1 million species are at risk of extinction; climate change is accelerating; and the pandemic, which is linked to the dangerous commercial trade in wildlife for human consumption, has claimed millions of lives. But we have hope for the future because of your strong support for our mission—and because of all we have accomplished with that support.

Conserve biodiversity and wilderness
with science-led species protections and strategies to protect 30 percent of our planet by 2030

Help prevent future pandemics
by rolling out One Health solutions worldwide and ending the commercial trade in wildlife for human consumption

Advance nature-based solutions to climate change
—which can provide nearly one-third of the action we need by 2030—by unlocking the power of intact forests

WCS SEEKS TO:

Protect and rewild Nature’s Strongholds
including 60 of the planet’s most critical remaining wilderness areas on land and at sea

Inspire millions to protect nature
through our NYC zoos and aquarium, and through strong digital engagement and education programs

Stabilize or increase at-risk populations
of tigers, elephants, sharks, and many other endangered species

Stop the commercial trade in wildlife for human consumption
through legislative reform, educational campaigns, and stronger measures to help law enforcement find, catch, and prosecute wildlife trafficking criminals

Scale up our intact forest conservation fieldwork
to protect the planet’s 1.7 billion hectares of intact forest by 2030

Use cutting-edge science and strong policy
to advocate for conservation action and promote nature-based solutions

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Today, an unprecedented 1 million species around the world are at risk of vanishing forever. This is not a loss we can afford. From the smallest birds, bats, and insects that pollinate crops to the largest predators—including the big cats and sharks that keep food chains strong and balanced—biodiversity plays a vital role in the web of life that sustains us.

And it is not too late to reverse course. Saving wildlife has always been WCS’s core mission, beginning with rewilding the buffalo, or bison, in the American West at the turn of the 20th century. WCS’s ambitious 2030 goal is not only to prevent the extinction of our planet’s most iconic and biologically important species—but also to lay the groundwork for their full recovery.

WCS is leading the way with science-driven fieldwork and policy efforts across 60 countries. We are protecting priority species that are ecologically vital and culturally valued: apes, big cats, bison, crocodilians, elephants, whales and coastal dolphins, sharks and rays, and tortoises and freshwater turtles.

In this section, you can read highlights of our progress toward protecting and recovering wildlife around the world, and learn about promising new conservation strategies for lions, jaguars, elephants, marine mammals, sharks, and more.

“WCS has recognized in a pioneering way the manmade catastrophes that are overcoming the natural world, and is one of the foremost organizations working to save the world’s wildlife.”

—SIR DAVID ATTENBOROUGH
NATURALIST, BROADCASTER, AND WRITER
Elephants are beloved animals, central to many African and Asian cultures. They also have far-reaching and beneficial impacts on their habitats. Science has shown that elephants play a key role in the growth and health of forests by dispersing seeds, minerals, and nutrients over long distances, and by opening pathways and mineral-rich clearings. Elephants’ browsing patterns also improve trees’ ability to store carbon, helping to curb climate change. In short: the fates of elephants and humans are intertwined.

After decades of poaching for their ivory, human-elephant conflict, and destruction of habitats, African and Asian elephants have disappeared from about 90 percent of the range they occupied two centuries ago. Their numbers have dwindled alarmingly, especially over the last 50 years. In 2021, WCS’s research on elephant populations and threats helped confirm that there are two distinct species and must be respectively classified as Critically Endangered and Endangered. WCS will use this science to advocate for domestic bans on the commercial ivory trade in all countries at the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Conference of the Parties in 2022.

Elephants have reduced potential conflict by as much as 90 percent.

WCS works in more elephant landscapes than any other conservation organization—and we have an evidence-based, proven strategy to not only stop their decline, but enable them to recover. The landscapes we protect contain more than 50 percent of African forest elephants and an estimated 50 percent of Asian elephants.

Using science to combat elephant poaching and ivory trade:

Historically, African forest elephants and African savanna elephants have been grouped together and scientifically classified as just Vulnerable. Several African nations have used this to justify keeping the ivory trade open. In 2021, WCS’s research on elephant populations and threats confirmed that these are two distinct species and must be respectively classified as Critically Endangered and Endangered. WCS will use this science to advocate for domestic bans on the commercial ivory trade in all countries at the CITES Conference of the Parties in 2022.

Elephant populations have stabilized or increased in areas throughout Africa where WCS has ensured long-term, effective site management and the necessary resources, anti-poaching systems, and training.

Increasing elephant populations:

WCS’s quarter century of conservation action in the Republic of Congo’s Nouabalé-Ndoki National Park has made it one of the rare places in Africa where forest elephant populations have remained stable over the last 20 years. In summer 2020, the region’s most notorious elephant poacher and ivory trafficker was the first to be convicted in Congo’s criminal court—the result of years of collaboration between WCS and the government. Authorities then arrested the kingpin trafficker operating above him—proof that our support of the government’s enforcement efforts is gaining traction in stopping Congo’s most dangerous wildlife criminals.

Two Years, Zero Poaching

We are taking our successful co-management approach and applying it to other key elephant landscapes, most notably in Mozambique’s Niassa National Reserve, which contains the country’s largest population of elephants. WCS has successfully stemmed the 10-year crisis in Niassa, when elephant poaching was rampant; we have now seen more than two years with zero poaching incidents in the Reserve. We have accomplished this by helping Niassa’s law enforcement officials gain a step ahead of poachers and traffickers, and through community-led conservation—working with the more than 30,000 people living in the Reserve to strengthen livelihoods and develop improved solutions to human-wildlife conflict. WCS signed a new 20-year co-management agreement with the Government of Mozambique in 2020 and is now drafting a 10-year conservation management plan for Niassa. Currently, Niassa’s elephant population is estimated at about 4,000 individuals, but our science indicates that this landscape could support as many as 20,000 elephants with WCS’s continued enforcement and community engagement programs.

Looking Ahead

Across critical elephant strongholds in Africa and Asia, WCS is working with governments and communities to develop improved solutions to poaching and human-wildlife conflict. We seek to scale up law enforcement activities—including by hiring and training additional rapid response teams, and increasing helicopter and airplane patrols. And we seek for all governments to close all markets and trade in ivory, strengthening our push for the EU, Japan, and other nations to shutter their legal domestic ivory markets and end their commercial ivory trade—as the US, China, and the UK already have. Ultimately, our goal is to expand and strengthen management of protected areas where elephants occur now, as well as in some regions where they used to occur, so their populations can fully recover, rewild, and thrive.
Leading Global Recovery of Big Cats

Tigers roaming through the snowy Russian Far East and the lush forests of Asia. Lions stalking prey across the vast savannas of Africa. These are vivid images in our mind’s eye—stories handed down through generations, a part of our natural heritage.

But the presence of big cats in the wild is also an important sign of a healthy ecosystem. As top predators, big cats regulate prey animals, and their absence can bring negative consequences. In eastern North America for example, numbers of white-tailed deer, which carry Lyme disease, have exploded because there are no longer populations of pumas to keep them in check.

WCS has been at the forefront of big cat conservation for more than 50 years. Today, with our government partners, WCS protects more big cat habitat and has more specialists on the ground than any other organization; we lead long-term programs at 47 sites in 33 countries across Africa, Asia, and the Americas.

WCS’s strategy focuses on protecting big cat strongholds—large areas of intact wilderness where robust populations can thrive. And we are getting results. Our longstanding presence in those strongholds is translating to recovery of big cats, with science-driven solutions reining in such threats as poaching, retaliatory killings, habitat loss, and disease outbreaks.

Our Vision: WCS aims to reverse the decline of all big cat species and restore populations to numbers their habitats can naturally sustain.

Tigers

WCS sites are home to around half the world’s wild tigers, and as a result of our strategy, they are bouncing back. Where we have worked the longest, tiger populations are strongly recovering, and in some cases have reached their natural carrying capacities.

Safeguarding tiger strongholds: To date, WCS has supported governments to create 24 protected areas of critical tiger habitat, including massive strongholds in the Russian Far East, in the mountains of India’s Western Ghats, and in Thailand’s tropical forests. We protect these gains through rigorous patrolling, bolstering law enforcement, and partnering with communities to foster conservation.

Restoring tigers by increasing their food sources: WCS recently led research on how to fully restore a key tiger landscape by rewinding it with large prey animals. Scientists looked at three large prey species in Thailand’s Western Forest Complex, a stronghold where tigers have made a comeback but have not fully recovered because of insufficient prey in some areas. This first-of-its-kind study shows that if people living near tiger habitats modify activities even to a small degree, tiger prey can bounce back. It provides a roadmap to tigers reaching carrying capacity in this vital landscape, and a model for other tiger strongholds.

Looking Ahead

Our global big cat conservation efforts are focused on stopping top threats and stabilizing or growing big cat populations at all WCS sites. When cats have been lost, we will look to “rewild” them. For example, WCS scientists have discovered enough potential habitat in Arizona and New Mexico to reintroduce a population of 150 jaguars—a species which last bred in the US in the 1960s.

We will also develop and launch an integrated mapping and reporting system for tigers, jaguars, and lions, enabling us to analyze changes in habitat and populations in near-real-time to guide global recovery efforts. In Africa, we are building a monitoring network for lions across the Sudano-Sahel region. It will enable us to track trends in some of the most imperiled lion populations on the continent and is a key component of our long-term plan to recover lions.
MEET A WCS EXPERT

Xiaoxing Bian

ROBERTSON BIG CAT CONSERVATION FELLOW

With a WCS scholarship, I am writing my PhD at the University of Florida on human-snow leopard coexistence.

Q: How did you come to work with WCS?

XIAOXING: I grew up in Beijing, a completely urban girl. But from the age of four, I loved observing any animal I could find, which usually meant beetles. As I made my way through forestry school and then a master’s degree in wildlife ecology, I kept hearing about WCS, which has an iconic reputation in China. People talked about WCS scientists like George Schaller, who since 1980 had been working in the hardest, most remote parts of Tibet, doing fundamental science on species like chiru and wild ass. They said if you want to work with the toughest, most hardcore field biologists, you need to join WCS. So in 2013, I did.

For six years, I looked for snow leopards in the Chang Tang region of the Tibetan Plateau, where the average elevation is 5,000 meters. Because snow leopards are so elusive, we set up 360 camera traps across 5,000+ square kilometers—creating the highest altitude camera trap network in the world. We ran across 5,000+ square kilometers—creating the highest altitude camera trap network in the world. We ran into lots of fierce Tibetan brown bears and rutting wild male yaks—and fixed many flat tires. It was the most fun I’ve ever had.

Q: How would you describe your work?

XIAOXING: Our exchanges with local people were so moving. Even those who’d suffered great losses would often say that they understood, the animals also have children to feed. There are retaliatory killings, but many of these people are Buddhists who value all life and regard these animals as their siblings. They’re inventing new protective strategies, like using a kind of scarecrow—a “scare-leopard.”

These communities hold deep knowledge. One local Tibetan ranger, Tharjie, could precisely draw the round pugmark [footprint] and heart-shaped scrape [mark] of a snow leopard, and the longer, clawed track of a wolf. He showed us where to find scrape, and how many cats are in the area, he said 20—which is exactly what the cameras ended up showing. We were so grateful to have him on our team.

Nothing can replace that kind of lifelong on-the-ground experience. I also, just once, got to see a wild snow leopard. I was with Dr. Schaller in Qinghai province when a colleague spotted a tiny cat bent on a distant ridgertop. For several minutes he stared at us and we stared back. George was happy—he hadn’t seen one for several years—but not as happy as me. I jumped like a rocket, ran up the mountain, and found super-fresh scat and tracks in the snow. I could still feel the power and beauty of this predator, a king of his kingdom.

Q: Why is this work important to conservation?

XIAOXING: China has 60 percent of the world’s snow leopard habitat, and half of that is on the Tibetan Plateau. But just 2 percent of their range has been sampled. And these animals are under intense pressure. Though WCS helped protect the Chang Tang through the creation of one of the world’s largest reserves, the snow leopard’s habitat extends into heavily populated areas. As humans move in, we see fewer animals and more conflicts. We interviewed 200 households; many had lost livestock or even family members to brown bears or wild yaks. We’re working to figure out ways for people and animals to co-exist safely. Climate change is also damaging everyone’s world. The glaciers are melting so fast I could watch it happen out in the field: every six months they’d retreat another dozen meters.

Q: Your most rewarding moments?

XIAOXING: Seeing the power and beauty of the snow leopard. Seeing the power and beauty of nature. Feeling the power and beauty of the snow leopard.

Healthy Sharks = Healthy Ocean

Sharks strengthen the health and productivity of marine ecosystems

BENEFITING CORAL REEFS

Sharks maintain food webs and fish stocks and regulate invasive species. Sharks generally hunt larger predatory fish, which in turn controls these larger species’ predation of smaller reef fish. Many of those smaller species graze algae, which helps keep coral clean and healthy, thereby supporting the entire ecosystem.

Cycling Nutrients

Sharks often eat and eliminate in different places, transferring nutrients across the ecosystem.

Balancing Populations

Sharks are predators at the top of the marine food chain—they keep ecosystems stable by maintaining the natural balance of species.

Feeding Other Species

Sharks are messy eaters. The scraps from their hunting create a food source for scavengers.

Sustainable shark and ray tourism can help local communities and funnel funds back into conservation.

Bolstering Local Economies

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Saving Sharks in 10 Hotspots over 10 Years

Though often feared, sharks maintain healthy ecosystems and are among the world’s most threatened species groups: open-ocean sharks have declined over 70 percent in the last 50 years. Building on decades of expertise, WCS’s new 10x10 shark strategy will focus the next 10 years of conservation on 10 countries that are strongholds for sharks and rays.

Overfishing is the main threat, and WCS is working with communities to craft locally relevant approaches to sustainable fisheries that foster the recovery of sharks and rays. This strategy dovetails with our longstanding efforts to support national governments in safeguarding their most biodiverse waters through marine protected areas.
To see a whale for the first time is astonishing: an impossibly large, air-breathing mammal is visible for a moment, then disappears into the ocean depths. Thanks to major conservation efforts by WCS and others, such encounters are becoming more accessible in many places—including right off New York City’s shores.

But the history of whales and humans is marked by exploitation as well as reverence. For centuries, whales were hunted relentlessly. With a moratorium on commercial whaling and increased conservation efforts, some whale populations are slowly recovering. As forage fish and other prey species are becoming more abundant in certain areas—including in waters off New York—some whales are increasingly using these habitats to feed. However, a range of new threats including ocean noise, ship strikes, and entanglement in fishing gear mean that we must remain vigilant.

Since the early 20th century, WCS has led pioneering whale research and monitoring around the world, leading to greater protection of important whale habitats. Today, WCS scientists are gathering and analyzing essential scientific data to assess the impact of increased noise and shipping on whales and other marine mammals. This work is especially urgent in the busy New York seascape and in the Arctic, where marine mammals. This work is especially urgent in the busy New York seascape and in the Arctic, where marine mammals.

Safeguarding Whales in the New York Seascape
Diverse marine life—including humpback whales, harbor porpoises, bottlenose and common dolphins, fin whales, minke whales, and even the critically endangered North Atlantic right whale—can be seen in the New York Bight. And while these are encouraging signs, NY/NJ is also home to the largest port on the eastern seaboard. Ship-strike risk and unusual mortalities for some species are major concerns. These are some of the reasons why WCS’s effort to better understand whales’ habitat use and migration patterns through the waters off New York is so important and why we use our science to strongly advocate for their protection.

Protecting the North Atlantic Right Whale
WCS’s acoustic work with Woods Hole Oceanographic Institution (WHOI) in the New York seascape detects four species in near-real time, and some of this technology is helping WCS and others roll out additional protections. For example, the National Oceanic and Atmospheric Administration (NOAA) issues requests for ship “slow downs” when the two WCS-WHOI monitoring buoys relay data on the presence of North Atlantic right whales, in order to safeguard the approximated 368 individuals that remain. Additional studies by WCS and colleagues found that humpback whales in this area produce intricate songs and social sounds, and may be present nearly year round.

Advancing Noise Protections in the Rapidly Changing Arctic
With climate change and melting sea ice, the Arctic is changing rapidly and new areas are opening up to navigation—creating new risks for marine life. By identifying where important marine mammal habitats are, WCS’s scientific insights are helping to make informed decisions that minimize risks to marine mammals from shipping and providing proof of ocean noise levels to international decision-making bodies charged with defining marine mammal protections, including the Arctic Council, UN agencies, and the Convention on Biological Diversity.

WCS’s leading marine mammal research has won comprehensive protections and lasting results. For example, following our decades of research and conservation action, two humpback whale populations off Gabon and Madagascar have recovered to 70–90% of pre-whaling levels.
Emerging and re-emerging viral disease outbreaks impacting people and animals have risen sharply in recent years. Many of these viruses, including influenza, West Nile, HIV, and now SARS-CoV2, originate in wildlife. The global public health and economic crises unleashed by this zoonotic-origin pandemic have shone a harsh spotlight on the far-reaching dangers of the increasing contact between people and wildlife through deforestation, and the harmful commercial trade in wildlife for human consumption.

The One Health approach that WCS has pioneered recognizes the strong links between human, animal, and environmental health. Building on decades of scientific leadership on this issue, WCS is partnering with governments to secure crucial, permanent changes that will protect human health and well-being, economies, and security on a global scale, while also preventing the devastation of the world’s wildlife and wild places.

This section highlights WCS’s progress in banning the commercial trade in wildlife for human consumption, our efforts to help local communities detect and reduce transmission of deadly diseases such as Ebola, and our long track record of leadership in wildlife health.

“The health of our planet hinges on the symbiotic relationship between humans, animals, and the environment.”

— CHRI$ WALZER
EXECUTIVE DIRECTOR, WILDLIFE HEALTH PROGRAM
Our Best Bet to Prevent the Next Pandemic

ENDING THE COMMERCIAL TRADE IN WILDLIFE FOR HUMAN CONSUMPTION

Along wildlife trade supply chains, wild and domestic animals that would never normally come into close contact are packed together. Stressful and unsanitary conditions increase the chances of “spillover events” where pathogens move between animal hosts, then jump to humans. The end result can be zoonotic-origin diseases like COVID-19, and other potential pandemics or epidemics.

Now is the time to secure permanent changes that will protect human health, economies, and security on a global scale, while also preventing the devastation of the world’s wildlife. Evidence shows that species threatened by habitat loss or exploitation can transmit more zoonotic-origin diseases. In response, WCS is advancing a science-based strategy to end commercial trade in live, wild birds and mammals for human consumption.

Advancing Reform at the National Level

Drawing on our scientific, policy, and field-based expertise, WCS is working with governments around the world to decrease the risk of spillover events by supporting wildlife trade policy reform and strengthening counter-wildlife trafficking efforts. The following are just a few examples of our many efforts in countries where spillover risk is high:

In China: In January 2020, in response to the rapid spread of COVID-19, WCS issued a statement pushing for urgent action from governments and societies to end the wildlife trade. The following month, the Chinese government announced a national ban on the trade of land-based animals for human consumption, which protects over 2,000 wild species.

RIGHT/BELOW To prevent future outbreaks, WCS is working to stop the commercial trade in wildlife for human consumption, particularly of birds and mammals. Our longstanding counter-wildlife trafficking efforts also protect at-risk animals such as the slow loris and African grey parrot, which are highly trafficked for the illegal pet trade. Health and animal care experts from WCS’s zoos and from our field sites have worked closely with law enforcement agencies to rehabilitate and release many confiscated animals back into the wild.

It also finalized a new biosecurity law with key provisions on zoonotic-origin disease prevention and control aligned with WCS’s prior recommendations. With this new legislation in place, China has significantly stepped up law enforcement, regulation, and inspections in conjunction with strong recommendations from WCS. For example, in Guangdong province alone, authorities conducted 20 times more total inspections than the previous year: more than 660,000 of markets, 8.2 million of businesses, and 1.2 million of farms. Authorities also carried out more than 4.6 million e-commerce inspections. The government shut down 12,000 markets, farms, and restaurants nationwide found to be illegally trading wildlife in the first few months after the national ban. And cases heard by the judiciary involving illegal purchase, transport, sale, hunting, or killing of rare or endangered wildlife has increased by 22 percent compared to the previous year.

In Vietnam: In 2020, the Vietnamese government prohibited the import of live wildlife, called for stronger enforcement of wildlife trafficking, and directed its ministries to review wildlife farming operations and penalties for wildlife consumption. WCS is currently working with partners in Vietnam on national policy reform to end the commercial trade of live wild birds and mammals.

WCS trains rangers and other law enforcement officials across the globe in how to use technology such as the SMART patrol system to target poaching hotspots, dismantle illegal trade networks, and monitor wildlife health.
CONSERVATION IMPACT

Strengthen and expand surveillance at key points

Advance global commitments:
Support law enforcement agencies to disrupt
arrests as well as seizures by the authorities of high-trafficking cases throughout the last year, resulting in increased enforcement efforts are needed as countries teams on the ground in nearly 30 countries. While presence of any conservation organization, with WCS has the largest global anti-wildlife trafficking

In India, for example, WCS provided support to local communities that depend on wildlife access and rights of Indigenous Peoples and

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Advance global commitments: We will advance a strategy to win global commitments to measures to prevent future pandemics and protect wildlife through four complementary strategies:

- End commercial trade through policy and legislative reform: We will design and launch national advocacy campaigns aimed at ending the commercial trade and associated markets of live wild birds and mammals for human consumption in Asia, Africa, and Latin America.
- Strengthen and expand surveillance at key points along wildlife supply chains: We will strengthen pathogen surveillance within and beyond key countries by improving field-based capabilities, and through timely analysis and reporting.
- Support law enforcement agencies to disrupt wildlife trafficking networks: We will provide actionable intelligence and other targeted support to law enforcement and judicial agencies to disrupt and deter criminal networks that traffic wild animals within countries and across borders.
- Advance global commitments: We will advance a strategy to win global commitments to measures designed to prevent the emergence and spread of new zoonotic-origin diseases, as well as potential new pandemic prevention treaty or protocol, focusing on the United Nations, the Convention on Biological Diversity, and intergovernmental organizations such as the World Health Organization and the World Organization for Animal Health.

Looking Ahead ➔ ➔

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Supporting Law Enforcement Agencies

WCS has the largest global anti-wildlife trafficking presence of any conservation organization, with teams on the ground in nearly 30 countries. While the danger of poacher spillover is not limited to trafficked wildlife, it poses a sizeable risk, and increased enforcement efforts are needed as countries adopt stricter legislation.

In India, for example, WCS provided support to law enforcement agencies in a number of wildlife trafficking cases throughout the last year, resulting in arrests as well as seizures by the authorities of high-value wildlife and/or products including pangolins, leopard fur, ivory, and Indian star tortoises.

A Decade of Discovery at the Bronx Zoo’s Molecular Diagnostics Lab

WCS has long recognized how helpful molecular technologies could be in detecting disease risks and better understanding infectious diseases in wildlife. To this end, over a decade ago we created a zoo-based molecular diagnostics laboratory at the Bronx Zoo’s Wildlife Health Center, led by Dr. Tracie Seimon—one of only a few such zoo-based labs in the world.

The molecular program’s fascinating discoveries include:
- using environmental DNA (eDNA) to find endangered species;
- uncovering illegal wildlife trade activity; detecting wildlife disease risks; and conducting biodiversity surveys on Mount Everest.
- We have developed mobile capacity to deploy our diagnostic tools around the globe, enabling scientists to detect wildlife disease outbreaks and inform conservation measures—including for chytrid fungus that threatens amphibians, and canine distemper virus, which is impacting Amur tigers.

MEET WCS’S GOVERNMENT PARTNER

I manage anti-poaching patrols and monitor wildlife populations in Thailand’s Huai Kha Khaeng Sanctuary and promote conservation in local schools and communities.

Permsak Kanishtajata

HUAI KHA KHAENG WILDLIFE SANCTUARY SUPERINTENDENT

Q: What is a typical day for you?

PERMSAK: I assign daily activities to my assistant officers and staff. I also support the wildlife research station, located inside the protected area, guiding the systems for our tiger population monitoring. Strengthening the day-to-day team training and them to make sound decisions is very satisfying and has had a positive impact on our conservation objectives.

Q: What makes Huai Kha Khaeng Wildlife Sanctuary an extraordinary stronghold?

PERMSAK: For the Thai people, the sanctuary is at the heart of the conservation movement. It has become a model for protected areas in Thailand and other countries in Southeast Asia because of its protections for tigers and other endangered species. Most importantly, the populations of tigers and other endangered wildlife have been increasing. Fifty years ago, the SMART patrol system was rolled out within the sanctuary. This reporting tool equips rangers with technology and information and has effectively suppressed all illegal activities that are harmful to wildlife and their habitats. WCS provides important support to the government by using science-led actions such as these to strengthen interventions and monitoring in the Huai Kha Khaeng and Thung Yai wildlife sanctuaries. This has improved the management of the protected area, which now supports a range of biodiversity and ecosystem services. Under the Thai Office of Wildlife Conservation and the Department of National Parks, Wildlife, and Plant Conservation, it is one of the best wildlife sanctuaries in Thailand and has become globally recognized amongst wildlife conservation communities as a standard for protected areas.

Q: What accomplishments are you most proud of?

PERMSAK: After I finished my bachelor’s degree in wildlife from Kaensart University, I was a contract officer at a wildlife sanctuary near Huai Kha Khaeng. For four years, I managed a small ranger station in a very remote area and it was a really tough place to live and work. I’ve now been doing conservation work for about 24 years, and those early years helped me improve my skills in real-world situations. Another accomplishment I feel proud of is pushing for science-based management, strong law enforcement, and collaboration with people who rely on the sanctuary. These approaches have significantly reduced poaching incidents in the area, indicated by the reduction of poaching camps over the years.

Q: What are your hopes for the future?

PERMSAK: As tigers, elephants, and other wildlife gradually recover and disperse into the surrounding protected area, we want to make the buffer zone around the protected area safer to reduce human-wildlife conflict. I also hope that Huai Kha Khaeng will continue to be a model for younger generations of wildlife researchers and managers, to learn how to conserve protected areas based on science.
Advancing Health with Science and Partnerships

WCS’s veterinarians and other health experts partner across borders and disciplines to solve the world’s most pressing wildlife health challenges. At the heart of our One Health approach is community: we collaborate with diverse partners ranging from government and international health agencies, to villagers in remote forests, to restaurants in big cities.

**Ebola Detection and Prevention**

In Central Africa, Ebola remains a threat to human communities and a serious concern in the decline of gorilla and chimpanzee populations. Together with governments and local villages, we set up an early warning system for Ebola outbreaks focusing on remote areas with high biodiversity, which also have some of the poorest access to health resources.

Our accomplishments include:

- Conducting Ebola education campaigns across more than 30,000 square kilometers of forest in northern Congo—home to about 60 percent of the world’s gorillas—that reached 6,600+ traditional hunters and thousands more women and children.
- Building a surveillance network of traditional hunters from 260 villages, who have reported 58 animal carcasses to date—which WCS diagnostic analysis confirmed posed no risk of Ebola spread.
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**Reducing the Urban Wild Meat Trade**

The illegal wild meat trade is widespread in cities in Central Africa. Though this trade can and does exist legally, many restaurants also source protected wildlife caught by poachers. In 2021, WCS and partners released a study finding that restaurants play a key role in whether protected wildlife winds up on the menu, and that monkeys are most at risk of poaching and trade in the Central African cities of Kinshasa and Brazzaville. Our focus groups confirmed the widespread view that wild meat is a luxury item and sign of wealth—which is also the case in China and other countries.

In response, WCS, together with Kinshasa-based organizations and YoYo Communications, supported the government to launch a unique behavior change campaign in Kinshasa. Avoiding negative messaging, we instead showcase the city’s vibrant social life. Partnering with a Congolese celebrity chef, our campaign invites people to preserve wildlife through a new food trend: celebrating Congolese cuisine without wild meat. With Oxford University, we are tracking our progress on changing perceptions and reducing wild meat demand.

**SMART for Health: Piloting New Approaches to Preventing Emerging Diseases**

Ten years ago, WCS and partners created SMART (Spatial Monitoring and Reporting Tool) to monitor, analyze, and respond to threats to wildlife and protected areas in real time—and shut down poaching and other illegal practices in partnership with law enforcement. SMART is now used by WCS and other organizations at 1,000 sites globally, with approximately 50,000 protected area staff trained in its use.

WCS has now built upon this approach to collect real-time wildlife health updates—SMART for health—to detect and stop emerging disease threats such as Ebola, avian influenza, and coronaviruses wherever they might emerge. SMART for health is accessible via smartphones in even extremely remote areas, and supports tracking of animal behaviors, mortality events, and photo uploads. WCS is piloting the tool in Cambodia, Lao PDR, Vietnam, and Mongolia, in support of wildlife health surveillance system development by our government partners.

A Century of Pioneering Zoo- and Field-Based Wildlife Health Solutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1916</td>
<td>WCS establishes first on-site veterinary hospital in the US at the Bronx Zoo.</td>
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<tr>
<td>1989</td>
<td>WCS establishes a field veterinary program—the first and largest of its kind.</td>
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<tr>
<td>1999</td>
<td>WCS discovers West Nile Virus in NYC birds and creates a diagnostic technique to screen for the virus; a joint effort by physicians and WCS veterinarians produces a new animal vaccine, developed with the samples WCS collected.</td>
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<td>2004</td>
<td>WCS coins the term “One World – One Health” at a WCS-organized symposium convening human, animal, and infectious disease experts to address global health challenges, and develops the Manhattan Principles.</td>
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<td>2008</td>
<td>WCS begins critical research on Ebola virus, believed to have killed as many as one-third of the world’s gorillas.</td>
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<td>2019</td>
<td>On October 25, just one month before the emergence of COVID-19, WCS and global health leaders issue the Berlin Principles on One Health: an “Urgent Call for a United Effort to Stop Diseases Threatening All Life on Earth.”</td>
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<tr>
<td>2020</td>
<td>When the Bronx Zoo’s tiger, Nadia, contracts COVID-19, WCS scientists reliably brief both animal and human health professionals in the US and abroad—helping advance the world’s understanding of the novel coronavirus, and protecting other cats in zoos worldwide.</td>
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<tr>
<td>2021</td>
<td>“One Health” concept formally accepted by the G7 at June summit, recognizing of the highest political level the essential connection between human, animal, and environmental health.</td>
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Looking Ahead

We will expand rollout of SMART for health, creating a robust worldwide network of wildlife disease sentinels collecting and sharing information to stop the consumption of illegally caught wild meat—and prevent future pandemics. In wildlife trafficking hotspots, we will work with consumers and restaurants to reduce demand for wild meat, conduct surveillance, and support law enforcement efforts across the globe to protect wildlife and prevent disease outbreaks.
In our increasingly urban and technological world, people have become more disconnected from nature. But just one visit to a zoo or aquarium has the power to rekindle that vital connection. WCS’s zoos and aquariums serve as vast oases at the heart of a metropolis where nature can be hard to come by. These beloved New York City cultural institutions attract people from every borough and beyond—most of whom will never be able to travel to Tanzania or Patagonia to see the planet’s most iconic animals.

WCS sets the standard worldwide for best-in-class animal care, innovative exhibits, and zoo-based conservation through our powerful combination of five urban parks—the Bronx Zoo, New York Aquarium, Central Park Zoo, Queens Zoo, and Prospect Park Zoo—and conservation work in 60 countries across the globe. While our parks were closed for several months during the pandemic, hundreds of our dedicated staff continued caring for our more than 17,000 animals every day—and we found new ways to help people connect with nature virtually.

In just the first year since our parks have reopened, we have safely hosted nearly 3 million visitors eager to return to in-person experiences—and many of our parks’ animals, such as our gorillas, are enjoying having visitors once again. In partnership with the Association of Zoos and Aquariums, we are forging ahead with our critical mission to spark a powerful movement to protect wildlife and wild places, while advancing the conservation of species in the wild.

Read on for more about how our parks are making an enormous difference for wildlife, for wild places, and for people of all ages and walks of life in New York and around the world.

“It’s not enough to keep animals in exhibits just for people to look at; there has to be a higher purpose, and for us, it’s conservation of species in the wild.”

— Jim Breheny
Executive Vice President and General Director of Zoos and Aquarium & Director of the Bronx Zoo
Caring for Rescued Animals at WCS Parks

WCS’s Bronx Zoo and our other wildlife parks are recognized as global leaders in breeding endangered species and educating millions of visitors each year about wildlife and conservation. A lesser-known—but extremely important—role our parks play is taking in animals that cannot return to the wild. WCS receives a multitude of calls from government agencies and other organizations seeking guidance on injured, orphaned, and confiscated animals—and in recent years, we have cared for tens of thousands of rescued animals across our sites. By providing these animals with the long-term care they need, we are also inspiring zoo and aquarium visitors to learn more about the risks these species face in the wild and to support urgently needed conservation action.

Amos the White Pelican

A few years ago, Amos was found in the Port of Corpus Christi, Texas with drooping wings. Rescuers determined that he had been shot in both wings and would not be able to survive in the wild. Our veterinarians have ensured that he receives the best possible healthcare, and though he will never be able to fly, Amos now lives at the Bronx Zoo, where his larger-than-life personality is helping to educate visitors about human-wildlife conflict.

Sidney the Harbor Seal

WCS stepped in to welcome a harbor seal pup at the New York Aquarium after a team at the Pacific Marine Mammal Center discovered her alone on a rocky beach in California with her umbilical cord still attached. The veterinarians who examined her suspected she was born prematurely, so rehabilitating her for release back into the wild was not possible. Harbor seal pups can become orphaned for a multitude of reasons, including their mothers being startled or disturbed by human activity. Our animal care staff worked to acclimate Sidney to her new home at the Sea Cliffs exhibit, where she has developed a close bond with Murphy, another female harbor seal born at the aquarium last summer.

Ruth the Golden Eagle

Ruth’s rescue story began in 2020 when she was injured in a collision with a vehicle in Utah. Accidents like these pose a serious threat to the golden eagle population in the western United States. Ruth’s injury could not heal properly, and she lost the range of motion and strength needed to fly, hunt, and care for herself in the wild. But Ruth is a fighter, and the rehabilitator who was caring for her called the Bronx Zoo to ensure that she could receive the expert care she needs for the rest of her life. Ruth’s beauty and strength, and her new lease on life, are sure to inspire countless zoo visitors for decades.

Looking Ahead

WCS will remain steadfast in our work with government agencies and partners across the country to urgently respond to animals in need of expert care. Our veterinarians and curators will also collaborate with our field staff to help breed and rewild species at risk around the world—ones that could otherwise disappear forever.
Providing Jobs, Internships, and More throughout COVID

Our flagship Bronx Zoo is an anchor in the community: we employ more youth than any other organization in the borough. In the past year, WCS intensified support to our city’s young people, providing a range of online and in-person job, internship, and volunteer opportunities. We also increased our reach. For example, attendance at our Career Skills workshop expanded by more than 330 percent.

WCS jobs and internships give young New Yorkers pathways to transform their experiences with WCS into future careers. Olivia Ramos, pictured here, began her journey with WCS in 2014, working summers as an Education Fellow at the Bronx Zoo. Now a full-time WCS Youth Development Coordinator, Olivia inspires her fellow Bronx youth to become involved in conservation, and helps shape WCS’s educational programming.

Q: What is your typical day?

MICHELLE: When we reopened the Bronx Zoo last July, we had to get a new reservation system up and running for up to 14,000 visitors a day, and figure out how to speak with guests about masks. But it was worth it: our visitors were so happy to be back at the zoo! I manage more than 40 people; it’s exhausting and challenging sometimes, but we’re like a family so we make it work. And if I’m stressed, I can go see lions or pet the goats in the Children’s Zoo. How many people have that?

Q: What are your most memorable moments?

MICHELLE: Over the years, I’ve probably helped thousands of visitors so it’s hard to choose one. One day I saw a little girl crying and decided I had to help by giving her something extra special. I had turned to something else when I felt a tap on my shoulder. There she was with a sweet smile saying, ‘thank you!’ I’ve always been a person who wants to go above and beyond. And I get a lot in return. There’s a longtime WCS Member, Donna, who always remembers me. She’ll come over and show me amazing photos that she takes of wildlife at each of our parks.

I also once got a chance to get kisses from a sea lion. It was such a weird feeling on my cheek. We had to stay very still; all you smelled was fish and I was super nervous, but I’ve never forgotten it. Feeding a giraffe was also memorable. They’re beautiful but so big and so picky. They decide whether to take the food from your hand.

Q: What is your hope for the future?

MICHELLE: My daughters are now 19 and 15; I’ve been at WCS nearly their whole lives. All those years, it has been an extremely supportive place to work. That’s what I want for my daughters: the chance to be themselves—authentic, caring human beings—and be happy in whatever they do. I also know that if we keep visitors satisfied and coming back to the zoo, the proceeds from their tickets will help prevent the extinction of wildlife all over the world.

I work to ensure that all of our Bronx Zoo visitors receive a warm welcome.
Reimagining Zoo-Based Learning

Everyone has a role to play in saving wildlife and wild places, and forging a connection to nature is the first step. But today, people are becoming more disconnected from the natural world, and children risk being cut off from nature during a formative time in their development.

WCS helps bridge that divide in a unique way. Our four zoos and aquarium in New York City make science and conservation accessible to people of all ages and backgrounds, reaching some 4 million people each year through our immersive exhibits and rich interpretive materials that draw content from our field-based work in 60 countries. Our urban wildlife parks and staff are also critical resources for schools: we help educators teach young people why it’s important to protect wildlife and wild places—and how WCS does it.

Throughout the COVID-19 pandemic—even during the five-month closure of our parks—WCS stayed on mission and continued to provide children, families, and schools with a unique gateway to nature, pivoting to provide rich science and conservation content virtually. Once we re-opened in July 2020, our parks were one of the few places where people could get out and experience nature and wildlife—surely needed in a difficult time.

We learned a lot from reimagining how to connect people to nature during the pandemic—and in doing so, expanded and strengthened our reach. Below are just a few examples.

**Educating through Multiple Channels**

Whether visiting with animals at our parks or logging on to WCS’s social media channels, WCS inspires people to learn. Visitors at our parks saw a range of behaviors from iconic species like apes and big cats, and learned how scientists protect these animals in the wild. Online, people engaged with our keepers and learned some unique animal facts, like why flamingos are pink and how tortoises can snooze underwater.

**Bringing Nature to You: WCS Virtual Zoo**

The **live cams at our parks** brought an array of wildlife right into people’s homes, offices, and schools. People delighted in watching ring-tailed lemurs scampering at the Bronx Zoo’s Madagascar! exhibit, and sharks gliding in the Canyon’s Edge exhibit at the New York Aquarium. Bringing wildlife and people still closer together were our Wild Encounters, through which people visited with cheetahs, giraffes, penguins, and more—all either online or in person.

**Helping Our Communities Get Vaccinated**

During summer 2021, WCS’s New York Aquarium and Bronx Zoo partnered with the City of New York to provide safe and accessible COVID-19 vaccines for our local communities. Through these sites, we helped to administer over 3,000 COVID-19 vaccine doses to families.

**Launching Wildlife School Online**

With many students struggling to adapt to online learning, WCS provided much-needed virtual education resources for use in the classroom or at home. Children from around the world “met” animals and virtually explored our parks and global field programs. Virtual science fairs showcased student research projects, and immersive visits to our exhibits and activities kept children pre-K through 12th grade engaged in science. We worked with schools and after-schools in underserved communities to tailor programs at no cost, and provided open-source modules for families.

**Wildlife Camp Online—A National Model for Digital Learning**

Our 2020 online summer camp included registrants from 30 states and 6 countries, and became a national model for innovative digital learning. From visits with animal keepers in our city parks to conversations with staff experts as far away as Mongolia, the team created a one-of-a-kind summer enrichment experience. To sustain our wider reach, in 2021 we developed a hybrid model combining in-person and virtual experiences at our parks.

**Imagining Yourself as a Conservation Hero**

Our Conservation Heroes website showcased the diverse role models at WCS—from New York City-based Zoo Veterinarian Susie Bartlett to Marysa Sibarani, a Forest Animal Researcher in Indonesia—with the goal of inspiring more young people to envision themselves as future leaders. Through our Conservation Careers curriculum, young people explored various jobs in conservation through role play and quizzes.

**Looking Ahead**

As our natural world faces increasing threats such as climate change and habitat loss, it is more urgent than ever before to inspire people to protect wildlife. To reach more people and engage them in conservation, we will innovate, expand, and strengthen our conservation science programming, building forward-looking, hybrid models that incorporate both in-person and virtual experiences.
Connecting People to Nature at WCS’s Zoos and Aquariums

Telling Stories of Recovery on The Zoo

Our flagship Bronx Zoo and four other parks welcome 4 million guests each year. But millions more across the US and around the world—who might not otherwise get a chance to visit our parks—gain a window into WCS’s work through Animal Planet’s award-winning docuseries THE ZOO.

With the fifth season premiering in October 2021, viewers will get a behind-the-scenes look at how our expert staff provide care for the 17,000 animals at our parks, while helping advance the conservation of species in the wild. Below are just a few examples of the inspiring stories that will be featured in this new season.

Ensuring Top-Tier Vet Care

In its newest season, THE ZOO follows several stories of animals receiving innovative and life-changing veterinary care they could not have received in the wild.

How do gorillas deal with a toothache?
Wild animals do their best to hide injuries to avoid showing vulnerabilities that predators or competitors might key in on. Yet our watchful Bronx Zoo keepers noticed a subtle change in male gorilla Babatunde’s behavior when he was eating, and found the problem to be a cracked tooth. Our zoological health experts determined he needed a root canal to alleviate his discomfort. Babatunde is now back with his troop, eating and behaving normally.

Baby bison, big surgery
A bison calf at the Bronx Zoo was born with a bowed leg—which would have been problematic when the calf grew into a 1,000+ pound adult. Following a complex surgery to straighten out her leg, she was immediately able to rejoin her mother. Soon after, they were reunited with their close-knit herd.

Helping Aurora the tiger find a mate
Amur tigers are classified as Endangered. Only about 500 individuals remain in their native habitat in the Russian Far East and northern China. In 2021, the Bronx Zoo received a female Amur tiger named Aurora from the Minnesota Zoo as part of the Association of Zoos and Aquarium’s Species Survival Plan program. This season shows how Aurora and her new companions at the zoo all have different personalities and paces at which they acclimate to change. We are hopeful that Aurora and her potential mate Aldon will breed and produce a litter of healthy cubs.

Breeding Vulnerable Species

THE ZOO educates people about zoo-based breeding programs and how they are critical to maintaining diverse and self-sustaining populations in parks accredited by the Association of Zoos and Aquariums.

A “pig happy family”
The Bronx Zoo has a long history of breeding babirusas, a charismatic and somewhat unusual-looking species of wild pig native to Indonesia. Five-year-old Ivy recently joined the zoo’s babirusa group, and she and eight-year-old Ken have bred and produced a healthy piglet named Sprout. Including Ivy’s baby, 32 babirusa piglets have been born at the Bronx Zoo since 1986.

MEET A WCS EXPERT

John Scott
NEW YORK AQUARIUM MARINE MAMMAL AND BIRD KEEPER

Q: What is your typical day?
JOHN: We begin at 7:00 am with frozen fish: sorting and weighing the restaurant quality fish we feed our animals. We then do three or four rounds of training, with cleaning and project work in between. I care for the California sea lions and otters, harbor seals, and African penguins. The training mostly replicates their behaviors in the wild, but we also include a few human behaviors, like waving, and show our close bonds with the animals to maximize the connection our visitors feel.

Q: What are some of your most memorable moments? I love every moment with our 800-pound sea lion Clyde. He’s so chill. No one would ever describe me as chill, so it’s a nice yin and yang. And he’s such a gentle giant. We worried about how he’d do with our little six-month pup Marco, who was a tenth his size, but they played together all the time. And he’s always engaged; it’s cool to see the gears turning in that big head of his. I’ll also never forget this Memorial Day, when with about 200 visitors I got to watch our sea lion Arianna give birth. It was incredibly moving and I thought, ‘Wow, this is my JOB!’

Q: What are your hopes for the future? I hope to be the role model I never had, growing up as a gay kid interested in wildlife. I want to open doors for others left outside. The usual career path—beginning as I did with unpaid internships—closes our anyone that can’t afford that. Paid entry-level jobs like those at our Children’s Zoo at the Bronx Zoo help grow the diverse groups of leaders the world needs.

Environmental issues impact all of us. Burning fossil fuels harms our animals through climate change but also causes high rates of asthma in my Queens neighborhood. Our work at WCS is all about legacy, what we leave for the future. I want ours to be the generation that stopped species extinctions and climate change.

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Protecting Nature’s Strongholds

Vast wilderness areas may seem far removed from our daily lives, yet the survival of life on Earth depends on preserving the Congo basin’s tropical forests, the Arctic and boreal forests, the coral-studded reefs of Melanesia, and many other intact places around the world on land and sea. But today, less than a quarter of our planet remains wild.

That is why WCS has made a commitment to conserve 60 make-or-break strongholds across the globe. Nature’s Strongholds are the planet’s remaining areas of protected wilderness, and WCS’s core mission is to fully conserve, restore, and rewild these places and the countless species that depend on them, including our own. Our goal is to safeguard half of life on Earth by winning strong national and international commitments to secure these strongholds, which span over 9.6 million square kilometers—more than 2.5 times the size of the United States.

In this section, we spotlight three strongholds where we have achieved progress, thanks to our science-led approach and longstanding trusted relationships with Indigenous Peoples, local communities, and government partners. We now aim to scale up our successes for still greater impact. WCS is helping to rally the global community around the ambitious goal of protecting 30 percent of our planet by 2030—prioritizing intact places with the greatest biodiversity and climate change resilience, and turning commitments into action.

“Nature’s Strongholds contain disproportionate amounts of the planet’s wildlife and intact ecosystems—and are also our greatest asset in tackling climate change, the collapse of biodiversity, and zoonotic pandemics.”

— JOE WALSTON
EXECUTIVE VICE PRESIDENT, GLOBAL CONSERVATION PROGRAM
WCS is at the vanguard of the movement to protect, restore, and rewild Nature’s Strongholds.

Nature’s Strongholds are our planet’s remaining intact forests, coral reefs, savannas, mangroves, peatlands, and other wilderness areas with the greatest ecological integrity, size and diversity of species populations, and resilience to climate change. We aim to conserve more than 60 of the most extraordinary strongholds for wildlife—to sustain life-giving ecosystems and conserve half of the planet’s biodiversity.
Ndoki-Likouala: A North Star for Stronghold Conservation

In the late 1980s, WCS conservationists walked and canoed hundreds of miles through the Republic of Congo’s Ndoki-Likouala Stronghold to survey its wildlife and forest habitat. In 1993, WCS helped the Congolese government establish Nouabalé-Ndoki National Park to protect one of the most biologically intact forest ecosystems on the African continent: more than 4,000 square kilometers of contiguous lowland rainforest, a vital stronghold for forest elephants, gorillas, and chimpanzees. Since then, we have collaborated with the Congolese government to conserve this land, and in 2014 entered into a public-private partnership that delegated WCS full management authority.

Today, Ndoki is one of the rare places in Africa where elephant and ape populations have stabilized or increased over the past 15 years, a stark contrast to population crashes seen across much of the two species’ African range. How we have achieved our results illuminate WCS’s pioneering approach, and has made Ndoki a paragon of the stronghold model. Below are just a few highlights from the last year.

Stepping Up Patrols and Convictions

As of March 2021, no elephants had been poached in the park for the past six months.

WCS’s Wildlife Crimes Unit played a critical role in identifying and dismantling criminal trafficking networks. From a conviction rate of zero for regional wildlife crime in 2015, we are now supporting prosecutors to achieve a 75 percent conviction rate. In the last two years, the rate of maximum-penalty convictions has doubled. Last summer, the most prolific elephant poacher and ivory trafficker in the area was the first to be sentenced in Congo’s criminal court and sentenced to 30 years—proof that we are gaining traction in stopping Congo’s dangerous wildlife criminals.

WCS grew Ndoki’s trained ranger force and helped increase patrol coverage to more than 84,000 kilometers of crucial forest and river habitat. In more than 150 patrols, rangers eradicated 116 illegal hunting camps, and seized 1,492 snares within the park and its periphery.

WCS established aerial surveillance operations and introduced real-time communications technology.

Supporting and Empowering Local Communities During the Pandemic

The rise of COVID-19 magnified the struggles of the people and wildlife living at the periphery of the park. When the government declared a full lockdown at the start of the pandemic, the Nouabalé-Ndoki National Park was declared an “essential service” to enable operations to continue. Because of this, WCS supported the Nouabalé-Ndoki community teams were able to conduct an ongoing COVID awareness campaign and provide hand-washing stations to the villages of Bomassa, Kabo, and Makaa. WCS also supported the provision of food and transport of community members to local markets in the absence of any other transportation, providing an alternative to bushmeat consumption, which saw a fourfold increase during lockdown. And we donated 4,000 pairs of gloves, 1,500 facemasks, and infrared thermometers to two health centers in the region.

Activating Responsible Ecotourism Opportunities

WCS has launched a four-year program with the Congolese Government, in partnership with the Congo Conservation Company and the US Agency for International Development (USAID), to create the first professionally managed ecotourism operation, which could contribute an estimated 25 percent of the park’s operating budget over the next 10 years. The partnership will enable us to:

- Build two eco-lodges in the park’s periphery
- Train local communities in hospitality and management skills
- Diversify local livelihood opportunities
- Build and enhance two eco-lodges in the park’s periphery
- Train local communities in hospitality and management skills
- Diversify local livelihood opportunities
- Build two eco-lodges and enhance local communities through revenue sharing of tourism fees

Looking Ahead

We aim to further strengthen Ndoki’s management and infrastructure, to keep wildlife populations stable and recovering over time. WCS will also apply the lessons learned in Ndoki and scale up our impact in other strongholds, such as DRC’s Okapi Wildlife Reserve and Mozambique’s Niassa Special Reserve. Our overarching strategy is to continue protecting intact ecosystems within, and beyond, protected areas.
Indonesia is home to an astounding 17 percent of the world's species, including the longest list of endangered species: 126 birds, 63 mammals, and 21 reptiles. In Sumatra, the Gunung Leuser National Park and its surrounding forests represent one of the last great intact wilderness areas on Earth, so the significance of this 26,000-square-kilometer haven is difficult to overstate.

Leuser's old-growth, biodiversity-rich forests and peatlands remain remarkably healthy and intact, acting as nature's lungs and helping to provide oxygen to the world. We need to act quickly to protect this biodiversity powerhouse and its essential ecosystem services that locally benefit more than 5 million people, particularly 862 villages around the national park.

Looking Ahead
This is a pivotal moment for the Gunung Leuser National Park and its surrounding forest area. With MoEF, several of our collective goals are to:

- Increase the Sumatran tiger population by 10 percent and grow populations of other threatened species.
- Define new and enhanced strategies to conserve biodiversity and support communities around the national park by rolling out an “Integrated Prevention Model.”
- Reduce poaching and forest habitat loss across this vast landscape by a further 20 percent over the next five years.
- Continue to rapidly respond to community reports of human-wildlife conflict as a way to prevent retaliatory killings of threatened species, such as tigers and elephants.
- Install camera traps across a 1,000-square-kilometer core tiger area to monitor tigers and their prey in order to measure population trends and determine if adjustments are needed to the collaborative conservation strategy.

Partnering to Secure the Gunung Leuser National Park and Its Surrounding Forests in Sumatra

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- Define new and enhanced strategies to conserve biodiversity and support communities around the national park by rolling out an “Integrated Prevention Model.”
- Reduce poaching and forest habitat loss across this vast landscape by a further 20 percent over the next five years.
- Continue to rapidly respond to community reports of human-wildlife conflict as a way to prevent retaliatory killings of threatened species, such as tigers and elephants.
- Install camera traps across a 1,000-square-kilometer core tiger area to monitor tigers and their prey in order to measure population trends and determine if adjustments are needed to the collaborative conservation strategy.

Partnering to Secure the Gunung Leuser National Park and Its Surrounding Forests in Sumatra

This is a pivotal moment for the Gunung Leuser National Park and its surrounding forest area. With MoEF, several of our collective goals are to:

- Increase the Sumatran tiger population by 10 percent and grow populations of other threatened species.
- Define new and enhanced strategies to conserve biodiversity and support communities around the national park by rolling out an “Integrated Prevention Model.”
- Reduce poaching and forest habitat loss across this vast landscape by a further 20 percent over the next five years.
- Continue to rapidly respond to community reports of human-wildlife conflict as a way to prevent retaliatory killings of threatened species, such as tigers and elephants.
- Install camera traps across a 1,000-square-kilometer core tiger area to monitor tigers and their prey in order to measure population trends and determine if adjustments are needed to the collaborative conservation strategy.
WCS leads conservation programs in Fiji, Papua New Guinea, and Solomon Islands—countries which are part of the Melanesia region in the southwest Pacific. A unique and essential biodiversity stronghold, it provides nearly 11 million people with clean water, food security, livelihoods, and health benefits. The region’s waters make up a cornerstone of the Coral Triangle—a critically important marine area containing 75 percent of the world’s coral species and over 3,000 species of reef fish. A new WCS-led study has shown that the Coral Triangle is surprisingly resistant to climate change-related heat spikes, making it a sanctuary for coral reefs that play a central role in marine ecosystems and human livelihoods. But the Coral Triangle can only survive over the long term if we can reduce other human pressures, such as overfishing and pollution.

How can we better manage small-scale fisheries in the Coral Triangle and beyond? A key part of the answer lies in improving gender equality and inclusion within fisheries management.

Two recent studies that WCS conducted throughout Fiji, Solomon Islands, and Vanuatu highlighted that:

- Women fishers account for an annual catch of nearly 3 million tons of seafood a year, providing critical contributions to their household food and economic security. Yet their substantial contributions are not included in most official statistics, and therefore are unrecognized in fisheries management and policy development.

- When women are included in the planning, development, processes, and outcomes of small-scale fisheries management, these fisheries are more likely to be sustainable, and the benefits more fairly distributed.

WCS is working to help secure new government commitments to protect 30 percent of our world’s oceans by 2030; our work in Melanesia is a core part of this effort. In Fiji, WCS is supporting the creation of a network of 117 new near-shore tabu (no-take) areas within Locally Managed Marine Areas; we are also ensuring that women fishers from local communities are able to take leading roles in the management of these areas. In Papua New Guinea, WCS is working directly with women and other community members in the eastern part of the country to establish a new coastal MPA (2,500 square kilometers) and a new offshore MPA (5,000 square kilometers), both of which will be critical for community livelihoods as well as conservation of key fish and ray species.

More quantitative information about the volume and size of fish and invertebrates harvested by women would greatly improve the sustainable management of key species within coral reef ecosystems.

Following these recent studies, WCS is collecting more data to help ensure women’s catches are counted and included in all statistics, analyzing the outcomes of local management through a gender lens, and we are advocating for greater participation of women in fisheries management decisions and policies.

Looking Ahead

Across our ocean strongholds, WCS is working to help secure new government commitments to protect 30 percent of our world’s oceans by 2030; our work in Melanesia is a core part of this effort. In Fiji, WCS is supporting the creation of a network of 117 new near-shore tabu (no-take) areas within Locally Managed Marine Areas; we are also ensuring that women fishers from local communities are able to take leading roles in the management of these areas. In Papua New Guinea, WCS is working directly with women and other community members in the eastern part of the country to establish a new coastal MPA (2,500 square kilometers) and a new offshore MPA (5,000 square kilometers), both of which will be critical for community livelihoods as well as conservation of key fish and ray species.
Q: Why is preserving the forest important for the Tacana?

YACIRA: Since the time of our ancestors, we have lived within nature. Without it, we cannot exist. Our “big house,” as we call it, is the source of our ancestral knowledge, of our medicines and food. We live by hunting, fishing, harvesting wild fruits from healthy forests; we settle alongside lakes and streams because they provide for our daily lives.

Q: How has WCS helped with that effort?

YACIRA: Ever since WCS’s Rob Wallace and Lilian Painter first came to us more than 25 years ago, WCS has been an important ally to our 20 communities, and our main partner in collecting vital information about our territory. With their scientific support in counting and mapping our many plants and animals, butterflies, fishes, and reptiles, we were able to develop the ecotourism project I work on at the San Miguel del Bala Lodge. WCS also helped us develop materials about jaguars, giant otters, caiman, and other local species in Tacana, Spanish, and English.

Knowing where our animals live and move enabled my community to designate areas for specific activities: this zone for community tourism, that one for hunting or harvesting. This research also allowed us to determine how many fruits we could harvest, how often we could hunt agoutis or other animals and still see them in our tourism areas and sustain them for the long-term. Knowing how much territory each of our communities needs for subsistence also helped us reclaim title to our land. WCS has even supported recovery of our Tacana native language.

To work together like this, we had to overcome great mistrust. At first, our people kept asking: ‘Why are they here? What do they want? Why should we limit our traditional hunting and fishing?’ WCS organized workshops to listen, and to answer these questions. After many workshops, we learned to say ‘We want this’ and ‘We do not want that’ in a beautiful and collaborative way.

Q: What are your hopes for the future?

YACIRA: As the only woman guide in Bolivia’s Amazonian region, I hope WCS will continue to support the development of our women into leaders defending the forests and heritage we’ve fought for, particularly in the face of new threats like gold mining that can damage our rivers and fisheries. Building respect for our Indigenous territory, culture, and voice is critical to preserving Madidi and our communities.

Our people have adapted and continue adapting to change, from participating in scientific monitoring to welcoming tourism. By combining our traditions and knowledge with the skills and reach of WCS, we have been able to improve our well-being and create work opportunities for our young people within the forest community, so they don’t have to leave. Yet, we still have much to do to protect Madidi. As a person, a woman, a mother, a wife, and a spokeswoman of the Tacana nation, I ask: Let’s continue to walk forward together, hand in hand.

As a member of the Indigenous Tacana People, I work with WCS to protect our lands and raise public awareness of their rich biodiversity.

Trinidad Yacira
Cartagena Terrazas
Guide for the San Miguel del Bala Ecotourism Lodge in Madidi National Park, Bolivia

Madidi-Tambopata is one of the last intact landscapes on Earth. This unrivaled biodiversity haven is an important carbon sink that fortifies our natural defenses against climate change. WCS’s scientific expertise and the ancestral knowledge of the Tacana People have come together to strengthen protections for Madidi, reduce deforestation, and protect vital species.
We are seeing intensifying signs of climate change all around us, with profound impacts on human well-being and the wildlife and wild places that WCS protects. The climate crisis is the consequence of our broken relationship with nature—but nature could also be a powerful ally in the fight against climate change, if we choose to tap its immense potential. Indeed, nature-based solutions can provide nearly one-third of the action we need by 2030—quickly and cost-effectively—complementing other necessary climate solutions and buying time for them to be effective at scale.

Intact forests are particularly critical because they are massive carbon sinks for the planet. WCS research has revealed that the benefits of saving intact tropical forests are six times higher than current methods assume. But such ecosystems are disappearing fast. In this section, we share highlights from WCS’s drive to stop the loss of highly intact forests by 2030, securing a major essential sink and ensuring that the 510 gigatonnes of CO₂ these forests store stay out of the atmosphere. We also share stories about WCS using cutting-edge science to help wildlife, coral reefs, and communities adapt to our changing world.

“WeCS is leading the way on protecting our planet’s intact forests—and helping others understand why this is essential to meeting global climate goals.”

—CHRISTIANA FIGUERES
EXECUTIVE SECRETARY OF THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (2010-16)
WCS Climate Action

WCS uses cutting-edge science to understand the impacts of climate change, plan conservation for a rapidly changing world, and devise nature-based solutions to protect people and the environment.

This map highlights how we are leading the charge to curb climate change, help wildlife adapt, and mobilize strong climate policies at national and international levels.

Advancing Climate Science to Protect Coral Reefs
WCS is using robust science to evaluate the impacts of climate change on coastal ecosystems and forests. One example is MERMAID, the world’s first open-source coral reef data platform. This technology, developed by WCS and partners, enables conservationists to assess climate impacts on coral reefs and transform data into action. In countries like Fiji, information from MERMAID flows from scientists to local communities so they can track their progress toward protecting their vital marine resources.

Protecting Intact Forests as Carbon Sinks
To assess the health of forests, WCS developed a first-ever global metric to better understand such values as how much carbon a forest stores and its importance to local communities. WCS has used this Forest Integrity Index to ascertain which forests are essential to conserve—such as those within the ultradiverse Amazon and Congo basins.

We are protecting intact forests and other high-integrity ecosystems to cost effectively and swiftly address the climate crisis. WCS has a strong track record in 25 countries that are home to highly intact tropical forests which serve as extraordinary “carbon sinks.”

Spotlighting REDD+
Through a project to Reduce Emissions from Deforestation and Forest Degradation (REDD+) within Cambodia’s Keo Seima Wildlife Sanctuary, WCS and partners have reduced over 18 million tonnes of CO₂ emissions since 2010 by avoiding the loss of approximately 22,000 ha of forest, an area four times the size of Manhattan. Over the project’s lifetime, WCS has supported the sale of over $31 million of carbon credits for conservation and community development, including helping local people to secure title to their lands and practice sustainable agriculture.

Helping Wildlife and Communities Adapt
Around the world, WCS is helping people, ecosystems, and species adapt to the impacts of climate change. For example, we have identified the coral reefs that are most likely to survive the increased heat stress of our planet in the coming years, and are working with partners worldwide to win protections for these vibrant, resilient reefs.

In North America, we have supported more than 100 projects through the WCS Climate Adaptation Fund, helping species such as seabirds and walruses adapt to climate impacts as sea levels rise. And in places like Rwanda, WCS is leveraging support from the Green Climate Fund to reduce or limit greenhouse gas emissions while improving community resilience to climate impacts.

Strengthening Global Policy
WCS is working to ensure that nature-based climate solutions are at the forefront of global decision-making. In fall 2021 we are playing a key role in important opportunities to elevate and advance nature-based solutions, such as at the UN Climate Change Conference in Glasgow and the UN Convention of Biological Diversity in Kunming, China. These meetings will set the agenda for curbing climate change as well as restoring nature—and with input of WCS’s cutting-edge science, countries have now agreed to prioritize ecosystem integrity in setting goals and targets.

Engaging People on Climate at WCS Parks
WCS is strengthening content on climate impacts and solutions for visitors to our New York zoos and aquarium, including through in-park signage and interpretation, and in our education programs. At the New York Aquarium’s new Spineless exhibit, for example, we call out easy ways that our guests can help reduce pollution, destructive fishing, and climate change impacts—such as eating a more plant-based diet, choosing sustainable seafood options, and keeping trash out of storm drains.
Unlocking the Power of Intact Forests

The planet’s intact forests pump out oxygen and hold vast stores of carbon in their biomass. But WCS science shows that only 40 percent of the world’s remaining forests are intact—that is, not significantly disturbed by human activity. We lost nearly 10 percent of the planet’s last blocks of these forests between 2000 and 2016 alone to road building, mining, logging, settlement, fire, agricultural expansion, and infrastructure development. Overhunting of ecologically critical wildlife species further erodes the health of these unique places. If destruction continues at the current pace, at least half of what we have now will be gone by 2100—dramatically accelerating the rate of climate change.

WCS has an unparalleled long-term field presence in 25 tropical forest countries supporting 459 million hectares of highly intact forest, and trusted working relationships with government, Indigenous, and community partners in these countries.

In the past year alone, WCS has helped secure, expand, or improve protection for more than 2.5 million hectares of intact forests in 7 countries.

Securing the Critical Connection in the Maya Forest Corridor

Mesoamerica’s five great forests are home to nearly 8 percent of the planet’s biodiversity. They provide clean water, clean air, food to 5 million people—and hold nearly half the region’s forest carbon.

The Maya Forest, extending through Belize, northern Guatemala, and southeastern Mexico, is the largest of the five: a biodiverse ecosystem that is critically important to the local Maya peoples. Within Belize, the Maya Forest Corridor is the last forested connection between the magnificent Maya Mountains of Southern Belize and the rest of the 4-million-hectare Selva Maya Forest.

With WCS input, the government of Belize announced new plans to protect the corridor in 2020—but expanding sugar cane development threatens key areas. To forestall those threats, WCS worked with a strong coalition of partners to lay the political, social, and financial groundwork to finalize the corridor, which will connect 93 percent of Belize’s terrestrial protected areas, holding together Mesoamerica’s largest remaining forest.

Advancing Science to Catalyze Action

All forests are not equal. In order to protect those forests with the greatest biodiversity, climate, and social values, we must first be able to identify them. That is why WCS and partners created the first-ever global metric of forest integrity. Now the data is available to all—and will help inform targeted action to conserve, manage, and restore intact forests.

Safeguarding Canada’s Boreal Forests

One of the largest remaining intact forests in the world, the far northern Canadian boreal region has healthy ecosystems with a full suite of top predators including wolves and grizzly bears.

These forests have an astounding ability to store carbon—nearly twice as much as all of the world’s tropical forests combined—and are also essential to the culture and livelihoods of Indigenous Peoples who have lived in them for millennia.

But pressure is growing to push new mines, roads, and forestry operations into intact areas. To counter those pressures, WCS is providing technical support to the land use planning efforts led by the Indigenous Peoples who co-govern and steward the land and resources. This partnership has already protected 80 percent of the Peel Watershed in Yukon, 67,000 square kilometers of wilderness that are the spiritual heartland for the four First Nations whose traditional territories overlap the area.

Promoting Peatlands as Climate-Fighting Powerhouses

One of the largest remaining intact forests in the world—equivalent to the size of Spain—are some of the richest carbon sinks and strongholds for wildlife on the planet. WCS is protecting them, in partnership with Canada’s government and Indigenous Peoples, for whom these ecosystems hold great cultural and spiritual significance.

Promoting Peatlands as Climate-Fighting Powerhouses

One of the largest remaining intact forests in the world—the far northern Canadian boreal region holds major stores of carbon in their soils, formed by accumulation and decay of waterlogged plants and mosses over thousands of years. Since 2004, WCS has been working in the Hudson Bay Lowlands, the second largest peatland in the world—equivalent to the size of Spain. We are urging the Canadian government to invest in Indigenous Guardians to help monitor and protect the Lowlands; and to ensure that peatlands are no longer overlooked in climate policy decisions.

ABOVE: Intact forests provide vital climate benefits as well as critical habitat for wildlife, such as this jaguar in the Maya Forest. WCS is leading the way toward ending all intact forest loss by 2030.

Canada’s boreal forests (left) and northern peatlands (below) are some of the richest carbon sinks and strongholds for wildlife on the planet. WCS is protecting them, in partnership with Canada’s government and Indigenous Peoples, for whom these ecosystems hold great cultural and spiritual significance.

Looking Ahead

WCS seeks to halt intact forest loss by 2030. Our strategy is to:

- Advance rigorous science for measuring and valuing intact forests so their value can be recognized and incorporated into national and global commitments.
- Catalyze global action by securing new policy commitments, funding, and financial mechanisms that incentivize and reward intact forest conservation, working with forest champion countries.
- Accelerate and scale up protections in the world’s most important intact forest countries—where the carbon value and projected losses are greatest—together with community, Indigenous, and government partners.
HELPING SPECIES AND COMMUNITIES ADAPT TO CLIMATE CHANGE

As the impacts of climate change degrade ecosystems, disturb economies, and threaten human life at a greater rate than ever before, there is heightened urgency to help animals, habitats, and people adapt and build resilience to these impacts over the long term.

WCS is advancing on-the-ground adaptation projects globally in close partnership with Indigenous Peoples and governments—from ensuring that species have the space and ecosystem integrity they need to thrive, to making forests more resistant to wildfires by helping communities adapt how they earn their livelihoods.

The impacts of climate change degrade ecosystems, disturb economies, and threaten human life at a greater rate than ever before, there is heightened urgency to help animals, habitats, and people adapt and build resilience to these impacts over the long term.

Looking Ahead

Over the next five years, we seek to further improve forest management in the Congo Nile Divide and deliver additional nature-based benefits to nearly 1.4 million people. For example, we will work to lower sedimentation levels and improve water quality by helping Rwanda produce cleaner, cheaper hydropower energy. We estimate that we can help sequester more than 5 million tonnes of CO₂ equivalents by 2050—keeping Rwanda’s national CO₂ emissions negative throughout this time period. Through forest restoration, continued biodiversity monitoring, and ecotourism initiatives, we can secure a resilient future for the Congo Nile Divide’s mountain gorillas and other iconic species.
Guiding Climate Adaptation Efforts in the Changing Arctic

North America’s boreal and Arctic regions contain some of the world’s greatest wildlife aggregations and remaining expanses of intact ecosystems. But the climate crisis is hitting these strongholds harder and faster than anywhere else. The Arctic has warmed about twice as fast as the rest of the planet.

In the far North, many species such as polar bears, caribou, wolverines, walruses, seals, and migratory birds are being forced to adapt to profoundly different conditions. Humans are also adapting to this warming world, and some of those adaptations—including creating new shipping lanes where sea ice has melted—are increasing impacts on species already having difficulty surviving.

WCS is working to help Arctic species adapt in sustainable ways, and partnering with the region’s Indigenous Peoples who rely on the Arctic’s incredible wildlife and resources. For example, WCS is mapping the location of walruses in the Arctic as they adapt to climate change. Female walruses and their calves have had to move to land due to the loss of summer sea ice, and by doing so are closer to coastal villages and shipping lanes. With this WCS-supported monitoring data, real-time advisories can go out to mariners and airplane pilots to avoid areas where these iconic, at-risk animals are present across the Alaskan coastline.

Looking Ahead

Across North America, we seek to leverage our cutting-edge science, longstanding commitments to the places we work, and enduring partnerships with governments as well as First Nations and Indigenous communities to strengthen local stewardship and policy, and ensure these extraordinary ecosystems adapt and survive. To protect Arctic wildlife, we will advance monitoring techniques and lay the groundwork for new protected areas and other conserved areas that benefit both wildlife and people. We will also work with partners across the globe to monitor and protect the millions of birds that come to the Arctic to breed each summer, whose migratory habitats are under threat due to development and climate change.

Identifying and Protecting Climate-Resilient Corals

Half a billion people rely on coral reefs for food security and cultural traditions. Yet as climate change causes ocean waters globally to heat up and become more acidic, and sea levels to rise, the vast majority of coral reef ecosystems are at risk.

WCS is leading efforts to scale up global monitoring for sensitive corals—and targeting conservation efforts to those reefs with the best chance of surviving climate change. There is reason to be hopeful: in late 2020, WCS scientists discovered an incredible climate refuge within a rare ocean cool spot along East Africa’s Kenya-Tanzania coast after analyzing data we and our partners collected over three decades. Despite its modest size, we found that this cool spot is protecting large populations of corals from thermal stress, bleaching, and mortality, and therefore is providing a safe haven for vulnerable marine species. If well-managed, this region can serve as a sanctuary for threatened biodiversity, while providing high yields of foods central to the region’s unique cultural heritage.

Looking Ahead

Building on East African research and a similar study in Asia’s Coral Triangle, WCS scientists are making the case for coral reef protection globally, and showing that vulnerable species can survive climate change. We will work to identify similarly resilient environments and reefs across the world’s oceans, and encourage our government and community partners to focus conservation efforts on these safe havens.
We are deeply grateful to our generous private and public funders for their strong support and partnership, which enables us to deliver on WCS’s vital mission. This was especially true during the pandemic, when WCS, along with so many organizations and individuals, faced unprecedented hardships.

WCS’s parks were closed for months during the pandemic, shrinking a critical part of our attendance-based revenue. Despite this, we ensured the health and well-being of the animals in our care, as well as the safety of our staff. We also helped people connect to nature virtually when it was not possible to attend our parks in person—all while protecting hard-won conservation gains in the 60 countries where we work.

Our longstanding public-private partnership with New York City and New York State spans 125 years. This partnership enables WCS to advance science learning across the urban landscape and is a driving force behind our capital upgrades, animal care, and operations.

WCS’s track record of sustained conservation results also makes us a trusted partner of governments around the world. In FY 2020 (July 1, 2019–June 30, 2020), our global conservation programs received substantial support from more than 15 government funders, including the US, Germany, France, the UK, and Norway, as well as from 13 multilateral agencies such as the European Union, Global Environment Facility, Blue Action Fund, United Nations Development Program, World Bank, and Food and Agriculture Organization.

Without private philanthropy, WCS would not be able to accept these funds. Each dollar we receive from private donors allows us to leverage and put to work at least five dollars of additional funding toward the programs and operations described in this report.

We hope you feel proud of what we have accomplished together. Thank you.

### Financial Report

#### 2020 Total Revenue ($285.1 Million)

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<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Investment Income</td>
<td>3%</td>
<td>$9,796,486</td>
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<tr>
<td>Admissions, Memberships, and Visitor Services</td>
<td>19%</td>
<td>$54,862,292</td>
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<tr>
<td>Gifts and Grants</td>
<td>51%</td>
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<td>City of New York</td>
<td>25%</td>
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<tr>
<td>Other Income</td>
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<td>Total Revenue</td>
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#### 2020 Total Expenses ($318 Million)

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<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Fundraising and Membership</td>
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<tr>
<td>Management and General</td>
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<td>Zoos and Aquarium (incl. Visitor Services)</td>
<td>48%</td>
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<td>Global Programs</td>
<td>39%</td>
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<td>Total Expenses</td>
<td>100%</td>
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## CONSOLIDATED BALANCE SHEETS (JUNE 30, 2020 AND 2019, IN THOUSANDS)

### Assets

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<thead>
<tr>
<th>Description</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$2,709</td>
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<tr>
<td>Miscellaneous receivable</td>
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<td>Receivable from the City of New York</td>
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<tr>
<td>Receivable from the State of New York</td>
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<tr>
<td>Receivable from Federal sources</td>
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<tr>
<td>Contributions receivable</td>
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<tr>
<td>Non-US governmental and bilateral grants and contracts receivables</td>
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<td>Private organization grants and contracts receivables</td>
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<td>Inventories</td>
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<td>2,658</td>
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<td>Prepaid expenses</td>
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<td>4,035</td>
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<td>Advances to sub awardees</td>
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<tr>
<td>Investments</td>
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<tr>
<td>Amounts held in trust by others</td>
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<tr>
<td>Funds held by Bond Trustee</td>
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<td>3,122</td>
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<td>Property and equipment</td>
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<td><strong>Total Assets</strong></td>
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<td>$1,107,639</td>
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### Liabilities and Net Assets

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<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Accounts payable and accrued expenses</td>
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<td>Grants and contracts liabilities</td>
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<td>Annuity liability</td>
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<td>Line of credit</td>
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<tr>
<td>Loans payable</td>
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<td>Bonds payable</td>
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<td><strong>Total Liabilities</strong></td>
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### Net Assets (Without donor restriction)

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<th>Description</th>
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<tbody>
<tr>
<td>General Operating</td>
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<td>(3,019)</td>
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<td>Board Designated</td>
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<td><strong>Total without donor restrictions</strong></td>
<td>376,518</td>
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### Net Assets (With donor restriction)

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<tr>
<th>Description</th>
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<tr>
<td>Purpose restricted</td>
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<td>Endowment Corpus</td>
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<td><strong>Total with donor restrictions</strong></td>
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### Total Net Assets

<table>
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<tr>
<th>Description</th>
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<th>2019</th>
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<tbody>
<tr>
<td><strong>Total net assets</strong></td>
<td>803,780</td>
<td>842,779</td>
</tr>
</tbody>
</table>

### Total Liabilities and Net Assets

<table>
<thead>
<tr>
<th>Description</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Liabilities and Net Assets</strong></td>
<td>$1,115,446</td>
<td>$1,107,639</td>
</tr>
</tbody>
</table>

Additional updates on WCS’s financial information can be found at [wcs.org/financials](http://wcs.org/financials).
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  - Chair Emeritus

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  - Catherine and Blake Holden
  - Barbara Hebek Zucker

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  - Felicia Hamerman, Special Assistant to the President and CEO & Board Liaison

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- **Bronx Zoo**
  - Patrick R. Thomas, Vice President & General Curator

- **Central Park Zoo**
  - Craig Piper, Director of the Central Park Zoo

- **Prospect Park Zoo**
  - Denis McLean, Director of Prospect Park Zoo

- **Queens Zoo**
  - Michael T. Allen, Director of Queens Zoo

- **New York Aquarium**
  - Craig Piper, Interim Director of the New York Aquarium

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- **Charles Ceballos, Curator, Ornithology**

### Zoological Health Program
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### Exhibits & Graphic Arts Department
- **Susan A. Chin, Vice President of Planning & Design and Chief Architect**

### Education
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### Lists current as of October 2021
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For more information, contact Stephen Ham at 718 741 1619 or SHam@wcs.org.

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WCS’s Conservation Patrons are saving wildlife and wild places by giving at the $1,500 to $24,999 level. Patrons receive special conservation impact updates, invitations to insider events, recognition in the WCS Impact Report, and the option to receive zoo benefits with access to our five NYC wildlife parks.

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WCS Corporate Partners provide vital operating support of our conservation efforts through philanthropic giving, corporate membership, sponsorship, and cause marketing. Partnerships with WCS help corporations gain brand exposure, consumer loyalty, and community engagement, while aligning with an important cause that resonates with their consumers, employees, and investors.

For more information, contact Leah Wu Fell at 718 741 1651 or LFell@wcs.org.

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You can build a conservation legacy by designating WCS as a beneficiary in your will or trust. You can also name WCS as a beneficiary of your individual retirement account, life insurance policy, donor-advised fund, or brokerage account.

For more information, contact Emily Hirshbein at 718 741 1628 or EHirshbein@wcs.org.

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There are exhibits, galleries, and benches available for naming within well-loved spaces at our five wildlife parks. Naming an animal is also a unique way to provide critical support for the care, enrichment, and health of the animals at WCS’s Bronx Zoo, Central Park Zoo, Queens Zoo, Prospect Park Zoo, and New York Aquarium.

For more information, contact Stephen Ham at 718 741 1619 or SHam@wcs.org.

**Additional Information**

For information on how you can support the Wildlife Conservation Society, please call our Global Resources Division at 718 220 5090 or visit wcs.org. A copy of this annual report may be obtained by writing to the Chair of the Board, Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, New York 10460. In addition, a copy of the WCS’s annual filing with the Charities Bureau of the Office of the New York State Attorney General may be obtained by writing to the Charities Bureau, New York State Attorney General’s Office, 3rd Floor, 120 Broadway, New York, New York 10271.

The report can also be found online at wcs.org.

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The Trustees of the Wildlife Conservation Society suggest that, for estate-planning purposes, members and friends consider the following language of giving, which is intended described herein.”

“If at some future time, in the judgment of the Wildlife Conservation Society, it is no longer practical to use the income and/or principal of this

principal to be used as determined by WCS for its general purposes.”

You can build a conservation legacy by designating WCS as a beneficiary in your will or trust. You can also name WCS as a beneficiary of your individual retirement account, life insurance policy, donor-advised fund, or brokerage account.

For information on how you can support the Wildlife Conservation Society, please call our Global Resources Division at 718 220 5090 or visit wcs.org. A copy of this annual report may be obtained by writing to the Chair of the Board, Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, New York 10460. In addition, a copy of the WCS’s annual filing with the Charities Bureau of the Office of the New York State Attorney General may be obtained by writing to the Charities Bureau, New York State Attorney General’s Office, 3rd Floor, 120 Broadway, New York, New York 10271.

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