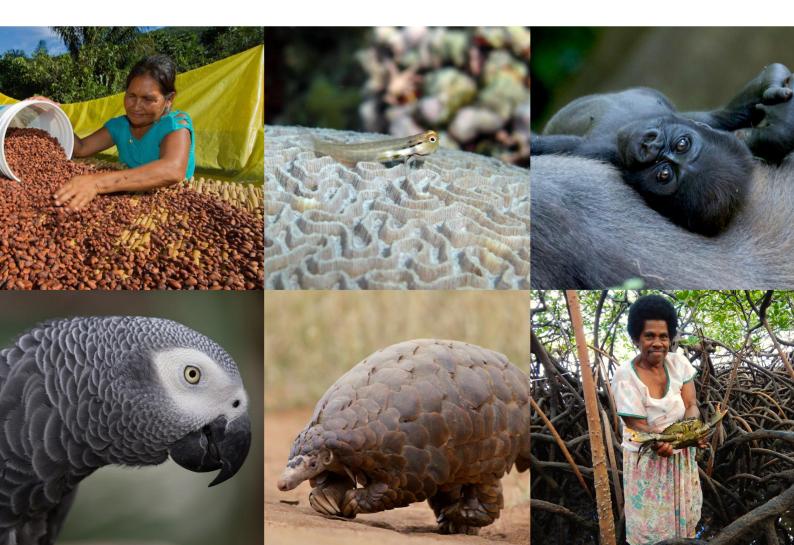




### Wildlife and Wild Places -Essential to achieving the Sustainable Development Goals





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### Acronyms

ACP CAMI CBD CEDP CMS	African, Caribbean and Pacific Group of States Central Asian Mammals Initiative Convention on Biological Diversity The Wildlife Conservation Society's Conservation Enterprise Development Programme Convention on the Conservation of Migratory Species of Wild Animals
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CIFOR	Centre for International Forestry Research
CIRAD	French Agricultural Research Centre for International Development
COMBO	Conservation, impact Mitigation and Biodiversity Offsets in Africa
DRC	Democratic Republic of Congo
EU	European Union
FAO	Food and Agriculture Organisation
GCF	Green Climate Fund
GEF	Global Environment Facility
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategies and Action Plan
NNNP	Nouabalé-Ndoki National Park
ODA	Official Development Assistance
REDD+	Reduced Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goal
SMART	Spatial Monitoring and Reporting Tool
SNAPP	Science for Nature and People Partnership
SRP	Sustainable Rice Platform
SWM	Sustainable Wildlife Management
TNS	Sangha Trinational
UN	United Nations
UNCAC	United Nations Convention Against Corruption
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
UNODC	United Nations Office on Drugs and Crime
UNTOC	United Nations Convention on Transnational Organized Crime
WCS	Wildlife Conservation Society
WHC	World Heritage Convention

#### **Delivering the Sustainable Development Goals**

Wildlife and wild places around the world have never been under greater threat from anthropogenic pressures, including (but not limited to) land conversion for agriculture and other use, climate change and the associated increase in natural disturbances, and escalations in the targeted exploitation of wildlife, including for the illegal wildlife trade.

Investing even a relatively small proportion of the global overseas development aid (ODA) budget in enhancing our natural environment and protecting wildlife species will deliver a high return on investment and substantially contribute to achieving a wide range of Sustainable Development Goals (SDGs).<sup>1</sup> Successfully achieving the SDGs that directly relate to biodiversity conservation (e.g. SDG 15 on Life on Land and SDG 14 on Life Below Water) will also deliver goals related to poverty alleviation, food security, sustainable agriculture and fisheries, health, economic development, peace and security, and climate change mitigation and adaptation.

The **Wildlife Conservation Society** (WCS) works with local and national governments, intergovernmental and nongovernmental organisations, local and indigenous communities, and other partners in more than 60 countries to help deliver the SDGs and their targets.

This document highlights how the conservation of wildlife and wild places plays a central role in achieving the 2030 Agenda for Sustainable Development, with illustrations from WCS's work. We also provide suggestions for future policy action.



Cheetah (Acinonyx jubatus). Credit: Julie Larsen Maher © WCS

### Interconnectivity of the SDGs

The SDGs are a universal call to action adopted by the United Nations (UN) in 2015, to address a range of global societal challenges, including ending poverty, protecting the planet and ensuring that all people enjoy peace and prosperity.<sup>2</sup> All 17 goals are interconnected and cannot be dealt with separately (see Figure 1). The key to success in achieving the SDGs therefore lies in holistic approaches.

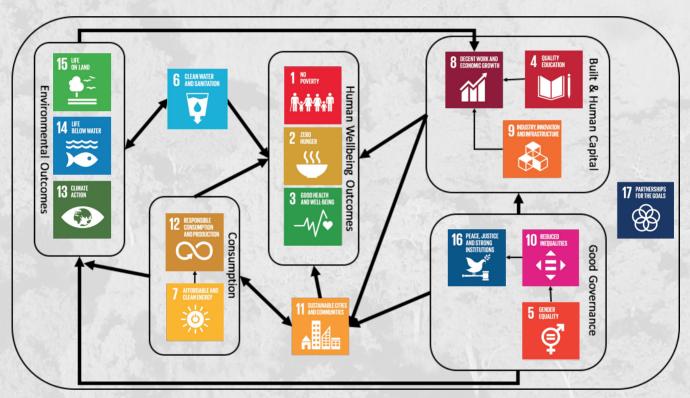


Figure 1. Interconnectivity of the SDGs. Credit: David Wilkie © WCS

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### CASE STUDY 1: The Sustainable Wildlife Management Programme

The seven-year Sustainable Wildlife Management (SWM) programme is an initiative of the European Union (EU) and the African, Caribbean and Pacific Group of States (ACP), which clearly demonstrates the linkages between wildlife conservation and the SDGs.<sup>3</sup> Led by the UN Food and Agriculture Organisation (FAO), it also relies on the expertise of the Centre for International Forestry Research (CIFOR), the French Agricultural Research Centre for International Development (CIRAD) and WCS.

In many rural areas, wild animals are being hunted to such an extent that they are rapidly disappearing from tropical forests and savannahs, creating a crisis for food security and health for the poorest who depend on hunting for their food, as well as a biodiversity crisis with some species in danger of extinction. Working closely with national authorities, the programme

will contribute to the conservation and sustainable use of wildlife by regulating wildlife hunting, strengthening the management capacities of indigenous and rural communities and increasing the supply of alternative protein sources such as chicken, livestock or farmed fish. If hunting wildlife for food is not reduced to sustainable levels, not only will biodiversity be lost, but countless numbers of families, whose livelihoods depend on natural resources, will suffer soaring levels of food insecurity and debilitating child malnutrition. The initiative also focuses on creating jobs in the farming sector, empowering women, and securing the rights of indigenous and traditional peoples to access the natural resources their livelihoods and cultures depend on. The programme thereby contributes directly to several SDG targets related to food security, sustainable land management and biodiversity conservation (see Figure 2).

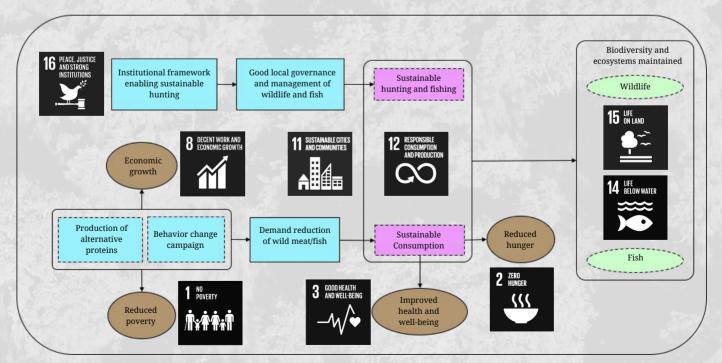


Figure 2. Theory of change: SWM and the SDGs. Credit: Diane Detoeuf © WCS

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### CASE STUDY 2: Nouabalé-Ndoki National Park (NNNP)

Created in 1993. NNNP is situated in northern Republic of Congo, covers an area of 4,238 km<sup>2</sup>, and is home to globally important populations of forest elephants, western lowland gorillas, chimpanzees, bongo, and many other endangered mammals. Partially funded by the EU, NNNP provides protection to wildlife through a collaborative management programme between WCS and the Congolese Ministry of Forest Economy and Sustainable Development.<sup>4</sup> NNNP is part of the Sangha Trinational (TNS) transboundary conservation complex in the North-western Congo Basin where Cameroon, the Central African Republic and the Republic of Congo meet. Due to its importance as an area of outstanding biodiversity, the TNS was awarded World Heritage site status in July 2012.<sup>5</sup> NNNP activities have focused on developing and implementing effective systems and strategies for protection, research, and monitoring,

with substantial capacity building programmes. Specific activities conducted include anti-poaching missions, law enforcement, ecotourism, conservation education large mammal monitoring, and ensuring that roads built by logging companies are sited away from the NNNP. A special focus is also placed on women and community development, for example, the NNNP assists pregnant women in undertaking prenatal examinations, supports mothers with their babies for vaccinations, and provides training on beekeeping practices to women associations.<sup>6</sup> The sound management of the NNNP thereby contributes to achieving several SDG targets related to health, resilient infrastructure, gender equality, sustainable land management and biodiversity conservation (see Figure 3).

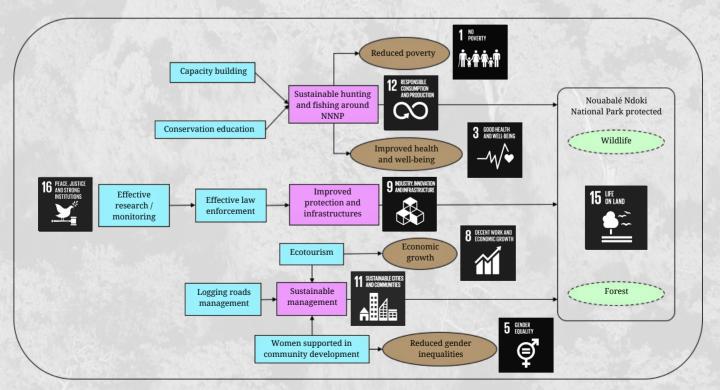


Figure 3. Theory of change: NNNP and the SDGs. Credit: Diane Detoeuf © WCS



Contribution of wildlife and wild places to the achievement of the SDGs

#### GOAL 1: End poverty in all its forms everywhere

Many poor and vulnerable rural populations, especially indigenous and other traditional people, are directly dependent on access to natural resources for food, shelter, and medicine. Conserving natural systems and the ecosystem services they generate is necessary for livelihood security and resilience to environmental stresses for many of the most isolated and poorest people on the planet. This is particularly important in the face of increasing climatic risks. For example, mangroves and coral reefs can act as buffers against the physical impacts of more frequent storms. Stabilizing forest slopes through afforestation, can significantly reduce the risks of landslides and floods that threaten agriculture communities and businesses.<sup>7</sup>



Mangrove forest in Kenya. Credit: Julie Larsen Maher © WCS

WCS works in 16 global regions that are home to 300 million people, some of whom are amongst the world's poorest and most vulnerable. Many of our programmes are based in and around protected areas and seek to sustain natural ecosystems that provide the basic necessities for people's lives. In Bolivia, WCS supports indigenous organisations' efforts to secure land and resources in traditional territories. In Papua New Guinea, WCS works with local communities to restore and conserve mangroves and protect coral reefs, which are important sources of natural resources and food.

# GOAL 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Healthy ecosystems are sources of nutritious food that are important for preventing malnutrition, especially for the most marginalized communities in rural and coastal tropical regions.<sup>8</sup> In Madagascar, for example, 30% of children in rural households that have lost access to wildlife as food are likely to have iron-deficiency anemia.<sup>9</sup>

Maintaining, protecting and restoring healthy terrestrial and aquatic ecosystems is essential to ensure year-round food security for vulnerable people in countries around the world, and can act as an insurance when food supplies are decreased for economic or climatic reasons. Coral reefs, in particular, provide vital spawning grounds for many commercially vital fish populations on which communities depend for their food and livelihoods but are very vulnerable to climate change.

Healthy ecosystems also underpin the long-term sustainability of agricultural and fishing industries. Many wildlife species, such as animal pollinators, for example, play vital roles in the functioning of agricultural systems.



Local fishermen in Belize. Credit: Julio Maaz © WCS

WCS works to maintain and improve the productivity of agriculture and fisheries while stewarding natural systems and maintaining the ecosystem services essential for the wellbeing of rural populations. In Cambodia, for example, WCS is trialing the Sustainable Rice Platform (SRP) in seven targeted villages in Kompong Thom Province, aiming to increase the sustainability of rice farming using various measures, ranging from water use, inputs, biodiversity conservation and labour rights.<sup>10</sup> In the Chaco and Pantanal grasslands of Bolivia and Brazil, WCS works with ranchers to improve cattle production while conserving natural ecosystems. As a partner in the 50 Reefs Initiative, WCS also works to protect coral reefs, which support 25% of all marine life worldwide and secure food and livelihoods for half a billion people.<sup>11</sup>

# GOAL 3: Ensure healthy lives and promote well-being for all at all ages

Ecosystem alteration and degradation (for example, arising from deforestation, coral reef destruction, mangrove removal) are linked to declines in public health. In particular, reduced biodiversity and habitat degradation can potentially heighten the transmission of infectious diseases.<sup>12</sup> For example, connections have been drawn between deforestation and an increased risk of malaria transmission and Ebola virus disease outbreaks.<sup>13</sup> Degraded ecosystems are also more vulnerable to the impacts of extreme natural events that can lead to loss of life and public health impacts. For instance, there is increasing evidence that tropical cyclones have greater negative public health consequences in areas with deforested upstream catchment areas by facilitating river sedimentation and increasing the incidence of typhoid and leptospirosis.<sup>14</sup>

Additional evidence suggests that upstream tree cover helps to maintain water quality, ultimately resulting in lower probability of childhood diarrheal diseases, which is a major cause of child mortality globally.<sup>15</sup> Conservation of protected areas helps to reduce harmful levels of air, water and soil pollution. Numerous studies also show that human health, especially mental well-being, is greatly enhanced by nature and biodiversity, and that decreased interaction with nature can be linked to depression and other mental illnesses.<sup>16</sup> Understanding and quantifying the human health linkages to natural ecosystems, and working with local communities and national and international health and environment agencies, is critical to implement appropriate policies and 'upstream' interventions.



Amazonian rain forest vegetation in Bolivia. Credit: Julie Larsen Maher © WCS

The WCS Wildlife Health Programme is working to better understand and quantify the human health linkages to natural ecosystems. For example, WCS is working to understand how environmental conditions in African tropical forests might be related to Ebola virus disease emergence. WCS also actively engages in Ebola virus outbreak prevention through education, surveillance, field diagnostics and response. In Cambodia, our research efforts have focused on the effect of deforestation on wildlife, including rodents, on humans, and on vectors such as mosquitoes and ticks, and how these changes influence the risk of infection with zoonotic pathogens. Through the Science for Nature and People Partnership (SNAPP), WCS is also involved in identifying ecological levers for health and drawing the attention of researchers to study this issue.

### GOAL 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Ensuring quality education, increasing awareness and knowledge of biodiversity, and developing creative thinking among the younger generation is key in achieving this and other SDGs, and in resolving some of our planet's most pressing issues.<sup>17</sup> In particular, indigenous and traditional knowledge are critical to the conservation and sustainable use of biodiversity.<sup>18</sup> Effective zoo and aquarium education programmes also help conserve global biodiversity by encouraging sustainable behaviours in people that visit zoos and aquaria.<sup>19</sup> Developing high quality national leadership is essential to ensure the conservation of natural resources but local training opportunities in developing countries are often limited.



Aquarium camp education at the New York Aquarium. Credit: Julie Larsen Maher © WCS

Through its urban complex of wildlife parks in New York City, which include the Bronx Zoo, Central Park Zoo, Prospect Park Zoo, Queens Zoo and New York Aquarium, WCS connects more than 4.3 million visitors annually to our global conservation field programmes and provides them with high quality information on species and conservation actions. WCS offers programmes geared towards all ages, abilities, and backgrounds, in order to engage new visitors, cultivate deeper relationships with underserved populations, and expand conservation awareness. Through its Graduate Scholarship Programme, which started in 1996, WCS has awarded 101 scholarships (56 for Master's degrees and 45 for doctoral programmes) to conservation leaders from 34 countries in Asia/Pacific, Africa, Latin America, and North American indigenous groups.<sup>20</sup>

# GOAL 5: Achieve gender equality and empower all women and girls

Women are often the primary users and traditional stewards of natural resources, possess unique knowledge of resource use and management, and can contribute significantly to the sustainability of resource use and poverty alleviation. In particular, rural women have a special and deep interaction with natural resources as they are often involved in collecting and producing food products, fuel, medicinal remedies and other raw materials.

The lack of ownership and control over land and resources by women combined with limited access to education and services, constitute major threats to the sustainable management of natural resources.<sup>21</sup> Equitable engagement of women is therefore key to effective natural resources governance and management.



Indigenous women of the Tacana Indigenous Territory in Bolivia. Credit: Eleanor Briggs © WCS

WCS supports women to secure their rights to natural resources and to build the governance systems needed to manage their resources sustainably. For instance, the Isoso women of the Bolivian Chaco initially had no say in the operations of their indigenous organisation – CABI. Today with the help of WCS, the organisation is more gender balanced and women have an equitable voice in natural resource access and use decisions. In Fiji, WCS has launched a number of initiatives such as the Women in Fisheries Programme to support the economic empowerment of rural fisherwomen and increase women's capacity to participate in decision making and leadership at all levels, from village to national government.<sup>22</sup>

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# GOAL 6: Ensure availability and sustainable management of water and sanitation for all

Protecting natural watersheds is essential to maintain critical ecosystem processes and services. Fresh water is an international resource that flows across political borders and therefore requires integrated management at all levels, including through transboundary cooperation. Many migratory freshwater fish species know no political boundaries and are the primary source of protein and income for millions of people. Sensitive water-related ecosystems, including high mountain glaciers, páramos, rainforests, wetlands, flooded forests, and lakes play a critical role in regulating flood risk and preventing droughts, while supplying clean water resources to downstream communities, agribusinesses and bottling plants. Conserving forests and watershed areas maintains natural water filtration and provides access to safe, regular and reliable sources of affordable drinking water, and studies show the role of watershed conservation in reducing diarrheal illness.<sup>23</sup>



Antisana Ecological Reserve in Ecuador. Credit: Galo Zapata-Ríos © WCS

In Rwanda, WCS works with the government, communities, and local partners to protect the Nyungwe forest, one of Africa's largest mountainous rainforests and one of Rwanda's major freshwater catchments, securing reliable supplies of high quality water for drinking, agriculture, manufacturing and energy production.<sup>24</sup> In the high Andes, WCS supports governments and communities to effectively manage wet páramos, montane grassland ecosystems found above the continuous forest line and below the permanent snow line, as an integrated part of larger Andean ecosystems. Building upon decades of working in the flooded forests of Brazil and Peru, WCS has launched the innovative Amazon Waters initiative that recognizes the value of fisheries, wildlife, and aquatic habitats in the western Amazon and the need to manage these resources sustainably to contribute to the quality of life of local people.<sup>25</sup>

### GOAL 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Pollution and waste generated from non-renewable energy sources threaten wildlife and wild places around the world as well as contributing to climate change. Additionally, millions of people rely on resources like wood, crop refuse or animal dung for cooking and heating some of which can lead to forest and habitat degradation. Renewable energy generated from biomass such as agricultural and forestry by- products can provide alternative sources of clean, reliable and affordable energy. The sound management and use of these cleaner, more renewable resources is critical to reducing dependency on fossil fuels and other harmful resources.<sup>26</sup>



Local women producing ceramic cook stoves in Bukavu, DRC. Credit: Fidele Kavuba © WCS

WCS works in several countries to ensure access to affordable, reliable, sustainable sources of energy. For example, WCS conducts projects that promote clean and energy-efficient cook stoves in Rwanda, the Democratic Republic of Congo (DRC) and the Republic of Congo. In the Nyungwe National Park in southwestern Rwanda, WCS launched the Community Enterprise Development Initiative, which provided energy saving cooking stoves to 200 households. In Bukavu in Eastern DRC, WCS's work combines the production and distribution of agroforestry tree seedlings with the reduction of firewood demand through the promotion of energy-efficient cook stoves.

### GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Many people living in rural or coastal areas depend on the natural environment for their subsistence needs, livelihoods and extra income in times of stress. Marine protected areas have been shown to provide economic benefits from increased fish catches and tourism. For example in Madagascar, reef surveys between 2013 and 2015 show a tenfold increase in fish biomass within Locally Managed Marine Areas.<sup>27</sup> Worldwide, around 1.6 billion people depend on forests for their livelihoods and 100 million people are employed in forest industries.<sup>28</sup> The unsustainable use of natural resources undercuts the livelihoods and job security of people who depend on them.

The establishment of sustainable business enterprises, such as ecotourism, provides jobs and revenues to support local community initiatives, contributes funds to protected area management, educates visitors about the value of wildlife and wild places, and can be compatible with local social, cultural and conservation conditions. A healthy natural environment can also contribute to long-term, sustainable economic development on a large scale. For example, Costa Rica has become known for its outstanding wildlife, developing a substantial ecotourism industry, which contributes  $\in 1.75$  billion to the economy annually and represents 8% of the economy and 13% of direct and indirect employment.<sup>29</sup>



COMBO workshop. Credit: © COMBO

WCS's Conservation Enterprise Development Programme (CEDP) finances and incubates promising new and existing business enterprises with long-term potential for environmental, social, and economic returns.<sup>30</sup> CEDP supports local people in developing new rural enterprises that increase families incomes by adding value to certified agricultural products and sustainable natural product harvesting practices. Through the Conservation, impact Mitigation and Biodiversity Offsets in Africa (COMBO) Project, WCS is supporting the governments of Guinea, Madagascar, Mozambique and Uganda in developing and implementing regulations that require no net loss of biodiversity for projects that will have an impact on the environment.<sup>31</sup> In South East Asia, WCS engages with the banking sector to promote the adoption of green principles such as the Equator Principles that require investors to follow the mitigation hierarchy.

### GOAL 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Infrastructure development, such as transportation, mining and hydroelectric power, frequently contributes to habitat degradation, ecological fragmentation, loss of natural resources, and ancillary impacts such as unsustainable hunting. Promoting smart, green infrastructure development therefore helps mitigate impacts on biodiversity and ecosystem services. For instance, coral reefs and mangrove forests are reliable and cost-effective natural infrastructures as they protect coasts against flooding and extreme weather events, while urban green belts and vegetation can absorb surface water runoff and help reduce erosion.<sup>32</sup>



Logging concession in the Republic of Congo. Credit: Mark Gately © WCS

WCS promotes smart, green infrastructure through a planning process that considers impacts of projects, ascertains the resource needs of impacted ecosystems and human communities, and identifies priority areas for conservation. In northern Congo, for example, WCS works with logging companies to site roads away from the Nouabale-Ndoki National Park and other ecologically sensitive areas. WCS is a partner with the Convention on the Conservation of Migratory Species of Wild Animals (CMS) on the Central Asian Mammals Initiative (CAMI) aiming to address the growing development of linear infrastructure across key habitats and migratory corridors, which constitutes one of the most significant threats to Central Asian large migratory mammals.<sup>33</sup>

#### **GOAL 10: Reduce inequality within and among countries**

Conserving natural systems and the ecosystem services they generate is necessary to protect livelihood security and the basic income of some vulnerable social groups, which helps to reduce inequalities. Women, indigenous peoples, and local communities are often marginalized and disadvantaged, while they are major bearers of unique knowledge and custodians of wildlife.<sup>34</sup> Key to reducing socioeconomic and political inequalities of marginalised rural groups includes ensuring rights to the sustainable management of natural resources and building an environment for equitable benefit-sharing.<sup>35</sup>



Local people, adults and kids in Madagascar. Credit: Julie Larsen Maher © WCS

WCS supports women and indigenous, First Nations, traditional and local people to secure their rights to natural resources and to build the governance systems needed to manage their resources sustainably. WCS empowers and helps local people regardless of their age, gender, origin, or religion to manage resource access and use within Sustainable Development Reserves (Brazil), Communal Reserves (Peru), Indigenous reserves (Bolivia), First Nations Lands (Canada), Traditional and tribal lands (DRC, Cambodia, Guatemala, the United States), Wildlife Management Areas (Tanzania and Zambia) and Locally-Managed Marine Areas (Belize, Melanesia, Indonesia, Western Indian Ocean).

### GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable

All cities depend on the importation of water, food, fuel and other commodities. Helping urban dwellers better understand the impact of their consumption patterns and choices has proven a powerful motivator for them to reduce their environmental footprint, and the aggregate impact of cities on biodiversity.

Cities are drivers of change and can move to alternative and more sustainable forms of urban land use, transportation and energy use. In addition, green space and natural environments within cities have a net positive impact on mental wellbeing.<sup>36</sup>



Sea lion pool at the Central Park Zoo in New York City. Credit: Julie Larsen Maher © WCS

In New York, WCS works with the private and public sector to develop nature goals for the city, and protects green space through the world's largest system of urban zoological parks, including the famous Bronx Zoo. WCS is also a partner with the Brooklyn Bridge Forest initiative, which allows one of New York City's most important landmarks, the Brooklyn Bridge, to be preserved sustainably through the replacement of the boardwalk's aging planks with sustainably harvested rainforest wood.<sup>37</sup> In addition, WCS participates as an observer to the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Convention (WHC), and supports the efforts of the Convention and its Parties to preserve the cultural and natural heritage of humanity. WCS also works on the ground in 32 World Heritage sites, in close collaboration with national and local governments and local communities.

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# GOAL 12: Ensure sustainable consumption and production patterns

The sustainable use of natural resources depends on balancing consumption with the ecological limits of natural resource production. This requires governance systems that are legitimate, capable and fair.

Supporting local communities is necessary to ensure the sustainable use of natural resources, especially wildlife, including freshwater and marine species. Working closely with corporations and financial institutions can help ensure that biodiversity conservation and the management of ecosystem services are included in their policies and practices, and that they have and use the tools to implement these approaches. Ensuring that commercial logging companies, for example, change their business practices to minimize the impact of timber extraction on wildlife populations and ecosystem services is critical.



Spectacled caiman (Caiman crocodilus). Credit: Dennis DeMello © WCS

WCS is working with local communities to ensure that any commercial off-take of natural resources is based on scientific evidence, well regulated, and sustainable. WCS works with commercial logging companies in the Republic of Congo, for example, to change their business practices to minimize the impact of timber extraction on wildlife populations and ecosystem services. In Bolivia, WCS is working with the Tacana indigenous people to implement management plans for the sustainable offtake and trade of spectacled caiman.

## GOAL 13: Take urgent action to combat climate change and its impacts

Intact natural ecosystems play a key role in combating climate change and its negative impacts. Intact forests, peatlands and oceans help to mitigate the impact of climate change by absorbing carbon. In addition, ecosystembased adaptation has been shown to provide an effective approach to climate change adaptation, for example, salt-marshes and mangroves can protect coastlines from storm surges, coastal erosion and flooding caused by sea level rise.<sup>38</sup> Vegetation cover is important for preventing soil erosion and desertification, and forests stabilise slopes and protect against flooding and landslides from increased rainfall. Freshwater wetlands reduce the impact of floods and provide water storage to protect against droughts.<sup>39</sup>

Developing plans to help people and wild species adapt to climate change, and modifying existing development and conservation policies and strategies are critical to respond to present and future climatic changes.



Mangroves in Kenya. Credit: Julie Larsen Maher © WCS

Through the WCS Climate Adaptation Fund, we have awarded more than  $\notin$ 11 million to 78 innovative and science-driven projects responding to the impacts of climate change on wildlife and people across the United States.<sup>40</sup> We are protecting large swaths of tropical forest that sequester carbon through the Reduced Emissions from Deforestation and Forest Degradation (REDD+) mechanism and we are projected to have helped avoid at least 43 million metric tons of CO<sub>2</sub> emissions through two of our REDD+ projects, in Cambodia and Madagascar. WCS also partners with WWF and Birdlife International in the Trillion Trees initiative aiming to conserve and restore forests and increase the scope and scale of our work on REDD+. In Uganda, WCS is helping design climate resilient approaches to ecosystem management that both protect wildlife species and help secure the livelihoods of the rural poor. In Papua New Guinea, WCS has created two climate change resource centres for use by educators, the public and school groups.

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### GOAL 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

It is critical to improve the sustainability of coastal fisheries operating in tropical developing countries, where biodiversity is highest and local people and economies are highly dependent on healthy marine ecosystems. Today 90% of all fishers operate in small-scale coastal fisheries, live in developing countries, and are dependent on a sustainable catch from the ocean for food security and livelihoods.<sup>41</sup> Improving marine resource governance and the sustainability of coastal fisheries will lead to an increase in fish biomass, ultimately helping to restore ecosystem health and fisheries production. Investing in mangrove protection and restoration, conservation of intact seagrass beds and the identification and protection of climate refugia for coral reefs will help enhance local community resilience.



WCS staff survey coral reef health in Madagascar. Credit: Emily Darling © WCS

The WCS's Marine Conservation Programme seeks to safeguard 90 percent of global coral species, reverse the decline of sharks and rays, and steward the recovery of marine mammals. We seek to rebuild local fisheries by ending overfishing of fragile coastal ecosystems and supporting measures that increase the available fish biomass. Through the  $\epsilon$ 14 million WCS Marine Protected Area (MPA) Fund, we are working in 19 countries with the goal of establishing one million km<sup>2</sup> of newly declared MPAs.<sup>42</sup> Within these MPAs, WCS is committed to long-term sustainable management, and for MPAs in coral reef ecosystems, reaching biomass targets that approach pristine levels. In recent years our efforts have supported the expansion of MPAs in Argentina, Bangladesh, Belize, Chile, Equatorial Guinea, Fiji, Gabon, Indonesia, Kenya, Madagascar, and Nicaragua. Based on sound science and with community engagement, WCS supports sustainable small-scale fisheries management in 14 countries. Furthermore, as part of our efforts to find a balance between conservation and development in the marine environment, WCS is pioneering research and conservation efforts as part of a multi-stakeholder Working Group to reduce and mitigate the impacts of ocean noise pollution and ship strikes on whales and other marine mammals.<sup>43</sup>

### GOAL 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss

The natural environment, especially in the developing world, is now under great stress despite its proven benefits for human life, health and wellbeing, and current efforts are insufficient to respond to the range and scale of environmental problems. Biodiversity loss in particular is now at critical levels; a recent report concluded that populations of vertebrate species have declined worldwide by 58%.<sup>44</sup> According to the 2017 International Union for Conservation of Nature's Red List of Threatened Species, globally 41% of species of amphibians, 31% of sharks and rays, 25%

of mammals and 13% of bird species are threatened with extinction.<sup>45</sup> At the same time, there has been a massive increase in recent years in the poaching and trafficking of many wildlife species. Forest elephant populations in Central Africa declined by 62% between 2002 and 2011 mainly due to poaching for ivory<sup>46</sup> and more than 1,000 rhinoceroses were poached in South Africa in 2016, compared to 13 in 2007.<sup>47</sup> Tigers have declined from a wild population of 100,000 a century ago, to fewer than 4,000 today.<sup>48</sup>



Malayan tiger (Panthera tigris jacksoni). Credit: Julie Larsen Maher © WCS

WCS's goal is to conserve the world's largest wild places in 16 priority regions, home to more than 50% of the world's biodiversity, and reverse the decline of six priority groups of species – elephants, apes, big cats, sharks and rays, whales and dolphins, and tortoises and freshwater turtles. In the last 100 years, WCS has helped establish and manage more than 240 parks and protected areas, and we are currently working with partners to conserve more than 5 million km<sup>2</sup> of wild places. A core focus of WCS programmes is to end the illegal wildlife trade and the poaching that supplies it, through work with our government partners on monitoring, law enforcement, legislative and regulatory change, consumer behaviour change, and other interventions. In Africa, for example, WCS has supported the deployment of 'sniffer' dogs to detect wildlife products at key ports and airports. In Indonesia, WCS-supported Wildlife Crime Units have resulted in arrests of hundreds of wildlife traffickers, helped to disrupt criminal networks. In China and globally, WCS's targeted interventions work to close ivory markets and assist governments with enforcement.

### GOAL 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Conserving biodiversity and ensuring sustainable resource use depends on good governance, anti-corruption efforts, and appropriate incentives to maintain the rule of law. Long-term sustainable management of natural resources is predicated on representative, democratic and transparent governance whereby the costs and benefits are distributed fairly.

The current scale of the global illegal wildlife trade not only endangers wildlife but negatively impacts communities in many low-income countries by undermining local security and governance. The trade in some wildlife products, such as ivory and rhino horn, has become so lucrative that highly organised international criminal networks are now profiting from it; these networks are often also involved in other criminal activities such as human trafficking, drugs and firearms. This instability undermines investment and economic development, not least for the tourism industry, which is heavily affected by the removal of iconic wildlife species from national parks and the threats to security caused by poachers and traffickers.<sup>49</sup> Rebel groups across sub-Saharan Africa are increasingly turning to the illegal wildlife trade to help finance their operations resulting in a climate of terror in many affected communities, a breakdown in local governance, and the deaths of hundreds of park rangers.

WCS works closely with indigenous and traditional peoples, local authorities, national governments, and the international community to strengthen governance of natural areas and wild species, and regulate access to and use of protected areas, halt illegal take of wild resources, and stop the international trafficking of wild species, and close markets for illegal wildlife products. For instance, WCS pioneered the development and deployment of SMART (Spatial Monitoring and Reporting Tool), now being used in more than 600 sites in 55 countries, which increases transparency and accountability of law enforcement patrols and greatly reduces opportunities for corruption.<sup>50</sup> WCS provides government partners with assistance in engaging intergovernmental organisations and the treaties and other institutions of global governance. WCS has active programmes in 14 countries of the UN List of Least Developed Countries, for example in South Sudan, Afghanistan, and Rwanda, and is committed to enhancing their effective engagement with relevant intergovernmental organisations and institutions.

# GOAL 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

The Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), WHC, and CMS are four of the major multilateral treaties that provide a global framework for the conservation and sustainable use of biodiversity. To ensure the adequate implementation of these treaties, financial support and stakeholder and government engagement are critical.

Under these Conventions, Parties work together to support biodiversity conservation, share knowledge and technologies, improve South-South and North-South cooperation, and enhance national and local capacities for policy and conservation.<sup>51</sup> Effective implementation of these Conventions is therefore key to the success of the SDGs.



WCS staff at the 17<sup>th</sup> meeting of the Conference of the Parties to CITES in South Africa. Credit: Mary Dixon © WCS

WCS is working at the intergovernmental level through CITES, CMS, WHC, and other treaties, the United Nations General Assembly (UNGA), and multiple UN agencies, including the United Nations Development Programme (UNDP), the United Nations Office on Drugs and Crime (UNODC), and UN Environment to support and provide timely scientific and technical information to governments. WCS works with government partners in multiple countries to enhance their ability to engage bilaterally, and with various treaties and international organisations.

### **Recommendations**

WCS urges the global community, including national and sub-national governments, the private sector, non-governmental organizations, and other stakeholders to increase their commitments to protect wildlife and wild places. We look forward to further contributing to joint efforts to fully deliver the full range of SDGs.

Specifically, WCS urges governments to:

1. Increase international cooperation on biodiversity conservation, including on actions agreed to within intergovernmental negotiations:

- Ensure that a robust and effective global framework for biodiversity conservation is adopted under the CBD in 2020 as the follow-up to the Strategic Plan for Biodiversity 2011-2020 and the current SDG Targets, including an overall target on nature retention and an explicit focus on safeguarding the world's most intact, resilient habitats through protected areas and other conservation approaches.
- Increase and strengthen bilateral and multilateral enforcement actions to combat wildlife trafficking and transnational organized wildlife crime as agreed in UN General Assembly resolutions A/RES/68/205, A/RES/69/314, A/RES/71/326, as well as Resolutions and Decisions agreed to by the Parties to CITES.
- Increase ambition and funding in multilateral environmental financial mechanisms including the Global Environment Facility (GEF) and the Green Climate Fund (GCF). This could include increased support for REDD+ results-based payments and other forms of climate finance that contribute to the conservation of forest landscapes.

2. Effectively implement national commitments and policies, including those made in response to intergovernmental negotiations:

- Develop and implement comprehensive national strategies to combat illegal wildlife trade (commercial trade in contravention of CITES and national laws), including through well resourced, interagency law enforcement partnerships, increased capacity of law enforcement and the judiciary to address wildlife crime, and intelligence-led efforts to identify, disrupt, and dismantle the critical elements of organized crime networks trafficking threatened species for financial gain.
- Improve legal frameworks to reduce opportunities for trafficking in wildlife and facilitate effective, deterrent enforcement, including the adoption or amendment of legislation so that wildlife trafficking is a "predicate offense" to ensure asset forfeiture, ensuring that organized wildlife trafficking is treated as a "serious crime" as recognized and addressed by the UN Convention on Transnational Organized Crime (UNTOC), and that domestic ivory markets are effectively closed.

#### Recommendations

- In line with National Biodiversity Strategies and Action Plans (NBSAPs), increase efforts to achieve all Aichi Targets adopted in 2010 as part of the CBD Strategic Plan for Biodiversity, and adopt NBSAPs as government-wide, multisectoral documents that ensure sustainable conservation and appropriate use of natural resources.
- Fully resource and implement existing forest-related commitments to achieve goals under the CBD Aichi Target 5, the New York Declaration on Forests, the UN Strategic Plan on Forests 2017-2030, the Bonn Challenge (on forest landscape restoration), and SDG 15, with a special focus on protecting and effectively managing intact forest landscapes for their exceptional biodiversity, climate and watershed benefits.
- Identify and protect the Outstanding Universal Value of natural World Heritage sites, including through the implementation of decisions taken by the UNESCO-World Heritage Committee on natural and mixed World Heritage sites. This extends to recommendations directed to States Parties who are responsible for impacts on a World Heritage site in other States Parties' jurisdictions.
- Make conservation of biodiversity and critical wildlife habitat a high priority in national development assistance and foreign aid (ODA) budgets, recognizing the critical importance of the SDGs to biodiversity and habitat conservation, and the significant linkages between biodiversity, the SDGs, and the broader sustainable development agenda.

#### 3. Address transboundary threats and drivers of biodiversity loss, particularly where international and intergovernmental frameworks are lacking:

- Recognize the importance of healthy wildlife for healthy ecosystems, people, and livestock beyond their potential as reservoirs for infectious diseases, but as sentinels for ecological processes (including the effects of climate change), by endorsing The Manhattan Principles on *One World – One Health* ™ and including wildlife health as an important matter in global health strategies.
- Codify best practices for applying the mitigation hierarchy in international, national and/or subnational law and ensure that jurisdictional approaches to avoiding, minimizing and offsetting negative impacts from industrial development and extractive industries follow rigorous spatial planning and Strategic Environmental Assessments, and rely on the best available scientific and technical advice.
- Incorporate the unique value of intact forest, coral reef and other biodiverse habitats into efforts to achieve other relevant international goals, including the Paris Agreement's mission to limit climate change to an increase of 2 degrees Celsius, and Agenda 2030 goals on watershed protection and management, food security for indigenous peoples, and many others.

### Recommendations

- Increase national and international attention to the issue of corruption and its impact on wildlife and forest crime and focus on potential solutions, including through international development assistance and discussions taking place under the UN Convention Against Corruption (UNCAC).
- Remove deforestation from international and national agricultural commodity supply chains through changes by companies, banks and other private sector actors in relation to production, purchasing and investment practices, consistent with the New York Declaration on Forests and the commitments of the Consumer Goods Forum, underpinned by government policy decisions, civil society engagement and consumer demand.
- Eliminate harmful subsidies for industrial fishing and other extractive industries or industrial development, and otherwise transform the global financial system to be a positive driver for sustainable development and biodiversity protection.
- **Establish and effectively manage MPAs**, based on sound science and strong community and other stakeholder participation and support, with the goal of maintaining or recovering intact, functional marine ecosystems.
- Sustainably manage and protect marine and coastal ecosystems both within and outside of protected areas, taking a more integrated approach to land/sea and ocean management.
- End overfishing and ensure that all fisheries are sustainably and equitably managed, decision-making is based on sound science and inclusive, participatory processes, and there are clear benefits both for marine resources and local communities.
- Recognize the cumulative impacts of increased anthropogenic activity on marine biodiversity including in particular underwater noise pollution and take local, national and multilateral actions to mitigate these impacts.

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#### CRFDIT

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#### ACKNOWLEDGEMENTS

Susan Lieberman, Elizabeth Bennett, Janice Weatherley-Singh, Alfred DeGemmis, David Wilkie, Tim Tear, Chris Walzer, Sarah Olsen, Benita Hussain, Howard Rosenbaum, Jason Patlis, Sofia Sainz, Karen Tingley, Kate Mastro, Diane Detoeuf, Tim Rayden, Tom Evans, Rob Craig, Tom Clements, Kim Gruetzmacher, Mediatrice Bana, Sangeeta Mangubhai, Aaron Nicholas, Lilian Painter, Cecilia Florest, Chip Weiskotten, Pato Salcedo, Andrew Kirkby.

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Published on 21 January 2019.



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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.

The Niassa National Reserve, in November 2015, on the onset of the rainy season with trees displaying rich gold and red colours.

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