

Perspectives.

Issue No. 46



**Earth's
Hidden
Climate
Allies**

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Executive Summary

For a long time, there has been talk about the value of ecosystem services, including those critical for climate change mitigation, but little mention has been made of key actors in delivering these: wild animals. However, from small to big, from land to sea, wild animals are indispensable for the ecosystems to perform those services. Elephants, for example, trample on young trees and leave others behind with better access to light and water, helping them grow sturdier and absorb more CO₂. Whales, after filling up in the ocean depths, release nutrients in their waste when they rise to the surface, stimulating the growth of phytoplankton – the true lungs of the planet. And predators like wolves or sea otters play a vital role in maintaining the ecological balance of their habitats. Their presence helps ensure a diverse and healthy ecosystem, which is crucial for the habitat's ability to sequester and store carbon effectively.

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February 2024

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So, in addition to being sentient beings with intrinsic value, the thriving of wild animals also matters for climate change strategies. This, in turn, raises the question of how to protect them effectively—for their sake and ours. Unfortunately, land-use changes—to a significant part driven by industrial animal agriculture—along with the direct exploitation of species through fishing, hunting, and the wildlife trade greatly reduce the health, capacity, and number of wild animals and increase the extinction risk for entire species. Unless action is taken, natural carbon sequestration will dwindle. Protecting and restoring wild habitats and curtailing the wildlife trade are avenues to pursue to mitigate this. Key to the success of these strategies is the transformation of food production into systems that are sustainable and kind to all, complemented by a shift in consumption patterns towards more plant-based diets that are less land intensive. Only by doing so will we open up the much-needed physical space that will allow species to recover and increase their contributions to the natural carbon cycle.

How do we give these strategies the priority and resources they merit? At the global level, addressing climate change and protecting nature, including its animals, in tandem will be key, for example, through exploring synergies between the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). This, in turn, could strengthen the basis for regional and country-level prioritisation. For such prioritisation to happen, global commitments, together with intrinsic, cultural, recreational, and reputational values and motivations, are important. Still, a significant share of decision-making by governments and corporations alike is based on economic or monetary considerations that often overlook the benefits of protecting wild animals. In response, researchers suggest the valuation of nature as an avenue to capture its benefits more comprehensively, including from wild animals, as well as the costs arising from their loss. This would pave the way for increased funding to protect and restore their vital services. On the public sector side, taxes constitute the largest share of financing in

most countries' national budgets and are often spent on harmful environmental subsidies whose redirection could generate a double dividend. In addition, development assistance in lower-income countries and innovative financing instruments like debt-for-nature swaps could play supporting roles, augmented by complementary private-sector financing.

We can no longer afford to overlook the role animals play in climate mitigation when designing climate and sustainable development strategies. Luckily, research into their contributions, the value of nature, and the benefits of protection and restoration strategies are increasingly available to decision-makers. We can craft a sustainable future where both humans and animals thrive in harmony. Will we do it?

Introduction

Kelp forests inhabited by sea otters have been found to absorb 12 times as much carbon dioxide from the atmosphere than their otter-less counterparts. Because of their appetite for sea urchins – creatures that, if left without their natural predators, would multiply and devour entire kelp forests – sea otters increase kelp forest carbon storage by 4.4 to 8.7 megatons annually. To put that in perspective, that's akin to the CO₂ emissions from three to six million cars. Not only are sea otters endearing, but they are also efficient.

The relationship between sea otters and kelp forests is one of many examples of key alliances in our battle against climate change. When we allow wild animals to thrive, they can maintain, restore, and increase their habitat's capacity to provide climate mitigation services. In fact, studies show that wild animals could the carbon content in plants, soils, and sediments by 15-250% relative to the conditions in which they are absent.

Tragically, just as we begin to appreciate animals' carbon sequestration services, we find ourselves witnessing what scientists have dubbed the sixth mass extinction.

In 2022, WWF's Living Planet Report painted a grim picture: an average 69% drop since the 1970s across wild vertebrate species. Then, in September 2023, a report published by the journal *Proceedings of the National Academy of Sciences* concluded that in the last five centuries, 73 genera of tetrapods – amphibians, birds, mammals, and reptiles – have vanished, far more than expected if we were following natural extinction rates. It stated, "such mutilation of the tree of life and the resulting loss of ecosystem services provided

by biodiversity to humanity is a serious threat to the stability of civilization." A month later, the UN University's Institute for Environment and Human Security published a stark warning in its Interconnected Disaster Risks Report that 1 million plants and animals could be wiped out "within decades", with the loss of key species to "trigger cascading extinctions of dependent species" and raise the likelihood of ecosystem collapse. Extinction threats are posed by habitat damage and exploitative food systems, such as industrial animal agriculture, overfishing, and bottom trawling; pollution; the wildlife trade; poorly planned infrastructure; and the climate crisis itself.

Yet, amidst this bleak scenario, scientists have also told us there is still time to act – that we can still change course for policies and systems to protect and nurture nature. In doing so, we might still be in time to enlist the help of animals in our collective fight against climate change.

This article first explores wild animals' critical contributions to carbon sequestration, from herbivores to carnivores, small to big, and land to sea. Subsequently, we highlight strategies to support animals' carbon sequestration services. Finally, we look at the prioritisation of such strategies and their financing.

The risk of inaction is significant: critical ecosystems could transition from carbon sponges to carbon emitters if we fail to protect wild animal species. But so is the opportunity of action. It is high time to account for their role in climate strategies – for their survival and ours.

1. The critical contributions animals make to carbon sequestration

First, we need to understand animals' role in natural carbon cycles as a foundation for action. This poses the question: how and in what volume do animals contribute to carbon sequestration? Here we discuss three of many examples that illustrate how animals make a significant difference in natural carbon sequestration: Elephants, wolves, and baleen whales and mesopelagic fish.

Elephants: Environmental engineers

Herbivores can greatly affect how much carbon is stored in nature, which in turn can help slow down climate change. In areas with scattered trees (like savannas), large herbivores can redirect carbon from consumed plants into the soil via their waste. In dense forests (like rainforests), they can actually help increase tree carbon storage. They reduce competition among young trees and help spread seeds of long-lived tree types that store more carbon. This can result in forests storing 26-60 more tons of carbon per hectare.

The Finance & Development Magazine published by the International Monetary Fund (IMF) highlighted this in 2020, dubbing forest elephants "environmental engineers." Elephants' behaviour – including consuming or trampling young trees – provides a survival advantage to the trees they leave behind: better access to water and light so they can grow taller and larger, and thus

store more carbon. By the way they eat and poop, elephants have been shown, for example, to increase carbon sequestration in the Congo Basin between 7% and 14%.

Wolves: Forest regulators

Apex predators, such as wolves and sharks, also play a pivotal role in an ecosystem's carbon sequestration. They regulate herbivores and smaller predator populations and thus augment the trophic cascade, or food chain, throughout the ecosystem. The wolf best illustrates such carbon-storing effects of predators.

A 2016 report showed that wolves in North American forests can boost carbon storage in vegetation and soil by preying on moose populations. Also, their mere presence keeps moose on the move, averting their overgrazing. The carbon-offsetting effect of wolves – the study estimated – is equivalent to removing 6 to 20 million cars from the road annually.

Yellowstone National Park gives us a good example of the wolf's impact. Early 20th-century wolf extermination led to booming elk populations, resulting in overgrazing and devastating ecological consequences. With their reintroduction in the 1990s, this imbalance began to rectify, showcasing the indispensability of apex predators.



A family of wild Asian elephants

Photo: © Adam Oswell / We Animals Media

Baleen whales and mesopelagic fish: Oceanic carbon guardians

Through their dietary habits and life cycle, baleen whales, like blue whales, play a dual role in carbon sequestration.

It all starts with their appetite for small fish and krill – a small crustacean found in the open seas – which, before being eaten by the whales, have been feasting on phytoplankton. The latter fixes approximately 40% of all produced CO₂.

All that eating of krill gains whales about seven to nine tons of carbon weight in their body. When whales die, they often sink, burying away this carbon for millennia. Ed Goodall, from the Whale and Dolphin Conservation, explains, “The carbon in the [whale’s] carcass gets broken down and consumed by all sorts of species, and is then stored and cycled amongst the benthic community or locked into sediments where it can be locked away/sequestered for thousands, perhaps even millions of years.” He further points out a study from the Greater Farallones National Marine Sanctuary, which showed that these sunken whale carcasses contributed to approximately 60% of the sanctuary’s annual carbon sequestration, noting that this was more than the combined carbon uptake by the Sanctuary’s salt marsh, seagrass, and kelp beds.

But before they die, whales also enhance the ocean’s carbon sequestration through a process called the “whale pump.” They consume from ocean depths, then release nutrients near the surface in their waste, stimulating phytoplankton growth and further carbon capture. Initial research suggests reverting global whale populations to pre-industrial levels could increase CO₂ sequestration by over 1.5 billion metric tons annually.¹

Whales are not the only ones helping the ocean sequester carbon. Another often overlooked key player is the mesopelagic fish. Found in the ocean’s twilight zone, which lies between 200 and 1,000 metres below the surface, these fish travel vertically at night to feed on carbon-rich marine plants near the ocean’s surface before descending back to avoid predators in the daytime. With such a behaviour pattern, these fish shuttle carbon into the deep sea. And the amount is significant. Mesopelagic fish constitute 95% of all fish in the ocean. According to research from 2021, these fish are responsible for moving about 16% of the carbon from the ocean’s sunlit upper layers to deeper parts.

Animals matter because they’re sentient beings with intrinsic value. They also happen to play a critical role in ensuring a sustainable future, including through carbon sequestration services as illustrated by the examples above.

2. Safeguarding and restoring animals’ roles in climate change mitigation

Recognising animals as vital, albeit often overlooked, partners in our fight against climate change begs the next question: how can we safeguard and amplify their contributions?

By now, it is clear that the decline in biodiversity poses a significant threat to sustainable development. This decline disrupts ecosystems and undermines their ability to provide essential services, one of them being climate change mitigation. In 2020, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) concluded that land-use changes primarily drive this decline, closely followed by direct exploitation of animals, plants, and other organisms through fishing, logging, hunting, and the wildlife trade, among others. Unless action is taken to reduce the intensity of the drivers of biodiversity loss, IPBES estimates that around 25% of animal and plant species risk extinction, with many potentially disappearing within decades. As a result, natural carbon sequestration would dwindle.

To mitigate this, we need to protect critical habitat for wild animals and curtail wildlife trade. Additionally, rewilding is paramount to safeguarding and restoring wildlife populations within functional ecosystems. Both of these strategies are threatened by our current food system that relies heavily on land-intensive farming and the exploitation of wild animals at sea and on land. Transforming our food systems is therefore a third priority.

Safeguarding wildlife and their habitats

Thriving, wildlife-rich ecosystems are the foundations of human life, including because of their ability to absorb carbon and buffer climate change impacts. And yet, wildlife exploitation is on the rise for meat, recreational hunting, exotic pets, research and medical testing, and other purposes. According to UNEP’s report “Preventing the Next Pandemic”, regions witnessing growing population numbers and rising wealth have also seen a surge in demand for wildlife and their products.

Following the outbreak of COVID-19 in 2020, over 170 environmental, human rights, animal protection and faith-based NGOs introduced a collective Animals’ Manifesto. Key recommendations to reduce the use and exploitation of wildlife, include:

- **Better regulating the wildlife trade:** They recommend enhancing regulations for and phasing out live wildlife markets and commercial wildlife trade. Non-essential

1 An overview of assimilation of whale carbon data can be found here: Pearson, H. C., et al., 2023. Whales in the carbon cycle: can recovery remove carbon dioxide? Trends in Ecology & Evolution, 38(3), 238-249

wildlife uses, such as for fashion, luxury foods, and entertainment, should be curbed. A “positive list” regulating exotic pet ownership is also proposed.

- **Supporting sustainable livelihoods:** In parallel, communities dependent on wildlife trade should be assisted in transitioning to sustainable, safe livelihoods. This could come in the form of government support structures and safety nets. It could also come in the form of creating of socio-economic opportunities for local communities, such as through ecotourism. In this case, eradicating poverty and protecting wildlife can be concurrent goals, a view echoed by the UN General Assembly.
- **Tackling illegal wildlife trade:** An international effort to eradicate the illegal wildlife trade would align with the Sustainable Development Goals, and several global resolutions and conventions. For this, for example, the Global Initiative to “End Wildlife Crime” works with States to establish a protocol on wildlife crime under the UN Convention on Transnational Organised Crime.
- **Reevaluating what use is considered ‘sustainable’:** ‘Sustainable use’ is a cross-cutting concept increasingly employed in environmental agreements. It is crucial to establish stringent sustainability criteria that consider all uses and pressures on species,

including both legal and illegal wildlife trade, and incorporate the risks for human and animal health and well-being from wildlife exploitation. Given that wildlife exploitation is a primary driver of biodiversity loss, a highly precautionary approach is paramount.

As integral as wildlife is to biodiversity, so too are the habitats they call home. Ensuring the **conservation and protection of these habitats** is central to our battle against climate change and the biodiversity crisis. By preserving wild habitats, we not only guarantee a space for wildlife to thrive but also safeguard crucial ecological services these habitats provide.

An example of global efforts to protect wild habitats is the recently adopted UN High Seas Treaty. Covering nearly two-thirds of the world’s oceans, the high seas are areas beyond national jurisdictions. These vast expanses of open ocean are rich in biodiversity and, as discussed above, play a vital role in global climate regulation. Yet, they remain one of the least protected habitats on Earth, vulnerable to overfishing, deep-sea mining, and the effects of climate change. Scientists predict marine extinction risk will skyrocket in the next few years because of rapidly developing infrastructure in the oceans.



Great wildebeest migration crossing Mara river at Serengeti National Park - Tanzania
Photo: © Jorge Tung / Unsplash

A key measure from this agreement, which as of October 2023 has been signed by over 80 countries, is the establishment of Marine Protected Areas. These areas will provide sanctuaries for marine life, such as whales, sharks, and mesopelagic fish, and allow species that are overexploited to recover. As per the agreement, activity can occur in these areas but only “provided it is consistent with the conservation objectives” - meaning it aims to mitigate damage to marine life. This could mean limiting fishing activities, shipping routes, and exploration activities like deep-sea mining.

Making a positive climate impact: Animating the carbon cycle through trophic rewilding

Rewilding, a strategy increasingly adopted to enhance biodiversity, aims to restore healthy ecosystems by reintroducing animals in suitable habitats. This approach values animals not only for their intrinsic value but for their contribution to the integrity and functioning of ecosystems. It relies on the core animal welfare principle of freedom to express natural behaviour patterns.

The first section of this article elaborated on how animals aid in carbon storage within ecosystems. Building on this premise, safeguarding and augmenting animal populations can enhance carbon capture. This approach is called “trophic rewilding” and involves not just protecting animals but ensuring they are present in numbers significant enough to impact the ecosystem.

An example of the benefits of animating the carbon cycle through trophic rewilding is what happened in the Serengeti in the 1950s. Earlier in the century, the Wildebeest population had been largely obliterated by the rinderpest virus contracted from domesticated cattle. With the sudden reduction in grazing, standing grasses frequently fuelled widespread severe wildfires, releasing carbon into the atmosphere. After introducing a vaccine against the rinderpest virus, the wildebeest population saw a resurgence. Their grazing, and the introduction by insects of the wildebeest dung into soil, helped transform the savanna from a fire-prone grassland carbon source to a carbon sink, storing up to 4.4 million tons of carbon dioxide more than when wildebeest numbers were low.

Recent research underscores the profound potential of rewilding in carbon sequestration. A 2023 scientific paper showed that rewilding could capture an extra 6.4 gigatons of carbon dioxide annually. That would be over 15% of current global annual emissions from revitalising nine wildlife species alone.

Transforming food systems: necessary for biodiversity and climate change mitigation

Agriculture uses half of the world’s habitable land. A staggering 77% of this area is dedicated to animal farming, including land for grazing and cultivating feed

crops. This vast agricultural expansion, largely fueled by industrial animal agriculture, stands as a primary cause of land-use changes that decimate biodiversity.

The industrialisation of feed production spells trouble for many species. Birds, insect-eating mammals, and vital insect populations decline, a consequence intensified by the recurring use of chemical fertilisers and pesticides. But, not only are our food systems major contributors to biodiversity loss, they also contribute significantly to climate change. In 2019, IPBES estimated that nearly 25% of global greenhouse gas emissions come from land clearing, crop production and fertilisation. Animal-based food is responsible for three-quarters of this figure. Moreover, industrial agriculture, aquaculture, and fisheries are also major contributors to the pollution of aquatic and terrestrial ecosystems and the depletion of freshwater resources. An overhaul of our food systems is necessary. And, as UNEP notes in its latest Emissions Gap Report 2022, such transformation requires a combination of measures targeting the demand side, protection of ecosystems, and farm-level improvements.

Integrating animal welfare as an essential policy concern across our food systems can significantly contribute to preserving biodiversity and regenerating the world’s ecosystems. For instance, a shift towards plant-rich diets could free up billions of hectares for nature-positive land use, such as rewilding. By reducing dependencies on animal products, we could open up significant amounts of land for restoration and natural carbon sequestration. In oceans, reducing the extraction of vast numbers of fish and other marine species for consumption and feed would allow their populations to recover and increase their contributions to the natural carbon cycle. These would also be invaluable strategies for delivering on the biodiversity goals agreed upon in the Kunming-Montreal Global Biodiversity Framework (GBF), including the goal of protecting 30% of land and water by 2030.

Furthermore, transitioning the remaining animal production to high animal welfare systems that are



Photo: © Nikki Ritcher / #unboundproject / We Animals Media

integrated within ecosystems can support biodiversity, as highlighted by the International Panel of Experts on Sustainable Food Systems. Agroecological approaches can work in harmony with animals and their place within natural processes, supporting ecosystem services, such as pollination, temperature regulation, and carbon storage. By primarily relying on animal feed grown in integrated crop-livestock farms, these can further reduce the impetus for land-use change, thereby reducing negative impacts on biodiversity. However, such systems are only sustainable at significantly reduced numbers of animals farmed.

3. Prioritising and resourcing strategies that support animals' roles in climate change mitigation

Lastly, we need to implement the above strategies to make a real difference in the fight against climate change. The final set of questions therefore relates to how we give these strategies the priority they deserve in view of their benefits for humans and animals alike, and where do we find the resources to finance their implementation?

At a global level, enhancing synergies between the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD) could strengthen the basis for regional and country-level prioritisation. Addressing climate change and biodiversity loss in tandem is the key. With shared root causes for both crises, tackling them in isolation is a missed opportunity and can even be counterproductive. For instance, deep-sea mining, proponents argue, might provide critical metals for the green energy transition, recent studies indicate it would have a devastating impact on marine life, extending far beyond the immediate mining zones, potentially undermining carbon sequestration potentials. In contrast, nature-based solutions, like rewilding and safeguarding essential habitats, help combat climate change and benefit biodiversity and humans. For example, projections suggest that terrestrial-based Natural Climate Solutions could contribute to fulfilling one-third of the Paris Climate Agreement's emission reduction targets by 2030.

At the country level, strategies that help protect and restore nature can be, and are at times, prioritised in the public and private sectors of countries globally due to a whole range of different values and motivations, including intrinsic, cultural, recreational, and reputational ones. That said, a significant share of governments' and firms' decision-making is based on economic or monetary approaches. An example of such an approach is a cost-benefit analysis. When benefits stemming from nature and animals, often referred to as ecosystem services, are not assigned a value or the

value does not adequately reflect their contributions, there is a risk that they are overexploited (even from the anthropocentric perspective of sustainable use) and that insufficient resources are invested in their protection and restoration. We discuss below one approach to counter this oversight within the prevailing global economic system: the valuation of nature to facilitate its inclusion in economically informed decision-making.

Once strategies are prioritised, revenue sources can be used to fund protection and rewilding activities and support food system transformation as part of countries' public sector budget cycles. A significant share of this could come from redirecting subsidies that currently support harmful environmental practices. In lower-income countries, development assistance can supplement countries' own resources. Next to traditional approaches like a grant or (concessional) loan-funded projects, an example of an innovative instrument is a debt-for-nature swap as a mechanism to fund nature-based solutions, which could grow in scale because of skyrocketing debt levels in many developing countries following the pandemic years and the higher global interest rate environment.

Supporting the protection of nature by valuing it

While nature and animals have intrinsic value, in modern economic systems, the valuation of nature, which can be both quantitative and qualitative, helps stakeholders understand the worth of natural assets. As such, it can help promote informed decision-making encompassing environmental, social, and economic outcomes.

Recently, emphasis has grown on valuing nature for the economic benefits of its services. This involves economists allocating a quantifiable monetary value to make a compelling case for stakeholders to invest in the protection and restoration of the environment. An example of this is the Economics of Ecosystems & Biodiversity Initiative.

For the purpose of this article's topic, it is worth considering a framework developed by a group of researchers in 2020 to value nature-based solutions for climate change. The framework aims to guide the monetary valuation of individual species, like elephants or whales, as opposed to entire ecosystems. The methodology involves identifying the services provided by the resource, such as carbon sequestration, and forecasting the value of these services. They then compare these benefits with the cost of investing in them to calculate future returns that can be expressed in present monetary value.

To illustrate the framework, they applied it to value forest elephants in Africa. Research into the impact of forest elephants on carbon capture in central African forests revealed that a resurgence in forest elephant populations to historical levels would significantly increase the

carbon storage in these forests, owing to the elephants' positive effect on tree growth. By using the market price for carbon offsets, the researchers calculated the environmental value of this increased carbon storage. Their findings revealed that each forest elephant could be considered worth an astonishing \$1.75 million, based solely on the carbon they help the forest store. Similarly, initial rough estimates calculated an average benefit of \$2 million per whale, though further research is needed to substantiate such estimates (footnote 1).

Going back to the example I started with, a different study estimated that the amount of carbon stored by kelp forests reinforced by sea otters would be worth \$205-400 million using the 2012 price from the European Carbon Exchange (US\$47 per ton).

Such valuations, these researchers argue, could spur action by making individuals, the private sector, and decision-makers believe and relate to the need to preserve natural resources. That said, further research is critical and must be prioritised to fill knowledge gaps and devise robust processes to substantiate such valuations. In practice, any market-based implementation of such valuations would need to be carefully considered and cautiously implemented alongside other ways to value animals and nature. Then, they may open up new possibilities for action.

Selected ideas to boost resources for nature protection and rewilding

Debt-for-nature swaps are financial arrangements in which a portion of a developing country's foreign debt is exchanged for investments in environmental projects. These swaps are designed to address both economic and environmental issues, supporting a reduction in debt burden while creating fiscal space that is earmarked for nature conservation, rewilding, or similar activities. The financial instrument was developed in the 1980s, with the first swap occurring between Conservation International and Bolivia in 1987. Since then, around 140 swaps have been implemented.

In May 2023, Ecuador completed the world's largest debt-for-nature swap to date, supporting the conservation of the Galapagos Islands. Using a credit guarantee from the Inter-American Development Bank and political risk insurance from the U.S International Development Finance Corporation, the country bought back about \$1.6 billion of its debt at a close to 60% discount. As a result, Ecuador's debt was cut by over \$1 billion while providing \$450 million for conservation. With debt burdens rising in developing countries, including from pandemic impacts and increasing interest rates across major global currencies, debt-for-nature swaps can constitute a win-win situation for indebted governments, creditors, conservation organisations, and facilitating development institutions. The monetary

valuation of animals' carbon sequestration services could thereby serve as the analytical underpinning for debt-for-nature swaps, i.e., by correlating debt relief to the value of the services. The importance of animals and their protection should be included where such swaps are done (and this might be of particular relevance in Ecuador where animal rights have been recognised as part of the rights of nature).

Nature valuation could further pave the way for other policies safeguarding animals and their habitats. The researchers from the earlier referenced paper published by the IMF point to several options: Governments could establish meaningful and deterrent **finances** based on the value of animals' climate change mitigation services to deter damaging activities, for instance, ship-whale collisions or poaching. This could, in turn, foster innovations in monitoring, including by offering rewards for reporting damaging activities. In parallel, it could incentivise the private sector to **invest in protective measures**, e.g., to avoid ship collisions with whales.

Further, this could inform **biodiversity offsets** where these are used to fund conservation activities that (it is hoped) compensate for the impacts of development projects on ecosystems and species. Developing biodiversity offsets involves quantifying biodiversity value, determining equivalence between sites, finding suitable offset locations, and monitoring and verification. While critics argue it reduces nature to mere numbers and might distract from the need for reducing consumption and stronger regulation, its adoption is growing. For instance, the GBF proposes raising "\$200bn per year" by 2030, including from biodiversity offsets and credits. Where such approaches are used, they should include the protection of animals and their health and welfare.

Conclusion

The important role animals play in climate mitigation is undeniable, and we can no longer afford to overlook it when devising climate and sustainable development strategies. Sea otters, elephants, wolves, whales and other animals play critical roles in our ecosystems, helping one another and ourselves to thrive, sequestering carbon and maintaining natural food webs.

To maintain these roles, their habitats, their health and their welfare need protection. Our tools to achieve this include habitat protection; positive regulation of wildlife trade beyond what is currently illegal; rewilding; transforming away from industrial food systems to ones that better protect both those animals farmed and impacted wildlife; and reducing the overall impact on animals, climate and nature.

To do this, we need to re-evaluate what is sustainable to include animal protection, to value animals for themselves and for the roles they play, and to ensure those values are included in our economic and policy decision-making. Luckily, research into their contributions, the value of nature, and the benefits of protection and restoration strategies are increasingly available to motivate decision-makers and the private sector to invest in protecting wild animals and habitats. Our knowledge and tools to protect animals and the planet from climate change are growing. Now, we can craft a sustainable future where both humans and animals thrive in harmony. Will we do it?

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