Media Release: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Media Release

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Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating'

Current global response insufficient; 'Transformative changes' needed to restore and protect nature; Opposition from vested interests can be overcome for public good

Most comprehensive assessment of its kind; 1,000,000 species threatened with extinction

Nature is declining globally at rates unprecedented in human history — and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely, warns a landmark new report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the summary of which was approved at the 7th session of the IPBES Plenary, meeting last week (29 April – 4 May) in Paris.

"The overwhelming evidence of the IPBES Global Assessment, from a wide range of different fields of knowledge, presents an ominous picture," said IPBES Chair, Sir Robert Watson. "The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide."

"The Report also tells us that it is not too late to make a difference, but only if we start now at every level from local to global," he said. "Through 'transformative change', nature can still be conserved, restored and used sustainably – this is also key to meeting most other global goals. By transformative change, we mean a fundamental, system-wide reorganization across technological, economic and social factors, including

paradigms, goals and values."

"The member States of IPBES Plenary have now acknowledged that, by its very nature, transformative change can expect opposition from those with interests vested in the status quo, but also that such opposition can be overcome for the broader public good," Watson said.

The IPBES Global Assessment Report on Biodiversity and Ecosystem Services is the most comprehensive ever completed. It is the first intergovernmental Report of its kind and builds on the landmark Millennium Ecosystem Assessment of 2005, introducing innovative ways of evaluating evidence.

Compiled by 145 expert authors from 50 countries over the past three years, with inputs from another 310 contributing authors, the Report assesses changes over the past five decades, providing a comprehensive picture of the relationship between economic development pathways and their impacts on nature. It also offers a range of possible scenarios for the coming decades.

Based on the systematic review of about 15,000 scientific and government sources, the Report also draws (for the first time ever at this scale) on indigenous and local knowledge, particularly addressing issues relevant to Indigenous Peoples and Local Communities.

"Biodiversity and nature's contributions to people are our common heritage and humanity's most important life-supporting 'safety net'. But our safety net is stretched almost to breaking point," said Prof. Sandra Díaz (Argentina), who co-chaired the Assessment with Prof. Josef Settele (Germany) and Prof. Eduardo S. Brondízio (Brazil and USA). "The diversity within species, between species and of ecosystems, as well as many fundamental contributions we derive from nature, are declining fast, although we still have the means to ensure a sustainable future for people and the planet."

The Report finds that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history.

The average abundance of native species in most major land-based habitats has fallen by at least 20%, mostly since 1900. More than 40% of amphibian species, almost 33% of reefforming corals and more than a third of all marine mammals are threatened. The picture is less clear for insect species, but available evidence supports a tentative estimate of 10% being threatened. At least 680 vertebrate species had been driven to extinction since the 16th century and more than 9% of all domesticated breeds of mammals used for food and agriculture had become extinct by 2016, with at least 1,000 more breeds still threatened.

"Ecosystems, species, wild populations, local varieties and breeds of domesticated plants and animals are shrinking, deteriorating or vanishing. The essential, interconnected web of life on Earth is getting smaller and increasingly frayed," said Prof. Settele. "This loss is a direct result of human activity and constitutes a direct threat to human well-being in all regions of the world."

To increase the policy-relevance of the Report, the assessment's authors have ranked, for the first time at this scale and based on a thorough analysis of the available evidence, the five direct drivers of change in nature with the largest relative global impacts so far. These culprits are, in descending order: (1) changes in land and sea use; (2) direct exploitation of organisms; (3) climate change; (4) pollution and (5) invasive alien species.

The Report notes that, since 1980, greenhouse gas emissions have doubled, raising average global temperatures by at least 0.7 degrees Celsius – with climate change already impacting nature from the level of ecosystems to that of genetics – impacts expected to increase over the coming decades, in some cases surpassing the impact of land and sea use change and other drivers.

Despite progress to conserve nature and implement policies, the Report also finds that global goals for conserving and sustainably using nature and achieving sustainability cannot be met by current trajectories, and goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political and technological factors. With good progress on components of only four of the 20 Aichi Biodiversity Targets, it is likely that most will be missed by the 2020 deadline. Current negative trends in biodiversity and ecosystems will undermine progress towards 80% (35 out of 44) of the assessed targets of the Sustainable Development Goals, related to poverty, hunger, health, water, cities, climate, oceans and land (SDGs 1, 2, 3, 6, 11, 13, 14 and 15). Loss of biodiversity is therefore shown to be not only an environmental issue, but also a developmental, economic, security, social and moral issue as well.

"To better understand and, more importantly, to address the main causes of damage to biodiversity and nature's contributions to people, we need to understand the history and global interconnection of complex demographic and economic indirect drivers of change, as well as the social values that underpin them," said Prof. Brondízio. "Key indirect drivers include increased population and per capita consumption; technological innovation, which in some cases has lowered and in other cases increased the damage to nature; and, critically, issues of governance and accountability. A pattern that emerges is one of global interconnectivity and 'telecoupling' – with resource extraction and production often occurring in one part of the world to satisfy the needs of distant consumers in other regions."

Other notable findings of the Report include[1]:

- Three-quarters of the land-based environment and about 66% of the marine environment have been significantly altered by human actions. On average these trends have been less severe or avoided in areas held or managed by Indigenous Peoples and Local Communities.
- More than a third of the world's land surface and nearly 75% of freshwater resources are now devoted to crop or livestock production.
- The value of agricultural crop production has increased by about 300% since 1970, raw timber harvest has risen by 45% and approximately 60 billion tons of renewable and nonrenewable resources are now extracted globally every year – having nearly doubled since 1980.
- Land degradation has reduced the productivity of 23% of the global land surface, up to US$577 billion in annual global crops are at risk from pollinator loss and 100-300 million people are at increased risk of floods and hurricanes because of loss of coastal habitats and protection.
- In 2015, 33% of marine fish stocks were being harvested at unsustainable levels; 60% were maximally sustainably fished, with just 7% harvested at levels lower than what can be sustainably fished.
- Urban areas have more than doubled since 1992.
- Plastic pollution has increased tenfold since 1980, 300-400 million tons of heavy metals, solvents, toxic sludge and other wastes from industrial facilities are dumped annually into the world's waters, and fertilizers entering coastal ecosystems have produced more than 400 ocean 'dead zones', totalling more than 245,000 km2 (591-595) - a combined area greater than that of the United Kingdom.
- Negative trends in nature will continue to 2050 and beyond in all of the policy scenarios explored in the Report, except those that include transformative change – due to the projected impacts of increasing land-use change, exploitation of organisms and climate change, although with significant differences between regions.

The Report also presents a wide range of illustrative actions for sustainability and pathways for achieving them across and between sectors such as agriculture, forestry, marine systems, freshwater systems, urban areas, energy, finance and many others. It highlights the importance of, among others, adopting integrated management and cross-sectoral approaches that take into account the trade-offs of food and energy production, infrastructure, freshwater and coastal management, and biodiversity conservation.

Also identified as a key element of more sustainable future policies is the evolution of global financial and economic systems to build a global

sustainable economy, steering away from the current limited paradigm of economic growth.

“IPBES presents the authoritative science, knowledge and the policy options to decisionmakers for their consideration,” said IPBES Executive Secretary, Dr. Anne Larigauderie. “We thank the hundreds of experts, from around the world, who have volunteered their time and knowledge to help address the loss of species, ecosystems and genetic diversity – a truly global and generational threat to human well-being.”

Human society under urgent threat from loss of Earth's natural life

Scientists reveal stark decline in biodiversity in damning UN report on planetary health

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Forest clearance in Indonesia. Scientists have warned of the impact of deforestation on animals. Photograph: Ulet Ifansasti/Greenpeace

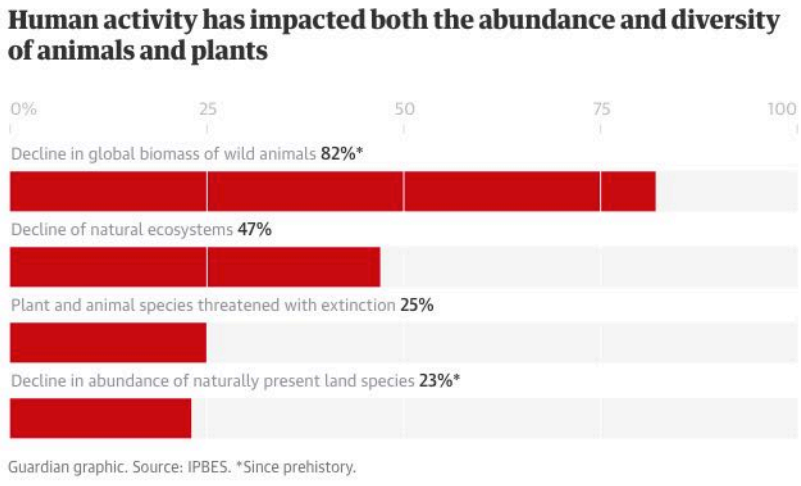
Human society is in jeopardy from the accelerating decline of the Earth’s natural life support systems, the world’s leading scientists have warned as they announced the results of the most thorough planetary health check ever undertaken.

From coral reefs flickering out beneath the oceans to rainforests desiccating into savannahs, nature is being destroyed at a rate that is tens to hundreds of times higher than the average over the last 10m years, according to the Global Assessment Report by the United Nations.

The biomass of wild mammals has fallen by 82%, natural ecosystems have lost about half their area and a million species are at risk of extinction – all largely as a result of human actions, said the study, compiled over three years by a team of more than 450 scientists and diplomats.

Two amphibian species in five are at risk of extinction, as are one third of reef-forming corals, while other marine animals by down by close to a third. The picture for insects – which are crucial to plant pollination – is less clear, but conservative estimates suggest at least 10% are threatened with extinction and in some regions, populations have crashed. In economic terms, the losses are jaw-dropping. Pollinator loss has put up to $577bn (£440bn) of crop output at risk, while land degradation has reduced the productivity of 23% of global land.

The knock-on impacts on humankind, including freshwater shortages and climate instability, are already “ominous” and will worsen without drastic remedial action, the authors said.



“The health of the ecosystems on which we and other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of economies, livelihoods, food security, health and quality of life worldwide,” said Robert Watson, the chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (Ibpes). “We have lost time. We must act now.”

The warning was unusually stark for a UN report that has to be agreed by consensus across all nations. Hundreds of scientists have compiled 15,000 academic studies and reports from indigenous communities living on the frontline of change. They build on the Millennium Ecosystem Assessment of 2005, but go much further by looking not just at an inventory of species, but the web of interactions between biodiversity, climate and human well-being.

Over the past week, representatives from the world’s governments have fine-tuned the summary for policymakers, which includes remedial scenarios, including

“transformative change” across all areas of government, revised trade rules, massive investments in forests and other green infrastructure, and changes in individual behaviour such as lower consumption of meat and material goods

Following school strikes, Extinction Rebellion protests, the UK parliament’s declaration of a climate emergency and Green New Deal debates in the US and Spain, the authors hope the 1,800-page assessment of biodiversity will push the nature crisis into the global spotlight in the same way climate breakdown has surged up the political agenda since the 1.5C report last year by the UN Intergovernmental Panel on Climate Change.

“We tried to document how far in trouble we are to focus people’s minds, but also to say it is not too late if we put a huge amount into transformational behavioural change,” said David Obura, one of the main authors on the report and a global authority on corals. “This is fundamental to humanity. We are not just talking about nice species out there; this is our life support system.”

Australia’s Great Barrier Reef. The UN report reveals one third of reef-forming corals in the world are at risk of disappearing. Photograph: Tane Sinclair-Taylor/AFP/Getty Images

The report paints a picture of a planet in which the human footprint is so large it leaves little space for anything else. Three quarters of all land has been turned into farm fields, covered by concrete, swallowed up by dam reservoirs or otherwise significantly altered. Two-thirds of the marine environment have also been changed by fish-farms, shipping routes, subsea mines and other projects. Three-quarters of rivers and lakes are used for crop or livestock cultivation. As a result more than 500,000 species have insufficient habitat for long-term survival. Many are on course to disappear within decades.

“We have been displacing our impact around the planet from frontier to frontier,” said Eduardo Brondizio, an Ibpes co-chair from Córdoba National University, Argentina. “But we are running out of frontiers…If we see business as usual going forward, then we’ll see a very fast decline in the ability of nature to provide what we need and to buffer climate change.”

Agriculture and fishing are the primary causes of the deterioration. Food production has increased dramatically since the 1970s, which has helped to feed a growing global population and generated jobs and economic growth. But this has come at a high cost. The meat industry has a particularly heavy impact. Grazing areas for cattle accounts for about 25% of the world’s ice-free land and more than 18% of global greenhouse gas emissions. Crop production uses 12% of land and less than 7% of emissions.

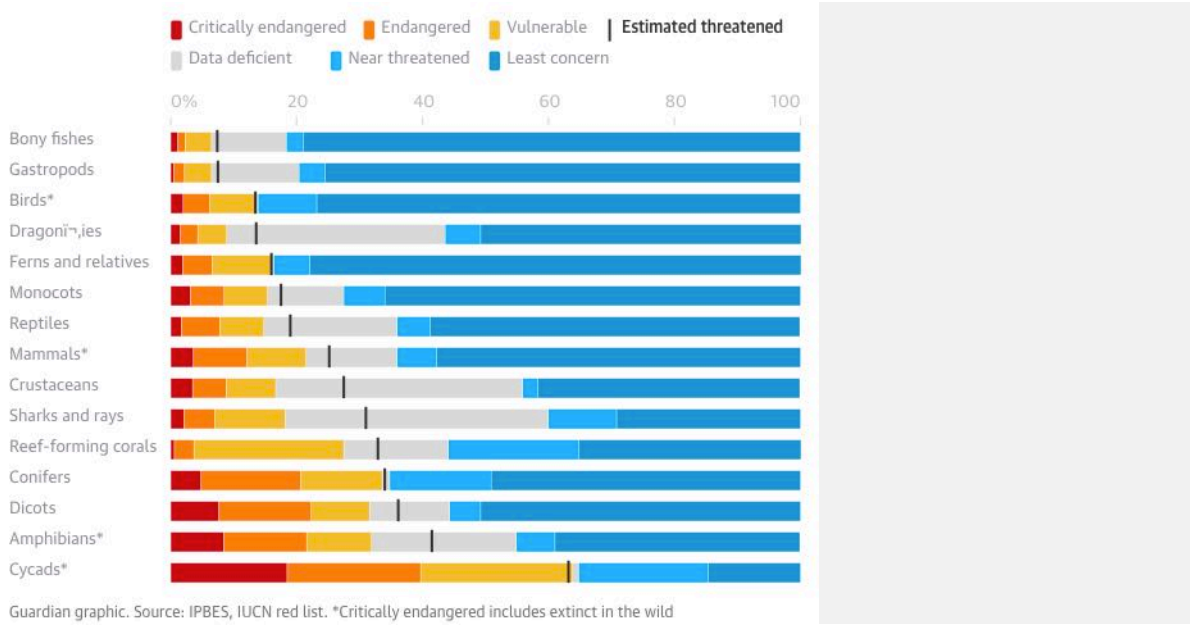
The study paints a picture of a suffocating man-made sameness spreading across the planet, as a small range of cash-crops and high-value livestock are replacing forests and other nature rich ecosystems. As well as eroding the soil, which causes a loss of fertility, these monocultures are more vulnerable to disease, drought and other impacts of climate breakdown.

In terms of habitats, the deepest loss is of wetlands, which have drained by 83% since 1700 with a knock-on impact on water quality and birdlife. Forests are diminishing, particularly in the tropics. In the first 13 years of this century, the area of intact forest fell by 7%, an area of France and the UK combined. Although the overall rate of deforestation has slowed, this is partly an accounting trick as monoculture plantations replace biodiverse jungle and woodland.

The oceans are no longer a sanctuary. Today, only 3% of marine areas are free from human pressure. Industrial fishing takes place in more than half the world’s oceans, leaving a third of fish populations overexploited.

Climate change, pollution and invasive species have had a relatively low impact, but these factors are accelerating. Even if global heating can be kept with the Paris agreement target of 1.5C to 2C, the ranges of most species will shrink profoundly, the paper warns.

Population growth is noted as a factor, along with inequality. Individuals in the developed world have four times as much of an economic footprint as those in the poorest countries and the gap is growing.



Guardian graphic. Source: IPBES, IUCN red list. *Critically endangered includes extinct in the wild

Our species now extracts 60bn tons of resources each year, almost double the amount in 1980, though the world population has grown by only 66% in that time. The report notes how the discharges are overwhelming the Earth's capacity to absorb them. More than 80% of wastewater is pumped into streams, lakes and oceans without treatment, along with 300-400m tons of heavy metals, toxic slurry and other industrial discharges. Plastic waste has risen tenfold since 1980, affecting 86% of marine turtles, 44% of seabirds and 43% of marine mammals. Fertiliser run-off has created 400 "dead zones", affecting an area the size of the UK.

Andy Purvis, a professor at the Natural History Museum in London and one of the main authors of the report, said he was encouraged that nations had agreed on the need for bitter medicine.

"This is the most thorough, the most detailed and most extensive planetary health check. The take home message is that we should have gone to the doctor sooner. We are in a bad way. The society we would like our children and grandchildren to live in is in real jeopardy. I cannot overstate it," he said. "If we leave it to later generations to clear up the mess, I don't think they will forgive us."

The next 18 months will be crucial. For the first time, the issue of biodiversity loss is on the G8 agenda. The UK has commissioned Partha Dasgupta, a professor at Cambridge University, to write a study on the economic case for nature, which is expected to serve a similar function as the Stern Review on the Economics of Climate Change. Next year, China will host a landmark UN conference to draw up new global goals for biodiversity.

Cristiana Paşca-Palmer, the head of the UN's top biodiversity organisation, said she was both concerned and hopeful. "The report today paints quite a worrying picture. The danger is that we put the planet in a position where it is hard to recover," she said. "But there are a lot of positive things happening. Until now we haven't had the political will to act. But public pressure is high. People are worried and want action."

The report acknowledges that current conservation strategies, such as the creation of protected areas, are well-intended but inadequate. Future forecasts indicate negative trends will continue in all scenarios except those that embrace radical change across society, politics, economics and technology.

It says values and goals need to change across governments so that local, national and international policymakers are aligned to tackle the underlying causes of planetary deterioration. This includes a shift in incentives, investments in green infrastructure, accounting for nature deterioration in international trade, addressing population growth and unequal levels of consumption, greater cooperation across sectors, new environmental laws and stronger enforcement.

Greater support for indigenous communities and other forest dwellers and small-holders is also essential. Many of the last hold-outs for nature are in areas managed by such groups, but even here the pressures are beginning to take a toll, as wildlife declines along with knowledge of how to manage it.

"The situation is tricky and difficult but I would never give up. The report shows there is a way out. I believe we can still bend the curve," said Josef Settele, an Ipbes co-chair and entomologist at the Helmholtz-Centre for Environmental Research in Germany. "People shouldn't panic, but they should begin drastic change. Business as usual with small adjustments won't be enough."

Nature crisis: Humans 'threaten 1m species with extinction'

By Matt McGrath
Environment correspondent, Paris
6 May 2019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Pollination is vital for food production

On land, in the seas, in the sky, the devastating impact of humans on nature is laid bare in a compelling UN report.
One million animal and plant species are now threatened with extinction.
Nature everywhere is declining at a speed never previously seen and our need for ever more food and energy are the main drivers.
These trends can be halted, the study says, but it will take "transformative change" in every aspect of how humans interact with nature.

From the bees that pollinate our crops, to the forests that hold back flood waters, the report reveals how humans are ravaging the very ecosystems that support their societies.
Three years in the making, this global assessment of nature draws on 15,000 reference materials, and has been compiled by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). It runs to 1,800 pages.
The brief, 40-page "summary for policymakers", published today at a meeting in Paris, is perhaps the most powerful indictment of how humans have treated their only home.
It says that while the Earth has always suffered from the actions of humans through history, over the past 50 years, these scratches have become deep scars.


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The world's population has doubled since 1970, the global economy has grown four-fold, while international trade has increased 10 times over.
To feed, clothe and give energy to this burgeoning world, forests have been cleared at astonishing rates, especially in tropical areas.
Between 1980 and 2000, 100 million hectares of tropical forest were lost, mainly from cattle ranching in South America and palm oil plantations in South East Asia.
Faring worse than forests are wetlands, with only 13% of those present in 1700 still in existence in the year 2000.
Our cities have expanded rapidly, with urban areas doubling since 1992.


"Species are going extinct at a faster rate than we've seen for millions of years" - Laura Foster reports

All this human activity is killing species in greater numbers than ever before.
According to the global assessment, an average of around 25% of animals and plants are now threatened.
Global trends in insect populations are not known but rapid declines in some locations have also been well documented.
All this suggests around a million species now face extinction within decades, a rate of destruction tens to hundreds of times higher than the average over the past 10 million years.
"We have documented a really unprecedented decline in biodiversity and nature, this is completely different than anything we've seen in human history in terms of the rate of decline and the scale of the threat," said Dr Kate Brauman, from the University of Minnesota and a co-ordinating lead author of the assessment.


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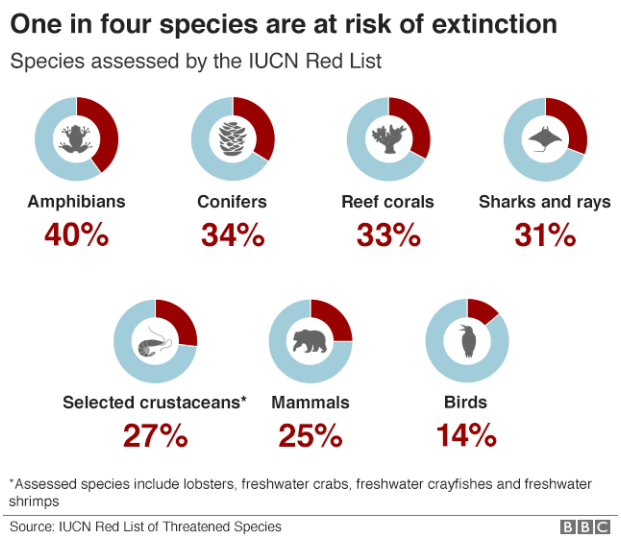
"When we laid it all out together I was just shocked to see how extreme the declines are in terms of species and in terms of the contributions that nature is providing to people."
The assessment also finds that soils are being degraded as never before. This has reduced the productivity of 23% of the land surface of the Earth.
Our insatiable appetites are producing a mountain of waste.
Plastic pollution has increased ten-fold since 1980.
Every year we dump 300-400 million tonnes of heavy metals, solvents, toxic sludge and other wastes into the waters of the world.

What's behind this crisis?



The report's authors say there are a number of direct drivers of which land use change is the primary one.
This essentially means the replacement of grassland with intensive crops, or replacing ancient woodland with a plantation forest, or the clearing of forests to grow crops.
This is happening in many parts of the world, especially in the tropics.
Since 1980, more than half of the increase in agriculture has been at the expense of intact forests.
It's a similar story at sea.
Only 3% of the world's oceans were described as free from human pressure in 2014.
Fish are being exploited as never before, with 33% of fish stocks harvested at unsustainable levels in 2015.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Many fish species are in decline through overfishing, the study says

Live coral cover on reefs has nearly halved over the past 150 years.
Pushing all this forward, though, are increased demands for food from a growing global population and specifically our growing appetite for meat and fish.
"Land use now appears as the major driver of the biodiversity collapse, with 70% of agriculture related to meat production," said Yann Laurans from IDDRI, the French policy research institute.

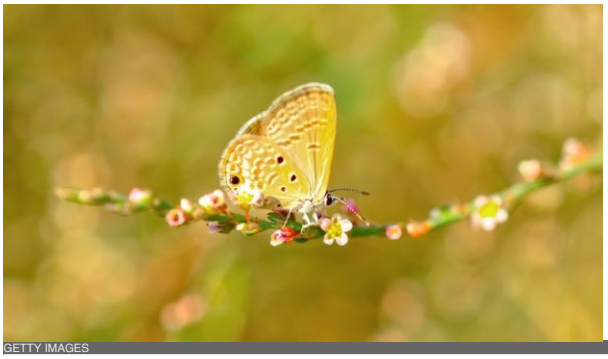
INTERACTIVE

Parts of Rondonia, Brazil, have suffered severe industrial deforestation
2018

1984

"It is time to reconsider the share of industrial meat and dairy in our diet."
The other key factors are the hunting and the direct exploitation of animals, climate change, pollution and invasive species.
The report finds that many of these factors work together to make matters worse.
At the report's launch, Kai Chan, a co-ordinating lead author from the University of British Columbia, Vancouver, said: "No previous assessment has considered at this scale the simultaneous challenge of protecting nature, maintaining water, feeding the planet, supplying energy, while mitigating climate change... this is the most exhaustive report to have ever done that."

The decline in numbers



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Species extinction risk: Approximately 25% of species are already threatened with extinction in most animal and plant groups studied.
Natural ecosystems: Natural ecosystems have declined by 47% on average, relative to their earliest estimated states.
Biomass and species abundance: The global biomass of wild mammals has fallen by 82%. Indicators of vertebrate abundance have declined rapidly since 1970.
Nature for indigenous people: 72% of indicators developed by local communities show ongoing deterioration of elements of nature important to them.

What does the future hold?

It all depends on what we do.

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Researchers say the loss of nature will have major implications for humans

The authors looked at a number of scenarios for the future, including business-as-usual, but also examining options that were more based on sustainable practices.
In almost all cases, the negative trends for nature will continue to 2050 and beyond.
The only ones that didn't continue towards ecological disaster involved what the scientists term "transformative change".

What does transformative change actually mean?

The study doesn't tell governments what to do, but gives them some pretty strong hints.
One big idea is to steer the world away from the "limited paradigm of economic growth".
They suggest moving away from GDP as a key measure of economic wealth and instead adopting more holistic approaches that would capture quality of life and long-term effects.
They argue that our traditional notion of a "good quality of life" has involved increasing consumption on every level. This has to change.

Similarly, there must be change when it comes to financial incentives that damage biodiversity.
"Crucially, governments must end the destructive subsidies, including for fossil fuels and industrial fishing and agriculture," said Andrew Norton, director of the International Institute for Environment and Development.
"These drive the plundering of the land and ocean at the expense of a clean, healthy and diverse environment on which billions of women, children and men depend now and in the future."
The amount of land and sea that is under protection needs to increase rapidly, with observers saying that a third of our lands need to be preserved.
"We need to secure half of the planet by 2050 with an interim target of 30% by 2030," said Jonathan Baillie, from the National Geographic Society.
"Then we must restore nature and drive innovation. Only then will we leave future generations a healthy and sustainable planet."

Is this worse than climate change?

Climate change is a crucial underlying factor that's helping to drive destruction around the world.
Greenhouse gas emissions have doubled since 1980 and temperatures have gone up 0.7C as a result. This is having a big impact on some species, restricting their ranges and making extinction more likely. The global assessment finds that if temperatures go up by 2C, then 5% of species are at risk of climate-driven extinction, rising to 16% if the world warms by 4.3C.

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"Of the prioritised list of proximate drivers of biodiversity decline, climate change is only number three," said Prof John Spicer from the University of Plymouth.
"Climate change is certainly one of the greatest threats that face humankind in the near future - so what does that tell us about the first and second, changes in land/sea use, and direct exploitation? The current situation is desperate and has been for some time."
The report's authors hope that their assessment becomes as critical to the argument about biodiversity loss as the IPCC report on 1.5C has done to the debate over climate change.

What can I do?

The idea of transformative action is not just confined to governments or local authorities. Individuals can certainly make a difference.
"We know that the way people eat today is often unhealthy for them and for the planet," said Dr Kate Brauman, one of the report's authors.
"We can become healthier as individuals by eating more diverse diets, with more vegetables, and we can also make the planet healthier by growing that food in more sustainable ways."
As well as consumer and lifestyle choices, other authors believe people can make a difference through politics.
"It might be more important for society to invest more in renewables than coal," said Dr Rinku Roy Chowdhury, from Clark University in Worcester, Massachusetts.
"So how do you that? Through individual behaviour, through the polling booth.
"Rather than just conserving energy by turning my lights off, some other less obvious means might be through political action."

One million species threatened with extinction because of humans

By Isabelle Gerretsen, CNN

Updated 1327 GMT (2127 HKT) May 6, 2019

Managing the land

Just as with climate change, humans are the main culprits of biodiversity damage, altering 75% of Earth's land and 66% of marine ecosystems since pre-industrial times, according to the report.

The report emphasizes the disastrous impact of population growth and rising demand. It notes that the world's population has more than doubled (from 3.7 to 7.6 billion) in the last 50 years, and gross domestic product per person is four times higher.

More than a third of the world's land and 75% of freshwater supplies are used for crop or livestock production, it noted.

"[There is] very little of the planet left that has not been significantly altered by us," Sandra Diaz, co-author of the report and professor of ecology at the University of Córdoba, told CNN. "We need to act as stewards for life on Earth."
Diaz said countries in the Global North are particularly to blame for nature damage due to their "unsustainable" levels of consumption, especially when it comes to fishing and logging.

The 'ecological foundations of society' are in peril, a massive UN report warns

In 2015, a third of marine stocks were being fished at unsustainable levels and the amount of raw timber being harvested has increased by almost half since 1970, with up to 15% of it cut illegally, according to the report.

Marine plastic pollution has increased tenfold since 1980, with an average of 300-400 million tons of waste dumped into the world's waters annually.

Pollution entering coastal ecosystems has produced more than 400 ocean "dead zones," totalling an area bigger than the United Kingdom. These areas are so starved of oxygen they can barely support marine life.

Key numbers from the report

- Around 10% of insect species are threatened with extinction.
- 300% increase in global food crop production since 1970.
- 23% of land areas have reduced agricultural productivity due to land degradation.
- About 25% of greenhouse gas emissions are caused by land clearing, crop production and fertilization.
- Around half of all live coral reef cover lost since the 1870s.
- Urban areas have grown more than 100% since 1992.
- 25 million km of new paved roads expected by 2050.

It's not too late

Despite the ominous picture "it is not too late to make a difference, but only if we start now at every level from local to global," said Watson, adding that this would require an overhaul of economic systems and a shift in political and social mindsets.

Diaz said that governments should implement drastic changes now to avoid a "dire future" in 10-20 years when their "food and climate security [is] in jeopardy."

Climate change has already contributed to biodiversity loss by triggering more extreme weather events and rising sea levels and will exacerbate the crisis over the coming decades, the report noted.

The report says we can improve sustainability in farming by planning landscapes so that they provide food while also supporting the species that live there. Other suggestions include reforming supply chains and reducing food waste.

When it comes to healthy oceans, the report recommends effective fishing quotas, designated protected areas and reducing the pollution that runs off from the land into the sea, among other actions.

Rachel Warren, professor of global change and environmental biology at the University of East Anglia, told CNN that governments should focus on "the restoration of destroyed or degraded ecosystems with native species [as this] helps to address both biodiversity loss and climate change."

"Biodiversity underpins ecosystem services such as pollination, flood prevention, water and air purification, and soil conservation. We are in danger of losing vital ecosystem services which will have major negative consequences for human civilization," she said.

Guenter Mitlacher, director of international biodiversity policy at the World Wildlife Fund (WWF), said, "Ours is the first generation with the tools to see how the Earth has been changed by people at our own peril. We're also the last generation with the opportunity to influence the course of many of those changes. Now is the time to act, not halfheartedly and incrementally but drastically and boldly."

The IPBES report comes ahead of two high-level summits in 2020 where world leaders will scale up their climate and environment protection goals. That is when China will host the UN convention on biodiversity to set new 20-year targets and when the signatories of the 2015 Paris Agreement to keep global warming to less than 2 degrees will revise their commitments.

One million species face extinction, U.N. report says. And humans will suffer as a result.

Scientists warn humans threaten one million species with extinction

Scientists on May 6 released a landmark United Nations report on the damage done by modern civilization to the natural world. (Reuters)
By Darryl Fears
May 6 at 9:45 AM

Up to 1 million plant and animal species are on the verge of extinction, with alarming implications for human survival, according to a United Nations report released Monday.

The report's findings underscore the conclusions of previous scientific studies that say human activity is wreaking havoc on the wild kingdom, threatening the existence of living things ranging from giant whales to small flowers and insects that are almost impossible to see with the naked eye.

But the global report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services goes a step further than previous studies by linking the loss of species to humans and analyzing its effect on food and water security, farming and economies.

[Read the U.N. global report: Species extinction rate is accelerating]

According to the report, more plants and animals are threatened with extinction now than any other period in human history. Nature's current rate of decline is unparalleled, it says, and the accelerating rate of extinctions "means grave impacts on people around the world are now likely."

In a prepared statement, Robert Watson, a British chemist who served as the panel's chairman, said the decline in biodiversity is eroding "the foundations of our economies, livelihoods, food security, health and quality of life worldwide."

Moe Flannery of the California Academy of Sciences inspected a dead gray whale in Tiburon, Calif., last month, one of seven whales that have washed up on the shores of the San Francisco Bay and along the coast in recent weeks. (Justin Sullivan/Getty Images)

The report's authors declared that the world's governments should address the global decline of biodiversity together with human-caused climate change. The warming climate is a major driver that is exacerbating the effects of overfishing, widespread pesticide use, pollution and urban expansion into the natural world.

For example, ocean ecosystems are degrading as temperatures rise toward 2 degrees Celsius — 3.6 degrees Fahrenheit — above preindustrial levels, the study warns. Coral reefs lost to warming and acidifying oceans could cause a collapse in commercial and indigenous fisheries, affecting billions of coastal residents who rely on seafood for protein.

"Once you get to basically 2 degrees Celsius, the models show that only 1 percent can survive," Watson said. "Let's be quite candid. We're not on the pathway to 2 degrees Celsius. We're on a pathway to 3, 3 ½ degrees Celsius. The coral system is truly in trouble."

The report emphasized the effects humans have on animals that are key to their own survival. Pesticides sprayed by farmers kill pollinators such as bees and other insects will likely to have a devastating effect on crops. Homeowners

contribute to the problem by purchasing “bug zappers” that target mosquitoes but also eliminate key pollinators such as butterflies and moths, as well as common flies that some animals rely on for food.

Global trade has introduced invasive species to countries with devastating effects, such as crop-destroying stink bugs and tree-killing emerald ash borer in the United States. Travelers exploring forests in other countries have returned home with microbes that cause diseases lethal to animals, such as the white nose fungus that is killing millions of bats whose immune systems have not adapted to fight it.

“The most important thing isn’t necessarily that we’re losing . . . 1 million species — although that’s important, don’t misunderstand me,” Watson said during a teleconference Sunday. “The bigger issue is the way it will affect human well-being, as we’ve said many times — food, water, energy, human health.

“We care about nature, but we care about human well-being,” Watson said. “We need to link it to human well-being; that’s the crucial thing. Otherwise we’re going to look like a bunch of tree-huggers.”

The report has a positive spin, saying that “it is not too late to make a difference.” But that difference requires more than 100 developing and nondeveloped nations to work together to bring about change.

Nations that signed off on the study’s findings acknowledged that opposition from rich people invested in the status quo is expected.

“Since 1992, we’ve been telling the world we have a problem,” Watson said. “Now what’s different? It’s much worse today than it was in 1992. We’ve wasted all of the time . . . the last 25 years.” However, he said, “we have a much better understanding of the links between climate change, biodiversity, and food security and water security.”

Nearly 150 authors from 50 nations worked for three years to compile the report. They relied on input from 300 contributing authors who assessed the impact of economic development on nature to estimate future effects.

They noted that the world’s population has doubled since 1950 and that urban areas worldwide have doubled since 1992. By mid-century, the world’s population is expected to approach 9 billion.

The resulting pressure on natural resources has been enormous. Seventy-five percent of the land environment and well more than half the marine environment have been altered by humans.

On land, “more than a third of the world’s land surface and nearly 75 percent of freshwater resources are now devoted to crop or livestock production,” the report says. Farms that cut into forests that trap carbon have expanded exponentially, increasing crop production by 300 percent since 1970.

At sea, a third of marine fish stocks were being harvested at unsustainable levels in 2015. “Sixty percent were maximally sustainably fished,” meaning they were being pushed to the verge of collapse.

Onlookers stand before paper mache replicas of the critically endangered porpoise known as the vaquita during an event in front of the Mexico's National Palace in Mexico City. (Rebecca Blackwell/AP)

Humans extract 60 billion tons from nature each year to satisfy demands worldwide for crops, fish, minerals and other goods, the authors said. They concluded that the harvest is unsustainable.

The U.N. report followed a study in January that predicted a bug massacre — 40 percent of all known species face extinction, including beetles, flies, moths, butterflies and bees, the result of habitat loss and pesticides, according to a recent study.

The United States is hardly immune to the loss of biodiversity. In recent weeks, the federal government moved to protect a declining group of Bryde's whales in the Gulf of Mexico with an endangered listing because fewer than 100, and possibly as few as 45, are estimated to exist.

In January, wild reindeer were declared extinct in the Lower 48 states. Wildlife managers in British Columbia caught the last female in a herd of caribou that once migrated between the Pacific Northwest and Canada and stuck her in a pen because "that animal was not going to survive," an official said.

Meanwhile, a doomsday count on the tiny vaquita porpoise in the Gulf of California is nearing zero. As Mexican fisherman continue to poach shrimp and fish consumed in the United States, vaquitas occasionally show up dead in their fishing nets.

In Antarctica, the second-largest group of emperor penguins, the tallest of all penguins, has not produced offspring for three years, assuring a catastrophic drop in their numbers.

The U.N. report "means that nature is collapsing around us, and it's a real wake-up call to humanity," said Andrew Wetzler, managing director of the nature program for the Natural Resources Defense Council, a conservation group.

Oceana senior adviser Philip Chou called the report a beacon for more action to address a crisis.

"We are seeing alarming increases in the deaths of fish, marine mammals and turtles ingesting plastics," Chou said. "These plastics break apart in the ocean into microscopic particles [that are] consumed by fish, fish we now eat."

Humans are driving one million

species to extinction

Landmark United Nations-backed report finds that agriculture is one of the biggest threats to Earth's ecosystems.

Jeff Tollefson

Report on the state of the world's ecosystems finds that human activities and climate change have significantly altered habitats such as coral reefs.Credit: The Ocean Agency/XL Catlin Seaview Survey

Up to one million plant and animal species face extinction, many within decades, because of human activities, says the most comprehensive report yet on the state of global ecosystems.

Without drastic action to conserve habitats, the rate of species extinction — already tens to hundreds of times higher than the average across the past ten million years — will only increase, says the analysis. The findings come from a United Nations-backed panel called the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

According to the report, agricultural activities have had the largest impact on ecosystems that people depend on for food, clean water and a stable climate. The loss of species and habitats poses as much a danger to life on Earth as climate change does, says a summary of the work, released on 6 May.

The analysis distils findings from nearly 15,000 studies and government reports, integrating information from the natural and social sciences, Indigenous peoples and traditional agricultural communities. It is the first major international appraisal of biodiversity since 2005. Representatives of 132 governments met last week in Paris to finalize and approve the analysis.

Biodiversity should be at the top of the global agenda alongside climate, said Anne Larigauderie, IPBES executive secretary, at a 6 May press conference in Paris, France. "We can no longer say that we did not know," she said.

"We have never had a single unified statement from the world's governments that unambiguously makes clear the crisis we are facing for life on Earth," says Thomas Brooks, chief scientist at the International Union for Conservation of Nature in Gland, Switzerland, who helped to edit the biodiversity analysis. "That is really the absolutely key novelty that we see here."

Without "transformative changes" to the world's economic, social and political systems to address this crisis, the IPBES panel projects that major biodiversity losses will continue to 2050 and beyond. "We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide," says IPBES chair Robert Watson, an

atmospheric chemist at the University of East Anglia in Norwich, UK.

Reshaping life on Earth

About 75% of land and 66% of ocean areas have been "significantly altered" by people, driven in large part by the production of food, according to the IPBES report, which will be released in full later this year. Crop and livestock operations currently co-opt more than 33% of Earth's land surface and 75% of its freshwater resources.

Agricultural activities are also some of the largest contributors to human emissions of greenhouse gases. They account for roughly 25% of total emissions due to the use of fertilizers and the conversion of areas such as tropical forests to grow crops or raise livestock such as cattle. Agricultural threats to ecosystems will only increase as the world's population continues to grow, according to the IPBES analysis.

The next biggest threats to nature are the exploitation of plants and animals through harvesting, logging, hunting and fishing; climate change; pollution and the spread of invasive species. The IPBES report finds that the average abundance of native plants, animals and insects has fallen in most major ecosystems by at least 20% since 1900 because of invasive species.

The report draws inextricable links between biodiversity loss and climate change. An estimated 5% of all species would be threatened with extinction by 2 °C of warming above pre-industrial levels — a threshold that the world could breach in the next few decades, unless greenhouse-gas emissions are drastically reduced. Earth could lose 16% of its species if the average global temperature rise exceeds 4.3 °C. Such damage to ecosystems would undermine global efforts to reduce poverty and hunger and promote more-sustainable development, the IPBES report says.

Pulling back from the brink

Scientists might quibble about some extinction estimates and other details, but the report pulls no punches when describing how humans have altered Earth's ecosystems, says Stuart Pimm, an ecologist at Duke University in Durham, North Carolina.

The world can reverse this biodiversity crisis, the report says, but doing so will require proactive environmental policies, the sustainable production of food and other resources and a concerted effort to reduce greenhouse-gas emissions.

The IPBES report is solid on the science, but the panel should do more when it comes to outlining practical solutions for governments, businesses and communities, says Peter Bridgewater, an ecologist at the University of Canberra who led a separate analysis — released on 29 April — of the effectiveness of the biodiversity panel. That report, commissioned by the IPBES, recommended that the body develop partnerships with governments and communities, and assess policies that can be implemented at local and national levels.

Despite those shortcomings, the IPBES report will help to set the agenda when governments negotiate new conservation goals for the next decade at the UN Convention on Biodiversity next year, says Brooks. "Then we will need to see implementation across all sectors of society," he says. "That's when we will see a difference."

Humans Are Speeding Extinction and Altering the Natural World at an 'Unprecedented' Pace

Fishing nets and ropes are a frequent hazard for olive ridley sea turtles, seen on a beach in India's Kerala state in January. A new 1,500-page report by the United Nations is the most exhaustive look yet at the decline in biodiversity across the globe.

Soren Andersson/Agence France-Presse — Getty Images

By Brad Plumer
May 6, 2019

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Leer en español
*Want climate news in your inbox? Sign up here for **Climate Fwd:**, our email newsletter.*

WASHINGTON — Humans are transforming Earth's natural landscapes so dramatically that as many as one million plant and animal species are now at risk of extinction, posing a dire threat to ecosystems that people all over the world depend on for their survival, a sweeping new United Nations assessment has concluded.

The 1,500-page report, compiled by hundreds of international experts and based on thousands of scientific studies, is the most exhaustive look yet at the decline in biodiversity across the globe and the dangers that creates for human civilization. A summary of its findings, which was approved by representatives from the United States and 131 other countries, was released Monday in Paris. The full report is set to be published this year.

Its conclusions are stark. In most major land habitats, from the savannas of Africa to the rain forests of South America, the average abundance of native plant and animal life has fallen by 20 percent or more, mainly over the past century. With the human population passing 7 billion, activities like farming, logging, poaching, fishing and mining are altering the natural world at a rate "unprecedented in human history."

At the same time, a new threat has emerged: Global warming has become a major driver of wildlife decline, the assessment found, by shifting or shrinking the local climates that many mammals, birds, insects, fish and plants evolved to survive in.

As a result, biodiversity loss is projected to accelerate through 2050, particularly in the tropics, unless countries drastically step up their conservation efforts.

Cattle grazing on a tract of illegally cleared Amazon forest in Pará State, Brazil. In most major land habitats, the average abundance of native plant and animal life has fallen by 20 percent or more, mainly over the past century.
Credit
Lalo de Almeida for The New York Times

The report is not the first to paint a grim portrait of Earth's ecosystems. But it goes further by detailing how closely human well-being is intertwined with the fate of other species.

"For a long time, people just thought of biodiversity as saving nature for its own sake," said Robert Watson, chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,which conducted the assessment at the request of national governments. "But this report makes clear the links between biodiversity and nature and things like food security and clean water in both rich and poor countries."

A previous report by the group had estimated that, in the Americas, nature provides some $24 trillion of non-monetized benefits to humans each year. The Amazon rain forest absorbs immense quantities of carbon dioxide and helps slow the pace of global warming. Wetlands purify drinking water. Coral reefs sustain tourism and fisheries in the Caribbean. Exotic tropical plants form the basis of a variety of medicines.

But as these natural landscapes wither and become less biologically rich, the services they can provide to humans have been dwindling.

Humans are producing more food than ever, but land degradation is already harming agricultural productivity on 23 percent of the planet's land area, the new report said. The decline of wild bees and other insects that help pollinate fruits and vegetables is putting up to $577 billion in annual crop production at risk. The loss of mangrove forests and coral reefs along coasts could expose up to 300 million people to increased risk of flooding.

The authors note that the devastation of nature has become so severe that piecemeal efforts to protect individual species or to set up wildlife refuges will no longer be sufficient. Instead, they call for "transformative changes" that include curbing wasteful consumption, slimming down agriculture's environmental footprint and cracking down on illegal logging and fishing.

"It's no longer enough to focus just on environmental policy," said Sandra M. Díaz, a lead author of the study and an ecologist at the National University of Córdoba in Argentina. "We need to build biodiversity considerations into trade and infrastructure decisions, the way that health or human rights are built into every aspect of social and economic decision-making."

Scientists have cataloged only a fraction of living creatures, some 1.3 million; the report estimates there may be as many as 8 million plant and animal species on the planet, most of them insects. Since 1500, at least 680 species have blinked out of existence, including the Pinta giant tortoise of the Galápagos Islands and the Guam flying fox.

Though outside experts cautioned it could be difficult to make precise forecasts, the report warns of a looming extinction crisis, with extinction rates currently tens to hundreds of times higher than they have been in the past 10 million years.

"Human actions threaten more species with global extinction now than ever before," the report concludes, estimating that "around 1 million species already face extinction, many within decades, unless action is taken."

Unless nations step up their efforts to protect what natural habitats are left, they could witness the disappearance of 40 percent of amphibian species, one-third of marine mammals and one-third of reef-forming corals. More than 500,000 land species, the report said, do not have enough natural habitat left to ensure their long-term survival.

Over the past 50 years, global biodiversity loss has primarily been driven by activities like the clearing of forests for farmland, the expansion of roads

and cities, logging, hunting, overfishing, water pollution and the transport of invasive species around the globe.

In Indonesia, the replacement of rain forest with palm oil plantations has ravaged the habitat of critically endangered orangutans and Sumatran tigers. In Mozambique, ivory poachers helped kill off nearly 7,000 elephants between 2009 and 2011 alone. In Argentina and Chile, the introduction of the North American beaver in the 1940s has devastated native trees (though it has also helped other species thrive, including the Magellanic woodpecker).

All told, three-quarters of the world's land area has been significantly altered by people, the report found, and 85 percent of the world's wetlands have vanished since the 18th century.

And with humans continuing to burn fossil fuels for energy, global warming is expected to compound the damage. Roughly 5 percent of species worldwide are threatened with climate-related extinction if global average temperatures rise 2 degrees Celsius above preindustrial levels, the report concluded. (The world has already warmed 1 degree.)

"If climate change were the only problem we were facing, a lot of species could probably move and adapt," Richard Pearson, an ecologist at the University College of London, said. "But when populations are already small and losing genetic diversity, when natural landscapes are already fragmented, when plants and animals can't move to find newly suitable habitats, then we have a real threat on our hands."

The dwindling number of species will not just make the world a less colorful or wondrous place, the report noted. It also poses risks to people.

Volunteers collected trash in March in a mangrove forest in Brazil. The loss of mangrove forests and coral reefs along coasts could expose up to 300 million people to increased risk of flooding.
Credit
Amanda Perobelli/Reuters

Today, humans are relying on significantly fewer varieties of plants and animals to produce food. Of the 6,190 domesticated mammal breeds used in agriculture, more than 559 have gone extinct and 1,000 more are threatened. That means the food system is becoming less resilient against pests and diseases. And it could become harder in the future to breed new, hardier crops and livestock to cope with the extreme heat and drought that climate change will bring.

"Most of nature's contributions are not fully replaceable," the report said. Biodiversity loss "can permanently reduce future options, such as wild species that might be domesticated as new crops and be used for genetic improvement."

The report does contain glimmers of hope. When governments have acted forcefully to protect threatened species, such as the Arabian oryx or the Seychelles magpie robin, they have managed to fend off extinction in many cases. And nations have protected more than 15 percent of the world's land and 7 percent of its oceans by setting up nature reserves and wilderness areas.

Still, only a fraction of the most important areas for biodiversity have been protected, and many nature reserves poorly enforce prohibitions against poaching, logging or illegal fishing. Climate change could also undermine existing wildlife refuges by shifting the geographic ranges of species that currently live within them.

So, in addition to advocating the expansion of protected areas, the authors outline a vast array of changes aimed at limiting the drivers of biodiversity loss.

Farmers and ranchers would have to adopt new techniques to grow more food on less land. Consumers in wealthy countries would have to waste less food and become more efficient in their use of natural resources. Governments around the world would have to strengthen and enforce

environmental laws, cracking down on illegal logging and fishing and reducing the flow of heavy metals and untreated wastewater into the environment.

The authors also note that efforts to limit global warming will be critical, although they caution that the development of biofuels to reduce emissions could end up harming biodiversity by further destroying forests.

An elephant in the Lewa Wildlife Conservancy at the foot of Mount Kenya, outside Nairobi. More than 500,000 land species do not have enough natural habitat left to ensure their long-term survival.
Credit
Tony Karumba/Agence France-Presse — Getty Images

None of this will be easy, especially since many developing countries face pressure to exploit their natural resources as they try to lift themselves out of poverty.

But, by detailing the benefits that nature can provide to people, and by trying to quantify what is lost when biodiversity plummets, the scientists behind the assessment are hoping to help governments strike a more careful balance between economic development and conservation.

“You can’t just tell leaders in Africa that there can’t be any development and that we should turn the whole continent into a national park,” said Emma Archer, who led the group’s earlier assessment of biodiversity in Africa. “But we can show that there are trade-offs, that if you don’t take into account the value that nature provides, then ultimately human well-being will be compromised.”

In the next two years, diplomats from around the world will gather for several meetings under the Convention on Biological Diversity, a global treaty, to discuss how they can step up their efforts at conservation. Yet even in the new report’s most optimistic scenario, through 2050 the world’s nations would only slow the decline of biodiversity — not stop it.

“At this point,” said Jake Rice, a fisheries scientist who led an earlier report on biodiversity in the Americas, “our options are all about damage control.”

For more news on climate and the environment, follow @NYTClimate on Twitter.

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Nature loss: Report to show scale of 'silent crisis'

By Matt McGrath
Environment correspondent, Paris
6 May 2019

SARAH HANSON

The world's most comprehensive, and damning, report on the state of nature will be released on Monday in Paris.
The UN's Global Assessment will highlight the distressing impact that humanity is having on the natural world.
It will probably state that species are being lost at the fastest ever rate, mainly driven by the changing use of land.
Rapid action is needed at the political level to avoid an ecological disaster.

The **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services** (IPBES) has spent the last three years working on the 1,800-page assessment.
For the last week, the lead authors have been meeting government representatives from over 130 countries in Paris to hammer out the final details of a much shorter summary report.
This study will underline just how much humanity relies on the natural world, whether it is for food, clean water, or to absorb the warming CO2 gas that's driving climate change.
It is expected to show, in grim detail, how humans have trampled all over the natural world over the past 50 years - and what is likely to happen over the coming decades unless major changes are implemented.

"Species are going extinct at a faster rate than we've seen for millions of years" - Laura Foster reports

"I would say that the report is likely to be interpreted as 'Boy, we are in trouble' but there are solutions," said the chair of IPBES Prof Sir Bob Watson, speaking to the BBC before the meeting.
"Our report will talk about to what degree are we losing biodiversity, and to what degree could we protect some of it in the future."
The study will analyse the impacts that the changing use of land is having on nature. Forest clearing for agriculture, fuelled by increased consumption of animal products, has driven many native species from their ancient homes.
Overfishing has caused the decimation of fish stocks in most parts of the world.

SARAH DUCKWORTH
Wild cats are now a rare sight in the UK

The report will warn that the speed of loss is likely to increase in the coming decades, pushing vast numbers of species towards extinction.
Speaking at the opening of the meeting in Paris, France's minister for the ecological and inclusive transition, François de Rugy, compared the loss of biodiversity to the damage caused by climate change.
Unlike rising temperatures, which has seen a massive rise in public awareness around the world, the slow loss of nature was a "more silent crisis," he said.

FOE

Skylarks have declined by 50% over the past 40 years across Europe

Taken together the increasing speed of rising temperatures and species is the gradual but accelerating species extinction, which, in combination with climate change, produces a worldwide "bio-climatic crisis."

Ahead of the report, some **600 conservation campaigners** from 50 different countries signed an open letter, initiated by the campaign group WWF.

The letter, which has been published in major newspapers around the world, calls for urgent political action in light of the IPBES report.

"There is still time to protect what is left and to start restoring nature," the letter says.

"But to do that, we must radically change the way we live, including how we use energy to power our societies, grow our food, and manage our waste… But for this to happen, we need decisive and ambitious action from world leaders."

Losses in the UK and Europe

FOE

While the demise of species thanks to deforestation and land clearing in developing countries will be well documented in the report, the threat to nature is just as significant in richer countries. Friends of the Earth has published a list of some of the most threatened species in the UK and Europe.

Skylark: Well known for its flight pattern, the skylark has declined by 50% over the past 40 years across Europe, mainly due to changes in farming practices that have resulted in the loss of nesting sites and food sources.

Small Blue Butterfly: This has declined in the most parts of the UK, with numbers down 38% since the 1970s.

Bees and hoverflies: Recent studies show that around one third of the 353 wild bee and hoverfly species in the UK are in decline. Factors include habitat loss, climate change, pesticides and disease.

Red Squirrels, wildcats and long-eared bats: All facing severe threats to their survival from a number of sources, including invasive species, road deaths and the use of pesticides.

Hedgehogs: Almost half of rural hedgehogs in the UK and a third in urban areas have been lost says Friends of the Earth. The reasons are not fully understood but are likely to include the loss of key habitat features such as hedges.