LIVING PLANET REPORT 2020

YOUTH EDITION
A GUIDE FOR OUR FUTURE

WHAT IS THE LIVING PLANET REPORT?

The Living Planet Report is produced every two years by WWF, with input from leading experts and other organisations. It is a health-check for the planet, showing how the natural world is doing, what threats it faces and what this means for us humans. The conclusions and recommendations in the LPR are based on an analysis of a great many measures of biodiversity, one of the biggest being the Living Planet Index.

WHAT IS THE LIVING PLANET INDEX?

Experts all over the world have been measuring changes over time in the populations of thousands of animal species, from counting the number of wildebeest in the savannah, to trapping the movement of tapirs on cameras in the Amazon rainforest. Scientists bring these data together into a database and analyse it to come up with the Living Planet Index (LPI).

The LPI only uses data for species that have been monitored for at least 2 years and recorded from the 1970s onwards. Even so, the LPI is currently able to track what is happening for over 21,000 populations of mammals, birds, reptiles, amphibians and fish. The trends that scientists find in these data help them to draw conclusions about the health of the wider ecosystems.

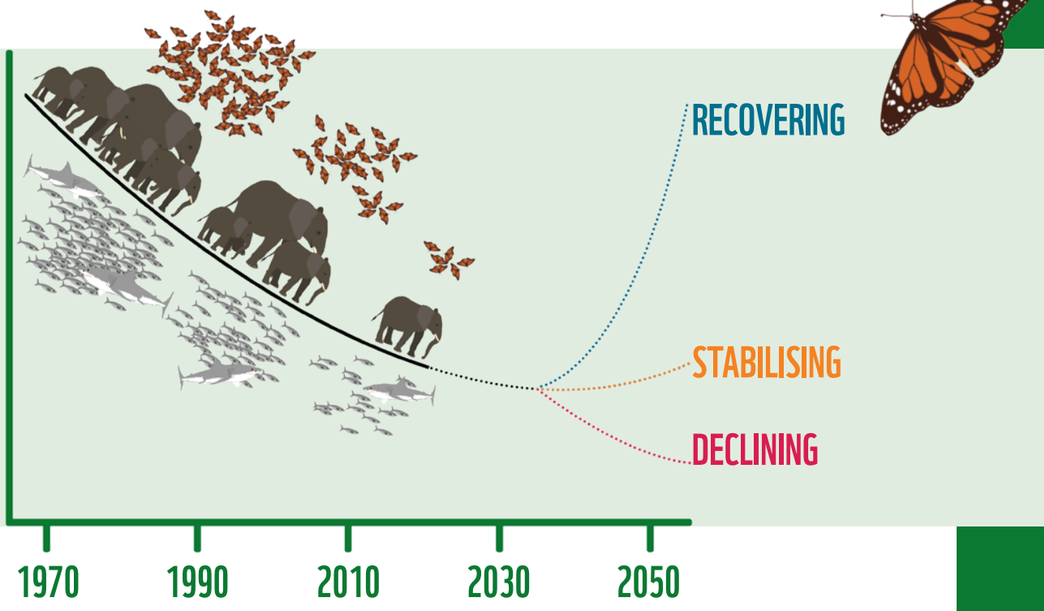
SECTION 1

NATURE IN DECLINE

The stable climate and comfortable living conditions that humanity has enjoyed throughout history, and which has allowed our species to thrive and grow in numbers, is the result of a complex living system. Biodiversity is vital to the system, as we rely on living things and the complex interactions between them, for clean air, fresh water, a breathable atmosphere and the conditions needed to grow food.

WILDLIFE POPULATION SIZE

The LPI shows that, globally, the average population size of mammals, fish, birds, reptiles and amphibians has declined by 68% since 1970

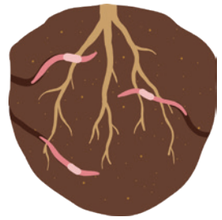


The Living Planet Index shows that wildlife populations around the world have, on average, declined by 68%, and this trend is not yet slowing down. This decline in wildlife and wild places is mostly due to human activities, and it is starting to prevent the living system from working as we need it to in order to provide for the needs of the growing human population. The LPI is one of many different indicators that confirm that biodiversity is declining.

Over the past decades human activities have destroyed and degraded forests, grasslands, wetlands and other important ecosystems, threatening human well-being. 75% of the Earth's ice-free land surface has already been significantly altered, most of the oceans are polluted, and 90% of wetland area has been lost. This destruction of ecosystems has led to a million species (500,000 animals and plants, and 500,000 insects) being threatened with extinction over the next hundred years. Many of these extinctions are preventable if we conserve and restore nature.

On a LPI graph showing the change in biodiversity on our planet, the line has been dropping for years, as animal populations continue to decline. It is essential that we take the actions needed to change this trend and 'bend the curve' of biodiversity loss. This means not only stopping it from declining, but making changes that allow it to recover, so that the line on our graph slopes upwards and biodiversity increases to the levels we had in the past. This will not be easy, but if we act quickly, and with an understanding of the way different parts of the living system depend on each other, we can start to make the world wild again, and therefore more healthy and resilient.

90%



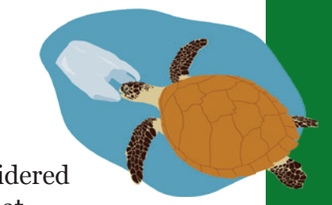
of land-dwelling species spend part of their life cycle in soil.

LIFE UNDER OUR FEET

Soil is an essential part of the natural environment, because of the many species that live completely under the surface, but also because 90% of land-dwelling species spend part of their life cycle in soil. The biodiversity in soil is responsible for the formation of soil itself (decomposers breaking down dead plants and animals into nutrient-rich soil) and for the incredible contribution soil makes to human well-being and the health of the rest of the planet. Healthy soil filters water, helps keep greenhouse gases from building up in the atmosphere, and allows plants to grow – including our food.

By understanding when our actions are harming soil biodiversity – such as when pesticides are sprayed onto farmland – we can identify the changes we need to make in order to ensure soil biodiversity is protected.

13%



of the ocean is considered to be 'wilderness' that is not directly impacted by human activity.

OUT OF OUR DEPTH

Overfishing, plastic pollution, deep-sea mining and increasing temperatures resulting from climate change are taking a devastating toll on the rich and varied wildlife of the ocean.

Healthy oceans filled with life play an important role in slowing climate change and driving global weather systems, as well as providing livelihoods for more than 10% of the world's population. Coral reefs, threatened by rising temperatures and coastal developments, provide vital protection from storm surges and waves for nearly 200 million people, and support the entire ocean ecosystem. Loss of ocean biodiversity affects every living thing on the planet.

We need Marine Protected Areas (MPAs) to create wild spaces and restore the ocean's natural balance. We also need to end plastic pollution and destructive fishing practices.

90%

of global wetlands have been lost since 1700.

MUDDYING THE WATER

Freshwater wildlife populations have declined by 84% on average since 1970. Almost one in three freshwater species are threatened with extinction, and larger animals such as hippos, river dolphins, sturgeon and beavers are generally most at risk.

Despite the importance of water for life and health, freshwater ecosystems are the most threatened on Earth. Protecting critical wetland habitats and ending overfishing are just two of the ways that we can bend the curve on freshwater biodiversity loss.

1/3

of the food we produce around the world, by weight, is never eaten!

TOO MUCH ON OUR PLATE

One third of land on our planet is now used for farming crops or livestock, and farming accounts for 75% of all freshwater used by humans. About one-third of the food we produce around the world, by weight, is never eaten. It may be wasted at the point of production, or at one of the points on its journey to the dinner table as it is transported, packaged and sold. Food waste is responsible for roughly 8% of global greenhouse gases added to the atmosphere, including gases released as it decomposes.

Food waste is a problem that we can address, and it would make a huge difference if we did.

SECTION 2

WHY DOES IT MATTER?

Our living planet operates as a living system, resulting in the conditions for life that have allowed humans to thrive. Biodiversity is a very important part of this system, and it cannot work in the same way if the amount of wildlife and wild spaces is reduced. Biodiversity brings lots of direct benefits that we will lose if we continue to destroy the natural world, but we are starting to see that lots of other problems are also caused when the balance is upset and biodiversity is lost.

In 2019, Africa had its largest outbreak of desert locusts in decades when unusually heavy rainfall in the Arabian Peninsula created perfect breeding grounds for the locusts, which migrated to East Africa and South Asia causing widespread crop devastation. Also, in 2019, an exceptionally hot and long heatwave led to extreme droughts in India and Pakistan, forcing tens of thousands to abandon their homes and causing many deaths. Just a few months later, Australia experienced one of the most intense bushfire seasons ever recorded, with more than 10 million hectares burnt and huge numbers of wild animals killed. This crisis was worsened by unusually low rainfall and record-high temperatures, as well as excessive logging.

In 2020, a previously unknown coronavirus, COVID-19, generated a pandemic that has affected almost everyone on the planet, and is having a huge impact on the global economy. 60% of recent large-scale outbreaks of diseases, including COVID-19, come from animals, and crossover into human populations because of the way we are destroying habitats, harvesting wildlife and farming livestock.

All of these disasters have been the result of human-induced damage to the natural world, and it is likely that more damage to the environment will result in problems like these becoming more frequent and more severe. It will become harder and harder to achieve a world in which everyone has the opportunities and the quality of life set out in the United Nations Sustainable Development Goals.

It is clear that saving the environment is vital if we want to save ourselves.

As well as the risk of disasters that result from our destruction of the natural world, we are increasingly understanding that biodiversity is important if we want to cope with a changing world. As conditions change because of climate change, some species will not survive. The greater the variety and number of different species in an ecosystem, the higher the chance that some species will survive and take the place of those that are lost, allowing the ecosystem to survive.

Humans have relied on chemicals and materials discovered in the natural world for many important advances in science. If we are not careful, species that offer vital solutions to challenges we face in the future may be lost before we have the chance to discover them.

The natural world is a resource that we cannot afford to lose.

As conditions change on our planet, scientists need to be able to explore the different varieties of food crop species and find those that will allow us to continue to grow the food we need. If we don't protect biodiversity, that means there will be fewer options for us to draw on when we need them most. In 2007 frost wiped out the entire potato harvest in Peru's Huancavelica region, except for one variety: Yana manua. If the population had relied on just one variety that was less resilient to frost there could have been a severe food shortage.

WHAT IS DRIVING THE DECLINE?

For decades humans have been using resources faster than they can be replaced by nature. Our current lifestyles mean that humans currently demand 1.6 times more than the amount that Earth can regenerate. It is like living off 1.6 Earths. Every year we leave nature weaker and with fewer resources – and less able to ensure our future survival. Biodiversity loss is one symptom of the damage being caused by these unsustainable activities.

The total Ecological Footprint of the human population is too high for the planet to carry on sustaining forever. However not every human has the same Ecological Footprint, and it is by decreasing the amount that the average human consumes that our impact can be lessened. That means the humans on the planet that use the most resources need to be the ones making the biggest changes to lower their impact.

WHAT CAN WE DO?

We need to rethink our relationship with the planet and find the balance that will allow us and the rest of nature to survive. Whenever something that humans are doing is resulting in damage to the natural world, there are three possible solutions.

Stop doing it altogether, and give up a product or activity. The problem with this is that we might have to find an alternative, which could also cause problems.

Do it less, so that nature is able to replace what we take or absorb the impact of our action. This could mean that those humans whose lifestyles use the most resources need to be satisfied with less, or find ways to make the most of less by wasting less food and reusing things rather than replacing them.

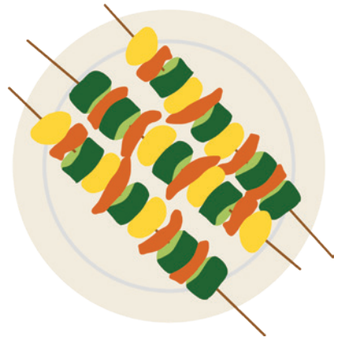
Find new ways to do it so that we get the same benefit but in a way that does not cause damage to the planet. An example would be to use renewable energy to power our electronic devices and heat our homes, rather than energy produced by burning fossil fuels.

Scientists are suggesting that these three actions would be the most important if we want to start living in a sustainable way and start to bend the curve in the next few years.

1

Transform food production and consumption so that we produce enough for everyone, but in a sustainable way. That means farming in a way that uses less space (stopping habitat destruction), less water, and fewer chemicals that harm the ecosystem. It also means stopping the wastage of food, changing some of our diets, and a change of fishing practices to ensure that the oceans can thrive and replace what we take out.

Change at home: Eat a more plant based diet, choose food that has not been produced in a way that causes deforestation, and buy locally.



2

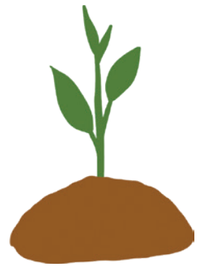
Tackle climate change by cutting greenhouse gas emissions and investing in renewable energy alternatives.

Change at home: Check your energy is from 100% renewable sources.

3

Invest in 'nature-based solutions' that can support biodiversity while playing an active role in slowing climate change and protecting people and wildlife from its effects. For example, carefully choosing places to plant more forests can strengthen landscapes, improve soil quality and capture carbon to help in the fight against climate change. In urban environments, trees improve air quality, prevent floods and keep residential areas cool, and simply having trees nearby improves the physical and mental health of people living and working there.

Change at home: Take action for local biodiversity.



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The LPI shows that, globally, the average population size of mammals, fish, birds, reptiles and amphibians has declined by 68% since 1970.

LIVING BEYOND OUR MEANS

Humans currently demand 1.6 times more resources than Earth can regenerate. Each year we leave nature weaker and less able to provide for our future needs.

NATURE IS DECLINING

Populations of wildlife have declined by

68%

on average since 1970

WE ARE THE CAUSE

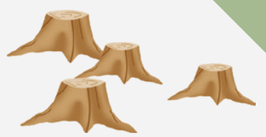
Climate Change is putting pressure on ecosystems

30%

of all land is used for agriculture

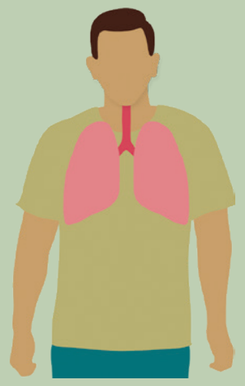
1/3

of all food is lost or wasted



WE NEED NATURE

Loss of nature has global economic impact



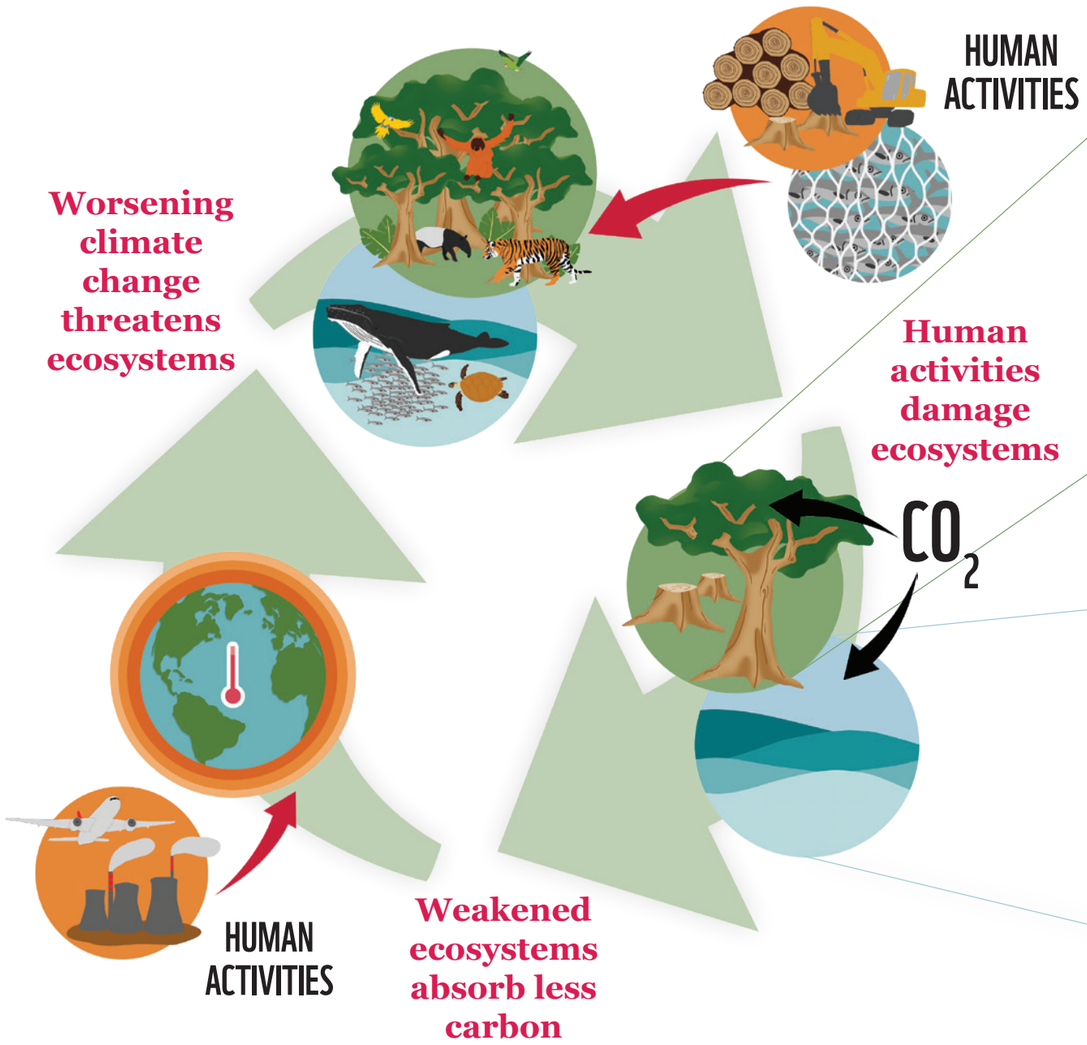
Nature underpins our health & well-being

Biodiversity is essential for food security

WE CAN RESTORE NATURE

TURNING UP THE HEAT: CLIMATE CHANGE & BIODIVERSITY

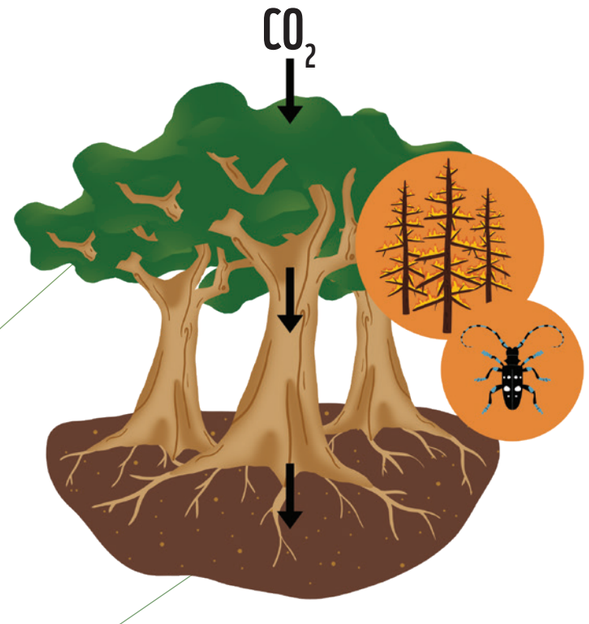
Climate change has not been a big factor in the decline of biodiversity up to this point, but scientists are now seeing the effects of rising temperatures on wildlife and it is clear that many species will face problems in the years ahead as temperatures rise. Species that are used to certain conditions are shifting their ranges, with knock-on effects on other ecosystems, and in some cases where they are unable to do this species are struggling to survive the changes to their habitat.



FORESTS

Healthy forests draw carbon from the atmosphere as CO_2 and lock it into trees and soil.

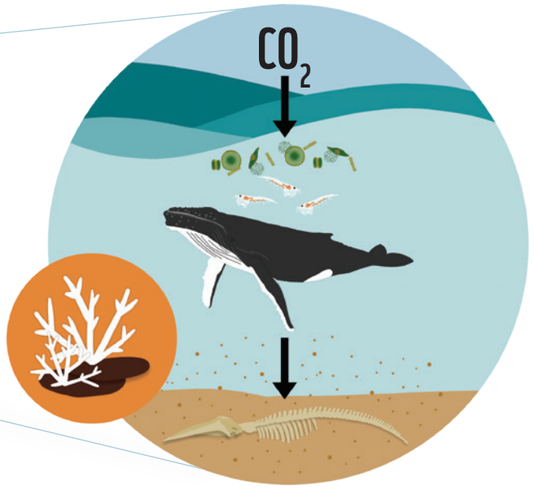
Climate change increases the risks from forest fires and invasive pests, which are especially damaging for forests that are fragmented by human activities.



OCEANS

In a thriving ocean ecosystem carbon is drawn from the atmosphere by phytoplankton, stored in wildlife biomass, then sinks to the ocean floor as poo and debris.

Climate change threatens key habitats that are vital for sustaining ocean ecosystems – such as coral reefs.



In Australia, tens of thousands of flying foxes recently died in a single heat wave, and in 2016 Australian rodent **Bramble Cay Melomys** was the first mammal known to become extinct as a direct result of climate change. A rise in frequency and intensity of storm surges wiped out vegetation and caused a lack of food on its island home.

Bramble Cay Melomys

10%

of the world's greenhouse gas emissions are attributed to wildfires annually.

WORLD ON FIRE

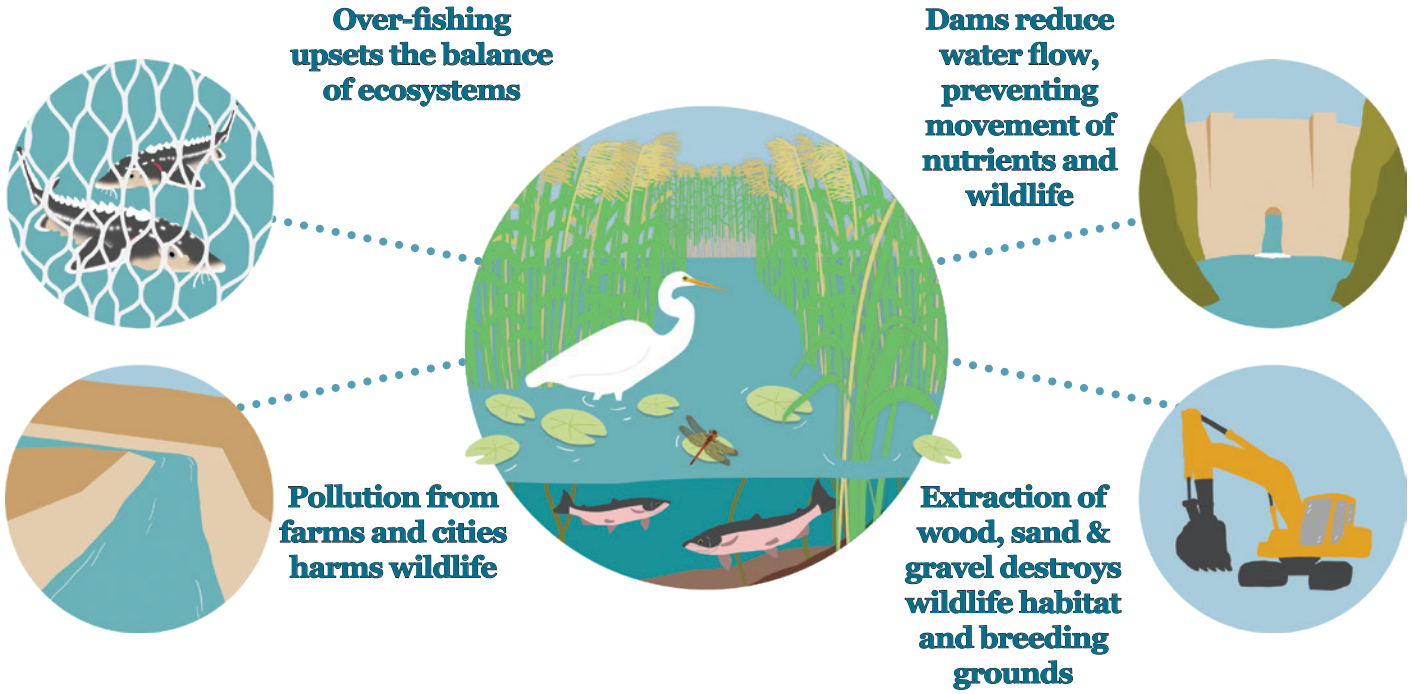
Every year more wildfires are reported around the world, destroying huge areas of natural habitat including the Amazon rainforest and the Australian bush, and posing threats to humans and wildlife. 10% of the world's greenhouse gas emissions are attributed to wildfires annually, and the number, scale and duration of fires is being increased by climate change. Fires pose a threat to the survival of endangered species and could upset the balance of ecosystems when species that cannot adapt to fires are lost.

FRESHWATER: A DEEP DIVE

Freshwater is essential for the survival of all life on land - including humans - and yet freshwater habitats such as rivers, streams, wetlands and lakes are among the most threatened ecosystems on our planet. There are many ways that humans are damaging these precious freshwater systems. Diversions and dams reduce water flow and therefore the amount of nutrient rich sediment carried by water into the ecosystem. This creates breaks in water systems that were once connected, preventing species from completing their life cycles.

WHAT CAN BE DONE?

A global team of scientists and policy experts have recommended a six-point Emergency Recovery Plan, based on proven measures, to reverse the dramatic decline.



6 STEPS TO RECOVERY

1. Let rivers flow naturally
2. Reduce pollution
3. Protect critical wetland habitats
4. End unsustainable fishing & sand-mining
5. Control invasive species
6. Restore connectivity of river systems

WWF

Working to sustain the natural world for people and wildlife
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