

Conserving Biodiversity

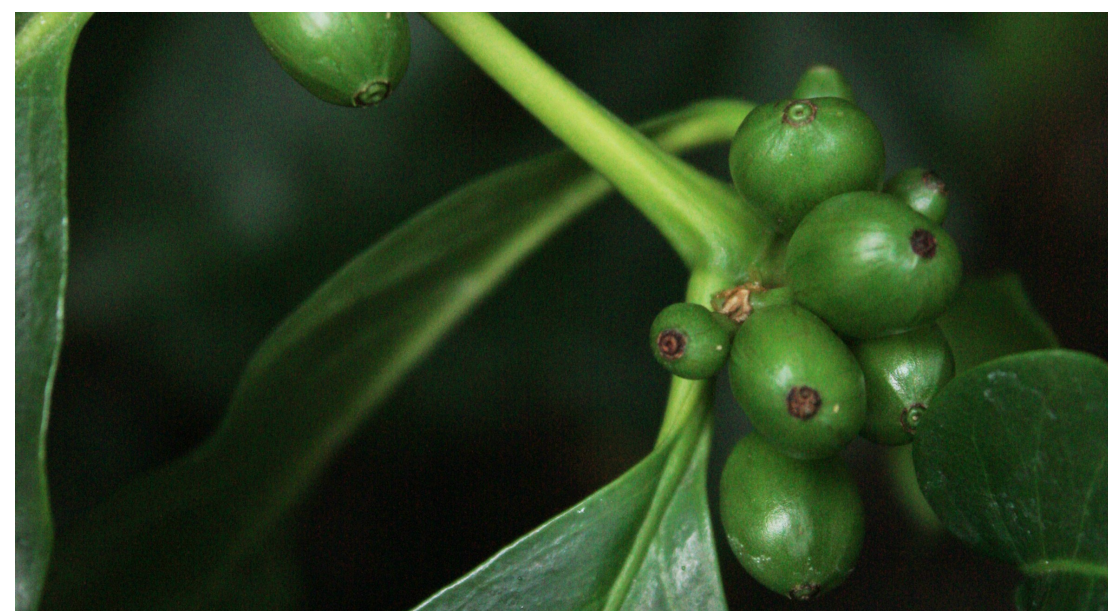
Why Conserve Biodiversity?

The world that we live in is a unique and diverse place, home to millions of species of living organism. But many of these species are under threat of extinction: one in five mammals, one in ten birds and one in three amphibians are at risk, other groups are less well studied but are also under threat. Human activity has led to fragmentation and loss of natural habitats, over-harvesting, pollution and climate change, all of which can lead to extinction. But why do we work so hard to bring threatened species back from the edge of extinction? Ask anyone interested in conservation about why we should preserve species and you will get a wide range of responses...



Aesthetic

Animals, plants, ecosystems: biodiversity is beautiful and this beauty deserves to be protected. A world without the majestic elephant, the breathtaking bird of paradise or the delicate orchid would be worse for all of us.



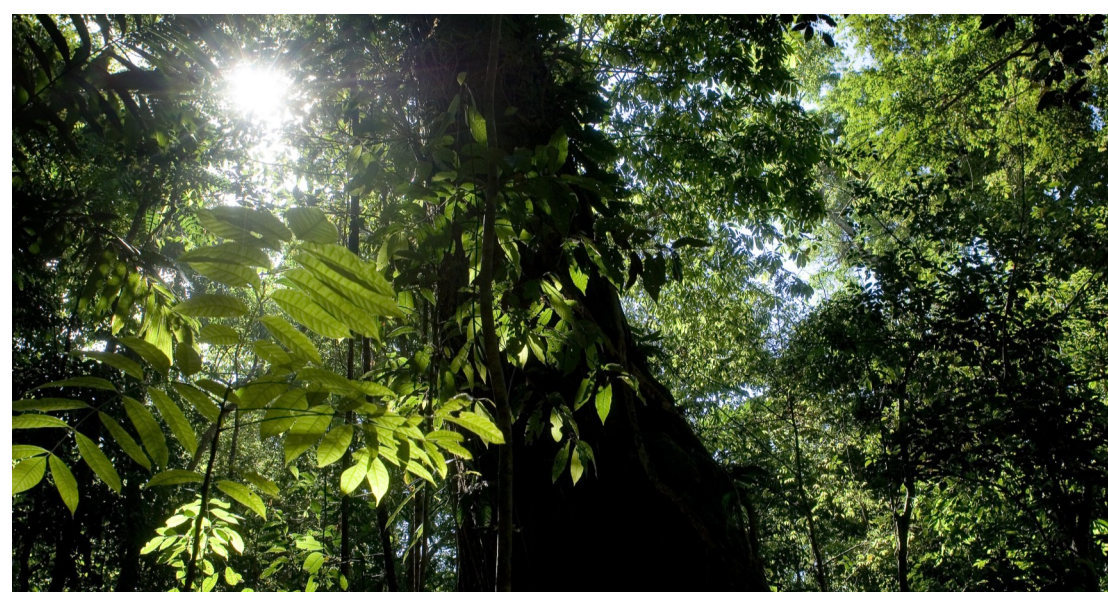
Economic

We already rely on biodiversity in all sorts of ways for economic benefit - food, clothing, building materials, medicines, ecosystem services such as water storage and purification - and many new uses of natural products are still being discovered. Man-made alternatives are costly and take time to develop.



Ethical

We have a moral duty to protect endangered species, particularly if they are threatened due to human activity. All living organisms have a right to exist and we should not allow our actions to harm them, even if they provide no direct benefit to us.



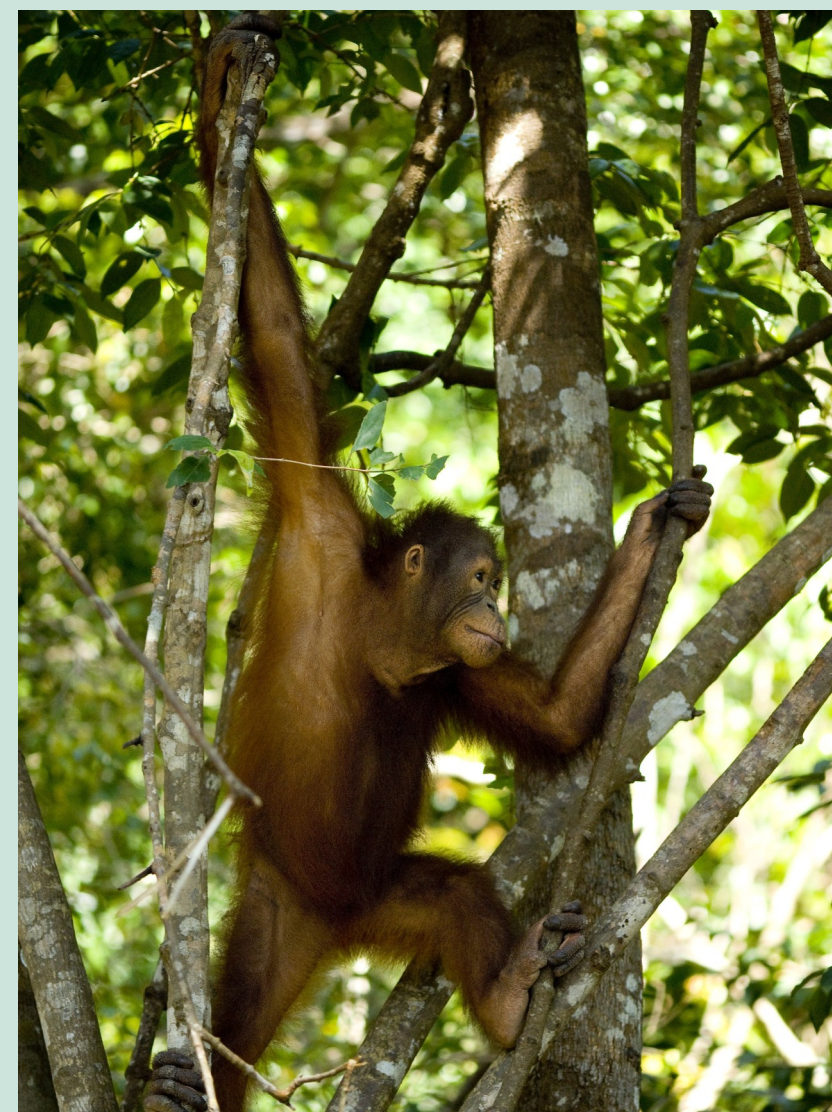
Ecological

Ecosystems are intricate and complex, formed by numerous interacting organisms many of which are highly dependent upon each other. Sometimes it is essential to conserve one species in order to protect the entire ecosystem in which it lives - gorillas, for example, play an essential role in dispersing the seeds of the trees in their forest habitats, if they were to die out several other species would be affected.

Types of Conservation

In Situ

Conserving biodiversity in the wild is known as *in situ* conservation, this usually involves protecting areas of natural habitat in national parks. The aim is to stop habitat degradation, fragmentation and loss which are the major causes of extinction.



Ex Situ

Many methods have been used to conserve biodiversity outside of its natural habitat, this is known as *ex situ* conservation. Zoos and botanic gardens are working towards this goal through activities such as seed banking and breeding programmes.



Zoos: how can they help?

Zoos were not originally intended to further the cause of conservation but many have now taken on this goal and have achieved great successes through:

- Educating the public and raising awareness of local and national conservation issues.
- Raising money for conservation work.
- Carrying out *in situ* conservation projects and scientific research.
- Preserving diversity by protecting species which are extinct in the wild.
- Breeding endangered species in captivity.
- Reintroducing species into their natural habitats.

Botanic gardens and seed banks fulfil a similar role for plant species.



International Conservation Agreements

The Convention on Biodiversity

Also known as the 'Rio Convention', the Convention on Biodiversity was set up at the Rio de Janeiro Earth Summit in 1992. Countries which sign up to the Convention agree to commit to the 'conservation and sustainable use of biological diversity'. The means of doing this are not specifically outlined in the Convention, countries are free to develop their own systems, including such measures as creating national parks, reintroducing species that have died out in the wild or protecting endangered animals in zoos.

Find out more at www.cbd.int

CITES

The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) protects endangered species by regulating international trade. Countries which sign up to the convention agree to restrict trade in those animals and plants which appear in its three appendices. Appendix I includes species which are the most at risk, such as tigers and elephants, these are subject to the strictest regulations. Species in the other two appendices (II and III) are less at risk.

Find out more at www.cites.org



Conservation and climate change

The global climate is changing, with average temperature rising and extreme weather events such as floods and droughts becoming more common. Many species can live only within a narrow temperature range and often their response to changes in temperature is to alter their geographic distribution. The question is, can they move fast enough to keep up with the changes and will there be anywhere for them to go?



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