

Loss of Diversity



What is an endangered species?

When a species is at risk of extinction, it is **endangered**.

Over 1,100 animal species and over 700 plant species are classed as endangered or threatened.

Animals that are endangered or threatened include the:

- gorilla
- giant panda
- snow leopard
- California condor
- blue whale.





Forests cover 10% of the Earth but are home to 50% of all animal and microbial species, and 70% of higher plants.

As the human population increases, more forests are being destroyed to make room for houses, factories and farmland. This is called **deforestation**.

What effect is this having on the environment and the wildlife that forest habitats support?



The destruction of an animal's habitat can lead to a change in the animal's behavior.

For example, predator animals such as tigers may be forced to prey on domestic livestock and even humans as their usual wild prey dwindles.

Even though the animal may be protected, they are still killed by humans in retaliation or to prevent further conflicts.

Organizations such as the Worldwide Fund for Nature try to relocate groups of animals that get too close to humans and encourage people to better protect their livestock and crops.

Are these good long-term solutions?



Conservation for ethical reasons

Some people think that all species have a right to exist and there is an ethical reason to ensure they survive.

The argument is that humans – as the dominant species on Earth and a major cause of the current reduction in biodiversity – should be responsible for the protection of the natural environment.



There is also an argument that biodiversity should be preserved for the benefit and enjoyment of future generations.



What is sustainable forestry?

Deforestation destroys habitats, but wood can still be harvested in a sustainable way by:

- **replanting** – new trees are planted to replace those that are cut down.
- **coppicing** – harvesting the stems of young trees and allowing them to regrow.

However, developing countries may not have enough money to invest in sustainable forestry. How could these countries be helped?



Many species provide humans with useful products and therefore have a practical, as well as an economic, value. Many more could potentially be of use to future generations.

Examples of useful products include:

- **food** from plants and animals – only a relatively small number of species are domesticated, meaning an outbreak of pests/diseases, or the effects of climate change and pollution may have severe consequences on food production.
- **industrial materials**, such as timber, wood, gums, fibers, paper, rubber and fuel.
- over 100 **medicines**, including anti-inflammatories, painkillers, cancer drugs, anticoagulants and anesthetics.



The complexity of relationships within ecosystems means that no species exists in complete isolation. This is called **interdependence**.



Habitat loss can therefore have a dramatic, widespread and unpredictable destabilizing ecological effect.

Conserving for ecological reasons may therefore be the most important long-term consideration.

