



**Clean Up the World  
inspires and empowers  
communities to clean up,  
fix up and conserve the  
environment.  
[www.cleantuptheworld.org](http://www.cleantuptheworld.org)**

Biodiversity is the variety of life on Earth and encompasses all living things.

Biodiversity today is under threat. The current rate of species extinction is faster than any other time in the last 65 million years. The principal causes of biodiversity loss are habitat destruction, the introductions of non-native species, the over-exploitation of natural resources and the accumulation of pollution.

Fortunately, there are many things that can be done to help conserve biodiversity. Choosing to act to protect and promote biodiversity in your local environment will contribute to the global effort.

### **What is Biodiversity?**

Biodiversity is the variety of life on Earth. It encompasses all living things such as mammals, amphibians, birds, reptiles and insects and includes the creatures that support and feed them such as plants, fungi and innumerable single celled organisms.

The biodiversity we see around us today is the result of around 3.5 billion years of evolution.

Estimates about the number of species on earth vary from three to 100 million, but the International Convention on Biodiversity says about 1.75 million species have been identified so far, mostly insects, but also including mammals, amphibians, fish, fungi and a diverse range of plants (4.SCBD, website).

Protecting biodiversity is in our self-interest because biological resources are the pillars upon which we build our societies (4.SCBD, website).

This is because biodiversity is crucial in maintaining healthy local ecosystems. We depend on these ecosystems to give us clean water, clean air and fertile soil. Across the world, ecosystems help to neutralise pollution, recycle waste and regulate climate (1.MEA,p.50).

People also enjoy the diversity of ecosystems such forests, coral reefs and mountain streams purely for their intrinsic beauty.

### **Biodiversity Loss**

Scientists currently estimate that the loss of species on earth is between 100 and 1,000 times faster that it was

prior to human civilisation (1.MEA.p.164).

There are five principal causes of biodiversity loss: habitat destruction, the introductions of non-native species, the over-exploitation of natural resources and the accumulation of pollution. (1.MEA.p.67).

Unfortunately, since the global spread of industrialisation, humans have done enormous damage to ecosystems, accelerating the loss of biodiversity.

This is despite the fact that the degradation of ecosystems and subsequent loss of biodiversity often causes significant harm to human well-being.

Furthermore, the total economic reward associated with preserving ecosystems is often far higher than the value that comes from rapidly destroying them.

For example, whilst overfishing can provide short term gains it ultimately destroys a source of income, whereas the global net value of coral reefs as fisheries, coastal protection buffers and sites of tourism is long lasting and estimated to total US\$30 billion per year (2.UNEP,p.170).

Further, the cost of restoring an ecosystem is often far higher than the cost of preserving it. Not all ecosystems can be restored, while others only regenerate over years, decades or centuries.

### **Did you know?**

- Some 10–30% of mammal, bird, and amphibian species are currently threatened with extinction (1.MEA.p.35).
- It is estimated that between 150 and 200 species of life become extinct every 24 hours (5.UNEP,WED website).
- More than 60 per cent of the world's people depend directly on plants for their medicines (5.UNEP,WED website).
- At least one quarter of important commercial fish stocks are overharvested (1.MEA,p.39).
- Deep sea creatures are the least well understood. Only one in every one million deep sea creatures have been categorised (2.UNEP,box 5.4,p.163).
- Deforestation, mainly conversion of forests to agricultural land and pasture, continues at the rate of about 13 million hectares a year. This is equivalent to the area of Greece (3.SCBD,p.23).



**Conserving Biodiversity**

Fortunately, a number of efforts to help reduce the rate of biodiversity loss have been highly successful.

At a global level, the International Convention on Biodiversity is an effort by all nations to preserve the variety of life on earth. Within this convention, many countries submit their national plans to help support the global effort.

Locally, you can support your national effort by working within your community to protect and promote biodiversity in your local environment.

Ultimately, the conservation of biodiversity means saving individual species, which requires preserving their habitat. The preservation of species and their habitat is crucial because unlike pollution problems species loss can't be cleaned up. A species may have been on Earth for millions of years, but once it's extinct, it's gone forever.

On land, an enormous number of species rely on native trees for their habitat and for the seeds, fruits and other foods they provide. So, when forests and trees are removed biodiversity suffers. On the other hand, planting trees native to the local area can greatly help to preserve biodiversity.

One Clean Up the World Member in Kenya working towards this goal is the 'Save Mount Kenya Forest From Extinction Group'. They have been able to plant 600,000 trees over the course of several years. This has helped not only to create habitat for local species, but also to filter the local water.

By removing waste from the environment, we help to mitigate the accumulation of pollution. Many types of waste harm native species either by toxic chemical effects or when they are accidentally ingested. Plastics are particularly harmful, as they persist in the environment for a long time. So when we remove plastics and other wastes from the environment, we help to alleviate this problem.

Once we remove waste, if we recycle it, then we create many extra benefits. Recycling waste uses less energy than creating new materials, so by recycling we help to prevent the over-exploitation of natural resources.

In Guyana, local Scouts who are Clean Up the World Members have been working to remove waste plastic from the ocean. This plastic had been harmful to a local population of endangered sea turtles. So by removing this waste, the Scouts help to maintain biodiversity.

Clean Up the World Member 'The Future Centre', based on the Caribbean Island of Barbados, conducted the activity 'Clean Up Barbados'. In a single morning, the group was able to remove 42 tons of waste. Half of this waste was subsequently recycled, restoring valuable materials to the local economy and beautifying beaches that are important to tourism.

It is important to remember that when combined each local effort has the power to change the world. Without such changes, our children may never know the rich biodiversity we experience today.

**References**

1. Millennium Ecosystem Assessment Board (MEA). Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC. <http://www.millenniumassessment.org/en/index.aspx>
2. United Nations Environment Programme (UNEP), 2007. *Global Environment Outlook: environment for development (GEO-4)*, 2007. <http://www.unep.org/geo/geo4/media/>

**References continued**

3. Secretariat of the Convention on Biological Diversity (SCBD), 2006. *Global Biodiversity Outlook 2*. Montreal, Canada. <http://www.cbd.int/GB02/>
4. SCBD, 2010. International Year of Biodiversity [website]. <http://www.cbd.int/2010/biodiversity/?tab=0>
5. UNEP, 2010. World Environment Day [website], State of the Planet's Biodiversity. <http://www.unep.org/wed/2010/english/biodiversity.asp>

**For further information**

Clean Up the World  
<http://www.cleanuptheworld.org>

UNEP, 2010 International Year of Biodiversity  
<http://www.unep.org/iyb/>

UNEP, World Environment Day 2010  
<http://www.unep.org/wed/2010/english/biodiversity.asp>

UNEP Ecosystems for Development  
<http://www.unep.org/ecosystemmanagement/>

CBD, International Convention On Biodiversity  
<http://www.cbd.int/convention/>

CBD, 2010 International Year of Biodiversity  
<http://www.cbd.int/2010/welcome/>  
<http://www.cbd.int/2010/prints/?tab=5>

IUCN, Biodiversity  
<http://www.iucn.org/what/tpas/biodiversity/>