



This Earth Day, Let's Think About How to Protect the Biodiversity to Fight the Climate Change

This year's Earth Day theme is 'Environmental and Climate Literacy'. Climate change refers to changes happening to the world climate, which are linked to rising sea levels, melting glaciers, and shifting flower and plant blooming times. Contributions to human-induced climate change include the burning of fossil fuels, which releases heat-trapping gases into the air. Climate change affects biodiversity of all kinds and in all areas of the world, often by depriving animals of their habitats and food sources, or changing their living conditions dramatically and dangerously.

Deforestation, another driving cause of climate change, is the cutting down of trees on a very large scale, and it happens most often due to agricultural reasons, financial reasons, or human expansion into new areas to live. Millions of species lose their habitats as a result of deforestation. In addition, without the trees to provide a forest canopy to block the sun during the day and capture heat at night, extreme temperature swings result and can negatively impact plants and animals in the area.

The link between climate change and biodiversity has long been established. Although throughout Earth's history the climate has always changed with ecosystems and species coming and going, rapid climate change is a threat because species have evolved to live within certain temperature ranges, and when these are exceeded and a species cannot adapt to the new temperatures, or when the other species it depends on to live cannot adapt, for example its food supply, its survival is threatened.

The IPCC has predicted that by 2100, assuming that current trends in burning fossil fuels continue, the surface of the Earth will warm on average by as much as 6 degrees Celsius (around 11 degrees Fahrenheit) or more. It is not possible to predict how most species, including our own, and how most ecosystems, will respond to such extreme warming, but the effects are likely to be catastrophic.

Climate change alone is expected to threaten with extinction approximately one quarter or more of all species on land by the year 2050, surpassing even habitat loss as the biggest threat to life on land. Species in the oceans and in fresh water are also at great risk from climate change, especially those that live in ecosystems like coral reefs that are highly sensitive to warming temperatures, but the full extent of that risk has not yet been calculated.

There are lots of things that we as human beings can do to help fight climate change and can slow biodiversity loss, although there is no way to bring back the species that have already gone extinct.

Creating protected areas where human activity is limited is the best way to prevent deforestation and exploitation of organisms and the resources they need to survive. In order to truly make a difference, much planning needs to go into the creation of a protected area. It needs to consider all elements of the ecosystem it is trying to protect, so that it isn't too small. It needs to include all resources that are utilized by its inhabitants; for example, leaving out a stream where half of the mammals go to drink would not make a protected area very effective.

Preventing species introduction is another important thing for slowing down the biodiversity loss. It is often much easier and less expensive to prevent a problem from developing in the first place than to try to fix it once it occurs. This is the case with invasive species, which can wreak havoc when introduced to ecosystems that aren't prepared to deal with them.

Education is a powerful tool, and the more people know about biodiversity loss, the more they will be prepared to help slow it. Spreading the word about detrimental human effects on plants and animals can encourage people to change their ways and effect changes to preserve biodiversity.

Promoting sustainable consumption and production is also an important action towards protecting the biodiversity. Since consumption of resources is a root cause of biodiversity loss, we can consume less and be more mindful about what we consume. We need to leverage our purchasing power to help protect biodiversity by consuming products that do not harm the environment. Sustainable agriculture is much better for the environment than grazing and cropping that rely on clearing swathes of forest or field.

Preventing toxic chemicals and hazardous waste contaminating with ecosystems is also very important as toxic chemicals are found in practically all ecosystems on Earth, affecting biodiversity, agricultural production or water sources. Many chemicals, such as persistent organic pollutants (POPs) and mercury, can travel over large distances through air, migratory species and water currents. Some chemicals like PCBs build up in the food chain and can cause adverse health effects in humans and wildlife, including cancer and harm to immune, nervous, and reproductive systems. PCBs disrupt thyroid hormone levels in animals and humans, hindering growth and development.

One of the most important things that we can do on this year's Earth Day is plant trees. Trees fight climate change by absorbing excess CO₂ from the atmosphere. CO₂ is harmful to the climate and is created by such things as car emissions. In one year, an acre of mature trees can absorb enough CO₂ to make up for a car that drove 26,000 miles. In addition to absorbing CO₂, trees absorb other climate pollutants such as nitrogen oxide and ammonia, and act as a filter to capture harmful particulates in their leaves and bark. **Let Us Act Now** and plant at least one tree on this Earth Day.