

ENVIRONMENT POLLUTION: CAUSE

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BIOLOGICAL DIVERSITY AND ENVIRONMENT:

The reduction in the number of trees has two major effects as far as man is concerned: one is that it leads to a diminished environment; the other is that there is a loss of biological diversity.

The environment is eroded in a number of ways. The buildup of carbon dioxide and other greenhouse gases in the atmosphere, together with the damage to the ozone Layer, presents a danger to all life on Earth. By taking up carbon dioxide the lost trees would have helped to mitigate the effects of global warming. Instead, slash and burn methods of forest clearance have added considerable amounts of carbon dioxide to the atmosphere.

Large scale deforestation can lead to significant and widespread changes in climate. A tree transpires a considerable amount of water through its leaves into the air around it. An area of shade is also created under the leaf canopy. A small wood can create a micro-climate of its own. In summer the air inside the wood can be damper and cooler than it is outside. As a consequence the humidity will also be relatively high. In winter the wind shelter provided by the trees means that the wood is warmer inside than it is outside.

In the case of vast areas of rain forest these features are magnified to such an extent that they modify the environment; particularly the temperature and humidity of the air above the forest. This not only affects the amount of rainfall over the forest itself. It can also lead to changes in the climate over a much wider area.

The roots of the trees create a mat which holds the soil of the forest floor in place. When the trees are on the side of a hill the mat not only stops the soil from being washed away but also retards the rate at which water runs off. When the trees are removed over a wide area the rainfall may be diminished but the rain which does fall immediately flows into the valleys carrying with it much of the top soil. The streams and rivers in the valleys become clogged with silt and the hydrology of the region is severely modified. On flat ground, without the shade of the trees, the soil may quickly dry out and, with no roots to hold it in place, it can be blown away. This leads to the formation of deserts.

The ecodystem of a rain forest is complex. Above ground the vegetation may be lush and the system may support an abundance of wild life; but often the soil itself is very poor in nutrients. Many of the nutrients are effectively stored in the tissues of the living organisms both above ground and in the soil. Once the trees are removed the soil quickly becomes impoverished and infertile. It is then able to support only poor vegetation. As the climatic conditions will also have been changed it becomes very difficult to re-establish the forest.

TREES AS HOUSE DIFFERENT SPECIES:

A tropical rain forest such as that in the Amazon contains an extraordinary variety of living organisms both in the trees themselves and in the flora and insect fauna which they support. A single tree can support a number of species unique to itself. Neighboring plots may share only 10 per cent of their species and over a distance of 50 miles plots may share only 1 per cent of their species. The total number of species of insects on the Earth has been estimated as at least five million (some scientists put the figure very much higher); about half of these are thought to be in the Amazon region. Other tropical rain forests are similarly rich in biological diversity. Thus the loss of only some of the rain forests has brought about a significant loss of species.

Chemists are continually deriving new medicines from species which hitherto have been unexploited. Who knows what life threatening diseases might have their cure in species which are being destroyed day by day?

No-one will ever know how important this will be for future generations but it is necessary to preserve as many as possible of those species which remain.

Plants cultivated by man represent a very small number of species usually grown in monocultures. As such they are prone to attack by disease and from time to time, in order to produce new resistant strains, they need to be crossed with related species. Many of the latter are found only in tropical forests; if the variety of these species is severely reduced then important food crops may eventually be destroyed by disease.

MASS EXTINCTIONS:

Mass extinctions have happened a number of times, probably as the result of events which have altered the climate. On five of these occasions at least 80 per cent of the extant species have disappeared. The last time there was mass extinction was at the time of the dinosaurs. This made possible the development of mammals and thus the birth of the human race.

On these past occasions the reason for the mass extinction was probably a shock to the ecosystem caused by external events in its physical environment. But now the sixth extinction is in progress and it is not the result of an external force but of internal changes in the ecosystem. These have been brought about by the process of evolution itself, namely the emergence of man. It is also happening with great speed, probably much quicker than at any time in the past.

Up to now, however, the pattern of evolution has been one of collapse and regeneration. Unfortunately for mankind regeneration takes millions of years. If we and many other current species do disappear life it will probably go on but it will take forms which are unimaginable today.

Fortunately, the current cycle of extinction has yet to run its course. It is human culture which has brought about the present situation, perhaps human culture can bring it under control. As well creating traits like war and greed our cultures also incorporate moral values and ethics.

We have seen that there are pragmatic reasons of self-interest for preserving as many species as we can. We have also come to understand that the ecosystem is so complex and inter-related that we do not know how many bricks we can remove without precipitating the collapse of the complete structure. But as well as the need to preserve as much biological diversity as we can for our physical needs we also need it for our spiritual well-being.

As a result of the array of facts which are coming to light even urban man is beginning to realize that he has a close relationship with the natural world and that he is not a separate entity with a different destiny. Because of this knowledge many people are in the process forming new ethical standards which accept that human beings have no right to destroy other species.

There are, then, three sets of reasons for the growth of concern for conservation, self-interest, spiritual values and ethics. Unfortunately, it has yet to be shown that this concern is being translated sufficiently quickly into the necessary action. How many of us are prepared to change our life styles, and our patterns of consumption, to the degree necessary to preserve the natural world in the form it has today?

It may be that, as individuals, we cannot do these things until a general framework for action has been mapped out which will embrace politics, economics, ethics and philosophies of life. This must take time but time is short. Our best chance of doing something quickly lies in saving as much as possible of the remaining rain forests.

So we come back to the tree; it's symbolic importance now takes on a new dimension. The tree can be seen as a metaphor for the whole planet. It can be seen either as a finite physical resource like oil or as a sustainable source of cash crops. As the latter it can provide an environment which supports many other forms of life and act as a gene bank. For many people it is also a source of spiritual sustenance. If we can

find the political will and energy to save the rain forest then, touch-wood, maybe we will have found the formula which will help us to preserve an Earth which is fit for people to live in.

EDIBLE PRODUCTS:

We get all the minerals and vitamins needed for our proper health and growth from the fruits and other plant products like vegetables, cereals, grains, grams etc. Around the world everyone is opting for the vegetarian diet as it provides a wholesome and balanced diet. The balanced diet keeps the people healthy and prevents many diseases.

ENVIRONMENT FRIENDLY:

The roots of the trees hold the soil firmly and prevent soil erosion. This leads to the increase in the ground water level and the continuity of water cycle gets balanced resulting in good rains. Ultimately trees prevent the drought and provide greenery to the environment. Apart from taking care of the soil and water, the trees provide shelter to many animals and birds in the forests which ultimately help in the ecological balance of the nature. Having more number of trees around will reduce the hazardous effects of global warming.

OTHER USES:

We are taking the trees for granted and felling them mercilessly. This will lead to a treeless environment which cannot be even imagined. But the woods from cut trees also help us to make beautiful furniture and other things required for the house. The wood is used as a fuel even now in many rural areas. The trees provide us shade and the breeze will be so cool in the places where there are number trees. Many people who suffer from chronicle ailments are said to feel better when they were put in a beautiful tree surrounded areas. We must remember that the trees are very essential and we must start growing more trees in our surroundings for the sake of next generation to give them a beautiful and healthy environment. We should keep in mind that the deforestation will lead to the extinction of many animals.

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