

Briefing Paper-The Question of the degradation of coral reefs

A coral reef is an underwater ecosystem made up of colonies of thousands of tiny individual corals called polyps. Coral reefs provide an important ecosystem for life underwater, protect coastal areas from coastal erosion by reducing the power of waves, and provide a crucial source of income for millions of people through activities such as tourism.

Degradation of coral reefs is the destruction and potential mass death of the ocean's corals. Up to half of the world's coral reefs have so far been destroyed completely or badly damaged. This destruction is continuing at an alarming rate.

There are five main causes of the degradation of coral reefs:

- Reef bleaching occurs when extreme water conditions are caused mainly by changes in water temperature and pollution. Bleaching causes coral to expel the internal, vital microorganisms that give them their vibrant colors. This then causes corals to become more vulnerable to disease and possible death.
- Poison fishing uses cyanide to fish for coral reef creatures. It temporarily causes the creatures to lose most sense of consciousness, but it wears off fairly quickly and causes no long-term effects. However coral polyps tend to die due to the poisoning from the cyanide. This is becoming a more common practice causing more and more coral to degrade and die.
- Water pollution also greatly harms reefs. Every day, over 2 million tons of sewage and industrial and agricultural waste are discharged into the world's water. When oil, fertilizer and human/animal waste are dumped in the ocean. This blocks sunlight from the coral reefs. Like most ecosystems they cannot survive without sunlight hence forth they die from lack of sunlight overtime.
- When sediment enters the ocean, it can smother coral reefs depriving them of sunlight and nutrients having further fatal consequences.
- Tourism is another leading factor contributing to coral reef degradation. Coral reefs support over 70 million tourists annually. Increased tourism is causing major destruction to coral reefs- this includes uncontrolled infrastructure in coastal areas to facilitate tourists, increased waste on and off the water and careless tourist behavior when visiting the reefs.

The effect of the degradation of coral reefs is immense. For creatures, the reef provides essential food, shelter and the reproduction grounds needed for their species survival. If their habitats disappeared marine biodiversity would suffer immensely, disrupting food chains and ecosystems all around the world. It would result in 25% of marine life losing their habitat. And many fish, turtles and other creatures would also disappear. Other effects would include the collapse of coastal fishing industries, coastlines would experience mass erosion and coastal tourism economies would hugely shrink, losing their average income of \$36 billion annually.

Even if global warming stopped today scientists still expect that more than 90% of corals will die by 2050. Without drastic intervention we risk losing them all, causing a very different life for future generations.