

# CORALS, AND THE ATOLLS THEY FORM, ARE NOW IN GRAVE DANGER FROM GLOBAL WARMING

Relevant for: World & Indian Geography | Topic: Islands & Coral Reefs, changes therein and in Flora & Fauna and the Effects of such changes

Fading: Corals in the Lakshadweep atolls. | Photo Credit: [Wiki Commons](#)

Of the many wonders of the world, few have fascinated us more than corals and the colourful reefs they build. Besides being one of the most beautiful and biologically diverse habitats in the ocean, they are also some of the most ancient. In India, Lakshadweep is the perfect example of how coral islands are formed and how the corals nurture marine life and also the people who depend on them.

Corals, and the atolls and lagoons they form, are now in grave danger from global warming. In October, the Intergovernmental Panel on Climate Change, the world's largest body of climate scientists and experts, dropped a bombshell in a special report called [Global Warming of 1.5°C](#). The report painted a grim picture of the impacts of climate change if earth's temperature continues to rise.

It said rising temperatures would result in increasing floods and droughts, more intense cyclones and hurricanes, and more wildfires. It also predicted that coral reefs would suffer a mass die-off by as soon as 2040, just 22 years away. For coral colonies that have taken millions of years to form, it'd be a tragedy of epic proportions that would affect millions of islanders across the world.

## Wake-up call

Coral reefs would decline by 70-90% with global warming of 1.5°C, whereas virtually all (more than 99%) would be lost with a rise of 2°C compared with preindustrial times, [the report said](#). Needless to say, the report is an urgent wake-up call for action.

To save coral reefs, the [Coral Reef Alliance](#) has urged action on two fronts — swiftly and drastically lowering greenhouse gas emissions, and effectively reducing local stresses to reefs and atolls. Without effective action on both fronts in the next 20 years, we could be facing a world without functional coral reefs, the international non-profit organisation said.

The effects of losing coral ecosystems would be terrible, to say the least. A quarter of all marine life depends on coral reefs, and over 500 million people worldwide rely on coral reefs for food security, economic well-being and cultural identity. The Coral Reef Alliance says that tourism and fishing derived from coral reefs are estimated to be worth \$375 billion every year.

Coral reefs are essential to protect island communities from strong sea waves, erosion and tropical storms. It's nobody's case that the world needs coral reefs. Unfortunately, most coral reefs are already in a state of decline. A combination of rising ocean temperatures due to global warming and localised threats has resulted in the loss of 50% of reef-building corals in the past 30 years. This has placed an estimated one-third of reef-building corals at the risk of extinction.

In Lakshadweep, the corals suffered a disaster in 1998, when close to 90% of the reefs were destroyed. [Recent research](#) has indicated that the very shape and structure of the corals in the archipelago has changed, and by 2017, only 11% of the reef cover in Lakshadweep was left. It had shrunk by as much as 40% in just 18 years. This has had an adverse impact on marine

biodiversity that is vital for the livelihoods of the islanders.

## Severe erosion

At the same time, increased coastal erosion brought on partly by climate change is posing a danger to the islands. The erosion is severe in some cases. A couple of years ago, R.M. Hidayatullah, then a doctoral student of Calicut University and a native of Androth Island, found that Parali I, an uninhabited islet in the Bangaram atoll, has [completely disappeared](#). He called for urgent action to check further erosion in the islands by framing an appropriate bio-strategy.

But most importantly, it is necessary to restrain global warming if we were to save coral islands such as those in Lakshadweep. It is in this context that the United Nations climate summit, ironically held in the coalmining town of Katowice in Poland, assumed importance. It was expected that national governments will agree on a set of rules to implement the historic [Paris Agreement](#), which aimed at keeping global temperature rise to well below 2°C.

However, it needs a lot of funding to combat climate change and mitigate its effects on various ecosystems, which include coral habitats. And there lies the rub. Rich nations are unwilling to shell out the money. At wintry Katowice, oil-rich countries such as the U.S. and Saudi Arabia stymied efforts to chalk out the details of the so-called Paris rulebook that would have enabled adequate flow of funds.

Despite that, it is perhaps only fair to say that the global community seems sincere to control global warming, but climate change is far outpacing the efforts to mitigate and adapt to it. For the atolls of Lakshadweep, the torturously slow pace of international negotiations might prove too costly for the corals. And if the corals die, much beauty will be lost and many lives will be devastated.

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