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At a time when global climate change projections point to an ecological and human catastrophe in the Coral Triangle, we must choose another future. But there isn't much time to act. ▶

CLIMATE CHANGE

Climate change doesn't just threaten the Coral Triangle's coral reefs, fish and mangroves—it can undermine livelihoods and stability in a region that is extremely reliant on natural resources.



THE CORAL TRIANGLE—the nursery of the seas—is the most diverse marine region on the planet, covering 6 million km² of ocean across six countries in the Indo-Pacific region. This is the home to more than 3,000 species of reef fish and commercially-valuable species such as tuna, whales, dolphins, rays, sharks, and six of the seven known species of marine turtles.

Marine life at risk

Within the Coral Triangle lie some of the richest marine ecosystems on Earth. But this treasure can no longer be taken for granted. Climate change is bringing about distorted weather patterns that cause floods and severe storms—even changing the chemistry of the ocean itself. Meanwhile, rising sea levels are putting new pressure on coastal communities.

If greenhouse gas emissions continue to rise on their current path, many parts of the Coral Triangle will be unlivable by the end of this century.

Changes are already occurring

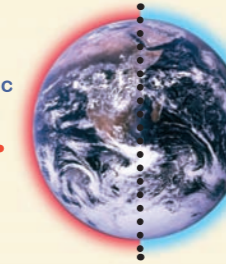
In 1998, over 16 percent of reefs globally were destroyed by bleaching. Widespread coral bleaching occurred again in 2002 and is forecast to become increasingly severe and frequent in the future as a result of climate change.



One world, two futures

A WWF report released in 2009 reveals that the Coral Triangle faces two possible futures:

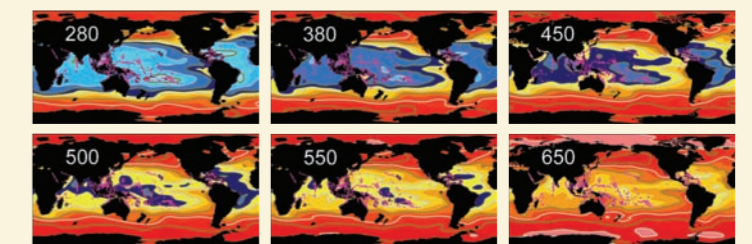
In one world, the international community continues down the current track towards catastrophic climate change. The biological treasures of the region are destroyed while poverty increases, food security fails and economies suffer.



In the other world, world leaders curb the build-up of greenhouse gases. Coral Triangle countries and the international community also invest in solutions that reduce other environmental stresses. In this world, communities and economies continue to grow sustainably into the future.

What could climate change mean for the Coral Triangle?

- Seas will be warmer by 1–4°C. Coral reefs are highly threatened by small surges in ocean temperatures. Increases of more than 2°C will eliminate most coral-dominated reef systems.
- Acidic seas will drive reef collapse. Many coral reefs may begin to collapse if the concentration of global CO₂ reaches a dangerous level.



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Marine areas suitable for coral reef formation (in blue) will shrink and disappear altogether with increasing CO₂ concentrations.

- More intense and longer floods and droughts. It seems likely that rainfall events will become more extreme and the annual variability of monsoon rainfall will increase.
- Sea level rise may reach 6m in places. By 2100, projections from the Fourth Assessment Report of the IPCC suggest that seas will rise by 30–60cm.
- More intense cyclones and typhoons.
- More violent weather events are predicted, especially for the Philippines and the Solomon Islands.
- El Niño events could lead to more climate variability.

The way forward

There is one essential goal: maintain ecosystems in a healthy state in the Coral Triangle so that ecosystems are resilient to climate change. A crucial aspect of this effort is to grow a network of marine protected areas that safeguard delicate and yet vital ecosystems and species. Communities will also need to adjust to the inevitable changes that will occur in coastal areas.

In May 2009, this effort took root with the launch of a regional cooperative effort—the **Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI)**. Adopted by Indonesia, Malaysia, Papua New Guinea, the Philippines, the Solomon Islands, and Timor Leste, the Regional CTI Plan of Action sets time-bound steps to address growing threats to the region's marine ecosystems and threatened species, well into the future.

What is coral bleaching?

High water temperature and other stresses can cause algae living inside the coral to be expelled. In the long term, corals turn white and die.



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What WWF is doing

- **Creating awareness of the observed and projected impacts of climate change.** The overwhelming scientific consensus and observations from communities around the world point to the same urgent priority—prevent global temperatures from rising to 2°C above pre-industrial levels.
- **Working at the frontlines of global climate negotiations.** WWF's mandate is to craft a strong and effective global 'climate deal' that puts us on the path to a low-carbon economy. At the same time, we must increase investment in actions that enable people and ecosystems to adapt to a rapidly changing climate.
- **Engaging all sectors of society.** We are using WWF's global network to better activate leaders within the Coral Triangle amongst local communities, businesses and the scientific world. For example, we are developing partnerships with the tourism industry to reduce its carbon footprint and to become more active in protecting the natural systems on which it depends.

WWF's Coral Triangle Programme

WWF's Coral Triangle Programme is focused on securing the health of the region's natural resources and the millions of livelihoods that depend on it. We are working to ensure that proper environmental, political and socio-economic management is put in place towards:

- Building a sustainable live reef food fish trade
- Promoting sustainable tuna fisheries
- Financing marine protected areas
- Protecting marine turtles and reducing their bycatch
- Reducing the impacts of climate change

www.panda.org/coraltriangle/climate



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