

CORAL REEFS

Shallow tropical coral reefs are very biodiverse; many different kinds of corals grow in different forms, and have different functions. They provide **habitats for all kinds of ocean animals**, as well as **food, coastal protection from storm surge and battering waves, jobs, tourism and recreation** for people.



CORAL BLEACHING



WHAT IS IT?

Coral bleaching occurs when temperature, light or nutrients in the oceans change. Corals become stressed and turn white. Climate change is causing this to happen at a rate never seen before.

HOW IT WORKS

1 Zooxanthellae (algae) live inside coral, where they photosynthesise food for the corals.



2 When waters get warmer, corals expel the zooxanthellae, turning them white.

RECOVERY

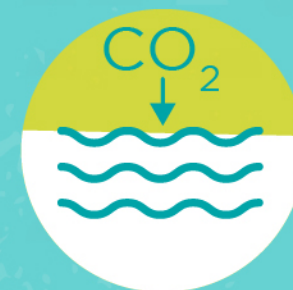
Corals can recover if they don't experience regular bleaching, and if they are protected from other stressors like:



POLLUTION



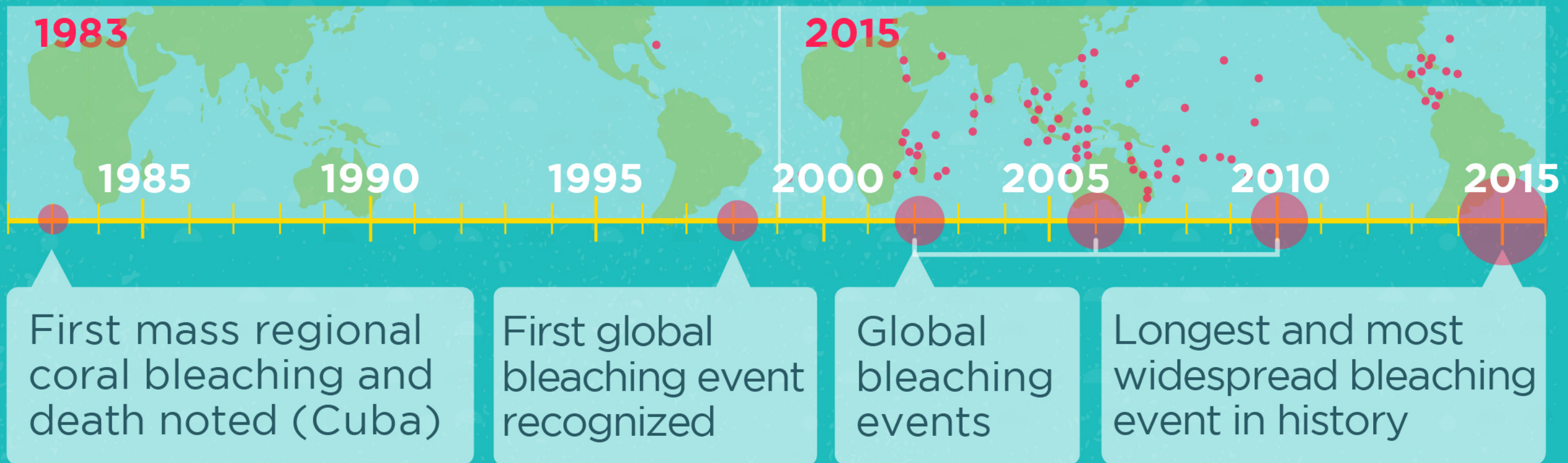
OVERFISHING



OCEAN ACIDIFICATION

CAUSE FOR CONCERN

TIMELINE OF INCREASING CORAL BLEACHING EVENTS



If we continue with 'business as usual' and don't reduce our carbon emissions, coral reefs could all but disappear.



Even if we curb our carbon emissions such that global temperature rise is limited to a **1.5°C** increase, we will still lose many coral species.

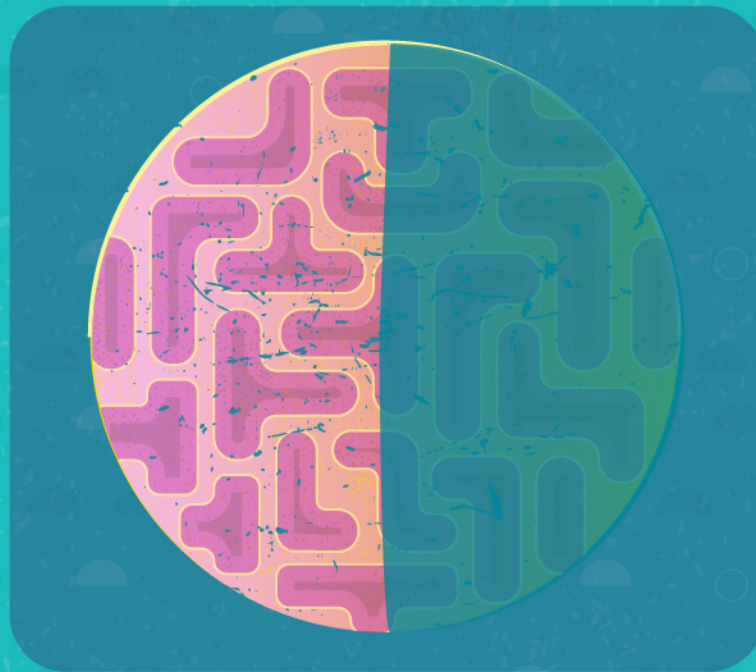
Hughes TP et al (2018) Spatial and temporal patterns of mass bleaching of corals in the Anthropocene. Science, 359, 80 - 83.

SEYCHELLES

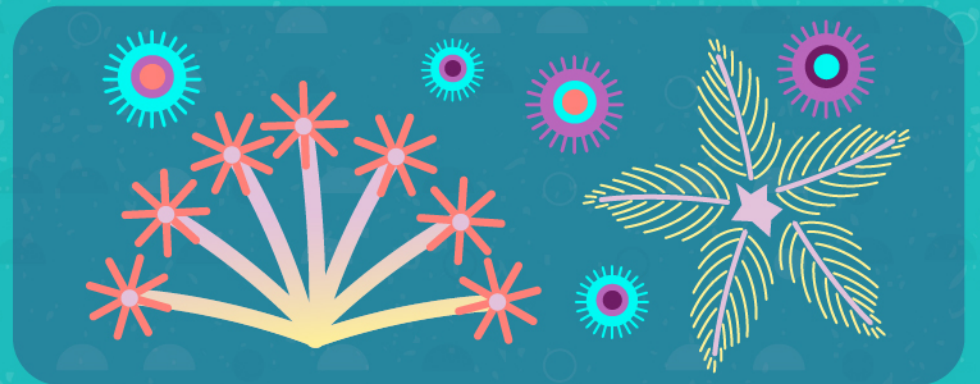
The remote location and near-pristine ecosystem of D'Arros Island and St Joseph Atoll in Seychelles may help corals recover after coral bleaching events.



Seychelles experienced **coral bleaching after high sea temperatures in 2016**, mirroring global trends.



Hard coral coverage consequently **declined by 50%**



Soft coral coverage didn't change. **This may be due to the healthy fish community, and lack of human-related stresses.**

Keeping the marine life in these areas protected and limiting human disturbance will help local coral reefs **recover** after bleaching events and keep them resilient.

