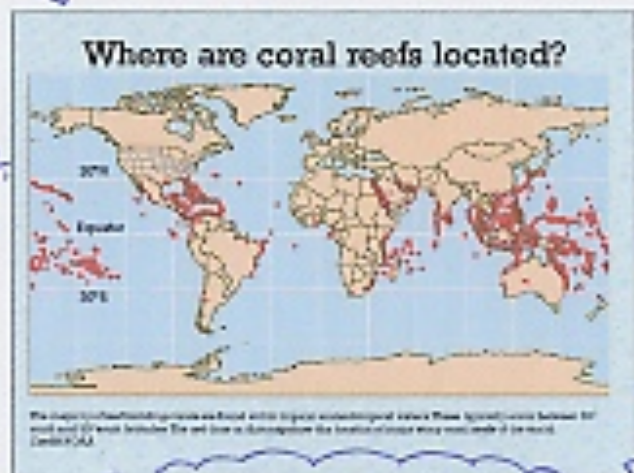


Warm Tropical/sub-Tropical Oceans between 30°N and 30°S. Temperatures between approximately 22°C and 30°C are needed for colonial coral polyps to grow and thrive. Temperatures above 30°C cause the algae associated with the coral to die.

Normal sea water salinity  $\approx$  35 ppt. are needed for coral to thrive. Near the mouth of a river the inflow of fresh water makes the salinity too low for coral. In shallow tidal lagoons evaporation of sea water increases the salinity above tolerable levels for coral.



### CONDITIONS NEEDED

High energy wave environments are beneficial for coral as the sea water in these areas is well oxygenated.

Shallow Tropical ocean areas are needed up to 30-50m deep only. The reef needs to be in the photic zone reached by sunlight. Not for the coral polyp which is an animal but for the Zooxanthellae algae that lives symbiotically with the coral. The Algae photosynthesises the sunlight to help the coral produce calcium and oxygen and remove waste. The coral helps to protect the algae and produces CO<sub>2</sub>.

Clear water is needed to allow the transmission of sunlight to the algae. Areas made cloudy by silt and clay transported to the coast by rivers may also impact on the ability of the corals to feed on plankton.

