

PURPOSE

To evaluate the effects of climate change-induced temperature shift on coral reef bleaching.

BACKGROUND INFO

Coral reefs are reservoirs for biodiversity, and economically valuable. Increasing atmospheric CO₂ is raising Sea Surface Temperature (SST), and extreme weather events. Resultingly, coral reefs are undergoing bleaching, in which crucial microalgae are expelled, causing reef deaths.

IMPLICATIONS

Marine habitat destruction, loss of biodiversity, disruption of interactions between resident species.

‘WAVE’ GOODBYE TO CORAL REEFS

Fatima Zia, Faizaan Qureshi, Sajid Alvi Leandra Castellanos

Contact: Sajid Alvi, salvi96@my.yorku.ca, York University

MATERIALS & METHODS

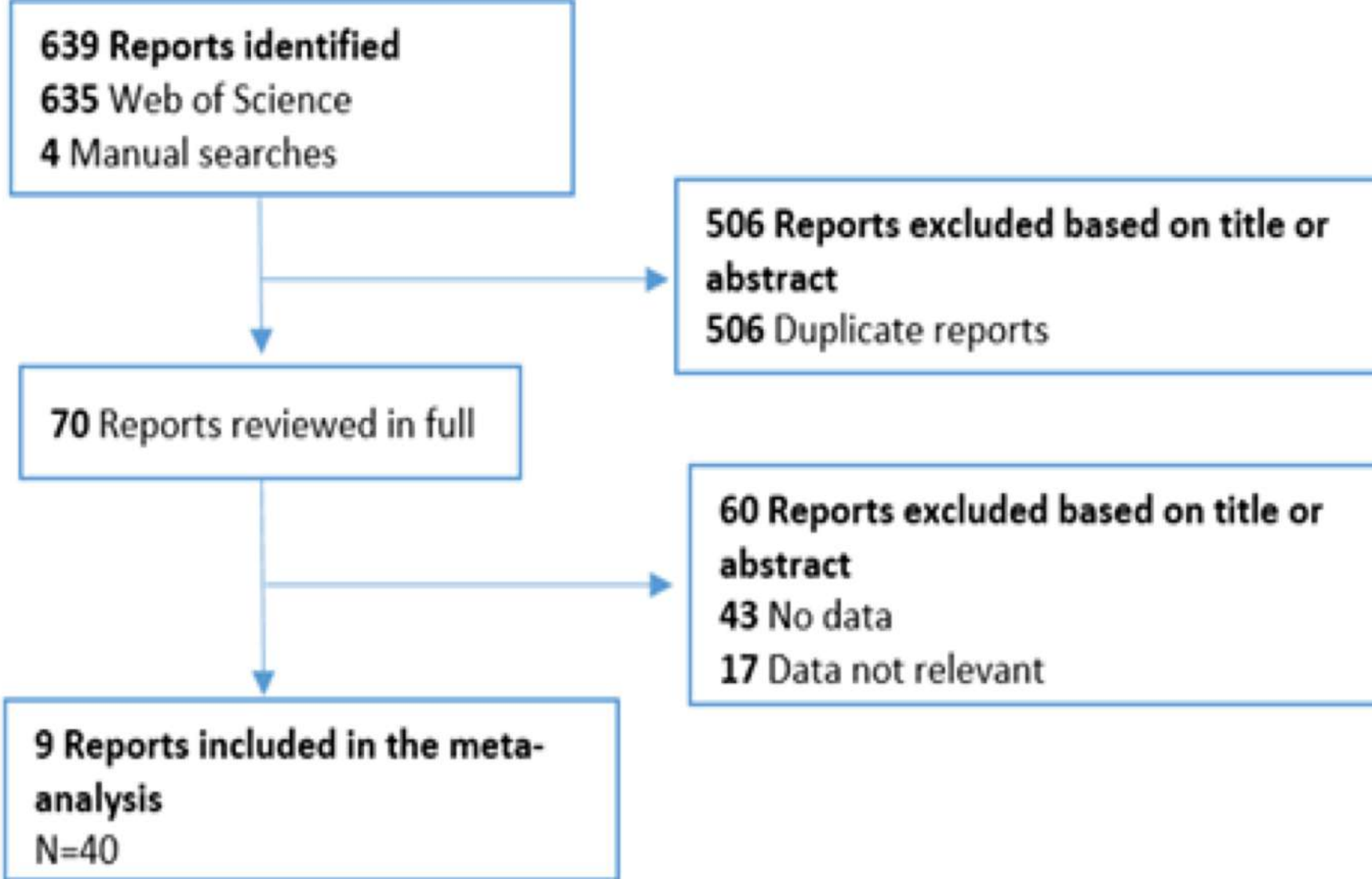


Figure 1. Study sites of reefs (N = 40)

RESULTS

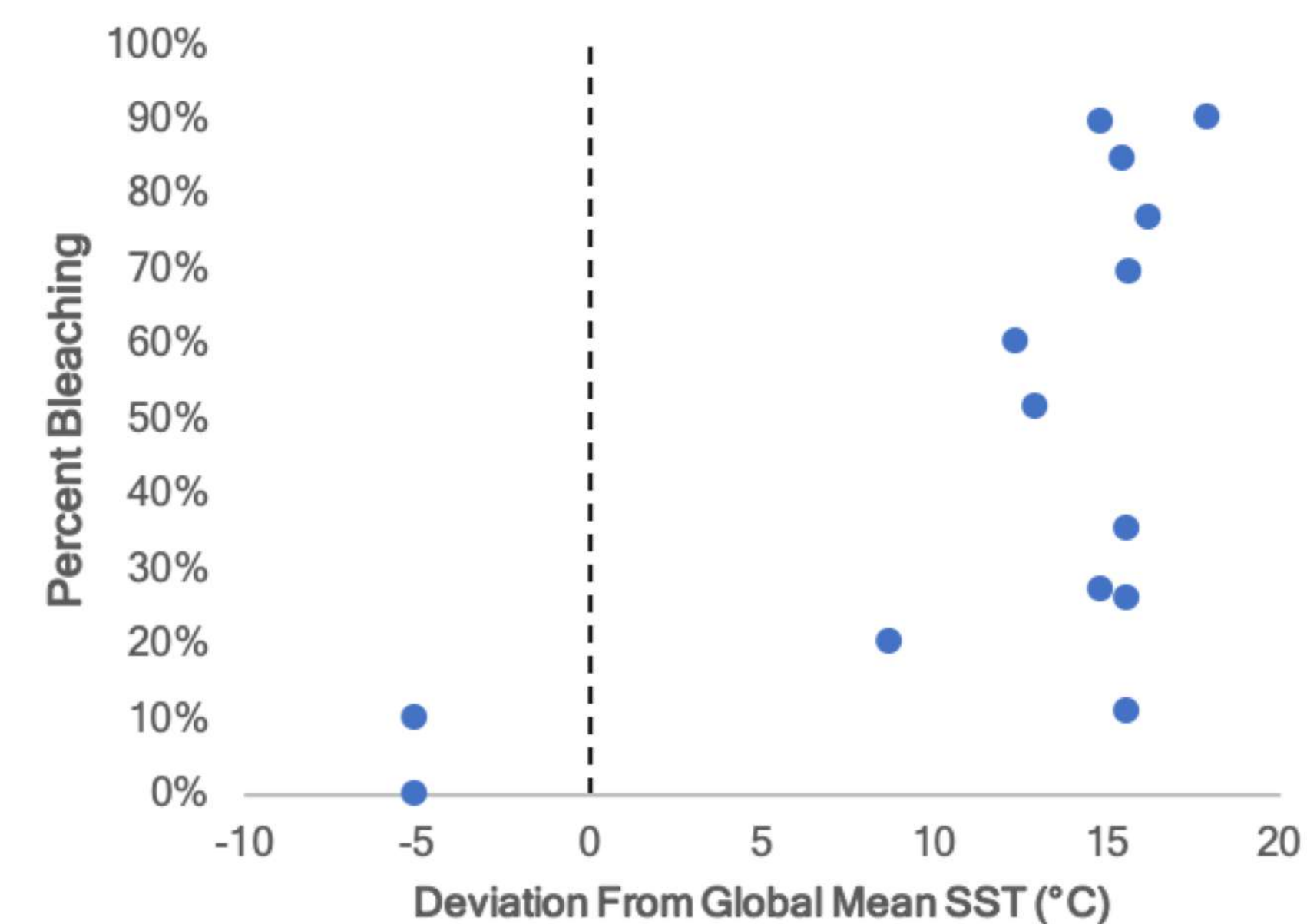


Figure 2. Difference between observed maximum SST and global mean SST (16.1°C) during bleaching events.

Abnormal extreme temperature events resulted in highest levels of coral bleaching. The higher the SST, the more bleaching that was observed.

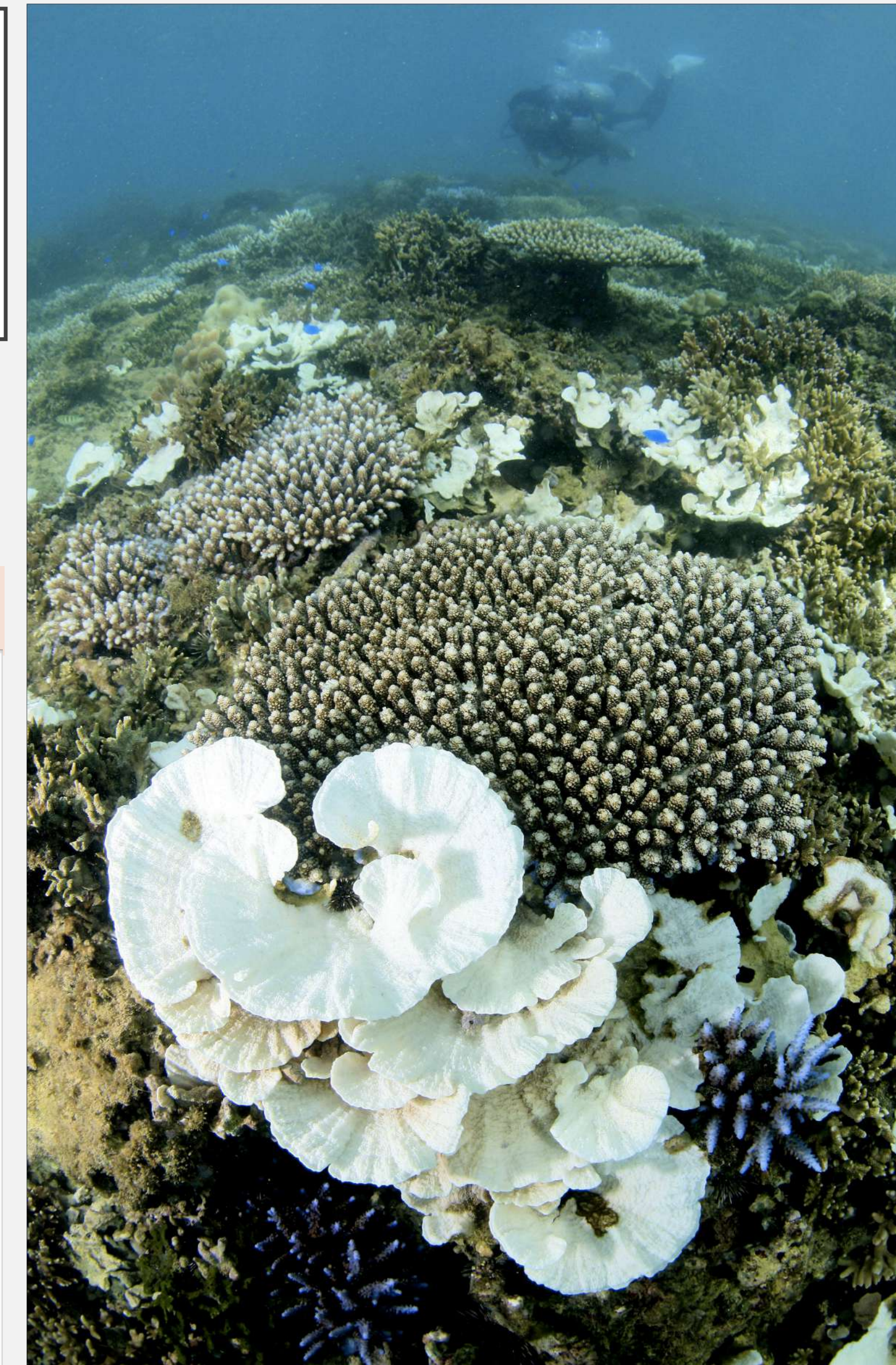


Figure 3. Bleached (white) and unbleached (brown) corals.

CONCLUSIONS

Extreme temperature events result in an increase in coral bleaching. Small variations in SST lead to rapid bleaching events.

