Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Environment and Energy portfolio

Question No: 331

Hearing: Additional Estimates

Outcome: Agency

Program: Great Barrier Reef Marine Park Authority

Topic: Coral species in Thailand

Hansard Page:

Question Date: 6 March 2017

Question Type: Written

Senator Roberts asked:

Is it true that some GBR coral species thrive in the ocean off Thailand in water two degrees Celsius warmer than in the GBR?

Answer:

Some of the coral species found on the Great Barrier Reef are also found on coral reefs throughout the world, for example in the waters off of Thailand.

Coral reefs throughout the Great Barrier Reef and the rest of the world are adapted to survive within the local temperature regimes in which they exist. For example, given the large latitudinal range of the Great Barrier Reef, the average long-term monthly sea surface temperatures are higher in the northern Great Barrier Reef than in the southern Great Barrier Reef. This means that, although the same species of coral may exist throughout the Great Barrier Reef, the corals of that species in the northern Great Barrier Reef must adapt to higher average temperature conditions than corals of that species which exist in the south. Therefore, the upper and lower thermal limits (after which thermal stress occurs) for a coral in the far northern Great Barrier Reef will be different than that of the same species of coral in the southern Great Barrier Reef.

The same logic applies to corals found at latitudes where sea surface temperatures are typically warmer than those on the Great Barrier Reef. Those corals are adapted to survive within the given average temperature range for that region or specific location.

The coral reefs of Thailand have also been affected by the third global coral bleaching event, with reports in the media in May 2016 that ten popular tourism dive sites had been shut down by the Thai National Parks department due to coral bleaching.