

## TAKE **MEASURE**

Rebekka Pentti is a Marine Environment Specialist at Al Mahara Diving Centre, in Abu Dhabi, and Coordinator for Reef Check UAE – the local arm of a global organisation that combines education and research to help protect reefs and oceans. Here, she gives her insight on our local coral reefs. Coral reefs are extremely important marine habitats and host an incredible amount of marine biodiversity; one fourth of all marine life can be found in coral reefs, although they only cover approximately 0.1% of all oceans. They provide important spawning, feeding and nursery grounds for marine life and contribute to carbon sequestration, thus playing a major role in tackling the effects of climate change.

"The marine life here is exposed to the highest annual sea temperature fluctuations, as well as the overall highest temperatures, along with high salinity due to lack of rainfall and freshwater inlets surrounding the gulf.

"The east coast of the UAE is in the Indian Ocean and regularly visited by divers for its plethora of marine life. The west coast is shallow and sandy with plenty of artificial breakwaters, reefs and shipwrecks that attract marine life and produce great dive sites. Natural reefs on the west coast are more sparsely distributed, yet they still host a surprising diversity of corals. Acropora hard corals used to be the most prominent coral growth on the west coast, but the more resilient Porites and Favia seem to have increased in abundance in recent years, though this depends on the site.

"It had previously been suggested that reef community structures in the UAE were primarily driven by water temperature and salinity. However, studies by local coral experts state that winds, surface currents and chlorophyll-a have also been found to play an important role. Reef Check UAE is currently concentrating its monitoring efforts on the Al Dhabiyah, Ras Ghanada and Saadiyat reefs, in Abu Dhabi, although we hope to extend monitoring efforts to other emirates.

"Corals in the UAE are threatened by coral bleaching. Some UAE reefs are situated adjacent to many fast-growing infrastructure hubs and are therefore also impacted by sedimentation due to costal development. Anchor damage and over fishing are also impacting our natural reefs. Collecting baseline information on the health of the UAE's corals can provide useful information for decision-makers in these sectors. Ultimately, more Marine Protected Areas should be established to effectively enhance the survival of UAE reefs.

"While the UAE, and Abu Dhabi in particular, hosts some of the world's leading experts in coral research, there is a need for systematic reef surveys. We're reaching out to the local diving community and citizen scientists on our eco diving initiatives to reestablish data collection efforts. While over 20 reef surveys have been carried out in the UAE by the Al Mahara Reef Check team, we aim to carry out another 16 surveys this year.

"After intensive training, Reef Check volunteer divers are able to collect four types of data – a description of each reef site based on measures of environmental and socio-economic conditions and ratings of human impact; a measure of the percentage coverage of different substrate types, including live and dead coral; invertebrates indicator species counts, as well as fish indicator species counts. This data is used in the creation of a global and regional report regarding the status of the coral reefs.

"Reef Check UAE is also planning plenty of activities outside of scuba surveys. We conduct beach and underwater clean-ups, educational talks and documentary screenings. A successful Reef Check programme grows with the support of the community and we welcome any help from our environmentally conscious community members."

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