

# How climate affects coastal waters of Exmouth Gulf

December 17 2019

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Credit: University of Western Australia

Ms Cartwright has used Exmouth as a research base since November 2018 as part of a \$350,000 partnership between UWA and K+S Salt Australia.

"I've been looking to understand how natural events such as seasonal oceanographic processes, and the La Nina/ El Nino oscillation patterns, affect nutrients and turbidity in the waters of the region," Ms Cartwright said.

"The water sampling process has helped me confirm observations derived from long-term satellite data."

The water sampling process has been hard work for Ms Cartwright who usually makes the trip to difficult-to-reach waters as the sole scientist responsible for five large eskies of specialized lab water bottles used to collect the samples.

Supported by the Terrafirma Offshore team contracted by K+S, Ms Cartwright collects the [water samples](#) using specialised sample bottles as well in-situ water instruments to build a vertical profile of the water.

Over the course of her four-day trips Ms Cartwright visits 10 sampling sites where she collects the required 300 samples, as well as two logger sites where she records the data gathered during the previous month.

The research, which is required by K+S Salt Australia for modeling and understanding water quality in the areas around the planned Onslow Salt project, is also contributing to broader knowledge of the previously understudied area.

"This research is informing our understanding of the impact of water quality on corals and seagrasses in the region," Ms Cartwright said.

"It's early days, but we are looking to understand the parameters of turbidity which results in more resilient ecosystems, which will certainly help as we look to protect and conserve our marine habitats."

K+S Salt Australia Managing Director Gerrit Gödecke said he was proud that the [environmental studies](#) K+S Salt were undertaking were also informing broader scientific knowledge of the region.

"We are committed to doing the right thing and are taking our time with our environmental studies to make sure we gather the right information to adequately assess [environmental risks](#)," Mr Gödecke said.

"It is fantastic that Ms Cartwright's studies are also giving new insights into the [water](#) system and ecology of the Exmouth region.

"We are proud to be part of the Pilbara and are pleased to be contributing to new knowledge of this important region of Western Australia."

Provided by University of Western Australia

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