

Perth has distinct dolphin communities and they each need different protections

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Research out of Murdoch University has identified distinct ecological communities of dolphins living in Perth waters requiring separate protection measures from anthropogenic threats.

Research lead, Dr. Delphine Chabanne from Murdoch University's

Harry Butler Institute said the research found that identifying [population structure](#) and boundaries among communities of wildlife exposed to human induced threats was vital to ensuring successful conservation management.

"Our research found that in the Perth [metropolitan area](#), discrete communities of Indo-Pacific bottlenose dolphins occupied different habitat such as coastal, embayment and estuarine waters," Dr. Chabanne said.

"These communities are exposed to year-round anthropogenic activities, including dredging, pile driving, recreational and commercial shipping and fisheries, environmental contaminants, and climate change.

"Each community needs to be treated as a distinct ecological unit and require different protection measures because they are exposed to different anthropogenic threats occurring in those distinct ecological habitats.

"While there are genetic similarities among all dolphins, and that the dolphins' mate randomly and even between communities, each social community should be considered as a distinct ecological unit to be conserved.

"Each social community are exposed to different anthropogenic threats in different ecological habitats."

Dr. Chabanne said an important finding of the research was that if any of the communities of dolphins become extinct, the locality of the community could be repopulated by members of one or more from the adjacent communities.

"However, at a [population level](#) the number of dolphins could decrease if

the cause of one community decline and its extinction in the first place is not correctly identified and managed accordingly," Dr. Chabanne said.

"Therefore, each community should still be considered a distinct 'ecological unit to conserve' based on the available information on anthropogenic stressors."

The four communities of dolphins in the Perth metropolitan waters are located at:

- Cockburn Sound
- Swan Canning Riverpark
- Owen Anchorage (area defined between Fremantle and Woodman Point)
- Gage Roads (area defined between Fremantle up to Scarborough level).

More information: *Frontiers in Marine Science*, [DOI: 10.3389/fmars.2020.617540](https://doi.org/10.3389/fmars.2020.617540)

Provided by Murdoch University

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