

## Using ecology to help manage dolphins and their marine ecosystems

Dolphins, as top marine predators, play a key role in marine ecosystems. Yet little is known of the ecology of South Australian dolphins, which is a vital component for their effective conservation and management.

Researchers from the South Australian Research and Development Institute (SARDI) and Flinders University will use aerial surveys, distance sampling, population genetics and spatial modelling as the basis of their research to better understand the ecology of common dolphins in South Australia. This is part of a recently approved study, funded by the Australian Marine Mammal Centre (AMMC), which will provide critical baseline information.

South Australia's coastal, estuarine and marine environments sustain some of the most biologically diverse fauna and flora in the world, with an estimated ninety per cent of these species unique to southern Australia.



Common dolphins leaping out of the water in Gulf Saint Vincent.

As top marine predators, dolphins play an important role in the structure and functioning of these marine ecosystems. Dolphins are potential indicators of the health of marine habitats, and their protection ensures that key components of the marine ecosystem are preserved.

Our understanding of the ecology of common dolphins in South Australia is very poor. Consequently, the



Dr Parra and Dr Bilgmann processing biopsy samples of common dolphins.

ability of wildlife management agencies to provide effective management solutions is hindered by this lack of information.

A recently approved study on the ecology of South Australian common dolphins (*Delphinus delphis*), funded by AMMC, led by Dr Guido Parra, MISA's Cetacean Ecologist, together with colleagues from Flinders University (Dr Luciana Möller and Dr Kerstin Bilgmann) aims to bridge this knowledge gap.

This multidisciplinary project will provide invaluable insights into the vulnerabilities of common dolphins in South Australia to changes in environmental conditions and anthropogenic activities.

The project is the first stage of a long-term commitment to whale and dolphin research in South Australia by MISA, SARDI and Flinders University as part of the recently established Cetacean, Ecology, Behaviour and Evolution Lab (CEBEL) led by Dr Parra and Dr Möller.

The group, based within the School of Biological Sciences, Flinders University, deals with pure and applied cetacean research and with conservation and management issues that are considered priority by state and federal government.

## Key Points

Dolphins, as top marine predators, play a critical role in the structure and functioning of marine ecosystems.

Understanding their ecology is critical for their conservation and management of healthy marine habitats, yet very little is known.

A recently approved study, funded by the Australian Marine Mammal Centre, will focus on understanding the abundance, population structure and habitat preferences of common dolphins to provide critical baseline information.

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