



National Environmental
Research Program

MARINE BIODIVERSITY *hub*

New options for assessing rare and threatened marine species

Reliable, cost-effective assessment tools are vital for managing rare and threatened species. Northern

Australia has some of the last remaining populations of sawfish, sharks and rays that live in both freshwater and seawater environments. The population status of these species and the effectiveness of conservation management – a key requirement of recovery plans – are unknown.

The NERP Marine Biodiversity Hub will provide the first estimate of population status for these species using electronic tagging (acoustic telemetry) and advanced genetic techniques (close-kin genetics) designed for this project.

Acoustic telemetry will establish how many juveniles survive through time. Close-kin genetics will establish how often animals give birth, whether females return to the same river to give birth, how many of their offspring survive, and which adults are the parents of juveniles sampled in a river.

Field surveys of juvenile sawfish and spartooth shark (species listed under the EPBC Act) are being conducted in Northern Territory rivers. Many surveys are being undertaken in close collaboration with traditional owners in the Daly River region and Kakadu National Park.

The project will lead to estimates of population trend and size for focal species, enabling management strategies to be evaluated and improved.



A freshwater sawfish on the Daly River being released after tissue sampling for genetic analysis. The Marine Biodiversity Hub will provide the first estimate of population status for this and other shark and ray species. Photo: Miguel Clavero



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Australian Government

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