



CASE STUDY OF IMPACT
October 2018



Australian sustainable fisheries: Southern Bluefin Tuna



Conservation management of Southern Bluefin Tuna to improve the security of the fishing industry in Australia, New Zealand and world-wide.

The challenge

Southern Bluefin Tuna (SBT) is vulnerable to overfishing due to their longevity, late spawning (10-12 years old) and relatively low rates of natural mortality. The SBT stocks had been fished beyond sustainable levels and were both in danger of collapse. By 2010, SBT was listed as conservation dependent under the Environment Protection and Biodiversity Conservation Act (1999) and as critically endangered under by the International Union for Conservation of Nature. This immediate situation required the development and implementation of a plan for rebuilding stock levels.

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The response

To manage the SBT fishery to ensure it is run in a sustainable way requires an ability to accurately assess and monitor fish stocks in order to determine the annual total allowable catch (TAC) for the fishery.

In 2016, CSIRO developed two innovative new stock assessment methods: Close Kin and Gene-Tagging to accurately determine the abundance of the adult spawning stock and the recruitment of juveniles, respectively. These projects gained significant industry and management support; the close-kin due to deep concerns about the impact of the unreported catches on the accuracy of the current stock assessment; and, gene-tagging as a potentially more accurate and cost-effective alternative to the aerial survey used to estimate relative juvenile abundance.

The impact

CSIRO's SBT research enabled the development of an effective monitoring and decision-making framework, which generates transparent and consistent advice.

The SBT research has contributed to economic benefit from commercial fishery revenue for Australia in the order of \$80 million, and globally of \$300-400 million over the 2011-18 period. Another impact of this research has been the development of an Australian SBT industry.

An independent economic assessment estimates that the net present value of the benefits to 2025 from the Orange Roughy and Southern Bluefin Tuna project is \$616.5 million in 2018-19 dollars. The project has a benefit-cost ratio of over 28.¹

¹ ACIL Allen Consulting, 2018. *Orange Roughy (OR) and Southern Bluefin Tuna (SBT) – An Independent Assessment*. ACIL Allen Consulting: Canberra. The results includes benefits of both OR and SBT Projects.

CONTACT US

t 1300 363 400
+61 3 9545 2176
e enquiries@csiro.au
w www.csiro.au

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FOR FURTHER INFORMATION

Dr Campbell Davies
t +61 3 6232 5044
e campbell.davies@csiro.au
w www.csiro.au/impacts