

# Hydrodynamic modelling and habitat mapping of Aitutaki Lagoon and boat channel

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## Description

Bathymetry, oceanographic data and benthic habitat data and Hydrodynamic (HD) model of the lagoon collected and processed to support detailed investigation of the performance of proposed boat channel design changes as well as improved understanding of flow regimes in the lagoon. Bathymetry and oceanographic data collected and HD model and habitat map developed. Weather scenarios developed and lagoon / channel circulation, elevation, velocity, residence time and flow regimes have been modelled. The study also considered the construction of weirs to reduce boat channel flow rates. Technical work completed and delivered to stakeholders in Rarotonga by the Marine, Coastal Science and Survey team first quarter 2011. The channel and harbour have been re-designed following wide stakeholder consultation and taking into account the recommendations of the technical report. A further model run was requested in July 2011 to investigate the impact of the new design criteria on the hydrodynamics of the lagoon.

## Project Status

[Completed](#)

## Start Date

Tuesday, December 6, 2022

## End Date

Tuesday, December 6, 2022

## Project Type

[Other](#)

## Project Scope

[National](#)

## Implementing Countries

[Cook Islands](#)

## Implementing Organisation(s)

[SPC-SOPAC](#)

## Development Partner Contacts

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