



Research & Education New Project Fine Tunes Rock Lobster Fishery Assessments.

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Further improving and fine tuning the stock assessment model which underpins the management of Victoria's rock lobster fishery, is the aim of a study underway at the Department of Primary Industries' Queenscliff Centre.

Funded by Fisheries Victoria and the Fisheries Research and Development Corporation, the aim of this two-year study is to improve the current stock assessment modelling capacity by better representing the biological variation exhibited by rock lobsters populations across the state.

Stock assessment models use data collected from a fishery to estimate the current size of the population available to the fishery and trends in this population over time. The results of these assessments are used to make management regulations, set total allowable catches (quotas), and assess the performance of the rock lobster fishery in Victoria.

The rock lobster fishery in Victoria is divided into Eastern and Western Zones. The Western Zone extends from the South Australian border to Apollo Bay, while the Eastern Zones extends from Apollo Bay to the New South Wales border. Different catch limits and management targets have been set for each zone, reflecting the different challenges faced by the two fisheries.

"Our current assessment model assumes that rock lobster populations within each of these zones have the same biological characteristics such as growth rate and size at onset of maturity," explains Project leader David Hobday. "However, we know that rock lobster populations vary within each zone with respect to these characteristics.

Research has shown the growth, movement and size at which rock lobsters mature also varies across the state and within the current management zones. In addition, fishing intensity also varies within the each zone."

To capture this diversity, David and his team will identify areas within each of the current management zones that have similar population structures and dynamics. They will then adapt the current model to recognise the areas of similarity within each zone. It is hoped that eventually

assessments can be directed to smaller spatial scales, more effectively managing the rock lobster resource.

Once the assessment model has been improved to capture the biological diversity inherent in Victoria rock lobster fishery, the performance of the stock assessment model will be tested.

"The testing phase or Management Strategy Evaluation is the most important aspect of this project," David says. "Sophisticated computer modelling techniques will be employed to evaluate how well stock assessment methods perform."

It will also be used to assess different management options so that the right management decisions can be made to ensure the continued sustainability of the rock lobster fisheries.

For more information about this project, please contact Mr David Hobday at, DPI Queenscliff Centre on (03) 5258 0256.

Further Information

Fisheries Research and Education Notes are available on the web at the following address: www.dpi.vic.gov.au. Follow the prompts to Fishing and Aquaculture and then to Publications and Fisheries Notes. The notes are listed under the heading Research and Education.

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