

# Southern Hemisphere Porbeagle Stock Status Assessment

Update January 2016

**Programme:** Since their start of work in August 2015, NIWA (New Zealand) has progressed through a number of tasks in the five-stage work plan for the southern hemisphere porbeagle stock status assessment. The first two tasks, develop a work plan and initiate indicator production with national participants, have been completed in 2015. Work now proceeds with synthesizing the initial indicator results into preliminary stock assessment and risk assessment models.

**Progress:** Through generous support from New Zealand's Ministry for Primary Industries, and in-kind support from Japan's Fisheries Research Agency, draft indicator series have been produced as the result of two weeks of collaborative work in Japan in November 2015. New Zealand will produce national indicators in February 2016, and Uruguay and Argentina have produced initial series and are currently working to finalize them. Chile and Korea have committed to indicators work over the next few months, and relevant data from Australia, SPRFMO, Kerguelen and the tuna RFMOs has been either obtained or identified. A stock assessment model framework has been developed in Stock Synthesis and work on the risk assessment approach will begin shortly.



Photo: Malcolm Francis



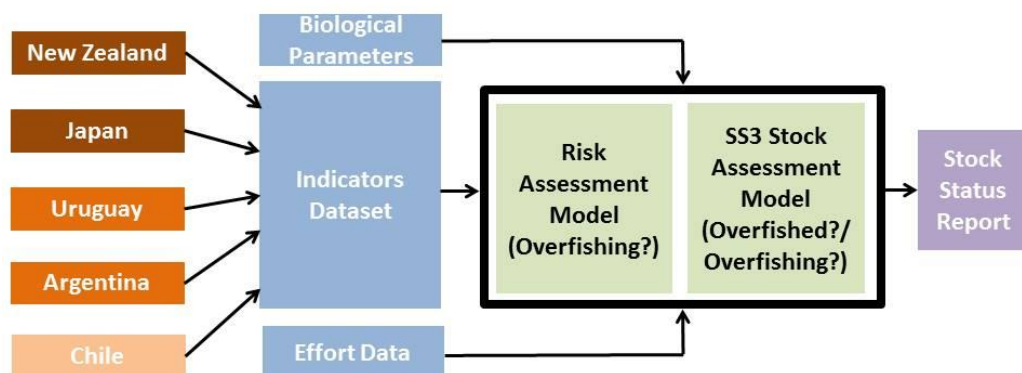
**Outlook:** The work plan was designed with the intention of presenting the assessment results to either the next CCSBT ERSWG (not yet scheduled) or the WCPFC SC (next meeting 2-11 August 2016 (SC12)). If all national indicators series proceed on schedule to completion over the next four months, it may be possible to meet the submission deadlines for WCPFC's SC12. However, providing for some flexibility in the timeline might be worthwhile if it allows more of the national indicator series to reach a higher level of refinement and still provides for presentation of the assessment results at the CCSBT's ERSWG.

# Southern Hemisphere Porbeagle Stock Status Assessment

Update April 2016

**Recap:** Consultants (NIWA and Dr Carlos Bustamante) began work on the study in August 2015 and as of December 2015 were in contact with scientists from several porbeagle range States including Argentina, Chile, Japan, Korea, Namibia, New Zealand, South Africa, Chinese Taipei and Uruguay, to explore whether stock status indicators can be produced. Consultants spent two weeks on site in Japan in November 2015 resulting in collaboratively-produced national indicator series. Relevant data from Australia, SPRFMO, Kerguelen and the tuna RFMOs had been either obtained or identified.

**Extension:** The study results are not due to be reported to the CCSBT Ecologically-Related Species Working Group until its next meeting in 2017, and can be presented to WCPFC in August 2017. Noting this and recognizing that the study is a rare opportunity to obtain information about southern hemisphere porbeagle shark, the project's deliverable schedule has been extended to allow for better development of indicators by project collaborators. The outline stock status report is now due at the end of October 2016 and the draft stock status report at the end of January 2017.



**Progress:** Two national indicator series are nearing completion: New Zealand's indices are complete but being updated with observer data for 2014-15 and Japan is working to finalize their indices by resolving some minor outstanding issues. Two other national indicator series are still in progress: Uruguay and Argentina have produced draft series but are still actively working with the consultant to explore patterns in the datasets. Following some initial consultation, the consultants hope to assist with national indicator series from Chile but are awaiting details of what data are available. A stock assessment model, which will address both stock status and exploitation rates, and a risk assessment model, which will address exploitation rates only, are both under active development.



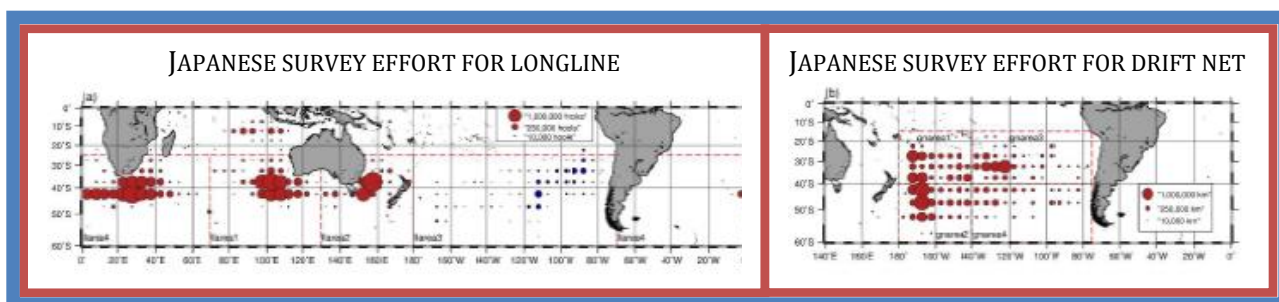
For additional information, contact:

- Dr Shelley Clarke, Common Oceans Tuna Project  
Technical Coordinator-Sharks and Bycatch | [shelley.clarke@wcpfc.int](mailto:shelley.clarke@wcpfc.int)

# Southern Hemisphere Porbeagle Stock Status Assessment

Update August 2016

- Recap:** Consultants (NIWA and Dr Carlos Bustamante) have continued their work with key partners New Zealand, Japan, Argentina, Uruguay and Chile to develop stock status indicators. A stock assessment model, which will address both stock status and exploitation rates is under development, and a risk assessment model, which will address exploitation rates only, has been fully developed and applied to bigeye thresher shark in a parallel WCPFC ABNJ project. The project's deliverable schedule was extended in April 2016 to allow for better development of indicators by project collaborators and delivery of the draft stock status report by late January 2017.
- Progress:** Japan holds the world's most informative longline and drift net datasets for the southern hemisphere porbeagle shark (see figure†). New Zealand graciously offered to assist the ABNJ-funded assessment by supporting a collaborative analysis of these datasets by Japan and NIWA, the results of which will be published soon as a New Zealand Fisheries Assessment Report‡. The new analysis investigates catch rate series for subareas defined by spatio-temporal analysis of size and sex, the influence of targeting behaviours, and vessel catchability and reporting rate factors. These advances will allow for the identification of separate trends in discrete areas (rather than treating the entire Southern Ocean as one unit), provide new insights into porbeagle habitat preferences, and illustrate improved methodologies that can be used across a range of species.



- Next Steps:** The project team continues to collaborate with Argentina and Uruguay on finalizing their national indicator series, and is working on finding ways of engaging with Chile to harness more information from the southeastern Pacific to support the assessment. A progress report on stock assessment methods is due in October.

- † Semba, Y., K. Yokawa, H. Matsunaga and H. Shono. 2013. Distribution and trend in abundance of the porbeagle (*Lamna nasus*) in the southern hemisphere. *Marine and Freshwater Research* 64 (6): 518-529.
- ‡ Hoyle, S.D., Y. Semba, M. Kai and H. Okamoto (in prep). Development of porbeagle shark stock abundance indicators using Japanese data, New Zealand Fisheries Assessment Report 201X/XX



For additional information, contact:

- Dr Shelley Clarke, ABNJ (Common Oceans) Tuna Project Technical Coordinator  
Western and Central Pacific Fisheries Commission | [shelley.clarke@wcpfc.int](mailto:shelley.clarke@wcpfc.int)