

How the Pacific Community contributes to the annual WCPFC Scientific Committee meeting

An interview with Dr Graham Pilling, Deputy-Director of the Pacific Community's Fisheries, Aquaculture and Marine Ecosystems Division (Oceanic Fisheries Programme).

What is the Scientific Committee meeting?

This is a key meeting supporting the work of the Western and Central Pacific Fisheries Commission (WCPFC), whose goal is to conserve and manage tuna and other highly migratory fish stocks across the western and central Pacific Ocean (WCPO). The Scientific Committee (SC) meeting is held in August each year, prior to the annual Commission meeting in December. The SC is composed of the 33 WCPFC member countries and territories, and it scrutinises a range of scientific issues, including data and statistics, stock assessments, management issues, and ecosystem and bycatch mitigation.

The Pacific Community's Oceanic Fisheries Programme (SPC OFP) has been the Commission's Science Services Provider and Data Manager for almost 15 years, which means that the SC meeting is a key opportunity to present SPC OFP's analyses and inform scientific advice from SC on which the Commission will base its fishery management decisions.

What process did SPC follow to submit the scientific papers?

Each SC meeting defines the stock assessments to be developed by OFP for the following year. This year, the two key SPC assessments were WCPO bigeye and yellowfin tuna.

There are many key inputs to these assessments, and I'll give an example of two. First, we need to understand the biology of each tuna stock, to gauge how they may have reacted to fishing pressure. A key part of this is understanding how tuna grow. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Australia led work developing new information on bigeye and yellowfin growth this year. They used tuna otoliths (ear bones) collected within the WCPO by scientists and fishery observers to provide information on the age of tuna at different sizes. This work refined our understanding of growth for bigeye tuna, which has previously had a significant impact on the results of our assessments.¹ For WCPO yellowfin tuna, CSIRO's work since 2019 provided our first otolith-based understanding of growth, which was used in a yellowfin stock assessment. Another key input is the information available from fishing

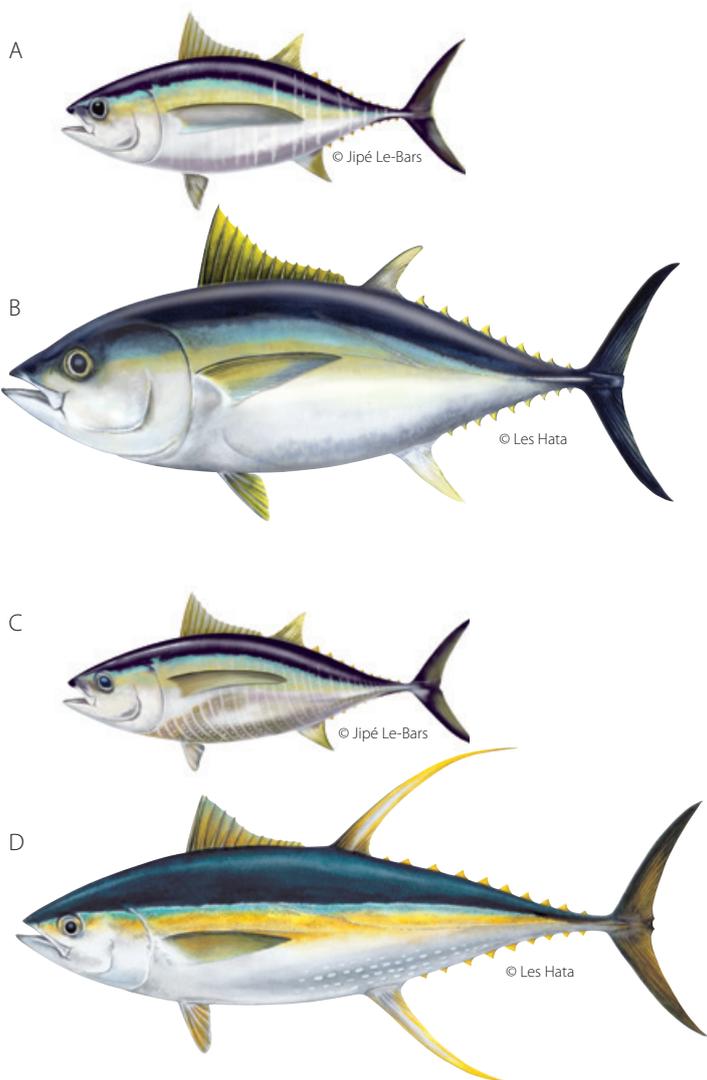


Dr Graham Pilling (image: Toky Rasoloarimanana, ©SPC)

vessels and fishery observers on the levels of catch taken by different fishing gear within the Pacific Ocean. SPC manages the data for the WCPFC and for SPC members, and the annual statistics are submitted to us by members by the end of April in the following year. Once all inputs are available, our assessment scientists need to work incredibly long hours to develop and refine each stock assessment to ensure they represent the best scientific information prior to the deadline for papers to be submitted to the SC – often less than three months after the data are received.

During the development and production of SC papers, OFP holds regular internal meetings to refine analyses. Then, before papers are submitted to SC, we also perform internal peer reviews to “sign off” each paper to ensure that scientific quality is maintained.

¹ See: Hampton J. 2017. What is going on with bigeye tuna? SPC Fisheries Newsletter 153:24–29. Available at: <http://purl.org/spc/digilib/doc/76mjb>



The two key stock assessments presented by SPC to the WCPFC Scientific Committee in 2020 were WCPPO bigeye (A, B) and yellowfin (C,D) tuna.

Papers for the SC must be submitted to WCPFC over two weeks before the meeting starts, so well before the end of July. This ensures that all members have time to read and consider them. Then, when the SC meets, members will have had time to prepare their questions and statements on the work.

SPC is not the only organisation submitting papers to SC, but OFP's staff significantly contributed to 70 papers this year – over 75% of the papers submitted. OFP's output at SC16 represents a group effort that could not have been achieved without the hard work undertaken by all 60+ staff in OFP, and in particular the 22 OFP staff that were lead authors. Our papers represented key inputs to support the stock assessments themselves,

informed SC of the status of data collection and fishery knowledge, provided scientific information to support advice on fishery management approaches, or provided information on the wider WCPO ecosystem, climate change and fishery impacts. All papers are freely available on the WCPFC website at: <https://www.wcpfc.int/meetings/16th-regular-session-scientific-committee>

Once the papers are completed, is OFP's work for the SC meeting finished?

OFP's work for SC does not end once the papers are submitted. Prior to the SC meeting, we provide scientific support to members of the Pacific Islands Forum Fisheries Agency and the Parties to the Nauru Agreement in SPC's role supporting Pacific Island countries and territories, to ensure they can take full account of the scientific information being provided within their decision-making.

During the SC meeting itself, we present our papers and respond to scientific questions that SC members have on the work and our recommendations, which represents a further peer review of our work. The meeting generally runs for more than a week, during which we continue to deliver scientific advice on all subjects, in what are usually very intense sessions.

Why is this annual tuna scientific assessment process important?

Given the value of the tuna fishery to all members, as well as the global importance of the fishery – this region supplies over half of the world's tuna – the sustainability of our tuna stocks and fisheries is of paramount importance. The stock assessments provide the clearest indication of stock status and underpin further analyses to identify whether current fishery management regimes are likely to maintain the stocks at healthy levels. In turn, they form key building blocks of the "harvest strategy" management approach that WCPFC is undertaking to help ensure long-term stock health. By the end of the meeting, all members agree on scientific advice and recommendations to the Commission meeting, including in particular the status of assessed stocks and any scientific recommendations on actions needed to ensure fishing remains sustainable.

What was different about the 2020 SC?

Our approach to delivering the stock assessments and range of papers to the 16th SC meeting this year were no different from any other year. However, the COVID-19 pandemic has had a massive impact on regional fishery management processes in the Pacific,² and the SC meeting itself did not

² See: Smith N. 2020. How the COVID-19 crisis is affecting Pacific Island fisheries and aquaculture. SPC Fisheries Newsletter 161:2–3. Available at: <http://purl.org/spc/digilib/doc/cz32e>

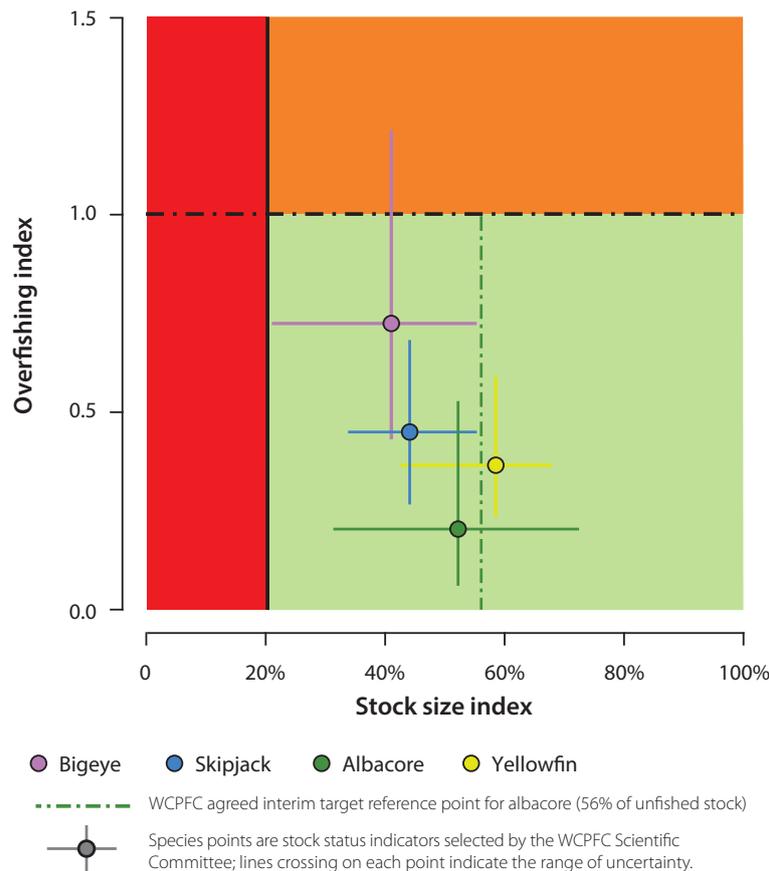


Figure 1. Stock status of the four main tuna species in the western and central Pacific Ocean.

escape the effects. This year’s SC meeting was held online, with a shortened agenda that covered only essential issues that required SC advice to the Commission. To help deal with other important issues, an “online forum” was set up by the WCPFC Secretariat prior to the meeting to get written responses from members. In general, while the level of discussion was less than it would have been during a physical meeting, and we could not discuss all the papers submitted, this year’s SC process worked pretty well, and the bigeye and yellowfin tuna assessments were agreed as being the best scientific information available, and indicate that these stocks are in the green (safe) zone of the Majuro plot (Fig. 1). But I hope we can meet face-to-face next year.

Speaking of next year, what’s next?

For the remainder of this year, we will be providing scientific support to members of WCPFC’s Technical and Compliance Committee, which meets in September, and the Commission meeting itself in December. We already have tasks from SC16 for further scientific analyses to be performed and presented to the meetings this year to help inform discussions.

Our work for next year’s SC started as soon as SC16 had agreed on its recommendations. Next year, we are scheduled

to assess South Pacific albacore tuna and Southwest Pacific swordfish stocks, with an assessment of South Pacific blue shark awaiting funding decisions. We are also directed to investigate and develop further this year’s yellowfin tuna assessment, with an external peer review scheduled for 2022.

So, we have already started reviewing recommendations that arose during the previous assessments of albacore and swordfish, and started specific projects to analyse biological information to address some of these recommendations and help inform the assessments and continue to ensure that the best scientific information is available for managers to make decisions.

Another busy year ahead!

For more information:

Graham Pilling
 Deputy-Director, FAME Oceanic Fisheries Programme
grahamp@spc.int