



The goals, objectives and strategies for the SCRS are summarized in the 2015-2020 Science Strategic Plan

collection systems; scientific capacity building courses in introductory and advanced stock assessment methods; and short-term contracts to promote science-based programs. The ICCAT-Japan Capacity-Building Assistance Project (JCAP) has been dedicated to assisting developing CPCs to effectively implement ICCAT measures including those related to the monitoring, control and surveillance of tuna fishing activities as well as the improvement of data collection, analysis and reporting. The SCRS is also exploring new ways to communicate and present the results from complex approaches such as MSE (Management Strategy Evaluation) to broad range stakeholders. All of this is related to the integration of traditional knowledge in Ocean Research, the transfer of knowledge, the introduction of emerging technologies and strengthening Ocean science in developing countries.

The ICCAT convention jurisdiction in the Atlantic Ocean and adjacent areas is large, encompassing multiple species and a diverse group of CPC's. Establishing research priorities to ensure the necessary information is available to evaluate/assess stocks and to provide scientific advice, which is an important task of the SCRS. The SCRS recognizes the importance of scientific research in the sustainable management of resources and has recommended that research priorities should consider the requirement to quantify the major uncertainties in the assessment, the need to acquire the necessary biological information on the target species as well by-catch species, to improve the standardization of fishery-dependent information; to promote the development of fishery-independent indices; to balance the adequacy between the models and the quality of data; to evaluate management measures and strategies in achieving the Commission objectives; and, to include research needs for the inclusion of ecosystem considerations in the provision of scientific advice. All of these have been considered in the current ICCAT Strategic Science Plan with suggestions of how these goals might be achieved. The SCRS has supported many research initiatives and projects to develop new fishery independent indices of abundance (e.g., aerial surveys, larval, and acoustic surveys), the introduction of emerging technologies and modeling approaches (e.g., satellite/acoustic tags, and advanced analytical models). Recently the SCRS, through the GBYP and other voluntary funds, has invested heavily in Management Strategy Evaluations (MSE) for understanding and incorporating sources of uncertainty in the evaluation and assessment of the resources, using simulation studies to test and provide advice on management procedures that are robust and will perform better under those uncertainties and various possible alternative future scenarios. As with the objectives described above these goals are in line with many of the Ocean Science and the United Nations Decade of Ocean Science for Sustainable Development objectives and concerns.

One of the key roles of the SCRS is to conduct stock assessments for the mandated species and to provide advice to the Commission on their status and potential future catches that are in line with the Commission objectives of maintaining fishing stocks at Maximum Sustainable Yield (MSY). The specific goals of the SCRS are to provide objective, reliable and robust scientific advice to the Commission; to evaluate precautionary management reference points and robust harvest control rules through MSE; advance Ecosystem Based Fishery Management advice; and, eventually broaden the scientific advice to include economic and social aspects of various management measures.

One of the most common forms of advice regularly provided by the SCRS is the status of each stock, and the probabilities that various alternative future Total Allowable Catches (TACs) will have on achieving the Commission's MSY objective over a certain number of years. In terms of MSE, the SCRS has identified a path forward for its implementation, which takes a sequential approach that focus on one species at a time, while continuing to progress on several others. Albacore was first and the focus is now mostly on Atlantic Bluefin tuna, with parallel processes starting for Swordfish and Tropical tunas. Simulation studies based on the MSE models and available data can be used to investigate the sensitivity of the Conve