Dear Dr. Beamish,

I would like to nominate the Center for the Advancement of Population Assessment Methodology (CAPAM) for the American Institute of Fisheries Research Biologists' Outstanding Group Achievement Award. I have two paragraphs below that identify their contributions and the reason for the nomination.

Regards,

Rick Deriso

Nomination of the Center for the Advancement of Population Assessment Methodology (CAPAM) for the American Institute of Fisheries Research Biologists' Outstanding Group Achievement Award

Stock assessment is the gold standard for the provision of advice for fisheries management. Without accurate stock assessments, the socio-economic benefits from the fishery must be reduced to avoid risk of stock collapse. Therefore, improvement of stock assessments and the methods used to conduct stock assessments should be an objective of any organization mandated to manage fisheries and a priority for the various forms of stakeholders that range from the fishing industry to non-governmental organizations. This is particularly true with the adoption of science-based fishery management plans (FMP), harvest control rules, reference points, and annual catch limits (ACLs), which should be based on accurate stock assessments. Stock assessment methods range greatly in their complexity depending on the data available and the important biological and fishing processes that must be accommodated. Stock assessments used for valuable fisheries are typically based on complex mathematical, statistical, and computational concepts. Therefore, professionals with highly-technical skills are needed to conduct stock assessments. Unfortunately, there is a shortage of these professionals as highlighted by numerous organizations including, the U.S. National Academy of Sciences. (https://www.nap.edu/read/10000/chapter/1) and the U.S. National Marine Fisheries Service (http://www.nmfs.noaa.gov/pr/sars/improvement/pdfs/marine_fisheries_saip.pdf). The functioning of fisheries agencies forces this limited pool of professionals to focus on conducting assessments and presenting advice to the detriment of research and improving stock assessment methods. Creation of general stock assessment programs (e.g. Stock Synthesis), which encapsulate the current body of knowledge about stock assessment, has greatly facilitated the development and application of stock assessments, since it is no longer necessary to create a new computer program for each fishery. However, they are still inadequate to fulfill the future needs of stock assessments, as requested by legislation and management bodies, because their complexity still requires expert professionals to use them and our collective understanding of stock assessment is still lacking. Stock assessment methodology is underdeveloped due to the lack of support for directed research. This results in a lack of understanding about the appropriate methods to use for an application, which can be seen as an inconsistency in the methods used among fisheries. What is needed is a well-researched Good Practices Guide (GPG) to Fisheries Stock Assessment. This will improve the current stock assessments and allow more assessments to be conducted as less experienced practitioners can apply the GPG, using a general

stock assessment program. The GPG should be predicated on a sound science-based foundation, and its development entails addressing the most influential issues in a structured manner. It should also evolve through focused and coordinated research, and strengthen over time.

The Center for the Advancement of Population Assessment Methodology (CAPAM; http://www.capamresearch.org/), a collaboration of the Inter-American Tropical Tuna Commission (IATTC), the U.S. National Marine Fisheries Service (NMFS) Southwest Fisheries Science Center, and the Scripps Institution of Oceanography (SIO), has the objective to promote research and development of fishery stock assessment methods. Toward this goal, CAPAM has developed a Stock Assessment Good Practices Program (GPP). CAPAM also provides training for students and early career scientists through SIO and other research collaborations. At the center of the GPP are workshops on stock assessment methodology (http://www.capamresearch.org/workshops) and the resulting special issues in the journal Fisheries Research (http://www.capamresearch.org/publications), which have been an outstanding success and have been recognized as a model for advancing fisheries science (e.g. http://ices.dk/news-and-events/asc/ASC2017/Pages/Theme-session-W.aspx). Dr. Andre Punt, Director of the School of Aquatic and Fishery Sciences, University of Washington, remarked: "I consider these CAPAM workshops to be my top priority to get students working in population dynamics to attend. The stock assessment-related research that I saw over only two days exceeded what I would expect to see at AMSS [Alaska Marine Science Symposium] or the AFS [American Fisheries Society]." CAPAM has conducted three workshops covering the topics selectivity (over 70 onsite participants), growth (over 100 onsite participants), and data weighting (over 50 onsite participants), which were also webcast for those unable to attend in person. In addition, one upcoming in late 2017 on recruitment and another one in early 2018 on spatio-temporal modelling of CPUE data. These are a continuation of the Inter-American Tropical Tuna Commission's (IATTC) October stock assessment methodology workshop series that ran for about 10 years. CAPAMs achievements are not derived solely from the output of CAPAM staff members or its visiting scientists, but the synergistic relationship between many researchers resulting in journal special issues and follow-on research. Major concepts on selectivity, growth, data weighting, and general guidelines for stock assessment modeling resulting from the CAPAM workshops have changed the way assessments are conducted.