Second Announcement: CAPAM Mini-Workshop Announcement: Development of spatio-temporal models of fishery catch-per-unit-effort data to derive indices of relative abundance

The Center for the Advancement of Population Assessment Methodology (CAPAM) will host a technical mini-workshop on the development of spatio-temporal models of fishery catch-per-unit-effort data to derive indices of relative abundance in La Jolla, CA, USA, February 26-March 2, 2018.

Properly accounting for the spatio-temporal distribution of both fishing effort and fish abundance has been one of the largest sources of uncertainty in using CPUE as an index of relative abundance. Of particular concern is the change in spatial distribution over time due to movement of the stock, recruitment dynamics, or local depletion. Compounding the historical treatment of CPUE data is the component of the population that is represented by the index with respect to age or size. Within integrated assessment models, this population component is modelled using a selectivity curve that is estimated by fitting to composition data. For fleets with both catch and CPUE included in the assessment model, the estimated selectivity curve represents both the age structure of the catch as well as the index of abundance. However, these may differ due to a mismatch between the spatial distribution of the catch compared to the spatial distribution of the population, when the age structure of the population varies spatially. One solution to this issue is to use the same spatio-temporal model, extended to include age, and weight the estimates by catch and area, respectively. There has been substantial recent progress made in both the statistical methodology and the practical implementation (e.g. software) of spatial-temporal models. However, there has been less work focused on the specific issues related to use in fisheries stock assessment. Focused discussions and consequent research is needed to make the most of this modelling technique. The format of the workshop will follow that of the successful CAPAM series (http://www.capamresearch.org/workshops) with a specialized technical focus and allowing ample time for presentations and discussion.

Topics (and Key notes) included in the workshop will be basic concepts (Jim Thorson, NMFS, USA), statistical issues (Hans Skaug, University of Bergen, Norway), computational issues (Kasper Kristensen, Technical University of Denmark), issues highlighted by applications (Toshihide Kitakado, Tokyo University of Marine Science and Technology, Japan), issues relating to including results in stock assessments (Rick Methot, NMFS, USA), a non-fisheries perspective (Christopher Wikle, University of Missouri, USA), and alternative methods (Nicole Augustin, University of Bath, UK). Contributed presentations by participants are encouraged. Presentations relating to applications must address general issues encountered when applying

spatio-temporal models. For information concerning the workshop, please contact the Chair Mark Maunder (mmaunder@iattc.org), and visit the CAPAM website (http://www.capamresearch.org/Spatio-Temporal-Modelling-Mini-Workshop) for updated information.

Registration deadline: December 31, 2017

Non-US Citizens must fill out the Foreign National Registration Form to have access to the meeting room (http://www.capamresearch.org/sites/default/files/Foreign%20National%20Registration.pdf).

Location: Southwest Fisheries Science Center, La Jolla, CA 92037, USA.

Background information document: https://www.iattc.org/Meetings/Meetings2017/SAC08/PDFs/Docs/_English/SAC-08-05d_Spatial-temporal-modeling-of-CPUE-data.pdf