144th Annual Meeting of the American Fisheries Society

Symposium proposal

Title:

The Next Generation of Fish Stock Assessments

Sponsors:

Marine Fisheries Section

Organizers:

Patrick Lynch and Tara Dolan

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Chairs:

TBD

Description:

Fish stock assessments serve as the scientific basis on which fishery management decisions are made. In the United States, federally managed fisheries are beholden to the Magnuson-Stevens Act, which dictates fishery management decisions be based on the best scientific information available. Thus, the obligation to conduct high-quality fish stock assessments is clear. Over time, stock assessment science and fish stock monitoring has continually evolved, starting from relatively simplistic approaches based on limited input data, to more comprehensive analyses that incorporate multiple sources of fishery and survey data. Concurrently, the relative effects of fishing have also changed. Historically, large biomasses of many fish stocks were reduced by fishery removal rates that were not sustainable. Today known occurrences of overfishing have been essentially eliminated in many parts of the world, and accumulating evidence points to important ecosystem and climate effects on many stocks. More holistic fishery assessment approaches are needed to incorporate a greater diversity of calibration data while enabling greater responsiveness to changing ecosystem and climate conditions. To do so, there are numerous aspects of stock assessments that need attention, including the ability to forecast stock dynamics and project sustainable harvest levels; best practices for providing catch advice from data- and information-limited stocks; socioeconomic impacts of various harvest strategies; spatial and temporal heterogeneity in stock dynamics; accounting for ecological interactions, ecosystem productivity, and climate and regime shifts; quantification and communication of uncertainty, and many others.

Recognizing that many or all of these factors are simultaneously occurring in each assessment setting, this symposium will assemble stock assessment experts across government, academia, and other institutions, to address these issues from multiple perspectives. The main objective of the symposium is to integrate these diverse perspectives to help guide and prioritize future research and development, and paint a picture of what next and future generations of stock assessments can and should look like. This symposium will cover the core features of fisheries science, from research to management, and therefore will appeal broadly to AFS members, meeting participants, and anyone interested in fisheries as natural resources.

Format:

A mix of oral and poster presentations are welcome.

Important deadlines:

January 10, 2014 – Submit tentative presentation titles to symposium organizers

March 7, 2014 – Confirm presentation title with organizers

March 14, 2014 – Submit presentation abstracts to AFS

Confirmed presenters:

Session 1 Keynote – Richard Methot

Session 2 Keynote – Jason Link

The symposium structure will be determined based on the topics submitted for presentation, but in general, talks could follow a gradient, starting with the core features of assessment models through more complete and all-inclusive approaches.