

Topic Workshop on “Pelagic and forage species – Predicting response and evaluating resiliency to environmental variability”

Conveners:

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Brian Hunt (Canada)

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Potential Invited Speaker:

TBA

Description:

Climate and environmental variability influences pelagic ecosystems with direct and indirect impacts on pelagic and forage fish populations. These species are particularly responsive to shifts in the physical environment and the production and phenology of biological production at lower trophic levels. Forage fish are also the link between planktonic food webs and higher trophic levels in the global ocean. Despite their critical role in North Pacific ecosystems, forage fish have remained understudied due to the majority of research resources and effort being focused on the predatory species that they support. This knowledge gap is increasingly pressing as the North Pacific advances into new climate and ocean modes. The workshop builds on the Topic Session “*Influence of climate and environmental variability on pelagic and forage species*” convened at PICES-2018 and related collaborations to share results on trends in pelagic and forage fishes in the PICES region, including work using experimental, observational and modeling approaches. We intend to use the North Pacific as a case study for global response to warming and determine the attributes important in understanding how different populations respond in similar or divergent ways to common drivers. We also aim to examine two overarching themes: (1) adaptation/resiliency and (2) forecasting to better define our 'current state of knowledge' and use this workshop to further identify data gaps, research needs, and suitable tools and models to advance research in this area. The goal is to bring together forage fish researchers from around the North Pacific, and use regional presentations as a springboard for discussion on common ecosystem drivers and similarities/dissimilarities among regions, with the intent to develop a synthesis review manuscript. Priority data gaps will be ranked as a step towards focusing direction for short and long-term research objectives.