

CSI Resources

Report to Council regarding initiative for capacity building involving coordination among North American and European Universities to develop multidisciplinary, multi-institutional coursework, research opportunities and scientific personnel exchanges that will build capacity for meeting future science-based advisory needs.

During the June, 2019 Bureau meeting, Bill Karp (USA) agreed to work on this initiative and develop a proposal for a workshop that would bring together academic leaders from across the ICES member countries to draft a plan for addressing this challenge. While this work is ongoing, Bill was successful (together with Tim Essington (USA) from the University of Washington), in securing partial funding from the US Department of State to support an initial workshop (see proposal that was funded below). Since then, Steve Cadrin (USA; University of Massachusetts)) has also agreed to participate. Next steps will be as follows:

1. Engage ICES Training Group and encourage their participation
2. Identify key participants from academic institutions within ICES member countries (ongoing: to be completed during upcoming ASC and Council meetings)
3. Develop TORs for workshop
4. Schedule workshop (most likely during Q2 of 2020)
5. Draft report and recommendations for next steps (June 2020 Bureau and October 2020 Council)

Note that this action is also relevant to TORs for CSIMTC. During the recent US/Canada/ICES trilateral in Halifax, Canada, US and Canadian participants expressed enthusiastic support.

Proposal for workshop that has been partially funded by the US Department of State:

ICES Capacity Building – A Proposal

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QERM (Quantitative Ecology and Resource Management) Interdisciplinary Graduate Program

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Introduction

We seek funding for a workshop which will bring academic leaders from ICES member countries (US, Canada and Europe) as the first step in developing multidisciplinary, multi-institutional coursework, research opportunities and scientific personnel exchanges which will build capacity for meeting future science-based advisory needs. While primarily focused on addressing future ICES needs it will also address future needs within NOAA and other US governmental agencies and international organizations. Through this process we will also strengthen the US contribution to ICES through engagement of academics as well as experts from resource management agencies.

Background

ICES provides advice on a range of topics relating to marine policy and resource management. This includes management of living marine resources including stocks of commercially-important fish and shellfish.

ICES advises governmental organizations with responsibilities for marine management including:

- Governments of ICES member countries,
- European Commission (EC) in relation to the Marine Strategy Framework Directive, the Habitats Directive and the Common Fisheries Policy.
- Helsinki Commission (HELCOM),
- North Atlantic Salmon Commission (NASCO),
- North East Atlantic Fisheries Commission (NEAFC)
- OSPAR Commission (OSPAR)

ICES advice is produced through a process which ensures it is based on the best available science and data, is considered legitimate by both authorities and stakeholders and is relevant and operational in relation to the needs of the requestors.

The problem

The basis for advice is compilation of relevant data and analysis by experts in the field, normally through an expert group which includes core researchers in the field. This analysis is peer reviewed by independent scientists who have necessary expertise but have no programmatic interest in the management decisions being made. Expertise for carrying out analyses, drafting advice and conducting independent peer reviews is drawn from the ICES member countries and includes scientists working for resource management agencies and academic institutions.

ICES is recognized globally for the quality, integrity, transparency and independence of its advisory products. Consequently, demands have increased

and the organization is beginning to face difficulties in finding suitably-qualified and experienced experts for all stages of the advice-giving process. A recent survey of national delegates articulated concerns regarding meeting current and future demands. With respect to future demands, many delegates saw challenges in finding suitably-qualified candidates for positions which would provide experts to support ICES advisory needs in the coming years.

At the same time, U.S.-based higher educational systems are facing limitations on funding and research opportunities for talented graduate students pursuing advanced degrees in statistics, modeling, ecology and natural resource management.

A strategy

The complexity and scope of future advisory needs will require multidisciplinary and multi-institutional educational opportunities. ICES has itself identified this concern and is has begun to develop a strategy to build capacity involving coordination among European and North American universities to provide M.S. and Ph.D. level coursework, research opportunities, internships and exchanges that will help build capacity for future advisory needs. While some examples already exist (e.g. the NOAA Fisheries QUEST Program - <https://www.st.nmfs.noaa.gov/quest/>) much work needs to be done to understand likely future advisory needs and current capabilities within academic institutions in the ICES area, and to develop and implement structures for the kind of cross-institutional collaboration that will be necessary. We believe an essential first step would be to bring together educators and leaders from key institutions in the ICES area in a workshop designed to define needs and collaborative opportunities and draft a plan for moving forward.

Successful implementation of programs of the type described above would be beneficial not only to ICES but to other international organizations which provide scientific advice for marine resource and ecosystem managers as well as to federal agencies such as NOAA and individual State natural resource management agencies. In the context of ICES, it would enable greater US participation in the capacity building and advisory processes consistent with our obligations to the organization.

Budget

We seek funding for a one-week workshop which would take place in the in early 2020 to address the goals described above. Ideally, we would invite approximately 20 individuals to participate and the deliverable would be a draft plan as described. Funding is requested for travel, lodging and per diem for 20 individuals at an average cost \$4,500 each; total request is for \$90,000.00. These funds would be made available to ICES who would manage reimbursement. Please note that this request is scalable; if only a smaller amount is available, we would seek additional funds from other sources.