

## Aquaculture SG

### Introduction

Aquaculture is making an increasing contribution to global fish and shellfish production and a growing and visible industry in many ICES countries. The Aquaculture Steering Group is responsible for guiding and supporting Expert Groups.

### ASG Terms of Reference approved by SCICOM.

| Terms of Reference  | Progress   |
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| ToR a) Engage with and work with Chairs of EG to ensure that EG work supports and meets the science objectives and advisory needs of ICES   | All existing EG Chairs have been contacted. In progress.   |
| ToR b) Help EG formulate and prepare their draft terms of reference and resolutions   | EG ToR were suggested by the Council Strategic Initiative on Aquaculture prior to establishment of the SG. In the process of drafting ToR's for additional EGs and will engage EG chairs on this for all new ToRs. |
| ToR c) Review and report on the science being undertaken within EGs to SCICOM, with a focus on identifying science highlights and priorities and demonstrating the impact of their science  | First meeting at 2017 ASC, September 2017.   |
| ToR d) Review scientific products/deliverables of the EG and provide feedback on ways to improve the impact and influence of their work   | Not yet addressed. Will start to work with EG chairs to identify highlights and other opportunities to create impactful science products   |
| ToR e) Provide feedback to SCICOM on research priorities and implementation of ICES strategy  | Not yet addressed  |
| ToR f) Identify shortfalls in skills and knowledge needed to achieve ICES objectives within the SGs area and work within the SG and through SCICOM and operational groups to develop capability   | On-going. Follows ToR g.   |
| ToR g) Identify gaps and overlaps in the work of EG, and propose consolidation, rationalization or forming of new EG to SCICOM as appropriate   | Working on formulation of three new EGs in the short term, and strategy for ICES aquaculture science and advice longer term.   |
| ToR h) Help EG Chairs to adopt practices which ensure scientific information generated by EGs is receiving adequate quality control consistent with scientific norms  | Not yet Addressed  |
| ToR i) Facilitate active horizontal and vertical communication, collaboration and co-ordination between EGs and all other relevant ICES groups and identify, in cooperation with EG Chairs, opportunities for internal and external collaboration | Communication within SG started at the 2017 ASC. Held one on one conversations with two other SG chairs and other SCICOM members   |

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|--|---|
| ToR j) Represent the SG at SCICOM meetings and SCICOM/ACOM leadership meetings in spring and at the ASC  | First meeting at ASC 2017   |
| ToR k) Establish a core group of ASG Expert Group chairs who, together with the ASG Chair, will share responsibility for implementing the work of ASG; | Opened communication with and among current EG chairs. Building additional EGs to help fill out SG. |
| ToR l) Generate a position paper on the contribution of ASG to ICES science, data and advice;  | Still in conceptual stage. Will work with SG members to crystalize.                                 |

### List of existing aquaculture EGs

- Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM) (Chair: Gary Carvalho transitioning to Jann Martinsohn)
- Working Group on Pathology and Diseases of Marine Organisms (WGPDMO; Chair: Ryan Carnegie)
- Working Group on Social and Economic Dimensions of Aquaculture (WGSEDA; Chair: Gesche Krause)

### Science highlights

SCICOM chair and the ASG Chair in the process of identifying and listing specific work products related to aquaculture from all ICES expert groups.

### Communication with EGs

The SG chair has contacted each EG chair and begun the dialogue needed to focus EG ToRs on issues of greatest potential impact for ICES countries. EG chairs are all supportive of standing up an aquaculture science capacity focused on key needs for science based development and management of north Atlantic aquaculture. Next steps will be to get all EG chairs and SG chair together electronically to develop action items followed by an in-person meeting (tentatively in January 2018 in Copenhagen) to sharpen strategic vision and identify tactics to set ICES aquaculture research on a productive and sustainable path.

### Summary of new EG proposals and EG closing

None of the three existing EGs are closing however there are some changes. The Genetics working group (WGAGFM) has recently submitted a proposed new ICES training course, to consider the role and impact of genomics in fisheries and aquaculture. Such an opportunity will hopefully foster improved integration of ideas and approaches. This working group has also put forward a recommendation from their meeting in Faro in May 2017, to change the name of the group, to *Working Group on the Application of Genetics in Fisheries and Aquaculture* (WGAGFA). Chair of this group has transitioned from Gary Carvalho to Jann Martinsohn.

At the March 2017 SCICOM meeting, the Committee supported the proposal by CSIAQUA to establish three new working groups under the Aquaculture SG to take on:

- **Scenario foresight, future projections / eco-forecasting**

- **Environmental interactions, risk assessment, data collection, methodologies**
- **Aspects of carrying capacity, efficiencies, IMTA, modelling**

The Aquaculture SG will be keeping the intent of these three groups but modifying the ToRs and names to align with ICES vision and goals, and to enhance team building. Focus ToRs on management needs and target peer reviewed publications, management tools (models, synthesis documents, etc.) and Viewpoints as deliverables is envisaged.

The future projections group will have ToR to include identification of current advice needs by member countries (including identifying the process for permitting and management of aquaculture by governments and key information needs for informed decision making), current social and economic drivers of ICES country aquaculture industries, and current science capabilities in the ICES region that will impact future growth and development of the aquaculture sector in a north Atlantic context. It is important to understand the current state prior to any future activities. It is desirable to have all SG members (Chair and EG chairs) participate in this EG due to its anticipated central role in developing a vision and tactical approach to aquaculture science in ICES going forward.

The environmental interactions group will have minimal modifications to the proposed ToRs but the focus will be in both improving ecosystem services as well as mitigation of impacts.

The proposed ToRs of the carrying capacity group will be modified to include marine space analysis of aspects of carrying capacity, modelling, tropic interactions, and risk. This is because location is the key driver in determining the relevance, size of impact, and potential of the other ToRs. An additional ToR linking sustainable aquaculture development in a defined location to economic and social impacts will be added.

A resolution(s) to establish these groups will be forthcoming quickly so that a chair can be chosen and can join the SG meetings this fall and winter.

### **Forward look (actions for SG and SCICOM/ ACOM)**

SCICOM/ACOM has approved resolutions form aquaculture EGs.

Aquaculture actions under the H2020 Atlantic Ocean Alliance CSA project:

- The AORA Trilateral Aquaculture Working Group met in June 2017 to discuss progress and relations to the new ICES ASG (Mike Rust is the US Chair of the AORA Trilateral WG)
- An AORA workshop 'Genetic Interactions Modelling - Exploring IBSEM & POPMOD' was held in Scotland in October 2017
- A panel session '*Aligning Marine Aquaculture Perspectives with the Current State of Science: A Panel Discussion*' by Kimberly Thompson, Sebastian Belle, Halley Froehlich, Robert Jones, Mike. Rust, and Wojciech Wawrzynski will be held at Aquaculture America Conference, February 2018.

**Request to Council**

To suggest / encourage / support potential Chairs and members to contribute to the above listed emerging WGs.