Summary

Seminar: "Cooperation in Marine Science around the Baltic Sea and beyond: a contribution to Europe's Societal Challenges"

On **22th of April 2015**, the Estonian Liaison Office for EU Research and Innovation, in cooperation with the Estonian Marine Institute and Marine Systems Institute, welcomed EU and Member State policy makers and marine research stakeholders to discuss opportunities and challenges within marine and maritime science in the context of Horizon 2020, JPI Oceans and BONUS research programs.

In the opening speech **MEP Tunne Kelam** (EPP), stressed the importance of cooperation between the Baltic region and other European regions in joint marine research. Mr. Kelam exemplified BONUS as a positive model in implementing the EU Strategy for the Baltic Sea Region. If we speak about Europe's marine research priorities based on Horizon 2020, then we have the double task to make use of marine resources and services to develop competitive economies, but also maintain and improve the environmental status of seas, which includes safe food production, mitigating climate change effects and developing marine observation systems.

Mr. Peter Crawley from the unit Marine Resources, DG Research and Innovation**,** reflected on the rationale and importance behind cooperation in marine innovation and research. The economic zone of Europe is the largest in the world. There is no area more important to have cooperation between countries and regions, as well between different institutions in countries, as fisheries, industry and environment. Blue Growth is one of 12 cross-cutting focus areas in Horizon 2020, which requires strategic programming of societal challenges and priorities, also reflected in underlining legislation for Horizon 2020.

Mr. Crawley presented the **main barriers** to joint marine research: standards based on national law, hindering ecosystem-based studies of seas; the need to improve marine spatial planning and science diplomacy; huge diversity in funding schemes and sources, making it difficult to achieve continuity and synergies between research groups across borders; lack of data sharing and standards.

The Commission conclusions following **interim evaluation** on BONUS, which were adopted in January this year, recognize very important achievements of BONUS towards joint research in the Baltic Sea. In addition, Mr. Crawley noted the importance of efficiently managing national contributions in BONUS.

Dr Kaisa Kononen, Executive Director of BONUS, reminded the audience that BONUS was founded by eight EU Member States, with a mission to integrate Baltic Sea marine research into a cooperative and interdisciplinary transnational programme in support of the region's sustainable development. From 2007 to 2014, 44 BONUS projects

have been funded under the topics "Ecosystem approach to management", "Viable ecosystems and Innovation, Sustainable ecosystems". Project results have given strong support to HELCOM's Baltic Sea Action Plan & Marine Strategy Framework Directive (MSFD).

The next BONUS call will be launched later in 2015, and the total budget of the 2011-2017 program is 100 million. Currently BONUS is negotiating the follow up program to BONUS (post-2017), with the aim also to include countries surrounding the North Sea, as both the Baltic and North Sea regions boast similarities in their ecological and environmental situation. While current Bonus countries Denmark, Germany and Sweden have access also to the North Sea side, the future joint marine research programs should also include The Netherlands, United Kingdom, Belgium and France.

Dr Georg Martin from Estonian Marine Institute (EMI), University of Tartu introduced the societal challenges for Estonian marine science and introduced ongoing projects in main research areas at the institute, which are marine biology, fisheries and marine modelling. EMI provides support for policy making for ICES, where Dr Martin is chairing the Working Group on Ecosystem Impacts and Pressures, and also in HELCOM and MSFD international projects. Examples of ongoing projects at EMI are BONUS projects INSPIRE, BAMBI and EEA Grants project NEMA.

EMI recently led a project on the methodology of mapping Earth's lakes, and new results show that approx. 177 million lakes take up about 3,7% of Earth's surface area, which enables IPCC and other bodies to re-asses their role in climate change models. The ensuing discussion focused on the needs for more interdisciplinary curricula and training for marine researchers, an area that EMI id developing. JPI Oceans and BONUS made connected examples of their research projects platforms for interdisciplinary research proposals.

Dr Jüri Elken, Director of the Estonian Marine Systems Institute (MSI), Tallinn University of Technology, Estonia, introduced some society-driven marine research directions conducted in the university. Activities in operational oceanography have culminated in participation of Copernicus Marine Service, but specific results are used also in the context of harmful algal blooms, climate projections, safe wintertime navigation and environmentally friendly dredging and dumping. Examples of ongoing projects at MSI include the BONUS project HARDCORE and FP 7 project EUROFLEETS2.

Dr Elken said that the sea use has gone so complex that we cannot use any more intuition-based decisions like ancient fishermen did, but with developing marine goods and services we need decisions based on robust knowledge with constant measurements and baselines. Q&A with the audience focused on access and sharing of the data in BONUS and other research networks, like EMODNet, SEAdataNET and with Russia.

The seminar concluded with a **Panel discussion** where Dr. Kaisa Kononen and Dr. Kathrine Angell-Hansen, Director of JPI Oceans Secretariat, discussed how to achieve marine economy growth without compromising ecosystem long-term sustainability, and the aimed to define some of the research gaps in those areas. Dr. Henn Ojaveer, lead scientist at EMI, moderated the discussion.

One of the challenges in marine management includes selecting baselines and setting appropriate targets, and whether we would like to prioritize socio-economic, ecosystem functional, or species sustainability? Dr. Kononen proposed to tackle this problem in small, targeted research programs, while also engaging the society to change the attitude towards the importance of marine research. Dr. Angell-Hansen supported the need for baselines, and stressed the importance of an integrated approach in sea management plans and spatial planning. Cross-sector cumulative pressures need to be decoupled and downscaled to regional level, and there is strong need for coordinated research management to look at the integrated results.

Mr. Crawley from the EC added that **marine economy is very complex**, serving as a place for energy, shipping, food and other services, and that cooperation between sectors is lacking. Member States are investing 2 billion euro per year for marine research and data gathering, we need to access and consolidate this information for a common knowledge base, couple this information with data from other marine economy sectors and also climate models.

When talking about the **research gaps**, panelists agreed that every scientist could define the gaps in its own research area. However, the research topics that are important from a scientific standpoint, aren't often connected with the research on societal values and economic (financial) analysis in the respective sectors. Eco-innovation and uptake of new technologies is growing, but **industries** have a key role in bridging the gap between knowledge of ecological status of the seas with technological innovation and competitive production business models.

Another important aspect in cooperation is willingness of **data sharing**. One of the major issues in this context is the fate and availability of databases after the project ends. JPI Ocean is testing a pilot action in the North Sea together with ICES, gathering data for MSFD and Common Fisheries Policy. Eight countries are involved and there are agreed roles to gather data for the two directives and share it. Horizon 2020 is also putting lot of efforts for trying to create searchable database on the project level to ensure that all valuable information is available. Additionally, data should be indexed for major search engines.

We thank you for joining us, and are hope to meet you again in our upcoming events!