BONUS
SCIENCE FOR A BETTER FUTURE OF THE BALTIC SEA REGION

BONUS in Brief

DECEMBER 2015

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EDITORIAL

BONUS reaches an important milestone in its continuation plans

by **Kaisa Kononen**, Executive Director, BONUS

BONUS has reached an important milestone: after almost three years of preparation, an outline document for the continuation of the programme for the years 2018-2023 was submitted to the European Commission last month.

The proposal has been prepared by scientific community, research funding institutions and ministries from EU member states adjacent to two northern European regional seas, The Baltic Sea and the North Sea. As a curiosity and a reflection of the thoroughness of the negotiation process, the Secretariat filed almost 40 dated versions of the document prior its completion.

Those of us having been involved in the preparation process are convinced that the new programme will pave the way for better policy making and new innovations which will support growth based on blue economies, while protecting the marine environment. The programme will produce new knowledge and scenarios about the marine ecosystem functioning in the changing climate, and increase understanding of how the seas are impacting economies, human behaviour and societies' values. This will be the basis for new regulations and incentives as well as clean techology solutions and products, and for creating jobs, increasing people's awareness and promoting ecological behaviour and everyday choices. (See page 4 for more.)

Will the new programme be as impactful as we anticipate? The foreseen impact will be evaluated by a specific ex ante impact assessment procedure performed by the European Commission during the coming winter, before the proposal can be presented to the European Parliament and the Council.

It is a well-known fact that the impact of research can have many dimensions, such as impact on scientific quality, technology, environment, society, economy, organisation, health etc. and that the impact may become visible only after years or even decades after the finishing of a particular project or programme. The further in time we proceed, the more difficult it becomes to attribute the impact to a specific scientific work. The impact, most immediate and easiest to attribute, is on science and international collaboration, as there are relatively simple indicators that can demonstrate it.

BONUS has now been running research for six year, as the first 16 BONUS+ projects started in 2009. The impacts in science can already be demonstrated based on evidence. The systematic collection of data about the international peer reviewed scientific articles published by those projects reveals that the scientific excellence has increased in comparison to pre-BONUS time: median impact factor of the all publications increased with almost 2 units. International scientific collaboration has also increased, the average percentage of publications by multinational groups changed from 32 % to 53 %. So, the immediate impact in science has been remarkable and as time goes on, the scientific knowledge is integrated into societal actions towards sustainable development. The BONUS Secretariat is currently analysing the data more thoroughly.

At present we can only speculate how the research to be carried out in the current and new BONUS programme will have impact in broader societal terms - it remains to be demonstrated by future generations. Although the progress does not always seem to be fast enough, we should have a long-term vision in mind and be proud of what we've already achieved. ■

BONUS guest column

This time we publish a guest column inspired by presentations and discussions of the recent ICES Annual Science Conference 2015 session *"From genes to ecosystems – spatial heterogeneity and temporal dynamics of the Baltic Sea"* that was convened by BONUS BAMBI, BONUS BIO-C3 and BONUS INSPIRE projects.

Finding bridges between biodiversity research and ecosystem-based management

Interactive expert teams take us closer to finding sustainable solutions for the Baltic Sea

by **Jan Dierking** (BONUS BIO-C3), **Karin Hüssy** (BONUS INSPIRE), **Linda Laikre** (BONUS BAMBI)

Today, it appears safe to say that in principle we know enough to improve management actions, but that existing and new knowledge is not applied to the extent needed. Adaptive policy and ecosystem-based management are considered ways forward for the future. To put things simple: this will require including more of what we know in policy and management and continuously reviewing and updating practices. The BONUS programme with projects bringing into contact integrative teams spanning broad areas of expertise from fundamental science to modellers and policy experts, but also ICES with its integrative working groups, foster a much needed basis for such adaptive management. They point the way towards a more generalised integration of the scientific, conservation, resource management and policy domains. These efforts are much needed and, if continued and expanded, will take us closer to a sustainable future for the Baltic Sea. In this article we give concrete examples based on research by three BONUS projects on how scientific information is integrated into adaptive fisheries management.

New key pieces in the Baltic Sea biodiversity puzzle – but how can we fit them into the management jigsaw?

Biological variation – from genes via species to entire ecosystems – is now being surveyed, mapped, monitored and understood to a degree that has never before been possible. Genes allowing species to cope with extreme environmental conditions are being identified, methods for delineating marine species abundance, distribution and population structure are put forward, and the complex connections between hydrographical conditions and ecological processes are increasingly possible to grasp.

In the Baltic Sea, the BONUS projects BAMBI, INSPIRE, and BIO-C3 are among those generating this new information. By teaming up scientists from a broad spectrum of backgrounds, they are providing answers on how populations and species are connected to each other, how the dynamic physical environment and the establishment of non-native species is affecting biological communities, to which extent evolutionary adaptations will allow species to cope with future conditions, and which consequences human induced impacts and climate change will have for biodiversity. At the same time, BONUS BAMBI research shows that only a tiny fraction of existing knowledge on Baltic Sea genetic diversity is taken into consideration in management plans.

Increasing knowledge 1: Keystone species Baltic cod

The example of cod, a species of key ecological and economic importance in the Baltic Sea, illustrates how quickly new biological puzzle pieces are falling into place. This includes improved understanding of temporal changes in Baltic cod genetic diversity, and consequences for adaptive potential; recent shifts in cod distribution and overlap with prey species and competitors; shorter than expected adult migration distances; fine-scale habitat use and integration with our understanding of factors affecting recruitment. This integrative information is particularly timely considering the problem of "the starving Baltic cod", with recent sharp declines in fish condition, which illustrates that classical monitoring and resource management concepts may not suffice to sustainably manage the complex habitats of the Baltic Sea.

Increasing knowledge 2: Genetics of Baltic key species

Though spring and autumn spawning herring are managed as single stocks, we now know that they are reproductively isolated and thus should be managed separately. Genetic patterns in pike in the Baltic suggest long distance gene flow over pelagic regions in this philopatric, coastal species. A likely explanation lies in long-distance transfer of non-native genotypes by stocking, calling for a better documentation and management of stocking activities. Further, lab-based and common garden experiments with an increasing number of organisms, including key zooplankton species, reveal the genetic background underlying tolerance to low salinity and temperature increases.

New knowledge used in management?

The question is now: how do resource managers actually benefit from this new wealth of knowledge? One positive example comes from cod in the eastern and western Baltic Sea – two genetically distinct stocks that do not interbreed. However,

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Jan Dierking

Karin Hüssy

Linda Laikre

in the Arkona Basin connecting east and west – though traditionally counted as part of the western stock management area – the two stocks are mixing. Keeping track of the respective contributions is essential for informed stock assessments. Recent BONUS INSPIRE and BIO-C3 research demonstrates that this objective can be accomplished cost-effectively using combined genetic and otolith shape data, and results are now directly implemented in new ICES advice to the European Union's regulatory action for western Baltic cod. In other instances, however, translation of new information into management action seems far away. For example, cross-disciplinary BONUS BAMBI research shows that genetic biodiversity is not considered in the Baltic Sea marine protected area management - although it is a key factor for species' adaptive potential, and is actually inscribed in international and national policy. This is only one example where marine resource management does not benefit from new information that appears readily available from a scientist's perspective. Ongoing research aims to find out why this is the case, and how it could be changed.

We need to use more of what we know

Our world, and particularly the Baltic Sea – where changes until the year 2100 are projected to be large - are becoming more complex. Meanwhile, our ability to understand this complexity is also increasing. We know that many resources are not managed sustainably. Decades of eutrophication undermine ecosystem resilience. Habitat modifications have eradicated many genetically unique Baltic salmon populations and stocking programmes have put the genetic integrity of natural populations of salmon, sea trout, and whitefishes at serious risk. And finally, most Baltic Sea fish stocks have been fished at levels surpassing maximum sustainable yield (MSY), often by a factors of 2 or more, for decades. For example, actual yield of western Baltic cod has surpassed MSY every year of the past decade. This is not justifiable from neither ecological nor economic perspectives – however, by using the available data effectively, change for the better is not only possible but likely. ■

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Seven BONUS viable ecosystem projects report on first promising results

by **Meelis Sirendi**, Programme Officer, BONUS

While the eight projects funded under the BONUS call 2014: Sustainable ecosystem services have commenced their work earlier this spring and future applicants are carefully studying the Blue Baltic call guidelines in order to prepare good proposals by the submission deadline of 10 March 2016 (see page 5), the seven viable ecosystem projects are already reporting first promising results of what is to come when these projects mature further. Much is also built on the tight collaboration and its continuity among researchers around the Baltic Sea as ties established during the BONUS+ projects (2009-2011) are proven to be long-lasting well beyond the projects' end.

After the first year of implementation BONUS viable ecosystem projects have reported tens of activities where they have assisted in or assessed the policy making, an area of activities which is of key importance to BONUS through contribution of sound knowledge to serve as the basis of developing and evaluating regulations, policies and management practices as well as researchers participation in different stakeholder committees.

For example, BONUS projects have reported so far on a total of 36 policy making related events, the BONUS CHANGE project has been active in developing revised guidelines for leisure boat owners concerning antifouling paints in Sweden, Germany and Finland, and multiple times have BONUS COCOA, BONUS BIO-C3 and BONUS INSPIRE researchers contributed to the national implementation of the EU Marine Strategy Framework Directive. Furthermore, a total of 179 BONUS researchers are members in the stakeholder committees, amongst other in 80 different ICES, 16 HELCOM and 13 European Commission led working groups. For successful influencing of policies, it is also important to involve all different interested parties to the project work already from the beginning. In the first year, 13 of projects' stakeholder events were organised that amounted to attendance of more than 200 participants.

BONUS projects are expected to interact with other BONUS projects as well as cooperate with researchers in other European sea basins and worldwide. Altogether 31 international cooperation activities from New Zealand to USA have been listed by the projects to date. Within BONUS, the projects are conforming their work plans and sharing and combining their resources and forces. For instance, a total of 42 researchers used the infrastructures available for other projects, with two-thirds of those involving research vessels.

Examples of progress made by viable ecosystem projects are plentiful and let's hope that this momentum gained will not fade away but instead inspire other BONUS projects to an equally promising start. ■

Find out more about BONUS projects at www.bonusportal.org/projects

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BONUS is a joint Baltic Sea research and development programme producing knowledge to support development and implementation of regulations, policies and management practices specifically tailored for the Baltic Sea region. It issues calls for competitive proposals and funds projects of high excellence and relevance based on its strategic research agenda.

BONUS is funded jointly from the national research funding institutions in the eight EU member states around the Baltic Sea and the European Union's Seventh Programme for research, technological development and demonstration by a total of EUR 100 million for the years 2011–2017. Russia participates in BONUS through bilateral agreements.

BONUS in Brief is published by the BONUS Secretariat to keep the BONUS community, including partners and supporters, informed about current views and news about BONUS activities and accomplishments. BONUS EEIG is the legal management organisation of BONUS.

A leap towards forming a new, northern European regional seas programme

by **Kaisa Kononen**, Executive Director, BONUS

In November 2015, after almost three years of preparation, the eight member states participating in BONUS (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden), together with three other EU member states (Belgium, France and the Netherlands) and with negotiations still ongoing with the United Kingdom, submitted to the European Commission a proposal titled "Towards sustainable blue growth – the joint Baltic Sea and North Sea research and innovation programme". The programme is envisaged to be implemented as a successor of the current BONUS proramme from 2018 onwards for six years in accordance with the Article 185 of the Treaty on the Functioning of the European Union (TFEU) and linked to Horizon 2020, the EU Framework Programme for Research and Innovation. Its anticipated funding volume is EUR 200 million.

Programme outline document describes the two seas and the foreseen outcomes

The programme outline document includes two parts. The first part describes the rationale, challenges, objectives, impact, thematic coverage and implementation of the proposed programme while the second part gives an overview of the two seas and their ecosystems, describes their interlinkages and the surrounding societies in terms of uses of the ecosystem services and human-induced pressures on these ecosystems, as well as the types of policy responses needed.

Similarly as in the ongoing BONUS, the new, proposed programme is designed to underpin and develop EU and national policies and strategies, with particular consideration of Europe's blue growth strategy. The ultimate goal of the programme is to elevate the Northern European region's research and innovation capacity to a level necessary to achieve a decisive boost in development of a sustainable marine and maritime economy.

The starting point for designing the programme objectives is a careful identification of the challenges that threaten the sustainable development of the Baltic Sea and the North Sea regions and that need to be addressed by the future research and innovation. The programme outline lists five critical challenges and defines five respective objectives for the programme.

CHALLENGES	OBJECTIVES
Fragmentation delays and increases costs of development	Overcoming fragmentation in research and innovation: to structure the Baltic Sea and the North Sea EU member states' marine and maritime research and innovation effort to enable concerted and efficient responses to the basin-wide challenges across national borders and sectors.
Gaps in interdisciplinary knowledge prevent sustainable solutions	Supporting ecosystem based management: to promote interdisciplinary research and innovation that enables ecosystem-based management of human activities along the land-coast-sea continuum, protects sustainability of different ecosystem services of the Baltic and North Seas and supports the goals of achieving and maintaining good environmental status in these seas and their catchment areas; and to improve the observation, assessment and forecasting capacity of both the natural and societal systems under global change.
Lack of identified synergies and trade-offs among blue economy sectors hamper development of best strategies and smart specialisation	Fostering sustainability of blue growth: to deliver a new knowledge base for appraising the socio-economic value of different ecosystem services of the Baltic and North Sea areas and to provide innovative tools for comprehensive planning and management of maritime activities and mitigating the trade-offs among different uses; this will serve as an input to integrated coastal management and maritime spatial planning and as a contribution to the EU 2020 strategy towards smart, sustainable and inclusive growth and its implementation in the EU Strategy for the Baltic Sea Region as well the European Commission's Investment Plan for Europe.
Insufficient knowledge exchange	Transferring knowledge to practice: to achieve the level of knowledge transfer and collaboration necessary for (a) devising fit-for-purpose regulations, policies, management tools, practices, and incentives and (b) stimulating the development and implementation of innovative technologies of maritime industries that in turn enable sustainable blue growth and enhance human wellbeing without jeopardising good environmental status.
Human health and wellbeing aspects of blue growth are not considered	Supporting human wellbeing: to deliver new knowledge base for supporting social sustainability of blue growth and wellbeing of both genders, including health aspects and fair distribution and inclusive access to the benefits of blue growth among citizens of different regions and states, representatives of different groups of society and people of different occupation

Why a regional seas programme?

The Baltic and the North Seas are exceptionally well suited for a joint research and innovation programme: they face similar challenges associated with climate and sea level change, are influenced by runoff from large, densely populated and heavily exploited catchment areas resulting in loading with nutrients, contaminants and marine litter. Both seas are interconnected, forced by the same weather patterns and water exchange with the North Atlantic. The regulatory and management frameworks are similar, and both sea areas exhibit rather homogeneous cultures of and visions for exploiting marine resources and conducting maritime activities.

Sectors involved in blue economy are many, diverse and often conflicting (e.g. fisheries, aquaculture, shipping, tourism, energy etc.). Also, the current landscape of marine/maritime research and innovation in Europe is quite diverse, with several ongoing parallel national programmes, regional initiatives (BONUS in the Baltic Sea, PRIMA and BLUEMED in the Mediterranean) and European wide undertakings (ERANETs, Joint Programming Initiatives). The new programme is expected have a strong structuring impact at the macro-regional level, and a powerful consequence is also

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expected on the national level. Previously isolated research and innovation efforts by several research and innovation funders supporting interests of different sectors are expected to become much more impactful when structured under a durable, jointly coordinated programme.

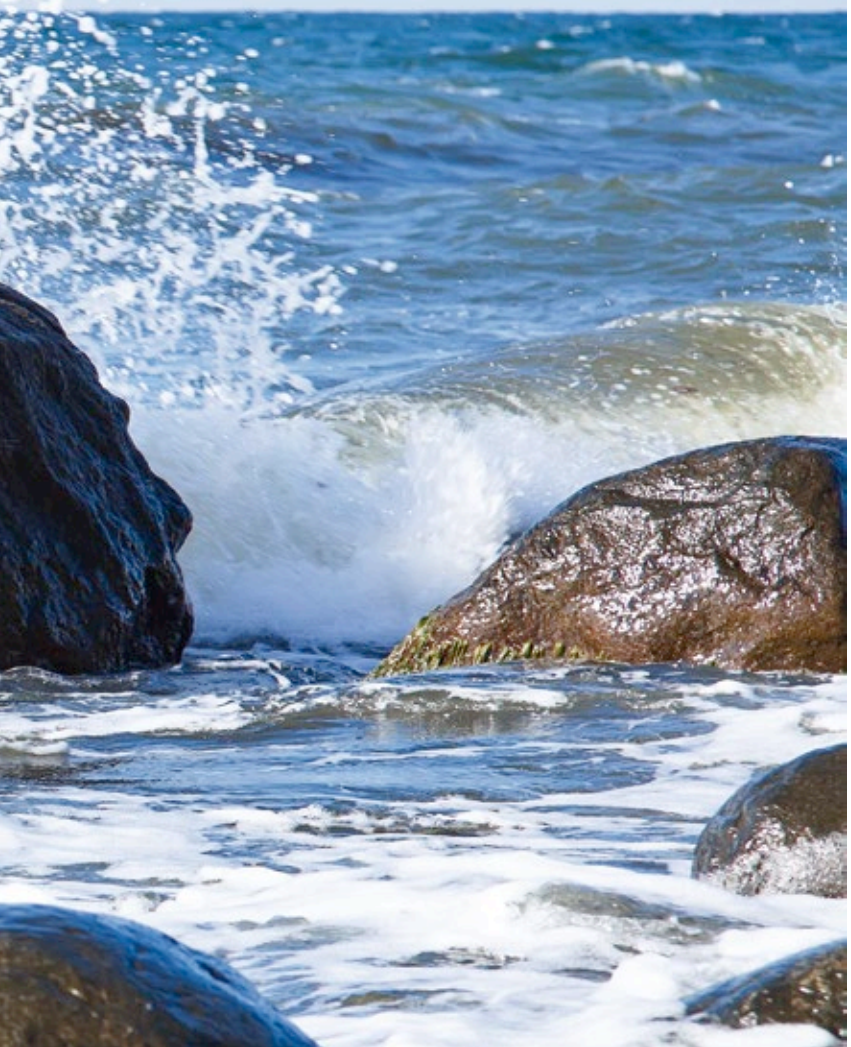
The programme will focus its effort on those issues where European Union objectives can only be successfully achieved by an approach at a regional sea scale, e.g. in

a. resolving structure, functioning and linkages of ecosystems and distinguishing between the effects of natural and human induced drivers upon them,
b. achieving good environmental status by coordination of national and international efforts in monitoring, assessment and management,
c. optimising sustainable exploitation of ecosystem services by considering activities of all relevant actors and
d. achieving optimum innovation potential by cross disciplinary collaboration and across the region.

The programme will effectively supplement the efforts at pan-European and national scales and complement the joint thematic programming effort by the EU member states, in particular the Joint Programming Initiative (JPI) 'Healthy and Productive Seas and Oceans', as well as JPI Water challenges for a changing world, JPI Climate and JPI Agriculture, Food Security and Climate Change.

The next steps

Now after the submission, the European Commission will consider the proposed programme's strengths, the level of commitment of the participating countries and its suitability for being implemented as an Article 185 programme. A positive outcome of this consideration will be the launch of an ex ante impact assessment – a mandatory procedure for each EU's legislative act, in which independent experts examine the proposal and may propose different options for its implementation. Following these suggestion, the Commission will draft a legislative proposal and present it most likely in early 2017 to the European Parliament and the Council for political negotiations. The whole process is expected to be completed by the end of 2017 so that the implementation could begin in early 2018, and the first call for research and innovation proposals of the new programme opened. ■



Proposals invited to BONUS call 2015: Blue Baltic

by **Meelis Sirendi**, programme officer, BONUS

Who wouldn't like watching the beautiful sand dunes, the stony islets, or a sunset or a rise with a backdrop of a blue sea, our blue Baltic Sea? This is how the third call of the BONUS programme for Baltic Sea research is called.

Altogether nine themes out of the 19 included in the BONUS strategic research agenda 2011-2017 are opened for this call worth a total of EUR 30 million (max of EUR 3 million per project). The choice of the themes opened are based on careful assessment of the topics already covered by the 28 running projects – as well as the initial planning of the calls. The themes are divided between two groups, the first group includes themes with more scientific outcomes, and the second group is for more applied topics. There will be two separate ranking lists made for these two groups.

The theme *sustainable aquaculture in the Baltic Sea [3.5]* is called for the first time and included in both groups of themes – in the first group it focuses on scientific basis for aquaculture production across the Baltic Sea region and in the second group on technological solutions for aquaculture. Another subtheme opened for the first time is *eco-technological approaches [2.4]* focusing on economic models and evidence-based review of new technological solutions and biomanipulation methods. Three themes namely *ecosystem goods and services [4.2], maritime spatial planning [4.3] and developing innovative in situ, remote sensing and laboratory techniques [5.2]* are opened with partial coverage of the themes only. Applicants are strongly advised to study in detail all the description of the themes opened and their relevant expected outcomes from the BONUS strategic research agenda 2011-2017, update 2014 (BONUS publication No 14, www.bonusportal.org/sra).

One of the most important specificities in the Blue Baltic call is the introduction of a new eligibility criterion for the second group of the themes. According to it, only proposals in which at least 25% of BONUS funding is allocated to enterprises are eligible and forwarded to the evaluation. The previous innovation call in 2012 saw relatively low participation rate of enterprises and the current eligibility criterion is hoped to facilitate consortia to involve in new proposals partners from all stages of innovation chain to the planned work. The plan is ambitious and the budget earmarked for the second group of themes is as high as EUR 12 million. The Partner Forum 2015 at www.bonusportal.org/bbpartnerforum has been set up to assist consortia to look for partners with necessary expertise and/or different institutions for suitable consortium.

The deadline for preregistrations is 9 February 2016 and proposal submission deadline is 10 March 2016, so in total more than five months to prepare excellent proposals from the preannouncement of 21 September 2015.

So, good luck for those compiling the new proposals and please read carefully the guiding documents – and consult the contact persons in your country (see www.bonusportal.org/contactpoints). For further information, visit www.bonusportal.org/bluebaltic. ■

For the first time a policy day convened during the Baltic Sea Science Congress

The result of having the first ever policy day as part of the Baltic Sea Science Congress was most encouraging. In particular a significant achievement was made by starting openly discussing the role of science and the attitude of the research community towards the blue growth initiative. The level of activity in the discussion indicated not only high relevance and interest and diversity of opinions, but witnessed such discussion to be timely, worth effort, and that it deserves continuation at the future forums of the Baltic Sea scientists. In particular the joint Baltic Sea Science Congress and BONUS Forum policy day introduced as well as the technology transfer workshop ran during the congress presented two novelties of this Congress that could well become a tradition at the future ones.

The policy day, convened on 17 June in Riga, set out to define a common understanding of the links between research and innovation, regional prosperity and sustainability in the long term, all under one of the Congress's seven themes, the 'Viable ecosystem for a sustainable society'. The broad objective of the policy day was to discuss the research needs and bottlenecks of the academy-policy-industry interface processes to ensure most desirable development of sustainable blue economy in the Baltic Sea and wider context of the European regional seas. The policy day was attended by some 150 Baltic Sea Science Congress participants, and moderated by Ms. **Pauli Merriman**, Director of WWF Baltic Sea Ecoregion Programme and Professor **Markku Ollikainen**, Environmental and Resource Economics, University of Helsinki, Finland.

The session was kicked off with a compelling presentation by a world-renowned scholar **Dr. (Ru)Dolf de Groot**, Wageningen University, The Netherlands. He discussed the topic of how to embed marine goods and services to societal action in support of region's prosperity. Particularly considered was the question of how we can evaluate and embed marine ecosystem services to the practices and management action of society so that it truly supports blue growth and region's prosperity? **Maike Piepho**'s, of University of Rostock, Germany presentation provided an overview of the project BACOSA, the Baltic Coastal System Analysis and Status Evaluation project and was followed by **Holger Jansson**'s, of Leibniz Institute for Baltic Sea Research Warnemuende, Germany presentation on integration challenges in maritime spatial planning and the concept of an ecosystem approach. The presenters were joined in a panel discussion by **Evija Smiete** from the State Environmental Service, Latvia and **Peter Crawley**, DG Research, European Commission.

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The panellists of the discussion on ecosystem goods and services session from left to right: Evija Smite, Holger Jansson, Peter Crawley, Dolf de Groot.

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Panelists of the discussion on best governance model from left to right: Eeva-Liisa Poutanen, Kaisa Kononen, Kari Hyytiäinen, Zrinka Mendas, Peter Crawley, Mike Elliot, Gerhard Schernewski.

The second part of the policy day was built around the theme of searching for the best cross-border and -sector governance model: What would the best model look like that emerges from the Baltic Sea experience and that ensures the best possible cross-border and cross-sector governance and ecosystem based management practices, not only to be used in the Baltic Sea region, but to act also as a model in other European regional seas? The keynote by Professor **Mike Elliott**, University of Hull, UK, set the scene for the discussions to follow. The first presentation by Professor **Kari Hyytiäinen**, University of Helsinki, Finland outlined results of a comparative project titled "Water Protection in the Baltic Sea and the Chesapeake Bay: Institutions, Policies and Efficiency". The second presentation by Dr. **Zrinka Mendas**, Anglia Ruskin University, UK, was titled "Toward a sustainable spatial island ecosystem of island archipelago in Zadar, Croatia". The presenters were joined in a panel discussion by Dr. **Eeva-Liisa Poutanen**, Environment Counsellor, Environment Ministry of Finland, Dr. **Gerald Schernewski**, Leibniz Institute for Baltic Sea Research Warnemünde, Germany and Dr. **Kaisa Kononen**, Executive Director, BONUS as well as the Commission representative from the first panel session, Mr. Crawley. ■

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Baltic Sea is as unique as work done by BONUS, says EU Commissioner Moedas

Commissioner Carlos Moedas for research, science and innovation said these words after visiting the BONUS Steering Committee meeting on 31 August 2015 in Helsinki.

"What brings us together is the concern about the Baltic Sea and its future, concern about its environment, its ability to provide good and services, not only for us but also for the future generation", reflected the host of the Commissioner's visit, *Dr Kaisa Kononen, Executive Director, BONUS*.

EUROPEAN COMMISSION

Commissioner Moedas and the Chair of the BONUS Steering Committee Mats Svensson.

During his visit, Commissioner Moedas heard about the unique, threatened and valuable Baltic Sea as well as about the BONUS programme and how BONUS is monitoring its impact in creating more scientific excellence, collaboration and groundbreaking innovation.

The integration of the eight Baltic Sea member states to the BONUS programme and its central role in these respective countries were reflected in the statements provided by the Steering Committee members and forthcoming members of BONUS to the Commissioner.

Commissioner Moedas noted water to be one of the key areas in his priorities, and continued that in fact, originally from a small European country of Portugal himself, considers no country that has sea next to it, to be a small country. He commended BONUS for its valuable and impressive work and felt it should be known for what it does and has achieved to date in Europe by large. ■

EUROPEAN COMMISSION

Commissioner Moedas (in the middle) with Kaisa Kononen, Executive Director, BONUS and participants from the BONUS Steering Committee meeting, 31 August 2015.

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Over 100 BSSC and local young scientists learn about seven secrets of extremely successful researchers

The feedback provided on the two-hour session ran by a BONUS invited researcher trainer Hugh Kearns, Flinders University, Australia, confirmed that this session was time extremely well spent for the young scientists who were in Riga to attend the 10th Baltic Sea Science Congress. The lecture hall was packed, with also local young scientists joining in the session.

"I think everyone will say that we spent a great time listening and discussing among us the difficult life of early career scientist struggling between science, supervisors, distractions and sense of guilt. It was a mind opening seminar that will help for sure all of us attending it to give a new boost to our studies and research."

– participant of the workshop, 15 June 2015

The open seminar "Seven secrets of extremely successful researchers" described the key habits that, based on experience with thousands of research students and post-docs, make a difference to how quickly and easily one completes his/her research. Just as importantly, these habits can greatly reduce the stress and increase the pleasure involved in research! Topics addressed included ways how one deals with supervisor, how to structure time, attitude (or lack thereof!) in relation to research, writer's block or having difficulty writing, getting the help needed when stuck, juggling multiple commitments and never having enough time as well as keeping on going when the going gets tough.

This training session was filmed and is made available via a link to the BONUS young scientist community via the BONUS projects' website resources section (password protected).

The inspiring afternoon session was followed by a casual get-together organised by the local young scientists, this allowing everybody to forge friendships already at the very beginning of a busy Congress week! ■

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TUUKKA TROBERG

Workshop on "Seven secrets of extremely successful researchers" was led by Hugh Kearns (on the right) during the first day of BSSC in Riga on 15 June 2015.

BONUS at the 6th EUSBSR Annual Forum

BONUS participated in the 6th Annual Forum for the EU Strategy for the Baltic Sea Region in Jurmala, Latvia on 15-16 June 2015. The Annual Forum was a great opportunity for networking with many stakeholders from policy makers to industry and other key actors, and communicating about science and knowledge in support of blue growth agenda.

A revised Action Plan of the EUSBSR was presented during the Annual Forum and now consists of 13 policy areas and 4 horizontal actions, in total 17 thematic areas of macro-regional significance. It also includes a new chapter on the role of regional organisations/networks, including BONUS, and their added-value within the EUSBSR.

The BONUS exhibition in the networking village ran the full duration of the Forum and attracted a steady flow of visitors. Amongst the visitors wanting to learn more about the BONUS programme and projects it funds, was the Commissioner **Carlos Moedas** for Research, Science and Innovation, European Commission.

Dr. **Fritz Köster**, Director General, National Institute of Aquatic Resources, Denmark and a member of the BONUS Steering Committee, joined the Commissioner Moedas (speech available here) as a fellow speaker in the plenary session titled "A sustainable competitive Baltic Sea region". This set out to highlight in the afternoon hours of the first Forum day the importance of blue growth to the region, and touched upon the essential lessons learned on sustainability and the interaction between different economic, commercial and societal systems. The potential of a cooperative regional approach in this area was also much stressed, it on its part enabling also growth of the Baltic economies in general and the continued solidarity between Baltic Sea states that is essential if this is to be maintained.

In the morning of the second day, the BONUS workshop session titled "Niches matter more, borders less" considered further the relationship between science and knowledge. The session used sustainable blue growth as an example to illustrate how the challenge of true integration of science and society's knowledge is being achieved, not just within the usual policy horizon, but in a long-term in 25, 50, 100 years and more given the necessity to transit to 'ecosystem-based management' beyond national boundaries. The panellists of the session included Professor **Mike Elliot** of University of Hull; **Jana Moldanova**, Swedish Environmental Research Institute and BONUS project SHEBA coordinator; **Alf Norkko**, University of Helsinki from BONUS project COCOA; **Henn Ojaveer**, University of Tartu and coordinator of BONUS project INSPIRE, and **Eeva Rantama** from INTERREG Secretariat, Baltic Sea Region Programme. In addition Professor **Hans von Storch**, University of Hamburg, and **Kaisa Kononen**, Executive Director of BONUS joined the session's panellists via a video link established from the Baltic Sea Science Congress held in Riga at the same time. The session was moderated by **Pauli Merriman**, Director of WWF Baltic Sea Ecoregion Programme and **Andris Andrusaitis**, Programme Manager of BONUS.

The inspiring day for BONUS was concluded with a Baltic Sea communicators' network initiation meeting "Tell it together, tell it loud" coorganised by HELCOM, Baltic Eye and BONUS. Currently the best approaches are considered in forming a network and adding value and strength to the Baltic Sea macroregional communicators' efforts in the coming months and years. ■

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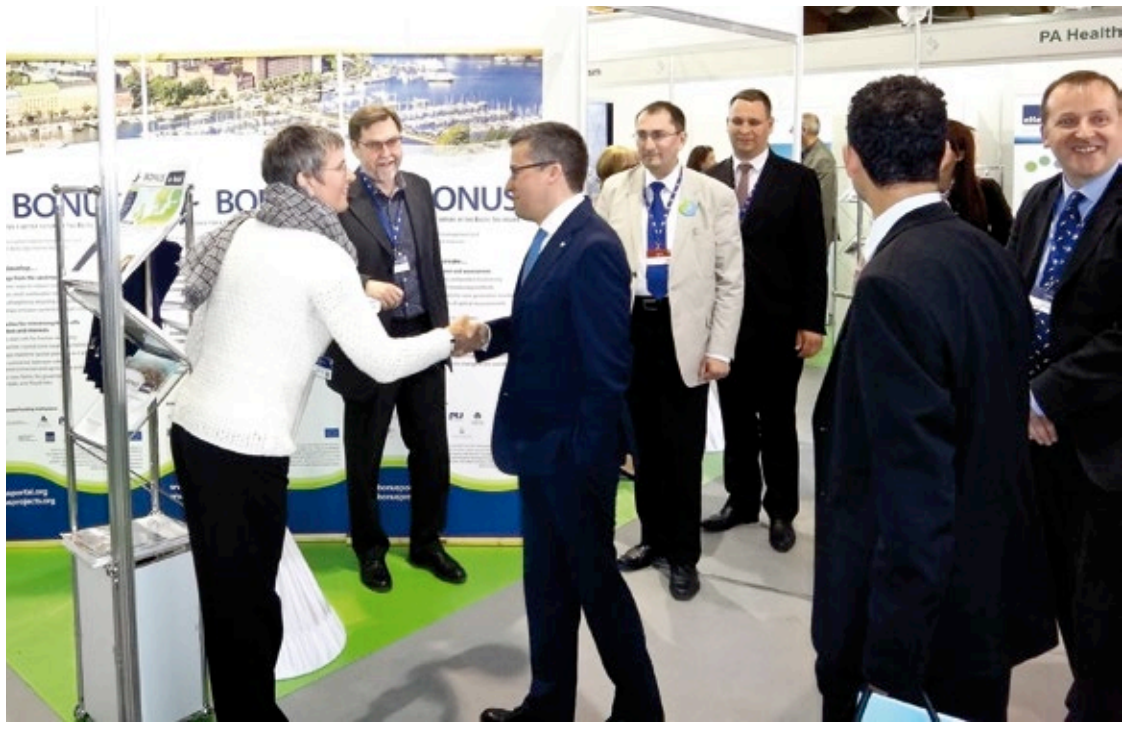

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Commissioner Moedas being greeted by Kaisa Kononen, Executive Director, BONUS at the BONUS stand of the EUSBSR Annual Forum Networking Village, 15 June 2015, Jurmala.

Interview with the Chair of BONUS Steering Committee

On 1 July 2015, Dr. **Mats Svensson** from the Swedish Agency for Marine and Water Management was appointed as the Chair of the BONUS Steering Committee. Dr. **Fritz Köster** from the National Institute of Aquatic Resources, Denmark acts as the current vice-chair. The BONUS Steering Committee chairmanship rotates and changes annually on 1 July. As the highest decision making body of BONUS, the BONUS Steering Committee consists of representatives from the national funding institutions that are members of BONUS. The Steering Committee convenes approximately 3–4 times a year and decides all strategic activities as well as the themes and opening of calls, projects to be funded, budget etc.

Dr. Mats Svensson, could you tell us about your professional background?
I am currently working with marine and water issues at the Swedish Agency for Marine and Water Management, as the Head of the Research and Environmental Objectives unit. I work with various management and policy issues within fish, marine and water management, related to research and the Swedish environmental objectives.

I am also the Swedish delegate in the scientific committee of ICES, International Council for the Exploration of the Sea, and work in the Joint Programming Initiatives JPI Ocean and JPI Water. I have previously been involved in strategic water planning within the Water Framework Directive work.

I have a PhD in chemical ecology from Lund university, a background in ecological modelling, systems analysis and system dynamics. I have also work experiences from various EU projects.

Sweden has been a member of BONUS EEIG from the very beginning. What in your view has been the most rewarding accomplishment over this time?
The most rewarding accomplishment is improved collaboration between scientists around the Baltic Sea, as well as the very close connection to HELCOM. BONUS has meant a lot to the advancements of Baltic Sea Action Plan, in my view, even if it takes time from research to policy to measures and the effects of measures. I think BONUS is a necessity for the future of the Baltic Sea as a healthy sea.

How do you see the strengths of BONUS evolving in the future?
By expanding the BONUS research to encompass also the North Sea and the OSPAR area, we can strengthen the research in the entire area, and make better use of the invested research resources, including innovations and technology. I also hope we can jointly make use of infrastructure such as outputs from the Copernicus programme in a better way. ■

For the full list of representatives of the BONUS Steering Committee, visit www.bonusportal.org/steering

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News from members of the BONUS Steering Committee and Advisory Board

■ ***SwAM*** has published a new report that aims to assess the status of marine ecosystem services in
Swedish waters and evaluate anthropogenic pressures. Several of the ecosystem services were classified using indicators or environmental quality norms, an approach likely to be central in future assessments. ■

Access the report at www.havochvatten.se/en

■ ***VASAB*** will host the 2nd Baltic Maritime Spatial Planning Forum on 23-24 November 2016 in Riga. The
VASAB will host the second Baltic Maritime Spatial Planning Forum next year on 23-24 November 2016 in Riga. The Forum serves as a platform for discussions and sharing experiences among different stakeholders on how to further develop and enhance maritime spatial planning in the Baltic Sea region. ■

www.vasab.org

■ ***WWF***'s new report, **All Hands on Deck: Setting Course to a Sustainable Blue Economy in the Baltic Sea Region** makes it clear that we need to raise the bar on the goals, targets, and actions that will deliver a sustainable Blue Economy in the region. ■

Read the report and comment at www.panda.org/balticblue

BONUS members

Denmark
- Innovation Fund Denmark

Estonia
- Estonian Research Council

Finland
- FiRD Coop & Academy of Finland

Germany
- Forschungszentrum Jülich Beteiligungsgesellschaft mbH & Federal Ministry of Education and Research

Latvia
- Ministry of Education and Science of the Republic of Latvia & State Education Development Agency

Lithuania
- Research Council of Lithuania

Poland
- National Centre for Research and Development & Ministry for Science and Higher Education

Sweden
- Swedish Agency for Marine and Water Management
- Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning FORMAS
- Swedish Environmental Protection Agency

BONUS
SCIENCE FOR A BETTER FUTURE OF THE BALTIC SEA REGION

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