Baltic Science Network Gives a New Impetus to the Baltic Sea Region as a Science Powerhouse

Key Messages of the Baltic Science Network Working Papers, Studies & Reports Published During the Second Phase of the Project Implementation

Baltic Science Network

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

EU STRATEGY FOR THE BALTIC SEA REGION FLAGSHIP

In Place of a Foreword

The second implementation phase of the Baltic Science Network has generated further findings about the Baltic Sea Region as an impressive area of research performance and science excellence. This concise overview of the conclusions and recommendations prepared during the last months of Baltic Science Network provides a condensed glimpse into the Working Papers, Studies and Reports presented to the wider audiences so far.

Readers interested in such topics as the Council of the Baltic Sea States´ Science, Research & Innovation Agenda, Nordic Research & Innovation Area, Policy Area Education of the EU Strategy for the Baltic Sea Region, European Research Area, EU Framework Programmes – in general, Widening Participation and Spreading Excellence measures – specifically, Cohesion Policy support measures for research and innovation are invited to continue following the Baltic Science Network´s activities after the initial development phase of the project.

Study (O 4.2)

Researcher Mobility Tools in the Baltic Sea Region

The overview of existing tools for researcher mobility in the Baltic Sea Region is presented together with an analysis how the existing tools help to overcome challenges and barriers in researcher mobility. The study puts forward suggestions for new structured tools.

The mapping identifies 86 tools for supporting researcher mobility in the Baltic Sea Region. Researcher mobility tools are defined as set practices, agreements or funding instruments that facilitate researcher mobility with a focus on or including the Baltic Sea Region. Tools are provided by more than 30 organisations, covering Denmark, Estonia, Finland, Germany (with focus on Baltic Sea Region), Latvia, Lithuania, Norway, Poland, Russia (only Baltic Sea adjacent areas) and Sweden.

The mapping shows that there is a great deal of tools that can be used towards supporting researcher mobility within the Baltic Sea Region. However, only few tools are designed with a direct focus on the Baltic Sea Region and most of these are rather small-scale, with the exception of BONUS EEIG.

Best practice tools cannot easily be replicated, as they are the result of years of negotiations and built trust. Also, information on the tools is not easily and equally available to all researchers.

The study recommends three possible models for building structured tools for research mobility, depending on the aim of research cooperation.

Working Paper (O 3.2)

Fostering Sustainable and Inclusive Labour Markets in the Baltic Sea Region: A Life Course Perspective

BSN Working Paper prepared by the Welfare State Expert Group elaborates on the key global, European, transnational and macro-regional trends, which affect the public debate, policy measures and research agendas revolving around the welfare state topic.

It paves the way in suggesting specific components for the BSN action plans by outlining a set of challenges, analytical concepts and data repositories, which hold most value for future welfare state research in the specific Baltic Sea Region setting. Among the key suggestions for the BSN action plans are such thematic research strands as demographic shifts accompanied by various vulnerabilities of different age groups of the active and non-active population; social inequalities of various sorts; new skills required in the contemporary and future labour market; solidarity of various sorts; diversity and nuances of welfare state regimes; a sustainable welfare state.

Among the most valuable data repositories for the future Baltic Sea Region-wide research projects on the welfare state are the European Social Survey, International Social Survey Programme, the Survey of Health, Ageing and Retirement among others. The prioritisation of certain data repositories is proposed, together with a note that a proper maintenance of high quality and systematic national data inputs remain the key for future research success and the delivery of projects with high scientific value.

In some cases, the research problem at hand might only be adequately addressed with the help of qualitative data and methods. Thus, in future transnational research efforts there should be space for the collection and analysis of comparative qualitative data capable of enriching the knowledge produced on the basis of quantitative survey and administrative data.

Report (O 3.2)

Scientific Excellence in Life Sciences in the Baltic Sea Region

Report of the Life Sciences Expert Committee maps the existing cooperation patterns in the Baltic Sea Region via a comprehensive SWOT (strengths, weaknesses opportunities, threats) analysis.

Most potential opportunities are related to pooling and sharing resources, and to utilising researcher mobility as an active tool for promoting brain circulation and network building in the macro-region. Building critical mass by pooling and sharing resources (such as infrastructures, registers and data banks) can enhance the quality and cost efficiency and open for new opportunities in research. This also includes an ambition to share good examples of accessing human material and data, shed light on the different legal regulations and promote a harmonisation of research assets and standards in the region.

Report elaborates in greater detail on the following suggestions:

- foster innovations in the Master & PhD programmes through novel forms of cooperation between universities, research institutes and businesses;
- support sharing training & joint coordination initiatives aimed at better accessibility of world-class infrastructures for the life sciences researchers based in the Baltic Sea Region;
- strengthen the Baltic Sea Region´s position as a world leader in life sciences industry by facilitating more active collaboration with public R&D organisations.

Various specific measures are presented with attention paid to the time span required for their implementation:

- fast track actions, which can be implemented within 1 – 3 years by research communities themselves;
- selected actions to be implemented within a time frame of 1 – 5 years;
- long-term actions.

Brochure (O 6.1)

Research and Innovation Excellence in the Baltic Sea Region

Baltic Science Network aims at showing how resourceful and promising is the research potential and science excellence in the Baltic Sea Region. It is done by offering a comprehensive landscape of various initiatives and projects which deliver impressive results and show the tangible value of continuous promotion of a cooperation in science.

Brochure stands out with its breath taking diversity of examples, spanning across such topics as overweight and its associated health risks; e-solutions; brain research; atmospheric aerosols; quantum physics; seafloor exploration; multi-degree-of-freedom robotics in analytical measurement; biological, environmental and social factors that influence health and behaviour of adolescents; materials and technology research; bioorganic chemistry; molecular tools for genome editing; cancer vaccines; genome and proteome research; synchrotron X-rays.

It is an inspiring overview capturing the huge potential of the brightest and tirelessly forward-looking minds working across the Baltic Sea Region.

Working Paper (O 3.4)

Roadmap for Transnational Utilisation of Existing and Planned R&I Infrastructure

While many countries of the Baltic Sea Region have identified their individual research development and innovation commitments, including research infrastructure development objectives, the research infrastructure in the Baltic Sea Region lacks sufficient and extensive interconnectivity and is not equally distributed between countries.

This roadmap has been created to provide practical suggestions on the efficiency of the research infrastructure utilisation and cooperation. It is focused merely on the research infrastructure that is already established or is in the phase of development, rather than suggesting the creation of new research infrastructure. In this roadmap, the best practices of the research infrastructure utilisation and cooperation in Europe are analysed, and the tool-box of best practices is created to understand the qualities of and processes in the research infrastructure that should facilitate successful utilisation and cooperation.

An evaluation of European research infrastructures of interest for the Baltic Sea Region is performed. As a result, a framework is provided to analyse the efficiency of the research infrastructure cooperation and utilisation. This framework can further be used on the research infrastructures of the Baltic Sea Region to assess and enhance their qualities. Suggestions are provided for the science ministries or other relevant institutions, in order to indicate possible ways for them to facilitate and enhance the efficiency of the research infrastructure utilisation and cooperation.

Report (O 3.2)

Creating a Unique and Sustainable Value Through Scientific Excellence in Photon and Neutron Science in the Baltic Sea Region

Report of the Photon & Neutron Science Expert Committee offers an acknowledgement that the Baltic Sea Region still suffers from its heterogeneity with partially fragmented efforts which requires a much wider approach in order to properly address all the complex and interrelated challenges in the Baltic Sea Region.

Therefore, the expert group recommends the installation of a Baltic Sea Region Science Forum on Photon and Neutron Sciences which would include representatives from the research institutions, research infrastructures, science policy officials and industry from the macro-region. This Forum should be charged to devise a strategic roadmap process for the Baltic Sea area to explore in detail the science and innovation capabilities, the business needs and opportunities and the pathways to the future.

Among other recommendations presented by the committee is a suggestion to develop a photon and neutron science support action for widening participation that will strengthen the research capacity and user community of EU13 countries.

The report gives a short overview of the existing good practices, such as FinEstBeamS, RACIRI, Röntgen-Ångström Cluster, LINX and CREMLIN.

Working Paper (O 4.3)

Mobility Funding Instruments

An examination of existing good practices and consultations with three expert groups have resulted in a prioritisation of three mobility tools – summer schools with a focus on large research infrastructures, research internships for students within the Baltic Sea Region, as well as short-term scholarships for doctoral students.

All three instruments are presented as being closely intertwined with three values – excellence, transparency and continuity. Excellence should be the guiding criteria for selecting the best candidates for funding. It is important to start with areas of mutual Baltic Sea Region interest in order to be able to widen the research cooperation.

Transparency with regard to the call timeline, review and selection criteria is a baseline to build confidence within the research community.

Continuity is also important for building up trust from the research community. No matter how large the outreach efforts would be, there is a high probability that some researchers will miss the first call. With calls every year the knowledge within the research communities is excepted to gradually increase and with time the Baltic Science Network tool holds a potential to become a standard tool for supporting mobility within the Baltic Sea Region.

Further details on the publication

Name of the project	Baltic Science Network
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All Baltic Science Network Working Papers, Studies and Reports stated in this overview are available in a PDF format online on the project´s website:

http://www.baltic-science.org/index.php/publications

Project in brief

Baltic Science Network (BSN) serves as a forum for higher education, science and research cooperation in the Baltic Sea Region.

BSN is a policy network gathering relevant transnational, national and regional policy actors from the Baltic Sea Region countries. The Network is a springboard for targeted multilateral activities in the frame of research and innovation excellence, mobility of scientists and expanded participation. These joint activities are modelled with an overall aim to ensure that the Baltic Sea Region remains a hub of cutting-edge scientific solutions with the capacity to exploit the region´s full innovation and scientific potential. The activities are modelled as examples of best practice which form basis of the policy recommendations drafted by the Network.

The platform is tailored to provide advice on how to enhance a macro-regional dimension in higher education, science and research cooperation. Recommendations jointly formulated by the Network members address the European, national and regional policy-making levels.

BSN is a flagship of the EU Strategy for the Baltic Sea Region under the Policy Area Education, Research and Employability, as well as one of two cornerstones of the Science, Research and Innovation Agenda of the Council of the Baltic Sea States.

Disclaimer: This publication is based on input from stakeholders and BSN project partners and does not necessarily reflect the views of all participating Member States and organisations.

Since Baltic Science Network is keen on continuing to facilitate the public debate on macro-regional research cooperation and its contribution to the advancement of the European Research Area, readers are encouraged to familiarize with and engage in the upcoming events announced on the Baltic Science Network website: www.baltic-science.org

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