BALTIC SEA REGION CLIMATE PARTNERSHIPS

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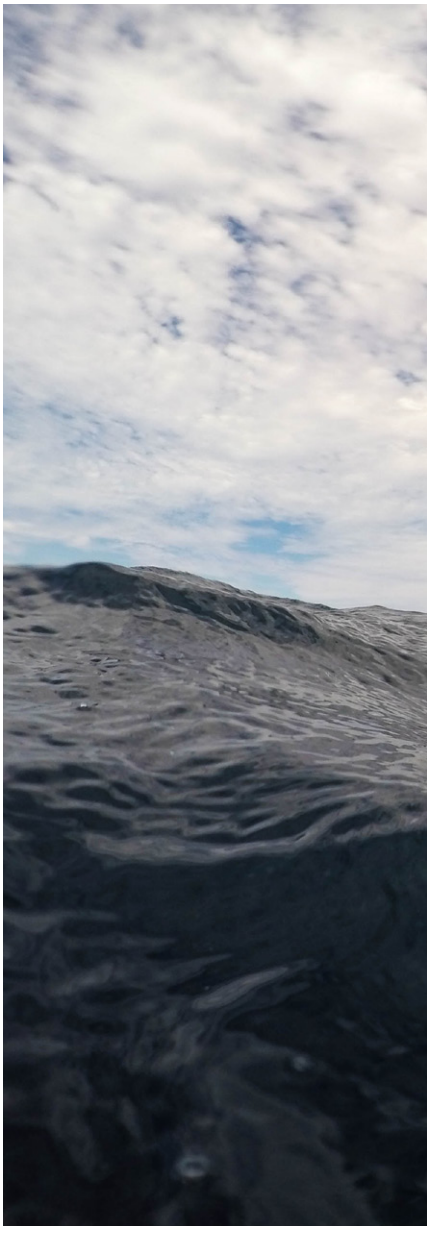


IMPACTS OF CLIMATE CHANGE IN THE BALTIC SEA REGION

Climate change is one of the most pressing environmental issues today. Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems. Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks (IPCC Climate Change Synthesis report, 2014). Current impacts of climate change in the Baltic Sea Region (BSR) are also evident and are expected to emerge also in the future.

According to the conclusions of the BALTADAPT project, the majority of climate change simulations reveal strong changes in the air temperature in BSR. The simulated increase is already statistically significant in the nearest few decades compared to the most recent past decades. The changes are largest in winter and most so in the north-eastern part of the domain, where a coupling to a reduction in snow and sea ice is evident. Temperature extremes are projected to change more than long-term averages. In winter this implies that cold extremes in today's climate will get very unusual in a future warmer climate, while **SUMMERTIME HOT EXTREMES ARE EXPECTED TO BE MORE INTENSE** than those today.

Simulated changes in precipitation in the Baltic Sea Region are large and indicate a wetter climate in the future. The projected increases are largest and most consistent during winter. In summer the scenarios generally show **MORE PRECIPITATION IN THE NORTH AND LESS IN THE SOUTH** but there are large uncertainties in this. Also precipitation extremes are projected to change with time and models show **INCREASING AMOUNTS OF PRECIPITATION ASSOCIATED WITH EXTREME EVENTS,** also in areas that may experience decreases in seasonal mean precipitation.

Climate change simulations reveal a large spread in changes in wind speed in the Baltic Sea region. A majority of projections show **AN INCREASE OF WIND SPEED** over the Baltic Sea in a future warmer climate but the uncertainty is large.

The projected regional climate change will have the largest effect on the **RISING SEA LEVEL** in the Bothnian Bay, the Gulf of Finland and the Gulf of Riga. The total rise will be much larger in the southern and south-eastern parts of the Baltic Sea while the northern part will be less affected. The consequences of rising sea levels will differ along the coastline where lowland areas and densely populated regions are more exposed. On a shorter time-scale the sea level in the Baltic Sea is affected by the local meteorological conditions which may cause an extreme sea level rise and flooding. The frequency of such events in the future climate is unpredictable.

The wave climate in the Baltic Sea is changing as a result of the largescale atmospheric circulation. Model simulations in the Baltic Sea show an increase in maximal wind speed and frequency of extreme events. Following these changes in wind conditions, the wave height and frequency of the highest waves are also increasing. As a consequence, the **NUMBER OF EROSION EVENTS IN THE SHALLOW AREAS IS INCREASING** as well.

All scenario simulations display **INCREASING WATER TEMPERATURES,** both for the volume average and for the sea surface. The largest change is obtained in the Bothnian Bay in summer. In winter the largest increase is found in the Gulf of Finland. Changing water temperatures will have an impact on the occurrence and distribution of various species in the Baltic Sea. In summer cyanobacterial blooms may be enhanced. In areas where late winter convection normally takes place an increased temperature may change the density distribution in such a way that the deep convection is affected.

Substantial changes in the Baltic Sea ecosystem are expected in the coming 100 years. The sea will become more brackish, warmer and the sea level will rise in the southern part. Biological communities inhabiting the Baltic will change dramatically. **FEWER SPECIES WILL BE PRESENT IN GENERAL AND MORE FRESHWATER SPECIES WILL PENETRATE INTO THE BALTIC** at the expense of the marine species. Eutrophication may increase due to the expected increase in precipitation in the catchment area unless political action and proper management measures are taken. Increased plankton production and further reduction in oxygen concentration **MAY CAUSE EVEN LARGER DESERT-LIKE AREAS IN THE DEEPER PARTS OF THE BALTIC,** devoid of macroscopic benthic fauna and increase the areas where the species composition of today is changed. The increased plankton production and biomass in the surface layer will reduce light penetration and by that affect eelgrass meadows and seaweed forests on reefs and rocky shores. In the Northern Baltic Sea the expected lack of or reduced ice cover over the winter season will affect populations of birds and at least the ringed seal, and may have secondary impacts on numerous links in the ecosystem as cold-adapted species are replaced by freshwater species tolerating warmer water. Potentially **LARGE-SCALE FUNCTIONAL CHANGES IN THE ECOSYSTEM** can be foreseen.

Infrastructure in the Baltic Sea region will be affected by climate change in various ways. Rising temperatures, decreasing sea ice cover, sea level rise, changing precipitation and storm patterns directly impact infrastructure such as coastal protection, maritime traffic, ports and tourism infrastructure. Indirect effects of climate change such as shifts in tourism or changes in demand will have further consequences for the maritime sector. Also economic sectors like forestry, agriculture, construction, energy production and transport will be affected by the climate change.

The Baltic Sea region is highly industrialised and populated, thus making it particularly vulnerable to climate changes. The riparian BSR countries share a certain responsibility to respond to the climate change and its possible impacts on human security, the environment and competiveness in the region. It is therefore important to work not only on mitigation measures, but also on strategies to adapt to climatic changes. The establishment and implementation of the Macro-Regional Climate Change Adaptation Strategy and Action Plan in the BSR will strengthen efforts to such cooperation, based on the understanding of the specific impacts within the Baltic Sea Region.

EUSBSR HORIZONTAL ACTION CLIMATE

HORIZONTAL ACTION (HA) CLIMATE OF THE EU STRATEGY FOR THE BALTIC SEA REGION (EUSBSR) AIMS TO:

—> Facilitate integrative cross-sectorial policy discussions and alignment of policies, including mainstreaming of climate change into other sector policies
—> Promote low emission and climate resilient development
—> Promote regional cooperation and empower EU climate and energy policy development
—> Promote sustainable production and consumption-oriented measures
—> Increase coordination and synergy among initiatives and projects dealing with climate adaptation and mitigation in the BSR

HA CLIMATE FOCUSES ON TWO MAIN AREAS - LOW EMISSION DEVELOPMENT AND CLIMATE CHANGE ADAPTATION. THE HA CLIMATE LOW EMISSION DEVELOPMENT ACTION SETS OUT TO SUPPORT THE BALTIC SEA REGION TRANSFORMATION INTO A LOW CARBON ECONOMY BY:

—> Strengthening macro regional cooperation on mitigation
—> Raising public awareness on low-emission lifestyles
—> Promoting a circular economy, solutions for integrated renewable energy, energy efficiency in buildings and improved waste management
—> Promoting Green Public Procurement
—> Supporting the harmonisation of regulations and proposals between BSR planning authorities
—> Facilitating policy-science-business dialogue for deployment of best available technologies and social innovation

THE HA CLIMATE SETS OUT TO SUPPORT THE DEVELOPMENT AND IMPLEMENTATION OF NATIONAL CLIMATE POLICIES AND ADVANCE JOINT CLIMATE ACTIONS IN THE BALTIC SEA REGION BY:

—> Mainstreaming climate into land use and spatial planning as well as into territorial governance
—> Supporting the harmonization of indicators for monitoring vulnerability and progress of adaptation action
—> Promoting best practices on climate action between the stakeholders and macro-regions
—> Strengthening disaster risk management and preparedness.

EUSBSR
EU STRATEGY
FOR THE BALTIC
SEA REGION

ACTION
CLIMATE

The climate actions of the EUSBSR are truly "horizontal" by involving stakeholders from across the whole region, from a wide range of sectors and policy areas, as reflected by the long-term sector specific networks for cooperation and policy dialogue platforms as well by transnational projects carried out in the recent years in the Baltic Sea Region.

The implementation system of the Strategy is based on a multi-level governance principle where many authority structures interact in the political spectrum together with active stakeholders. The **INVOLVEMENT OF A BROAD RANGE OF STAKEHOLDERS REPRESENTING THE EUROPEAN UNION, NATIONAL, REGIONAL AND LOCAL LEVELS, DIFFERENT POLICIES AND PROGRAMMES IS ESSENTIAL FOR THE SUCCESS OF THE STRATEGY,** as they can transfer the macro-regional objectives of the Strategy into regional and local initiatives.

Council of the Baltic Sea States Secretariat (CBSS) in its capacity as the coordinator of HA Climate encourages building of partnerships between various stakeholder groups both on developing joint projects and initiating policy dialogue within the sectors in order to mainstream climate into the sector policies. These partnerships aim also to build capacities of various stakeholders to address the emerging complex climate change issues.

THE FOLLOWING IS AN OVERVIEW OF SELECTED PARTNERSHIPS AND EXAMPLES OF COOPERATION IN THE BALTIC SEA REGION, AIMING TO ACHIEVE LOW-CARBON DEVELOPMENT AND INCREASE RESILIENCE TO THE NEGATIVE IMPACTS OF THE CLIMATE CHANGE.

CLIMATE DIALOGUE PARTNERSHIPS

BALTIC SEA REGION CLIMATE DIALOGUE PLATFORM

CLIMATE DIALOGUE

WEBSITE: http://www.cbss.org/strategies/horizontal-action-climate

SCOPE

The BSR Climate Change Dialogue Platform is a strategic action initiated by the Baltic 2030 network to facilitate coordination and knowledge exchange among the member states and to support the development and implementation of the national climate policies and advance joint climate actions in the Baltic Sea Region.

The main elements of the CBSS Climate Dialogue Platform are as follows:

—> Round-tables. Information exchange between countries, EUSBSR, Policy Areas/Horizontal Actions and the EU for policy alignment and development/implementation of national climate policies
—> Climate inventory: collection and dissemination of data on Climate Change Adaptation.
—> BSR climate forums and capacity building programmes: for stakeholders involvement and awareness raising
—> Joint projects and actions for providing practical solutions
—> Cooperation with the EC and EEA, other EU macro regions, the UN for policy alignment, and knowledge exchange & transfer.

PARTNERS

EUSBSR HA Climate, led by the Council of the Baltic Sea States secretariat (CBSS), Baltic 2030 network, Estonian Ministry of the Environment, Estonian Environmental Research Centre, Stockholm Environment Institute (SEI Tallinn Center), Baltic Environmental Forum Estonia, Coastal Union Germany, Latvian Ministry of Environmental Protection and Regional Development, Polish Ministry of the Environment, Ministry of Natural Resources and Environment of the Russian Federation, Climate secretariat of Russian Social Ecological Union, Russian Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), Russian Geological Research Institute, Swedish Meteorological and Hydrological Institute, Swedish civil contingencies agency (MSB), Swedish University of Agricultural Science, Swedish Geotechnical Institute, European Environment Agency, VASAB, CPMR.

MILESTONES

The BSR Climate Change Dialogue Platform was a direct result of the Baltadapt project, which produced a Climate Change Adaptation Strategy and an Action Plan for the Baltic Sea Region. Baltadapt aimed to improve intergovernmental cooperation and to set up a platform for continuous policy-science dialogue. It is **the only multi-stakeholder platform for climate cooperation in the Baltic Sea region** and is open to relevant stakeholders from different levels of governments and sectors in order to ensure a truly cross-sectoral, integrated working approach. In June 2015, the Platform was included as a new Flagship of the EU Strategy for the Baltic Sea Region (HA Climate).

BSR DIALOGUE FORUM ON ENERGY AND RESOURCE EFFICIENCY

WEBSITE: http://www.cbss.org/sustainable-prosperous-region/baltic-21-lighthouse-projects

SCOPE

BSR Dialogue Forum on Energy and Resource Efficiency is one of the outputs of the EFFECT project. EFFECT's main aim was to map, communicate, foster and learn from good practice solutions on eco-efficiency in the Baltic Sea Region. The project was designed to attract and enable cities, villages and BSR sub-regions as well as other relevant actors from the local, regional, national and pan-Baltic level to jointly develop and implement policies and concrete actions on becoming more energy and resource efficient, sustainable and resilient, while stimulating a greener economy.

PARTNERS

CBSS Secretariat Baltic 2030 Unit, Swedish National Board of Housing (SE), Building and Planning, County Board of Dalarna (SE), Sustainable Business Hub Sustainable Business Hub, Greenelizer Green Tech Consultancy (SE), Royal Technical University KTH (SE), Regional Council of Pohjois-Savo (FI), Kaunas District Municipality (LT), Lithuanian Institute of Agrarian Economics (LT), Central Mining Institute of Poland (PL), University of Lifelong Learning of Belarus (BY), Belarusian National Technical University (BY), Norwegian Hedmark County Council (NO), City of Petrozavodsk (RU), Leontief Centre (RU), Nordregio, VASAB, Baltic Sea Parliamentary Conference Working Group on Green Growth and Energy Efficiency.

MILESTONES

• **Policy Review on Energy Efficiency in the Baltic Sea Region** provided an overview of policies concerning energy efficiency with a special focus on energy efficiency in buildings. The review stressed that improving energy efficiency is the most cost -efficient way to reduce emissions, improve energy security and that the co-benefits of improving energy efficiency in buildings include job creation, fuel poverty alleviation, health improvements, better energy security and improved industrial competitiveness. It also emphasized the importance of financial instruments, administrative procedures and informing the general public.

• **Project and Policy Review on Low Carbon Economy in the Baltic Sea Region,** evaluated the use of different indicators (such as emissions, energy consumption, energy prices and energy efficiency) to measure the current state of play and thereby to be able to make informed decisions.

BALTIC WASTE MANAGEMENT COUNCIL

SCOPE

Establishment of the Baltic Waste Management Council was one of the outputs of the project Towards Sustainable Waste Management in the Baltic Sea Region-RECO Baltic 21 Tech (October 2010-December 2013) project aimed at the strengthening the capacity of Baltic Sea countries to climb the waste hierarchy and meet the EU directives requirements on prevention of wastes, waste reuse, recycling and recovery.

PARTNERS

IVL - Swedish Environmental Research Institute (SE), Belarussian Association of Environmental Management (BAEM) (BY), Estonian Regional and Local Development Agency (ERKAS) (EE), Stockholm Environment Institute Tallinn Centre (SEI Tallinn) (SE/EE); Hamburg University of Applied Sciences (HAW) (DE), Waste Management Association of Latvia (LV), Ogre Municipality(LV), Kaunas University of Technology (APINI) (LT), Siauliai Region Waste Management Centre (LT), Alytus Region Waste Management Centre (LT), Gdansk University of Technology (PL), State Autonomous Institution of Kaliningrad Region "Environmental Centre - ECAT-Kaliningrad" (RU), North Western International Cleaner Production Centre (RU), Sustainable Business Hub (SE) and IIIEE Lund (SE).

MILESTONES

The project created innovative business opportunities in the clean-tech industry by establishing a transnational and cross-sectorial platform for expertise exchange in waste management in the Baltic Sea Region. In the long-term all the project activities will contribute to resource efficiency and reduction of the greenhouse gases emission from the waste management sector.

BALTIC EARTH

WEBSITE: http://www.baltic-earth.eu

Baltic Earth is an open research network of scientists involved in environmental research in the Baltic Sea basin in all its aspects. It is meant to act as a common science, communication and data platform, with the overall goal to integrate efforts to gain a better understanding of the Earth system of the Baltic Sea region, encompassing processes in the atmosphere, on land and in the sea, as well as processes and impacts related to human activities. Among other goals is to foster the development of coupled models contributing to a regional Earth System Modelling of the Baltic Sea basin.

Baltic Earth research encompasses the following disciplines: meteorology, hydrology, oceanography, Regional Climate Research, biogeochemistry, numerical modelling as a common tool, attempting to integrate these disciplines, and social science to evaluate the role of humans in the changing environment.

The goal of Baltic Earth is to achieve an improved Earth system understanding of the Baltic Sea region. Baltic Earth is the successor to BALTEX that was terminated in June 2013 after 20 years and two successful phases. The research components of BALTEX continue to be relevant, but now have a more holistic focus encompassing processes in the atmosphere, on land and in the sea, as well as processes and impacts related to the antroposphere.

EXAMPLES OF TRANSNATIONAL PROJECTS

FOCUS ON LOW EMISSION DEVELOPMENT

CROSS-SECTOR

BALTIC GREEN PUBLIC PROCUREMENT (GPP) CAPACITY BUILDING AND IMPLEMENTATION IN THE BALTIC SEA REGION

Green Public Procurement

WEBSITE: http://www.motivanhankintapalvelu.fi/the-green-procurement-guide/EN

SCOPE

Baltic Green Public Procurement (GPP) project carried-out from September 2011 to June 2014, aimed to cooperate across borders in the development of common resources in the BSR for supporting tendering innovative green products and services. The objective of the project was to increase the level and uptake of GPP in the Baltic Sea Region, stimulate green growth through GPP (procuring innovative products and services and involving excelling (SME) suppliers for green solutions), address better core environmental priorities such as the Baltic Sea pollution and Climate Change mitigation and adaptation measures through GPP, align regional approaches to GPP application and foster life-long learning and exchange within the Baltic GPP network.

PARTNERS

Swedish Environmental Management Council (SE), CBSS Baltic 2030 Unit, SKL Kommentus (SE), Motiva (FI), Danish Environmental Protection Agency (DK), National Procurement Ltd. (DK), Procurement Department of Danish Ministry of Environment (DK), Department of Public Procurement of Norwegian Agency for Public Management and e-Government (NO), German Federation of Energy and Climate Protection Agencies (DE), Tromsø County Council (NO), Sør Trøndelag County Authority (NO).

MILESTONES

The project helped to strengthen and further develop national GPP focal points in each country of the region, to increase knowledge and expertise on GPP amongst procurement professionals at all governmental levels, as well as to develop common training materials and to build up the necessary capacity to have the knowledge to implement GPP in the Baltic Sea Region. About 380 people were trained in nine BSR countries. The project also produced an online green procurement guide, which takes users through the basics and the potential of GPP, important roles and processes, methods and criteria. It focuses on four important procurement areas: Catering Services, Construction, IT and Transport

EXAMPLES OF TRANSNATIONAL PROJECTS. **FOCUS ON LOW EMISSION DEVELOPMENT**

AGRICULTURE

BIOECONOMY IN THE SOUTH BALTIC AREA: BIOMASS-BASED INNOVATION AND GREEN GROWTH (BIOBIGG)

SCOPE

BioBIGG project aims to unlock the innovation potential, related to unutilized biological resources in the Agro-Industrial value chains (such as grain production, sugar production, vegetable production and manufacturing). Strengthening of the SME innovation capacity will be achieved through cross-border knowledge transfer, sharing of good practices, advisory activities and preparation of pilot projects and investments. Development of new knowledge and co-creation of innovative solutions will be adapted to the specific situations and framework conditions in the participating regions.

PARTNERS

Region Zealand (DK); Roskilde University (DK); Region Scania (SE); Swedish Institute of Agricultural and Environmental Engineering (SE); Rostock Agency for Renewable Resources (DE); Gdansk University of Technology (PL).

MILESTONES

The project will concentrate on the most promising innovation and market maturation options in order to bring the biomass-based products, production processes and business models closer to the commercial stage. Within the seed money project these potentials will be screened and assessed tentatively, whereas in the main project these potentials will be further explored, analyzed, developed and disseminated.

EXAMPLES OF TRANSNATIONAL PROJECTS. **FOCUS ON LOW EMISSION DEVELOPMENT**

TRANSPORT

LIQUEFIED NATURAL GAS VALUE CHAIN FOR CLEAN SHIPPING, GREEN PORTS AND BLUE GROWTH IN THE BALTIC SEA REGION (GO LNG)

WEBSITE: www.golng.eu

SCOPE

The project which is funded by INTERREG BSR during 2016-2018 will focus on developing the demand and accessibility of LNG (Liquefied Natural Gas) in the Baltic Sea Region (BSR). The aim of the project is to establish a strategic approach of LNG infrastructure development and mobilize the critical mass of technology, business partnerships, and regulative authorities to implement LNG powered transport corridors in BSR. An integrated value chain will increase the competitiveness of LNG fuel by improving the economic and environmental performance and increasing the fuel and infrastructure demand. Replacing the liquid fossil fuels with LNG reduces significantly GHG emissions from shipping. The project will also explore opportunities to use a LNG infrastructure for Liquid Bio Gas (LBG). The project consortium consists of 18 partners from 6 different countries and gathers all major LNG stakeholders in the BSR.

PARTNERS

Klaipeda Science and Technology Park (LT); Klaipeda State Seaport Authority (LT); Klaipeda Shipping Research Centre (LT); Klaipedos Nafta (LT); Wismar University of Applied Sciences (DE); ATI-erc gGmbH (DE); Institute for sustainable Economics and Logistics (DE); Logistik-Initiative Hamburg (DE); Maritime University of Szczecin (PL); Motus Foundation (PL); Blekinge Institute of Technology (SE); Clean Shipping Index (SE); World Maritime University (SE); Svenskt Marintekniskt Forum (SE); Maritime Development Center of Europe (DK); Transport Innovations Network (DK); Samsø Commune (DK); OSK-Ship Tech A/S (DK); Shipping Offshore Network (NO); Baltic Ports Organization (EE).

MILESTONES

The project will establish a BSR LNG business cluster that will help the transport and marine technology industry be more competitive towards the Blue growth strategy, establishing the value chain for the BSR as a hub for clean shipping, competence and technology in LNG for transport. The aim of the cluster is to promote innovation and business projects, providing solutions for existing and upcoming users. It would also enhance everyday LNG usage i.e. LNG powered trucks and ships, LNG energy or LNG power for inland waterways.

LOW-CARBON LOGISTICS (LCL)

WEBSITE: http://energikontorsydost.se/l/projekt/10995

SCOPE

Low-carbon Logistics project, financed by the Interreg South Baltic Program (2016-2019) aims to establish low carbon logistic structures in four locations within the South Baltic Region, giving them best practice status towards widest possible adaptation. To achieve this, an analysis of preconditions (flows, type of goods, stakeholders, guidelines etc.) will be carried out, joint development of a low carbon logistics concept for towns and rural areas in the SB region, which will be done jointly by the pilot regions and an international consortium of transport and mobility experts and on basis of the concept, the local/regional working plans and long-term strategies will be developed in close cooperation with relevant players.

PARTNERS

Energy Agency for Southeast Sweden Ltd. (SE); Olofströms Näringsliv AB (SE); Rietavas Tourism and Business Information Centre (LT); Rietavas Municipality Administration(LT); Neringa Municipality (LT); The Green Policy Institute (LT); Research GmbH Wismar,Competence Centre for Rural Area Mobility (DE); Institute for Climate Protection, Energy and Mobility (DE); Maritime University of Szczecin (PL).

MILESTONES

In its last stage, the project will start an active implementation of the determined measures and solutions via pilot measures in each region. This work will be accompanied by an extensive engagement of the public from the very beginning of the project, which includes campaign work, as well as the development and recommendation of business models related to low carbon logistics, the creation of an international label for low carbon logistics institutions and learning from best practices. Project activities will ensure that the national expertise of the involved partners will be made available for other regions for active use during and after the project. For dissemination of the project outputs, an international LCL consultancy structure will be established and operated towards supporting specific regions with the green logistics attempts, providing guidance on application of green policy instruments relevant for transport sector.

EXAMPLES OF TRANSNATIONAL PROJECTS. **FOCUS ON LOW EMISSION DEVELOPMENT**

ENERGY

EFFECTIVE FINANCING TOOLS FOR IMPLEMENTING ENERGY EFFICIENCY IN BUILDINGS (EFFECT4BUILDINGS)

EFFECT4buildings

SCOPE

The EFFECT4buildings project financed from INTERREG Seed Money Facility (2016) is preparing a major project for developing and improving institutional and financial measures, promoting energy efficient technological solutions to increase energy efficiency in buildings, as well as developing and implementing training schemes for professionals and anchoring them in the daily practice of the target group. Project stems from the preceding EFFECT project, funded by Swedish Institute, which sought to map, foster and communicate good practice solutions that attract and enable cities, villages and regions from all relevant levels of governance to jointly develop and implement policies and concrete actions on becoming more energy and resource efficient, sustainable and resilient, while stimulating green growth.

DOWNLOAD REPORT "ENERGY EFFICIENCY IN THE BALTIC SEA REGION, POLICY AND PROJECT REVIEW":
http://www.cbss.org/new-report-energy-efficiency-baltic-sea-region-published/

PARTNERS

County board of Dalarna (SE), Environmental office of Lappeenranta region (FI), Hedmark County Council (NO), Vidzeme Planning Region (LV), Gate 21 (DK), Tallinn Science Park Tehnopol (EE), Sustainable Infrastructure Cluster (PL).

MILESTONES

Project aims to develop measures to enhance owner's capacity in decision making and to convince the decision makers in municipalities to invest in energy efficiency measures of the public buildings.

BIOENERGY PROMOTION 2

WEBSITE: www.bioenergypromotion.com

SCOPE

The Bioenergy Promotion 2 project, financed by the Interreg BSR Programme (2012-2014) aimed to capitalize the strategic outputs of the preceding Bioenergy Promotion project into the BSR and national political arenas, to promote the sustainable use of bioenergy at various levels through public procurement, corporate strategies of utility companies, proposing incentives within the reviewed Common Agriculture Policy, Rural Development Policy and Regional, Structural and Cohesion Funds. Furthermore, the project also provided direct support to so-called demo regions or municipalities that are implementing Strategic Management Plans developed during the first phase of the project. During its last two years the project has organized several cross-sectorial and transnational workshops to discuss and implement sustainable bioenergy strategies and facilitate information and knowledge exchange.

PARTNERS

German Agency for Renewable Resources (DE), Baltic Eco Energy Cluster (PL); Chamber of Agriculture Lower Saxony (DE); Fachagentur Nachwachsende Rohstoffe e.V. (DE); Forestry Development Centre Tapio (FI); Latvian Environmental Investment Fund (LV); Lithuanian Energy Institute (LT); Motiva Oy (FI); Nordic Energy Research (NO); Region Zealand (DK); Roskilde University (DK); Spektrum (PL) and Swedish Energy Agency (SE).

MILESTONES

Policy Recommendations on Bioenergy Promotion in the Baltic Sea Region, elaborated during the project, included the following recommendations for action:

• Promotion of the Green Growth Agenda, either as an integral part of broader sustainable business development activities, or forming specialized bioenergy business development platforms, clusters and other initiatives

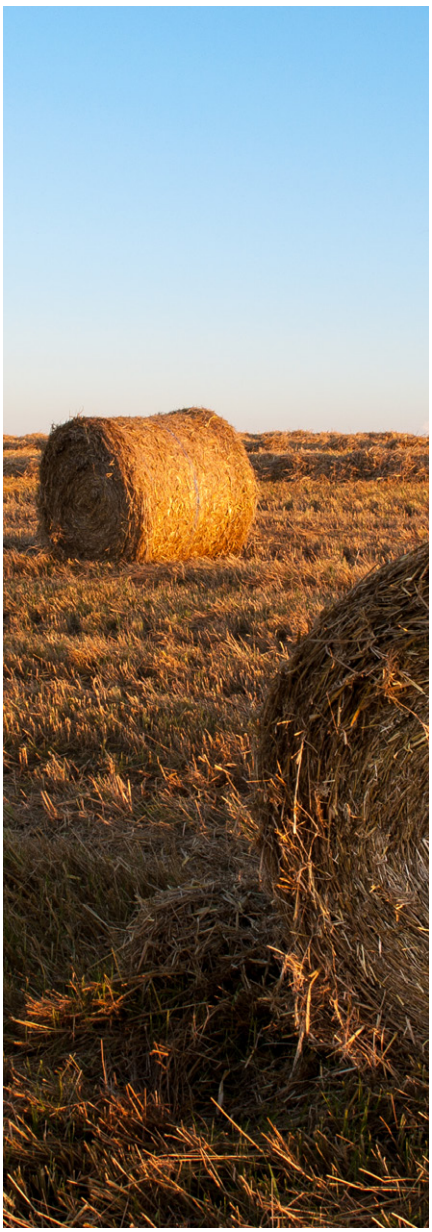
• Development of innovative and efficient frameworks and instruments in order to unleash the potential of bioenergy like regional and local (bio) energy strategies and action plans, which can be provided by public authorities in a co-creative process involving key stakeholders; strengthening entrepreneurship and market development; Here the principle of multilevel governance can be unfolded and pave the way for actions that create vertical cooperation as well as horizontal dynamics

• Development of Renewable Energy System via careful analyses on possible future energy system designs, taking into consideration the whole energy chain: resources, conversion, end-use, to ensure the most energy and cost efficient solutions. By reducing the energy need in the end-use, and creating more efficient conversion

processes, the need for biomass, which is a limited resource, will be reduced

• Establishment of Baltic Sustainable Bioenergy Certification System addressing the full value chain of energy conversion by using lifecycle approach, to integrate already existing control mechanisms and certification systems in the Baltic Sea Region, and make sure that the best available EU knowledge is taken into account

• Bioenergy capacity building in the way that all projects and activities enhancing the development of bioenergy production and consumption should be accompanied by competence development. In order to create a holistic understanding of the processes, systems thinking, ecosystems services, sustainable development criteria, life cycle analysis, logistics and entrepreneurship should become integrated parts of these activities.



EXAMPLES OF TRANSNATIONAL PROJECTS. **FOCUS ON LOW EMISSION DEVELOPMENT**

EDUCATION

LET'S DO IT – SOUTH BALTIC INITIATIVES TO STOP CLIMATE CHANGE

SCOPE

Let's Do It (2016-2018) financed by the INTERREG South Baltic program, focuses on providing a test-ground for the participating schools and teaching staff to realize international school exchanges on climate change to try out methods in a hands-on training approach for the teachers who will together with their colleagues from other schools plan, carry out and evaluate workshops on the climate protection issue.

PARTNERS

Fjord School Nykobing Falster (DK); Falkenberg School, Kalmar Municipality (SE); Gargzdai Minija pro-gymnasium (LT); Klaipeda Sendvario pre-gymnasium (LT); City of Schwaan (DE); Reda City Municipality (PL); Educational Association of Social Primary School & Social Gymnasium No. 1 of Gdansk (PL).

MILESTONES

Among the expected results of the project are:

• Starting an intercultural dialogue between school students, teachers and municipal actors from the local level on sustainable lifestyles and consumer behaviour in their neighbourhoods, different national traditions of energy production and concepts for a sustainable future

• Contributing to green growth by awareness-raising among school students and their parents for climate change issues; exchanging and facilitating environmental education programmes in the international playing field to increase the attention for the cross-border relevance of climate protection and to foster "green initiatives"

• Developing good models for school projects on sustainable energy issues and environmental education.

FOCUS ON CLIMATE CHANGE ADAPTATION

CROSS-SECTOR

SUSTAINABLE AND ETHICAL ADAPTATION TO RISING MEAN SEA LEVELS (SEA-RIMS)

SCOPE

The project SEA-RIMS (Sustainable and Ethical Adaptation to Rising Mean Sea levels), has received grant from FORMAS to carry out research during the 2016-2021 on the ethical, and social dimensions of planning in response to sea level rise.

PARTNERS

The research will be performed by a multidisciplinary team of researchers from the Division of Philosophy at KTH and the Swedish Geotechnical Institute (SE) in collaboration with the municipalities of Båstad, Halmstad, Laholm, Mörbylånga, Trelleborg, Ystad, the County Administrative Boards of Skåne and Halland, the Foundation Halland County Museums(all SE), the Council of the Baltic Sea States and White Arkitekter AB (SE).

MILESTONES

SEA-RIMS will produce knowledge and tools that can assist local and regional actors in Sweden in making sustainable and ethically legitimate adaptation decisions in response to sea level rise. The objectives of the research project are to:

• Provide an inventory and in-depth analysis of the ethical problems, including goal conflicts and value trade-offs, that arise in adapting to rising mean sea levels, with particular focus on southern Sweden.

• Develop two complementary GIS-visualisations for coastal vulnerability indices in collaboration with our municipal partners, and provide structured guidance as to how this new information can be used in adaptation to sea level rise.

• Explore different strategies to manage long-term sea level rise at municipal and regional levels in Sweden and generate scenarios of sustainable and ethical sea level rise adaptation.

CROSS-SECTORIAL COOPERATION IN CAPACITY BUILDING (CRCC)

WEBSITE: http://www.bsr-secure.eu

SCOPE

The project "Making communities resilient to climate change: cross-sectorial cooperation in capacity building – CRCC" supported by the Swedish Institute Baltic Sea Cooperation Seed fund and led by EUSBSR PA Secure and HA Climate, hosted by the CBSS Secretariat in collaboration with MSB started in June 2016 to last 1 year with the twofold aim:

—> to expand the existing network of civil protection stakeholders in the Baltic Sea Region (BSR) by widening the geographical coverage of the partnership and by building up new partnership between stakeholders of civil protection sector with the regional development stakeholders (e.g. municipalities, associations of the local governments, regional development agencies, etc.) in order to join efforts for reducing the vulnerability of the societies towards the emerging climate change, and
—> to prepare jointly an application for funding of the larger cooperation project aiming at increasing the resilience of the communities to the negative impacts of the climate change by enhancing the capacity of local governments and other stakeholders on climate risks assessment as well by mainstreaming climate change into local spatial planning processes and into procedures of contingency planning for specific natural disasters.

PARTNERS

Union of Baltic Cities (FI), Frederiksborg Fire and Rescue Service (DK), Estonian Rescuet Board (EE), Main School of Fire Services in Warsaw (PL), The Swedish Civil Contingencies Agency (SE), Hamburg Fire Service Academy (DE), Council of the Baltic Sea States.

MILESTONES

The project will involve partners relevant for implementing the Sendai Framework for Disaster Risk Reduction in joint activities aimed at identifying gaps in existing frameworks of adaptation to climate change, in particular in prevention, preparedness and response phases of the policy cycle, and proposing more efficient ways to overcome shortages of capacities in these areas. Ensuring cooperation of experts representing civil protection agencies, local and regional governments and academia, will provide the project with an opportunity to develop a comprehensive concept of the mechanism enabling local and regional communities to strengthen capacities to respond effectively to major threats permanently rising with the climate change.

RISK MANAGEMENT CAPABILITY BASED ON GAPS IDENTIFICATION IN THE BSR (FROM GAPS TO CAPS)

Co-financed by the EU - Civil Protection Financial Instrument

WEBSITE: http://www.gapstocaps.eu
http://www.14point3.eu

SCOPE

The project From Gaps to Caps, co-financed by the EU Civil Protection Financial Instrument (2015-2016), was aimed at building knowledge on disaster risk management capability assessments and to develop a more common understanding of disaster risk assessments at national level in the BSR. The project contributed to the implementation of a macro-regional civil protection strategy and joint macro-regional prevention and preparedness approach towards major hazards and emergencies. The project addressed the gaps identified during the project European Union Strategy for the Baltic Sea Region Flagship Project 14.3 on Macroregional Risk Scenarios and Gaps Identification – implemented during 2012–2013.

PARTNERS

Fire and Rescue Department under the Ministry of the Interior of the Republic of Lithuania (LT); Council of the Baltic Sea States; Swedish Civil Contingencies Agency (SE); Frederikssund-Halsnæs Brand & Redningsberedskab (DK); University of Iceland (IS); Hamburg Fire & Rescue Service (DE); Estonian Rescue Board (EE); Ministry of the Interior of Finland (FI); State Fire and Rescue Service of Latvia (LV); Norwegian Directorate for Civil Protection and Emergency Planning (NO); Main School of Fire Service in Warsaw (PL).

MILESTONES

With a view to the guidelines for assessments of risk management capability in accordance with the EU Decision on a Union Civil Protection Mechanism (1313/2013/EU), the project surveyed and collected data on existing ways of assessing capability in the civil protection systems of the region. Along with relevant aspects of the EUSBSR 14.3 project as well as national risk assessments, these findings served as a basis for developing a methodology for future assessments of capability among the Baltic Sea States with a special focus on cross-border dimensions. This can include events occurring in one Baltic Sea State of direct impact on the territory of another/others, events in border areas, events simultaneously affecting several countries in the region and events in a Baltic Sea State affecting residents of another, temporarily abroad, as well as events occurring in one country that can be dealt with – only or more effectively – with the assistance of other countries. The results presented in this project will provide a solid base for future work aimed at harmonizing risk- and capability assessment work within the Baltic Sea Region. A major achievement is the acceptance and promotion of a new proposed methodology for risk and capability assessments in the BSR, which is fully in line with the objective of "strengthening capacity to respond and to recover from major emergencies and accidents: better risk assessment and crisis management" in Policy Area Secure in the EUSBSR.

BALTADAPT

WEBSITE: www.baltadapt.eu

SCOPE

BALTADAPT project (2010-2013) was supported by the Interreg BSP and was a Flagship under the EUSBSR. The project's main goal was to prepare a Climate Change Adaptation Strategy for the whole Baltic Sea Region and - during the preparation of the strategy - to arrange participatory dialogues between the stakeholders of the region. The Strategy and Action Plan were presented in June 2013 at the Adaptation Policy Forum in Riga. The specific objective of the Baltadapt Action Plan was to strengthen the capacity for adaptation action at all relevant levels and to enhance the 'adaptive capacity' of the region. Adaptive capacity comprises a sound knowledge base, an exchange of information between relevant actors in science and policy, the mainstreaming of Climate Change adaptation in other policy areas and includes cooperation activities between all actors in the BSR.

PARTNERS

Danish Meteorological Institute (DK), Aarhus University Department of Bioscience (DK), Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (DE); German Federal Environment Agency (DE), Leibniz Institute for Baltic Sea Research Warnemünde (DE), University of Latvia (LV), Baltic Environmental Forum Lithuania (LT), Finnish Environment Institute (FI), Swedish Meteorological and Hydrological Institute (SE), University of Tartu (EE), Estonian Marine Institute (EE) and the CBSS Secretariat.

MILESTONES

The Baltadapt Strategy and Baltadapt Action Plan are based on Baltadapt reports (http://reports.baltadapt.eu), covering gap-fit analyses, impact and vulnerability assessments, as well as on the consultation process with relevant policy-makers and stakeholders during three policy fora, stakeholder workshops on tourism and agriculture and through consultations with DG CLIMA and DG REGIO.

EXAMPLES OF TRANSNATIONAL PROJECTS. **FOCUS ON CLIMATE CHANGE ADAPTATION**

URBAN DEVELOPMENT

INTEGRATED STORMWATER MANAGEMENT (IWATER)

WEBSITE: http://www.integratedstormwater.eu

SCOPE

iWater - Integrated Storm Water Management project supported by the INTERREG Central Baltic program aims to improve the urban planning in the cities of the Baltic Sea Region via developing integrated storm water management system. During the years 2015–2018, common guidelines and tools of integrated storm water management will be developed in the partnering cities with the involvement of local stakeholder and interest groups.

PARTNERS

Union of the Baltic Cities Sustainable Cities Commission (FI); City of Riga (LV), City Development Department (LV); Jelgava City Council, Development and City Planning Department (LV); Municipality of Söderhamn, Municipal Committee Department (SE); Municipality of Gävle, Management administration (SE); Tartu City Government, Department of Urban Planning, Land Survey and Use (EE); City of Helsinki, City of Helsinki Environment Centre (FI); City of Turku, Environmental Division (FI); Aalto University, Department of Architecture (FI).

MILESTONES

The project partner cities will adopt new programs and approximately 35 other cities will be trained to use the developed methods in the region. iWater summer schools will be organized with the aim to produce innovative storm water management solutions for the iWater pilot sites. Pilots will be developed in Gävle, Helsinki, Jelgava, Riga, Söderhamn, Tartu and Turku. The 5-day intensive studio courses took place during the 2016 in Latvia, Sweden and Estonia. The "Green area Factor (GAF)" is one of the main tools presented in the iWater project. The GAF method improves the city's prerequisites for adapting to climate change by promoting the green efficiency of the vegetation on the plots and the conservation of sufficient green structure. Vegetation mitigates the risk of flooding, reserves carbon dioxide, cools down the heat islands of built environments and increases the pleasantness and beneficial health-effects of the urban spaces. In the GAF method, the planner sets a green factor target level for the plot that can be achieved flexibly by the garden designer using various green elements when designing the garden.

RESILIENT AND ECOLOGICAL APPROACHES FOR LIVING SUSTAINABLY (REALS)

WEBSITE: http://realsproject.org

SCOPE

REALS project (September 2013 – August 2016) aimed to create networks and intercultural learning between Sweden, Russia and Belarus, with a focus on socio-ecological resilience and sustainable lifestyle. Funded by Swedish Institute, the project REALS was a part of the newly created European Network for Community-led Initiatives on Climate Change and Sustainability - ECOLISE. REALS also contributed to the implementation of the EU Strategy of the Baltic Sea Region by increasing learning, awareness and access to information in relation to sustainable lifestyles, waste reduction and sustainable resource management in Western Russia, Belarus and in the Baltic Sea Region.

PARTNERS

Swedish Permaculture Association (SE), CEMUS at Uppsala University (SE), Greenelizer Green Tech Consultancy (SE), Russian Eco-Village Network REEN (RU), St. Petersburg State University (RU), EcoHome and Ecoproject (RU), and Belarusian Green Movement (BY).

MILESTONES

Project findings included the following:

• Policies and regulations in the BSR can be more context-responsive and enabled by: being responsive and sensitive towards emergence, changing needs and opportunities of diverse local initiatives

• Finding forms of regulations and offering funding schemes which encourage experimentation and development of small scale and appropriate solutions for sustainability within social, economic and ecological spheres

• Enabling financial, educational and consultative support for and with local initiatives for sustainability such as ecovillages, permaculture initiatives, urban gardens and more

• Encouraging the use of truly participatory process facilitation, decision making and leadership

• The project also concluded that a regional strategy supporting climate friendly and climate-resilient agriculture needs to be developed and implemented within the BSR based on "4/1000 Initiative" and Regional strategies and regional initiatives for climate-resilient rural and urban areas (e.g. under Covenant of Mayors and others) should be promoted, supported and further developed.

CLIMATE CHANGE: IMPACTS, COSTS AND ADAPTATION IN THE BALTIC SEA REGION (BALTCICA)

WEBSITE: http://www.baltcica.org

SCOPE

Adaptation to climate change cannot be solved solely locally and in isolated attempts, but calls for cooperation and integrated approaches in the Baltic Sea Region. The BaltCICA project (February 2009 to January 2012) with local and regional partners, helped to prepare regions and municipalities to cope with a changing climate.

PARTNERS

Geological Survey of Finland, Aalto University School of Engineering /Centre for Urban and Regional Studies (FI); Hanko Water and Wastewater Works (FI); Union of the Baltic Cities – Commission on Environment (FI); Helsinki Region Environmental Services Authority (FI); City of Helsinki (FI); City of Tampere (FI); Geological Survey of Estonia (EE); University of Latvia (LV); North Vidzeme Biosphere Reserve (LV); Municipality of Klaipeda (LT); Environmental Centre for Administration and Technology from Lithuania (LT); Vilnius University (LT); Lithuanian Geological Survey under the Ministry of Environment (LT); Kalundborg Municipality (DK); Danish Board of Technology(DK); Geological Survey of Denmark and Greenland (DK); Nordic Centre for Spatial Development-NORDREGIO (SE); Norwegian Institute for Urban and Regional Research (NO); Leibniz Institute for Baltic Sea Research Warnemünde (DE); HafenCity University/ Institute for Urban-, Regional- and Environmental Planning (DE); EUCC – The Coastal Union Germany (DE); Potsdam Institute for Climate Impact Research (DE).

MILESTONES

The BaltCICA project used climate change scenarios to discuss and develop adaptation measures with relevant planning authorities and stakeholders. The project assessed costs and benefits of adaptation in case studies and on a pan-Baltic level. The 13 BaltCICA case studies focused on specific thematic areas, such as metropolitan planning and adaptation strategies (Hamburg, Tampere, Helsinki and its Metropolitan Region), groundwater and climate change (Hanko, Klaipėda and Falster), the Environment (North Vizdeme, Karklė) as well as scenario development and citizen participation (Kalundborg, Riga, Klaipėda, Tampere, Hamburg). The BaltCICA project has: identified adaptation measures and implemented them in the Baltic Sea Region; produced new knowledge relating to climate change impacts, costs and benefits and governance of adaptation; reduced uncertainty in decision-making in relation to adaptation by strengthening the science-practice link; increased participation of stakeholders and citizens in adaptation related decision-making.

AGRICULTURE

ECOVILLAGES

WEBSITE: www.balticecovillages.eu

SCOPE

The EcoVillages Project (2010 – 2013) aimed at fostering the ecovillages development as a more sustainable way of living in rural areas of the Baltic Sea Region. The Ecovillage principles aim to combine a social-cultural environment with a low-impact way of living. Choosing to live in an ecovillage is choosing an alternative way to the widespread individualistic, materialistic and consumer-oriented lifestyle.

PARTNERS

Lithuanian Institute of Agrarian Economics (LT), MTT Agrifood Research Finland (FI), Latvian State Institute of Agrarian Economics (LV), The West Pomeranian Business School (PL), Suderbyn Cooperative Society (SE), GEN Europe, ZEGG (DE), GEN Finland (FI), Centre for Independent Social Research (RU), St. Petersburg Forest Technical Academy (RU), Permaculture in Sweden (SE), Swedish University of Agricultural Sciences (SE), Ekobyarnas Riksorganisation (SE), EROGEN (SE), Ecohome (BY) and the Council of the Baltic Sea States, Baltic 2030 unit.

MILESTONES

The EcoVillages project successfully concluded with three manuals based on case studies, covering guidelines for eco-settling practices, environmentally-friendly technologies and community living, and social development in ecovillages. The project further published recommendations for decision-makers concerning ecovillages proper development including promotion of decentralized power production, retrofitting houses with renewable materials, promotion of building low-impact villages in rural areas using low-the solutions and natural materials, enabling the transfer of unmanaged land for common use (in the cities) for food production and for recreation, encourage new forms of business and organizations that have a focus on eco-entrepreneurship and enterprises managed by community as well promote eco-education as part of promoting rural life.

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Baltic Sea Region Climate Dialogue Platform
Baltic GPP
EFFECT4buildings
Bioenergy Promotion 2
Baltadapt
REALS
EcoVillages
Gaps to Caps