

# EN CLIME

## Joint Expert Network on Climate Change

### HELCOM and Baltic Earth joining forces



# HELCOM approach to climate change

## *Strong political mandate: Ministerial Meetings*

### **2010:**

- Acknowledgment of climate change impacts on the marine environment
- Climate change to be reflected in HELCOM policies

### **2013:**

- Mandated the assessment of climate change and its implications, notably through collaboration with Baltic Earth

### **2018:**

- **Increase resilience of the Baltic Sea to climate change** through research and adaptive management
- BSAP update: to acknowledge foreseen impacts of climate change
- Further adapt policies and recommendations in light of changing climate
- Maximize mitigation through blue carbon storage

## Ultimate Goal:

### *Increasing resilience of the Baltic Sea system to climate change impacts*

## Objectives:

1. building HELCOMs function as a **regional platform** for a policy-science dialogue on climate change ([EN CLIME](#))
2. **provisioning of robust, policy relevant, research-based knowledge on the state, impacts and vulnerabilities of the Baltic Sea and its surroundings to climate change** ([Baltic Sea Climate change fact sheet](#))
3. **reviewing policies** in the light of climate adaptation ([implementation and update of the BSAP](#))

## Expert Network on Climate Change (EN CLIME)

- **Joint HELCOM/Baltic Earth Expert Network:** comprising of experts from both organizations
- History of joint assessments (Joint Thematic Assessments of Climate Change in 2007 & 2013),
- Main focus is the **Baltic Sea region**
- Established late 2018 by adoption of ToR (document 2-1)
- housed under and guided by the Baltic Earth Science Steering Group and the HELCOM State and Conservation group
- **HELCOM/Baltic Earth Co-Chairs:** Clarisse Kehler Siebert (SE), HELCOM and Markus Meier (DE), Baltic Earth.

## Expert Network on Climate Change (EN CLIME)

### Goals

- Prioritize **close cooperation** with internal and external partners
- **Reduce the lag time** for transferring quality assured science to end users
- Ensure that **new scientific findings** on climate change and its impacts are visible in policy making, and find their way into decision-making and day to day work
- Support the identification of **knowledge gaps** and **future research priorities**

## EN CLIME, who is involved?

- **80+ researchers** from the entire Baltic Sea region directly involved in the work
- **Covers all HELCOM countries** (Contracting Parties)
- **Baltic Earth research network**
- **HELCOM Expert and Working Groups**
- **Baltic Eye**

More information in documents

2-1 Terms of Reference of EN CLIME

2-2 Structure and process of HELCOM climate change work

## Agenda Item 3 Structure of the fact sheet

### Climate Change Fact Sheet, what is it?

- A **science driven exercise** synthesizing already existing detailed, peer reviewed information
- One fact sheet, presenting a **consensus view** by the regions climate experts
- Using **set time ranges** for all the parameters
- **Condensed key messages**, present visually, in an accessible and stable way across years, including information on trends
  
- Using **agreed language** (in line with IPCC)
- Including **level of confidence** in the presented information
- Supporting, in depth material available as separate publications, clearly referenced

## Document 3-1

## Document 3-2 Examples of MCCIP report cards

## Document 3-4

Topic	Description	What is expected to happen?	Where is the change seen first? Is it already happening?	Other drivers	Knowledge gaps	Policy relevance
		Level of confidence:	Level of confidence:	Level of confidence:		
		Links to primary parameters	Link to primary parameters			
<p>E.g. Marine Mammals</p> <p>Affiliation of expert</p> <p>Petra Kääriä, HELCOM</p>	<p>Give a brief description of the parameter</p> <p>Show links to other parameters.</p>	<p>What is expected to happen in the future? Present expected changes quantitatively e.g. through ranges whenever possible.</p> <p>Use if statements</p> <p><b>Comments?</b></p>	<p>What is happening? Provide information on already identified effects</p> <p>What are the direct consequences? Examples of effects can we already see, if available.</p>	<p>Quite a number of ecosystem parameters have other more powerful drivers behind the present change.</p> <p>This column presents other drivers for the reader to understand that mitigation/adaptation can be done also by regulating these drivers.</p>		<p>Policy relevance:</p> <p>What can be done about it (possible responses)? Especially focusing on avoidance, alleviation, adjustment and adaptation.</p> <p>What is already being done about it?</p> <p>Existing agreements/policies:</p> <p>How does it affect measures taken to reduce pressures on the Baltic Sea?</p> <p>Policy gaps</p> <p>If statements if needed</p>



## Primary parameters (effects)

Temperature (air) and heatwaves
Temperature (sea) and heat waves
Large Scale Atmospheric Circulation (e.g airpressure, AMO, NAO)
Sea ice and extreme events
Salinity and saltwater inflows
Stratification and ocean circulation (incl. large scale marine processes e.g. spring/fall circulation)
Changes in carbonate chemistry (incl. air-sea exchange of CO <sub>2</sub> )
Sea level and sea level extremes, e.g. storm surges
Wind and wind extremes (storms)
Solar radiation and cloudiness
Precipitation and extreme events
Waves and extreme events
Sediment transportation
Run-off and extreme events
Riverine nutrient loads and atmospheric deposition (incl. dissolved organic matter and nutrients)

Team:  
Carbon  
and nutrient  
cycles

Secondary parameter (impact)	
Ecosystem dimension	Microbial community and -processes
	Pelagic habitats (incl. phytoplankton and zooplankton community structure, spring blooms, functional traits etc.)
	Benthic habitats (incl. benthic organisms and community structure, functional traits)
	Fish
	Waterbirds
	Marine Mammals
	Non Indigenous Species
	Acidification
	Oxygen concentration and hypoxia
	Ecotoxicology
	Ecosystem function
Human dimension	Shipping
	Tourism
	Built structures (incl. offshore renewable energy constructions and maintenance)
	Fisheries
	Aquaculture
	Nutrient concentrations and eutrophication
	Harmful algal blooms (HABs)
	Pollution and hazardous substances
	Human health
	Patogens
	Flooding
	Erosion and sedimentation
	Ecosystem services
	Marine Protected Areas (MPA's)
Blue Carbon storage capacity, biological carbon pump etc	

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## Work of EN CLIME

- Key messages for **primary parameters (and for 2 secondary) drafted**
- Focus now on **secondary parameter key messages**
- Deadline for secondary parameter key messages **end of January 2020**
- **Next physical meeting** of EN CLIME mid-February 2020 (SMHI?)
- **Peer-review** of all key messages spring 2020

## EN CLIME Workspace

- Platform for drafting key messages for the parameters
- Key messages for primary parameters available
- How to find?

<https://portal.helcom.fi/default.aspx>

<https://portal.helcom.fi/workspaces/EN%20CLIME-167/default.aspx>

# Agenda Item 5 Planning coming work

## Work plan of EN CLIME (Annex 1 of 2-1)

Action	2019				2020				
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Summarize and simplify draft key messages from already existing material and provide confidence assessments of draft key messages (EN CLIME).		■	■	■	■				
Simultaneously produce supporting material for the key messages, e.g. in the form of publications or thematic assessments. (EN CLIME)		■	■	■	■				
Peer review the collated key messages (using existing peer review structure within Baltic Earth, expanded to cover additional parameters as needed)						■			
Revise the key messages in light of peer review comments. (EN CLIME and HELCOM Secretariat)						■			
Where needed, revise the draft key messages based on the updated information in the supporting material. (EN CLIME)						■			
Peer review the draft key messages (using existing peer review structure within Baltic Earth, expanded to cover additional parameters as needed)							■		
Present draft key messages to State and Conservation for endorsement. (State and Conservation WG)							■		
Present product to Heads of Delegation for approval							■		
Publish fact sheet and supporting materials. (HELCOM Secretariat)							■	■	■
Joint launch event(s). BalticEye Baltic Sea Breakfast									■
Contribution by EN CLIME to BSAP update	■	■	■	■	■	■	■		

## Outline of coming work

1. Identify those primary parameters which are relevant to the secondary parameter in question
2. Use the draft key messages for the primary parameters to support drafting key messages for the secondary parameters (workspace)
3. Summarize and simplify draft key messages (if-statements) from already existing material/expert knowledge and provide confidence assessments of draft key messages for the secondary parameters
4. Peer review the collated key messages (using existing peer review structure within Baltic Earth)

Ready  
by end of  
January  
2020

Q1 2020

## Preferred mode of working

- Where appropriate agree on **thematic subgroups/team** ([suggestion](#) on the division by the Secretariat)
- Agree on a **lead for each parameter and team** (coordinator)

## Leads

### 1. Lead for each parameter (first draft)

Tasks: provide the first draft, communicate with other writers, summarize information

### 2. Lead for each subgroup

Tasks:

- Communicate with parameter leads under the subgroup
  - See that text is submitted in time (send reminders)
  - Collate information
  - Present the subgroup work at the physical meeting in February 2020
- With help from the Secretariat



## Preferred mode of working

- What would be the most efficient and practical **mode of working**?  
Thematic subgroups, independent expert work, online workshops, real life workshops etc.?
- If possible, already agree on **dates for follow-up meetings** under each subgroup/team
- Is a joint/larger meeting needed for going through the key messages for the secondary parameters?

# Thank you for your attention!

