

## Minutes of the 23rd Joint Baltic Earth Science Steering Group (BESSG) and Baltic Earth Senior Advisory Board (BESAB) Meeting

Date: 25 May 2025

Time: 15:00–19:00 CEST

Location: Institute of Oceanology Polish Academy of Sciences (IOPAN), Sopot, Poland

Mode: Hybrid

Participants:

In person: Inga Dailidienė, Georgia Destouni, Sonja Ehlers, Jüri Elken, Kari Hyytiäinen, Agnieszka Jędruch, Karol Kulinski, Andreas Lehmann, Markus Meier, Kai Myrberg, Kevin Parnell, Piia Post, Berit Recklebe, Gregor Rehder, Sławomir Sagan, Tarmo Soomere, Laura Tuomi, Tamara Zalewska, Oliver Zielinski

Online: Andris Andrusaitis, Urmas Lips

Minutes prepared by: Agnieszka Jędruch and Sonja Ehlers (International Baltic Earth Secretariat, IBES)

Last name	First name	Affiliation	Function
Andrusaitis	Andris	BONUS EEIG, Helsinki, Finland (retired)	BESAB member, chair
Dailidienė	Inga	Marine Research Institute, Klaipeda University, Lithuania	BESSG member
Destouni	Georgia	Department of Physical Geography, Stockholm University	BESSG member
Ehlers	Sonja	Leibniz Institute for Baltic Sea Research Warnemünde, Germany	IBES
Elken	Jüri	TalTech, Tallinn, Estonia	BESAB member
Jedruch	Agnieszka	Institute of Oceanology IO-PAN, Sopot, Poland	IBES
Hyytiäinen	Kari	University of Helsinki, Helsinki Institute of Sustainability Science	BESSG member
Kulinski	Karol	Institute of Oceanology IO-PAN, Sopot, Poland	BESSG member, vice chair
Lehmann	Andreas	GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel, Germany	BESSG member
Lips	Urmas	TalTech, Tallinn, Estonia	BESSG member
Meier	Markus	Leibniz Institute for Baltic Sea Research Warnemünde, Germany	BESSG member, chair
Myrberg	Kai	Finnish Environment Institute SYKE	BESSG member
Parnell	Kevin	Laboratory of Wave Engineering: Department of Cybernetics, TUTech, Tallinn, Estonia	BESSG member
Post	Piia	Institute of Physics, University of Tartu, Estonia	IBESSG member
Recklebe	Berit	Leibniz Institute for Baltic Sea Research Warnemünde, Germany	Guest
Rehder	Gregor	Leibniz Institute for Baltic Sea Research Warnemünde, Germany	BESSG member
Sagan	Sławomir	Institute of Oceanology IO-PAN, Sopot, Poland	BESAB member
Soomere	Tarmo	Department of Cybernetics, Tallinn University of Technology	BESSG member
Tuomi	Laura	Marine Research Unit Finnish Meteorological Institute, Helsinki, Finland	BESSG member

Zalewska	Tamara	Institute of Meteorology and Water Management – National Research Institute, Gdynia, Poland	BESSG member
Zielinski	Oliver	Leibniz Institute for Baltic Sea Research Warnemünde, Germany	BESAB member

## ACTION ITEMS

- 1) Finalisation of the Baltic Earth Science Plan (deadline December 2025, all BESSG and BESAB members)
- 2) Suggestions for topics of articles in BEAR II (deadline December 2025, all BESSG members)
- 3) Input to the Baltic Earth publication meta data base (deadline December 2025, all BESSG and BESAB members)

## INTRODUCTION

The 23rd Joint Baltic Earth Science Steering Group (BESSG) and Baltic Earth Senior Advisory Board (BESAB) Meeting was convened as a half-day hybrid session at the Institute of Oceanology of the Polish Academy of Sciences (IOPAN) in Sopot, Poland. The meeting took place on the eve of the Baltic Sea Science Congress, scheduled from 26 to 30 May 2025 in Sopot. Members of both the BESSG and the BESAB were invited to attend.

The meeting was opened by Markus Meier, Chair of the BESSG, who welcomed all participants. The introductory session included a brief round of self-introductions to facilitate engagement and exchange.

## DISCUSSION AND OUTCOMES

### 1. Organizational Matters

*Session held jointly for the Baltic Earth Science Steering Group and the Baltic Earth Senior Advisory Board*

- The agenda for the meeting was reviewed and formally approved without amendments (TOP 1.1). The minutes of the previous 22nd BESSG meeting were also accepted, with a suggestion to incorporate the previously omitted information regarding the Baltic Earth Winter School (TOP 1.2).
- Follow-up actions from the previous meeting were presented and discussed (TOP 1.3). These included the initiation of a self-assessment process for members whose three-year term had expired, with the intention of renewing terms based on member feedback. Additionally, the BESSG had aimed to propose new members from the early career researcher (ECR) community. Preparations for the Baltic Earth Scientific Colloquium Series had also been reviewed. The need to identify suitable speakers and topics had been reiterated, and it was suggested that confirmed events be publicised on the Baltic Earth website and associated social media platforms in a timely manner.
- Membership-related issues were also discussed, including procedures for potential suspension and reappointment (BESSG TOP 1.4 to 1.7). The format and structure of the Baltic Earth Assessment

Reports (BEARs) were examined in relation to potential synergies with HELCOM's Holistic Assessments (HOLAS) (TOP 6).

### *Strategic Directions and New Initiatives*

- The meeting addressed the need to further develop the Baltic Earth Science Plan (TOP 5). It was proposed that the document be treated as a “living document” to allow for continuous updates, reflecting the evolving priorities and ideas of both the Steering Group and the Advisory Board.
- A new proposal by Anders Omstedt was introduced, suggesting the compilation of an anthology comprising approximately 40 to 50 selected research papers relevant to the Baltic Earth programme. This publication would span a broad thematic spectrum and include both contemporary and historically significant articles. Selection would be guided by algorithmic filtering based on relevance and quality. The proposal prompted an in-depth discussion on the format of such a volume, the criteria for selecting articles, the responsibilities of those curating the content, and the potential benefits to the scientific community. Participants also considered the need to establish a dedicated database to support this initiative. However, concerns were raised regarding the overlap with the ongoing BEAR activities, and the risks associated with developing both projects in parallel were noted (BESSG TOP 1.8).

## **2. Parallel BESSG and BESAB Meetings**

### *2.1. BESSG Session*

*Session held for the Baltic Earth Science Steering Group*

Participants:

In person: Inga Dailidienė, Georgia Destouni, Kari Hyytiäinen, Karol Kulinski, Markus Meier, Kai Myrberg, Kevin Parnell, Piia Post, Gregor Rehder, Tarmo Soomere, Laura Tuomi, Tamara Zalewska, and Agnieszka Jędruch (representative of IBES)

Online: Urmas Lips

The BESSG session focused on several key matters, including membership changes and transitions (BESSG TOP 1.4), the evaluation and voting on new candidates (BESSG TOP 1.5 and 1.6), elections for the positions of Chair and Vice Chair (BESSG TOP 1.7), and a continuation of the discussion on the proposed anthology of scientific articles related to the Baltic Earth programme (BESSG TOP 1.8).

- The session commenced with a review of current BESSG membership. Results from the recent self-evaluation exercise were presented. Marcus Reckermann and Andreas Lehmann formally resigned from the group. Anna Rutgersson and Franz Berger will transition to the Baltic Earth Senior Advisory Board (BESAB).
- **New Members:** New candidates for BESSG membership were introduced and discussed. Three early career researchers (ECRs) were proposed: Heta Rousi, Leonie Barghorn, and Jamie Jenkins. Their scientific backgrounds and key achievements were presented, followed by a discussion on the importance of integrating ECRs into the BESSG and the disciplinary perspectives they represent.

Two additional candidates were presented: Taavi Liblik and Marc Silberberger. Their professional qualifications and contributions to Baltic Earth-relevant science were also outlined, and the Steering Group discussed their potential roles.

An extensive discussion followed concerning the broader scope and identity of the Baltic Earth. Participants deliberated on whether the BE should remain focused on its traditional core of physical oceanography or adopt a more holistic, interdisciplinary Earth system science approach. Arguments were raised both for maintaining focus and for increasing inclusivity, particularly toward disciplines such as marine biology and ecology, which could enhance holistic assessment capacity. The need to balance scientific breadth with strategic focus was acknowledged.

- Voting on new BESSG and BESAB members

*Members facing potential conflicts of interest excluded from the process*

Leonie Barghorn, Jamie Jenkins, Taavi Liblik and Marc Silberberger were appointed as new members of the BESSG. Heta Rousi's application was warmly welcomed. She was encouraged to further detail her application documents. Her membership will be considered on at the next BESSG meeting.

Petra Kääriä and Jan Harff were unanimously appointed as members of the BESAB.

- The group reflected on the current gender, age, and national representation within BESSG. The current composition includes representatives from Poland (3), Germany (5), Estonia (5), Finland (4), Lithuania (1), Latvia (1), Sweden (1), and Denmark (1). The group consists of 15 men and 6 women, in total 21 members at this time. The importance of maintaining balance in geographic and gender representation was emphasized.

It was confirmed that the suspension of members from Russia and Belarus remains in place and should continue as per the previous resolution.

- **Election of Chairs:** Nominations were submitted for the positions of Chair and Vice Chair. Markus Meier expressed willingness to continue in the role of Chair, and Karol Kuliński volunteered to continue as Vice Chair. As no other candidates were proposed, a vote was conducted.

Additionally, the possibility of introducing a second Vice Chair in the future was raised for further consideration.

- Voting on new BESSG members

*Members facing potential conflicts of interest excluded from the process*

Both candidates were unanimously re-elected.

- **Continuation of Discussion on Proposed Book Anthology:** The session concluded with a continuation of the discussion on the proposal by Anders Omstedt to compile an anthology of selected scientific articles relevant to the Baltic Earth programme. While the idea was well received, several concerns were voiced, particularly regarding potential overlap with the Baltic Earth Assessment Reports (BEARs). It was agreed that the current focus should remain on the BEARs. Questions were raised regarding article selection criteria, responsibility for curation, and the process of forming a working group. It was suggested that any selection should be made collectively rather than delegated to a small subgroup. Participants agreed to revisit the discussion at a later time and potentially invite Anders Omstedt to provide further clarification on the objectives and structure of the proposed volume.

## 2.2. BESAB Session

*Session held for the Baltic Earth Senior Advisory Board*

Participants:

In person: Oliver Zielinski, Slawomir Sagan, Jüri Elken, and Sonja Ehlers (representative of IBES)

Online: Andris Andrusaitis

The BESAB discussed recommendations for the Baltic Earth Assessment Reports (BEARs, BESAB TOP 1.4), the Science Plan (BESAB TOP 1.7), additional BESSG members (BESAB TOP 1.5), EN CLIME and the HELCOM/Baltic Earth climate fact sheets (BESAB TOP 1.6).

- **Discussion of the BEARs:** In past times there were BACC books, but assessment papers might be a better choice because they will most likely be read by more people than the books.

The number of acronyms in the BEARs should be reduced to make them less complicated. By doing so, it will be easier to understand the BEARs outside of the Baltic Earth Community.

Furthermore, it should be clarified how the BEARs and HELCOM climate fact sheets are related to each other. The fact sheets are very informative and scientific but there is so far a missing link between the BEARs and the fact sheets.

Special issues are recommended together with more condensed summaries.

Overall result regarding the BEARs: The BEARs should be harmonized internally, structured and should target two groups, the scientific community as well as the decision makers. Additionally, it should be evaluated how decision makers can more specifically be reached.

- **Discussion of the Science Plan:** The Science Plan has 9 research topics and the topics have overlap.

It is recommended to coordinate the Science Plan with the BEARs because the BEARs do not reflect the 9 research topics. Regarding the BEAR report, two research topics could join forces. Furthermore, it needs to be structured well.

Recommendations for new research topics for the Science Plan: The research topics are already very detailed. However, the concept of topic 9 (philosophical aspects) needs to be clarified because many different topics are included in that topic. It should be clarified what the difference is between Baltic Earth Phase 1 and Baltic Earth Phase 2 when the vision for Baltic Earth 2.0 is introduced on the first page of the Science Plan.

- **Discussion on how to deal with suspended members:** If members are suspended for political reasons, then they should be continuously suspended. However, if members would be personally involved in the support of the Russian aggression against Ukraine, then they should be excluded.
- **Recommendations for new BESSG members:** Women could be stronger in representation and one should strive for a balanced representation of the countries. Also, a balanced representation of disciplines (related to the Earth System) is recommended. The discipline Biology/Ecology is missing on the science side. Young people are welcomed to join BESSG.
- **Additional activities within Baltic Earth:** The two new co-heads of IBES should evaluate possible changes within Baltic Earth after one year.

### 3. Joint meeting

*Session held jointly for the Baltic Earth Science Steering Group and the Baltic Earth Senior Advisory Board*

The joint session brought together members of both BESSG and BESAB to summarise the discussions held in their respective sessions and to address shared strategic priorities.

- Recent activities were reviewed, including the establishment of the new Baltic Earth Secretariat (TOP 2.1), as well as key events in 2024 and 2025 (TOP 2.2). These included the Special Baltic Earth Colloquium on “Achievements, Thanks, and Future Challenges” held in Hamburg on 4 February 2025, and the 7th Baltic Earth Winter School, which took place in Klaipėda from 24 to 28 March 2025.
- Planned activities for the period 2025–2026 were presented (TOP 2.3). These include the GEWEX/GHP meeting in Montreal (9–11 July 2025), the 11th Baltic Earth Summer School on "Climate of the Baltic Sea Region" in Askö, Sweden (18–25 August 2025), the 8th Baltic Earth Winter School in Tallinn, Estonia (23–27 March 2026), and the 6th Baltic Earth Conference, scheduled for 13–17 April 2026 in Heringsdorf, Usedom. The 12th Baltic Earth Summer School is also planned for 17–24 August 2026 in Askö.

The upcoming conference in Heringsdorf was briefly discussed, with a call to disseminate information via flyers and social media, and a formal announcement to be made during the Baltic Sea Science Congress.

- **EN CLIME:** The future of EN CLIME was also addressed, particularly in relation to the next update of the Climate Change Fact Sheet, expected around 2029–2030 (TOP 3). Participants discussed its alignment with BEARs and HELCOM reports. An election for the Baltic Earth co-chair within EN CLIME will be held at a later date, following the announcement by Markus Meier that he intends to step down. Members were encouraged to consider potential candidates for nomination in the week following the meeting.
- **Working Groups:** A proposal for a new Baltic Earth working group titled "Future Projections of the Baltic Sea Region", led by Markus Meier, was introduced (TOP 4). The group will coordinate Baltic Earth’s involvement in the international Task Force on Regional Ocean Climate Projections—a joint initiative by WCRP CLIVAR–OMDP and RfS–CORDEX. This initiative aims to support regional ocean modelling and contribute to future IPCC assessments. The proposal was approved, and participants were invited to express interest in serving as co-leader of the group.
- **Science Plan:** The concept of the Baltic Earth 2.0 Science Plan was also introduced (TOP 5). Members were encouraged to review and provide feedback on its structure and content within their respective working groups by summer 2025.

The group discussed the potential development of a new research topic on "Philosophical Aspects of the Baltic Sea Earth System Research", proposed by Anders Omstedt. Members were invited to reflect on the proposal and provide comments. Further potential research directions were discussed, including regime shifts in the Baltic Sea and coastal processes in the Baltic and other marginal seas, as proposed by Tarmo Soomere.

- **BEARs:** In regard to the Baltic Earth Assessment Reports (BEARs), participants revisited the idea of publishing a collection of review articles in a well-recognised journal (TOP 6). Possible outlets such as Earth System Dynamics or State of the Planet were suggested. The group agreed to postpone topic selection until the next meeting and to reflect on priority areas. The current timeline foresees a deadline for submission by the end of 2027 and the publication in 2028.

- **6<sup>th</sup> Baltic Earth Conference Special Issue:** Participants discussed the previous special issue from the 5th Baltic Earth Conference, which was published in Frontiers, and considered Oceanologia as a potential outlet for future issue. Further discussions with the publisher are expected.
- **Future data base publications:** Finally, the group addressed the issue of establishing a database of Baltic Earth-related publications and metadata (TOP 7). While the IBES will take the lead on this initiative, input from group members regarding content and formatting is required. A decision on whether to proceed will be made in December, based on the level of engagement and submissions received.



**Group photo of the participants of the 23rd Joint Baltic Earth Science Steering Group (BESSG) and Baltic Earth Senior Advisory Board (BESAB) Meeting in Sopot.**

Front row (from left): Georgia Destouni, Piia Post, Tamara Zalewska, Laura Tuomi, Markus Meier, Berit Recklebe, Agnieszka Jędruch, Sonja Ehlers; back row (from left): Kevin Parnell, Karol Kuliński, Tarmo Soomere, Gregor Rehder, Kai Myrberg, Sławomir Sagan, Kari Hyytiäinen, Oliver Zielinski (© IOPAN)

## **APPENDIX – AGENDA**

### **BE SSG and BE SAB meeting on 25th May 2025, Sopot**

**15:00-19:00 CET**

(location IOPAN)

#### **Introduction**

#### **TOP 1: Organizational Issues**

- 1.1 Approval of the agenda
- 1.2 Approval of the previous 22st Baltic Earth SSG meeting minutes (attached)
- 1.3 Review of previous Baltic Earth SSG meeting action items

#### **Parallel BESSG and BESAB meetings:**

##### **BESSG:**

- 1.4 BSSG Membership issues  
- Results self evaluations
- 1.5 Young Baltic Earth Scientists issues  
- Result of the call for new (early career) members (three applications attached)
- 1.6 Recommendations for new BESSG members, suspended members
- 1.7 Election of chairs
- 1.8 Proposal of a book project by Anders Omstedt

##### **BESAB:**

- 1.4 Recommendations for the future of BEAR (boundary conditions by HELCOM/EN CLIME for the BEARs)
- 1.5 Recommendations for new BESSG members, suspended members
- 1.6 Recommendation of additional activities within Baltic Earth
- 1.7 Recommendation of new research topics for the science plan (see the draft version in a separate

email)

**Joint meeting:**

Summary of the discussions of the two groups

**TOP 2: Activities in 2024/2025**

2.1. Baltic Earth activities in 2024/2025

new secretariat implemented [secretariat@baltic.earth](mailto:secretariat@baltic.earth), home page baltic.earth

2.2 Baltic Earth events in 2024/2025

2.3 Anticipated events in 2025/2026

**TOP 3: EN CLIME**

Election of the co-chair and information about the future update of the Climate Change Fact Sheet in 2029/2030

**TOP 4: Working Groups**

Proposal of a new working group on „Future projections of the Baltic Sea region” (see attachment)

**TOP 5: Baltic Earth 2.0 science plan** (see the draft version in a separate email)

**TOP 6: BEARs**

Future of BEAR, format, time line, topics, deadline 2028

**TOP 7: Future data base publications**

**TOP 8: Any other issues**