

Time 9:00–12:00, 2 April 2019
Place Tarfala room (T433), Geoscience Building, Stockholm University

Attending board members *Cynthia de Wit, Chair*
Magnus Breitholtz, Dep. of Environmental Science and Analytical Chemistry, SU
Sara Broomé, Student representative, Stockholm University
Rodrigo Caballero, Dep. of Meteorology, Stockholm University
Ove Eriksson, Dep. of Ecology, Environment and Plant Sciences, SU
Dan Henningson, KTH Royal Institute of Technology
Bengt Karlsson, Dep. of Zoology, Stockholm University
Erik Kjellström, Rosaby Centre, Swedish Meteorological & Hydrological Institute
Johannes Morfeldt, Swedish Environmental Protection Agency
Magnus Mörth, Dep. of Geological Sciences, Stockholm University

Other participants *Nina Kirchner, Co-Director of the Bolin Centre*
Alasdair Skelton, Co-Director of the Bolin Centre
Annika Granebeck, Bolin Centre Coordinator & Communicator
Karin Jonsell, Bolin Centre Coordinator & Communicator
Agatha de Boer, Study Director for the MSc Program in Climate Science, during § 8

Absent *Gia Destouni, Dep. of Physical Geography, Stockholm University*

Secretary *Karin Jonsell*

§ 1	Meeting opens The Chair welcomed everyone.
§ 2	Appointment of protocol writer Karin Jonsell was appointed as protocol writer.
§ 3	Appointment of protocol checker Magnus Mörth was appointed as attester.
§ 4	Approval of the agenda The agenda was approved with the addition of items 9e-f.
§ 5	Protocol from the previous meeting The protocol from the previous meeting as seen in Appendix 1 was approved.
§ 6	Decision: The ProMemoria of the future role of the External Science Advisory Group <ul style="list-style-type: none"> The Board approved the ProMemoria of the future role of the External Science Advisory Group (ESAG), see Appendix 2.

§ 7	<p>Decision: Formal mandate for the project group <i>Climate answers by scientists</i> to provide answers on behalf of the Bolin Centre</p> <p>The Board discussed the proposal in Appendix 3.</p> <ul style="list-style-type: none"> The Board Centre Board grants the project group <i>Climate answers by scientists</i> permission to provide answers for the Bolin Centre provided that its members (1) sign answers with their own name/s followed by “Bolin Centre for Climate Research” and (2) contact experts outside the group if necessary.
§ 8	<p>Discussion: Eventual Bolin Centre support and further development of the MSc Program in Climate Science</p> <p>The Study Director Agatha de Boer presented the MSc Program in Climate Science as seen in Appendix 4a, b.</p> <ul style="list-style-type: none"> The Board asks the Bolin Centre Directors to investigate the issue together with Study Director Agatha de Boer and Magnus Mörth, Head of Department at the Department of Geological Sciences, and prepare for a decision at the next Board meeting.
§ 9	<p>Information</p> <p>a. Protocols for the Science Advisory Group (SAG) and the Climate Research School (CRS) meetings The protocols from the previous SAG and CRS meetings are presented in Appendix 5a, b.</p> <p>b. The Directors have summarised the principles behind the distribution of the Strategic funding (SFO-money) to the Departments for future use The summary can be seen in Appendix 6.</p> <p>c. The Bolin Centre has sent in a MISTRA application The Bolin Centre has contributed to a MISTRA application in partnership with SRC (lead), the Baltic Sea Centre and the Human Science Faculty. If successful, the Bolin Centre would host a research school in environmental communication.</p> <p>d. Report from the Bolin Centre supported Geoscience & Society Summit 18–21 March The Bolin Centre has been a sponsor and a local host to the American Geophysical Union’s Geoscience & Society Summit in Stockholm 18–21 March. There were 79 participants (scientists, NGO:s, companies and organisations) from 14 different countries.</p> <p>e. The Bolin Centre Vinnova application The Vinnova application sent in by the Bolin Centre has not been selected for a phase two application.</p> <p>f. Arctic Avenue The Arctic Avenue had a well-attended kick off meeting in Helsinki 27–28 March. There will be a fundraising event in Finland in May.</p>
§ 10	<p>Other business</p> <p>There were no other businesses.</p>

§ 11	Next meetings Date for the last Board meeting during spring 2019: Friday 2019-05-17, 9–12 at the KTH Royal Institute of Technology
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Karin Jonsell
Secretary

Magnus Mörh
Attester

Cynthia de Wit
Chair of the Board



Board Meeting
Protocol
2019-02-15

Bolin Centre
for Climate Research

Time 9:00–12:00, 13 February 2019
Place Tarfala room (T433), Geoscience Building, Stockholm University

Attending board members *Cynthia de Wit, Chair*
Magnus Breitholtz, Dep. of Environmental Science and Analytical Chemistry, SU
Sara Broomé, Student representative, Stockholm University
Rodrigo Caballero, Dep. of Meteorology, Stockholm University
Gia Destouni, Dep. of Physical Geography, Stockholm University
Ove Eriksson, Dep. of Ecology, Environment and Plant Sciences, SU
Bengt Karlsson, Dep. of Zoology, Stockholm University
Erik Kjellström, Rossby Centre, Swedish Meteorological & Hydrological Institute
Magnus Mörth, Dep. of Geological Sciences, Stockholm University

Other participants *Nina Kirchner, Co-Director of the Bolin Centre*
Alasdair Skelton, Co-Director of the Bolin Centre
Annika Granebeck, Bolin Centre Coordinator & Communicator
Karin Jonsell, Bolin Centre Coordinator & Communicator

Absent *Dan Henningson, KTH Royal Institute of Technology*
Johannes Morfeldt, Swedish Environmental Protection Agency

Secretary *Karin Jonsell*

§ 1	Meeting opens The Chair welcomed everyone and especially Sara Broomé, the new student representative in the Bolin Centre Board.
§ 2	Appointment of protocol writer Karin Jonsell was appointed as protocol writer.
§ 3	Appointment of protocol checker Ove Eriksson was appointed as attester.
§ 4	Approval of the agenda The agenda was approved with the addition of items 9 k and 10a, b.
§ 5	Protocol from the previous meeting The protocol from the previous meeting (Appendix 1) was approved.
§ 6	Decision: The Bolin Centre Budget The budget as given Appendix 2 was approved with the following notations: <ul style="list-style-type: none"> • The Board grants the Directorate permission to transfer funds between salary and drift costs for the CRS once its strategy is finalized. • The Heads of Department will check for outstanding CRS costs no later than 2019-03-31.

	<ul style="list-style-type: none"> The CRS is required to establish a better routine to ensure that Departments receive CRS funds in a timely manner.
§ 7	<p>Discussion: The External Science Advisory Group (ESAG) report for 2018</p> <p>The Board discussed the report the External Science Advisory Group (ESAG) has sent to the Bolin Centre, see Appendix 3.</p> <ul style="list-style-type: none"> The Board expressed their sincere thanks to the ESAG for providing such constructive feedback to the Bolin Centre The Board asked the Directors to invite MERGE in Lund to a workshop The Board also asked the Directors to begin work on revising the Centre's mission statement
§ 8	<p>Discussion: A ProMemoria of the past, current and future role of the External Science Advisory Group (ESAG)</p> <p>The Directors presented the ProMemoria summarizing the history, role and tasks of the External Science Advisory Group (ESAG), see Appendix 4. The document has been sent to the ESAG members and a final version will be presented at the next Board meeting for approval.</p>
§ 9	<p>Information</p> <p>a. Protocol for the Science Advisory Group (SAG) and the Climate Research School (CRS) meetings The protocols from the SAG and CRS meetings, as seen in Appendix 5a, b, will from now on be added to the Board agenda as information to further the transparency of the Bolin Centre.</p> <p>b. Protocol from Science Faculty Council See Appendix 6 for the protocol from the Science Faculty Council with the election of Sara Broomé (ordinary member) and Heather Wood (secondary member) as student representatives on the Bolin Centre Board.</p> <p>c. Thorsten Mauritsen has been selected as new Research Area 1 Co-leader The Co-Directors announced the selection of Thorsten Mauritsen from the Dept. of Meteorology, Stockholm University, as new Co-leader for Research Area 1.</p> <p>d. The Bolin Centre has sent an application to Vinnova The Bolin Centre has sent an application to Vinnova together with Naturvårdsverket, SMHI, and 11 others (both organizations and businesses) to form a competence centre. The decision if the application has passed the first approval round is expected in April.</p> <p>e. The Bolin Centre is currently contributing to a MISTRA application The Bolin Centre is currently contributing to a MISTRA application in partnership with SRC, the Baltic Sea Centre and the Human Science Faculty. The SRC is leading this application.</p> <p>f. The Directorate is planning a lunch-to-lunch retreat The Directorate is planning a lunch-to-lunch retreat for the Science Advisory Group, 20-21 August 2019 and the Bolin Centre Board is most welcome to participate.</p> <p>g. Update on the Geoscience and society (GSS) meeting The Bolin Centre has nominated 2 panelists to the Geoscience and society (GSS) meeting co-hosted by the Bolin Centre 18–21 March. The conference will be entirely in the Geoscience building. See https://connect.agu.org/gss/homeo for more information.</p>

	<p>h. The Bolin Centre communication plan for 2019 The Coordinators and communicators presented their plan for 2019 as given in Appendix 7.</p> <p>i. The Bolin Centre report will be made yearly The Bolin Centre Report will be made yearly as part of the effort to record progress in the Bolin Centre, and it will follow the calendar year.</p> <p>j. Recommendations for procurement of catering and restaurants The Bolin Centre Board's recommendations for procurement of catering and restaurants, as seen in Appendix 8, has been sent to Stockholm University. Stockholm University's Environmental committee also supports this action and plan to discuss with the head of administration if there are funds to hire a consultant for helping the procurement unit with the procurement process for catering firms. The Bolin Board supported this.</p> <p>k. Arctic Avenue The application called Arctic Avenue has been approved by the Universities of Stockholm and Helsinki. The project involves a number of Bolin Centre member, runs 2019–2021, and is funded with 1 MSEK per year at Stockholm University, and 100 000 € per year at Helsinki University, respectively. There will be a kick-off 27–28 March in Helsinki. The application can be seen in Appendix 9.</p>
§ 10	<p>Other business</p> <p>a. Alternative Board member for KTH Royal Institute of Technology The Board asks the chair to contact the KTH Royal Institute of Technology for an alternative Board member to the Bolin Centre Board.</p> <p>b. Bolin Centre by laws The Vice Chancellor has approved the Bolin Centre's new by laws, see Appendix 10.</p>
§ 11	<p>Next meetings</p> <p>Dates for Board meetings during spring 2019: Tuesday 2019-04-02, 9–12 in the Tarfala Room (T433) at Stockholm University Friday 2019-05-17, 9–12 at KTH Royal Institute of Technology</p>

Karin Jonsell
Secretary

Ove Eriksson
Attester

Cynthia de Wit
Chair of the Board

Bolin Centre for Climate Research External Science Advisory Group (ESAG): A short history, and thoughts on its current and future role

Motivation

Since its foundation in 2006, the Bolin Centre for Climate Research has not only grown steadily from its original constellation around research questions formulated in the Linnéus Application. It has also, in 2016, merged with the EKOKLIM strategic research area, thus broadening the scope of the Bolin Centre. Also, in 2017, the Bolin Centre initiated collaborative projects with the Human Science Academic Area at Stockholm University. Given these dynamical changes and noting that the description of the role of the ESAG in the Bolin Centre By-Laws has remained unchanged since 2012, we consider it timely to re-visit the role and tasks of the ESAG, in order to ensure that it continues to fulfill its function as observing and advising body to the Bolin Centre, as well as to ensure that the Bolin Centre provides the best-possible conditions for the ESAG to carry out this very important task.

Here, a short history of the ESAG is given for the years 2006-2016, followed by a short summary of the activities of the present ESAG with mandate period 2017-2019. The document concludes with an “ESAG Pro Memoria” which should be revised annually by the Bolin Centre Directorate in consultation with the ESAG and the Bolin Centre Board.

History

The history of the ESAG is closely linked to the history of the Bolin Centre for Climate Research, which is described e.g. here: <https://bolin.su.se/index.php/the-founding-and-early-years-of-the-bolin-centre>.

After the Bolin Centre was founded in 2006, an External Advisory Board comprising of Profs. Lennart Bengtsson, Inez Fung, Phil Jones, Julian Dowdeswell, Johannes Oerlemans and David Sudgen supported the Bolin Centre’s director, Prof. Johan Kleman. Prof. Oerlemans was regarded as the Chair of the External Advisory Board. However, detailed records of the External Science Advisory Board’s activities were not kept at that time. In 2011, the “Rules for the Bolin Centre for Climate Research”¹ state that an international group, comprising five outstanding researchers in climate science, shall support the group leading the Bolin Centre (note: the Bolin Centre Board was not appointed officially until January 1, 2013).

Changes in the Bolin Centre leadership were made when the Centre’s first director, Prof. Johan Kleman, stepped down as Director and was replaced by Prof. Alasdair Skelton from January 2013. Leadership was further strengthened by appointing Prof. Leonard Barrie as vice Director and Research Director from March 2013. Skelton and Barrie triggered a number of changes in the organization of the Bolin Centre, outlined in a proposal titled “Structure of the Bolin Centre for Climate Research at Stockholm University” dated 8 Dec 2012. Shortly thereafter, in the By-laws (approved 20 Dec 2012), the External Science Advisory Group’s role is described as follows:

¹ The “Rules” (in Swedish: “föreskrifter”) are the predecessors of the Bolin Centre By-laws. The first “Rules” were approved 22 Nov 2007 and revised 3 Oct 2011, and the first By-laws, building on the “Rules”, were approved 20 Dec 2012, with revisions dated 16 Feb 2017, and 20 Dec 2018.

External Science Advisory Group: The Bolin Centre's Board shall appoint an external science advisory group comprised of leading national and international scientists within climate research. The composition of the group is proposed to the Bolin Centre Board by the Directors. The external science advisory group's main tasks are: (i) To inform the Bolin Centre of its strengths, weaknesses and possibilities for development as well as (ii) increase the Bolin Centre's contacts to international networks and research groups within the climate research area. The mandate period for members of the external science advisory group is three years. Members can serve more than one mandate period."

In November 2013, Profs. Leonard Barrie, Alasdair Skelton and Cynthia de Wit, in their roles as Research Director of the Bolin Centre, Director of the Bolin Centre, and Chair of the Board of the Bolin Centre, respectively, proposed a document titled "Mandate, Membership and Modus Operandi of the External Science Advisory Group of the Bolin Centre for Climate Research". This document was approved, with slight modifications, by the Board of the Bolin Centre on 13 March 2014, and the ESAG had six confirmed members: Profs. Johannes Oerlemans (Chair, ex officio member of the Bolin Centre Board), Natalie M Mahowald, Eystein Jansen, Anders Lindroth, Raymond Pierrehumbert and Susan Lozier, serving on the ESAG until Dec 2016. Their tasks were (see Att. 1a (in Swedish only) and 1b, from the Board Protocol March 2014): to

- (i) *review strategic plans and directions, and to inform the Bolin Centre of its strengths, weaknesses and possibilities for development,*
- (ii) *increase the Bolin Centre's contacts to international networks and research groups within the climate research area.*

and which were suggested to be achieved through the following activities:

- (a) *assisting the Directors and Board in ensuring that the added-value of Bolin Centre activities are strong and well communicated to stakeholders including University, government, sponsors and the public,*
- (b) *promoting the quality and international visibility of science and graduate education in the Bolin Centre by providing constructive feedback to scientists and students on their research, and by being spokespeople for Bolin Centre science and graduate education internationally.*

It was suggested that each year, the ESAG would attend the Bolin Days, and report on tasks (i) and (ii) described above in two separate documents: (i) and (a) were to be addressed in a report directed to the Board, (ii) and (b) were addressed in a report directed to the Directors and the Bolin Centre science community. The first ESAG report was received in Nov 2014 (available from https://bolin.su.se/images/pdf_14/ESAG_report_9_December_2014.pdf) and presented at the Board meeting immediately after the Bolin Days.

The ESAGs report based on the year 2015 was compiled by Oerlemans in Nov 2015 (available from https://bolin.su.se/images/pdf_15/BolinCentre_ESAG-Report2015.pdf). In 2016, an oral report was given at the Board meeting (Nov 18, 2016, see Att. 2).

During 2016, the Bolin Centre merged with the strategic research area "EKOKLIM". As the mandate period of the ESAG was also coming to a close, a process was initiated that aimed to

appoint a new ESAG, giving those members that wanted to serve another mandate period the option to do so, and including new members with expertise to advise on the newly added research areas focusing on landscape processes and climate, and biodiversity and climate.

The present ESAGs first mandate period, 2017 - 2019

By early 2017, four new ESAG members had been recruited: Profs. Karen Kohfeld, Camille Parmesan, Deliang Chen and Andrea Rinaldo. Profs. Eystein Jansen, Anders Lindroth and Raymond Pierrehumbert stayed on the ESAG for a second mandate period (Att. 3).

All seven ESAG members joined the Bolin Days 2017, and presented their research in a special “ESAG session” (see Att. 4). The ESAG provided the Bolin Centre Board with a report, including a dissent expressed by Prof. Parmesan, in June 2018 (Att. 5).

In 2018, Profs. Chen, Jansen, Kohfeld and Pierrehumbert attended the Bolin Days, and the following Board meeting, where they provided an oral feedback. A written report was submitted in early January 2019.

Since late 2018, the ESAG receives the Board meeting minutes, to facilitate a more continuous observation of Bolin Centre activities and processes rather than attendance of the Bolin Days only.

Re - thinking the role of the ESAG in the future. An “ ESAG Pro Memoria”

Purpose of the ESAG

The ESAG is an external body providing evaluation, guidance and advice to the Bolin Centre, to safeguard the continuous improvement of the Bolin Centre. The ESAG works independently of funding agencies’ and/or governmental evaluations.

Composition and appointment of the ESAG

The ESAG shall comprise leading national and international scientists, active within climate research. The composition of the ESAG shall reflect the scientific scope of the Bolin Centre. and should have less than 10 members, with the exact number to be decided by the Bolin Centre Board. Gender equality and diversity aspects are taken into account for the composition for the ESAG.

ESAG members are proposed by the Bolin Centre Directors after consultation with the SAG, and appointed by the Board of the Bolin Centre, for a mandate period of 3 years unless otherwise stated. A mandate period can be extended once, but need not cover the full additional three years. This is to avoid that an entire ESAG is replaced at once, and that continuity and long-term guidance is lost with the parting ESAG.

The chair person of the ESAG is selected by the ESAG members, for the duration of one year at a time, at the meeting following immediately after the Bolin Days. This is to ensure the chairing of the ESAG discussions and to distribute the work burden amongst the ESAG members more evenly. The chair person is an ex officio member of the Bolin Centre Board. All ESAG members are invited to participate in a dedicated Board meeting following immediately after the Bolin Days, to share impressions of the Bolin Centre and the Bolin Days and to provide a first oral feedback.

The central tasks of the ESAG

The main tasks of the ESAG are:

- *to assess the performance of the Bolin Centre, how the Bolin Centre is communicated, and to give candid and constructive feedback, such as how the Bolin Centre compares to other centres.*
- *to give advice on the mid- to long term strategy and planning of the Bolin Centre, including future prospects, and possible developments and collaborations.*
- *to support the Bolin Centre Board and Directorate, by providing an independent opinion and advice concerning the present or future situation and development of the Centre or parts of it, if such is requested by the Bolin Centre Board or Directorate.*

Collectively, these tasks comprise cornerstones for an evaluation of the Bolin Centre which the ESAG is requested to provide annually in the form of a report, see below.

Frequency and duration of ESAG meetings

Each year, the ESAG is invited to participate in the Bolin Days, which are held for 2 consecutive days in the second half of November.

On the day following the Bolin Days, an ESAG meeting is scheduled during the morning. The current chair of the ESAG is responsible for preparing an agenda for the ESAG meeting, and to share it with the other ESAG members one week prior to the meeting. The Directors can be called by the ESAG chair to participate in selected agenda items of the ESAG meeting. No requests are made as to keep formal notes of the ESAG meeting, instead, a request is made for a more comprehensive report, see below.

In the afternoon of the day following the Bolin Days, a meeting of the ESAG with the Bolin Centre Board is scheduled. The agenda for this meeting will be prepared by the Bolin Centre Directorate with input from the ESAG chair, and is shared at latest one week prior to the meeting.

Other regular meetings are not scheduled. If deemed necessary, the ESAG as well as the Directorate, and the Board of the Bolin Centre, may request a meeting. Requests for a meeting shall be communicated between the Chair of the Board of the Bolin Centre, the Bolin Centre Directorate and the ESAG members, who then jointly decide on the planning of such a meeting.

Travels to ESAG meetings

ESAG members can either book travel and accommodation in connection with participation in the Bolin Days and the ensuing ESAG and Bolin Centre Board meeting through the Bolin Centre Coordinators & Communicators, or submit an expense claim if bookings are made otherwise. Reimbursement can only be made in accordance with Stockholm University's regulations.

Communication and sharing of information between the ESAG and the Bolin Centre

The Directorate of the Bolin Centre is responsible for the overall communication with the ESAG. Several communication threads are pursued:

- *Continuously: All minutes from the Bolin Centre Board meetings are written in English and sent to the ESAG immediately after the meeting (“next-day- minutes policy”).*
- *October: The Directorate send a status report (e.g. the Bolin Centre Annual report) documenting the annual progress of each Research Area to the ESAG, and responding to the recommendations made by the ESAG in the previous annual report.*
- *November/Bolin Days: ESAG interacts with all Bolin Centre members, and time is reserved for formal meetings with, e.g. Bolin Centre PhD students and/or RA leaders.*
- *November/Bolin Days: The ESAG attends a Board meeting directly after the Bolin Days, to share advice and impressions orally.*
- *January: The ESAG sends its written report to the Bolin Centre Directorate.*

In order to fulfill their mandate, members of the ESAG may obtain more information from the Bolin Centre Board or Directorate, and may – in agreement with them – visit the Bolin Centre at times other than the Bolin Days. Relevant additional information sent out at the beginning of each mandate period to the ESAG includes the Strategic Plan of the Bolin Centre and the Bolin Centre Communication Strategy. If updated revisions become available, these will be sent to the ESAG immediately.

The annual ESAG report

As a result of its evaluation (based on the status report, the Bolin Days, and discussions with the Bolin Centre Board, Directorate, RA-leaders, scientists and PhD students), the ESAG prepares a report addressing, but not limited to the questions and issues outlined in the ESAG tasks (see above). Also, the Bolin Centre Board and/or Directorate may ask the ESAG to comment on one or more specific questions should the need for it arise. The Directorate will send a template for the ESAG report to the ESAG along with the status report (in October), giving the ESAG sufficient time to prepare for answers, reflection and discussion at the Bolin Days (in November). The chair person is responsible for ensuring its timely and proper completion, and for sending it to the Directorate, who will share it first with the Bolin Centre Board, then with Research Area leaders, and finally make it publicly available on the Bolin Centre homepage. Therefore, sensitive recommendations or information should be discussed separately from the annual ESAG report, e.g. in a confidential letter to the Bolin Centre Board and /or Directorate.

Climate answers by scientists

The Bolin Centre regularly receives various types of climate related questions from society. We would like to offer scientific answers, in a time when it is much needed. The Directorate have therefore started a new project group: Climate answers by scientists. We are now approaching the Board to request a formal mandate that this group can provide answers on behalf of the Bolin Centre.

Ambition level

- All answers from us shall be understandable, correct (fact and knowledge based) and peer reviewed

Suggested work process for the group

- Questions are received by the Bolin Centre and posted to the group
- Whoever feels that a questions is within his/her scope writes a response and sends it to a colleague to be peer reviewed, "buddy-system"
- Questions from journalist are often with a tight deadline. We therefore need to be proactive and answer quickly. Our ambition is to provide peer-reviewed answers within 1 working day.
- The Bolin Centre Directorate will finance the time spent by scientists preparing answers.

MSc program in climate science

The Climate Research School (CRS) initiated an MSc program in climate science which was launched in 2018 and is hosted by IGV in collaboration with ACES, NG, MISU and BIG (representing SRC). The Director of Studies for this program (Agatha de Boer) approached the CRS Board requesting that it formed an advisory group for this program to provide strategic and pedagogic guidance. The CRS Board is comprised of persons engaged in research training (e.g. Directors of Studies for Research Training) who are not necessarily qualified to provide guidance about undergraduate education. For this reason, the CRS Board decided that it was not qualified to take on this task. The CRS Board did, however, acknowledge the importance of the MSc program and its history as a Bolin Centre initiative. With this in mind, the CRS Board encourages the Bolin Centre Board to establish a cross-departmental advisory group to support the Director of Studies with strategic and pedagogic guidance regarding this unique educational program. This group would ideally have representatives from each Department that participates in the Bolin Centre to support a long term vision of extending the existing program to encompass the new disciplines that became a part of the Bolin Centre (represented by DEEP and Zoologi) after the MSc program was established and in connection to the merger with EkoKlim.

Alasdair Skelton and Agatha de Boer

18 March, 2019

Excerpt from Agenda and Protocol for the Bolin Centre Climate Research School (CRS) Advisory Board meeting

Date: Thursday 14 March, 2019

Time: 16:00–18:00

Place: Navarino room (T223), Geoscience building

<p>7. Discussing stakeholder roles and responsibilities in the MSc Program from Climate Science</p> <p><i>The Masters program is administrated by IGV, with five participating departments are stakeholders. The study director would like the CRS to discuss if and how they would like to be involved in the program. Would the CRS like to take some ownership of the program and have a say in how it develops? In that case the study director suggest that the CRS members be their departments' representatives in the program, both for strategy and communication. The advantage for the study director would be that it would be easier to communicate with the various departments as and when needed and the advantage for the Bolin Center is that they could advertise the program as a flagship program on their website.</i></p>	NK/AS	
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<p>7. Discussing stakeholder roles and responsibilities in the MSc Program for Climate Science</p> <p>The Masters program is administrated by the Department of Geological Sciences, with five participating departments as stakeholders. The Director of Studies for the MSc Program and the CRS discussed if and how they would like to be involved in the program.</p> <p>Decisions by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS did not consider itself as the right entity for advising the Director of Studies for the MSc program in Climate Science. • The CRS advised the Bolin Centre Board to form a focus group for the MSc program if requested by the Director of Studies for the program. 	AS	
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Bolin Centre for Climate Research

7 March, 2019

Protocol for the Bolin Centre Science Advisory Group (SAG) meeting

Date: Wednesday 6 March, 2019

Time: 9:00–12:00

Place: Tarfala room (T433), Geoscience building

Directors:	Nina Kirchner (NK) Alasdair Skelton (AS)	RA 5:	Malin Kylander (MK) Frederik Schenk (FS) Qiong Zhang (QZ)
RA 1:	Agatha de Boer (AdB) Torben Königk (TK) Thorsten Mauritsen (TM)	RA 6:	Helen Coxall (HC) Margret Steinhorsdottir (MgS)
RA 2:	Frida Bender (FB) Matthew Salter (MtS)	RA 7:	Kristoffer Hylander (KH) Zahra Kalantari (ZK) Regina Lindborg (RL)
RA 3:	Fernando Jaramillo (FJ) Anne Soerensen (AnS)	RA 8:	Sara Cousins (SC) Johan Ehrlén (JE) Karl Gotthard (KG)
RA 4:	Christian Beer (CB) Volker Brüchert (VB) Gustaf Hugelius (GH)	Communication:	Annika Granebeck (AG) Karin Jonsell (KJ)
		Data coord:	Anders Moberg (AM)
		Mod. coord:	Kristofer Döös (KD) Anna Lewinschal (LM)

1. Meeting was opened	NK/AS	
2. Selection of attester for this meeting Gustaf Hugelius was selected as attester for this meeting	NK/AS	
3. Approval of the agenda The agenda was approved.	NK/AS	
4. Protocol from previous SAG-meeting The protocol from the previous meeting was approved.	NK/AS	App. 1
5. Protocol from previous Board meeting The SAG had no comments on the protocol from the Board meeting. However, in reference to point 6 in this protocol, the SAG discussed funding opportunities for PhD students: <ul style="list-style-type: none"> The SAG discussed a centralization of the Bolin Centre participation support to PhD students to the Climate Research School (CRS) enabled by a contribution to the CRS from the Research Areas of 25 000 SEK. This will be presented as a proposal and decided on at the next SAG meeting. 	NK/AS	App. 2

Bolin Centre for Climate Research



<ul style="list-style-type: none"> • The SAG recommends that it should be meriting in future CRS participation support calls for PhD students to apply for funding outside the Bolin Centre as well. The SAG suggested that the CRS provides information on external funding opportunities, e.g. on its homepage. • Travel by train instead of by air should be encouraged by being fully funded. • The SAG has different opinions whether applications should be funded in full or be capped. 		
<p>6. Protocol from previous CRS meeting The SAG had the opportunity to comment upon the protocol from the Bolin Centre Climate Research School (CRS) meeting during last SAG meeting.</p>	NK/AS	
<p>7. Formas call with possible centre financing The SAG discussed the Formas call Collaborative Research Action on Resilience in Rapidly Changing Arctic Systems (CRA Arctic II), see https://www.formas.se/arkiv/alla-utlysningar/utlysningar/2019-02-21-forskning-om-arktisk-resilience-in-rapidly-changing-arctic-systems.html</p> <ul style="list-style-type: none"> • The SAG endorses a centre application from the Bolin Centre. • Alasdair Skelton, Annika Granebeck, Gustaf Hugelius, Margret Steinthorsdottir and Nina Kirchner will form an initial working group. 	NK/AS	
<p>8. Research area & coordination news A summary of the coordination news can be seen in the App. 3.</p>	NK/AS	App. 3
<p>9. Discussion: The SAG & Board retreat agenda The SAG suggested including the following in the retreat agenda:</p> <ul style="list-style-type: none"> • How can the Bolin Centre encourage member activity in the RAs. • Should there be joint criteria for awarding RA funding. • How should PhD student participation in courses and conferences be funded? • How can the Bolin Centre make it possible for more of its scientists to engage in modelling activities? • How should the Bolin Centre decide on which data are to be stored in its database? <p>The SAG is encouraged to send further suggestions to the Directorate. An agenda for the retreat presented and decided on at the next SAG meeting.</p>	NK/AS	
<p>10. Call for interest for a joint workshop with MERGE The Board has tasked the Directorate to invite the collaboration MERGE in Lund to a workshop. This request is inspired by the ESAG recommendation to “Develop/establish relationship with MERGE”.</p> <ul style="list-style-type: none"> • The Directorate, Gustaf Hugelius and Qiong Zhang will form an initial working group. 	NK/AS	



<p>11. Information</p> <p>a) Arctic Avenue The application called Arctic Avenue has been approved by the Universities of Stockholm and Helsinki. The project involves a number of Bolin Centre members, runs 2019–2021, and is funded with 1 MSEK per year at Stockholm University, and 100 000 € per year at Helsinki University, respectively. There will be a kick-off 27–28 March in Helsinki.</p> <p>b) The MISTRA call: The Bolin Centre has contributed to an application to MISTRA about environmental communication. The application is led by the Stockholm Resilience Centre. Other collaborators are the Baltic Sea Centre and representatives from the Human Science Faculty. The SRC will lead this application. If the application is funded, funding will be available to Bolin Centre members for e.g. joint PhD supervision and projects in the area of environmental communication.</p> <p>c) Update on the Geoscience and society meeting 2019, GSS The Bolin Centre is co-hosting the Geoscience and society meeting in March 18–21 2019, https://connect.agu.org/gss/home. There are two free tickets for facilitators still available.</p> <p>d) Climate Festival The registration to the Bolin Centre Climate festival is now open and the SAG is asked to spread the word. See https://bolin.su.se/index.php/klimatfestivalen</p> <p>e) SEI & WWF’s climate impact calculator The Bolin Centre are in discussions to contribute to the development of the climate impact calculator made by SEI and WWF, see www.klimatkalkylatorn.se</p> <p>f) The Bolin Centre communication plan The Bolin Centre coordinators and communicators have made a communications plan for 2019, see Appendix 3.</p> <p>g) Upcoming SAG-fikas 2019-03-07 Thursday, 15:00–15:30 in the Navarino room (T223) 2019-04-04 Thursday, 15:00–15:30 in the Navarino room (T223) 2019-05-02 Thursday, 15:00–15:30 in the Navarino room (T223)</p> <p>h) Upcoming SAG-meetings 2019-04-25 Thursday, 9–12 in the Tarfala room (T433)</p>	<p>NK/AS</p> <p>NK/AS</p> <p>NK/AS/AG</p> <p>NK/AS/AG</p> <p>NK/AS</p> <p>NK/AS</p> <p>NK/AS</p> <p>NK/AS</p>	<p></p> <p></p> <p></p> <p></p> <p></p> <p>App. 4</p> <p></p> <p></p>
<p>12. Meeting closes</p>	<p>NK/AS</p>	<p></p>

18 March, 2019

Protocol for the Bolin Centre Climate Research School (CRS) Advisory Board meeting

Date: Thursday 14 March, 2019

Time: 16:00–18:00

Place: Navarino room (T223), Geoscience building

Members *Alasdair Skelton, Co-Chair, Co-Director for the Bolin Centre*
Clare Bradshaw, Dept. of Ecology, Environment and Plant Sciences (DEEP)
Ann-Kristin Eriksson-Wiklund, Dept. of Environmental Sci. and Anal. Chemistry (ACES)
Karl Gotthard, Dept. of Zoology
Abdul Hannachi, Dept. of Meteorology (MISU)
Otto Hermelin, Dept. of Geological Sciences (IGV)
Somya Joshi, Dept. of Computer and Systems Sciences (DSV) (via appear in)
Helle Skånes, Dept. of Physical Geography (NG) (via appear in)
Karin Jonsell, Bolin Centre Coordinator & Communicator

Absent *Nina Kirchner, Co-Chair Co-Director for the Bolin Centre*
Garry Peterson, Stockholm Resilience Centre (SRC)
Annika Granebeck, Bolin Centre Coordinator & Communicator

Guest *Agatha de Boer, Director of Studies for the Master program in Climate Science*

Secretary *Karin Jonsell*

1. Meeting was opened	AS	
2. Appointment of protocol writer Karin Jonsell was appointed as writer of minutes	AS	
3. Appointment of protocol checker Otto Hermelin was selected as attester for this meeting	AS	
4. Approval of the agenda The agenda was approved with the transfer of §14e to §15 Other business.	AS	
5. Protocol from previous CRS-meeting The protocol from the previous meeting was approved.	AS	App. 1
6. Participation of the Director of Studies for the MSc Program in Climate Science in the CRS Advisory Board meeting Decision by the Climate Research School: <ul style="list-style-type: none"> The Board welcomed Agatha de Boer, Director of Studies for the MSc Program in Climate Science, to participate in the meeting for agenda items 7. 	AS	

Bolin Centre for Climate Research



<p>7. Discussing stakeholder roles and responsibilities in the MSc Program for Climate Science</p> <p>The Masters program is administrated by the Department of Geological Sciences, with five participating departments as stakeholders. The Director of Studies for the MSc Program and the CRS discussed if and how they would like to be involved in the program.</p> <p>Decisions by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS did not consider itself as the right entity for advising the Director of Studies for the MSc program in Climate Science. • The CRS advised the Bolin Centre Board to form a focus group for the MSc program if requested by the Director of Studies for the program. 	AS	
<p>8. Budget for 2019 and principles for spending communication funds</p> <p>The Bolin Centre Board has approved the following budget for the CRS (Appendix 2): Director of Studies (50 %): SEK 541 267 Drift costs: SEK 500 000 Funds carried forward from previous years: SEK 701 294</p> <p>The Board has given the CRS its approval to redistribute funds from “Director of Studies” to “Drift costs” pending the outcome of work on the CRS strategy.</p> <p>Decisions by the Climate Research School:</p> <ul style="list-style-type: none"> • The original budget of SEK 900 000 for drift costs, while still allowing for recruitment of a Director of Studies at 50 %, was approved. This will reduce the amount of funds carried forward in 2020. • The funds allocated to CRS communication (SEK 75 000) are considered discretionary for the Bolin Centre communicators. 	AS	App. 2
<p>9. Discussion of possible tasks for the Director of Studies</p> <p>CRS Advisory Board discussed suggested tasks for the “Director of Studies” to be used as part of the work on the CRS strategy.</p> <p>Additionally: In 2018, Alasdair Skelton was awarded funding from the Swedish Research Council for a Research School for Teachers focusing on Climate and Environment. This award includes funding for a Director of Studies at 50 % for 3 years (2019–2021). The CRS Advisory Board is asked to approve this research school becoming a part of the CRS. The school’s 8 teachers would become members of the Bolin Centre and funds available for a Director of Studies would be made available to the CRS allowing then Director of Studies to be appointed at a level up to 100 %.</p> <p>Decisions by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS would like the role filled by an academic person with at least a PhD. • The CRS agrees with the list in Appendix 3, but with the amendments that the person would not necessarily teach and the person should coordinate the work with the director of studies at the Bolin Centre departments. • The CRS suggests the title “Academic coordinator of the Bolin Centre Climate Research School” for the position. • The job description of the position should be decided on by the Bolin Centre Board after the CRS strategy is finalized at their meeting on 2019-05-17 and the advertisement published shortly thereafter. • The Research School for Teachers will be part of the CRS. Alasdair Skelton will draft a job description for a Director of Studies to support participating teachers and to support other activities at the CRS. 	AS	App. 3

<p>10.Principles for the CRS grant approval process The CRS Advisory Board discussed the principles for the CRS grant approval process for PhD students requests for conference and course participation.</p> <p>Decisions by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS will issue biannual calls with deadlines 1 March and 1 October • The support from the CRS has a maximum limit of 5000 SEK, with the exception that PhD students opting to travel by train or bus to a conference or course can be funded in full. • The new academic coordinator will rank the proposals • The ranking should be based on: <ul style="list-style-type: none"> ○ Questions in the application form. The questions in Appendix 4 should be complemented with: <ul style="list-style-type: none"> ▪ Have you received money from the Bolin Centre CRS before? When? ▪ Are you applying for funding for this conference/course somewhere else? Where? ○ Support from the PhD supervisor shown by a confirmation letter/email ○ One page CV ○ Short motivational letter answering questions such as: <ul style="list-style-type: none"> ▪ Why this conference? ▪ How will it benefit you? ○ First time applicants will be favoured • The ranking is approved by the CRS Advisory Board 	AS	App. 4
<p>11.– The CRS grant approval during spring 2019 The CRS has received 24 applications to our March call for PhD conference and course participation. Twenty-two of these applications meet all of our eligibility requirements, see Appendix 5a, b. After one reduction (because the budget was too high), the total amount of funds requested are 99 780 SEK. We have assigned 50 000 SEK for this call.</p> <p>Decision by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS will use funds from the surplus carried forward from previous years so that all 22 applications can be funded. 	AS	App. 5a, b
<p>12.Principles for advertising courses at the Bolin Centre CRS web site</p> <p>Decision by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS Advisory Board recommends that information from third parties that is of interest for Bolin Centre PhD students can be included on the CRS web site. 	AS	
<p>13.Ideas for future CRS PhD courses This item was tabled due to lack of time.</p>	AS	
<p>14.Information</p> <ul style="list-style-type: none"> a) Decided by CRS by email: Support approved to CRS course in R-programming b) Decided by CRS by email: Support approved to Summer School on Ocean Waves & Abyssal Flow c) Decided by CRS by email: Support approved to PhD Students Antonios Dimitrelos and Ines Bulatovic for traveling to conferences 	AS	App. 6a, b App. 7 App. 8



<p>d) Update on the CRS strategy process As agreed on at the previous CRS Advisory Board meeting, Viktoria Arwinge will invite members of the CRS Advisory Board, Heads of Department, PhD supervisors (open call) and PhD students (open call) as well as HC Hansson and Björn Gunnarsson. Based on these interviews Viktoria Arwinge will prepare a draft strategy to be approved the CRS Advisory Board before it is presented to the Bolin Centre Board for final approval at its May meeting.</p>		
<p>15. Other business: Investigation of the procurement of the visualization course is needed The Biology sections would like to offer the course “Visualize your science” in collaboration with the Bolin Centre Climate research School. The procurement unit at Stockholm University has not reached a final conclusion yet if a procurement is necessary.</p> <p>Decision by the Climate Research School:</p> <ul style="list-style-type: none"> • The CRS will invite the Biology section to do a procurement of the course “Visualize your science” together. 	AS	
<p>16. Next meeting(s) 2019-05-22 Wednesday, 13–15 in the Tarfala room (T433)</p>	AS	

Karin Jonsell
 Secretary

Otto Hermelin
 Attester

Alasdair Skelton
 Chair of CRS

Principles for allocation of Strategic Research Area (SRA) funds at the Bolin Centre for Climate Research

The Bolin Centre receives SRA funds for two SRAs: SuKlim (since 2010) and EkoKlim (from 2017 to 2019). These funds totaled SEK 19,862,000 (SuKlim) and SEK 17,365,000 (EkoKlim) in 2018 and are incremented annually.

The following was decided on by the Bolin Centre Director on Feb 7, 2010 regarding the SuKlim funds:

- SU receives 80% of the SuKlim funds.
 - ACES receives 1/3 of these funds.
 - MISU, receives 1/3 of these funds
 - IGV receives 1/6 of these funds
 - NG receives 1/6 of these funds
- SMHI receives 10% of the SuKlim funds
- KTH receives 10% of the SuKlim funds

The following was decided on by the Bolin Centre Board on Feb 5, 2013 regarding the SuKlim funds allocated to SU:

- Part of these funds are used to pay for the central costs of the Bolin Centre. The amount allocated for this purpose is decided on by the Bolin Centre Board annually.
- Remaining funds are divided between ACES 31,3%, MISU 35,3%, IGV 16,7% and NG 16,7%.

The following was decided on by the Bolin Centre Board on Mar 9, 2015 regarding the SuKlim funds allocated to SU:

- From 2016 – 2020
 - ACES will receive 33,3% of these funds
 - MISU will receive 33,3% of these funds
 - IGV will receive 16,7% of these funds
 - NG will receive 16,7% of these funds
- In addition, compensation equivalent to the 8,3% of the SuKlim funds allocated to SU for the period 2016 – 2020 was paid to IGV and NG from accumulated Linnaeus funds, so that they received the equivalent of 25% of the SuKlim funds for the period 2016 – 2020. This compensation was paid in a lump sum in 2016.
- From January 1, 2021
 - ACES will receive 25% of these funds
 - MISU will receive 25% of these funds
 - IGV will receive 25% of these funds
 - NG will receive 25% of these funds

The following was decided on by the Bolin Centre Board on Oct 22, 2016 regarding the EkoKlim funds allocated at SU from 2017 to 2019:

- Part of these funds are used to pay for the central costs of the Bolin Centre. The amount allocated for this purpose is decided on by the Bolin Centre Board annually
- Remaining funds are allocated to RA7 and RA8 in equal proportions
- 40% of the 2017-2019 EkoKlim funds are put aside and will be used in 2020 and 2021