



## Conference

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### Forests and the climate

#### Manage for maximum wood production or leave the forest as a carbon sink?

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| Time                 | Starts on Monday 12 <sup>th</sup> March, 2018 at 10 AM (registration and coffee at 9.30 AM) and ends on Tuesday 13 March at 5 PM.   |
| Venue                | The Royal Swedish Academy of Agriculture and Forestry, Drottninggatan 95 B, Stockholm.  |
| Registration         | The invitation is personal. Last day for registration is 15 <sup>th</sup> January, 2018.  |
| Fee and cancellation | There is no registration fee. However, cancellation must be made in writing to <a href="mailto:gun.askero@ksla.se">gun.askero@ksla.se</a> no later than 1 <sup>st</sup> March, 2018. Otherwise, you will be charged SEK 500.  |
| Webb                 | The seminar will be broadcasted at <a href="http://www.ksla.se">www.ksla.se</a>   |
| Posters              | A selection of posters will be displayed during the meeting. If you wish to present your research in a poster, please submit your abstract (max. 200 words) to the scientific committee ( <a href="mailto:birgitta.naumburg@ksla.se">birgitta.naumburg@ksla.se</a> ) no later than 20 <sup>th</sup> January, 2018.  |
| Questions            | Registration: Gun Askerö, <a href="mailto:gun.aksero@ksla.se">gun.aksero@ksla.se</a> , +46 8 54 54 77 12<br>Content: Birgitta Naumburg, <a href="mailto:birgitta.naumburg@ksla.se">birgitta.naumburg@ksla.se</a> , +46 8 5454 7707, or<br>Elin Mellqvist, <a href="mailto:elin.mellqvist@kva.se">elin.mellqvist@kva.se</a> , +46 8 673 9728<br><br>This conference is financed by The Swedish Foundation for Strategic Environmental Research, Mistra, The Swedish Research Council Formas, the Swedish Energy Agency, and Chalmers University of Technology. |

**The Paris Agreement sets ambitious targets** for climate mitigation, which require transformation of the production and consumption systems that generate greenhouse gas (GHG) emissions, mainly due to fossil fuel use. Bioenergy is currently the largest renewable energy source used in the EU. Most Member States have, in absolute terms, increased their use of forest biomass for energy towards meeting their Year 2020 renewable energy targets.

The interaction of forests with the climate system is complex. Climate change affects forests, and at the same time forests and forest products industries play important roles in the GHG balance, in that they sequester and store carbon and displace fossil fuels and other products, which would otherwise cause GHG emissions. Forests can also affect the climate in other ways, for example, by modulating the share of incoming sunlight that is reflected back into space (instead of warming the earth surface).

The scientific literature provides a variety of views on how different forests and forest management options can be adapted to climate change—and there are also divergences in view on how they affect the climate. One reason for this diversity of opinion is that scientists assess climate change mitigation and adaptation in the forest sector from different perspectives and entry-points—all of which have their merits. The different contexts of the analyses that are performed exert a strong influence on the formulation of the research questions, as well as on the methods and assumptions related to critical parameters that are then applied. This in turn has a decisive impact on the results and conclusions. The ongoing and vigorous debate on these topics among experts often leads to confusion among decision-makers and citizens.

**The purpose of this conference** is to establish a shared view regarding some basic principles concerning the role of forests in climate mitigation and adaptation. This is needed for scientists to provide good advice to policy-makers. While mitigation and adaptation are two sides of the same coin, special focus will in this conference be placed on forests and forest management for climate change mitigation.

**The conference aims to:**

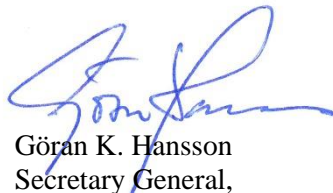
- facilitate a dialogue about the roles of forests and forest management in climate change mitigation, so as to advance scientific understanding of the topic and clarify divergent views and their underlying rationales;
- identify knowledge gaps and priorities for future research and data collection, with the aims of improving scientific understanding and supporting policy development of relevance to forest management in the context of climate change mitigation and adaptation; and
- produce and disseminate a state-of-the-art view of forests and climate that reflects the outcomes of the exchanges of opinions and areas of agreement that emerge from the conference.

The conference is organized by The Royal Swedish Academy of Agriculture and Forestry, The Royal Swedish Academy of Sciences, and The Royal Swedish Academy of Engineering Sciences. It consists of an expert workshop (one and a half days) followed by a half-day session during which the outcomes of the workshop will be presented and discussed in a forum that includes not only scientists and engineers, but also industry representatives, government officials, policy-makers, and politicians.

Welcome!



Eva Pettersson  
General Secretary and Managing  
Director,  
The Royal Swedish Academy of  
Agriculture and Forestry, KSLA



Göran K. Hansson  
Secretary General,  
The Royal Swedish Academy of  
Sciences



Tuula Teeri  
President,  
The Royal Swedish Academy of  
Engineering Sciences

# Programme

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## Forests and the climate

### Manage for maximum wood production or leave the forest as a carbon sink?

Moderator: Mattias Goldmann, FORES

#### Monday, 12 March

10.00 **Welcome**

Lisa Sennerby Forsse, President of the Academy, KSLA

*Session 1: The carbon cycle and the role of forests in climate change mitigation*

10.05 **Introduction**

Mattias Goldmann, moderator

10.10 **Societal transitions towards climate neutrality: challenges and strategic choices**

Anders Wijkman, Co-president Club of Rome, Chair Climate Kic

10.25 **EU policy processes of relevance for the theme of the conference**

Fredrick Federley and Jakob Dalunde, Members of the European Parliament

10.35 **Introduction to the expert workshop: background, working procedures and expected outcome**

Göran Berndes, Professor, Chalmers University of Technology, Sweden

11.00 **Open discussions**

11.30- **Lunch & poster session**

13.20

*Session 2: Assessing the climate effects of forestry and biomass production – why the lack of consensus?*

13.20 **The carbon cycle and forest-climate interactions: principles and considerations**

Werner Kurz, Dr. Senior Research Scientist, Canadian Forest Service, Canada

13.50 **Assessing the climate effects of forestry and biomass production: the outcome depends on questions asked and how these are answered**

Annette Cowie, Adjunct Professor, University of New England, Australia

14.20 **Understanding the bioeconomy: principles, considerations, and insights.**

Robert Abt, Professor, College of Natural Resources, NC State University, USA

14.50 **Open discussion**

15.20 **Coffee/tea**

*Session 3: The climate effects of forestry and biomass production – carbon balances under different forest management regimes*

- 15.50 **Comparison of selection systems and rotation-forestry system: conditions for biomass extraction, carbon balances and climate effects**  
Johan Bergh, Professor, Linné University, Sweden
- 16.10 **A principal choice – manage forests for wood production or leave the forest as a carbon sink: carbon balances and climate effects**  
Gert-Jan Nabuurs, Professor, Wageningen University, The Netherlands
- 16.30 **Climate effects of forestry and substitution of carbon-intensive materials and fossil fuels – a country level study for Sweden**  
Leif Gustavsson, Professor, Linné University, Sweden
- 17.00 **Comment and reflections on the presentations**  
Invited commentators
- 17.30 Open discussion
- 18.00 End day 1

**Tuesday, 13 March**

- 08:30 Registration of new participants

*Session 3: Continued*

- 09.00 **The climate impact of forestry extends beyond its carbon budget**  
Sebastiaan Luyssaert, Associate Professor, Vrije University, Amsterdam, The Netherlands
- 09.30 **Finnish case study – to increase or not to increase harvesting level. Do the biophysics matter?**  
Tuomo Kalliokoski, Postdoctoral researcher, University of Helsinki, Finland
- 10.00 **Synthesis and conclusions from sessions 2-3**  
Mattias Goldmann, moderator
- 10.30 **Coffee/Tea**
- Session 4: Meeting the targets of the Paris Climate Agreement – the role of forests and biomass*
- 11.00 **Bioenergy in the energy system – now and in the future**  
Filip Johnsson, Professor, Chalmers University of Technology, Sweden
- 11.30 **Together towards the bioeconomy – Bioenergy done right**  
Åsa Forsum, Head of unit sustainable bioenergy, The Swedish Energy Agency
- 12.00 **Comment and reflections on the presentations**  
Invited commentators

12.30 **Open discussion**

13.00 **Lunch**

*Session 5: Presentation and discussion of workshop outcome*

14.00 **Input from policy, authorities, industry and research**

15.00 **Coffee/tea**

15.30 **Panel discussion with audience**

16.30 **Summary and conclusions**

17.00 **Closing of the conference**