



Sofia Earth Forum

**1st Symposium on Grand Challenges, Solutions and Legitimacy
Culture Centre Sofia, Helsinki, FINLAND, 20-22 June 2016**

The Earth as a system is facing several environmental challenges on a global scale, so-called “Grand Challenges”. The growing population needs fresh air and water, good food and energy. However, humankind is not meeting these needs. The major environmental challenges include climate change, declining air quality, ocean acidification, loss of biodiversity and shortages of fresh water and food supplies. The Grand Challenges are the main factors controlling human well-being, security and stability of future societies. A common framework of scientists and the society is needed to be able to deliver a science based message to governments to be legitimated for fast tract policy making. Church has a focal role in this initiative. To answer the Grand Challenges and to avoid a collapse of Earth system, the mankind has only a 40-year window (Earth System Manifesto: https://www.atm.helsinki.fi/peex/images/manifesti_peex_ru_hub2.pdf). The Sofia Earth Forum aims at joint understanding over different boundaries and at finding practical solutions on the Grand Challenges, especially in the Northern context.

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Culture Centre Sofia

street address: Kallvikinniementie 35, 00980 Helsinki, FINLAND

www: <http://www.sofia.fi/en/kulttuurikeskus/culture-and-retreats>

Agenda

MONDAY 20 June

13.00- 14.00

LUNCH

14.00 - 14.20

Welcome and aims of the symposium

Metropolitan Ambrosius, Diocese of Helsinki, Orthodox Church of Finland
Introduction of symposium participants

14.20 – 18.30

SESSION: Grand Challenges - Science, Church, Science Policy Perspective

Chairs: M. Kulmala, Metropolitan Ambrosius, S. Zilitinkevich

14.20 - 14.45

Grand Challenges – A science based perspective with the focus on Arctic-boreal regions

Prof. Markku Kulmala, University of Helsinki, Finland

14.45 - 15.00

Grand Challenges from a viewpoint of a researcher

Prof. Sergej Zilitinkevich, Finnish Meteorological Institute, Finland

15.00-15.15

The planet under our feet

Prof. Salomon Kroonenberg, Delft Univ. of Technology, The Netherlands

15.15 - 15.30

Orthodox Church perspective on the Grand Challenges

Archbishop Jakov of Narjan-Mar, Russian Orthodox Church, Russia

15.30 - 16.00

Evangelical Lutheran Church perspective on the Grand Challenges

Dr. Kari Mäkinen, Archbishop, Evangelical Lutheran Church, Finland

16.00- 16.20

Coffee and refreshments

16.20 – 16.40

Challenge for science: from providing services towards driving the society

Prof. Tarmo Soomere, President, Estonian Academy of Sciences, Estonia

16.40 - 16.55

Theology and science - perspectives on responsibility

Dr. Tapio Luoma, Bishop, Evangelical Lutheran Church, Finland

16.55 - 17.10

Challenge for ethics - moral traditions and the universal perspective

Rev. Suvielise Nurmi, University of Helsinki, Finland

17.10 – 17.25

Cosmic liturgy as an ecological principle of Orthodox culture

Prof. Sergey S. Horuzhy, Institute of Philosophy RAS, Russia

17.25 – 17.40

Future Earth Program

Dr. Tanja Suni, University of Helsinki, Finland

17.40 -18.00

Discussion and summing up

18:00

Informal dinner in Sofia restaurant and sauna

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TUESDAY 21 June

Breakfast

09.00 – 10.40 **SESSION: Grand Challenges – Nordic dimension**

Chairs: M. Kulmala, T. Petäjä

- 09:00 - 09.30 **Science Policy based approach towards solving Grand Challenges**
Prof. Wolfgang Lutz, Director of the World Population Program, International Institute of Applied System Analysis (IIASA), Austria
- 09.30 - 10.00 **Grand Challenges - Nordic dimension**
Mr. Paavo Lipponen, former Prime Minister of Finland, Finland
- 10.00 - 10:20 **Grand Challenges in the Northern context - social sciences and humanities perspective**
Prof. Markku Kivinen, Director, Aleksanteri Institute, Finland
- 10.20 - 10.40 **Land-atmosphere feedbacks**
Prof. Tuukka Petäjä, University of Helsinki, Finland

10.40 - 10.45 **short break**

10.45 - 12.00 **SESSION: Grand Challenges – Towards legitimacy**

Chairs: M. Kulmala, T. Petäjä

- 10.45 - 11.00 **International Arctic collaboration – policy frameworks**
Mr. Aleksi Härkönen, Finland Arctic Ambassador, Finland
- 11.00 - 11.15 **Education – the next generation of multi-disciplinary young scientists**
Prof. Andrey Belotserkovsky, Rector, Tver State University, Russia
- 11.15 - 11.30 **Towards mutual understanding**
Prof. Arto Mustajoki, University of Helsinki, Finland
- 11.30 - 11.45 **On the communication in culture**
Prof. Nikolay S. Muskhelishvili, University of Humanities, Moscow, Russia
- 11.45 - 12.00 **The challenge of eco-anxiety for churches in Finland and Russia**
Dr. Panu Pihkala, University of Helsinki, Finland

12.00- 13.00 **LUNCH**

13.00 - 14.00 **Walking tour to the nearby sea side and a group photo**

14.00- 17.30 **SESSION: Grand Challenges – Environmental aspects & practical solutions**

Chairs. T.Petäjä, H.K: Lappalainen

- 14.00 – 14.15 **Grand Challenges in the Northern context – Siberian cryosphere**
Prof. Vladimir Melnikov, Academician, Tyumen Scientific Centre, Russia
- 14.15 – 14.30 **What does it mean when we say that something is unprecedented - a long-term perspective on environmental problems**
Prof. Atte Korhola, University of Helsinki, Finland

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- 14.30 – 14.45 **Challenges in sustainability and multi-functionality of northern forests in global change era**
Prof. Jaana Bäck, University of Helsinki, Finland
- 14.45 – 15.15 **Technology perspective**
Mr. Jouni Keronen, Director, Climate Leaderships Council, Finland
- 15.15 – 15.30 **Novel use of energy resources**
Prof. Jorma Kuparinen, Professor in Marine Biology, University of Helsinki, Finland
- 15.30 - 15.45 **Climate and humankind: interactions over the past millennium**
Dr. Olga Solomina, Director of Institute of Geography, RAS, Russia
- 15.45 -16.00 **Science policy based approach towards solving Grand Challenges**
Prof. Kari Raivio, Chancellor emeritus, University of Helsinki, Finland
- 16.00- 17.30 Discussion
- How to establish and maintain information flow between science and church communities
 - What kind of information church needs from the science community concerning Grand Challenges
 - next steps in Europe-Russia international collaboration
- 17.30** **Dinner in Sofia restaurant sponsored by VAISALA Ltd.**

WEDNESDAY 22 June

Breakfast

09.00 – 12.00 **SESSION: Grand Challenges - International Frameworks and Methods involving diverse communities to deliver a science based message to fast tract policy making**

Chairs. S. Zilitinkevich, H.K. Lappalainen

09.00 - 09.15 **Dialogue between Science and Theology in Finland**
Ms. Laura Riuttanen, Doctoral Student, University of Helsinki, Finland

09.15 - 09.30 **Pan-Eurasian Experiment (PEEX) Program**
Dr. Hanna Lappalainen, PEEX Program Executive Officer, Finland

09.30 - 09.45 **Misuse of science for political purposes**
Prof. David Gee, Professor Em., Department of Earth Sciences
Uppsala University, Sweden

09.45 - 10.00 **Churches working for environment and climate justice**
Rev. Ilkka Sipiläinen, Deputy Director, Evangelical Lutheran Church, Finland

10.00 - 11.30 Discussion, summing up and the next symposium
Markku Kulmala

11.30- Lunch

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