



Keit Pentus-Rosimannus
Estonian Minister of the Environment

No serious state can simply ignore the subject of climate change – its effect on our quality of life and the world's economy is just too overwhelming. To come up with a reasonable climate strategy, we need to take into account, on the one hand, the most up-to-date and precise scientific information and, on the other, economic and social aspects. I'm very glad that we have been able to bring to Tallinn experts who are absolute leaders in their field: with their help, we are going to tackle this complicated issue and direct the climate debate in Estonia in a more meaningful and science-based direction.



Lena Ek
Swedish Minister for the Environment

Sweden currently chairs the Nordic Council of Ministers. As the chair of the Environment sector and as the Swedish Minister for the Environment I want to emphasize the good results of the Nordic cooperation on environment has led to through the years. In some cases our cooperation has been an international game changer, for example in developing air pollution and chemicals legislation. I highly value the work within the Nordic Council of Ministers on climate issues. Working regionally, extending the Nordic cooperation to Estonia and the Baltics is central. Steps need to be taken locally, and with the regional perspective we can work together for both local and global climate action.



Ville Niinistö
Finnish Minister of the Environment

Climate change does not follow national borders. Therefore regional co-operation is vital for bringing about effective mitigation and adaptation measures. As regionally organised individual nations, we have greater potential to harness influential, flexible and cost-efficient policies tackling climate change. This is what regional co-operation is all about – the willingness to achieve notable results together. It is clear without saying that we all share the problems caused by climate change. As representatives of nations of the north, these problems call for urgent actions as the risk for irreversible changes in our climate and environment rises. Furthermore, these changes might have profound effects to our economies and societies. Thus every nation's contribution is needed.



Tom Heap
BBC reporter, conference moderator

I've been reporting on environmental issues for 15 years. I present 'Costing The Earth', the flagship radio documentary series on the BBC covering climate change, conservation, energy and waste. I also report on the BBC's weekly rural and environmental television programme 'Countryfile'.





Jens Hesselbjerg Christensen

Research Manager of the Danish Meteorological Institute, Lead Author of the UN IPCC climate change assessment reports

After graduating from the University of Copenhagen, I started working at the Danish Meteorological Institute in 1990 and have been involved in climate change science ever since. For the last seven years I've been in charge of 15 scientists at the Danish Climate Centre and coordinated several national and international projects with a focus on regional climate change and its impact. Along with my scientific efforts on regional climate change, I've been a lead author and coordinating lead author on the third, fourth and most recently fifth IPCC climate change assessment reports. On 27 September 2013, the IPCC released the first volume of its 5th assessment report - [Climate Change 2013: The Physical Science Basis](#). This report provides new information about the state of knowledge of the climate system, how it is changing and projections for future changes. Here, the main findings will be summarized with a focus on the implications for the Nordic-Baltic region.



Simon Upton

Director of the Environment Directorate, OECD

I am the Environment Director at the Organisation for Economic Cooperation & Development (OECD). I have played a key role in the development of the OECD's Green Growth Strategy. I am a New Zealander, a Rhodes Scholar and a former Member of Parliament. I was Minister for Environment and Science & Technology during the 1990s. I chaired the UN Commission on Sustainable Development in 1999. After leaving politics in 2000, I worked with Pricewaterhouse Coopers in New Zealand, was a Visiting Fellow at the University of Otago Faculty of Commerce and served on the board of Holcim (NZ) Ltd. I have chaired the Round Table on Sustainable Development at the OECD since 1998 and took over my current role as Environment Director in 2010.



Artur Runge-Metzger

Director of International and Climate Strategy, DG CLIMA, EU

I took up my current position in October 2009 when the 'climate change and air' directorate of the then DG Environment was covering issues such as international climate negotiations; emissions trading; emissions from transport, energy and industry; air quality; and the protection of the ozone layer. The current 'international and climate strategy' directorate covers international and inter-institutional relations; climate finance and deforestation; monitoring; reporting; verification; and strategy and economic assessment. From 1 September 2003 I was the Head of Unit focussing on climate strategy and international climate change negotiations. Before this I spent two years as the Head of Operations in the EC Delegation to Bosnia and Herzegovina in Sarajevo. From the end of 1997 until 2001 I worked in DG Development and DG Environment in Brussels on a wide range of environmental issues, particularly climate change in developing countries. I joined the European Commission in 1993, when I was first responsible for bilateral co-operation covering agricultural policies, rural development and the environment in the EC Delegation in Zimbabwe in Harare. After my university studies, I started my professional career at the University of Göttingen in Germany in 1985. My main scientific and lecturing topics were natural resource economics and development economics, including extensive research in rural West Africa. I hold a doctoral degree in agricultural economics. In June 2013 I was elected the new co-chair of the Ad-Hoc Working Group on the Durban Platform for Enhanced Action (ADP).





Robert Tromop

Head of Energy Efficiency Unit, IEA

I am the Head of the IEA's Energy Efficiency Unit. The unit leads the IEA's work on energy efficiency policy. Its key output includes the IEA 25 Energy Efficiency Policy Recommendations; cross-sector and sectoral policy analysis; and advice for policy development in a series of Policy Pathways. Current programme themes include 'Multiple Outcomes of Energy Efficiency', 'Marketing Energy Efficiency' and 'Behavioural Aspects of Energy Efficiency', as well as sector-focussed projects in buildings, appliances, industry and transport. Energy efficiency has been referred to as a 'hidden fuel' – one that extends energy supplies, increases energy security, lowers carbon emissions and generally supports sustainable economic growth. Yet it is hiding in plain sight: in 2011, investments in the energy efficiency market globally were at a similar scale to those in renewable energy or fossil fuel power generation. The IEA's first Energy Efficiency Market Report provides a practical basis for understanding energy efficiency market activities, a review of the methodological and practical challenges associated with measuring the market and its components and statistical analysis of energy efficiency and its impact on energy demand. It also highlights a specific technology sector in which there is significant energy efficiency market activity – in this instance appliances and information and communication technologies (ICT). The report also presents a selection of country case studies that illustrate current energy efficiency markets in specific sectors and how they may evolve in the medium term.



Erika A. Jorgensen

Economic Adviser, World Bank

I'm an economic adviser to the World Bank's Europe and Central Asia Region, where I also serve as the focal point for the economics of climate change and green growth. I recently led a major programme of analytical work and technical assistance on green growth for FYR Macedonia. I'm the lead author of a low-carbon growth country study for Poland and am co-leading analysis for the Romanian government on climate change and low carbon green growth. Over the past twenty years at the bank I've worked as a macroeconomist in Europe, East Asia and Latin America. I trained as a macroeconomist with an emphasis on financial markets and have since run the gamut of economic topics, including competitiveness and growth, migration, poverty, pension policy, labour markets, governance and corruption and now climate change and green growth. I have a PhD in Economics from Harvard University and degrees from Oxford University and Williams College.



Ilze Pruse

Director of Climate and Environmental Policy Integration Department, Ministry of Environmental Protection and Regional Development of the Republic of Latvia

I have a Ph.D in economics and am the director of the Climate and Environmental Policy Integration Department at the Ministry of Environmental Protection and Regional Development in Latvia. Besides managing the department, my main responsibilities are the co-ordination of Latvia's participation in International Emissions Trading within the framework of the Kyoto Protocol, supervision of the drafting of Latvia's climate policy and coordination of the ministry's preparations for Latvia's Presidency of the European Union (in the first half of 2015). Periodically I've been a guest lecturer at the University of Latvia





and Riga Business College.
The EU ETS covers only a small portion of Latvia's GHG emissions. The largest amount of non-ETS emissions come from the transport sector. Latvia has ambitious goals for GHG emission reduction and is currently reviewing its climate policy.



Andres Tarand

Climate Expert, Former Member of European Parliament, Estonia

I finished Tartu University as climatologist in 1963. In 1968-1970 was participating in 4th Soviet Antarctic Expedition. PhD Tartu University in 1973. Working in Tallinn Botanical Garden as head of sector, scientific director, director. From 1990 Estonian parliament, Minister of Environment, Prime Minister. 2004-2009 Member of European Parliament. The time series of Tallinn air temperature in winter (Dec-March) in period 1339-2010 will be presented. Comparison of air temperature time series of St.Petersburg, Helsinki, Tallinn, Stockholm, Tartu and Riga from the period 1804-2010 gives us new estimation of local impacts in the warming values in our region.



Jon Kahn

Director, Ministry of the Environment of Sweden

I work on Nordic and climate issues and am currently the head of the NEFCO board and of the Senior Nordic Environment Officials.
The presentation will focus on:

1. Swedish vision to be climate neutral to 2050
2. Presenting NEFCO efforts in the climate field



Merja Turunen

Senior Environmental Adviser and Head of the Climate Change Group, Ministry of the Environment of Finland

The purpose of the presentation is to evaluate national factors for operationalizing GHG mitigation measures, and to examine some of the key mitigation policies.



Meelis Münt

Deputy Secretary General of the Ministry of the Environment of Estonia

I have a Bachelor's degree from Tallinn University of Technology, where I also continue my Master's studies in the field of public management. My career in the Ministry of the Environment started in 2008 as a Senior Officer. In 2010 I became Director General of the Climate and Radiation Safety Department. In March 2012 I was nominated the Deputy Secretary General and I became involved in the management of the ministry regarding climate change, ambient air, radiation safety and international co-operation issues.





Ph.D Atte Korhola

Professor of Environmental Change, University of Helsinki

I'm a professor of Environmental Change and the Vice-Dean of Societal Interaction in the Faculty of Biological and Environmental Sciences at the University of Helsinki. I'm also the leader of the Environmental Change Research Unit (ECRU), a research group focusing on large-scale environmental changes and their implications for society. I'm a member of the Research Council for Biosciences and Environment of the Academy of Finland and the Environment Panel of the European Academies Science Advisory Council (EASAC), a Finnish representative of the Nordic Committee on Bioethics and the Nordic Council of Ministers and a fellow of the Finnish Business and Policy Forum (EVA). I've acted as a consultant and adviser to several companies and enterprises on climate issues. I lead several international and national research projects and programmes and have >100 scientific publications in international peer-reviewed journals dealing with global changes and their environmental impacts, water and air pollution, past climatic variability and ecosystem resilience. A radical change in climate mitigation approach is required, given that the 1992 international climate policy framework of the United Nations has failed to produce any discernible real-world reductions in greenhouse gases. The paper explains how the global economy can be moved away from its dependence on fossil fuels in harmony with economic recovery and public approval. This decarbonisation is achieved as a by-product of pursuing more pragmatic and popular primary goals, including expanding energy access and energy security and, ultimately, making energy less expensive and more abundant.



Ulrika Olausson

Professor, Jönköping University

I'm a professor in Media and Communication Studies at Jönköping University in Sweden and have been involved in research on media representations of the environment since 2005. I've been published extensively in journals such as 'Public Understanding of Science', the 'European Journal of Communication' and 'Environmental Communication', of which I'm also the associate editor. My theoretical interests lie within the areas of global risks, global journalism and political identity. During the first decade of this century there was a 'climate boom' in the news media in large parts of the world, including the Nordic countries. This boom peaked around 2009, and since then the climate issue has lost much of its newsworthiness. Olausson's presentation revolves around both quantitative and qualitative aspects of climate reporting, the latter of which deal with news content. Does certainty of the existence of climate change and its anthropogenic causes prevail in the news media or is it uncertainty that is communicated? Who is responsibility for resolving climate problems attributed to by the news media - the individual, or national or international political institutions? Olausson also presents results from studies of citizens' responses to news reporting on climate change. Do images of suffering polar bears trigger climate-friendly action among people, and do citizens trust climate reporting to be true?



Esa Hyvärinen

Vice President of Corporate Relations, Fortum

I am Vice-President for Corporate Relations, reporting to the President and CEO of Fortum. I'm in charge of monitoring the political and regulatory changes in all of Fortum's areas of operation and in the EU, which also brings Fortum's views on these changes to political decision-making arenas. I have worked for the Fortum Corporation since 2006. In order to mitigate climate change and meet the EU target of a 90% emissions reduction by 2050, the power





sector must become virtually non-emitting. And it is not only energy generation that will have to be changed: we will also have to change the way in which we transmit and consume energy. For us as an energy company, the best operational framework is one that best serves society as a whole. Our message to policy-makers is: please decide what you want, focus as much as possible on long-term targets and pursue them consistently.



Arko Olesk

Head of Science and Innovation Communication Centre, Tallinn University

I have a MSc in Science Communication from Imperial College London. Before taking up the position at Tallinn University I worked for nearly ten years as a science journalist, including for the national daily Postimees.



Benjamin Donald Smith

Senior Advisor of Nordic Energy Research

I am the coordinator of Nordic Energy Technology Perspectives - a collaborative research project between the IEA, a number of leading research institutions across the Nordic region, and Nordic Energy Research. Based in Oslo, Nordic Energy Research supports energy research cooperation in the Nordic and Baltic countries, and operates under the auspices of the Nordic Council of Ministers. Nordic Energy Technology Perspectives presents pathways to a carbon-neutral Nordic energy system in 2050. The publication was launched earlier in 2013 and is the first ever regional edition of the IEA's global publication Energy Technology Perspectives. While based on the same global scenarios to limit average global temperature increase to 2°C, the Nordic edition includes an even more ambitious scenario. This Carbon-Neutral Scenario assesses how the Nordic countries can achieve their national emission reduction targets for 2050 as a region. Read more at www.nordicetp.org.



Kaja Peterson

Senior Expert of Stockholm Environment Institute Tallinn Centre

I am working as the Director of Sustainability Measures Program at Stockholm Environment Institute Tallinn Centre. I have my first degree in biology-ecology from Tartu University and my master degree in Environmental Science from Manchester University, UK. In my PhD thesis I explored the drivers of effectiveness of Environmental Assessment, the process of taking the impacts of human action on the environment into account in decision making. Impacts of climate change on the environment, but also on the society are of my research interests. The presentation looks at some of the implications of climate change on species and habitats in Europe: such as changes in distribution; migration and breeding phenology. The implications on these changes on the socio-economics of societies is further explored and how societies need to adapt these changes.





Valdur Lahtvee

Senior Expert of Stockholm Environment Institute Tallinn Centre

I am environmental researcher and consultant, former MP and former Director of Stockholm Environment Institute Tallinn Centre. I have been graduated as Dipl. Engineer on Forestry and have worked more than 30 years on different positions for environment protection as legislator, law enforcer, manager of non-governmental organizations and think-tanks, consultant and researcher, senior civil servant within Ministry of Environment as well as of Environmental Manager of National Power Company. I have broad and high level experience on global environmental, sustainability and development issues; I have carried out numerous research projects as well practical implementation of integration of sustainability and environment considerations into the sector policies at national and European level. Estonia has great potential to shift from current unsustainable economic development path to the low-carbon economy by taking proper measures to encourage shift of energy sector from oil shale to renewable based and by encouraging efficiency of resource and energy use both in production and in consumption.



Fredrik Hannerz

Ministry of the Environment of Sweden

Short-Lived Climate Pollutants (SLCPs) are a set of air pollutants that have both significant climate impacts and negative health and environmental effects. According to UNEP, millions of premature deaths and the loss of tens of millions of tonnes of crops would be avoided each year by implementing selected measures. These actions can further reduce global warming by between 0.4 and 0.5°C and Arctic warming by 0.7°C in the coming decades. The presentation will describe the Swedish position on how to reduce SLCPs and particularly describe the current policy work in the Nordic and Arctic regions.



Bjarni D. Sigurdsson

Professor of Forest Science, Agricultural University of Iceland

I'm a professor of forest science in the Faculty of Environmental Sciences at the Agricultural University of Iceland. Most of my research has focused on the effects of climate change on forest ecosystem processes and ecosystem structure in northern climes. I've authored 45 publications in international scientific journals on these issues.

In this talk Professor Bjarni D. Sigurdsson will outline a state-of-the-art understanding of how climate change affects tree growth, forest production and other key ecosystem processes in the Nordic region. The talk is both a literary review of previous Nordic research and also reports on recently published findings where mature field-grown trees have been exposed to different combinations of climate and environmental change in Sweden, Iceland and Finland.





Karoliina Niemi

Senior Adviser on Forestry, Finnish Forest Industries Federation

I have a Master's degree in agricultural and forest sciences and a doctorate in philosophy and ecological sciences. In my current position as a senior adviser at the Finnish Forest Industries Federation (FFIF) I'm responsible for forest certification (FSC and PEFC) and forest policy in the EU. Forest policy issues are mainly related to sustainable forest management, which is one prerequisite for successful and competitive forest-based industry. My academic career has consisted of research in the field of forest biotechnology, including clonal propagation of forest trees and ecological interactions of genetically modified trees. Before joining the FFIF I worked as a senior adviser at the Ministry of Agriculture and Forestry as well as at the Central Union of Agricultural Producers and Forest Owners, MTK. My connection to biotechnology continued after my academic career as a secretary to the Advisory Board on Biotechnology appointed by the Finnish government.

Forests have the potential to absorb global carbon emissions and store them in their biomass and subsequently in forest-based products. They also provide raw material for bioenergy production, enabling the replacement of fossil fuels. The role of forests in climate change mitigation is huge - but only if they are sustainably managed. Maintenance of the health and vitality of forests is an essential part of sustainable forest management (SFM) and must be ensured throughout the lifespan of forests: use of high-quality reproductive material will improve a regeneration phase, and well-planned thinning will ensure the increased growth of remaining trees. Timely harvesting enables climate-friendly products to be produced and promotes future carbon absorption into forests. Finnish forest industry companies are committed to SFM and support the impartial and broadly recognised international forest certification systems FSC and PEFC.



Anders Lindroth

University of Lund

I am a professor of physical geography at Lund University. My field of expertise is greenhouse gas exchange and energy exchange between ecosystems and the atmosphere. I carry out process studies in forest and wetland ecosystems in the Boreal and Arctic regions. One of my special interests is the role of forests and forest management in the climate system. I'm involved in building a new greenhouse gas observation network in Europe – ICOS (the Integrated Carbon Observation System) – and I'm the director of the Swedish observation network, ICOS Sweden. I'm currently also responsible for the construction of the ICOS Carbon Portal, which will be a one-stop shop for all data from the pan-European ICOS. The concentration of CO₂ in the atmosphere is continually increasing, with the global level soon to reach 400 ppm. The main sources of CO₂ in the atmosphere are emissions from fossil fuels and the deforestation of tropical forests. The sinks in oceans and on land comprise around 25% each – leaving around 50% in the atmosphere. The sinks are thus of great importance, since they mitigate around half of emissions. Forests are often considered to be the most important solutions in our efforts to mitigate emissions from fossil fuels. Our utilisation of forest products for this purpose is steadily increasing and is likely to continue doing so in future. However, interaction between forests, the climate system and the 'mitigation sector' is quite complex and all of the measures that are implemented so as to increase the use of forest products must take the system as a whole into account – otherwise the mitigation effect could be very small or even negative.





Eduardo Zorita

Senior scientist of Halmholtz-Zentrum Geesthacht

My main research interests lie in the analysis of climate simulations, observations and reconstructions of recent past climate - the last few thousand years up to today- to disentangle the mechanisms that give rise to natural climate variability on global and regional scales, to identify the effects of external drivers and to estimate the uncertainties inherent in model-based climate projections. I obtained my Ph.D. in Solid State Physics in 1988, after which I switched to climate research. I have worked at the Max-Planck Institute for Meteorology in Hamburg, at the Laboratory of Dynamic Oceanography and Climatology in Paris and currently at the Institute for Coastal Research in Geesthacht (Germany), with shorter research stays at the University of Seattle and Stockholm University. I was a contributing author to the Fourth Assessment Report of the IPCC in the chapter 'Understanding climate change'. Projections based on climate simulations, as in virtually any scientific theory, cannot be considered either perfect or totally wrong. There is gradation in the level of confidence that should be placed on future climate projections. Whereas an increase in global near-surface temperature is almost certain and was calculated more than 100 years ago, long before the design of climate models, climate projections become increasingly more uncertain on smaller spatial scales and for magnitudes other than temperature. Both current and likely foreseeable knowledge of complex climate systems will render the accurate and comprehensive prediction of future climate changes an almost impossible task. Rather than requiring 'exact numbers', stakeholders should properly understand the inevitable sources of uncertainty, and learn to identify the more robust aspects of climate projections.

