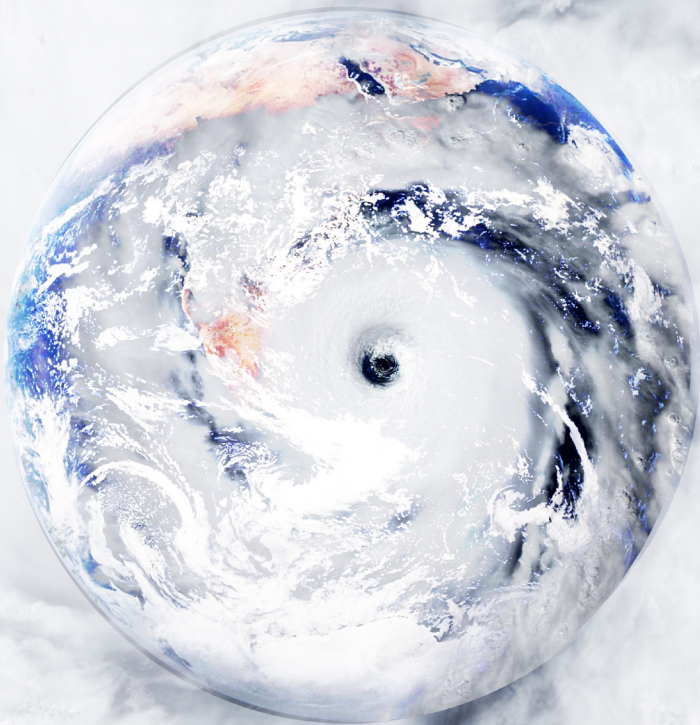


# Earth2016

Understanding Climate Change



EARTH  

# **Understanding Climate Change**

## **Picturing what we know about the past, the present and the future**

The purpose of the Earth101-project is to provide a venue where some of the world's preeminent minds on climate change meet and engage with policy makers, academics, artists and film-makers in a dynamic fashion, in order to address the manifold problems inherent in the public mediation of the environmental crisis. This is the greatest challenge the world is facing and the first step towards a rational human response is for mankind to acknowledge and understand the problem.

This is the focus of the third Earth101-conference in Reykjavik, May 26th and 27th 2016, where workshops, academic lectures and open panels will be used to stimulate the public response to the complex crisis of climate change.

# Projecting Climate Change

Workshop with academics, documentary filmmakers and writers

Thursday May 26<sup>th</sup> 10.00–12.00

Main Building – Aðalbygging A050

University of Iceland

**Guðni Elísson:** *“Projecting Climate Change”*

**Stefan Rahmstorf:** *“The public climate debate – climate skepticism and denial”*

The public climate debate is very different from the kind of discourse we are used to in the scientific community, and even for many climate scientists it is hard to understand what is going on. My talk will discuss issues such as the public perception of climate science and climate change, the organization and funding of anti-science propaganda groups, common characteristics of science denialism, false media balance, as well as many real-life examples. It also discusses what we can do and names some helpful resources.

**Michael E. Mann:** *“The Madhouse Effect: How Climate Change Denial is Threatening our Planet, Destroying our Politics, and Driving us Crazy”*

I offer a somewhat lighthearted take on a very serious issue—the threat of human-caused climate change and what to do about it, based on my collaboration with *Washington Post* editorial cartoonist Tom Toles. We target the ongoing campaign to deny that threat through satire and where appropriate, ridicule, built around Tom Toles’ famously insightful, edgy, and provocative climate-themed cartoons in the *Washington Post*. Using Tom’s cartoons (existing ones and some new ones exclusive to the book) as a template, we review the scientific evidence of climate change, the reasons we should care, and the often absurd efforts by special interests and partisan political figures to confuse the public, attack the

science and scientists, and deny that a problem even exists. Despite the monumental nature of the challenge this poses to human civilization, we find a way to end on an upbeat and cautiously optimistic note.

### **A presentations by the Bifrost team: *This is the Beginning***

Bifrost – This is the Beginning is a multimodal platform for public education, societal engagement and research communication focused on climate change. The centerpiece of the *Bifrost* platform is a major public event in an urban center with a prominent artistic component, organized with various local partners, and reinforced through a well coordinated media campaign. Called a *Bifrost* action, this event is intended to be reproducible in different urban settings on subsequent occasions. The inaugural action of *Bifrost--This is the Beginning*, the next iteration in the *Bifrost* series, is being planned for Stockholm in 2017, in close cooperation with partners from civil society such as the Nobel Museum and the Sigtuna Foundation. The action will include documentary art installations based on research case studies, talks from leading scientists, cultural figures and political leaders, panel discussions that encourage audience participation, and other ad hoc cultural and scientific activities, all carried out in a festival atmosphere over 2–3 days. A *Bifrost* action seeks to raise awareness about the realities and risks of climate change while also encouraging citizens to appreciate their own agency and capacity for positive societal and environmental change. In other words, while drawing attention to the very real risks and consequences of climate change in our time, the *Bifrost* action aims to explore and underscore how our present climate crisis may potentially catalyze constructive change for human societies and the planet. Other core elements of the *Bifrost* action are the project's off-site resources, including a web portal and a mobile app intended to offer greater educational depth to the scientific/scholarly case studies showcased in the site-specific action. On site art works include exterior film projections on urban structures, and multi-screen/modular film installations (indoor and outdoor) that seek to frame stories and information for audiences in new ways that may inspire deeper reflection.

# Participants

**Michael E. Mann** is Distinguished Professor of Atmospheric Science at Penn State University and director of the Penn State Earth System Science Center (ESSC).

He received his Ph.D. in Geology & Geophysics from Yale University. His research involves use of theoretical models and observational data to better understand Earth's climate system. He was a Lead Author on the *Observed Climate Variability and Change* chapter of the Intergovernmental Panel on Climate Change (IPCC) Third Scientific Assessment Report in 2001 and has received a number of honors including NOAA's outstanding publication award in 2002, the Hans Oeschger Medal of the European Geosciences Union in 2012 and the National Conservation Achievement Award for science by the National Wildlife Federation in 2013. He also contributed, with other IPCC authors, to the award of the 2007 Nobel Peace Prize. He made Bloomberg News list of fifty most influential people in 2013.

Dr. Mann is author of more than 190 peer-reviewed publications and has published the books *Dire Predictions: Understanding Climate Change* and *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*. He co-founded the award-winning science website *RealClimate.org*.



**Stefan Rahmstorf** obtained his PhD in oceanography at Victoria University of Wellington in 1990. He has worked as a scientist at the New Zealand Oceanographic Institute, at the Institute of Marine Science in Kiel and since 1996 at the Potsdam Institute for Climate Impact Research. His work focuses on the role of the oceans in climate change.

In 1999 Rahmstorf was awarded the \$ 1 million Centennial Fellowship Award of the US-based James S. McDonnell foundation. Since 2000 he teaches *Physics of the Oceans* as a professor at Potsdam University. Rahmstorf served from 2004–2013 in the *German Advisory Council on Global Change* (WBGU) and was one of the lead authors of the



4th IPCC Assessment Report.

Dr. Rahmstorf has published over 100 scientific papers (30 in leading journals such as *Nature*, *Science* and *PNAS*) and co-authored four books. Available in English are *Our Threatened Oceans* (2009, with Katherine Richardson) and *The Climate Crisis* (2010, with David Archer).

### **Bifrost Research-Arts Collaboration**

*Bifrost* is the name of a series of media collaborations bridging science and art undertaken by environmental humanities researchers from the Nordic Network for Interdisciplinary Environmental Studies (NIES) in partnership professional media artists. The *Bifrost* team includes **Steven Hartman** (environmental humanities scholar and chair of NIES, Mid Sweden University), **Peter Norrman** (independent filmmaker and award-winning artist), **Anders Birgersson** (independent journalist and art director, multiple award-winner of the Swedish Design Prize) and **Þorvarður Árnason** (environmental humanities scholar and photographer, University of Iceland). A number of documentary installations merging scientific and artistic content, as well as other media outputs devoted to environmental topics, have been produced in the *Bifrost* series since 2012, with previous works exhibiting in Sweden, Norway, the USA, Iceland, the UK, Barbuda and Antigua.



**Ragnar 'RAX' Axelsson** has been traveling to the Arctic for three decades, drawn by a deep respect and affinity for the hunting communities of northern Greenland and Canada. His book publications, *Faces of the North* (2003), *Last Days of the Arctic* (2010) and *Behind the Mountains* (2013), collect the highlights from his evocative photographic journey among



the people of the North, from Canada and Greenland to Northern Scandinavia and Siberia. For over a decade Axelsson has documented the depletion of the ice caps of Iceland and Greenland and is currently working on the project *The Arctic*, uniting his signature narrative documentation of hunters, fishers and herders with photographs of the dramatic results of climatic change in the Arctic landscape.

**Guðni Elisson** is the founder of the Earth101 project. He is a Professor in the department of Comparative Literature in the Faculty of Icelandic and Comparative Cultural Studies at the University of Iceland. He has written extensively on the climate change discourse in Icelandic media.



**Benedikt Erlingsson** is one of the most successful stage directors of the last decade in Iceland and has several times been awarded for his work both as a director, author and actor. As an actor he has played number of roles on the stages of the Icelandic theater. His first feature film *Of Horses and Men* received many prizes. Among them Nordic Council Film Prize 2014.



**Anton Helgi Jónsson** is a writer of fiction and poetry, living in Reykjavík. He has published several books of poetry but is now working on a novel.



**Ari Alexander Ergis Magnússon** studied at the Sorbonne University 1990–91 and earned a BFA in fine arts from Parsons Paris School of Art and Design, 1991–96. Since then he has exhibited his paintings, installations, and video work in galleries in various European countries, in the



United States, China, Argentina, Russia and Siberia. Magnússon has collaborated with Erró, Björk, Sigur Rós, Ólafur Elíasson, Sigurdur Gudmundsson, Alain Robbe Grillet, Albert Maysles, David Lynch and Yoko Ono. Among his documentaries are *Home to Siberia* (1993), *Screaming Masterpiece* (2005), *At the Edge of the World* (2007) and *Imagine Peace, Yoko Ono* (2012).



**Linda Mokdad** is an Assistant Professor of Film Studies and English at St. Olaf College. She is the co-editor, with Corey Creekmur, of *The International Film Musical*. She is currently finishing a book on post-9/11 American cinema, which is under contract with Rutgers University Press. In the summer of 2017 she will co-teach a course on Media and the Environment in Iceland.



**Susan Muska** produces and directs social-issue feature documentaries with Gréta Olafsdottir under the umbrella of their company Bless Bless Productions, based in NYC and Reykjavik. Their documentaries have won awards internationally and have been nominated for an Emmy Award for Excellence in Investigative Journalism. Presently they are working on a follow-up to their award-winning documentary *The Brandon Teena Story*, and are in the research phase of an environmental documentary about human-animal ecology in the far-northern hemisphere. Susan has also worked since 1986 in Rwanda and Zambia on developing community public health information about HIV, for NIH-funded projects. She teaches communications and media training at the UN University Programmes for Gender Equality, and Land Restoration in Iceland, and a course in Art, Ecology & Animals at the University of Iceland. She has taught core courses in Digital Narrative at Parsons in NYC.





**Björn Norðfjörð** is a visiting Associate Professor at St. Olaf College where he teaches courses on literature and film from around the world. Most of his research and publications in English are devoted to Nordic cinema, while in Icelandic he has published extensively on US and world cinema. In the summer of 2017 he will co-teach a course on Media and the Environment in Iceland.



**Anna Dís Ólafsdóttir** is head of production / producer at Profilm specializing in documentary production. Having worked in London for the BBC, Discovery Channel and Channel 4, Anna Dís has spent the last 14 years producing various international documentaries for Profilm, most of which have been distributed world-wide.



**A. Gréta Ólafsdóttir** is an independent documentary filmmaker who produces and directs feature documentaries with Susan Muska. They have produced, directed and edited the award-winning films *The Brandon Teena Story* and *Edie & Thea: A Very Long Engagement*, among others. Their film about women surviving ethnic cleansing in Kosovo, *Women, the Forgotten Face of War*, has been shown both in art museums and as part of campaigns by Amnesty International and Women in Black, to end violence against women. Their films have won best documentary and audience awards at the Berlinale and Vancouver International, among others, and have been nominated for an Emmy Award for Excellence in Investigative Journalism, and GLAAD Media awards. They are presently developing an animal-themed documentary set in the circumpolar environment. Gréta works on co-productions internationally, most recently on *La Chana*, the comeback story of a Roma flamenco icon. Gréta has taught narrative film and editing at Parson NYC, and has degrees in women's studies and photography.



**Kjartan Már Ómarsson** is a doctoral student in comparative literature, focusing on contemporary Icelandic cinema and critical theory. He is a member of the Earth101 team.



**Gunnlaugur Thor Palsson** is an independent TV and film producer/director. He started his career in documentaries and then became the Head of RUV Sport's Production. Gunnlaugur is now finishing a documentary on the Icelandic. The melting and retreating of glaciers and a rising sea level threaten human habitation along coasts and lowlands worldwide. A careful study of glaciers is therefore something that is crucial for all mankind.



**Jóhann Sigtússon** founded Profilm in 1990. He is a Director of Photography and Director who has made over 80 documentaries during the last 3 decades. He has been fortunate enough to receive many accolades for his work including an Emmy nomination for best cinematography.



**Magnús Örn Sigurðsson** is a producer of radio documentaries and a doctoral student at Rice University Department of Anthropology. He holds an M.A. in Environment and Natural Resources from the University of Iceland with an emphasis on the cultural representation of climate change.



**Alda Björk Valdimarsdóttir** is an associate professor at the University of Iceland, in comparative literature. She has published



books on contemporary Icelandic fiction and is at the moment working on a book on Jane Austen. She published her first volume of poetry in 2015.

**Sigurbjörg Þrastardóttir** is an Icelandic poet. Author of ten poetry collections, two novels and a couple of staged plays. Currently a columnist for the cultural radio program *Viðsjá*, formerly a journalist for the *Morgunblaðið* newspaper. Sigurbjörg has co-operated with foreign photographers and local musicians, and is a regular guest at international poetry festivals.



**Sjón** is an Icelandic author. His novel *The Blue Fox* was awarded the Nordic Council's Literary Prize and the novel *From the Mouth of the Whale* was shortlisted for the IMPAC Dublin Literary Award and the Independent Foreign Fiction Prize. Sjón's latest novel *Moonstone – The Boy who never was* won every major literary prize in Iceland. In 2001 he was nominated for an Oscar for his lyrics in the film *Dancer in the Dark*. His latest music collaboration is *neo-arctic* an oratorio about climate change that will be premiered in fall 2016 in Riga and Copenhagen.



**Helga Ögmundardóttir** is an assistant professor of anthropology at the University of Iceland. She teaches anthropological theory and method, as well as environmental anthropology and does research in the field of environment with humans in it, climate change and its effects on society and culture, and the human-nature nexus in general. Her main interest now is the perception of human future under climate change.



# The Past, the Future. How Fast, How Far? Threats Facing the Climate System

**Friday May 27th 13.00–17.00**

**Háskólatorg 105 (University of Iceland)**

**Guðni Elisson:**

***“Earth2016”***

**Michael E. Mann:**

***“Dire Predictions: Understanding Climate Change”***

This lecture will begin with a review of the now-solid evidence for a human influence on the climate of recent decades. Such evidence includes instrumental measurements available for the past two centuries, paleoclimate observations spanning more than a millennium, and comparisons of the predictions from computer models with observed patterns of climate change. The lecture will then address future likely impacts of human-induced climate change including possible influences on sea level rise, severe weather, and water supply. The lecture will conclude with a discussion of solutions to the climate change problem.

**Stefan Rahmstorf:**

***“Rising Seas: How Fast, How Far?”***

Sea-level rise is one of the inevitable results of global warming, as warmer ocean waters expand and land ice is melting and adding water to the oceans. Observations show that the seas are indeed rising, and that the rise in the 20th Century is unique in the context of the previous millennia. However, more difficult to answer is the question of how fast and how far sea level will rise in the future. The billion-dollar-question is: How stable are the ice sheets on Greenland and Antarctica?

**Stefan Rahmstorf:**

***“Is the Gulf Stream System Slowing?”***

A slowdown or even collapse of the Gulf Stream System as a

result of global warming has long been a concern of climate scientists and has fuelled the imagination of Hollywood. Regular direct observations of this giant ocean current system do not go back far enough to tell whether there is any long-term trend. However, in recent years indirect evidence is mounting for a remarkable slowdown over the 20th Century.

### **15 minutes break**

**Michael E. Mann:**

***“The Hockey Stick and the Climate Wars: The Battle Continues”***

A central figure in the controversy over human-caused climate change has been “The Hockey Stick,” a simple, easy-to-understand graph my colleagues and I constructed to depict changes in Earth’s temperature back to 1000 AD. The graph was featured in the high-profile “Summary for Policy Makers” of the 2001 report of the Intergovernmental Panel on Climate Change (IPCC), and it quickly became an icon in the debate over human-caused (“anthropogenic”) climate change. I tell the ongoing story behind the Hockey Stick, using it as a vehicle for exploring broader issues regarding the role of skepticism in science, the uneasy relationship between science and politics, and the dangers that arise when special economic interests and those who do their bidding attempt to skew the discourse over policy-relevant areas of science. In short, I attempt to use the Hockey Stick to cut through the fog of disinformation that has been generated by the campaign to deny the reality of climate change. It is my intent, in so doing, to reveal the very real threat to our future that lies behind it.

**Michael E. Mann:**

***“The Madhouse Effect: How Climate Change Denial is Threatening our Planet, Destroying our Politics, and Driving us Crazy”***

I offer a somewhat lighthearted take on a very serious issue—the threat of human-caused climate change and what to do about it, based on my collaboration with *Washington Post* editorial cartoonist Tom Toles. We target the ongoing campaign to deny that threat through satire and where appropriate, ridicule, built around Tom Toles’ famously insightful, edgy, and provoc-

ative climate-themed cartoons in the Washington Post. Using Tom's cartoons (existing ones and some new ones exclusive to the book) as a template, we review the scientific evidence of climate change, the reasons we should care, and the often absurd efforts by special interests and partisan political figures to confuse the public, attack the science and scientists, and deny that a problem even exists. Despite the monumental nature of the challenge this poses to human civilization, we find a way to end on an upbeat and cautiously optimistic note.

**Stefan Rahmstorf:**

***"Extreme Weather: What Role Does Global Warming Play?"***

Humans have had to cope with extreme weather events throughout their history. However, the data show that the number of certain types of extreme events is on the rise in recent decades. For some types of extremes, such as heat waves, droughts and extreme rainfall events, this is an expected outcome of global warming. Other consequences have surprised climate researchers, such as changes in the jet stream and planetary waves in the atmosphere that have been linked to some unprecedented recent extreme events.



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