



# CROSSING BOUNDARIES

New approaches to science for  
policy in Europe

SAPEA Insights

SAPEA

Science Advice for Policy by European Academies

This summary is the first in a series of SAPEA Insights. It provides highlights and key messages from SAPEA's *Crossing Boundaries* conference, which was hosted by the Estonian Academy of Sciences. The summary outlines the contributions made by the speakers and the discussions that followed in each of the sessions. This document aims to summarise the conversations throughout the day and therefore does not necessarily represent the views of SAPEA, the European Academy Networks or their member academies. The report reflects only the authors' views. The European Commission is not responsible for any use that may be made of the information it contains.

#### About SAPEA:

Spanning the disciplines of engineering, humanities, medicine, natural sciences and social sciences, SAPEA (Science Advice for Policy by European Academies) brings together the outstanding knowledge and expertise of Fellows from over 100 academies, young academies and learned societies in more than 40 countries across Europe. Working closely with the SAM High Level Group of Scientific Advisors, SAPEA is part of the European Scientific Advice Mechanism (SAM), which provides independent, interdisciplinary and evidence-based scientific advice on policy issues to the European Commission.

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# Crossing Boundaries New approaches to science for policy in Europe

Hosted by the Estonian Academy of Sciences  
13 October 2017



# Key messages of the conference

COLLABORATION WITHIN AND ACROSS SECTORS IS ESSENTIAL TO SUCCESS

INTERNATIONAL CHALLENGES REQUIRE AN INTERDISCIPLINARY APPROACH

SOCIAL SCIENCES AND HUMANITIES PLAY A VITAL ROLE IN POLICY ADVICE

CITIZENS' CONCERNS MUST BE UNDERSTOOD BY SCIENTISTS AND POLICYMAKERS

SCIENTISTS MUST ENGAGE WITH THE PUBLIC, NOT JUST INFORM THEM

CREATING INCLUSIVE COMMUNITIES FOR SHARED LEARNING AND DIALOGUE IS THE WAY FORWARD





# Introduction

## WE LIVE IN A TIME OF GREAT CHANGE THAT REQUIRES INNOVATIVE SOLUTIONS TO PRESSING PROBLEMS.

The twenty-first century is the era of Big Data, Open Data and Citizen Science. Interdisciplinary approaches to science-based policy advice are essential in addressing global challenges. Inter-sectoral exchange is needed between stakeholders – academic institutions, government, the private sector of commerce and industry, NGOs, entrepreneurs and the public. All of these key players must be involved in the co-creation of solutions to policy issues.



On 13 October 2017, SAPEA held a one-day conference, *Crossing Boundaries: new approaches to science advice for policy in Europe*, at the Estonian Academy of Sciences in Tallinn, Estonia. With an international audience of participants from a wide range of sectors, the event provided fresh thinking on these topics, by showing how change is happening.

Speakers from the policy sphere, the private sector, social enterprise, the media and the academic community shared best practice and considered how to forge a new way forward.

Discussions explored opportunities and challenges, whilst maintaining a focus on the quality assurance and independence provided by the European Scientific Advice Mechanism.

The meeting was designed to complement the international conference, European Research Excellence: Impact and Value for Society, which published the [Tallinn Call for Action](#), highlighting the importance of significant investment in research and innovation. Both took place as part of the programme of the Estonian Presidency of the European Council.

# SETTING THE SCENE

The international landscape and  
the new model for science and  
policy in Europe

**Professor Tarmo Soomere**, President of the Estonian Academy of Sciences  
**Professor Günter Stock**, 2017 Chair of the SAPEA Board, President of ALLEA  
**Professor Dame Helen Wallace**, the British Academy

***“Practices of scientific advice for policy differ between countries. There is no one-size-fits-all, no easy answers and no perfect model.”***

Professor Dame Helen Wallace, the British Academy

Policymakers often do not recognise when they need advice and scientists often do not know how to communicate it. Cognitive responses seem to matter less now, with the public tending to react on 'gut feeling'.

This makes behavioural and cultural factors ever more important. When it comes to policy decisions, finding agreement across the European Union's member states is not an easy task.



The increasingly digital world presents us with both opportunities and challenges. The facts, 'fake-facts' and 'non-facts' which circulate freely, especially via online media, are a feature of the science advice landscape.

These are early days for the new European Scientific Advice Mechanism (SAM). It is recognised widely that the Scientific Advice Mechanism should be given time to mature. It needs time to address some of the challenges it faces.

Find out more about the [European Commission's Scientific Advice Mechanism](#) and [SAPEA](#)

#### **Major challenges in the scientific advice landscape:**

- The complexity of the European landscape for scientific advice, with multiple sources of evidence and advice
  - Apparent declining trust in experts and expertise
- The need to improve relationships between the different stakeholders





# **CITIZENS' PERSPECTIVE**

How is the participation of citizens  
impacting on science for policy?

**Professor Brian Cox**, Royal Society Professor for Public Engagement in Science

**Professor Franck Courchamp**, Senior Researcher at CNRS and Université Paris-Sud

**Richard Hudson**, Editor-in-Chief, Science Business

**Erika Widegren**, Chief Executive, Re-Imagine Europa



***“It could be that people are not ‘sick of experts’ but rather ‘sick of pronouncements’ “***

Professor Brian Cox, Royal Society Professor for Public Engagement in Science

***“People look to the internet to endorse their own perspective. We must take this into account when communicating about science“***

Erika Widegren, Chief Executive, Re-Imagine Europa



## THE IMPACT OF SCIENCE

The impact of science is everywhere. Indeed, it is often taken for granted. However, academics should stop merely informing the public and instead focus on engagement. There is an increasing need for scientists to communicate more efficiently and more originally.

New forms of engagement via social media show that citizens' concerns are often different from those highlighted by traditional media. It is also clear that the role of journalists is changing and developing in new ways.



Doubt should be welcomed. It is important to accept that the scientific community does not know everything. Honesty and trust are essential for science to develop good relationships with policymakers, the wider public and the media. A collaboration framework to work with the media is beneficial for science, policy and industry. This is already happening in some countries.

Examples of collaborative frameworks in science include [the Science Media Centre](#) and [Sense about Science](#).

## POPULARISING SCIENCE THROUGH MEDIA

Insignificant is a 3D animation film about the place of humanity in the universe and the environment. The film presents science through a series of beautiful images and seeks to raise awareness of today's ecological problems by considering the place of humans in the universe and our relationship with nature. The project is partly-crowd funded and supported by major partners.



[The trailer for Insignificant is available here.](#)

Science must be active in public culture and engage large communities.

The Scientific Advice Mechanism itself should become more involved in the public debate. Narratives and ways of framing science stories are needed to attract different audiences and character types. These are often values-driven, appealing to feelings and emotions.

Science Business, Research and Innovation: how to get more impact? A public consultation carried out for the Estonian Presidency of the EU  
[Read the results here.](#)

# POLICYMAKERS' PERSPECTIVE

How are policymakers changing their  
approach to working with scientists?

**Dr Marju Lauristin**, Member of the European Parliament

**Dr Johannes Klumpers**, Head of SAM Unit, European Commission



***“The best moment for politicians to hear scientific advice is before the problem is in the media”***

Dr Johannes Klumpers, Head of SAM Unit,  
European Commission

## SOURCES OF ADVICE

The European Commission has many sources of advice, both internal and external. The Scientific Advice Mechanism must not duplicate what others are doing.

The best time to influence policy is at a very early stage of law-making. Scientific advisors need to recognise the need for timeliness of delivery, often to fit with the legislative process. Awareness of the political context is vital, and collaboration within and across sectors is important.

The European Commission is legislating in sensitive areas and lobbyists are extremely active. The quality and independence of scientific advice and of impact assessment are critical.

Arguments must be presented well, and the need for interaction between sciences, social sciences and humanities is becoming more important than ever for issues such as the digital society, privacy and artificial intelligence (AI).

Roger Pielke's 'honest broker' model represents best practice, providing an assessment of policy alternatives.

[Find out more about  
the Honest Broker model](#)





# ACADEMIC COMMUNITY'S PERSPECTIVE

How are science and provision of  
scientific evidence for policy changing in  
the academic community?

**Professor Günter Stock**, Chair of the SAPEA Board, President of ALLEA

**Professor Janusz Bujnicki**, Member of the SAM High Level Group

**Professor Poul Holm**, Chair SAPEA Working Group on Food from the Oceans

**Professor Nicole Grobert**, Young Academy of Europe

**Professor Maarja Kruusma**, Estonian Academy of Sciences, Leader of the Estonian  
Centres of Excellence in Science



***“We should engage in the scientific imagination and consider what we could do.”***

Professor Poul Holm, SAPEA Food from the Oceans Working Group Chair

Quality is essential within SAPEA, as part of the Scientific Advice Mechanism. Speed of working is also important. Early and mid-career researchers are involved in SAPEA, through the Young Academies across Europe.

Scientists' work may not impact on current politicians but instead on their successors. This is a long-term cycle of change.

In an era when the public has open access to knowledge, it will require leadership from the academic community.

For the advice process to be successful, scientists and policymakers should start by listening to people's real concerns.

People may not care about IT systems themselves, but they do care about the impact they will have on their lives and their job security.

***“We as scientists believe that our advice would help the general public to understand the background of certain developments and contributions to the design of policies. But it is all a moot point if we fail to communicate our work to them.”***



Professor Günter Stock, Chair of the SAPEA Board 2017 and President of ALLEA

Find out more about work on Food from the Oceans by [SAPEA and the SAM High Level Group](#).



# CORPORATE PERSPECTIVE

What is the changing role of NGOs and  
business engagement in science for  
policy?

**Ana María Álvarez Monge**, CEO and Co-Founder Migration Hub Network gGmbH

**Bernd Halling**, Head of Corporate Policy and Strategy, Bayer

**Haris Hadžialić**, CEO, GlobalGPS BH

**Jaan Tallinn**, Co-Founder Skype, Centre for the Study of Existential Risk,  
University of Cambridge



***“Experts preach to the converted. But remember that there are young, active people who are not experts. Think about the ultimate audience, and use the appropriate language.”***

Ana María Álvarez Monge, CEO and Co-Founder  
Migration Hub Network gGmbH

## ENGAGING SCIENTISTS AND BUSINESSES

Engagement between scientists and entrepreneurs is important and any polarisation between them is problematic. A strategy is needed to move towards better interaction and understanding. Where NGOs and businesses have collaborated better to address policy issues in recent years, the creation of common platforms, group collaboration and digital communication tools have helped to make this possible. We are still too often working in silos and the walls need to be broken down.

Social enterprise and entrepreneurship are ways of empowering individuals. Civil society is full of young activists who are not experts but influencers. Knowledge exchange is key. Society needs experts, not to preach or lecture, but rather to explain critical issues.

The Scientific Advice Mechanism will have to learn and adapt as it moves forward. The corporate sector is short on time and attention. Simplify communication, reduce bureaucracy and promote collaboration. Academia should open its doors, inviting entrepreneurs to harvest knowledge, creating a more dynamic environment,

Find out more about  
[The Migration Hub](#)  
[social enterprise](#)



# CONCLUSION

And speakers



## Conclusions and next steps

***“Crossing boundaries means building bridges and reaching out in new forms of collaboration. This is what SAM and SAPEA are all about. We are on a learning curve, learning by doing.”***

Professor Sierd Cloetingh, Member of the SAPEA Board and President of Academia Europaea

Involvement in the Scientific Advice Mechanism is a joint responsibility and it is a challenge. The European Commission's design of this new system was a high-risk, high-gain operation. It is not a trivial exercise. Scientists and scientific advisors are working in a complex landscape but that makes it interesting.

The work of the Scientific Advice Mechanism concerns science for policy, not policy for science. Nevertheless, this activity is proving healthy for science itself.

For successful collaborations between scientists, policymakers and other sectors, each player should be aware of their own role in the ecosystem. It is not expected that politicians would interfere with science or attack the independence of academia. There is a need for inclusive communities that can engage in dialogue.

In this way, everyone involved can learn by doing. It is true that the ideal world does not exist. There is not yet a perfect recipe for how science-informed policy should work in every scenario. Communities must focus on shared learning and on engaging our younger generations. The mindset they bring has huge benefits and involving them is essential.

***“At the heart of these discussions is the future of science, and the science of the future.”***

Professor Sierd Cloetingh,  
Member of SAPEA Board,  
President of Academia Europaea



## Speakers and panellists

### ANA MARÍA ALVAREZ MONGE

Ana María Álvarez Monge is the CEO, Chairwoman and Co-Founder of Migration Hub Network gGmbH, an organisation that co-creates a European platform for asylum, migration and refugee cooperation. Ana is a frequent consultant, coach and mentor in areas of social innovation and entrepreneurship.



### PROFESSOR JANUSZ BUJNICKI

Janusz Bujnicki is Professor of Biology, and head of a research group at IIMCB in Warsaw and at Adam Mickiewicz University, Poznań, Poland. He is a member of the European Commission High Level Group of Scientific Advisors.

### PROFESSOR SIERD CLOETINGH

Sierd Cloetingh is Distinguished Professor at Utrecht University, Faculty of Earth Sciences. Currently, he serves as President of the Academia Europaea and President of the European Cooperation in Science & Technology (COST). He is a member of the SAPEA Board.



# Speakers and panellists

## DR FRANCK COURCHAMP

Franck Courchamp is a Senior Researcher at CNRS and Université Paris-Sud. He specialises in population dynamics and conservation biology. He is a member of Academia Europaea and has received various prizes and awards for his work.



## PROFESSOR BRIAN COX

Brian Cox is the Royal Society Professor for Public Engagement in Science. He has received numerous awards for his work in publicising science. As an author, his books include 'Universal: A Guide to the Cosmos', and 'Human Universe' (HarperCollins), based on his hit BBC TV programme.

## PROFESSOR NICOLE GROBERT

Nicole Grobert is Professor of Nanomaterials at the Department of Materials at the University of Oxford and a Royal Society Industry Fellow at Williams Advanced Engineering. She is a founding member of the Young Academy of Europe.



# Speakers and panellists

## HARIS HADŽIALIĆ

Haris Hadžialić is CEO of GlobalGPS BH, a pioneering company in the field of IoT and the Mobile Assets Management services. In 2003-2004 he was instrumental in the setting up of a national policy for Information Society Development. In April 2013 he became president of C.R.E.A.M. BIH (Community Realization European Aid Masterplan).



## BERND HALLING

Bernd Halling is Head of Corporate Policy and Strategy at Bayer, a global enterprise with core competencies in the Life Science fields of health care and agriculture. Previously he worked as Director of Communications at IFAH-Global and IFAH-Europe.

## PROFESSOR POUL HOLM

Poul Holm is Professor of Environmental History at Trinity College Dublin, where he is founding Director of the Trinity Long Room Hub Arts & Humanities Research Institute. He has published over 100 academic papers and several books. He is the Chair of the SAPEA Food from the Oceans Working Group.



# Speakers and panellists

## RICHARD HUDSON

Richard Hudson is Editor-in-Chief and Vice-Chair of the Board for Science Business, which he co-founded in 2004. He has been a leading science and technology journalist in Europe for more than 30 years.



## DR JOHANNES KLUMPERS

Johannes Klumpers is Head of SAM Unit at the European Commission. After several years of industrial research in Sweden, he joined the European Commission's Directorate-General for Research & Innovation and has worked on topics including raw materials, gender equality and science in society.



## PROFESSOR MAARJA KRUUSMA

Maarja Kruusmaa is Professor of Biorobotics at Tallinn University of Technology. She is a Member of the Estonian Academy of Science and Head of the Estonian Centre of Excellence in IT Research.





# Speakers and panellists

## DR MARJU LAURISTIN

Marju Lauristin is an Estonian Member of the European Parliament and Vice-Chair of the Group of Socialists and Democrats. She has an academic career in social sciences and is a Professor Emeritus of Social Communication in Tartu University.



## PROFESSOR GÜNTER STOCK

Günter Stock was elected president of ALLEA (ALL European Academies) in 2012. He is the 2017 Chair of SAPEA. He has authored, edited, and co-edited numerous scientific publications and has been involved in the production of over 370 scientific and science-policy papers as well as in the creation of several patents in the medical field.

## JAAN TALLINN

Jaan Tallinn is a founding engineer of Skype and Kazaa. He founded the Centre for the Study of Existential Risk with Huw Price and Martin Rees. He is also a co-founder of the Future of Life Institute and philanthropically supports other existential risk research organizations.



# Speakers and panellists

## PROFESSOR TARMO SOOMERE

Tarmo Soomere is President of the Estonian Academy of Sciences. He was appointed as Vice-Director of the Marine Systems Institute in 2002-2004 and elected as the first Professor of Coastal Engineering in Estonia (2005). Currently he is the Head of Wave Engineering Laboratory in the Institute of Cybernetics.



## PROFESSOR DAME HELEN WALLACE

Helen Wallace was Foreign Secretary at the British Academy from 2011-2015. She is a leading expert on the politics of European integration, on which she has authored and co-authored numerous publications.

## ERIKA WIDEGREN

Erika Widegren is CEO of Re-Imagine Europa. She has been working in the field of connecting science and society for nearly a decade. She has contributed to several reports including European Research and Innovation – 2020: What can the Leading Institutions of Civil Society do for Europe (2010).



## About SAPEA

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This report can be viewed online at [www.sapea.info/crossingboundaries](http://www.sapea.info/crossingboundaries)

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