Science Meets Parliaments

Towards bridging science and decision-making

Tallinn, Estonia, 31 January–02 February 2019

While the production of new knowledge remains a corner stone of the academic landscape, a rapidly growing task of scientific community is providing advice to the local and national governments. This challenge calls for further elaboration of the options, best practices and mechanisms of advice in the contemporary society that is oversaturated by information.

FORESIGHT CENTRE

To meet this challenge, the Estonian Academy of Sciences and the Foresight Centre, a think tank at the Riigikogu (the Parliament of Estonia), organise jointly a seminar and a training workshop ***Towards bridging science and decision-making*** in Tallinn on 31 January–02 February 2019 in the frame-work of the action *Science meets Parliaments – Science meets Regions* launched by the European Commission Joint Research Centre (JRC).

JOINT RESEARCH CENTRE

The intention is to provide theoretical framework, share experience from policy-makers and offer opportunity for hands-on training on how to convert science into advice for policy, and how to deal with such advice from a "science for policy" perspective. To do so, high-level politicians, experts in cognitive studies and communication, and top scientists engaged in various advice mechanisms are invited as lecturers; professional instructors in presentation skills are engaged as trainers.

Scientists, science administrators, policy-makers, government and city officers, experts from industry, and representatives of the public who are (or are willing to be) involved in various advisory efforts are equally welcome to this event from Estonia, Latvia, and Lithuania. The intention is to provide them with information about the functioning of science advice channels and training in the use of the proper means to convert science into policy advice.

Practicalities

The event will take place in the Estonian Academy of Sciences (Kohtu 6, Tallinn). Admission is free, but please note that the number of participants is limited and pre-registration (sekretar@akadeemia.ee or tel +372 644 2129) is required before 21 January 2019.

Travel and accommodation costs of the speakers and registered participants from Estonia, Latvia, and Lithuania will be covered by a grant from the JRC. A block reservation will be provided in a hotel in walking distance from the venue (L'Ermitage or equivalent).

Tentative timetable

Day 1: Thursday, 31 January 2019

13.00–14.00 Registration, welcome coffee, light lunch

14.00–18.00 Opening and Session 1: Talking to each other

> The pool of scientific knowledge is growing explosively but is often limited to the use within academic community. How could it be better used for the benefit of society? How we can drive science to meet policy? How different are the languages used by scientists and policy-makers?

The session starts from drafting frequent challenges on the way from science to decision-making and continues with insights into the status and needs of science advice for policy by high-level politicians and senior government officers Mr Marko Pomerants, Chair of the Constitutional Committee of Riigikogu (the Parliament of Estonia), former Minister of the Environment; and Mr Viljar Lubi, Deputy Secretary General for Economic Development, Ministry of Economic Affairs and Communications). As an example of how to handle massive uncertainties (that are often an intrinsic part of contemporary research), an overview about how human uncertainty affects efforts to influence the climate change problem is given by Prof Tom Lenaerts (University Libre de Bruxelles, Machine Learning group – Vrije Universiteit Brussel, Artificial Intelligence lab).

19.00 Icebreaker reception and joint dinner

Day 2: Friday, 01 February 2019

9.00–13.00 Session 2: Converting science into advice

> Everybody on the academic landscape agrees that we should convert science into perfect advice. The question, however, is: how can we do that? What are the rules that govern this advice? How complicated or simplified should it be? How do we avoid failures, mistrust and misinterpretations? Who should talk and to whom? How do we build up a sustainable advice mechanism?

The session starts with an insight into how good science is used for broad (European) scale advice by Dr Maive Rute (Joint Research Centre, Deputy Director General). This experience is augmented by perceptions and experience of more narrowly targeted advice efforts in some branches of science (such as polar and marine research), emerging country-scale practice, and bottom-up experience in driving science policy by young scientists. The final part of the session provides a flavour about the richness of the pool of science in Estonia.

13.00–14.00 Lunch

14.00–17.50 Session 3: Transferring the advice into momentum

> Decision-makers are under pressure from many sides: facts are uncertain, values in question, stakes are high and decisions must be urgent. These imperatives drive the requests for high-quality advice that can be used in decision-making. Which format of advice is usable? How rapid/operational must it be? How do we distinguish between lobbying and advice? Who has the final responsibility?

The general To-do's and Never-do's of science advice are presented by Prof Kari Raivio (Chancellor emeritus of the University of Helsinki and former President of the Finnish Academy of Science and Letters). A possible theoretical framework for the background science is demonstrated via agent-based approaches for policies by Prof Mario Paolucci (Institute of Cognitive Sciences and Technologies, Italy, Rome). The focus of the rest of the day is on discussion and hands-on training on basics of converting science into advice in small groups. The session ends with a discussion of the best ideas developed in the groups.

19.00 Joint dinner

Day 3: Saturday, 02 February 2019

9.00–12.30 Session 4: Practical skills

The day starts with an overview of inside information about the efforts, techniques, and tricks used in science academies of small countries to catch the attention of the audience that is saturated by the massive information flow and continues with group work targeted at e.g., training of presentation skills, advice on how to prepare for an elevator speech, and communication with journalists and policy-makers.

12.30–13.30 Farewell lunch

The background

The current changes in the academic landscape and in the patterns of the use of information touch the very foundations of how science serves society and how knowledge can be transferred into policy advice.

A strong chain, localised in space and configured in time, has steered the use of scientific products in the past (and is still operational in research for business). It connected a scientist in a laboratory with an inventor in an adjacent room, then involved an engineer in a neighbouring house, and ended up at a manufacturer running a factory in the next street. The scientist was paid from the profit earned by the factory.

This chain is today replaced by two groups of people. Many excellent scientists contribute to the global knowledge pool. Inventors, engineers and entrepreneurs fish for ideas in this pool to develop new products. The use of knowledge is thus disconnected in both space and time. The subsequent sales generate public tax money that drives a large part of science.

This significant change has resulted in major alterations in how knowledge is used for national governance and policy-making. Today, it needs a mechanism that is adaptable to the context, then links it with other facts, provides it with appropriate justification, and gives it voice and momentum. It also needs skilled brokers and committed users who are able to (re)build trust in science and engage with both citizens and policy-makers.

This process is currently under way in the EC, for a long time via the in-house Joint Research Centre (JRC) and relatively new Science Advisory Mechanism (SAM). It is, however, non-existent or embryonic in many EU countries. Its development is often hindered because of the absence of the necessary techniques, skills and experience among scientists, the public and policy-makers.

The described bottleneck is acute in rapidly developing Eastern European countries. The separation of science and policy-making has been augmented in these countries by the process of reshaping the academies of science from research-performing institutions into societies of learned persons organized to advance science. This has also led to a degree of fragmentation of the voice of science between different research institutions.

As a result, the scientific competence is there but not really used in steering the agendas of the countries. It apparently needs only minor support and inspiration to become operational for use in policy-making. An important step is the training of people who are competent in different fields of science in the value system and language that is used in policy-making. A complementary skill is the understanding that scientific evidence is just one component in decision making.

Obtaining such skills usually requires specifically targeted training in consolidation, formatting, visualisation and presentation of evidence-based advice. The intention is to teach and train the participants on (a) how to convert science into advice for policy and (b) how to deal with such advice, with the aim to promote, improve and support the consistent implementation of a culture of evidence-informed policy-making.

The training will make use of recent developments of information and communication technologies as working examples provided by experts from the Flag-ERA network FuturICT2.0. These issues are important in themselves because misuse of such technologies is exploding. All parties need to understand the proper means to manage such issues as the avalanche of fake news or improper information. It is an imperative to make use of novel communication systems, which empower everyone to take better decisions.