Trust in science may face a tough time ahead as doubts about transparency and the way scientific evidence is used by policymakers persist. But the EU institutions at least seem aware of these concerns, as this latest Special Report shows.

On Tuesday, 23 January, Member of the European Parliament Julie Girling hosted an event in Brussels called Fact Checking Science: Shaping the governance of scientific advice in the EU.
More transparency needed in science, as experts take fight to the ‘flat-earthers’

Julie Girling MEP: ‘Most of us look for evidence that supports our own opinions’

Restoring trust and effectiveness in EU scientific advice

Fact Checking Science: Shaping the governance of scientific advice in the EU
More transparency needed in science, as experts take fight to the ‘flat-earthers’

By Sam Morgan | EURACTIV.com

There have been big changes in the way the EU institutions receive and use scientific advice but concerns remain that there is still not enough transparency in the process.

When Jean-Claude Juncker’s Commission started its mandate in 2015, it did so without the post of a chief scientific adviser. Instead, it has relied on the Scientific Advice Mechanism (SAM) to develop policies and legislation.

Previously, a chief scientific adviser was available to the president of the Commission to provide insight into a variety of topics but the position was abolished in part due to concerns about transparency and as a result of a controversial GMO debate.

Since then, SAM has attempted to provide independent advice on critical policy topics. It is complemented by the European Parliament’s Science and Technology Options Assessment division (STOA), which fulfils a similar role for lawmakers.

At an event in the Parliament on Tuesday (23 January), hosted by British MEP Julie Girling (ECR group), representatives from the institutions, agencies and private sector got together to discuss how science,

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particularly how it is used, can build trust in the EU.

Commission official Robert Schröder and chief scientist of the European Food Safety Agency Marta Hugas both agreed that more can be done to increase transparency in this area, claiming that there is currently a danger that trust in science might be decreasing.

Schröder, who is research Commissioner Carlos Moedas’ right-hand man, warned that the Commission cannot achieve that “in isolation”, while Hugas explained that transparency is more than just “publishing information. People must understand it.”

Toxicology expert Professor Daniel Dietrich acknowledged that even full transparency would not convince “the flat-earth society”, referring to groups of people who remain unconvinced by even the strongest evidence. But he insisted that being open will prevent more people joining their cause.

MEP Girling struck a cautious note on the issue of 100% transparency though, insisting that authorities should be careful to make sure information is completely accurate, before rushing to make details public. She and her fellow panellists acknowledged that this is part of a wider ongoing debate about whether the public can actually be trusted to make decisions or whether it is a case of communicating information more accurately.

WHAT’S IN A WORD?

Professor Dietrich and head of the European Risk Forum Dirk Hüdig both made the point that language plays an important part in a lot of scientific advice, especially when it comes to determining what is a ‘risk’ and what is a ‘hazard’.

This fundamental distinction, which is tied heavily to the EU’s much-championed precautionary principle, lies at the heart of many controversial debates, including the glyphosate pesticide renewal and the authorisation of genetically modified crops.

Hüdig pointed out that the difference between risk and hazard does not even exist in certain countries as the very word for both concepts is often the same in some languages.

Dietrich also warned that discrepancies in EU legislation, as a result of bad drafting or inaccurate translation, has muddied the waters further and created a grey area about what is acceptable and what is safe.

STRUCTURAL PROBLEMS

The way in which scientific advice is compiled in the first place was also debated and the panellists revealed that there are a number of problems in the process.

Professor Dietrich explained that high-level expert panels are often comprised of people who do their work through a personal commitment and that they offer their expertise during their free time. He called for a change in the dynamic so that they are given more recognition.

He also suggested that a new arbitration body should be set up and given the power to settle disputes between authorities that differ on conclusions, referring to the ongoing disagreement over the status of glyphosate and whether it is carcinogenic.

While MEP Julie Girling agreed that there could be room for such a mechanism for resolving low-level disputes like the formation of expert panels, she doubted that there would be much chance of an absolutely independent body being set up and granted that kind of decision-making power.

Summing up the event, Girling said that scientific advice is essential to policy-makers as they are often tasked with making binary decisions on complex issues. She added that the hazard vs risk consideration is a “frustrating one” but something all MEPs have to get used to.

Event participants were invited to get involved with how the EU uses scientific evidence by participating in a public consultation on risk assessment in the food chain, which is open until March 2018.
When drafting policy, EU officials and lawmakers have a variety of sources to call upon for scientific advice. But how useful is the information and how effective is the system currently in place? Julie Girling explains how she uses evidence in her day-to-day life as an MEP.

Julie Girling is an MEP with the European Conservatives and Reformists group (ECR).

She spoke to EURACTIV.com on the sidelines of an event she hosted at the European Parliament, called Fact Checking Science: Shaping the governance of scientific advice in the EU.

A video of the first half of the interview is available here (http://eurac.tv/9wIT).

Could you tell us a little bit more about this event and the issues discussed?

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We rely very heavily on the legislation and the legislation points us in very different directions. So if you’re looking at plant protection products then you’re very much pointed towards ECHA (European Chemicals Agency). If you’re looking towards food then you deal with EFSA (European Food Safety Agency).

But they’re based on different principles. So in ECHA we have things like the CLP (classification, labelling and packaging regulation) but with EFSA we have what I think is a much looser set of regulations. Not looser that they are less safe but to the degree that the agency has, in my view, a lot more latitude.

So the first thing is that we’re not consistent across legislation and in how we deal with data across different areas. I’d like to see more consistency.

At a higher level, we have the Scientific Advice Mechanism (SAM) for the Commission, which has not been around for very long. They’ve been involved a few high level reports that I found very interesting. I know that they are inputting into the very early stages of policy development but they don’t really help me as a legislator, I don’t find them particularly useful, partly because I haven’t really been involved with the pieces of legislation they’ve looked at!

While I think it’s a great initiative, I don’t think it’s going to help the everyday MEP when we’re dealing with amendments.

We also talked about not just risk but hazard too. It’s an argument that rages all the time in Europe. If something is known to be hazardous to health should it be banned automatically or do we need to look at its exposure and safe levels of use? Frankly, people have different opinions on that and I’m strongly in the camp of risk but many are strongly on the other side, on the hazard side of things.

So we need to try and reconcile that and come up with good policy.

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This was about how we policymakers use scientific evidence when we are making our decisions. I think you’ll find that most politicians will tell you that they are evidence-based, that they use scientific data before they come to a conclusion on a subject, so this was really about how we do that, is it adequate, do we have the systems in place to meet the people who have the evidence?

It’s fascinating because clearly people have a lot of different views on this.

What is the role of science-based evidence in policymaking? Is it a big part of your job?

Most of us have confirmation bias so we look for evidence that supports our own opinions. If we don’t have an opinion then maybe we’re a little bit more open-minded but we’re still looking for things that are easily accessible or put in front of us.

What’s put in front of us is often comes from advocacy groups or companies or whatever, so you have to recognise that that might not be bias per se but at least partial. It’s a very big difference. So what we’ve been discussing today is about how we can get more evidence and maybe better summaries of evidence.

We also talked about not just risk but hazard too. It’s an argument that rages all the time in Europe. If something is known to be hazardous to bees. So a precautionary limit was taken so that they would be banned.

Precautionary limit was taken so that they are dangerous to bees. So a ban is a great example. There is some lab and field evidence available that they are dangerous to bees. So a precautionary limit was taken so that they would be banned.

Are there any particular examples of that? Have there been failings?

The example of the neonicotinoid ban is a great example. There is some lab and field evidence available that they are dangerous to bees. So a precautionary limit was taken so that they would be banned.

That’s fine but I was very against it because we needed to think about what we were going to use instead because farmers will simply spray something else. That second substance may have been ruled as safe but only in a certain way.

We’ve effectively said that open crop spraying maybe five times is preferable to a seed treatment once. That comparison was never made or looked at, so how can we be so sure that it’s a good idea to ban neonicotinoids? I would like to see a full study done into what will happen if something is banned and glyphosate is a very good

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example of that.

Many people want glyphosate banned outright but what would happen if we did? We need to weigh up the benefits and the risks across the board.

**What's the best way of communicating science-based information to the general public?**

Any information you put out there will be seized upon. The press will put two and two together and make five. If you speak to comms people then their mantra is ‘you don’t say anything until you’ve got all the facts’. You don’t speculate. That’s generally how it does indeed work.

But as many people point out, the public has a right to know. People are grown up and sensible enough to interpret the information they are given but that information has to be accurate.

Ultimately, we have to change the mindset of the public and the press, which at the moment is scaremongering. The press are only interested in the scary story as they love a headline. The media has a responsibility to treat the information in the way it was meant to be treated.

This trend of an aversion to information is a direct result of their reluctance to do so. I don’t really know how we can solve this, beyond trying to get a public debate going that recognises there is no certainty in life.

The idea of an arbitration institute to settle the most controversial cases was floated at this event. **What do you think of that?**

There’s room for that in certain areas. I think complex decisions like putting a scientist on a panel could be facilitated by something like that, by ruling on conflict of interest cases. An arbitration panel of that nature could inject some proportionality into the mix. There’s a place for it there.

But in terms of setting up something similar that would look at the actual evidence itself, then it becomes more difficult. I think we would find ourselves in a position where we would then be calling into question the arbitration panel, so we’d need something to give that oversight, creating a neverending cycle of sorts. We can’t have a hall of mirrors like that.
Today, more than ever, EU regulators must ensure that risk management decisions meet public demands for high standards of protection whilst simultaneously stimulating competitiveness and prosperity in Europe. Basing decisions on the best available science is the pre-condition for achieving these goals, argues Dirk Hüdig.

Dirk Hüdig is Secretary General of the European Risk Forum (ERF), an expert-led, not-for-profit think tank.

Management of potential harms is a benefit to society and an overarching goal of the European Union. Today, public risk management is most readily associated with government actions to protect citizens and the environment from risks posed by technologies and lifestyle choices.

However, from crop protection products to endocrine disruptors, from food additives to biotech solutions, the framework underpinning the assessment and management of risks at the EU level has suffered a widespread loss of credibility and legitimacy.

One the one hand, the provision of scientific expertise to the EU decision-makers is atomised, resulting from the piecemeal evolution of the risk governance system over the preceding decades. While pockets of excellence do exist, and many of the scientific assessments carried out by the EU bodies are of high quality, evidential standards are not uniform, there is no horizontal policy governing the collection, validation and use of scientific evidence, and central oversight is not systematic.

On the other hand, some groups argue that analytical and decision-making processes have been captured by special interests, leading to discretionary, unpredictable, and ineffective outcomes.

Depending on the result of the process, the institutions, procedures and the evidential basis used for risk management decisions are praised or discredited by allegedly contrasting forces in society. Manufactured social concern, low quality evidence or activist-led investigations fuel the politicisation of science and seek its reduction to a set of mere opinions infused with values, until it serves predefined policy objectives and beliefs.

But such post-modernism is not inescapable. The EU institutions can and must counter any emerging tendency to adopt, in response to these novel ideologies, risk management choices that cause unnecessary or disproportionate costs or increase risks and generate no manifest, credible societal benefits.

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TOWARDS SCIENTIFIC EXCELLENCE AND IMPARTIALITY

In its recent study on Scientific Evidence and the Management of Risk, the European Risk Forum (ERF) explains why strengthening the role and quality of the scientific evidence sourced and used in the EU decision-making can contribute significantly to restoring trust in the EU’s institutions by making risk management processes more effective, predictable, and proportionate.

When used as the key knowledge input for decision-making, the best available science provides unique ways of identifying potential risks and protecting citizens, while at the same time allocating resources wisely and stimulating innovation.

If, by contrast, the scientific evidence used to justify government action fails to demonstrate robust, causal links between exposure and damage or fails to meet widely accepted evidential standards, then it is difficult for regulators to demonstrate the efficacy of policy measures, to avoid regulatory failure, or to maintain public confidence.

To make change happen, future reforms need to tackle several dimensions, including institutional structures, policies and guidance on risk, as well as political commitment. The lunch debate organised in the European Parliament on 23 January has highlighted several ideas to make the EU a world-leader again in the use of science to support regulation, to strengthen incentives to innovate, and to protect citizens and the environment.

EU-wide, uniform principles and standards – It is imperative to adopt uniform standards for the collection, validation and use of scientific evidence, which emphasises the importance of excellence and define the characteristics of the best available science. The benefits of rigorously deploying Systematic Reviews should be highlighted, so as to ensure that scientific findings rest on the powerful ‘scientific method’. At the same time, there should be a consistent policy on the way in which scientific experts are selected, managing through transparent arrangements the many conflicts of interest facing experts, including financial, idealistic, and ideological conflicts, and their resultant biases. Without exception, future EU principles and standards must recognise that how science is produced and the extent to which it meets the standards of the scientific method is more important than who produces it.

Operational guidance – New binding Rules of Procedure for all committees used by the Commission to undertake assessments of risk should be drawn up and applied. Amongst other requirements, these new rules should recognise the unacceptability of bias in scientific advice. They should emphasise the importance of the quantification of risk assessment, of meeting international standards, and of basing assessments on the best available science. They should require committees publicly to explain the criteria, assumptions and methods used for evaluating data and scientific information.

Scientific oversight – The institutional architecture that coordinates, oversees, and implements scientific assessments should be upgraded too. A new, well-resourced scientific oversight function should be established close to the centre of the European Commission with responsibility for the quality, utility and integrity of the scientific evidence used to make risk management decisions. The current framework provided by the Scientific Advisory Mechanism and by the Regulatory Scrutiny Board may serve as the foundations for this institutional reform.

Political commitments – Finally, as the recent European Parliament discussion has reaffirmed, political commitment at the highest level is a fundamental enabling condition for reforms to happen. Political statements should be issued, stressing the importance of basing all legal, regulatory and administrative risk management decisions on the best available science, recognising explicitly that this should meet internationally accepted standards of excellence and impartiality. Possible instruments to convey such commitments may be dedicated Conclusions of the Council of the EU, new provisions in the Inter-Institutional Agreement on Better Law-making, and political guidelines from the STOA Panel.

Protecting the quality and integrity of scientific evidence, and thus providing ‘better science’ to EU decision-makers, is an opportunity to restore trust in the public management of risk, and to make it more effective, predictable, and proportionate.

In turn, this is likely to increase incentives to invest on innovation in Europe again, contributing to higher living standards and greater sustainability. The ERF is committed to explore solutions with the EU institutions and all interested parties to make this happen.
What can EU institutions do to reinvigorate trust in EU government? Members of the European Parliament, in particular, play a key role in this process, both because of the impact of their political commitments and statements on societal attitudes, and because of their active involvement not only in making EU legislation but also in shaping its implementation.

This event was an opportunity to discuss the findings and recommendations of the Monograph by the European Risk Forum on Scientific Evidence and the Management of Risk.

The study sets out the main features of an enhanced governance for procuring, collecting and using the best available (scientific) evidence for EU decision-making. This is critical to protect citizens; restore public confidence in EU decision-making; and shape a regulatory framework that is conducive to innovation and economic growth.

Read the study: http://eurac.tv/9x8U