Science for Policy

François BUSQUET
CAAT-Europe as Honest Broker

INFORMING POLICY THROUGH EVIDENCE

STAKEHOLDER PLATFORM FOR ALTERNATIVES TO ANIMAL TESTING

INDEPENDENT REPRODUCIBLE RESEARCH

Machine learning of toxicological big data enables read-across structure activity relationships (RASAR) outperforming animal test reproducibility

Thomas Luechtefeld, Dan Marsh, Craig Rowlands, Thomas Hartung
Toxicological Sciences, kly152, https://doi.org/10.1093/toxsci/kly152
Published: 11 July 2018
Interaction with Policy Makers

EU POLICY AGENDA MEETS CAAT-EUROPE EXPERTISE

CAAT-EUROPE DISSEMINATES EU ANIMAL ALTERNATIVE RESEARCH & DEVELOPMENT

CAAT-EUROPE IDENTIFIED A BLINDSPOT TO WORK WITH POLICY MAKERS OUTSIDE EU POLITICAL AGENDA

SUGGEST AMENDMENTS, WRITTEN QUESTIONS

BUILDING RELATIONSHIP & KNOWLEDGE

DEVELOPPING CONSENSUS & ACTION
Science 2.0 for policy:

- Collision
- One-way
- Interaction
- Dialogue & co-creation

• People
• Data & information
• Sharing & collaboration
“The four idealised roles of science in policy and politics”

- **The pure scientist**
- **The issue advocate**
- **The science arbitrer**
- **The honest broker**

Linear model:

BASIC SCIENCE → APPLIED SCIENCE → SOCIETAL NEEDS

Stakeholder model:

BASIC SCIENCE → SCIENCE IS A RESOURCE → POLICY OPTION A

Pielke 2008; Calow 2014
society driven by facts only is ... 
society driven by values only is... 
society driven by facts and values are...

Value only 
Abortion  
(pro-life vs. prochoice)

Simultaneously 
GMO

Fact only  
Policy on earthquake detection

Policy questions can fall in each category or simultaneously
Major Challenges
Agendas dominate the policy process
Everyone has an agenda
Policy makers DO NOT UNDERSTAND science
Scientists meet MEPs: a relation based on trust
by Scientific Foresight (STOA)

Written by Zsolt G. Pataki with Riccardo Molinari,

To promote the role of science in ensuring a sound basis for public policies and political decisions, the European Parliament’s Panel for the Future of Science and Technology (STOA) organised ‘Science Week at the European Parliament’, between 5-7 February 2019, in cooperation with the European Commission’s Joint Research Centre (JRC), and the European Research Council (ERC). The week of scientific events
Policy makers
DO NOT GRASP UNCERTAINTIES
Catch 22: More science for more evidence can be a vicious cycle

Often no option to wait, need to make decisions based on imperfect knowledge and uncertainties

⇒ Policy options, flexibility

Reduction of uncertainties

Realistic or unrealistic?
Rank it!
- known
- partially known
- unknown
- unknowable

Frame it!
- methodology (expert)
- technology (data)
- epistemic (source of knowledge)
- societal (right ?)
Mapping the policy environment
### 1) Stakeholders met by MEP Norbert Lins:

<table>
<thead>
<tr>
<th>Type</th>
<th>Organisation</th>
<th>Who</th>
</tr>
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<tr>
<td>1</td>
<td>Industry</td>
<td>BASF</td>
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<tr>
<td>2</td>
<td>Ministry</td>
<td>Federal Ministry of Food and Agriculture Germany</td>
</tr>
<tr>
<td>3</td>
<td>Industry</td>
<td>European Crop Protection Association (ECPA)</td>
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<tr>
<td>4</td>
<td>Industry</td>
<td>AG Glyphosate</td>
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<td>Industrieverband Agrar (IVA) (German Agrochemical Industrial Association)</td>
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<td>Verband der Chemischen Industrie (VCI) (German Association of the Chemical Industry)</td>
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<td>Deutsche Umwelthilfe</td>
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<td>Global 2000</td>
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<tr>
<td>13</td>
<td>Agency</td>
<td>BfR</td>
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### 2) Stakeholders met by MEP Bart Staes:

<table>
<thead>
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<th>Type</th>
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<tbody>
<tr>
<td>1</td>
<td>Academia</td>
<td>Faculty of Bioscience Engineering, Department of Plants and Crops, Ghent University</td>
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<td>2</td>
<td>Industry</td>
<td>European Crop Protection Association (ECPA)</td>
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<tr>
<td>3</td>
<td>NGO</td>
<td>People for the Ethical Treatment of Animals Foundation (PETA UK)</td>
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<tr>
<td>4</td>
<td>Ministry</td>
<td>Belgian Ministry of Health, Food Chain Safety and Environment</td>
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<tr>
<td>5</td>
<td>NGO</td>
<td>GLOBAL 2000</td>
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<td>6</td>
<td>NGO</td>
<td>AVAAZ</td>
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<td>7</td>
<td>Attorney</td>
<td>Baum, Hedlund, Aristei &amp; Goldman</td>
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<td>Pesticide Action Network (PAN) Europe</td>
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<td>9</td>
<td>NGO</td>
<td>Belgian Bee Keeping Center for Research and Information (CARI), Utrecht University, Bee Life</td>
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<tr>
<td>10</td>
<td>Academia</td>
<td>University of Natural Resources and Life Sciences (BOKU), Vienna</td>
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<tr>
<td>11</td>
<td>Academia</td>
<td>Brunel University London</td>
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<td>Pesticide Action Network (PAN) Europe</td>
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<td>UFZ - Helmholtz Centre for Environmental Research, Leipzig, Germany</td>
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When:
- January 2018
- 11.04.2018
- 24.04.2018
- 4.5.2018
- 14.5.2018 (together with Norbert Lins)
- 26.6.2018
- 5.9.2018
- 5.9.2018
- 5.9.2018
- 5.9.2018
- 5.9.2018
Further readings...