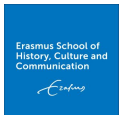


SCIENCE COMMUNICATION IN SUPPORT OF EVIDENCE-BASED POLICY-MAKING

EU POLICY BRIEF



EU Policy Brief: Science Communication in Support of Evidence-Based Policy-Making

Release date: 28 February 2022

H2020 Project

Trustworthy, Reliable and Engaging Scientific Communication Approaches – TRESCA

Grant agreement no. 872855

Duration: January 2020 – April 2022 (28 months)

Budget: EU contribution: 1,199,601.25 €

Website: <https://trescaproject.eu/>

Funding scheme

H-2020-EU.5.h – Improving knowledge on science communication in order to improve the quality and effectiveness of interactions between scientists, general media and the public Swafs-19-2018-2019-2020 – *Taking stock and re-examining the role of science communication*.

Research and Innovation Action – RIA

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- In a Nutshell Kurzgesagt GmbH – KURZ (Munich, Germany)

- Observa Associazione – OBS (Vicenza, Italy)

- Science Business Publishing Limited – SBP (Northwood, United Kingdom)

- Zentrum für Soziale Innovation GMBH – ZSI (Vienna, Austria).

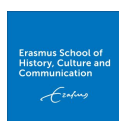
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Layout by Adolfo Antón-Bravo, CSIC (Madrid) * Powered by Debian GNU/Linux + Emacs + Orgmode + Inkscape

Suggested citation: Gábor Szüdi, Pamela Bartar and Sara Degli-Esposti (2022), “EU Policy Brief: Science Communication in Support of Evidence-Based Policy-Making”. H2020 TRESCA (GA no. 872855): 28 February. Available at: <https://trescaproject.eu/>



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INTRODUCTION

“**Trustworthy, Reliable and Engaging Scientific Communication Approaches – TRESKA**” is a project funded under the European Union’s Horizon 2020 Research and Innovation Programme. Its objective is to develop trust in science through the innovation of communication practices of scientific researchers, journalists and policy-makers. TRESKA draws insights from the experience and expertise of a multidisciplinary team of scholars and science communication practitioners in order to better understand how to communicate scientific findings in the most effective and accurate way.

In particular, the TRESKA team focused on the problem of **mis/disinformation related to current scientific issues** such as COVID-19 and to **digitalisation** as part of its activities.

TRESKA encountered an **amplified distrust in institutions** and corporations, coupled with an increased concern of citizens for the reliability of information sources, further exacerbated by the COVID-19 pandemic. These issues need to be effectively addressed with appropriate scientific advice contributing to the design and implementation of sound public policies. TRESKA developed **artefacts** (a science communication video, a MOOC and the proof-of-concept of a misinformation widget) to help mitigate the communication gap between scientists, policy-makers and citizens.

This policy brief complements these efforts with **concrete and practical advice – aimed primarily at the Directorate-General for Research and Innovation** as well as at national and regional level – **on how to better engage with researchers and communicate scientific findings that can inform key policy decisions.**

Based on project findings and feedback received from stakeholders, **in order to foster mutual understanding and trust between scientists and policy-makers, the following actions are beneficial:**

1. new **visual and media formats** should be used more often to make sound scientific evidence more digestible and accessible to the public and to policy-makers.
2. **young scientists** – in particular female researchers – should be encouraged to engage in science communication activities involving policy-makers as early as possible in their career.
3. **professional science communicators** should be more involved in publicly-funded research activities in order to facilitate a constructive dialogue between scientists, policy-makers and stakeholders.

This is the final version of the TRESKA Policy Brief which was updated after a stakeholder consultation.

TRESCA ARTEFACTS

(1) TRESCA Massive Open Online Course (MOOC)



The MOOC *Communicating Trustworthy Information in the Digital World* represents an opportunity for policy-makers, scientific communicators and scientists to learn about their respective communication practices.

The MOOC is available here:

- <https://trescaproject.eu/online-science-communication-course/>
- <https://www.coursera.org/learn/communicating-trustworthy-information-in-the-digital-world>

(2) TRESCA science communication video



A practical example of how to use **engaging, visual means** to communicate scientific findings not only to the general public, but also to policy-makers.

The video is available here: <https://www.youtube.com/watch?v=XFqn3uy238E>

(3) TRESCA Misinformation Widget (Ms.W)



Ms.W is a methodology and a toolkit to help journalists, policy-makers and citizens investigate the veracity of information they find online and taking into account their biases and degree of vulnerability to misinformation.

A description of the toolkit and the methodology is available here: <https://digital.csic.es/handle/10261/251951>

EVIDENCE AND ANALYSIS: CHANGING LANDSCAPE OF SCIENCE COMMUNICATION WITH POLICY-MAKERS

During project activities, the TRESKA team identified various effects that the pandemic and digitalisation have on the relationship that policy-makers have with science communication. Here we summarise current mechanisms that ensure European policies are informed by scientific advice. Every day, policy and decision makers need to take timely and well-articulated decisions under very complex circumstances with more scientific findings getting available at an increasing speed. This complexity contributed to an **increased institutionalisation of scientific advice** in legislative and regulatory decision-making processes at EU level. At present, EU decision-making is informed and influenced by scientific evidence as part of their procedures, as evidenced by specific EC's *Scientific Advice Mechanisms* such as the *Group of Chief Scientific Advisors* and *Science Advice for Policy by European Academies* (SAPEA), whose opinions complement those coming from the *Joint Research Centre* (JRC) and from the *Panel for the Future of Science and Technology* (SOTA).

To further support the presence of scientific advisers in the institutional process, the EC has drafted specific **guidelines** and formulated recommendations about how to better communicate **science**. These documents identify key priorities for deepening communication and strengthening knowledge transfer between research and policy-making. **Professional science communicators can support the EC** in the creation of training material and training opportunities to increase scientists' communication skills. Such training could be complemented with other activities aimed at bringing scientists and policy-makers closer, such as the [MEP-Scientist Pairing Scheme](#). This is a shadowing activity between Members of the European Parliament (MEP) and scientists to improve access to scientific advice and deepen scientists' understanding of the role that scientific advice can play in policy-making.

To foster a stronger, interactive engagement of scientists with decision-makers requires that both become **fluent in the languages of science and policy**. Therefore, it is worrying that, based on the results of TRESKA research, even though they are mostly intrinsically motivated to do so, scientists – in particular early-stage researchers – have no time and receive no training or have no incentives to engage in science communication activities. The current incentive and reward system offers limited recognition to early-stage researchers for their science communication activities. A movement from traditional methods of measuring academic impact to **new forms of alternative metrics** could help in this respect. The EC can also support scientists' outreach activities through schemes such as awards or **prizes to particularly active or successful scientists communicating their research**. When drawing up such schemes, principles such as **gender and racial equity** should be taken into consideration.

The ongoing **shift towards open science** is also transforming science communication, giving rise to open scholarly communication addressing not only data access, but also scientists' engagement with policy-makers. Within the framework of open science, the benefits offered by novel tools under Horizon Europe, such as the [European Open Science Cloud](#) (EOSC) or the [Open Research Europe](#) (ORE) publishing platform, should be promoted amongst early-stage scientists. Greater openness should allow young researchers to communicate their scientific findings even when they diverge from mainstream views.

However, increased openness should not hinder the **reliability** of scientific outputs used for policy advice, further questioned by recent controversial issues such as COVID-19. Peer-review and **fact-checking have a role to play in** debunking misinformation and in re-affirming sound scientific information. The set-up and maintenance of such online platforms is one of the main recommendations of the [Action Plan against Disinformation](#). The [European Digital Media Observatory](#) has also facilitated the creation of a network of new fact-checking hubs to support the collaboration between academics, policy-makers and media researchers in the fight against scientific misinformation.

Open science can also be strengthened by the uptake of new science communication formats and channels. **TRESCA research shows that traditional science communication methods** (e.g., scientific reports, scholarly books and articles, official communications of research advisory groups) **still play a key role** in offering scientific advice to policy-makers. However, classical inreach activities **should be complemented by easily understandable** – but not oversimplified or exaggerated – **visual and digital solutions**, such as videos, infographics, process diagrams and maps. The collective move to smart working has further reshaped the way we interact with peers and other researchers. Emerging forms of digital interaction, such as webinars, science virtual cafés, online surveys, consultations or other informal online spaces are examples on how scientists and policy-makers can now engage with each other.

POLICY IMPLICATIONS AND RECOMMENDATIONS

Based on these considerations, we recommend the following actions:

(1) Create training opportunities and tailor-made learning resources, such as MOOCs, course materials or shadowing exercises for scientists and policy-makers to learn the vocabulary and perspectives of each other to promote knowledge transfer. Such training opportunities for scientists can already be **included in PhD programmes** or offered for early-stage scientists to help them improve their communication and language skills. Training course developers may rely on advice from professional science communicators, and such guidelines may be tested in practice to truly build competence.

(2) Leverage the use of digital media to create easily ‘digestible’ and accessible, visualised science communication content that are at the same time not simplified or exaggerated, such as **videos, infographics, process diagrams or maps,** and host virtual meeting spaces, such as **webinars, virtual cafés, online consultations** or more informal online spaces to support an interactive two-way dialogue between scientists and policy makers.

(3) Prepare short but comprehensive science communication guidelines aimed towards both scientists and policy-makers at an institutional level that include **practical advice** on how to understand the interests, beliefs and values of the other parties. **Professional science communicators** can help scientists and policy-makers better understand the institutional framework within which science communication functions to achieve the right communication tone and format.

(4) Strengthen the EC’s open science policy by encouraging open science activities of early-stage scientists through more rapid and transparent publication opportunities with less costs and administrative burden at new platforms such as the **European Open Science Cloud** or the **Open Research Europe** platform.

(5) Promote the use of ‘fact-checking’ websites and tools around ‘hot’ scientific topics such as COVID-19, helping distinguish accurate from inaccurate online information in order to re-affirm evidence-based policy-making. The **European Digital Media Observatory** (EDMO) initiative is a positive example of providing this sort of support to policy-makers. The use of such tools should also be part of the training and awareness-raising efforts against misinformation.

(6) Promote new ways to motivate young researchers to participate in science communication with policy-makers that go beyond the established system of academic assessment and career incentives, with a specific focus on early-stage researchers and female scientists. This might include different schemes, such as **prizes or small grants** that can be considered a merit to be added to researchers' CV. TRESKA research shows that young (specifically female) scientists are keen to get engaged with policy-makers, but rarely have the time and need to give priority to academic publications for the sake of their career.

POLICY BRIEF METHODOLOGY

The methodology underpinning the findings and recommendations of this policy brief includes the analysis of both primary and secondary research data. A **comprehensive review** of relevant academic publications and white papers (project reports, policy documents, online repositories, etc.) was initially carried out to better understand current and emerging trends influencing the relationship between science communication and policy. To corroborate hypotheses emerging from this review, the following research activities were performed.

The TRESKA team conducted **29 semi-structured interviews with key policy-makers at national and transnational level** to gather detailed views on various aspects of the policy-science communication interface. Topics explored included relevant information sources, most demanded scientific topics, science communication channels and formats, stakeholder engagement methods and ways to disseminate policy initiatives. To complement the findings from the policy-making perspective with insights from the scientific community, the TRESKA team conducted an **online survey asking scientists about the most common (dis)incentives influencing their willingness to engage in communication with policy-makers** and the general public. Altogether **246 responses** were collected from scientists across Europe, mostly from Austria, Hungary, the Netherlands and Spain.

While these samples cannot claim to be representative, the countries involved in the desk research, interview and survey process were selected to represent a **balanced geographical coverage of the EU** and a mix of countries showing high level of social trust (Netherlands), medium level of social trust (Austria) and low level of social trust (Hungary, Spain). Social trust, which is an antecedent of institutional trust, refers to the trust we generally have in other people in our society we do not know.

RELEVANT EU DOCUMENTS ON SCIENCE COMMUNICATION & MISINFORMATION

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