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Short policy brief RP1

HOW TO SUPPORT A HEALTHY SCIENCE COMMUNICATION ENVIRONMENT?

Version 1.5

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ENJOI - ENgagement and JOurnalism Innovation for Outstanding Open Science Communication
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QUALITY ASSURANCE

To ensure the quality and correctness of this deliverable, we arranged an internal review and validation process. The deliverable was drafted by the work package leader (formicablu). All partners contributed and reviewed the overall draft. Finally, the final version was submitted to the project coordinator for a final review and validation.

DISCLAIMER

This deliverable contains original, unpublished work except where clearly indicated otherwise. It builds upon the experience of the team and related work published on this topic. Acknowledgment of previously published material and others' work has been made through appropriate citation, quotation, or both.

The views and opinions expressed in this publication are the authors' sole responsibility and do not necessarily reflect the views of the European Commission and the Research Executive Agency (REA), that are not responsible for any use that may be made of the information here contained.

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1. SUMMARY

1.1 Towards healthy science journalism in the Southern European region: PROBLEMS

Science communication, and to some extent also science journalism, are affected by a relation with science that has been defined as “too close for comfort”. It is often conceived as a byproduct of science, aimed at promoting its results, rather than as an independent, critical activity. As a result, some practices that are considered as indispensable in other areas of communication are still lacking in many science communication acts. Science communicators often tend to promote scientific results without **independent, critical thinking**, as recently shown by the Covid-19 pandemic. Stories based on a single source, experts interviewed on topics far from their actual expertise, lack of transparency, and weak connection with the social, economic and cultural aspects revolving around science: with few exceptions, science communication and journalism in Europe often lack a **scientific approach**.

These shortages are felt more intensely in Southern European countries, according to what emerged in the ENJOI Engagement Workshops and has been collected by interviews with experts, possibly due to the fragility of their media system. With fewer resources, training and opportunities available, these countries often appear to be at the tail-end in Europe in terms of quality of their media system, including the science communication environment. At the political level, this comes with a cost. Science coverage is often an **obstacle** rather than a facilitator towards the **development or influence of specific science-based policies**.

1.2 Towards healthy science journalism in the Southern European region: SOLUTIONS

Within the ENJOI project, we started drafting some guidelines to help change the status of science communication and science journalism in Europe, with a specific focus on the Southern European region. Reversing the current trend is crucial to effectively tackle challenges such as global health, climate change, AI and many others that are looming large. These issues can only be dealt with within a framework of policies and actions properly informed by science, allowing all relevant stakeholders to decide and act based on evidence. At the same time, proper policies are needed to support and improve the work done by science communicators and journalists, particularly when local and

national resources are lacking and the working environments are not particularly favourable.

The **main objective of this Policy Brief** is to present some challenges detected by the ENJOI Consortium and their possible solutions for effectively communicating **Science to Society** as a whole in a transparent, reliable, and valuable way. We wish to stress that the problems and the suggestions included in this document are still **a working list** and will be further defined, improved and completed within the second half of the project, when the interactive, co-creation activities will be finished, and a thorough evaluation of the entire participatory process will be undertaken.

2. ENJOI CONTRIBUTION TO SCIENCE COMMUNICATION

ENJOI (ENgagement and JOurnalism Innovation for Outstanding Open Science Communication) explores and tests **engagement as a key asset** of innovation in science communication and science journalism distributed via media platforms, with a strong focus on journalism.

Through a combination of methodologies and collaboration with producers, target users and stakeholders, ENJOI **co-creates and selects a set of standards, principles and indicators (SPIs)** condensed into a **Manifesto for Outstanding Open Science Communication (OOSC)**.

ENJOI works in four countries. Three of them are in Southern Europe (Italy, Portugal and Spain) and the fourth (Belgium) is primarily considered as a benchmark representing an average European situation. Therefore, ENJOI highly considers **different cultural contexts** that might impact **the practice of mediated science communication.**

Through a series of actions, such as Engagement Workshops (EWs), Labs, field and participatory research, scientific literary review, evaluation and testing phases, ENJOI validates **the SPIs** and makes them accessible and usable by the science communication community and interested parties and stakeholders at large.

ENJOI has designed and built an **Observatory** as its landmark product to make all results and outputs available to foster capacity building and collaboration of all actors in the field beyond the project duration.

ENJOI's ultimate goal is to promote **Outstanding Open Science Communication**. Contextually, it contributes to the active development of **critical thinking, digital awareness and media literacy** of all actors involved in the process, and thus facilitating **democratic deliberation and fighting misinformation**.

ENJOI in a nutshell

ENJOI strongly supports the need for improved scientific communication and journalism, particularly through innovative approaches and methodologies:

ENGAGEMENT
A variety of actors (SciComm users and producers) are directly involved in key project actions

CO-CREATION
Stakeholders participate in the process of selecting a set of standards, principles and indicators (ENJOI SPIs) of quality in SciComm

INCLUSIVENESS
Different cultural contexts and perspectives are taken into consideration

KEY ENJOI OUTPUTS

ENJOI Manifesto
SPIs available to guide people while producing, consuming and sharing information

Observatory
The ENJOI's flagship product. Results and useful tools available to foster capacity building and collaboration of all actors in the field.

Tools
Two sets of innovative, practical tools for several target users in science communication and journalism

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3. KEY QUESTIONS AND PROBLEMS EMERGING FROM ENJOI RESEARCH AND CO-CREATION ACTIVITIES

The need for thoroughly factual and carefully crafted science communication can no longer be ignored if we want citizens to fully and knowingly participate in democratic deliberations. The ENJOI's contribution to this overarching goal results from a multi-dimensional approach combining research and co-creation activities.

Besides traditional research approaches such as desk research and literature review, ENJOI tests **'engagement' as an innovative approach to directly involve all actors** in the field in creating and testing tools and products designed to improve science communication. A considerable number of inputs and insights emerged from both branches of activities, some of them highlighting criticalities that need to be addressed.

The different activities and outputs that ENJOI undertook and that generated a preliminary set of indications for policymakers and institutions are described in the table below:

Task and activities	Output	Problems detected
Literature review for the SPIs and the **inception report**	D2.1 - Inception Report for the co-creation of SPIs	- Information about best practices in science communication is spread through a wide variety of different, heterogeneous sources (from papers, to codes of best practices, to books, to grey literature like opinion articles, reports etc.) - The way publications in the field of SciComm are classified and are searchable do not refer to standards, principles and indicators. In other words, there are no direct search keys and tags to identify the literature focusing on these issues. - The initial survey of existing SPIs showed a significant overlap of advices and indications coming from very different sources. This might suggest that there is an

		underlying agreement among experts about the key-ingredients of a high-quality science communication.
Relationship between **science and media**	D5.1 - Literature review about the science-journalism relationship	- Scientists and journalists have different perceptions about their own and each other's roles in science communication, related to who should have control over the message. Scientists mostly described their roles as active experts, educators or science popularizers. Journalists tended to see scientists as more passive sources of expert information. In addition, journalists generally described their roles as critical and independent, whereas scientists preferred journalists to take on more supportive roles. - Studies about what discourages scientists and journalists from participating in science communication identified many challenges related to a lack of time, resources and skills. There is a lack of communication skills among scientists and at the same time a lack of basic scientific knowledge among journalists. There are concrete difficulties to make time for science communication for both parties.
Exploration of innovation in **media landscapes** - 4 lines of innovation have been analysed through literature search, interviews and case studies. The four lines are: **engagement** journalism; **data** journalism; **innovative and interactive formats** and **solution** journalism.	D7.1 Digital engagement focus report D7.2 Analysis report on the use of data and open science results D7.3 Focus report on innovative digital formats	- Public awareness of the importance of science for society is increasing but trust in the media is at an all time low. - Science is not a national/local issue. Science coverage is often limited to national networks because media tend to interview and involve only 'known' names who have become prominent public figures. - Innovative science communicators have to make a huge personal 'marketing' investment on social media to compete with well-established experts who are more prominent on legacy media. - Lack of reliable data and of

	D7.4 Focus report on constructive journalism	institutional transparency keeps being a challenge for journalists who practise data journalism, even if this type of information is highly recognised and appreciated by audiences
Co-creation with stakeholders during the 4 ENJOI **Engagement Workshops** (EWs) to co-create and validate Standards, Principles and Indicators (SPIs) of quality science communication and to co-design innovative tools	D2.2 Engagement Workshops (EWs) contributions to the SPIs for OOSC (Outstanding Open Science Communication)	- Participants highlighted the lack of opportunities for mutual learning and discussion between journalists and scientists/researchers and, in general, by all actors involved in knowledge production and communication. - Lack of specialisation and of professionalisation in science communication done by the media has been detected especially during critical times such as the infodemic associated with Covid19 pandemic

4. INITIAL AND PRELIMINARY RECOMMENDATIONS

Collecting, integrating and expanding upon the criticalities, lessons learned and suggestions coming from the activities that ENJOI had deployed in its first 18 months of work, a set of **8 preliminary recommendations** can be distilled. ENJOI partners have a special focus and interest in trying to reinforce and improve the quality of mediated science communication in Southern European countries, where the media system often deals with a number of infrastructural, economic and ethical problems. Therefore, many of the suggested preliminary measures are to be read and intended **within this framework of regional realities**, which can be very diverse from those characterising science communicators in other countries where the economics and the organisation of the media system are stronger, with more resources and quite independent.

Therefore, while the recommendations are intended for policymakers at all levels, from the EU Commission to the national and local level, they tend to have as a core the possibility to design EU-wide initiatives and support schemes that might foster a concrete improvement of the current situation which shows quite a degree of inequality in terms of opportunities and working conditions in the field of science communication.

The recommendations have been organised for sectors of intervention: knowledge and training; funding and resources; infrastructures; incentives, regulations and laws.

4.1 ENJOI preliminary policy messages in brief

Knowledge and training
Regularly updated knowledge on science communication is key
The description and evaluation of the state of the art of the science media and communication landscape **cannot be relied upon only on the basis of peer review and academic literature**. Given the pace of innovation and the multiplicity of actors, experiments and the rapid development of new trends, media studies do not always manage to catch the evolution and **knowledge and evaluation of the sector can only be**

complete by performing ad hoc focus reports and studies, including interviews and consultations with experts and a broad diversity of stakeholders (similar to the focus studies commissioned ad hoc on specific topics by the Panel for the Future of Science and Technology (STOA) Panel at the Euro Parliament).

Need for tailored training for science and non-science journalists

Covering science topics is no longer an exclusive task of specialists. With the global crises, **science has become part of the subjects a journalist might have to cover every day**. Training in science communication should be as distributed as training in any other journalistic practice, included in every journalism school programme and considered essential to have access to an official press card.

Demanding that science institutions employ science communicators is the first step. The second is to provide **opportunities for high-quality training** not only at the entry-level (as that granted by many Masters in science communication), but also for **mid and advanced career journalists, editors and communicators**, on one side, and **for researchers and scientists** who are asked to perform as experts of reference in the public domain. Flexible training schemes (Masterclasses; Summer schools; Intensive long weekends) must be implemented for working professionals and career scientists who can hardly attend full-time courses. Besides the formal training, **visiting schemes** (journalists in residence in a research centre and scientists in residence in a communication environment) can prove useful in understanding boundaries and needs of both professions.

Funding and resources

Agile experiments in journalism and communication

Innovation requires a lot of design, prototyping and experimenting. Funding at the European level tends to go towards big structured projects. In science communication, there is also a need for smaller-scale, innovative, agile prototyping experiments to co-design and test ideas, formats, use of diverse languages, and products tailored for different audiences. **A specific small-scale grant scheme** directed to local projects, small ventures, and innovative ideas can elicit a lot of interesting data and fresh approaches to improving the communication environment. Short-term, small-scale funding could be the key to supporting independent and creative approaches.

Quick and agile cycles of funding, with a simpler system of evaluation, can be more fruitful than big-scale projects that require well-established institutions and companies and rarely foster quick and creative innovative approaches.

Europe is changing, its population is changing, and diversity in science communication needs to be the rule.

A science communication only based on a Western traditional perspective is no longer acceptable. Media organisations and scientific institutions, as well as science communication organisations, show a very low degree of diversity. With the lack of diversity, the reasoning, the development of communication strategies, the language and finally, the products tend to miss the needs and views of part of the population. Newsrooms, as well as communication ventures and initiatives, **need to expand beyond diversity as political correctness**. Media organisations, as well as science institutions, have to become truthfully inclusive and diversified beyond one-stop initiatives such as specific workshops and seminars, to allow for more accurate and trustworthy news that cater for the needs of their audiences.

There is scope for both funding schemes and policies that support communication initiatives that prove to change structurally and work on a science communication approach that truly includes instances and demands and views from many diverse communities and cultures, and is not content with just a merely superficial approach.

Infrastructure

Small communities have the same rights as bigger ones, and science communication should never ignore them

While there are a number of science networks such as PCST, ECSITE, ESOF and many others, whose activities span globally or at least at the EU level, the **local dimensions cannot be forsaken**.

Particularly when looking at local issues, such as water pollution, the management of a forest or of a park, geological risk, the management of a river and so on, small tailored local initiatives in science engagement and communication can provide an answer to the local communities' needs that risk to be overlooked by global initiatives.

Local newsrooms; local groups of activists and concerned citizens; small independent centres… They are all key players in ensuring that local perspectives are taken into account and that there is no one dominating perspective over a range of important

local ones. Mountain communities; coastal communities; small farmers' communities; small towns, and villages have very diverse needs and expectations in terms of the scientific information and knowledge they might use.

Structural funding, as well as tech (broadband; good connectivity; open-source tools and software; etc) and infrastructural resources, should be made available and accessible to allow the development and independence of small local initiatives that might better respond to the needs of their community of reference.

Right to access critical information in an open, reusable way

Availability of fresh and updated data can make the difference between life and death in some situations, such as pandemic management or a post-disaster emergency. **Open data should be the rule** for every institution involved in monitoring, studying, producing science knowledge, and managing uncertain risk situations

Data, science publications, scientific literature, and corporate information are key components of a transparent system of information and communication. A better and more integrated system of data and information accessibility, that does not require journalists and communicators to spend big resources or to confront a high level of bureaucracy, is needed to ensure that citizens, stakeholders, researchers and all interested parties are promptly informed in issues that have relevance for the public interest. Transparency should be the key, both regarding public data and also data related to the corporate environment that proves to be of high public interest, in order to nurture trust in scientific developments.

Incentives and policies to improve the working activity

Media work environment and the peculiar status of science journalists

It is essential to encourage cultural change in the workplace, aligning with the rapidly changing society: fast technological progress and digital transformation have deeply changed workplace structures, organisations and relationships. Hence it is **urgent to align policies to meet citizens' need for quality information**. Local policy and decision makers may draw inspiration from the recently adopted Human Resources Strategy for the Commission (April 2022) aimed at granting a healthy, friendly, non-discriminatory, inclusive, gender-balanced and accessible to all working experience/environment (employees at the Commission).

A second issue regards the particular status of science journalists as **freelancers**. Particularly in Southern European media, science journalists are rarely hired by the newsrooms and are almost always freelancers. As such, they are rarely paid a proper fee. This has an impact on the amount of work they can do, the number of sources and independent experts they can interview and, particularly, the possibilities to do fieldwork. Schemes to support freelancers should be organised and applied every year to grant a critical mass of journalists who can focus on more in-depth reporting.

Media independence as a golden rule

In most Southern and Eastern European countries the media do not enjoy independence from the political and economic powers. Establishing policies and a system that can officially monitor media independence favouring those media that try to grant information in the public interest without bowing to local and national powers can provide substantial support to the quality of all information, including the scientific one.

Particular attention should be paid to ensuring a healthy media ecosystem as a precondition for giving the possibility to apply best practices and, most importantly, preventing possible pressure from institutions, both political and economic. All this can make a significant contribution to reversing the crisis of trust and responsibility experienced by the media today. ENJOI welcomes the current European Media Freedom Act - Proposal for a Regulation and Recommendation and hopes to see it further developed and enacted.

5. CONCLUSIONS

This Short Policy Brief is intended **as a living document** and will be updated at the end of the project and complemented by other material produced throughout the next year and a half of project activity and beyond.

Therefore, while we support **the initial and preliminary policy suggestions** we have outlined in Section 4, we expect to see a much stronger definition of these indications to come out of the final year of work, after the Labs will be completed and the results from all the interactive activities will be distilled and organised.

We wish to further stress the point that, while **some indications might be general and valid throughout the European region**, others need to be **tailored to the realities and difficulties** particularly encountered by science communicators, journalists and scientists in countries where the media system and the communication environment do not enjoy the same degree of wealth and freedom than in other countries.

Finally, in the upcoming years, ENJOI will be **collaborating with the other seven Swafs19 projects on science communication in a future project** and this will represent a golden opportunity to work more in-depth and intertwining findings and research coming from all diverse areas of science and society communication into **policy recommendation based on strong evidence and data**.

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