

Locating and Timing Matters: Significance and agency of STS in emerging worlds

### What Does The Public Expect From Science Communication? Explorations based on a Participatory Methodology

Ana Delicado, Jussara Rowland, João Estevens, Giuseppe Pellegrini, Andrea Rubin, Lubomir Sottnik, Dzhaner Ahmed







CONCISE



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824537".

### <u>Communication role on perception and beliefs of EU Citizens about Science</u>

#### The CONCISE project

Funding: European Commission, H2020 – SwafS

Duration: December 2018 – November 2020

Coordinator: Carolina Moreno, University of Valencia

Consortium: 5 countries (Italy, Poland, Portugal, Slovakia and Spain,), 9 partners (five academic, two SME, one CSO)





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### Objectives

I.To increase our understanding of how beliefs, perceptions and knowledge of science and technology related issues originate among EU citizens;

2. To review the existing structural obstacles that scientist and other R&I stakeholders, including policy makers, currently face when attempting to communicate science successfully;

3. To evaluate the existing models for teaching science communication to communicators and scientists in Europe;

4. To enable active citizen participation in scientific research process, in line with the concept of responsible research and innovation (RRI), by employing a public consultation methodology;

5. To measure the positive or negative perception of citizens participating in the public consultation on a selection of stories related to science.



#### Methodology

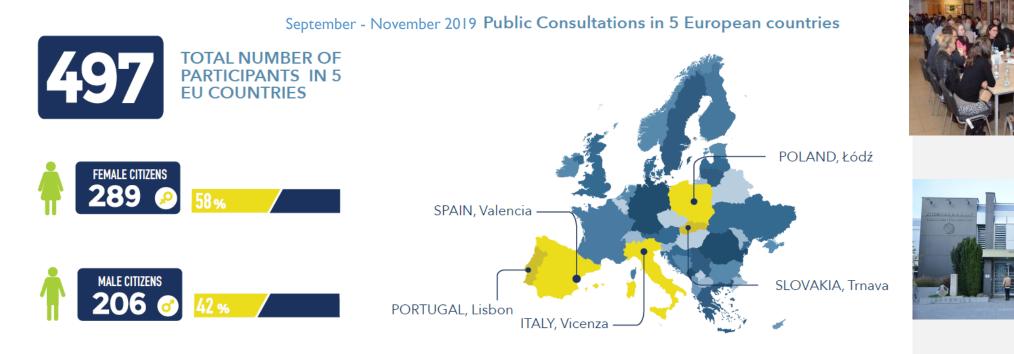
- Consultations with 100 citizens in each participating country, ensuring a diverse sample
- Discussion of 4 topics: climate change, GMO, vaccines and complementary medicine
- Issues for debate: how citizens perceive science communication, how individuals make decisions on science-related matters (e.g. vaccination), which information sources they use and find more credible
- Table discussions (qualitative data) + semi-quantitative activity (survey) for each topic



#### Methodology

- Advantages: face-to-face contact between researchers and public, allows more indepth discussion of issues, debate between contrasting opinions, language analysis (how people talk about science), raise awareness of science communication, mutual learning
- **Disadvantages**: difficulties in recruitment, biased samples (more literate and informed audiences), off-topic discussions, variations between moderators (and countries), logistic challenges, volume of written information produced for analysis







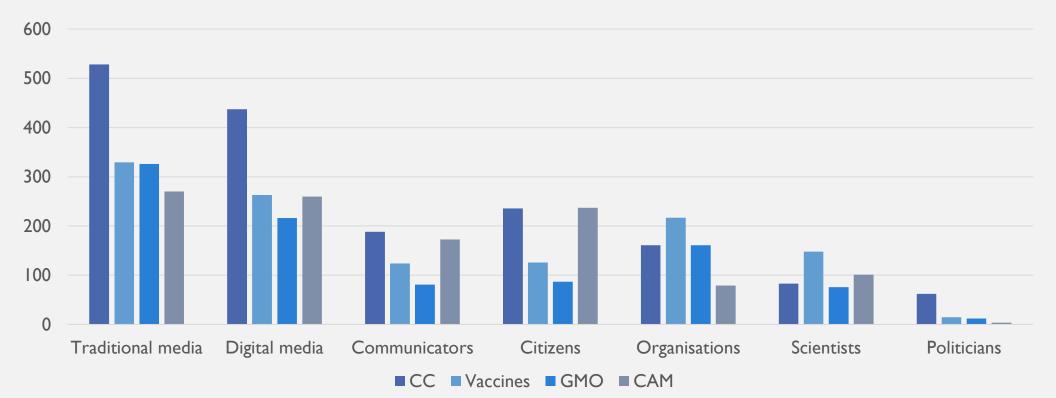








#### **Sources of information**



Number of mentions in the consultation transcriptions Nvivo Analysis (all countries except Slovakia)



#### Awareness: interest, sharing, familiarity

Alternative medicines were one of the topics that I started to find interesting because of my girlfriend, I even tried it and then over the years I tried to understand it a little bit, by chance, also. What is this? Why alternative, why is it not medicine? And the contact with my girlfriend, who has no doubts about any of the alternative medicines, gave me the reason to explore a little bit what it is. And so, I started to see many things and I became more and more skeptical. (CAM, Portugal)

I know very little about the topic, I have no children and I teach older children...(vaccines, Italy)

When I learn some information about the global warming, I share it with my family, friends, acquaintances, classmates and I also take part in some school activities. I organize some workshops, mostly types that teach how to take better care of environment. (climate change, Slovakia)



#### **Perception of science communication (quantity and quality)**

There is no information about vaccines.Vaccines are mandatory.We don't know whether they are good or bad, nor if they work or not. (vaccines, Portugal)

There is a million information, but it is a problem to orientate in them and assessment of relevance is very subjective. (climate change, Slovakia)

it is difficult to find texts that scientifically deals with GMOs and, if you find them, you find one that tells you one thing and the other that tells you the opposite... (GMO, Italy)



#### **Trust and mistrust**

If I wanted to get vaccinated, I would read about the topic and I would be interested where these information are coming from, who wrote it and why he wrote it. (vaccines, Slovakia)

I pay attention, normally... if it's an expert I give more attention, if it's a journalist I give a lot less, because there it is... there are those economic interests behind it and I never know when the news comes out biased and, therefore, I give some privilege to experts and scientists. (climate change, Portugal)

In the book and in the articles, he always cites sources of studies that he really does. Not airy-fairy things...(CAM, Italy)



#### **Evaluation of information**

I would try to find a paper about it. I would read the results, but it is not a search I would do on Google, for instance, as it is a more general opinion. Maybe I take twice the time to find reliable information, but I would rather do it. To also check if it was not financed by Monsanto (GMO, Portugal)

I listen to the opposite of everything and then I make my own instinctive evaluation... (climate change, Italy)

I would find some articles and media that are dedicated only to medicine, I would read some reputable people from that field and only then I would go to my GP and ask her about the vaccine. (vaccines, Slovakia)



#### What citizens want from science communication

The school should train, not only teach you what is a GMO, that too, but should form personalities, people who are sensitive to these issues, who are sensitive to seek information... (GMO, Italy)

Each television channel should have a specific time to talk about these topics. That is the only chance that exists! It's not only talking about the topic on a newscast, superficially, and then stop! ... I don't know... half an hour, specifically to talk about these topics on television. Just to talk about these topics, which is very important. If this is not on television, it is not worth it. (climate change, Portugal)

It is important that secondary and primary school teacher would teach students how to search for information. (climate change, Slovakia)



#### What citizens want from science communication

One essential thing is the language and how the different outputs target different publics. Because there are some very good articles that are for a medical audience, but for us is hard to understand. So, it also necessary to do this work for the people (vaccines, Portugal)

Yes, giving a news and proposing a solution, giving a news proposing a solution to which we can make a concrete and immediate contribution, that is pleasant to read because you feel you can participate in the common good, otherwise you are always a user who suffers something... (GMO, Italy)

And I think that we need to start from the cradle, from the early childhood, so they would have different thinking and attitude to nature. (climate change, Slovakia)



#### **Final remarks**

- What was presented is solely an exploratory approach to the data collected
- Ongoing analysis: recode some fields, quantitative analysis, international comparisons, sociodemographic variations
- Theoretical framework and results interpretation
- Recommendations for practitioners and policy makers
- Feedback to participants



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