PSF MLE Citizen Science

Topic 2, Day 1, 7 March 2022

Rosa Arias
CEO & Founder
<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.30-09.40</td>
<td>Welcome from the chair and presentation of the agenda (Alan Irwin, 5 minutes)</td>
</tr>
<tr>
<td></td>
<td>Short presentation of timelines for future meetings (Gillian Kelly, 5 minutes)</td>
</tr>
<tr>
<td>09.40-09.50</td>
<td>Presentation (Rosa Arias, 10 minutes):</td>
</tr>
<tr>
<td></td>
<td>• The role of citizen science in research and innovation: Citizen Science put into practice</td>
</tr>
<tr>
<td></td>
<td>• The added value of citizen science in Open Science, Sustainability and RRI</td>
</tr>
<tr>
<td>09.50-10.25</td>
<td>• National funding to promote Citizen Science: The case of Spain (Cecilia Cabello, Director STI Policies, Spanish Foundation for Science and Technology, FECYT, 10 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Q&amp;A (5 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Open discussion in Miro based on the experiences compiled by the Member States (Rosa Arias &amp; team, 20 minutes)</td>
</tr>
<tr>
<td>10.25-11.20</td>
<td>Barriers to the implementation of successful citizen science projects (Rosa Arias, 10 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Interactive exercise in Miro (Rosa Arias &amp; team):</td>
</tr>
<tr>
<td></td>
<td>• Working on the challenges and potential mitigation strategies (30 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Open discussion (15 minutes)</td>
</tr>
<tr>
<td>11.20-11.30</td>
<td>Break</td>
</tr>
<tr>
<td>11.30-11.45</td>
<td>Analysing the impact of citizen science projects:</td>
</tr>
<tr>
<td></td>
<td>• The ACTION impact framework (Antonella Passani, T6, 10 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Q&amp;A (5 minutes)</td>
</tr>
<tr>
<td>11.45-12.00</td>
<td>Examples of impactful projects:</td>
</tr>
<tr>
<td></td>
<td>• Teatime4science (Judith Sarneel, Umea University, Sweden, 7 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Q&amp;A (8 minutes)</td>
</tr>
<tr>
<td>12.00-12.15</td>
<td>Examples of impactful projects:</td>
</tr>
<tr>
<td></td>
<td>• D-NOSES. Citizen science for monitoring odour pollution (Rosa Arias, 7 minutes)</td>
</tr>
<tr>
<td></td>
<td>• Q&amp;A (8 minutes)</td>
</tr>
<tr>
<td>12.15-12.25</td>
<td>Open discussion (Antonella Passani, Judith Sarneel, Rosa Arias)</td>
</tr>
<tr>
<td>12.25-12.30</td>
<td>Closing and next meeting (Alan Irwin)</td>
</tr>
</tbody>
</table>
3 Topic Meetings ➔ 4 Countries

- **Topic 4 Meetings (Enabling environments and sustaining CS):**
  - 2 country visits:
    - Part I: Austria (7 and 8 June 2022);
    - Part II: Hungary (12 and 13 September 2022)
  - If due to Covid situation requires to be online:
    - 6 and 13 September (09.30-12.30 CET)

- **Topic 3 Meeting (Maximising the relevance and excellence of CS):**
  - Slovenia (10 and 11 October 2022)
  - If due to Covid situation requires to be online:
    - 10 and 11 October 2022 (09.30-12.30 CET)

- **Topic 5 Meeting (Scaling up CS):**
  - Germany (7 and 8 November 2022)
  - If due to Covid situation requires to be online:
    - 7 and 8 November 2022 (09.30-12.30 CET)

**Final Meeting:** 13 December in Brussels/Online
**Dissemination event:** early 2023 (exact date TBC)
The role of Citizen Science in R&I

CS is one of the 8 pillars of the European Commission’s Open Science Policy:

Open Science
An approach to the scientific process that focuses on spreading knowledge as soon as it is available using digital and collaborative technology. Expert groups, publications, news and events.

OBJECTIVES OF CS (‘Science with and for Society’, Horizon 2020)

1. Building effective cooperation between science and society
2. Recruiting new talent for science
3. Pairing scientific excellence with social awareness and responsibility
4. Ensuring a more responsible science and enabling the development of policies more relevant to society at large
The role of Citizen Science in boosting RRI

**PUBLIC ENGAGEMENT**
Engaging *citizens and quadruple helix* stakeholders to work together within the R&I ecosystem and tackle societal challenges.

**OPEN ACCESS**
Making *science accessible*, free of charge and without restrictions.

**ETHICS**
Connecting research with the [10 Principles of Citizen Science](#) and considering ethical principles.

**SCIENCE EDUCATION**
Boosting education through *training and participation* in science, increasing scientific literacy and critical thinking, and fostering STEM careers.

**GENDER**
Promoting gender balance and the *inclusion of sex and gender aspects* in R&I. Gender considered in all participatory activities, including the communication used to engage girls and women into the projects.

**GOVERNANCE**
Fostering the connection with *decision makers* for the official uptake of citizen generated data and to inform evidence-based policies.
Engaging citizens in research processes

The **active engagement of citizens in science boosts**:

- Relevance and effectiveness of **research agendas aligned with society**
- Consideration of the **needs, expectations and values of society**
- Creativity and better **quality of research and of data**
- **Scientific literacy**, skills and competences; science education; critical thinking and fighting against misinformation
- **Confidence of the public** in research outcomes and **institutions**
- **Transparency**, **social inclusion** and **employability**
- **Mutual learning** between science and society
The view from ECSA

1. European Citizen Science Association (ECSA):

- **Definition of CS:** participation of the general public in scientific processes in an open and inclusive approach and its use for societal benefit and decision-making processes.

- Developed the **10 Principles of Citizen Science**

- **Characteristics of Citizen Science:** guides practitioners in the implementation of CS projects.

CS is an integral part of the **EU’s Open Science Policy** and an agreed priority for the **European Research Area (ERA)**, which seeks that “The general public should be able to make significant contributions and be recognized as valid European science knowledge producers”.

1. **Open Science, Citizen Science and RRI are key** approaches to align societal needs with scientific objectives and tackle major societal challenges.

2. R&I can benefit from Citizen Science to produce new knowledge and **advance towards participatory democracy**.

3. Citizen Science actively **contributes to Open Science and RRI**.

4. Citizen Science needs to be **aligned with responsible funding** programmes to ensure project implementation and sustainability.

5. **Institutional changes** are needed to foster research incentives and mainstream CS into the European Research Area.
Support to Citizen Science in H2020

Why promote citizen science and societal engagement?

- **Contributes to excellence**
  - Enlarges the scope of R&I and the quality and quantity of data collected, discussed and analysed
  - Increases the robustness of the outcomes
  - Enables innovative and creative approaches
  - Leverages collective intelligence (often excluded from contributing to R&I)

- **Contributes to effectiveness**
  - Aligns outcomes with the needs, values and expectations of society, ensuring greater relevance and uptake
  - Reduces time-to-market of innovative products and services
  - Triggers behavioural changes

- **Contributes to trust of society in science**
  - Increases openness, transparency, and ‘co-ownership’ of society
  - Often leads to more inclusive outcomes
  - Encourages mutual learning between science and society

*Presentation from Linden Farrer, EC DG R&I, & Niamh Delaney, REA at EU-Citizen.Science event (27/10/2021)*
Support to Citizen Science in H2020

Table 1: Number of citizen science and citizen engagement projects in Horizon 2020, as of 15/07/2020

<table>
<thead>
<tr>
<th># of projects</th>
<th>SwafS theme</th>
<th>Citizen science &amp; citizen engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Running (at least 1 review held)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Running (1st review to be completed)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Just started (Q4 2019 / Q1 2020)</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>TOTAL GAs signed, as of 15/03/2020</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Forecast of 2020 call</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>TOTAL H2020</td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>
The volume of environmental knowledge generated by citizens' science initiatives across the EU offers a unique opportunity to help achieve the Green Deal and other EU priorities, and to involve the public in policy making.

Great interest: Topic 10.3 Green Deal 204 proposals submitted!! Horizon Europe: Some citizen science in the "Widening" part. We need to embed citizen science in all Clusters & Missions.
Support to Citizen Science in Horizon Europe

Art 2.5: 'Open science' means an approach to the scientific process based on **open cooperative work, tools and diffusing** knowledge;

Art. 7.11: The programme shall promote **co-creation and co-design** through **engagement of citizens**;

Art 14.4: Other open science practices shall be promoted and encouraged, including for the **benefit of SMEs**;

Art. 39: The work programme may provide for additional incentives or obligations for the purpose of adhering to **Open Science practices**.

The **current increase of CS projects** in the EU clearly shows the **growing participation of society in research and innovation**. Scientists, research organisations, and agencies are still discovering the benefits.
The presence of CS activities and strategies in Europe is highly contextualised.

Multi-level governance structures are building up

Are there any shared/common working documents/practices supporting Citizen Science in your country? (multiple choice)

* Survey carried out in 2019 in the framework of the COST Action on CS (WG3 “Improve society-science-policy interface”)

* 45 responses from all EU Member States, as well as Switzerland, Norway, Albania, Turkey, North Macedonia and Israel, for a total of 33 countries.

* Presentation from Sven Schade at EU-Citizen.Science event (27/10/2021)
PSF MLE Citizen Science

National funding to promote CS: The case of Spain

CECILIA CABELLO
FECYT
National Funding to Promote Citizen Science
We catalyze the relationship between science and society, promoting the Spanish scientific culture and fostering the transfer of knowledge through outreach, education, training, information and advising.

We collaborate with others’ agents and actors of the science, technology and innovation system in the internationalisation of Spanish science and the generation and analysis of data, and we provide support in the management of scientific information and open science.
<table>
<thead>
<tr>
<th>Area</th>
<th>Area</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERIODISMO CIENTÍFICO</td>
<td>CULTURA DE LA INNOVACIÓN</td>
<td>LA CIENCIA DE LA COMUNICACIÓN CIENTÍFICA</td>
</tr>
<tr>
<td>PARTICIPACIÓN CIUDADANA EN LA CIENCIA Y LA INNOVACIÓN</td>
<td>PROMOCIÓN DEL SISTEMA ESPAÑOL DE CIENCIA, TECNOLOGÍA E INNOVACIÓN</td>
<td>ARTE, CIENCIA Y TECNOLOGÍA</td>
</tr>
<tr>
<td>SISTEMA NORMALIZADO DE INFORMACIÓN CURRICULAR</td>
<td>CIENCIA EN EL EXTERIOR</td>
<td>LAS MUJERES EN LA CIENCIA Y LA INNOVACIÓN</td>
</tr>
<tr>
<td>OFICINA IBEROAMERICANA</td>
<td>ASESORAMIENTO CIENTÍFICO</td>
<td>ESTUDIOS DE TENDENCIAS Y ENCUENTRAS DE PERCEPCIÓN EN CIENCIA, TECNOLOGÍA E INNOVACIÓN</td>
</tr>
</tbody>
</table>
An EVALUATION COMMITTEE score:

1. Objectives and quality

2. Innovation and scientific-technical relevance

3. The project is structured and planned realistically and correctly

4. The project encourages the participation of new audiences (or inclusion)

5. Strong communication strategy

6. Experience of the team

7. Mechanisms to evaluate the impact of the project

Promotion of the scientific, technological and innovation culture through National Funding

ANNUAL CALL FOR PROPOSALS SINCE 2007

> 700 SUBMISSIONS PER YEAR

150-200 PROJECTS FUNDED PER YEAR
Promotion of the scientific, technological and innovation culture through National Funding

ANNUAL CALL FOR PROPOSALS SINCE 2007

> 700 SUBMISSIONS PER YEAR

150-200 PROJECTS FUNDED PER YEAR

O3 M1.1, 2013

“Encourage citizen participation in the scientific process through citizen science activities”

2016

Fundación Ibercivis

An EVALUATION COMMITTEE score:

1. Objectives and quality

2. Innovation and scientific-technical relevance

3. The project is structured and planned realistically and correctly

4. The project encourages the participation of new audiences (or inclusion)

5. Strong communication strategy

6. Experience of the team

7. Mechanisms to evaluate the impact of the project
Agreement to Promote Citizen Science in Spain

ACTION PLAN FOR THE STRENGTHENING, DEVELOPMENT AND CONSOLIDATION OF CITIZEN SCIENCE IN SPAIN

- 8 thematic meetings
- A sustainable and long-lasting Communication Plan
- I International Forum
  upcoming II Forum!
- > 300 participants
Agreement to Promote Citizen Science in Spain

ACTION PLAN FOR THE STRENGTHENING, DEVELOPMENT AND CONSOLIDATION OF CITIZEN SCIENCE IN SPAIN

- 8 thematic meetings
- A sustainable and long-lasting Communication Plan
- I International Forum
  - upcoming II Forum!
- > 300 participants

2018

Citizen Science Call Modality
€300,000

Since then...

- €960,000
- +21% submissions
- +25% funding (€)
Citizen Science in Spain: an overview

Knowledge areas of Spanish Citizen Science Initiatives ( nº of projects).
Informe del Observatorio de la Ciencia Ciudadana en España (2020)
Citizen Science in Spain: an overview

Impacts of Citizen Science (no. of projects).
Informe del Observatorio de la Ciencia Ciudadana en España (2020)
Collaboration established in H2020 citizen science projects with Spanish participation. Informe del Observatorio de la Ciencia Ciudadana en España (2020)
Spanish Citizen Science across Europe

Collaboration established in H2020 citizen science projects with Spanish participation. Informe del Observatorio de la Ciencia Ciudadana en España (2020)
Long-term sustainability strategies

“The social and economic responsibility of R&D&I through the incorporation of citizen science and the application of co-creation and open access policies, as well as the alignment of R&D&I with social values, needs and expectations”
Long-term sustainability strategies

“The social and economic responsibility of R&D&I through the incorporation of citizen science and the application of co-creation and open access policies, as well as the alignment of R&D&I with social values, needs and expectations”

Law 14/2011 article 38, paragraph 2

“Promote citizen participation in the scientific and technical process through, among other mechanisms, the definition of research agendas, observation, collection and through, among other mechanisms, the definition of research agendas, observation, data collection and processing, impact assessment data collection and processing, impact assessment in the selection of projects and monitoring of results, and other citizen monitoring of results, and other citizen participation processes.”

Science, Technology and Innovation reform. February 22, 2022
Follow us:

fecyt.ciencia
FECYT_Ciencia
Fecyt_ciencia
FECYT

THANK YOU
Barriers in the implementation of CS projects

- Challenges for **Scientific Recognition**
- Challenges for **Career Scientists**
- Challenges for **Citizen Engagement**
- Challenges for **Data Quality**
- Challenges for **Demonstrating Impact**
- Challenges for **Sustainability**
- Challenges for **National Schemes**
Challenges for Scientific Recognition

- Citizen Science has **lower scientific impact** than traditional science due to the **limited scope** of citizen science projects (also **funding**).

- **Underrepresented scientific fields** within citizen science (e.g. Social Science and Humanities (SSH), Public Health, Policy Research, History).
Challenges for Career Scientists

- Lack of necessary skills and familiarity to implement Citizen Science projects: need for education and training.
- Lack of interdisciplinary teams (i.e., a Social Scientist to support citizen engagement in Natural Sciences)
- Lack of incentives for scientists to enrol in a more complex and less controlled research scheme.
- Lack of scientific and academic career recognition.
Challenges for Citizen Engagement

- Increasing the **number** of participants
- Challenges in the engagement of citizens in **risk of social exclusion**
- **Barriers**: poverty, gender issues, ethnic minorities, language barriers, etc.
- **Role of citizens limited** to data gathering.
- **Cooperation** with CS organisations is needed to promote change. From top-down to **bottom-up**.
- **Motivation mechanisms are key**: relevant knowledge, access to information, games, entertainment, solving a direct problem they have, creating or accessing a community.

Are **rewarding mechanisms** needed? How **ethical** are they in each case?

Do citizens participating in citizen science projects have **internal biases**?
Challenges for Data Quality

- Automatic data validation mechanisms are costly.
- Data is dispersed and difficult to access and re-use.
- A data-centric approach is not systematically adopted, making it difficult to assess, measure and compare results and impact.
- Data sharing between projects is still a challenge.
Challenges for demonstrating impact

- Explore **new impact** and **evaluation metrics** that embrace new social dimensions.
- Use **co-creation** and participatory settings.
- Create **indicators to measure the impacts of citizen science**.
- Create indicators at the **adequate level** (local, regional, national, European) that can be easily measured to demonstrate impact.
Challenges for Sustainability

- **Lack of resources** to maintain technological tools (e.g. apps or platforms).
- Maintaining **engagement** (participation fatigue).
- **Financial** sustainability to ensure a **long-term** perspective.
- **Upscaling and replicability** mechanisms to cover wider areas or fields.
- **Lack of spaces to learn** especially relevant to younger generations.
Challenges for National Schemes

- Different **levels of maturity** of CS practices across countries.

- Limited **transfer of knowledge across countries**: limits replicability, increases the required efforts, limits maturity of results.

- Necessity of **building a strong European network** and supporting mutual learning, role modelling, and best practices.

- **Different** support **mechanisms** and funding schemes in the different countries.
PSF MLE Citizen Science

The ACTION impact framework

#HorizonEU

HORIZON EUROPE POLICY SUPPORT FACILITY
2021 – 2027

ANTONELLA PASSANI
T6 Ecosystems
ACTION
www.actionproject.eu
**ACTION: PARTICIPATORY SCIENCE TOOLKIT AGAINST POLLUTION**

**ACTION TOOLKIT**
Co-designed methodologies and socio-technical tools simplifying the everyday life of CS projects and supporting their sustainability.

**ACTION ACCELERATOR**
A set of services, tailored to the needs of each CS project, including: training, mentoring, infrastructure to host projects and their data; promotion and networking.

**ACTION MASTERCLASSES**
Tailored events for local, national and EU policy makers and civil servants interested in maximizing the potential of CS in their territories.

**ACTION OPEN CALLS**
Funds and support for 10 new and ongoing citizen science projects related to any form of pollution in Europe and worldwide.

**Lead institution:** KCL – KINGS’ COLLEGE LONDON  
**Start – End year:** 2019-2022 (just closed)  
**Funder:** Horizon 2020, SwafS programme  
**Website:** https://actionproject.eu/
ACTION IMPACT ASSESSMENT METHODOLOGY

5 AREAS OF IMPACT:
- SCIENTIFIC IMPACT
- SOCIAL IMPACT
- ECONOMIC IMPACT
- POLITICAL IMPACT
- ENVIRONMENTAL IMPACT

TRANSFORMATIVE POTENTIAL
ACTION IMPACT ASSESSMENT DIMENSIONS

**SCIENTIFIC IMPACT**
- Scientific knowledge
- New research fields and interdisciplinarity
- New knowledge resources
- Innovation in education

**SOCIAL IMPACT**
- Community building and empowerment
- Social inclusion
- Researchers’ and research community’s growth and empowerment
- Knowledge, skills and competences
- Changes in way of thinking, attitude and values

**ECONOMIC IMPACT**
- Impact on employment
- Cost saving
- Income and revenue generation for leading organisations
- Economic impact on the local communities

**POLITICAL IMPACT**
- Impact on policy process
- Political participation
- Self-governance

**ENVIRONMENTAL IMPACT**
- Impact on ecosystem
- Impact on biodiversity
- Impact on soil quality
- Impact on water quality
- Impact on air quality
- Impact on health
It is modular: not all the areas of impact/dimensions are relevant for all CS projects. Each CS project team can select the areas of impact/dimensions that are of interest and the impact assessment is done ONLY on those areas of impact/dimensions.

It is flexible: data can be gathered involving different stakeholders and in different time-frames. Ideally, each CS project should run an Ex-ante and Ex-post impact assessment in order to better monitor the changes between the situation “before” the project start and its conclusion. And, ideally, data should be provided not only by project team members but by citizens engaged in the activities. If this is not possible, we developed dedicated tools for assessing the impact only at the end of the project and by engaging only CS project managers.

Is fully operationalised: each dimension has been operationalised in indicators and variables and related questions so that, after the end of ACTION, CS projects will be able to use it in an autonomous way.

It guides the CS teams to reflect on their expected impacts thanks to a visual tool: the ACTION impact assessment canvas, a 4 page visual template that can be used for kick-starting the impact assessment process.
## IMpactS

### Accelerated pilots

- **16** pilots
- **89,700+** people reached
- **157** events organised
- **1,200+** participants
- **42** scientific outputs
- **3** press releases
- **62** articles

### Types of pollution addressed by the pilots

- Light: 4
- Soil: 6
- Water: 3
- Noise: 1
- Air: 2

---

### Social Impact

- **Very high impact**

### Environmental Impact

- **Very high impact**

### Political Impact

- **Very high impact**

---

### SDG Goals

1. Quality Education: 5 pilots
2. Zero Hunger: 1 pilot
3. Good Health and Well-Being: 3 pilots
4. Clean Water and Sanitation: 9 pilots
5. Gender Equality: 1 pilot
6. Reduced Inequalities: 1 pilot
7. Sustainable Cities and Communities: 10 pilots
8. Responsible Consumption and Production: 9 pilots
9. Climate Action: 4 pilots
10. Life on Land: 2 pilots
Example of new knowledge resources:

Involved citizens in environmental monitoring of their local riverbank, resulting in an interactive map of the environmental quality.
Example of social inclusion: Sonic Kayaks by

Thanks to its interdisciplinary approach, that combines natural science and sound art it allows people with visual impairment to actively participate in water pollution data gathering activities.
Value generated

For this analysis we consider only 7 projects. Overall their volunteers dedicated 1,551 hours to data gathering that would have cost approximately €29,000 if carried out by Post-Doc researchers.*

* Salary cost of post-doc work based on Ribeiro et al 2019
Example of political impact: NoiseMaps by BiT-LAB

Recording sound pollution. Empowering citizens with an evidence-based voice to contribute to policy agenda setting, and to collaborate with the municipality. Increasing political support for citizen science through positive collaboration with the city council in Barcelona.
Thank you!

Contact info:
Antonella Passani
a.passani@t-6.it

References

www.actionproject.eu
PSF MLE Citizen Science

Example of impactful project: Teatime4science

JUDITH SARNEEL
Researcher
Umeå University
Teatime4science
THE PROJECT: NAME + LOGO

Lead institution: Umeå University
Start – 2015 to 2019 (ongoing)
Funders: Swedish Research Council, Formas

Funding: 2014, 2020

Reach: global

Objectives:

Understand global drivers of decomposition through the creation of a global map.
Role: citizens in data collection/design of experiment
Citizen groups: EVERYONE active outreach to schools
Number involved: > 26 000 (in 2019)
Motivations: Fun, Participation in Research (importance, learning), Learning.
CITIZEN ENGAGEMENT

Engagement strategies: Email, Facebook/Twitter, school-visits, Teaching manual in different languages Website (teatime4science.org) Collaboration/support with local groups

Gender/ underrepresented group involvement:
- 75% women in the team.
- We will interview a range of people about their tea studies
- AGES (AU) made a pamphlet highlighting the diversity of researchers contributing to the SDG
DATA COLLECTION & QUALITY

Feedback (point with data on map) **Not perfect**

Submit online (consent on data use)

Data quality check (email)

Filtering out impossible values

Interpolated to a global map

Searchable webtool

1500 means (point data)

HARD!

Tea gets lost

Submit your own results

Submit one data point

European Commission
No written communication plans (but started with that in TeaTales)

Some assistants helped with data-checking and communication

Twitter and FB and local public events

Feedback to the citizens via FB and via TeaTales project (but not 100% overlap with all participants)
In some school projects we have done an enquiry before and after the project.

Scientific impact: ca 200 citations of the method publication

Policy, environmental, social or economic impacts: Diffuse. We make the view on research and soils a bit more positive.
No exploitation plan

Project has been replicated all over the world (science and citizen science)

Sustain the funding: apply from funding bodies (the tea company is not interested in a collaboration)
PSF MLE Citizen Science

Topic 2, Day 1, 7 March 2022

Rosa Arias
CEO & Founder
D-NOSES Coordinator

HORIZON EUROPE POLICY SUPPORT FACILITY
2021 – 2027
THE PROJECT: D-NOSES

Lead institution: Ibercivis / Science for Change

Start – End year: April 2018 - September 2021

Funder: EC, SwafS H2020 call

Funding received: €3.158.000

Geographical reach: Spain, Portugal, Germany, Greece, Italy, Bulgaria, the UK, Uganda and Chile

Objective of the project: Introduce odour pollution in the policy agendas at a global scale in the medium to long term.
Role: Citizens involved in the whole project lifecycle: From research problem definition, data collection and analysis

Citizen groups engaged: Neighbours, communities, some schools.

Number of people involved: + 2800 citizens involved in engagement
+1000 citizens used OdourCollect

Motivations: Odour pollution is a matter of their concern limiting their quality of life.
CITIZEN ENGAGEMENT

Engagement strategies: Community events, field work, co-creation workshops, local media interventions (papers, radio, twitter…) Each strategy adapted to each pilot.

Gender in the research/engagement strategy
- 67% of the D-NOSES teams are women, who play key roles
- 71% of odour observations reported come from women

Strategy to reach underrepresented groups
D-NOSES inclusivity model
**DATA COLLECTION & QUALITY**

**ODOURCOLLECT: a tool for data collection**

**Data set:** Type, subtype odour, hedonic tone, intensity, hedonic tone, geolocation, time, duration.

**Validate data - DATA PLAUSIBILITY**

1. Individual level
2. Collective level
3. Scientific level

---

**Odour training for participants**

- Theoretical/scientific and practical aspects
- OdourCollect app training
- "Sensory walk"

---

**- D-NOSES MOOC**

**- Didactic units of OdourCollect**
DATA COLLECTION & QUALITY

OPEN DATA
Odour Observations from OdourCollect (D-NOSES)
https://doi.org/10.5281/zenodo.5732853

FAIR data
Goal of the new professional version of OdourCollect.
Coming soon!
Communication plan

1. **Target audiences**: communication, stakeholder engagement, advocacy, dissemination.

1. **Messages**

1. **Tone of voice**: adopted to each actor of quadruple helix

**Feedback to the citizens engaged**
- Sessions
- Videos
- Whatsapp
- Facebook
- Twitter
- Flyers
Toolkits and Guidance

Most industries or service providers do not set out to cause odour problems. Sometimes odour is an unavoidable by-product of an essential process that benefits the community.

The guides below are to help you whether you are a community affected by odour, an industry which emits odour or a policy maker involved in odour issues.

- Guidance for communities
- Advice for policy makers
- Toolkit for industry

Start taking odour observations today

Start Recording Now
**Policy:** European Committee of the Regions (CoR) has adopted unanimously at its Plenary Session on 27 January 2022 the Opinion "EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil'.

**IMPACT**

The CoR underlines the importance of citizen science and public participation for tackling odour pollution challenges. A **multi-level approach** including different inputs of various stakeholders can empower citizens to participate in decisions made about their environment and can support policy-makers and odour emitting activities to make informed decisions and better manage the issue of odour pollution.”
ADVANCES AT NATIONAL LEVEL

**Portuguese advocacy actions**
Create a high level policy group, to work towards a **national regulation in odour pollution in the country**.

**Spanish advocacy actions**
In Spain, a **standard** to monitor odour pollution through **citizen science** is being promoted, with the support of the Spanish standardization body UNE.

**Chile advocacy actions**
Chile's draft of a **first national odour emissions regulation** covering the swine sector could be a blueprint for further regulations.

**Colombia advocacy actions**
Improvement of the procedure of execution and analysis of the **odour nuisance through surveys** using the OdourCollect App. Improved data quality and time.
IMPACT

- **D-NOSES website** (~12K unique visitors), (joint) newsletters, 1.2K+ downloads
- Leaflets, audiovisual content, social media
- 44 articles, **20 scientific papers**, 101 events (~15K attendees), 40+ policy society dialogues
- IOO: 20K+ users across continents: Europe (12K), Americas (6.3K) and Asia (2.7K)
- Community Maps: policy maps, 430 observations
Exploitation plan:
Free access to all the results produced by D-NOSES
The exploitation plan has been agreed by all partners

Replicability of the project

Funding to continue with the project:

More prizes to come! :)
Thank you!

RTD-PSF@ec.europa.eu