



NEWSERA - Citizen Science as the
new paradigm for Science
Communication

Deliverable 6.7

Events 3

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STATEMENT OF ORIGINALITY

This deliverable contains original unpublished work except where clearly indicated otherwise.

Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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SUMMARY

NEWSERA is analysing science communication strategies addressed to quadruple helix stakeholders in citizen science projects across Europe. The overall aim of NEWSERA is to demonstrate the virtues of citizen science (CS) as an inclusive, broad and powerful science communication mechanism that can allow to increase trust in science communication and, in turn, in science at large, while opening up science and innovation to society, raising awareness and educating in science, and reducing the chances of incurring in fake news by promoting critical thinking.

This document presents the **events attended and planned by the NEWSERA Consortium** to promote, disseminate and actively engage the project with different audiences during its second and third years of activity (until M39).

The NEWSERA project has its core activities in the **CitSciComm Labs**. The Labs include co-creation activities to analyse and improve the CS initiatives communication towards the quadruple helix stakeholders (citizens and society at large, academic scientists, policy makers, industries) and science and data journalists. The **2nd and 3rd rounds of Labs** were carried out in 2022; the methodologies adopted for these rounds were adapted to better cater to the needs of the pilot projects involved. For example, Round 2 included labs addressing cross-cutting issues in CS, following feedback which emerged after the first round of Labs, whilst Round 3 was shaped to deliver the NEWSERA Blueprints as well as include other activities, such as a pairing program of pilots and journalists, a high-level conference, among others.

During this period, NEWSERA organised and joined **training activities** (both informal and formal), and developed and inaugurated two **art exhibitions**. These activities were closely connected with the results of the Labs, and even generated some unplanned positive outputs, such as a CS nature photography contest (described in [section 7.2.1](#)).

Additionally, NEWSERA continued to participate in **periodic meetings with sister projects belonging to the SwafS-19 programme** and in a great variety of **external events**, such as conferences, workshops, and public events, to showcase the CitSciComm Labs methodology and results.

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1. Acronyms

Acronym	Description
CitSciComm	Citizen Science Communication
CS	Citizen Science
D	Deliverable
FB	Formicablu
FC.ID	FCIENCIAS.ID Associação para a Investigação e Desenvolvimento de Ciências
FECYT	Spanish Foundation for Science and Technology
IBERCIVIS	Fundación Ibercivis
M	Month
SfC	Science for Change
SMEs	Small and medium-sized enterprises
UNIPD	Università degli Studi di Padova
WP	Work Package
4H	Quadruple helix
CoP	Community of Practice

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2. Monthly Executive Board meetings (M14-M39)

Description of the periodic Executive Board (EB) meetings between the consortium partners

The **Executive Board** (EB) of the consortium, composed of at least one representative of each partner, as explained in D1.1, has been meeting online every first Thursday of each month, since M3 - after the Kick-off Meeting. An agenda of the meeting is shared in advance to be discussed and generally covers:

- executive actions to advance in the research project per WP;
- dissemination and communication actions;
- planning of upcoming deliverables;
- administrative requirements or others.

Extra meetings were organised according to the needs.

During the monthly meetings, the EB discussed the concepts and results of the **2nd and 3rd round of CitSciComm Labs** to include cross-cutting issues in citizen science, such as the definition of indicators to measure a project's success, policy impacts, ethical issues, fake news and misinformation. The 3rd round of Labs was planned to include a **high profile event** on data journalism and misinformation in collaboration with fellow EU-project ENJOI (described in [section 6.3.1](#)).

Moreover, the EB discussed the planning of training activities, publication of key materials (Policy Briefs, Blueprints), as well as the results from planned communication activities and unexpected outcomes of the project (such as the foundation of an Iberic meeting on CS of water ecosystems). The creation of an **Editorial committee** (described in [D6.6](#)) to involve each Consortium partner in communication and dissemination activities was also decided.

3. Consortium Meetings

Description of the annual Consortium Meetings between the partners

3.1 Consortium Meeting 2021 - Virtual

The 1st Consortium Meeting was held on **April 12 2021**; partners met online due to travel restrictions caused by the COVID-19 pandemic. During the meeting, a **performance review** of each WP was held. Participants discussed results from the CitSciComm Labs and planned key improvements to future rounds of workshops. A word cloud creation exercise helped participants focus on key challenges and concepts.

During the Consortium Meeting, partners also highlighted the **unexpected new possibilities** opened by the need to hold the CitSciComm Labs online, such as the opportunity to involve a wider number of CS Pilots.



Figure 1. Wordcloud created by NEWSERA partners during the 1st Consortium meeting.

3.2 Consortium Meeting 2022 - Madrid

The 2nd Consortium Meeting was held on **July 6 2022** in Madrid; the meeting was hosted by FECYT partner.

During the meeting, participants carried out a **general overview** of tasks, deliverables, milestones, and KPIs for the next period. Moreover, participants analysed the results of the second round of CitSciComm Labs and updated the Consortium on the status of NEWSERA Pilots. A co-creation exercise to plan Round 3 of the CitSciComm Labs and the Blueprints was also held.



Figure 2. NEWSERA partners in Madrid during the 2nd Consortium meeting.

3.3 Consortium Meeting 2023 - Virtual

The 3rd Consortium Meeting was held on **February 8 2023**, concurrently with the M38 Monthly meeting; partners met online.

During the meeting, each partner gave a **report** on their most recent activities and deliverables status. In particular, D5.2 (Iteration Cycle III and IV) was presented, describing the Round 2 and 3 of the CitSciComm Labs and their impact assessment.

Moreover, the **planning of the final event** was discussed, regarding the programme and management of details (such as invitations, participants, locations and budget). During the meeting, the upcoming foundation of the Italian Citizen Science Association¹ was also highlighted, as some of its founding members have been involved in the NEWSERA community of practice (CoP).

¹ <https://newsera2020.eu/2023/02/17/the-italian-association-of-citizen-science-is-born/>

4. Editorial Committee meetings

Description of the periodical Editorial Committee meetings dedicated to plan communication activities

The **Editorial Committee** (ED.COMM) of the consortium, composed of at least one representative of each partner, was introduced to ensure a **more effective planning** of communication and dissemination activities. The ED.COMM was introduced in M19 and met on a 2-month basis, with the first meeting happening in July 2021.

An agenda of the meeting is shared in advance by Formicablu to be discussed with other participants and generally covers:

- management of the @citscicom Twitter account in multiple languages;
- sharing and review of communication materials;
- updates by each partner's representative on upcoming events, conference, publications and local activities;
- website updates.

The introduction of the ED.COMM ensured an **effective workflow** with regards to revisions of communication materials by each partner's representatives.

5. #CitSciComm Labs Round 2 (M19-M29)

Presentation of Round 2 of the NEWSERA #CitSciComm Labs

5.1 Introduction

The 2nd round of the NEWSERA CitSciComm Labs was held during the **first half of 2022** and dealt with **cross-cutting topics**, as described extensively in D3.4 (Co-designed innovative strategies for Citizen Science Communication 2) and D5.2 (Iteration Cycle III and IV: Impact assessment of the new communication strategies for each stakeholder group).

The feedback received in the follow-up meetings and the first round of CitSciComm Labs, in particular the answers on training needs, led to change the structure of CitSciComm Labs Round 2. Taking into account all the suggestions from the pilots, the shared needs, as well as NEWSERA's objectives, Round 2 was developed around four cross-cutting issues to all the projects, namely **data journalism, policy, impact indicators, and ethics and misinformation**.

Round 2 counted a total of 5 Labs comprising 15 national workshops (5 in each country), 2 individual workshops (in order to establish and replicate the NEWSERA co-design methodology with one pilot that was later incorporated in the project), and 3 mutual learning gatherings during the NEWSERA Fridays.

5.2 #CitSciComm Lab - Data Journalism

Within the Data Journalism Lab, NEWSERA organised two workshops. The first (**July 2021**) introduced pilots to general theoretical level of **science journalism and data journalism**, with invited external stakeholders, experts in science and data journalism, some of which were already members of our CoP, as well as NEWSERA partners members, such as in the case of FB team, who are also professional active journalists. The workshops were followed by common learning sessions during the **NEWSERA Fridays** (further described in sections [5.3.1](#) and [5.5.2](#)).

5.2.1 Data Journalism Track 1

The online workshops were performed in a cascading fashion, in Italy, Spain and Portugal, in their mother tongue. The format envisaged by FB was adapted to the features of the different three countries:

- **ITALY, July 8 2021:** the Lab focused exclusively on data journalism; introduction to journalism performed with data, data analysis and the possibilities and limitations of data itself.
- **SPAIN, July 13 2021:** the lab envisaged an open session with other pilots and participants, broadcasted via [YouTube](#).

- **PORTUGAL, July 13 2021:** in Portugal, the Lab focused on introductions to data journalism and criteria of newsworthiness; data and its management, such as open data; data visualisation and charts.

5.2.2 Data Journalism Track 2

A second virtual workshop (**January 2022**) through Zoom was organised with a more hands-on approach. The NEWSERA team encouraged a **closer interaction** of the pilots with local experts, hoping to boost a relationship amongst them and with journalists.

NEWSERA followed a targeted working approach enrolling professional data journalists with the aim of supporting the project leaders in meeting three main outcomes: an **effective narrative**, a **sustainable organisation of data** and data analysis, and a **robust analytical path**, from a data journalism practice perspective.

Within each country, pilots were split in **parallel working sessions** according to their features, such as, degree of maturity in data collection and monitoring and thus the availability of such data and data availability.

- **ITALY, Tue 18 January, 2022**
 - Group 1.** Pilots: Aliens in the Sea; Air of Heritage; Sea Cleaner. **Facilitator:** Francesca Conti
 - Group 2.** Pilots: Roma Up; Gert; Reef Check Italia. **Facilitator:** Elisabetta Tola
 - Group 3.** Pilots: InNat; School of Ants; Easin. **Facilitator:** Marco Boscolo
- **SPAIN, Tue 18 January, 2022**
 - Group 1.** Pilots: Genigma, Adopta una Planta. **Facilitator:** Michele Catanzaro
 - Group 2.** Pilots: URBAMAR, Observatorio Ciudadano de la Sequía-OCS, Geovacui. **Facilitator:** Karma Peiró
 - Group 3.** Pilots: Cities at Night, DNOSES/OdourCollect. **Facilitator:** Eli Vivas
- **PORTUGAL, Thur 19 January**
 - Group 1.** Pilots: Novos Decisores Ciências, FRISK, MosquitoWeb, Rios Potáveis. **Facilitator:** Vera Novais
 - Group 2.** Pilots: Lixo Marinho, Censos de Borboletas de Portugal, Caça aos ovos. **Facilitator:** Ana Figueiras
 - Group 3.** Pilots: Biodiversity4all, GelAvista. **Facilitator:** Rui Barros

An immediate result of the Lab was the publication² of a press release about the project GENIGMA in El Periódico, as shown below.

The learnings from this Lab were presented in a poster at C*Sci virtual conference and incorporated in the [D5.3 Guide of Science Communication in Citizen Science projects and Citizen Science Journalism](#).

² “¿Puede un juego de móvil ayudar a entender el cáncer de mama?”, El Periodico, December 4, 2022
<https://www.elperiodico.com/es/entre-todos/20220412/juego-movil-entender-cancer-mama-genigma-13511234>



Figure 3. Article on El Periódico about the GENIGMA project.

5.3 #CitSciComm Lab - The NEWSERA Impact Framework in practice: co-designing ad hoc indicators for CS projects

The Impact Lab was held between **February 14-18 2022**. It consisted of a series of activities aimed at operationalizing the **indicators needed to assess the communicative impact** of the CS communication actions co-designed in CitSciComm Lab 1 for each NEWSERA pilot.

In order to ensure a degree of comparability between the performance of the different pilots involved, NEWSERA devised a **common framework**³ recognising 3 macro-areas:

1. **Communication**
2. **Stakeholder engagement**
3. **Impact**

For each Macro Area, the most suitable indicators were then co-created on the basis of the data available and feasibility.

The Pilots and stakeholders involved in the Impact Assessment Lab are listed below.

- **SPAIN**
Pilots: Urbamar; DNOSES; Compass; Geovacui; Cities at night; Mammalnet; Adopta una planta.
Facilitators: Joana Magalhães, Leire Leguina, Maite Pelacho.

³ https://zenodo.org/record/7744168#.ZBw0_nbMK3A

- **ITALY**

Pilots: Gert; Roma Up; Easin; School of ants; Sea Cleaner; Reef Check Italia; Innat; Aliens in the Sea;

Facilitators: Paolo Giardullo, Maria Angela Citarella, Francesca Manzoli, Giulia Conti, Gaia Agnello, Francesca Conti

- **PORTUGAL**

Pilots: Mosquito WEB; A Grande Caça aos Ovos; Novos Decisores Ciências; GelAvista; Invasoras.pt; Rios Potáveis BioDiversity4All; Censos de Borboletas de Portugal; Lixo Marinho

Facilitators: Cristina Luís, Ines Navalhas

5.3.1 NEWSERA Friday

The Impact Assessment NEWSERA Friday was held on **March 4, 2022**. The common discussion highlighted three trends in the indicators adopted by projects: quantity, variability, and impact.

Two outstanding stakeholders took part in the NEWSERA Friday: **Alessandra Fornetti** (SwafS-19 QUEST⁴ Coordinator) shared their process and final 12 Quality Indicators for Science Communication and **Antonella Passani** (SwafS-14 ACTION⁵ Responsible for Impact Assessment WP) that talked about the Impact Assessment model of Citizen Science projects developed under ACTION project.

5.4 #CitSciComm Lab - Increasing trust in citizen generated data and demonstrating the impact of CS for evidence-informed policies

The Policy Lab was held between **14-18 March 2022**. Through a participatory workshop, the topic of capacity building was addressed by developing basic knowledge, skills and attitudes to co-design a [policy action map](#)⁶ involving different policymakers' actors and communication actions in a multi-level framework. According to the maturity phase of each NEWSERA pilot, each working group was adapted to work on specific dynamics.

The Pilots and stakeholders involved in the Policy Lab are listed below.

- **PORTUGAL AND SPAIN**

Room 1. Pilots: Observatorio Ciudadano de la sequía, Compass, Mammalnet.
Stakeholders/Facilitators: Leire Leguina (Office of Science Policy Advice, FECYT), Joana Magalhães (SfC)

Room 2. Pilots: D-NOSES, Cities at Night, Geovacui.

Stakeholders/Facilitators: Ana Elorza (Office of Science Policy Advice, FECYT), Carla Perucca (NEWSERA Team)

⁴ <https://questproject.eu/>

⁵ <https://actionproject.eu/>

⁶ <https://doi.org/10.5281/zenodo.7752668>

Room 3. Pilots: Rios Potáveis, A Grande Caça aos Ovos, VacaLoura.
Stakeholders/Facilitators: Cristina Luís, Inês Navalhas (FC.ID)

- **ITALY**

Pilots: InNAT, Roma Up, Gert, School of Ants, Air Heritage.

Stakeholders/Facilitators: Carla Perucca (SfC Policy Officer); Maria Angela Citarella, Paolo Giardullo (UNIPD), Federica Manzoli (Università di Modena e Reggio Emilia), Giulia Bonelli, Francesca Conti (FB)

The results of this Lab were presented in a poster at **ESOF 2022**. One of the case studies from the D-NOSES/Odourcollect pilot is shown below.

The public sector can benefit from CS projects as they **provide ideas and engagement with society** to better understand the needs, interests and goals of those they represent. The involvement of policy makers with the CS projects also means the **opportunity to influence policies and regulations** with **evidence-informed, scientific data**, building trust in CS and in science at large. Moreover, their involvement offers an effective way to establish a **commitment of other multilevel stakeholders**. However, this collaboration with policy makers presents a number of challenges. On one hand, CS projects need to understand the **complexities of public policy making**, and on the other, **policy makers need to realize the potential** of the CS-based scientific results that may have societal impact within their policy portfolios. Some of the barriers and opportunities, such as promoting win-win collaborations where both CS practitioners and policy makers, and ultimately society, can mutually benefit, are examples that constitute the NEWSERA Policy Briefs. Visit poster P42.

NEWSERA Pilot: D-NOSES/OdourCollect

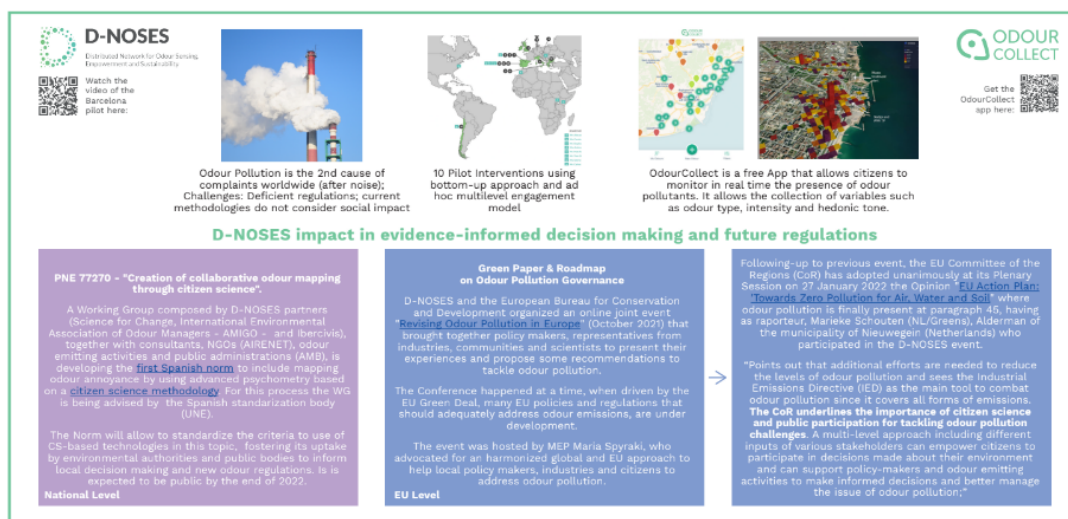


Figure 4. D-NOSES/OdourCollect case study included in the poster.

5.5 #CitSciComm Lab - Co-Identifying ethical and misinformation issues with NEWSERA pilots

During follow up meetings in between Round 1 and Round 2 of the Labs, pilots were approached with the topics of **Ethics and Misinformation**, and discussed entanglements between them.

These topics were further discussed in a dedicated Lab, first in a working session on Ethics in each country (held between **April 20-21 2022**) and then, taking advantage of the **NEWSERA Friday**, to delve on ethics implications in misinformation and the dissemination of fake news (held on **May 4 2022**).

5.5.1 Ethics Lab

The working session on Ethics was focused on effective guidelines on ethical aspects in Citizen Science communication. Two objectives were addressed:

- The correct development of **ethical aspects in the development of any participatory project**, with regard to (personal and no personal) data management.
- The ethical issues addressed by NEWSERA and its Pilots together, in order to **co-create guidelines on ethical issues in citizen science projects**, particularly related to communication.

The Pilots and stakeholders involved in the Ethics Lab are listed below.

- **SPAIN**
Pilots: Mammalnet, Geovacui, DNOSES/Odourcollect, Cities at Night, Drought Citizen Science Observatory (OCS)
Experts/Facilitators: Maria Jesus Marcos, Member of Research and Education Ethics Committee at the University of the Basque Country UPV/EHU
- **PORTUGAL**
Pilots: Novos Decisores Ciências, BioDiversity4All, MosquitoWeb, Lixo Marinho, Rios Potáveis, Invasoras.pt, GelAvista, A Grande Caça aos Ovos
Experts/Facilitators: Tiago Guerreiro, Cátia Pesquita, Members of the Ethical Committee, Faculty of Sciences, University of Lisbon
- **ITALY**
Pilots: Gert, Air of heritage, Easin, School of Ants
Experts/Facilitators: Simone Arnaldi, STS Italia, Associate Professor of Sociology at the Department of Political and social sciences, University of Trieste

5.5.2 Misinformation Lab

The NEWSERA Friday focused on Misinformation was held on **May 4 2022**. The event was organised with the aim to approach the topic in the specific setting of the NEWSERA Fridays, overcoming geographical and language barriers.

The first part was dedicated to two invited talks by **Elisabetta Tola** (ENJOI⁷ SwafS-19 Coordinator) “Mechanisms of digital misinformation”, and **Jason Pridmore** (TRESCA⁸ SwafS-19 Coordinator) “Overcoming Misinformation Vulnerabilities” who provided useful elements for the discussion supported by examples of recent disinformation.

The second part was dedicated specifically to analyse a fictional **case study** based on real events (illustrated in the image below). The activity brought Pilots to: identify risks of misinformation or misinterpretation; finding alternative frames;




⁷ <https://enjoiscicomm.eu/>

⁸ <https://trescaproject.eu/>

identify repercussions on local politics; identify ways to prevent misinterpretation of data.

The main output of this Lab was a checklist for citizen science projects to tackle misinformation and has been published in [Deliverable 3.7 Citizen Science as a communication tool in the Post-Factual Era](#).

Case study

Lago Pulito is a Citizen Science project. It involves citizens from two towns that face each other from the two sides of a lake, surrounded by hills and plains, in the Northern region of Lombardia, Italy. The lake is home to an important number of valuable native species of birds, fish and plants. There are also two protected areas along its banks, where fishing and bathing is forbidden.

The participants of the OS project have spent months sampling the waters and the sand of the small beaches, to evaluate the cleanliness, the chemical and organic quality and the state of local biodiversity.

The data demonstrates that near the urban areas there is more pollution and wildlife is less present, whilst the protected areas show a higher degree of biodiversity and also better chemical and organic quality parameters.

Now, Lago Pulito is ready to share its data with the local administrations. However, they face a puzzling problem.

The two towns are administered by opposite political governments: one is a centre-left coalition and the other one is a far-right movement. They have very different ideas with regard to environmental protection.

To make things more complicated, during the last winter, an informal settlement of refugees, which includes a number of families with small children, recently arrived, running from the war, has self-organized on a small stretch of sand, on one of the banks, not far from the protected area.

The data collected by Lago Pulito show clearly that the informal settlement is having an impact in terms of the cleanliness of the water and of the sand in the small beach. There is garbage left on the bank, there are no proper toilets, the sanitary condition of the settlement is very difficult. People use the water from the lake for all their needs.

Figure 5. The fictional “Lago Pulito” case study analysed during the Lab.

6. #CitSciComm Labs Round 3 (M34-M35)

Presentation of Round 3 of the NEWSERA #CitSciComm Labs

6.1 Introduction

The **3rd round** of the NEWSERA CitSciComm Labs was held between the end of **October** and the beginning of **November 2022**, as described extensively in D5.2 (Iteration Cycle III and IV: Impact assessment of the new communication strategies for each stakeholder group).

Round 3 counted a total of 4 Labs comprising 3 national workshops (one per country), 1 common workshop (Data Journalism Lab), and 1 mutual learning gathering during the DATA4CitSciNews exhibition.

6.2 4H-Stakeholder Labs

In this third round, the Labs focused on the quadruple-helix stakeholders were divided by **stakeholders groups**, although - differently from Round 1 and Round 2 - the subdivision was not replicated by each country. More specifically, each national group focused on specific stakeholders: **Policy makers** in Spain; **Industries and SMEs** in Spain; **Academic scientists** in Portugal; **Citizens and society at large** in Italy.

National groups in the three countries met during one-day, face-to-face workshops, which were divided into three parts:

- **Part 1** was dedicated to showcasing each NEWSERA Pilot: best practices, strengths and weaknesses, barriers and needs, resources needed, sustainability issues, as well as impacts, particularly related to their chosen 4H-stakeholder group.
- **Part 2** was dedicated to drafting the NEWSERA Blueprints - working groups by stakeholders, with representatives from each, as well as science communicators, and common ground on recommendations on how to tackle the barriers found - connected with Stakeholder Engagement, through a specific meeting with present stakeholders.
- **Part 3** was dedicated to informal networking.

In this Lab, **31 people** participated as representatives of **22 Pilots**, **16 people** represented the various 4H-stakeholder groups, and **21 science communicators** and science journalists were involved, as well as **10 NEWSERA members**.

The Pilots and stakeholders involved in each Lab are listed below.

- **PORTUGAL**
Date and location: 20 October 2022, Lisbon
Stakeholder: Academic scientists

Pilots: VacaLoura, MosquitoWeb, BioDiversity4All, Rios Potáveis, Censos de Borboletas de Portugal, Invasoras.pt, GelAvista, Novos Decisores Ciência

Stakeholders: Cátia Pesquita (Professor and Researcher in Computer Science, Faculty of Sciences, University of Lisbon); Palmira Carvalho (Curator and Researcher in Plant Ecology and Lichens, National Museum of Natural History and Science, University of Lisbon); Lanka Horstink (Research Fellow Sociology, Institute of Social Sciences, University of Lisbon)

Science communicators: Joana Lobo Antunes (Head of Science Communication Office, Instituto Superior Técnico) - member of ReThink SwafS-19 project (NEWSERA sister project); Carol Delmazo (Journalist, Science Communicator & Project Manager at ReSEED project); Bruno Pinto (Science Communication researcher, Faculty of Sciences, University of Lisbon)

- **ITALY**

Date and location: 21 October 2022, Bologna

Stakeholder: Citizens and Society at large

Pilots: Roma Up, Sea Cleaners, School Of Ants, InNat, Easin, Gert

Stakeholders: Federica Manzoli (Independent researcher, University of Modena and Reggio Emilia)

Science communicators: Laura Villanova (Member of the communication staff at CS Observatory in Italy)

- **SPAIN**

Date and location: 3 November 2022, Barcelona

Stakeholder 1: Policymakers

Pilots: D-NOSES/OdourCollect, OCS, CITIES AT NIGHT, GEOVACUI

Stakeholders: Diana Escobar (Project coordinator at the Science and Universities Department, City Council of Barcelona); María Victoria Sánchez García (Cabinet Adviser at the Ministry of Universities); César López García (Head of the Unit for Dissemination and Participation in Science, Scientific Culture and Innovation)

Science communicators: Isadora Jimenez (Member of SERA working group, Meteorological World Organisation); Victoria Toro (Science journalist, Communication Director of Asociación de Mujeres Ingenieras y Tecnólogas AMIT)

Stakeholder 2: Industry and SMEs

Pilots: DNOSES/OdourCollect, OCS, URBAMAR, RIUNET

Stakeholders: Iria Mata (Educational Projects Technician, COTEC Foundation for Innovation); Diogo Costa (Associate Professor University of Saskatchewan and CEO of ImpactBLUE Scientific); Raquel Saiz (Director of Analysis and Strategy, ASEBIO); Julia Hereza Atienza (Digital Information, Quality and Innovation Service, Directorate of Waste Prevention and Management Services, Metropolitan Area of Barcelona)

Science communicators: Adeline Marcos (NCP Horizon Europe, previously science journalist, SINC Agency); Juanita Zorrilla Pujana (Project manager SUBMON); Aaron Ross (Audiovisual expert)

6.3 #CitSciComm Lab - Data and Science Journalists

The Data and Science Journalists Lab took place in Barcelona on **November 28 2022**, following the **DATA4CitSciNews** public event (described below in [section 6.3.1](#)).

The Lab was held in person, with **7 Pilots** actively involved in co-creation activities with **media and journalism experts**; the other Pilots were invited to attend online. These projects were a selection of the NEWSERA Pilots involved in a **pairing programme** with data and science journalism, aimed at testing the developing concept of Citizen Science Journalism and at finding ways to bring projects and journalists together in a profitable way. The rationale of the Lab and the pairing programme are extensively described in D3.5 (Co-designed innovative strategies for Citizen Science Journalism 2).

The Lab followed a specific agenda, that featured:

- **NEWSERA Pilots short presentations**, detailing goal of the project, data collected and type of journalistic output (as for the example in the image below);
- **Co-creation of recommendations** to efficiently engage science and data journalists for wider impact in CS projects. To make the dynamic feasible in terms of interaction and fruitful discussion, the total number of participants was split in two groups that were meant to work in two separate tables;
- **Presentation of main recommendations and conclusions.**



InNat

Alessandro Campanaro, Alice Lenzi, Silvia Gisondi
Council for Agricultural Research and Economics, Research Centre for Plant Protection and Certification

Goal of the project
Increasing knowledge on Natura 2000 Network, surveying the distribution of selected protected species and habitats

Data collected
Records of presence on 35 animal (insects and one crustacean), 3 plant species and 3 habitats

Type of journalistic output
Dissemination of the project outputs as well as a focus on the results for the different target groups (ANTONIO MASSARIOLO, BoLive)

Available on the **Google Play** | Download on the **App Store**

www.innat.it

Data and science journalist Lab 3

Figure 6. Presentation of the InNat Pilot project.

The Pilots and stakeholders involved in the Data and Science Journalists Lab are listed below.

- **WORKING GROUP 1**

Pilots: D-NOSES/OC, Rosa Arias, Miguel Hernández; CITIESATNIGHT, Alejandro Sanchez; GelAvista, Antonina Santos; RomaUp, Sara Vegni, Maura Peca

Journalists and media experts: Natxo Lopez, Storydata; Christoph Raetzsch, Aarhus University; Rui Barros, Público; Marco Boscolo, Formicablu and Il Bo Live

Facilitators and observers: Elisabetta Tola, Joana Magalhães, Inês Navalhas, NEWSERA Team

- **WORKING GROUP 2**

Pilots: OCS, Amaranta Heredia; VacaLoura.pt, Inês Santos, Gonçalo Abreu; InNat, Alessandro Campanaro, Alice Lenzi;

Journalists and media experts: Michele Catanzaro, El Periódico; Vera Novais, Observador; Antonio Massariolo, Il Bo Live; Jesús Méndez, Science Media Centre

Facilitators and observers: Paolo Giardullo, Cristina Luís, Maria Angela Citarella, NEWSERA Team

6.3.1 DATA4CitSciNews Public event

To further develop the discussion on the topic of Citizen Science Journalism beyond the scope of the Labs, NEWSERA organised the public event **DATA4CitSciNews**⁹, in collaboration with SwafS-19 sister project, **ENJOI**. The event concept and results are described extensively in D3.5 (Co-designed innovative strategies for Citizen Science Journalism 2) and D3.7 (Citizen Science as a communication tool in the Post-Factual Era).

The event was held in Barcelona on **November 28 2022**, with science communication experts and speakers who brought examples, case studies and contributions on the topics of data science journalism, citizen journalism and misinformation in science communication. The event was carried out in a hybrid format, with a total of **75 participants** meeting in person in Auditorium Antoni Caparros in Barcelona and **318 viewers**¹⁰ following the live streaming of the event on the NEWSERA YouTube channel.

The main goals of DATA4CitSciNews were:

- to go in-depth during the keynotes on the **ethical, practical and professional framework** of data collection, analysis and use within the development of a journalistic/communication story;

⁹

<https://newsera2020.eu/2022/11/30/data4citsci-news-interconnecting-journalism-and-citizen-science/>

¹⁰ Viewer's data retrieved on 01/03/2023

- to showcase in the roundtable a **range of possible interactions and integrations** between the way CS projects can collaborate with media in the collection and organisation of data and in the use of those data to produce journalistic stories;
- look at how collaboration, co-creation and even co-design between journalists and citizen scientists could lead to a **deeper, more significant and better coverage of issues of public interest** such as the ones explored by CS projects.

The event was carried out by NEWSERA in collaboration with SwafS-19 sister project ENJOI (coordinated by FB), bringing together both communities of practice.

DATA4CitSciNews		28th November 2022
<p>↘ Open event to the public Auditorium Antoni Caparrós</p>		
9.30 - 10.00	Registration	
10.00 - 10.10	Welcome from NEWSERA and ENJOI Coordinators <i>Rosa Arias, Science for Change and Elisabetta Tola, formicablu</i>	
10.10 - 10.55	Key lecture: Data Journalism - what's new? <i>Matteo Moretti, Information experience designer</i>	
10.55 - 11.40	Key lecture: Misinformation/Fake News - what's new? <i>Joana Gonçalves, Coordinator Social Physics and Complexity Lab – SPAC</i>	
11.40 - 12.00	Session and Q&A <i>Moderated by Jesús Méndez, Science Media Center, Spain</i>	
12.00 - 12.30	Coffee Break	
12.30 - 13.30	Round table: Advancing on the concept of citizen science journalism <i>Jacopo Ottaviani - Code for Africa, Mapping Makoko</i> <i>Karma Peiró - Visualization for Transparency, Making data visible for social good</i> <i>Christoph Raetzsch - Aarhus University, Infrapublics</i> <i>Federica Arenare - Datatinja, Openthebox</i> <i>Moderated by Elisabetta Tola</i>	
13.30 - 13.50	Misinformation Recommendations for Citizen Science initiatives <i>Marco Boscolo, NEWSERA Data journalism expert</i>	
13.50 - 14.00	Visual Wrap Up and Closure <i>with Edgar Sanjuán, Visual & Design Thinker and Joana Magalhães, NEWSERA Project Manager</i>	

Figure 7. Morning program from the DATA4CitSciNews event.

In the afternoon, **co-creation labs** from both projects took place separately.

In the evening on the same day, the **DATA4CitSciNews exhibition** was inaugurated, with a networking event that reunited most participants to the Public event and

the Labs, in order to encourage connections between ENJOI and NEWSERA CoPs. The exhibition was then kept open for three days in order to grant the participation and the feedback collection of the public attending the gallery during the week. The DATA4CitSciNews exhibition is further described in [section 8.1](#).

The Twitter activity related to the DATA4CitSciNews event was monitored using the **Kampal social tool**¹¹, which was used to track social media activity in a period from February 2022 to February 2023, as described more extensively in the published full report in Zenodo¹².

The graph below shows the evolution of **#citizenscience**, **#citisci**, in addition to the specific hashtag **#data4citsci**, created for the event, allowing to analyse the impact of the latter. Clearly the former has the most important use, with a very remarkable peak in October 2022 (corresponding to the ECSA Biannual Congress) and reaching a maximum of 110 uses in one day. The peak of **#data4citsci** on November 28 corresponds to the day on which the event took place. On December 22nd the hashtag appears again, on the motive of a publication in Tercer Milenio Heraldo and the Observatory of Citizen Science in Spain.

Most notably, on November 28 the hashtag **#data4citsci** appears **35 times**, while **#citizenscience** and **#citisci** appear 26 and 3 times, respectively.

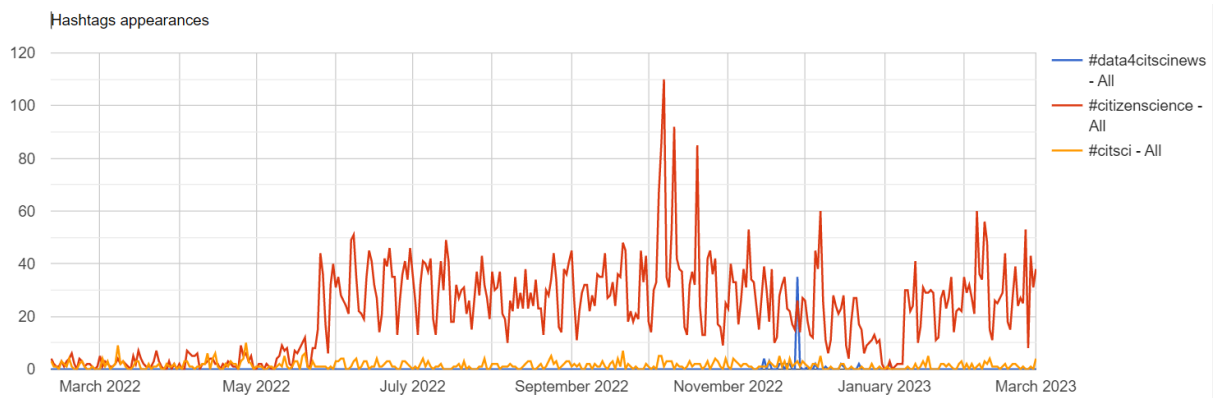


Figure 8. Use of the the specific hashtag **#data4citsci**, used for the relevant event, against the evolution of generical hashtags **#citizenscience** and **#citisci**.

Shown below, is the evolution of the usage of the other two project-specific hashtags, **#newsera** and **#citsci**. Both hashtags present a **peak on November 28**, related to the DATA4CitSciNews event.

¹¹ <https://social.kampal.com/>

¹²Pelacho M, Gonzalo A, Sanz-García F, Ferrer A, Varela-Machado O, Iguarbe A, Magalhães J. (2023). Analysis of NEWSERA's communication strategies through the Kampal Social tool for the digital sphere. Zenodo. <https://doi.org/10.5281/zenodo.7766621>

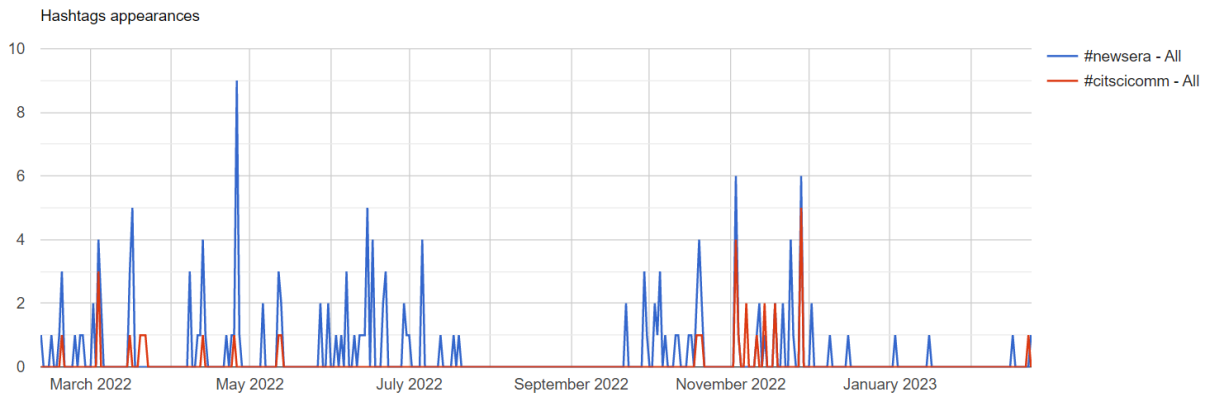


Figure 9. Evolution of the use of the specific hashtags #newsera and #citscicomm, highlighting the peak of November 28, related to the Data4CitSciNews event.

From the Kampal monitoring of views on the NEWSERA YouTube channel, it is also clearly observed that the DATA4CitSciNews video achieved **remarkable growth** in its first month, between December 2022 and January 2023, as opposed to the progressive rise of the rest of the videos. This difference is explained if we take into account that the event corresponding to this video was co-organized by NEWSERA and by another H2020 project, ENJOI (Engagement And Journalism Innovation For Outstanding Open Science Communication), bringing this second project the participation of two more countries, The Netherlands and Belgium, together with the three of NEWSERA, Italy, Spain and Portugal) as well as two more partners dedicated to the strengthening of science participation and communication.

The graph below details the **sharp increase in views** on the channel following the publication of the DATA4CitSciNews livestream.

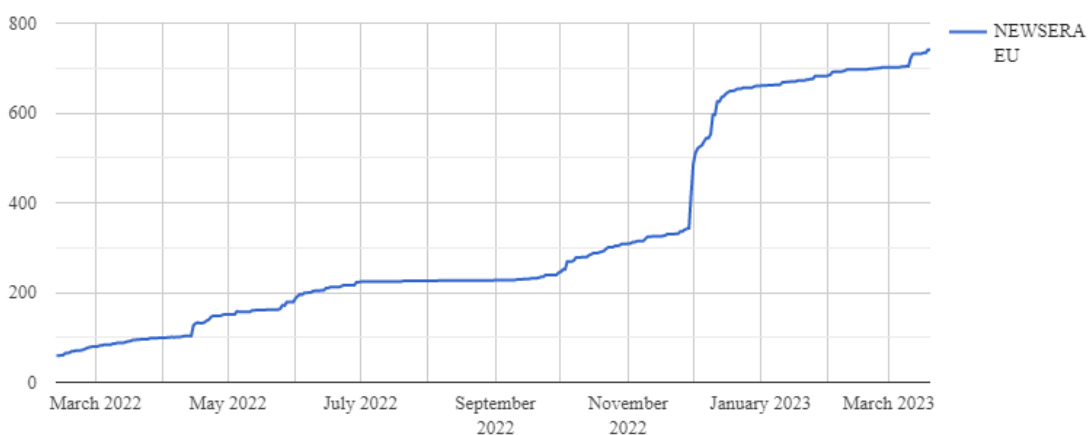


Figure 10. Evolution of views on the NEWSERA YouTube channel over time. The sharp increase in views is associated with the DATA4CitSciNews livestream.

7. Training

Presentation of formal and informal training activities carried out during the project

Within the context of NEWSERA, a set of **formal and informal training modules** for science communication was developed and tested in Portugal, Spain, and Italy, as described in D3.6 (Formal and informal training mechanisms for science communication).

A **set of five training modules** was initially developed and tested in Portugal, for a formal education (postgraduate level) context and then adapted and further tested in Italy (formal education - undergraduate level) and Spain (informal education - open to all), respectively. The overall reach of the modules was **112 people**.

Moreover, the NEWSERA team was involved in other training activities, such as courses organised by sister projects and capacity building workshops addressed to the NEWSERA Pilots, as detailed in the tables below.

Table 1. *Informal training activities carried out during the project.*

Informal training

5 workshops on Kampal in Spain and Portugal

1 training course organised by NEWSERA Pilots with NEWSERA team members as invited lecturers

3 workshops under Informal training in Spain

1 practical session in radio in Spain and Portugal

15 sessions under the CS project-journalist pairing program (3 projects in Spain, 2 in Italy, with 3 individual sessions each)

Table 2. *Formal training activities carried out during the project.*

Formal training

1 advanced course tested in Portugal

1 course in Portugal

1 course replicated in Italy

1 summer course organised by NEWSERA Pilots with NEWSERA team members as invited lecturers

1 PhD course organised by NEWSERA Pilots with NEWSERA team members as invited lecturers

7.1 Portugal

7.1.1 Initial development

From the **1st to the 5th March 2021**, the FC.ID team conducted an Advanced Course at the Faculty of Sciences of the University of Lisbon, entitled "**Strategies for Citizen Engagement in Science Communication**". Even though this Advanced Course was not initially planned under NEWSERA, it was an excellent opportunity to pave the way for the development of independent modules to be delivered and tested, both in formal and informal training.

The Advanced Course took place during an entire week (total duration: 36h), and was delivered online due to Covid-19 pandemic restrictions applied during that period. A total of 16 applications were received and all the applicants were selected to attend the course.

The trainers of this course included the NEWSERA project main core team at FC.ID (Cristina Luís and Esther Marín-González) but involved also other invited colleagues collaborating with NEWSERA that are highly experienced in science communication and citizen science practices: Filipa Vala, Patrícia Garcia Pereira and Patrícia Tiago (all from the Faculty of Sciences, University of Lisbon).

The course aimed at **exploring ways of communicating science to non-specialized audiences**, such as those from the quadruple helix innovation model: policy makers, industry, general public (including students and teachers), academia and media professionals, through their engagement and participation in citizen science activities.

7.2.1 NaturGramPT photo contest

As part of the Advanced Course, participants were challenged to develop an engaging activity for a target audience between 18 and 25 years old. One of the proposals was the **NaturGramPT Instagram photo contest**, which was later developed by two students of the course in partnership with the BioDiversity4All¹³ platform, one of NEWSERA pilots and the largest biodiversity registration platform in Portugal. The contest was also a citizen science activity, because all photographs needed to be registered in the BioDiversity4All platform, so that the data could become available for future research. As such, participants were also contributing to increased scientific knowledge.

The challenge on Instagram ran from **July to December 2022** and was highly participated, with winning photos averaging hundreds of likes. A total of **58 participants** joined the contest, and photos reached **13.896 Instagram users**. It also generated a photo exhibition (described in section [8. Exhibitions](#)).

¹³ <https://www.biodiversity4all.org/>

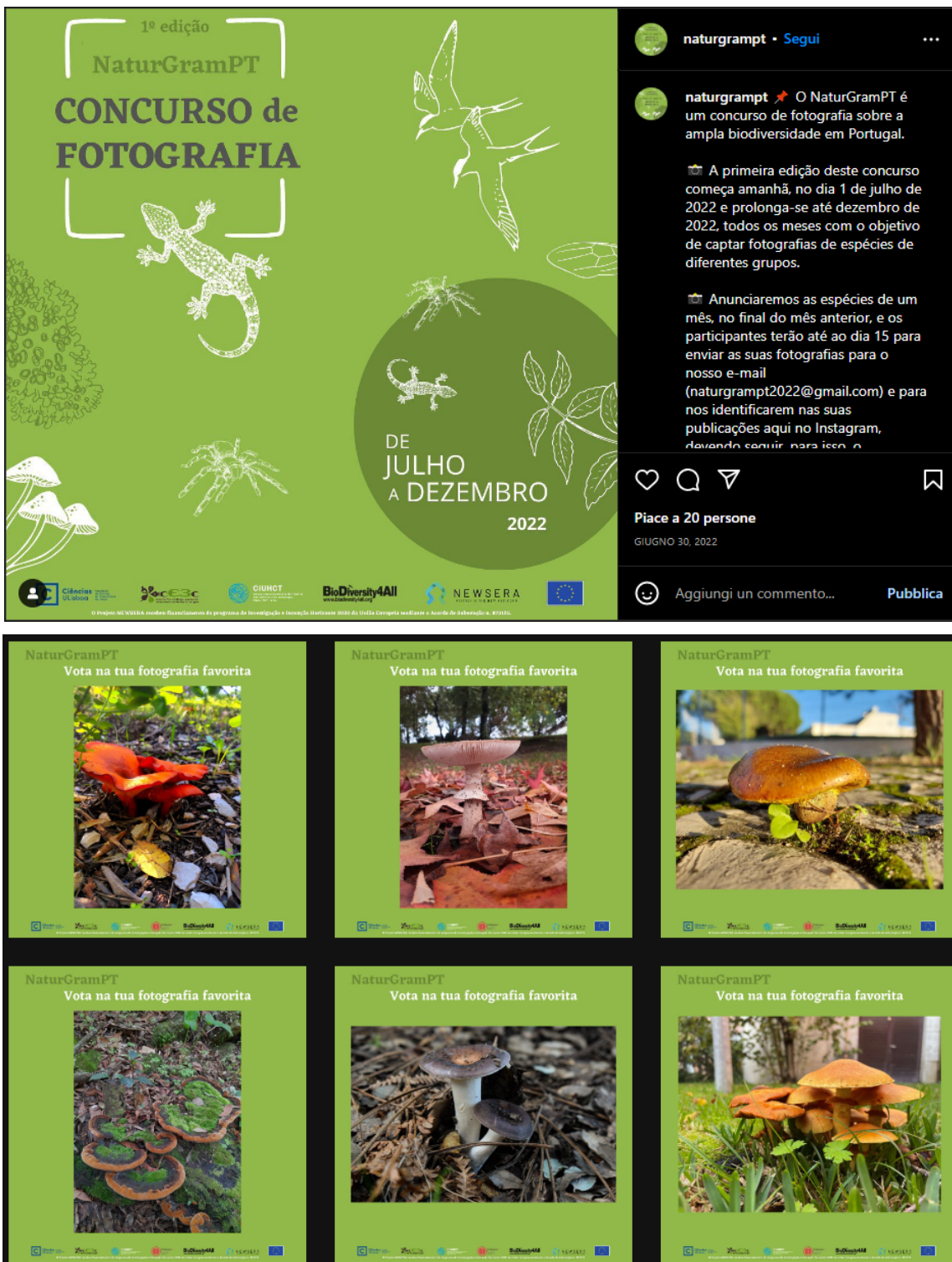


Figure 11. Screenshots from the NaturGramPT Instagram profile.

7.3.1 Formal training modules

The Advanced Course delivered in March 2021 was the base to set up **5 new modules** to support the teaching of science communication specifically targeting the development of skills for communicating science with non-scientific audiences and engaging society in science.

The modules started to be developed for formal training, to be tested on the curricular unit "**Communication in Science**", taught by Cristina Luís, and held at the Faculty of Science, University of Lisbon, Portugal, as part of a Master's in History and Philosophy of Sciences:

- **Module 1.** Directing science communication to different target audiences
- **Module 2.** Social media to communicate science to different target audiences
- **Module 3.** Out-of-the-box approaches for science communication
- **Module 4.** Engagement & Science communication
- **Module 5.** Impact assessment in science communication

The modules were tested between **October and December 2021**. The total number of students registered in this curricular unit was 8, however the number varied between classes.

7.2 Italy

The team from UNIPD (Paolo Giardullo and Stefano Crabu) implemented the modules developed in Portugal in a formal context to students at the **Science Communication, Media and Society course at the University of Padova**. The classes were delivered between **April 12 and May 10, 2022**.

Since the classes were also delivered in a formal context, there were only slight adaptations made by UNIPD to the materials provided by FC.ID, i.e., translation of the slides from Portuguese to Italian and searching for local/national examples that the students could more easily identify with throughout the modules. Each module had an average attendance of 20 students.

7.3 Spain

In Spain, some of the modules designed by FC.ID were adapted by FECYT and SfC with the collaborations of external experts (Agencia Sinc, Manuel Vicente from the Efervescencia¹⁴ radio program), and delivered in an **informal context**, specifically an online course open to citizen science projects, other professionals, and anyone interested in science communication.

The module focused on social media was adapted to be used by citizen science practitioners; the out-of-the-box activities module was adapted to be focused on podcast and radio activities, also considering gender inclusion perspective in media; and the module related to target audiences was adapted to be more focused on policy makers and their relationship with citizen science. The modules were delivered in Spanish to get access to a broader local audience.

¹⁴ <https://www.crtvg.es/rg/podcast/programa/efervescencia>

8. Exhibitions

Presentation of art exhibitions organised during the project

Within the context of NEWSERA, two art exhibitions were organised, as described below.

8.1 DATA4CitSciNews Exhibition

In the context of the **DATA4CitSciNews** event (described in [section 6.3.1](#)), SfC developed an itinerant art exhibition, which will live after the project's official end date, which was inaugurated at "The Green Parrot" gallery in Barcelona on **November 28, 2022** and held until **November 30**.

The exhibition featured **interactive installations** aimed at sparking a debate on how citizens and professionals in the journalistic world can come together to face current needs, especially in times of misinformation and fake news, and explore the potential of visual narratives, data journalism and the principles of quality scientific journalism. Specifically, how citizens and journalists and well designed data collection can be the drivers behind investigation to ultimately respond to societal needs and benefit communities.

Hereby we include a brief overview of some of the installations:

- **Installation 1. The citizen science journalism cloud**

In this first interactive space, visitors were invited to co-create a definition of citizen science journalism. Through a code, visitors contributed by responding to what are the most important values that this new concept must respect.



Figure 12. “The citizen science journalism cloud” installation at the DATA4CitSciNews exhibition.

- **Installation 5. If toxic air is a monument to slavery, how do we take it down?**

Projection of a 30-minute film authored by the London studio “Forensic Architecture” in collaboration with RISE St. James, which tells about research on toxicity in post-plantation landscapes and environmental racism. In the US state of Louisiana, over 200 industrial plants occupy the footprints of formerly slave-powered sugarcane plantations. Today, in the shadow of those plants, neighbouring communities – mostly historic “freetowns” inhabited by the descendants of people enslaved on those same grounds – breathe some of the most toxic air in the US. As industry poisons their air, it crushes the remains of their ancestors. Across the ruined mosaic of plantations, hundreds of Black cemeteries face desecration by frenzied development.

The installations were included in a catalogue, with an invited essay from Jacopo Ottaviani, Pulitzer Award for Map Makoko.



Figure 13. DATA4CitSciNews exhibition catalogue.

The DATA4CitSciNews art exhibition will also be replicated in Brussels within the context of the **NEWSERA Final event**, on March 29 2023 (as described in [section 10](#)).

8.2 NaturGramPT photo contest exhibition

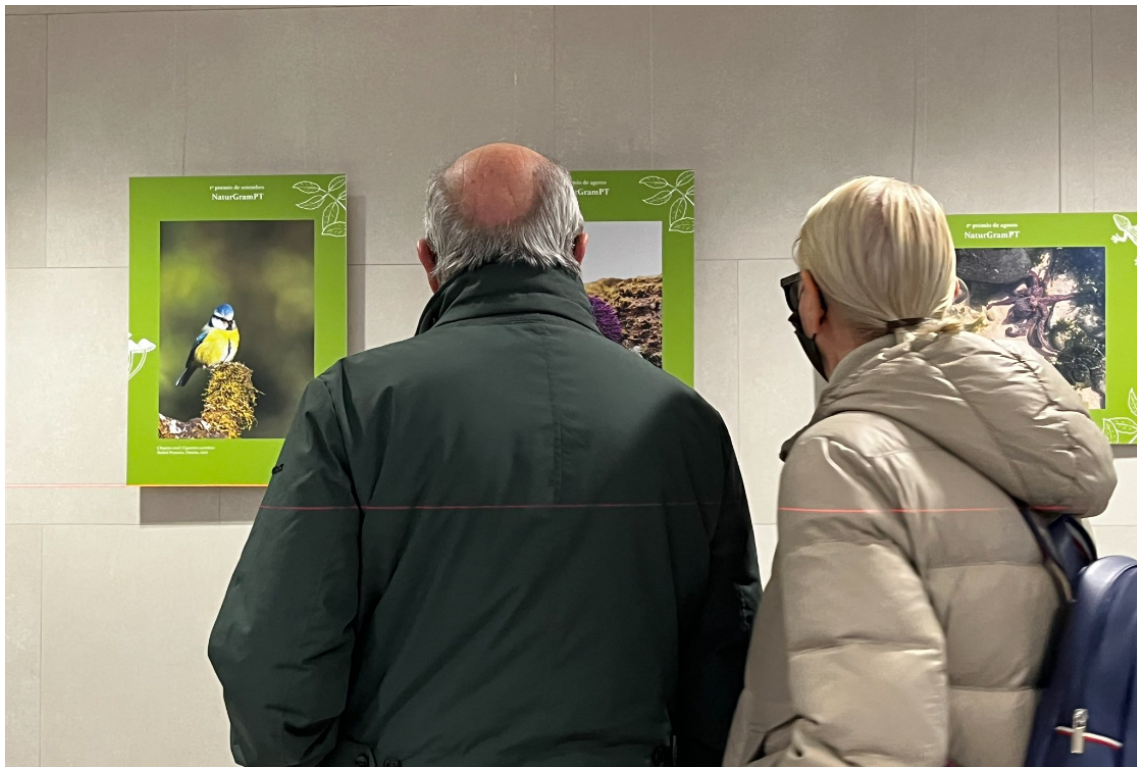
As a result of the NaturGramPT photo contest - described in section [7.2.1](#) - NEWSERA launched an exhibition featuring a selection of the photos that were submitted by participants in the contest, and were the most voted by the public.

The exhibition was presented in two different spaces, detailed in the table below. The estimated number of visitors was based on information provided by the location's representatives.

Table 3. List of NaturGramPT exhibitions.

Location	Date	Estimated number of visitors
Alvalade Shopping Centre, Lisbon	24/02/2023 - 15/03/2023	50.000
University of Lisbon Canteen, Lisbon	16/03/2023 - 31/05/2023	10.000

In addition, the NEWSERA Portuguese team also launched an exhibition catalogue (in Portuguese and English), with a brief introduction about citizen science and biodiversity and where all the photos exhibited were presented. The foreword was authored by Patricia Tiago, from the NEWSERA Pilot Biodiversity4all.



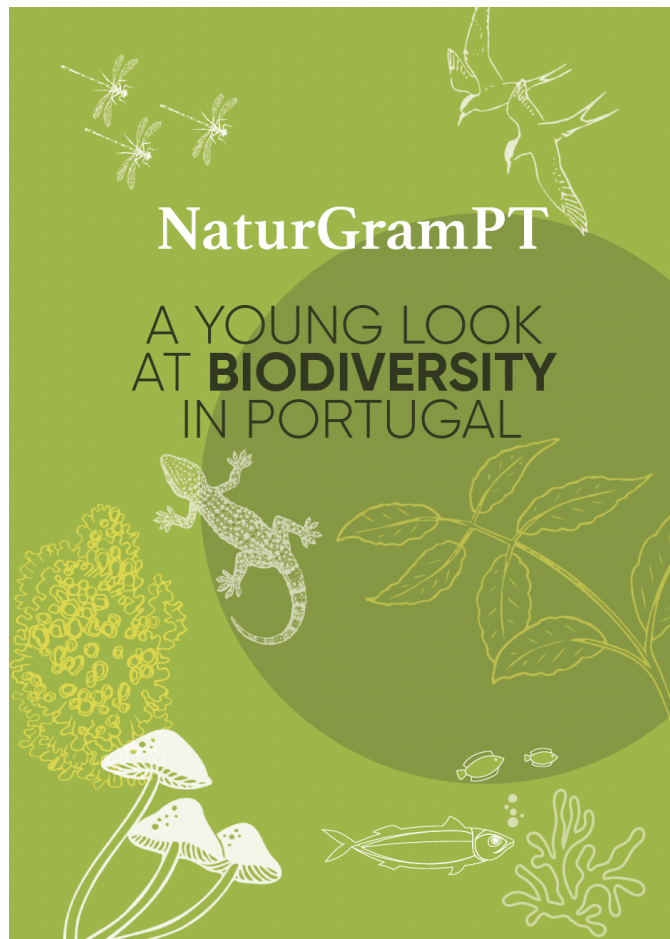


Figure 14. Top images: Visitors at the NaturGramPT exhibition at Alvalade Shopping Centre on opening day. **Bottom image:** Exhibition Catalogue.

9. External meeting and events (M14-M39)

Presentation of the meetings and events attended by NEWSERA partners and organized by other EU projects or organizations.

9.1 Periodic SwafS meetings

A series of periodical meetings between sister **SwafS-19 projects** was established in M6, as described in D6.5 (Events 2). Between M14 and M39, the group - as detailed in the following table - has continued to host regular meetings.

Table 4. List of SwafS-19 projects participating at common periodic meetings.

Project	Duration	Title	Website
CONCISE	12/2018-01/2021	Communication role on perception and beliefs of EU Citizens about Science	https://concise-h2020.eu/
ENJOI	01/2021-12/2023	ENgagement and JOurnalism Innovation for Outstanding Open Science Communication	https://cordis.europa.eu/project/id/101006407
GlobalSCAPE	3/2021-02/2023	Global science communication and perception	https://cordis.europa.eu/project/id/101006436
NEWSERA	01/2020-31/2022	Citizen science as the new paradigm for science communication	https://newsera2020.eu/
ParCos	01/2020-31/2022	Participatory communication of science	https://parcos-project.eu/
RETHINK	01/2019-12/2021		https://www.rethinkscicomm.eu/
QUEST	02/2019-7/2021	Quality and effectiveness in science and technology communication	https://questproject.eu/
TRESCA	01/2020-4/2022	Trustworthy, reliable and engaging scientific communication approaches	https://trescaproject.eu/

These meetings have been an effective way to foster collaborations, share materials and tools, offer communication support to each other's results, highlight common challenges and discuss experiences and possible solutions.

Moreover, the meetings resulted in the **publication** of a paper on the journal *Frontiers in Environmental Science*, "Taking Stock and Re-Examining the Role of Science Communication"¹⁵. The paper provided an overview of the eight projects in the SwafS-19 programme, of how they adapted to the challenges caused by the pandemic, and the subsequent implications for science communication policy and research funding. Another scientific output is the *Frontiers Special Issue on Bridging Citizen Science and Science Communication*, with Josep Roche (GlobalScape) and Joana Magalhães (NEWSERA) as two of the co-editors.

As a consequence of these meetings, several synergies have emerged, for example the participation of different members of the group in NEWSERA activities, such as

¹⁵ <https://www.frontiersin.org/articles/10.3389/fenvs.2021.734081/full>

NEWSERA Fridays, invited forewords in different deliverables or common interviews ([Horizon - the EU Research and Innovation Magazine](#)).

Without any doubt the most important result and legacy from all SwafS-19 gatherings is the common building on the outcomes of the different projects, in a **new project** in the Horizon Europe framework program “Coordinated Opportunities for Advanced Leadership and Engagement in Science Communication in Europe” (COALESCE). From April 2023, **COALESCE will establish the European Competence Centre for Science Communication** to support, give recognition and mainstream science communication in the European Research Area (ERA) and beyond. COALESCE will allow the development, consolidation, and rapid mobilisation of excellent scientific knowledge and recommendations to act in times of crisis and counteract misinformation, disinformation and fake news. It will bring together all the SwafS-19 communities of practice and the multiple stakeholders involved, and further enlarge its scope of action together with other national, international and global networks of science communication and other related topics. It will also compile and build upon the main results of the SwafS-19 projects to foster replicability and increase impact. The Centre will operate under a virtual platform connected with local, regional and national hubs in order to adapt resources to local contexts, promoting a sustainable and long term approach. It represents the perfect opportunity to build upon the legacy of the SwafS-19 projects and continue advancing the state of the art of science communication in Europe for the benefit of all its citizens and society at large.¹⁶

¹⁶ Magalhães J, Leguina L, Elorza A, Lacunza I, Luís C, Navalhas I, Pelacho M, Giardullo P, Citarella MA, Tola E, Arias R. NEWSERA Policy Brief 2. (D5.4). Zenodo doi: <https://doi.org/10.5281/zenodo.7752561>

9.2 Other meetings and events

The research methodology and results of NEWSERA have been presented in a wide variety of external conferences, meetings, workshops and training courses.

Table 5. List of events attended by NEWSERA partners since M14.

Event	Location	Date	Event type	Details	Partners involved
Roma Up training course	Online	10/03/2021	Course	Science communication training activity organised by NEWSERA Pilot Roma Up	UNIPD
CitSciVirtual	Online	19/05/2021	Conference	Hands-on workshop dedicated to explain and demonstrate the methodology of the CitSciComm Labs (8 participants)	SfC, FC.ID
RRI With & For Research Managers. Get set for Horizon Europe	Online	10/06/2021	Meeting	Poster "Citizen Science as the new paradigm for Science Communication"	SfC
STS Italia Conference	Online	17/06/2021	Conference	Roundtable "Responsible and inclusive citizen science. Comparing initiatives and assessing impacts"	SfC, FECYT, UNIPD
SciComPt2021	Online	24/6/2021	Conference	Workshop "Making and communicating science: how to break barriers?" addressed to scientists (42 participants)	FC.ID
15th ESA Conference 2021	Online	01/09/2021	Conference	Oral presentation in the in the Session RN12_01_Science, Technology and Environment (15 participants)	UNIPD
I Encuentro Nacional de Ciencia Ciudadana, Ciencias Sociales y Humanidades	Zaragoza, Spain	23/09/2021	Conference	Workshop on citizen science communication strategies addressed to policy makers (11 participants) Oral communication on NEWSERA and citizen science as the new paradigm for science communication	SfC
European Researchers Night 2021	Barcelona, Spain (and online)	24/09/2021	Public event	Poster "Citizen Science as the new paradigm for science communication (NEWSERA)"	SfC
VIII Congreso	Barcelona	30/09/2021	Conference	Oral communication on	SfC

de
Comunicación
Social de la
Ciencia
(CCSC2021)

, Spain
(and
online)

NEWSERA and citizen
science as the new
paradigm for science
communication

Congreso Internacional Culturas de la ciencia y la tecnología: praxeología de la cultura científica	Oviedo, Spain (and online)	20/10/2021	Conference	Oral communication and discussion "Researchers' barriers to communicating science: finding solutions"	FC.ID
Incontro Nazionale Citizen Science Italia	Grosseto, Italy	11/11/2021	Conference	Oral communication on NEWSERA and citizen science as the new paradigm for science communication	UNIPD, FB
Convegno Nazionale di Comunicazione e della Scienza	Trieste, Italy (and online)	17/11/2021	Conference	Video presentation on the potential of citizen science and data journalism for science communication	FB, UNIPD
Science & You	Metz, France (and online)	18/11/2021	Conference	Oral communication "Creating new pathways for increased dialogue between science and society through citizen science"	SfC, UNIPD, FC.ID
Global Community Bio Summit 5.0	Boston, USA (and online)	21/11/2021	Conference	Roundtable "Communicating Science to Policy Makers/Science Diplomacy"	SfC
Encontro Nacional de Ciência Cidadã	Online	25/11/2021	Conference	Roundtable Oral communication on science communication strategies for citizen science initiatives (40 participants)	SfC, FC.ID
Campus Gutenberg	Barcelona , Spain (and online)	02/12/2021	Conference	Roundtable on science communication in citizen science	SfC
Workshop series: Common challenges in citizen science	Online	14/12/2021	Workshop	Workshop focused on common challenges in citizen science communication addressed to researchers (30-40 participants)	SfC
STEPCHANGE workshop	Online	15/03/2022	Workshop	Workshop on NEWSERA and innovative science communication to tackle engagement challenges	SfC
Engaging Citizen Science	Aarhus, Denmark	25-26/4/2022	Conference	Poster "Re-thinking Science Communication to increase Citizen Science	SfC, FECYT, FC.ID,

Conference
2022

Projects' engagement"

UNIPD, FB

Poster "Defining citizen science communication strategies to engage citizens - NEWSERA Lab" (Winner of the **Best Poster Award** under the category "From Science Communication to Engagement in Citizen Science")

Roundtable ""Keeping participants engaged in citizen science projects: the role of science communication strategies"

SciComPt2022	Azores, Portugal	11-13/5/2022	Conference	<p>Oral communication "NEWSERA Co-creation Labs: how to reach different stakeholders through citizen science?"</p> <p>Oral communication "Communication strategies in citizen science projects. A preliminary analysis"</p>	FC.ID
C*SCI 2022	Online	25/5/2022	Conference	Poster "Unleashing the potential of newsable stories from citizen science initiatives derived data"	SfC, FB, FC.ID, IBERCIVIS, FECYT, UNIPD
National Workshop for funders in CC & SSH	Online	25/5/2022	Workshop	Workshop for policymakers on NEWSERA and citizen science as the new paradigm for science communication (11 participants)	IBERCIVIS, SfC
Impact of Science 2022 Conference	Leiden, The Netherlands	22-23/6/2022	Conference	<p>Oral communication "Citizen science for multi-stakeholder engagement" (20 participants)</p> <p>Roundtable "Co-creation for Excellence & Impact" (40 participants)</p>	SfC
¿Cómo orientar la investigación para crear impacto socioeconómico?	Santander, Spain	29/6/2022	Course	As part of the training course addressed to PhD students, participation to the roundtable "Research in the 21st century"	SfC
EASST 2022 Politics of Technoscientific Futures	Madrid, Spain	06/07/2022	Conference	Oral communication "Paradoxes and puzzles of/in citizen science"	UNIPD, SfC, FECYT, IBERCIVIS,

FC.ID

ESOF 2022 "Crossing Borders, Engaged Science, Resilient Societies"	Leiden, The Netherlands	13/7/2022	Conference	Poster "Re-thinking science communication to increase engagement with policy makers" Poster "Public engagement and science communication for tackling misinformation and promoting trust in science"	FECYT, SfC, FB, FC.ID
Encuentro Anual Divulgación 2022	A Coruña, Spain	23/07/2022	Conference	Oral communication on NEWSERA, citizen science and its potential for science communication (40 participants)	SfC
FEMeeting	Lisboa and Evora, Portugal	12/9/2022	Conference	Oral communication "Opening up science" Oral communication "C-OLORS of Alejandría" (NEWSERA Pilot project from Spain)	SfC
Campus Gutenberg	Barcelona, Spain	20/9/2022	Conference	Roundtable participation with presentation of the experience of the NEWSERA project	SfC
II Encuentro Nacional de Ciencia Ciudadana, Ciencias Sociales y Humanidades - Identidades Comunes	Zaragoza, Spain	20/9/2022	Conference	Poster "Re-thinking Science Communication to Increase Engagement with Policy Makers"	FECYT, SfC, IBERCIVIS
Thinking Citizen Science - Challenges and opportunities for the Social Sciences	Porto, Portugal	29/9/2022	Conference	Oral communication "Citizen Science: how to improve the engagement of society"	FC.ID, SfC
European Researchers' Night 2022	Lisbon, Portugal	30/9/2022	Public event	Demonstration and hands-on activity "Citizen Science: come and help to communicate science"	FC.ID
ECSA 2022	Berlin, Germany	5/10/2022	Conference	Poster "Science Communication for Policy Makers to increase Citizen Science Projects' engagement facing 21st-century challenges"	FECYT, SfC, IBERCIVIS, FB, UNIPD, FC.ID
GelAvista annual meeting	Lisbon, Portugal	10/10/2022	Conference	Talk about the research carried out during the course of NEWSERA during	FC.ID

				the annual meeting of the NEWSERA Pilot project Gelavista	
Jornades #Ciència Ciutadana 2022	Sabadell, Spain	19/10/2022	Conference	Roundtable “Multi-stakeholder communication strategies: the experiences of local NEWSERA Pilots”	SfC
Ciencia ciudadana aplicada a la docencia del patrimonio natural y cultural	Online	21/10/2022	Course	Invited talk “Citizen Science - Who, how and when”	FECYT, SfC, IBERCIVIS
Open Science Communication Conference 2022	Belgrade, Serbia	24/11/2022	Conference	Poster “Unleashing the potential of newsable stories from citizen-generated open data” Poster “Co-designing citizen science communication strategies to engage quadruple helix stakeholders. The NEWSERA CitSciComm Labs” Panel “New Opportunities through Citizen Science”	SfC, FB, FCID, UNIPD
BioSummit 6.0	Boston, USA (and online)	27/01/2023	Conference	Oral communication “Bringing data journalism and citizen science together towards new storytelling narratives”	SfC
MCAA GA and conference	Cordoba, Spain	24/02/2023	Conference	Citizen science and science communication: a connected path	SfC



Figure 15. Joana Magalhães (SfC) and Leire Leguina (FECYT) in front of the NEWSERA posters at the Engaging Citizen Science Conference in Aarhus.



Figure 16. Inês Navalhas (FC.ID) at the NEWSERA booth at SciComPt 2022 in São Miguel, Azores.

9.2.1 Creation of the Iberian Group on Citizen Science of Freshwater Ecosystems

During the course of its activities, NEWSERA facilitated the creation of a **network of citizen science initiatives** that brought to the foundation of an interest group across Spain and Portugal, the Iberian Group on Citizen Science of Freshwater Ecosystems.

The group first met on **January 13 2022**, bringing together **23 people** from **17 different projects** (as detailed in the table below). The group continued, since then, to meet periodically.

Table 6. List of participants in the first meeting of the Iberian interest group on citizen science of freshwater ecosystems.

Participants
Plataforma de Ciência Aberta – Município de Figueira Castelo Rodrigo
Faculdade de Ciências – Universidade de Lisboa
Science for Change
FEHMLab – Universitat de Barcelona
Observatorio Ciudadano de la Sequía – Universidad Pablo Olavide
Living River – Universidade Nova de Lisboa and Universidade de Coimbra
AquaColab – Universidad de Burgos
Ríos ciudadanos
Projeto Rios – ASPEA
Floodup
Grupo MiraVolta
Projecte Rius – Associació hàbitats
Rios Livres
GEOTA
Red Cántabra de Desarrollo Rural
eGroundWater-ISEG
Bioazul
CITAQUA – Universidade de Aveiro
Pescadors de Plàstics

The idea of collaborating sparked from the representatives of NEWSERA Pilot projects RIUNET (Spain) and Rios Potáveis (Portugal), together with NEWSERA team members, during periodic mentoring sessions; they detected the clear need of exchanging experiences, validating and upscaling methodologies, and bringing people together around the topic of citizen science for freshwater ecosystems. After the initial contacts, this need evolved into the idea of creating a **group of**

interest of researchers, managers and educators from Spain and Portugal that are working or want to work with citizen science related to water. During the first meeting, the following working topics were listed:

- Data validation and analysis
- Community participation: involvement with stakeholders (citizens, industry, management)
- Education, communication and awareness
- Financing and governance
- Joint proposals between projects

10. NEWSERA Final Event

The NEWSERA final event was held on **March 29, 2023**, at BIP Meeting Centre in **Brussels**, Belgium. The event was organised in a hybrid format, with participants meeting in person and live streaming on the NEWSERA YouTube channel. The agenda for the event is detailed in the table below.

Table 7. Agenda for the NEWSERA Final event.

Provisional agenda	
09.00	Registration
09.30	Welcome from NEWSERA Coordinator Rosa Arias, Science for Change
09.40	Science communication in the European Research Area Aleksandra Hebda, Policy Assistant, DG R&I, European Commission
10.00	The ESMH: communicate better science to all Vita Crivello, Policy Analyst, European Science Media Hub
10.20	NEWSERA - CitSci is the new scicomm - overview Rosa Arias, NEWSERA Coordinator, CEO Science for Change
10.40	NEWSERA Impact framework for CitSciComm strategies Paolo Giardullo, UNIPD & Maite Pelacho, IBERCIVIS
10.50	<i>Coffee break</i>
11.05	Blueprint with and for citizen scientists and society at large , UNIPD Roundtable with lessons learnt , NEWSERA Pilots representatives With: Alessandro Campanaro & Alice Lenzi (InNat), Lara Nunes (VacaLoura), Filipe Lopes (MosquitoWeb) Moderated by Maria Angela Citarella
11.45	Blueprint with and for Policymakers , FECYT Roundtable with lessons learnt , NEWSERA Pilots representatives With: Rosa Arias (D-NOSES), Alejandro Sánchez (Cities at Night), Elizabete Marchante (Invasoras.pt) and João 'Cão' Duarte (Novos Decisores Ciências) Moderated by Ana Elorza
12.30	CitSciComm activities in career scientists recognition & Blueprint with and for career scientists , FC.ID Roundtable with lessons learnt , NEWSERA Pilots representatives With: José Antonio Blanco (MamalNet), Cristina Castracani (School of Ants) and Eugenio Gervasini (Easin) Moderated by Inês Navalhas
13.15	<i>Lunch break</i>
14.15	Blueprint with and for Industry and SMEs , SfC Roundtable with lessons learnt , NEWSERA Pilots representatives With: Filipa Bessa (Lixo Marinho), Sonia Liñan & Andrea Comaposada (UrbamarBio) and Silvia Merlino (SeaCleaner) Moderated by Joana Magalhães
15.00	Blueprint with and for Science Journalists , Formicablu Roundtable with lessons learnt , NEWSERA Pilots representatives With: Carlotta Indiano (RomaUp), Eva Monteiro (Censos de Borboletas), Silvia Gisondi (InNat) and Alejandro Sanchez (Cities at night) Moderated by Elisabetta Tola



- 15.45 **Guide of Science Communication in Citizen Science Projects and Citizen Science Journalism & Citizen science as a communication tool in the post-factual era**
Joana Magalhães, Science for Change

What's next? The pathway after NEWSERA

- 15.55 **ENJOI: a Manifesto and an Observatory for high-quality science journalism**
Elisabetta Tola, ENJOI Coordinator (NEWSERA SwafS-19 Sister project)

- 16.05 **Horizon Europe Projects: COALESCE, IMPETUS, ECS**
Rosa Arias, Science for Change

- 16.20 **Wrap Up and Closure**
Rosa Arias, Science for Change

DATA4CitSciNews Exhibition and cocktail
Time: 19.00
Location: Au Bassin, 74 Quai Aux Briques, Brussels

The conference was introduced by featured talk by **Aleksandra Hebda** and **Vita Crivello**. Then, the NEWSERA Consortium members discussed the achievements of the project and presented the **NEWSERA Blueprints** on innovative citizen science communication. These documents are the results of the learnings of the CitSciComm Labs and were presented with the participation of representatives from the NEWSERA Pilots. Moreover, the NEWSERA final conference ended with further discussions into the concepts of citizen science communication and citizen science journalism, and featured presentations of fellow EU-funded H2020 project ENJOI, and Horizon EU, COALESCE, IMPETUS, and ECS, which will build among other sister projects, on NEWSERA findings and CoP.

The NEWSERA final event saw the participation of about 50 people, including NEWSERA partners, representatives from the Pilots projects involved in the Labs, invited speakers, and participants not involved in the project. The live streaming was watched 262 times¹⁷.

After the conference, NEWSERA partners and representatives from the Pilots celebrated the end of the project at Au Bassin, during the **DATA4CitSciNews exhibition**, with new exhibition modules featuring the process and results of the pairing program between NEWSERA pilots and data journalists. About 30 people participated in the evening event.

¹⁷ Views data retrieved on 31/03/2023.



Figure 17. Project overview by NEWSERA coordinator Rosa Arias.



Figure 18. Group photo of the NEWSERA consortium and Pilots at the end of the conference.

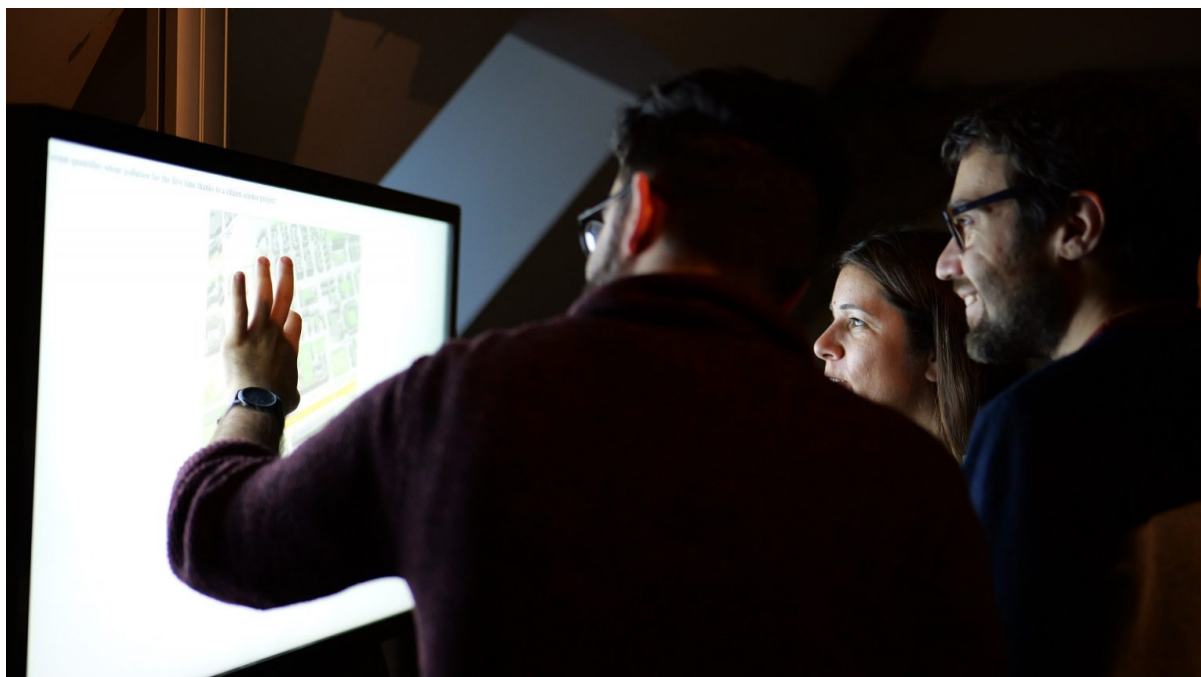


Figure 19. Visitors to the DATA4CitSciNews exhibition at Au Bassin, with one of the new modules.

11. Planned events after the end of the project

Description of the meetings and events to be attended by the NEWSERA partners after the end of the project

The following table lists a series of events and conferences that NEWSERA partners will attend with the aim to present the project and the research carried out within it, albeit happening after the end of NEWSERA.

Table 8. List of events foreseen after the end of the project and attended by NEWSERA partners.

Event	Location	Planned date	Event type	Details	Partners involved
PCST 2023	Rotterdam, The Netherlands	14/04/2023	Conference	Individual paper accepted “A methodological approach to co-design citizen science communication strategies directed to quadruple-helix stakeholders”	SfC, FC.ID
SciComPt 2023	Bragança, Portugal	03/05/2023	Conference	Two oral communication accepted: “Roadmap to citizen science journalism and citizen science communication” and “Comunicação de Ciência na Carreira	SfC, FC.ID



Científica”					
EU LIFE 10th Anniversary	Lisbon, Portugal	06/06/2023	Conference	Poster accepted: “Co-design with and for quadruple helix stakeholders, science and data journalists for a wide impact”	SfC
CCSC	Granada, Spain	25-27/10/2023	Conference	Oral communication submitted: “Codiseño de estrategias de comunicación con y para actores de la cuádruple hélice y periodistas de ciencia y de datos para lograr un amplio impacto de proyectos de ciencia ciudadana”	SfC