



An Ecosystem of Citizen Observatories for Environmental Monitoring

CoP2 – Impact and value of citizen observatories for governance Inception Report [Final]

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WeObserve Partners



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List of abbreviations and acronyms

Abbreviation	Meaning
CoP	Community of Practice
CS	Citizen Science

Version history

Version	Date	Main author	Summary of changes
0.1	18/06/2018	Uta Wehn	Draft outline
0.2	29/06/2018	Linda Velzeboer	Inclusion of CoP2 launch material
0.3	10/07/2018	Uta Wehn	Processing of CoP2 launch discussion into objectives and activities; edits throughout
0.4	15/08/2018	Linda Velzeboer	Inclusion of CoP2 members' comments during telco and in writing
1.0	7/9/2018	Uta Wehn	Processing of comments; edits throughout
1.1	15.11.2018	Mohammad Gharesifard	Revision of section 7 based on CoP2 members' indication of personal data sharing permission

1 Introduction

1.1 Background of the WeObserve project

The WeObserve consortium aims to bring together the current set of European H2020 COs, to enable improved coordination between these COs and to promote related activities at the regional, European and international level. WeObserve will coordinate and deliver a crucially needed CO knowledge framework to avoid duplication, share best practices as well as identify barriers and synergies. This framework will also promote standards to ensure interoperability, maximize impact and facilitate uptake by environmental authorities to ensure the sustainability of CO initiatives. Raising awareness and sharing this knowledge framework will not only foster the development of a sustainable ecosystem of citizen observatories, but also extend the geographical coverage of citizen science to new communities. The anticipated knowledge framework will span across sectors, national boundaries and language barriers as well as the public and private sectors.

The aim of WeObserve is to create the conditions for a sustainable ecosystem of COs that can tackle the identified challenges of awareness, acceptability and sustainability. A coordinated and coherent approach is therefore needed among existing COs and relevant communities, with inclusion of past, present and future projects at national, regional, European and potentially international scales. This approach underpins the action-oriented mission of WeObserve, which is to: *Move citizen science into the mainstream by building a sustainable ecosystem of citizen observatories and related activities.*

1.2 Purpose of the WeObserve Communities of Practice

In order to consolidate practice-based knowledge on COs that is dispersed among various stakeholders, WeObserve Task T2.2 is launching and coordinating dedicated Communities of Practice (CoPs) as a key mechanism for consolidating the knowledge inside as well as beyond the WeObserve consortium.

Initiating the CoPs will serve as the vehicle for sharing information and knowledge on selected key thematic topics related to COs, strengthening the knowledge base about COs in order to move citizen science into the mainstream of environmental management and decision making. The WeObserve Communities of Practice (CoPs) are therefore the (virtual) place where diverse stakeholders who share a joint (practice-oriented) interest in citizen science can work together towards concrete solutions by collating their experiences and lessons learned.

1.3 Purpose and structure of this document

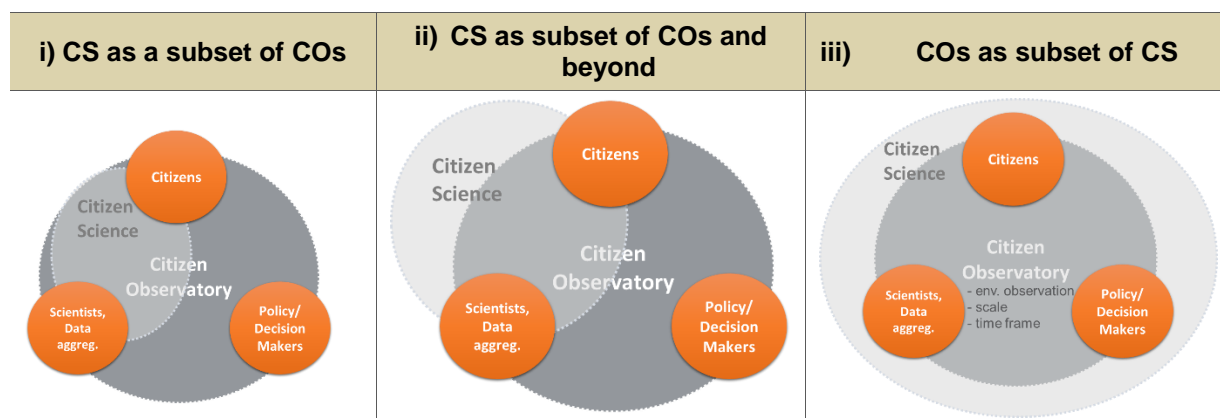
Before starting its activities, each CoP needs to define its objectives in a way that they are specific, measurable, achievable, relevant and timely (SMART), whilst taking into consideration best practices from relevant past and/or ongoing initiatives. The objectives for CoP2 on 'impact and value of COs for governance' are captured in this inception report, as well as the planned activities, target audiences, ways of working and timeline for CoP2.

This document will be approved by the 'foundation members' of the CoP and will be made public as reference for other people who may express interest in the future. Future members should adhere to the principles outlined in this document to join CoP2.

2 Scope of CoP2 – *Impact and value of COs for governance*

2.1 Citizen Science and Citizen Observatories

In the context of the WeObserve project, the core focus is on citizen observatories rather than citizen science at large. During the CoP2 Launch Workshop in Geneva, the following delineations between Citizen Science and Citizen Observatories were discussed (see table).



The discussion among the CoP2 launch workshop participants developed towards version iii) (although no definite consensus was reached), namely that COs present a specific form of Citizen Science, characterised by their focus on observing the environment (rather than other phenomena), the scale of their activities (typically local) and their time line (typically long term).

2.2 Problem statement and relevant themes

Knowledge on the impact and value of citizen observatories for governance is dispersed among various stakeholders, making it difficult to learn about common successes and challenges across projects. *Many organisations have valid and important practice-based knowledge, but it is not brought together in such a way that a more general methodology can be developed.*

The specific themes that were deemed relevant for this CoP by the participants of the CoP2 launch

Related to governance

- How are relevant stakeholder groups being involved – their voices heard (especially for controversies → i.e. by NGOs etc.)
- Contribution to the SDGs
- Sustainability goals
- Achieving SDGs monitoring
- Policy for citizen science (CO)
- Empower citizens to become the driving force for change
- Facilitate capacity building in the involved communities
- Contribute to community regulations and multi-level governance model (EU white paper on governance)
- Contribute to solve societal challenges that matter to citizens and influence policies
- Empowerment (through ownership)
- People's involvement (tangible)

Related to changing governance

- COs as platforms for policy makers to run/inform/support participatory policy-making processes
- COs as platform for groups of citizens in different locations to join efforts to share/create/implement their own projects to tackle local/regional/national/global issues
- Ways to influence policy, governance
- Relationship between COs + structures of governance
- COs able to generate/create/support positive changes in multilevel governance
- Improve decisions
- Add political perspective
- Adaptability to different contexts
- Cultural change or shift in gov. ass. Processes - understanding and accepting value of this
- Stakeholders and channels of communication
- Informing CO policy formulation/design
- COs as drivers of change
- Policy impact – connect to policymakers
- Concrete impact on EU environmental policies definition coming from CoP activities (concrete examples)
- Integration in decision-making, value for citizens impact on usage by governance, economic value for governance on local – national level
- Does perceived impact and value on government have implications on motivation and empowerment (measurable)

Related to changing science

- How could COs support the democratisation of science?
- Integration in GEOSS should increase impact of CO
- Contribute to the alignment of science with and for society (R&I, Swafs)

Related to methods/best practice

- Impact assessment (social, institutional, governance, economic)
- Evaluation of the impact and value
- Sharing impact stories/examples of best practice from citizen, public sector + policy perspective to reduce potential barriers to alternative governance structures
- Sharing specific risks and addressing these with tangible solutions
- Capture value for governance
- Social value metrics
- Socio-economic value methods for assessing CS/CO value chain (see GEO value)
- Designing for impact
- Which methodologies/methodological approaches are used through different phases of this multi-stakeholder process

Related to data

- Measuring environmental impacts via CO data collection
- Measuring attitude/behaviour change while data gathering
- Openness of the approach increases impact (open standard, science, data, source)
- Important data validation and recognition to be translated into new/improved policies
- CS into official data streams (value, acceptability)

- Data quality
- Through these COs, how can people gain ownership over their own data
- How could COs support data advocacy

Related to sustainable funding

- Business – reduce costs
- What analysis is needed to convince funders
- Governance versus funding
- Sustainable citizen science
- Demonstrating different economic models previously adopted that make CO sustainable and the impacts long-lasting
- Long-term projects

Other themes

- How to reach out to key players, awareness raising?
- Barriers for constructive interaction
- Role of EPA (governmental institutes)
- Contribution to standards and policy briefs

Conclusion on CoP2 thematic focus: a wide range of specific topics was tabled. In order to keep the scope of CoP2 manageable, to delineate CoP2 from CoP1 (on 'Co-design and citizen engagement') and to ensure that tangible results can be achieved, it is proposed that the following themes are prioritised initially:

- **Governance dynamics:** *understanding existing decision making structures and the role of COs (and their data) in changing these to address societal challenges*
- **Impact stories:** *capturing and demonstrating the impact and value of COs for governance*

2.3 Objectives

CoP2 aims to bring the knowledge of different stakeholders together on the impact and value of citizen observatories for governance. Ultimately, the resulting insights will be brought together in a WeObserve 'Cookbook' on citizen observatories.

For CoP2 specifically, the following objectives were mentioned by the participants during the launch workshop in Geneva on 6 June 2018:

Objectives proposed during CoP2 Launch Workshop 2018

Summary	Post its
<i>Provide advice/training</i>	<ul style="list-style-type: none"> • Provide advice (internal and external) on implementation of COs (regarding value and governance) • Training (materials and face-to-face) for an administrative level audience – CO concept • To have consistent and validated guidelines for impact assessment (timeline mid 2019) • Inventory of assessment methods (e.g. 500 projects in Europe, DG Environment) → best practice • Continue to find business models e.g. augmentation of scientific data for citizens
<i>Advocating</i>	<ul style="list-style-type: none"> • Advocating (hobbyists) for the value of COs • What does added value mean for whom?
<i>CoP membership</i>	<ul style="list-style-type: none"> • To recruit people from more policy relevant areas (>40%)
<i>Capture best practices, story telling</i>	<ul style="list-style-type: none"> • Collect best practices regarding the connection of COs and SDG on governance • Sharing impact stories/examples of best practice from citizen, public sector and policy perspective • COs – dissemination related to policy → collect this information • Inventory of examples/actions successful and unsuccessful
<i>other</i>	<ul style="list-style-type: none"> • Impacts: science, institutional, social, monetary, policy/rules • Test and validate methods for impact measurement, develop Guidebook • Assess needs of decision makers • Develop an evaluation strategy and metrics to track performance + impact • Link between CoP and WeObserve Roadshow • Explore corporate sponsorship and private sector involvements

Box 1: **Governance** refers to “the processes and institutions through which decisions are made” (Lautze et al., 2011, p. 4), e.g. decisions related to water. In contrast to ‘government’, ‘governance’ highlights a shift from state-centred management towards ‘a greater reliance on horizontal, hybrid and associational forms of government’, involving a broader network of actors, including citizens (Hill and Lynn, 2005, p. 173; Swyngedouw, 2005). Governance in the context of COs relates to processes of decision-making and definition of goals by a range of actors *on the thematic topic* that the COs focuses on, e.g. water quality, biodiversity, etc.



Synthesizing the detailed objectives mentioned above together and based on the delineation of the concept of 'governance' (see box 1 above) , the proposed objectives for CoP2 are as follows:

Overall objective of CoP2: *To intentionally become an effective CO knowledge resource on the impact and value of COs for governance (by 2019) to the CoP2 members and other constituencies that may benefit from this CO expertise.*

Specific CoP2 objectives:

Obj.1: To provide an inventory of 'tried and tested' methods for capturing the impacts of COs on governance

Obj.2: To capture CO impact stories/examples of best practice from citizens, public sector and policy perspectives

Obj.3: To provide guidance on CO impact assessment for the CoP2 members and beyond

3 Business case

3.1 What are the needs for this CoP?

As identified in the problem statement in section 2, knowledge on the impact of citizen observatories is dispersed among various stakeholders, making it difficult to learn about common successes and challenges across projects. Many organisations have valid and important practice-based knowledge, but it is not brought together in such a way that a more general methodology can be developed.

3.2 What are the benefits of the work done by the CoP?

CoP2 serves as a platform for CO practitioners to codify these emerging and practice-based insights in order to strengthen the CoP2 members' own activities and to make the generated insights, lessons learned and a more general methodology available to other interested stakeholders outside CoP2.

The methods captured in the Cookbook can be used by many different types of organisations when they are developing citizen observatories. This will help strengthen existing as well as emerging CO initiatives and projects. With the Cookbook, they will be better able to capture the impacts of their CO initiatives and projects in distinct governance processes, thus allowing them to articulate the value of their CO better to distinct stakeholders for sustained engagement and support.

4 Target audiences for CoP2

The different target audiences mentioned by the CoP2 participants in the launch workshop are the following:

- Citizens
- Local communities
- Local authorities
- Engaged communities
- Activists
- Scientists
- NGOs
- Citizens 'allergic' to science
- Policymakers
- Individuals/communities that want to create a CO
- Groups from the model – who would take up CO practice
- Coordinating with other EU projects
- Invite other members (policymakers etc.)
- Officers from EU – demanding for reviewers
- ECSA and COST Action (sustainability)

These can be narrowed down to the following stakeholders/groups:

- **Citizens and local communities** (those that are already engaged or are interested in setting up a CO)
- **NGOs** and activists (civil society)
- **Policy makers** – at the local, national and international (EU) level
- **Research/academia**
- Similar **projects** at local and EU level
- **Networks** (e.g. ECSA and COST Action)

5 CoP2 Activities

5.1 List of activities

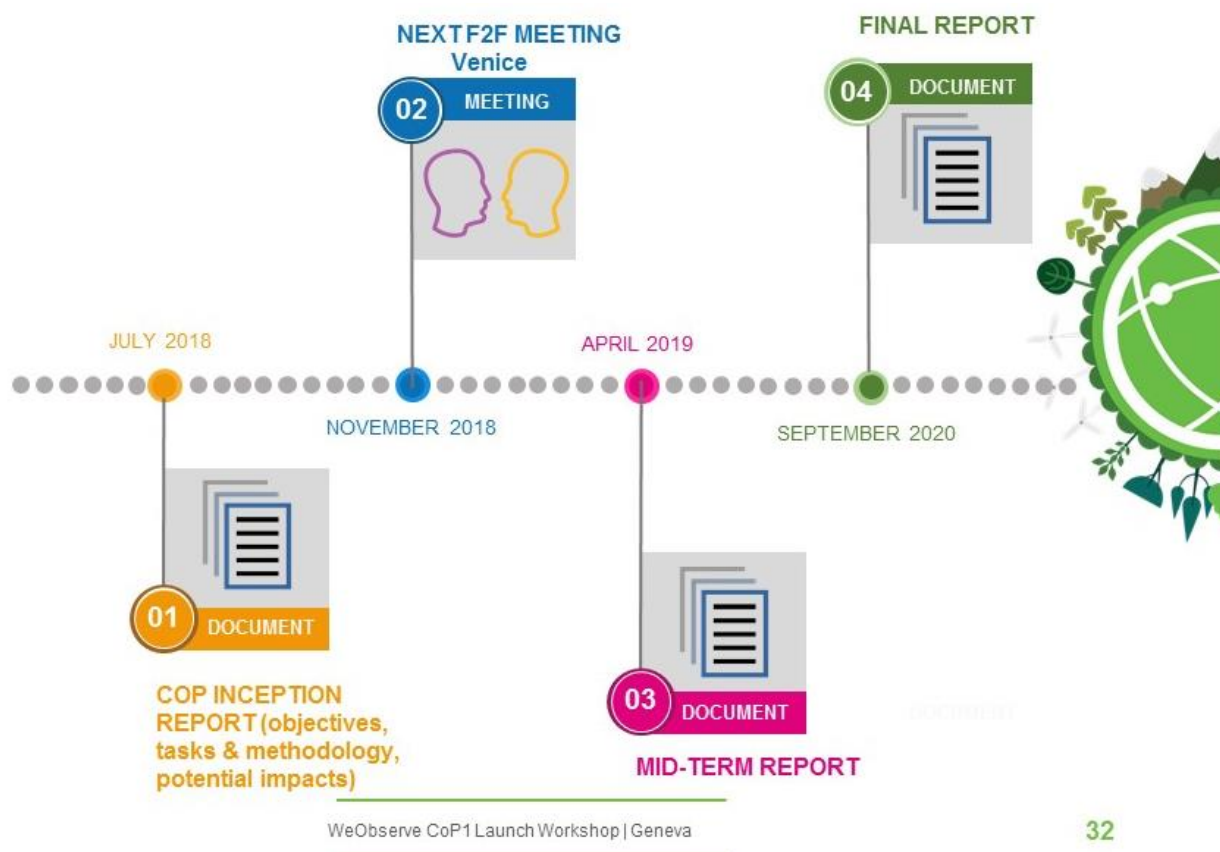
In order to achieve its objectives, CoP2 aims to undertake the following activities:

CoP2 Objectives	Activities to achieve objectives
Obj. 1: <i>To provide an inventory of 'tried and tested' methods for capturing the impacts of COs on governance</i>	<ul style="list-style-type: none"> • Set up glossary and template to categorise CO governance impact assessment methods and experiences with their application • Inventorise governance impact assessment methods from CoP2 members and other projects (e.g. via WeObserve landscape report) • Jointly analyse and synthesize experiences • Regularly repeat inventorisation to capture emerging approaches • ...
Obj.2: <i>To capture CO impact stories/examples of best practice from citizens, scientists, public sector and policy perspectives</i>	<ul style="list-style-type: none"> • Set up template to capture impact stories (incl. success and failure) from different perspectives (<i>citizens, scientists, public sector and policy perspectives</i>) • Apply template to projects from CoP2 members and other projects (e.g. via WeObserve landscape report) • Jointly analyse and finalise provided impact stories; capture lessons learned across impact stories • Regularly repeat inventorisation to capture emerging of impact stories from additional initiatives • ...
Obj.3: <i>To provide guidance on CO impact assessment for the CoP2 members and beyond</i>	<ul style="list-style-type: none"> • Co-design with end users how captured information, impact stories and lessons learned are to be presented (in WO Cookbook, on WO knowledge platform, etc.) • Finalise information for the WO Cookbook • Identify guidance opportunities and modalities to feed insights on CO impact assessment methods, lessons learned and impact stories into ongoing CO projects and initiatives • Implement CO impact assessment guidance • Provide guidance to targeted government officials to increase the political uptake of COs • Use the resources provided in WeObserve, such as the MOOC and the developing infrastructure and WO Toolkit • Write a report on tools/insights from the WeObserve MOOC as well as the other activities listed here • ...

5.2 Overview of timeline

In principle, the WeObserve CoPs will continue to exist only as long as they deliver value for their members in terms of achieving the jointly set objectives. After the end of the project, the CoP management could be transferred to GEOSS in the form of GEO activities or to ECSA in the form of a sub-working group.

The general CoP2 timeline during 2018-2020 consists of the following, which includes this report as the first step:



6 Communication agenda

It is vital that CoP2 not only communicates effectively amongst its members but also outside of the group. Therefore, the communication strategy of CoP2 is based on the communication strategy of the WeObserve project, to ensure that the communication from the CoP is in harmony with the overall communication of the WeObserve project.

6.1 Internal communication

CoP2 already has an email list and subscribing to the email list is mandatory to be part of the group. In addition, progress of the discussions and minutes of meetings will be recorded and organized in a GDrive that will be provided and managed by WeObserve ensuring harmonization and preservation. Following CoP2-internal discussions, a task force of each CoP will draft a solution proposal in the form of a template, for example. The resulting documents will be presented to a broader audience, comments will be incorporated and the final solutions will be agreed.

6.2 Communication with the WeObserve Consortium

Activities of the CoP need to be communicated to the WeObserve consortium for two main reasons:

(1) The WeObserve consortium needs to be aware of the activities of each CoP.

(2) The WeObserve consortium can assist in getting the message of the activities of the CoPs out to a wider audience.

The knowledge platform of the WeObserve project will have a dedicated space where CoP members can report on their activities to the other WeObserve partners. Regular updates, at least once a month, are expected.

6.3 External communication

In terms of communication to the wider public, the CoP2 results can be communicated and disseminated via demonstration, video, the WeObserve cookbook

Also, the WeObserve knowledge platform will be an important platform. Here the highlights of CoP2 activities (for example new releases or upcoming events) will be shared. These will also be communicated through the social media of the project, i.e. Twitter and Facebook.

7 Foundation members

The foundation members are those people who have been involved in CoP2 from the beginning by attending the launch workshop in Geneva on 6 June 2018 or by having signed up following the first call for registrations. Foundation members can either take the role of *participant* or *observer*. Participants actively take part in the CoP2 telcos, F2F meetings, task force activities etc. Observers are included in the email communication and have access to the CoP2 online workspace.

A list of the foundation members for CoP2 can be found in Table 1 below. In November 2018, all foundation members were contacted by means of a survey and were asked to indicate their agreement with the publication of their names and their respective organisation in the WeObserve CoP2 Inception Report. The name and affiliation of those members who indicated their agreement are mentioned in Table 1. In addition, in order to adequately reflect the overall composition of this CoP, all other members are referred to anonymously in Table 1.

TABLE 1: FOUNDATION MEMBERS OF CoP2

Last name	First name	Organisation	Role
Ajates Gonzalez	Raquel	University of Dundee	Participant
Anonymous member	Anonymous member	Mapping for Change	Participant
Anema	Kim	IHE Delft	
Anonymous member	Anonymous member	Ibercivis	Participant
Anonymous member	Anonymous member	University of Applied Arts, Vienna	
Bela	Györgyi	Budapest Citizen Observatory (BCO)	Participant
Berditchenskaia	Aleksandra	Nesta	Observer
Anonymous member	Anonymous member	BLB	
Anonymous member	Anonymous member	Radboud University	
Copas	Kyle	GBIF Secretariat	
Costa	Nina	NDCConsult	Participant
Coulson	Saskia	University of Dundee	Participant/observer
Anonymous member	Anonymous member	Mapping for Change	Participant/observer
Anonymous member	Anonymous member	IIASA	Observer
Gervasini	Eugenio	EC – Joint Research Centre	
Anonymous member	Anonymous member	IIASA	Observer
Haklay	Muki	UCL	
Anonymous member	Anonymous member	Atlas of Life Australia	Observer

Last name	First name	Organisation	Role
Joshi	Somya	Stockholm University	
Anonymous member	Anonymous member	Anonymous memberBineo Consulting SL	
Masó	Joan	CREAF	Observer
Mazzonetto	Marzia	Stickydot	Observer
Perez	Ana	Starlab	
Schade	Sven	European Commission	
Shulla	Kalterina	RCE middle Albania	Observer
Anonymous member	Anonymous member	Universität Heidelberg	Observer
See	Linda	IIASA	Observer
Anonymous member	Anonymous member	US South Big Data Innovation Hub	Participant
Anonymous member	Anonymous member	XTeam Software Solution	Observer
Anonymous member	Anonymous member	Université libre de Bruxelles	
Anonymous member	Anonymous member	RIVM	Observer
Anonymous member	Anonymous member	VITO	
Domain	Dahlia	IIASA	
Wehn	Uta	IHE Delft	Chair CoP2
Cerratto-Pargman	Teresa	Stockholm University	Participant
Gold	Margaret	ECSCA	

8 Ways of working

8.1 Periodic activities

The CoP will meet regularly by teleconference (via ZOOM) and will take advantage of existing opportunities (e.g. COWM18 conference, OGC TC meetings, GEO symposia and ECSA assemblies) to meet in person for longer discussions. These meetings will be driven and facilitated by WeObserve but will be composed by a much broader audience in an open and transparent manner.

8.2 Timing of meetings

The planning of the next meetings for the remainder of 2018 is summarised in the table below.

Date	Type (online/F2F)	Where
11 July	Online	ZOOM
Early September	Online	ZOOM
12-14 September	F2F	EuroGEOSS Workshop, Geneva
October	Online	ZOOM
27-30 November 2018	F2F	COWM Conference, Venice

8.3 Linked initiatives

CoP2 will ensure it is not repeating efforts of other associations. We have close networks with linked initiatives to ensure that we are sharing information and working separately where required. The linked initiatives include the following:

- ECSA Working Groups on Sharing Best Practice and Building Capacity; Policy, Strategy, Governance and Partnerships; Learning and Education in Citizen Science; Citizen Science and Open Science
- Citizen Science COST Action - CA15212: to promote creativity, scientific literacy, and innovation throughout Europe (<https://www.cs-eu.net/about/CA15212>) and specifically the following Working Groups: WG2 Develop synergies with education; WG3 Improve society-science-policy interface; WG4 Enhance the role of CS for civil society.
- OPENER Community of Practice on Public Engagement in Environmental Research (UK) (<https://research.reading.ac.uk/openupsci>)
- Citizen Science Global Partnership (CSGP) first call for participation (<https://www.wilsoncenter.org/article/concept-note-citizen-science-global-partnership>).
- Earth Observations and Citizen Science - Community Activity of the GEO Work Program (<http://earthobservations.org/activity.php?id=142>).
- Socio-economic benefits of Earth Observations - Community Activity of the GEO Work Program (<http://earthobservations.org/activity.php?id=142>).
- EuroGEOSS initiative (https://ec.europa.eu/info/research-and-innovation/knowledge-publications-tools-and-data/knowledge-centres-and-data-portals/eurogeoss_en).
- WeObserve Roadshow of COs for environmental and disaster risk and emergency management
- MICS - Developing metrics and instruments to evaluate citizen science impacts on the environment and society (H2020 project, 2019-2021), led by Earthwatch.

9 Policies and procedures

9.1 Opting in

Following the recently introduced General Data Protection Regulation (GDPR), CoP2 participants will be asked to sign an informed consent form (or during their registration process), indicating the following items:

- CoP2 participants can stop their participation in the CoP at any time and can ask WeObserve to remove all the personal data it has stored related to them;
- CoP2 participants give explicit consent to be contacted by WeObserve and give permission to WeObserve to store their personal contact details;
- CoP2 participants indicate they are aware that WeObserve is collecting data on citizen observatories for a Cookbook, and information provided by the participants can be used for this output (information provided will be acknowledged, as desired).

9.2 Principles of Conduct

During the CoP2 launch workshop, the following principles of conduct were presented and agreed upon:

- Extend respect and courtesy to colleagues at all times
- Develop and test ideas and insights impartially
- Think internationally, devising insights and solutions that meet the needs of diverse cultural contexts and operational environments
- Individuals who attend the WeObserve CoP-facilitated meetings are prepared to contribute to the ongoing work of the CoP
- Adhere to the agreed rules that protect the IPR of the members and the privacy of their discussions (see section 9.3)
- Adhere to the consensus process for deciding CoP-internally what content will be made public and when (see section 9.3)

9.3 Voting for publicly released results

Principally, the CoP2 members agree to protect the IPR of its members and the privacy of their discussions. Also, they agree to adhere to a consensus process for deciding CoP2-internally what content will be made public and when, as follows:

- Once outputs of CoP2 are finalised and acknowledgements of CoP2 participants have been agreed, the chair will ask if there are any objections against making the results public. If there are not, they will be made public straight away. If there are objections, a voting process (online if necessary) will be used, for which a 2/3 majority will be sufficient to pass a given decision.

9.4 Including or deprecating activities

Similar to the process described above regarding publicly released results, the inclusion or deprecation of activities will also be decided by a voting process. Any CoP member can propose activities to include or deprecate, after which a voting process (online if necessary) will be used. A 2/3 majority will be sufficient to pass a given decision.



An Ecosystem of Citizen Observatories for Environmental Monitoring

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