

Terms of Reference for the WeObserve Communities of Practice

What are Communities of Practice and why do we need WeObserve CoPs?

Communities of Practice are a key and practical approach in knowledge management. Communities of Practice can be defined as ‘*groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.*’ (Wenger et al., 2002, p. 4). The key aspect of CoPs that is binding its members together is that they find value in the joint learning derived from their interactions. These interactions can consist of information sharing, problem solving, tool or standards creation or developing tacit understanding on the focal topic.

The structural elements of a CoP are domain, community and practice (Wenger et al., 2002):

- The knowledge **domain** is the specific set of issues or topic. It is the *raison d’être* that brings the community members together and drives their joint learning.
- **Community** refers to the people who care about the domain
- **Practice** refers to the specific knowledge the community develops, shares and maintains; the shared practice of the community members that they are developing in order to be effective in their domain (e.g. frameworks, ideas, tools, styles, stories).

These definitions highlight that a CoP is more than codified knowledge (e.g. a website, database or best practices), namely ‘*a group of people who interact, learn together, build relationships, and in the process develop a sense of belonging and mutual commitment*’ (Wenger et al., 2002, p.34).

Practice-based knowledge on diverse aspects of citizen observatories [...] is dispersed among various stakeholders. Initiating WeObserve 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.*

What topics (domains) will the WeObserve Communities of Practice focus on?

Three initial topics were identified based on outcomes from the EC Citizen Observatories Cluster Workshop, held in Brussels (November 2016), which included representatives from the FP7 legacy COs as well as the current H2020 observatories. In addition, these topics are in line with the activities being undertaken as part of the Community Action on COs in the current GEO Work Programme (2017-2019), to which WeObserve will actively contribute. Also, the three topics touch on the various challenges of awareness, acceptability and sustainability.

The **three initial CoP** topics (domains) are as follows:

1. *Co-creating citizen observatories and engaging citizens – addressing incentives and barriers for participation, engagement strategies and citizen-science ethics (led by IHE Delft);*
2. *Impact and value of citizen observatories for governance – defining socio-economic and environmental impacts of community-based environmental monitoring for public authorities and decision makers including risk evaluation (led by IHE Delft);*

3. *Interoperability and standards for citizen observatories – adopting data quality, curation and preservation of citizen-science data, and addressing privacy and licensing for CO sustainability (lead by CREAM).*

To accommodate new opportunities, these three CoPs will be complemented with **two additional CoPs during the project** through recommendations from the CO and citizen science communities themselves.

Who can participate in the WeObserve Communities of Practice?

The WeObserve CoPs are intended as a key mechanism to consolidate knowledge on COs inside as well as beyond the WeObserve consortium. As such, the members of the WeObserve CoPs are relevant representatives of the WeObserve partners as well as targeted and/or interested stakeholders beyond the consortium from the larger community of CO practitioners, such as:

- public authorities (local, regional, national, EU)
- Civil Society Organisations
- research & academia
- citizens
- citizen science working groups, for example those of the Citizen Science COST Action CA151212 (to promote creativity, scientific literacy, and innovation throughout Europe), and the European Citizen Science Association (ECSA) listed in Table 1.

Table 1 Examples of current Citizen Science Working Groups

COST Action Working Groups	ECSA Working Groups
Ensure scientific quality of Citizen Science	Sharing Best Practices and Building Capacity
Develop synergies with education	Projects, Data, Tools and Technology
Improve society-science-policy interface	Policy, Strategy, Governance and Partnerships
Enhance the role of CS for civil society	Citizen Science and Open Science
Improve data standardization and interoperability	Learning and Education in Citizen Science
Cross-Working Group - Synthesis and overarching measures	Global Mosquito Alert

What will the WeObserve Communities of Practice do?

WeObserve Communities of Practice can undertake one or more of the following activities:

- *Thematic knowledge co-creation:* The members of the CoP will strive to create new knowledge related to its focal theme, with the aim of generating lessons learned for other CO initiatives.
- *Generating new solutions or agreeing on how to use existing ones* such as conducting interoperability experiments and generating technical recommendations. Examples are:

how to combine information of similar projects and to offer access to CS through GEOSS; how to share tools for implementing standards of common interest; a single sign on mechanism to collaborate with several projects of CS, etc.

- *Knowledge sharing activities (meetings, events, conferences etc):* As part of the focus of the CoP, wide dissemination, communication and diffusion of information should be at the centre of all activities; this shall be enabled also by parts of the WeObserve platform, where suitable mechanisms will facilitate exchange of opinions, ideas, material.

Why should stakeholders participate in a WeObserve Community of Practice?

By participating in a WeObserve CoP, stakeholders can:

- Share ideas, knowledge or experiences and work with others (networking)
- Leverage their ideas or knowledge
- Work towards concrete solutions in citizen science and optimise relevant resources
- Help broaden their own and their organisation's knowledge and horizons (capacity development)
- Link up with relevant initiatives at a global, national, regional or local level

with the overall goal of mainstream citizen science into policy and environmental management.

What is different about the WeObserve CoPs?

Many stakeholders are involved in Working Groups, Communities of Practice, Action Groups etc., most of which involve volunteer activities on top of existing professional obligations and commitments. Not surprisingly, many are experiencing a certain fatigue to be involved in 'yet another' CoP.

The WeObserve CoPs will overcome the known weaknesses and obstacles for "working groups/Communities of Practice" by providing the following:

- ✓ Structure for managing the CoP activities
 - by specifying clear deadlines and required outputs (incl. reporting templates)
 - by ensuring the complementarity of roles, expertise and type of input accepted by each participant so as not to duplicate efforts
- ✓ Support for leading the CoP by making a set of tools available
 - to ensure that meetings and actions happen in a timely manner
 - to accelerate knowledge consolidation by enabling the demonstration of ideas and adapted solutions
- ✓ Funds for CoPs
 - to enable and enhance member participation by reducing the cost for participation
- ✓ Dissemination and outreach
 - by assisting with the sharing of experiences and knowledge across CoPs
 - by providing a hosting platform and visibility for CoPs at one of the many WeObserve events
- ✓ IP protection and reputation
 - by requiring adherence to a common set of rules that protect the IPR of the members and the privacy of their discussions
 - by introducing a consensus process for internally deciding what content will be made public and when.

Budget for the WeObserve Communities of Practice

Each CoP will have a small budget of €8.000,- to facilitate its forums. Currently, there are four planned forums throughout the duration of the project. These events will often be held in conjunction with other citizen science events to maximize awareness, collaboration and networking, while minimizing travel costs.

What the budget can cover

The budget of €8.000,-per CoP can cover the following:

- Costs incurred to organise or facilitate a forum (i.e. room bookings, dissemination material, etc.)
- 1 social event to promote community building and increase engagement
- Meals of participants during forums

What the budget cannot cover

The budget cannot cover the following things:

- Employee salaries;
- Company overheads;
- All other costs not related to one of the four CoP fora.
- Any costs incurred by the WeObserve participants such as travel and accommodation.

How the budget will be administered

The budget for the CoP forums will be administered directly by IIASA, the WeObserve coordinator. IIASA will either directly cover expenses or provide reimbursements based on appropriate receipts, invoices and documentation. WeObserve partners are expected to cover their own expenses during CoP forum using their respective travel budgets.

Timeframe and criteria for the Communities of Practice

The first three WeObserve CoPs will be set up and launched during the workshops of the ECSA conference 2018, taking place on 6 June 2018 in Geneva (immediately following the main ECSA conference). The second set of (two) CoPs will be set up following a call for proposals, due to be launched in 2019.

The CoPs will continue to exist only as long as they deliver value for their members in terms of achieving jointly set objectives. *Each individual CoP will need to adhere to its own defined timeline.* 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.

Apart from specific responsibilities that will be outlined in the next chapter, there are several general criteria that all CoPs and their members should adhere to:

- Each CoP should be composed of **relevant stakeholders**, e.g. CO initiators, solution providers, customers and technical professionals who have enough resources (in terms of time and money) to participate;
- CoPs should strive for **gender balance** in the composition/interactions of the group;
- CoPs should comply with the WeObserve **ethics and gender aspects**. These documents will be given to the CoPs before the start of any activities;
- CoPs should operate in a transparent manner, whilst remaining open to new participants;



Responsibilities of the WeObserve Communities of Practice

Setting up SMART objectives for the Communities of Practice

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. Also, the objectives should be defined following a **participatory process** in which all CoP members can take part.

These objectives will be captured in an inception report that will have the following structure:

- Scope or Problem statement: Description of the scope of the CoP or the issues the CoP will address
- Business case: What is the need for the group and what are the benefits of the work done in the group
- Target audience: Who benefits from the work done
- Foundation members: List of initial members of the CoP
- Activities planned: List of activities, deliverables and timelines
- Communication agenda
- Ways of working: Periodicity, media and time of the meetings initially foreseen.
- Policies and procedures: How to opt-in, how to vote for publicly releasing results, how to include or deprecate activities.

The document will be approved by the foundation members of the CoP and made public as reference for other people who may express interest in the future. Future members should adhere with the document to join.

Ways of working

Each CoP will meet regularly by teleconference (Skype, GoToMeeting or similar) and will take advantage of existing opportunities (e.g. 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.

Each CoP will have an email list and subscribing to the email list will be mandatory to be part of the group. In addition, progress of the discussions and minutes of meetings will be recorded and organized in a wiki, GitHub or similar platform that will be provided and managed by WeObserve ensuring harmonization and preservation. Following CoP-internal discussions, a task force of each CoP will draft a solution proposal in the form of best practice, a profile or a standard. The resulting documents will be presented to a broader audience, comments will be incorporated and the final solutions will be agreed; for CoP3, these will eventually be ratified by a standards body.

Furthermore, the different WeObserve CoPs will also be encouraged to interact. For example, CoP3 may benefit from CoP1 in the form of requirements for the COs of the future. Secondly, CoP3 may need to get inputs from CoP2 on the experiences and lessons learned in previous COs about the governance impacts of COs. These inputs will need to be processed by CoP3; connectivity and/or harmonization or other interoperability problems will need to be identified. Once an interoperability problem has been identified, technical solutions will then be compared and a solution that brings consensus will need to be generated. The desired collaboration across the WeObserve CoPs may need to be accompanied by appropriate IPR agreements, if applicable.

Reporting

The CoPs will report to WeObserve in the following form.

- An Inception Report needs to be delivered one month after the start of the CoP. This report shall detail the objectives, tasks and potential impacts of the CoP, and the methodology it plans to use to achieve these objectives, tasks and impacts. The inception report needs to also detail the communication strategy and the means that the CoP will use to ensure that the outcome of its activities are shared with other CoPs and other interested stakeholders. The inception report will also present the work plan that the CoP intends to follow (incl. a Gantt chart).
- The Inception Report may be reviewed and updated by the group at any time and a new version released.
- A Concluding Report will be delivered before the end of the activities of the CoP or before the end of the WeObserve project (in case the CoP continues after the end of WeObserve), whichever comes first. This final report will include details on how the objectives have been accomplished, the impacts that have been achieved and the communication activities that were undertaken during the lifetime of the CoP and the reason why the group needs to be terminated if that is the case.
- Status updates need to take place between the CoP leaders and the WeObserve Tasks leader (IHE) to ensure that the CoP is following its aims, objectives and activities and to assist with any issues the CoP may be facing.

Communication and knowledge sharing strategy

One of the most vital aspects of a CoP is its communication, both within the group and with external stakeholders, i.e. communication beyond the group's members. Each CoP needs to detail its communication activities, how it plans to communicate among the CoP members and also how it plans to reach its target audience as well as other CoPs.

Obligatory communication for the external communication of CoP activities

Any communication from the CoP should use the WeObserve template for presentations, accessible on the WeObserve platform.

The CoP should include the following statement to show that it is part of the WeObserve project which has received funding from the European Commission:



This CoP, which forms part of the WeObserve project. WeObserve has received funding from the Horizon 2020 Framework Programme of the European Union with project number 776740.

www.WeObserve.eu

The CoP should also include the following reference to the WeObserve website:

The <NAME OF THE COP> WeObserve CoP, forms part of the larger WeObserve project: *An Ecosystem of Citizen Observatories for Environmental Monitoring*, where further CoPs have been formed.

Find out more here:



www.WeObserve.eu



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Responsibilities of the WeObserve project

- WeObserve members will participate in the CoP with the same rights as other participants/organisations.
- At least one WeObserve member will be co-chair of a CoP.
- WeObserve will provide support to the CoPs by providing and ensuring the continuity of a wiki or similar platform and an email list for the CoP.
- WeObserve will support the associated costs of meeting venues of the CoPs.
- WeObserve will propose the termination of inactive CoPs.
- WeObserve will contribute to the communication of the CoPs. In particular, WeObserve will provide a section on its website for a public image/reporting of the CoPs that will include links to their publicly released outputs.