

Smart Control of the Climate Resilience in European Coastal Cities

# Citizen Science

and its role in climate change monitoring

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### What is "Citizen Science"?

Citizen science is the term that is used to describe a wide range of activities, in which people from all walks of life participate in a scientific project in a meaningful way (beyond being subjects in a medical experiment, or participants in a study in the social sciences).

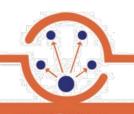




### What is "Citizen Science"?

## PUBLIC PARTICIPATION GOAL

# PROMISE TO THE PUBLIC



#### INFORM

To provide the public with balanced and objective information to assist them in understanding the problem, alternatives and/or solutions.

We will keep you informed.

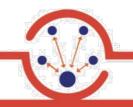


#### **CONSULT**

To obtain public feedback on analysis, alternatives and/or decision.

We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the

decision.



#### INVOLVE

To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.

We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.



#### **COLLABORATE**

To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.

We will look to you for advice and innovation in formulating solutions and incorporate your advice & recommendations into the decisions to the maximum extent possible.



**Citizen Science** 

#### **EMPOWER**

To place final decision-making in the hands of the public.

We will implement what you decide.

### INCREASING IMPACT ON THE DECISION



## Citizen Science and Climate Change



Passive Sensing relies on participants providing a resource that they own (e.g., their phone or space in their backyard) for automatic sensing. The information that is collected through these sensors is then used by scientists for analysis.



Volunteer Computing is a method in which participants share their unused computing resources, on their personal computer, tablet, etc. and allow scientists to run complex computer models when the device is not in use.





Environmental and Ecological Observation, while linking participants to the oldest forms of citizen science, is transformed by the societal and technological changes such as sensors and smart phones. It focuses on monitoring environmental pollution or observations of flora and fauna.





## Citizen Science and Climate Change



Participatory Sensing is similar to the previous type of observation but gives the participant more roles and control over the process. While many environmental and ecological observations follow data collection protocols that were designed by scientists, in participatory sensing the process is more distributed and emphasizes the active involvement of the participants in setting what will be collected and analyzed.

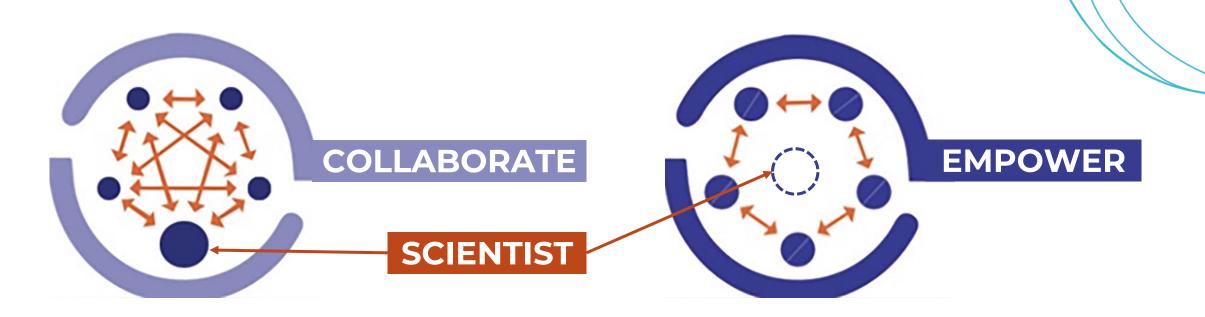


Civic/Community science, also known as bottom-up science, is initiated and driven by a group of participants who identify a problem that is a concern for them and address it using scientific methods and tools. Within this type of activity, the problem formation, data collection, and analysis are often carried out by community members in collaboration with scientists or established laboratories.





## Collaborate Vs Empower...what's the fuss?



The **SCIENTIST** is the center of the activities. He/she directs the research activities, coordinates the citizen scientists and analyses/uses the data for his/her research.

At the end of the project, the citizen science activities will more than likely END.

The **SCIENTIST** is a facilitator and support the activities. He/she provide skills and tools to the citizen scientist. The citizen have an active involvement in targeting a local issue which they care about.

At the end of the project, the citizen science activities will more than likely **CONTINUE**.





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# Thank you!

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