



**University of Dundee**

### **Citizen Science Projects (MOOC) 4.6**

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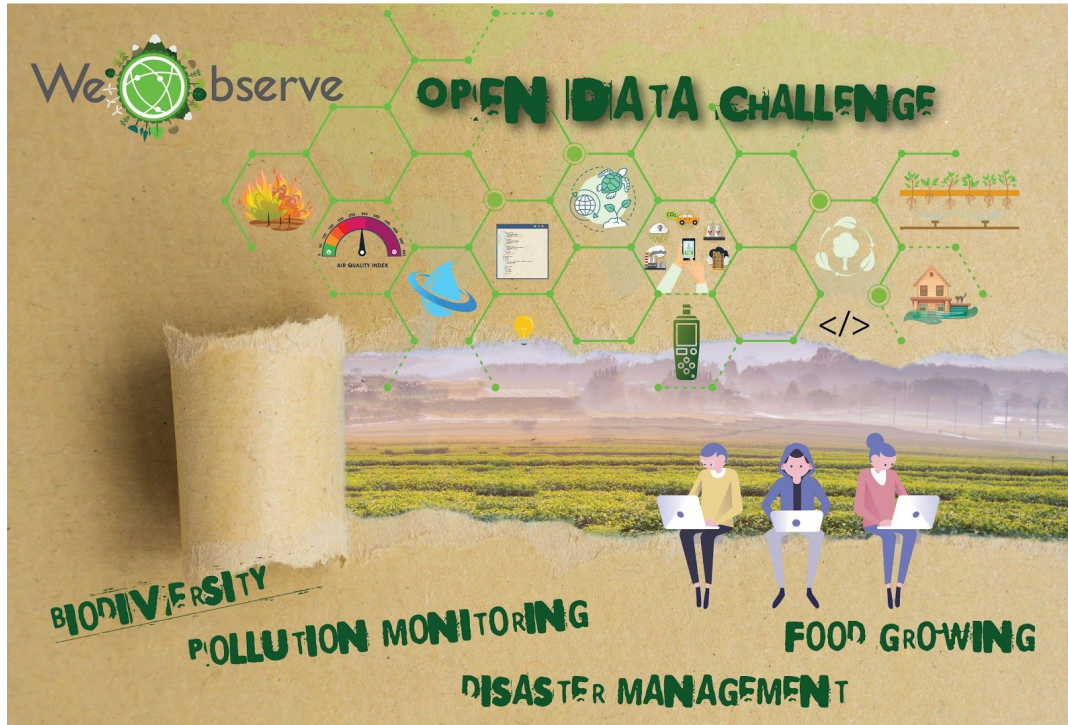
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## 4.6 Open Data Challenges



Addressing climate challenges requires help from everyone, and Citizen Observatories aspire to engage citizens to gather data and information about the environment to support better decision-making, new public services and make change.

WeObserve ran an [Open Data Challenge](<https://www.weobserve.eu/marketplace/opendatachallenge/>) (ODC) over the summer to create new digital transformation opportunities by using open data for solutions and services that can be implemented for wider social good.

By opening up data from four Citizen Observatories, citizens, communities, academics and technologists from all over the world were able to access some of the EU's richest citizen-generated environmental open data for the first time. The Challenge used data from the H2020 Citizen Observatory projects [GROW Observatory](<https://growobservatory.org/>), [Ground Truth 2.0](<https://gt20.eu/>), [Landsense](<https://landsense.eu/>), and [Scent](<https://scent-project.eu/>).

With the acceleration of climate change, addressing environmental challenges has never been more urgent. Environmental data can help to address these issues. As a result of citizens coming together with scientists and other concerned people and organisations, there is a growing amount of high-quality and open data to apply to these challenges. There are opportunities to merge open datasets from local governments and data from these Citizen Science projects to produce new and exciting data applications.

### ##How to run your own Open Data Challenge

An Open Data Challenge is a fantastic way to invite external proposals for novel applications of citizen science data from your project. Make sure to open your datasets with a defined licence aligned to your projects' values on open data, for example, Creative Commons by Attribution [(CC-BY 4.0 licence)](<https://creativecommons.org/licenses/by/4.0/>). A clear introduction of the dataset will help users. Include a general description of the type of data contained (e.g. air quality, soil moisture, noise levels, etc), keywords, creators, and rights and licence. You can also create a short video (5 minutes maximum as recommended length) to introduce your project and datasets. It is a good idea to think of a list of social challenges your data could contribute solutions to. In the WeObserve Open Data Challenge, for example, teams from all over the world worked on proposals to generate new approaches, and innovative solutions using open data for the following social and environmental themes:

- + Ecosystem monitoring: Phenology, biodiversity and land cover
- + Public infrastructure management: Soil moisture, water drainage and flood mapping
- + Community-Based Disaster Management: Flood, Fire, Drought, Heatwave Services, Landslide
- + Regenerative food growing: Yields, sustainable practices and natural pest control
- + Pollution monitoring and health: Water quality, air quality
- + Engaging young people on open data and climate: Education
- +Other: Innovative applications of WeObserve data e.g. COVID19

Further details about the timeliness and relevance of each theme can be found [here](<https://www.weobserve.eu/marketplace/opedatachallenge/>).

It is helpful to prepare a Participants' Pack including all the submission guidelines (e.g. open code, video explaining concept, etc) and a clear timeline as well as any mentoring support you might be able to provide.

### ##Evaluating submissions

A thorough and fair way to evaluate submissions is to convene a panel of people from your network of stakeholders who have the expertise to judge the proposals. To facilitate this process, we recommend you consider different criteria and score submissions across each of them, agreeing beforehand, a minimum score for each. In the case of the WeObserve Open Data Challenge, we used the following three criteria:

+ Solution and Data: An experimental proof of concept that can be interacted with to demonstrate functionality, with a [Technology Readiness Level of 3]([https://en.wikipedia.org/wiki/Technology\\_readiness\\_level#European\\_Commission%20definition](https://en.wikipedia.org/wiki/Technology_readiness_level#European_Commission%20definition)). It had to use one or more WeObserve datasets at the heart of the concept. Datasets could be combined with other data. Uphold FAIR Principles for any resulting datasets or code. The result had to be a new, original solution including a service, mobile or web application, visualisation or demonstration of applying data science by linking datasets for the generation of new insights.

+ Concept: The idea should address one of the thematic challenge areas provided or outline a new one. The concept must clearly communicate why the solution matters and who it benefits. It needs to have beneficial social impacts, such as meaningfully improving the lives of people, the environment or the planet.

+ Team and Market: The team had to clearly define and indicate who will use the product or service and why including a description of everyone involved.

Teams were free to focus on a single WeObserve dataset, or combine this with additional datasets from other sources. The focus of the demonstrators could be local or global, urban or rural or you can address a broader environmental issue or challenge relating to climate change. Teams should be aware of the United Nations Sustainable Development Goals (SDGS) and should attempt to address some of these goals in their application.

Curious about what proposals won the WeObserve Open Data Challenge? The winning submissions will be announced on the [WeObserve website](<https://www.weobserve.eu/marketplace/opendatachallenge/>) soon.

### ##How to access Open Citizen Science Datasets

The [WeObserve Marketplace](<https://www.weobserve.eu/marketplace/>) gives access to datasets from four H2020 Citizen Observatories. You will find a description of each dataset. Please make sure you carefully check the licence before you use the data to make sure your project aligns to the terms.

Could an open data challenge work for any open datasets you are aware of?

What kinds of new products or public services could be created with open environmental data?

Add your thoughts below!