



Österreich *forscht*  
www.citizen-science.at

## Quality criteria catalogue for citizen science projects on Österreich forscht

### Questionnaire for project managers

#### Preamble

In the course of one year the working group for quality criteria of the Citizen Science Network Austria developed a [catalogue of criteria for citizen science projects](#) on the platform Österreich forscht. From this catalogue questions were generated, which should help the project leaders of projects in Austria to fulfil the criteria. By answering the questions, important topics are addressed during the implementation of a project and can thus also be considered by the project management. On the other hand, the answers help potential project participants to make an informed decision about participation on the basis of the information presented.

Project leaders receive this catalogue of questions and send the answers back to Österreich forscht. The platform coordinators read the answers, consult with the Working Group for Quality Criteria if necessary and contact the project leaders in case of ambiguities for clarification and possible assistance. The aim of this process is not to exclude individual projects, but to jointly ensure the quality of the citizen science characteristics of the projects and eventually even increase them. An open dialogue and exchange and a respectful interaction between all participants is the prerequisite for this.

For the Working Group on Quality Criteria, the Leaders

Dr. Florian Heigl and Mag. Daniel Dörler

## Questions on the criteria catalogue

We regard all scientific projects as citizen science projects, except those that answer the following questions with yes:

Are exclusively people with a professional scientific background involved in your project?

Are people in your project exclusively asked about their opinion/attitude or lifestyle? <sup>1</sup>

Does your project exclusively collect data about the participants?

Do the participants in your project exclusively provide passive resources? <sup>2</sup>

If you can answer all 4 questions with "No", your project will be considered for the Austrian Research Platform. Please continue with the following questions.

### Scientificity

1. Which scientific question, hypothesis or goal is to be answered, tested or achieved with the project? <sup>3</sup>
2. Which scientific methods are applied in your project? Please describe them briefly.
3. Which new knowledge is generated in your project, e.g. which improved explanation of certain contexts is created, or which new method is developed in your project?

### Collaboration

4. What added value is generated for all participants (for the citizen scientists as well as for the scientists)?
5. Why is it not possible to achieve the project goals without the cooperation of the citizen scientists?
6. In which project element do the citizen scientists work? Common elements of research projects usually include:
  - Search for a topic and formulation of research questions
  - Method design
  - Data collection
  - Data analysis and interpretation
  - Publication and communication of results <sup>4</sup>
  - Project Governance (steering), administration and monitoring
7. Where are the tasks and objectives of the project published? Please formulate them in a generally understandable way.
8. What roles and associated tasks are there in the project and where are they described?

### Open Science:

9. Where are data and metadata made publicly available? <sup>5</sup> If there are legal or ethical arguments against doing so, please explain them briefly.
- 10./11. Where are the results made publicly available so that they can be found <sup>6</sup>, reused, comprehensible and transparent? <sup>7</sup> If there are legal or ethical arguments against doing so, please explain them briefly. This question corresponds to criteria 10 and 11.

### Communication:

12. How are the various interest groups addressed in an appropriate way?

13. How can participants contact the project management and give feedback and where can they find this information? (e.g.: e-mail, address, contact form)
14. In which way will the participants receive feedback on the results and progress of the project? (e.g. newsletter, blog, information event, scientific publication) <sup>8</sup>
15. In which way are the results presented to the public?

Ethics:

16. How are the project goals compliant with fundamental ethical values (including respect for human rights and fundamental freedoms)? <sup>9</sup>
17. Which transparent ethical principles does the project adhere to, e.g. is a declaration of consent (Informed Consent) obtained from the participants or their legal representatives (for children and young people)? <sup>10</sup>
18. How and where does the project publish generally understandable information on data handling (personal and research data) and how can citizen scientists consent to this information prior to participation?
19. Please reflect the ethical aspects in your project. For example, is there a reflection on diversity, inclusion, or gender equality about inclusion or exclusion of specific groups; self-obligatory information texts, etc.? <sup>11</sup>

Data management:

20. Does the project have a data management plan that complies with the EU General Data Protection Regulation? <sup>12</sup>

## FAQs

### <sup>1</sup> What does "exclusively asked about..." mean in the exclusion criteria?

This question mainly relates to opinion polls, which in our opinion are not active participation in scientific research.

### <sup>2</sup> What does "provide passive resources" mean in the exclusion criteria?

This means, for example, the provision of computing capacity by computers or smartphones, the one-time installation of a sensor without further tasks, if persons only make their property available for research purposes or the like. This type of projects does not offer sufficient integration into scientific projects.

### <sup>3</sup> What is meant by criterion 1?

A project must either have a question, a hypothesis or a goal that is being pursued. In most cases, this depends on the scientific background of the project, but can also vary within a discipline (e.g. a biodiversity monitoring will often not have a question, but rather a goal, namely to record the biodiversity in a certain area).

### <sup>4</sup> What does "publication of results" mean in criterion 6?

Publication of the results means active participation in the writing of this publication. The publication can be a report, a scientific publication or similar. Sharing results in the social media does not count as active participation in the publication of the results.

### <sup>5</sup> What does "publicly available" mean in criterion 9?

Publicly available means that the data and metadata on a public repository can be downloaded by anyone at any time free of charge. The repository can be located at an institution (e.g. university) or on the project page.

### <sup>6</sup> What does "findable" mean in criterion 10?

Findable means that the results can be found through the use of common search engines or clearly visible on the project website.

<sup>7</sup> What does in criterion 10 mean "reusable, comprehensible and transparent"?

Reusable, comprehensible and transparent means that the results can be reused by anyone without restrictions. This includes not only the direct use, but also the specification of the context (i.e. the description of the data) in which the data was collected. This is the only way to determine whether the data can also be used for this purpose. Also the quality of the data under indication of the respective quality control processes must be indicated. More information can be found here: <https://doaj.org/> or here <https://sparcopen.org/our-work/howopenisit/>.

<sup>8</sup> How do criteria 14 and 15 differ from each other?

In question 14, please indicate the channels through which you send feedback to your participants on the progress of the project and the results. This could be newsletters, blogs, events or similar.

In question 15, please indicate how you communicate your results to the public, i.e. to people who are not project participants.

<sup>9</sup> What does criterion 16 mean and how should I fill in the corresponding question?

Please explain here how the project goals are compliant with ethical principles. These are project-specific and can concern fundamental and human rights, for example, but can also be of a research ethical character (e.g. presentation of protected species on an online map).

<sup>10</sup> What information should be provided under criterion 17?

Please indicate here what ethical principles your project complies with if this applies to your project. This is particularly the case if data about the participants is also collected, or if you work with children.

<sup>11</sup> What information should be provided under criterion 19?

Please indicate in a short text which ethical aspects you have considered when planning your project. This criterion is mainly for your own reflection, and your answer will not be used to evaluate the project. An answer could look like this: "In my project, the participants can report data to XY in remote areas via Smartphone App. People with severe visual impairments or reduced mobility are therefore unlikely to be able to participate in the project.

Persons who do not have a smartphone are also excluded from participation. Unfortunately, we currently do not have the resources to allow these people to participate in the project."

## <sup>12</sup> Which questions do I have to consider in a data management plan?

The following are questions you need to ask yourself in the context of a data management plan:

- ⇒ Who will be responsible for data management within the project?
- ⇒ Which data and amounts of data will be collected and produced within the framework of the project and how?
- ⇒ How will the data be documented?
- ⇒ Which quality assurance methods are used to store and document the data?
- ⇒ How is the data stored and secured within the project?
- ⇒ How is access to the data regulated?
- ⇒ Which legal aspects have to be considered when accessing data (e.g. user licenses such as Creative Commons License)?
- ⇒ Should the data be archived on a long-term basis? If so, in which system should the data be searchable and accessible in the long term (e.g. repository)?
- ⇒ Which ethical aspects have to be considered when storing and accessing data?

<https://creativecommons.org/share-your-work/>

<http://blogs.plos.org/everyone/2015/07/02/plos-recommended-data-repositories/>