Use of Data Policies in Citizen Science Projects: A Step-by-step Guide

## Abstract

**Librarians servicing an academic institution may be aware of legal and ethical conditions pertaining to research projects, but how will these conditions apply to citizen science? It is inevitable that project managers have to consider a myriad of issues about access to and protection of data produced or collected by citizen scientists. The checklist below may help sustain the engagement and trust of participants by adhering to ethical and legal obligations emerging in citizen science projects.**

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## Step 1

**Manage personal information according to current legislation and responsible practices**

If and how data can be accessed depends on private and sensitive information being embedded in the data. In citizen science projects, personal information (name, contact information etc.) of the volunteers and often location sharing must be protected and handled according to current laws. In the EU, the GDPR applies to all handling of personal data and includes data that can identify a person, but also sensitive data such as information on health, ethnicity or religion. Not all countries outside Europe have laws protecting privacy or sensitive information of participants in citizen science projects, so follow responsible practices.

## Step 2

**Clarify and review ethical issues**

Evaluation by ethical committees are important for clarifying issues pertaining to health reporting and perhaps collection of biological material in projects, where citizens contribute with such data. Projects based outside an academic institution may experience difficulties receiving an ethical review depending on the regulation and possibilities in individual countries. Consider how participants are protected, their risk evaluated and how accidental finding disclosure will be handled.

## Step 3

**Protect studied objects and populations**

Sharing information about endangered species or particular populations requires special attention. Engaging specific populations in citizen science should be followed by clarifying their cultural needs during data collection and any resistance towards openly sharing (traditional) knowledge. It is the responsibility of the project manager to assess the consequences of data sharing and discuss this with the involved participants. Such issues may take time to investigate and should be planned for.

## Step 4

**Determine insurance coverage**

National or institutional frameworks often insure and protect participants of conventional academic projects. This may not be the case for participants of citizen science. Determine if extended insurance coverage is necessary and how to inform citizens of risks related to their contribution.

## Step 5

**Manage intellectual property rights of the citizen scientist**

Citizen scientists may produce photographs, writings, and creative selections or arrangements of scientific data. In contrast to the undisputable regulations in many countries of employees’ inventions, citizen scientists retain the intellectual property rights (IPR) to any copyrightable work they produce. Because the citizen scientists possess the right to exclude the project in using an invention they have produced, it is recommended to make transparent IPR agreements that are regularly updated with the participants. Also, the project holder should aim at sharing IPR, education or monetary value with the volunteers.

## Step 6

**Specify data access and license**

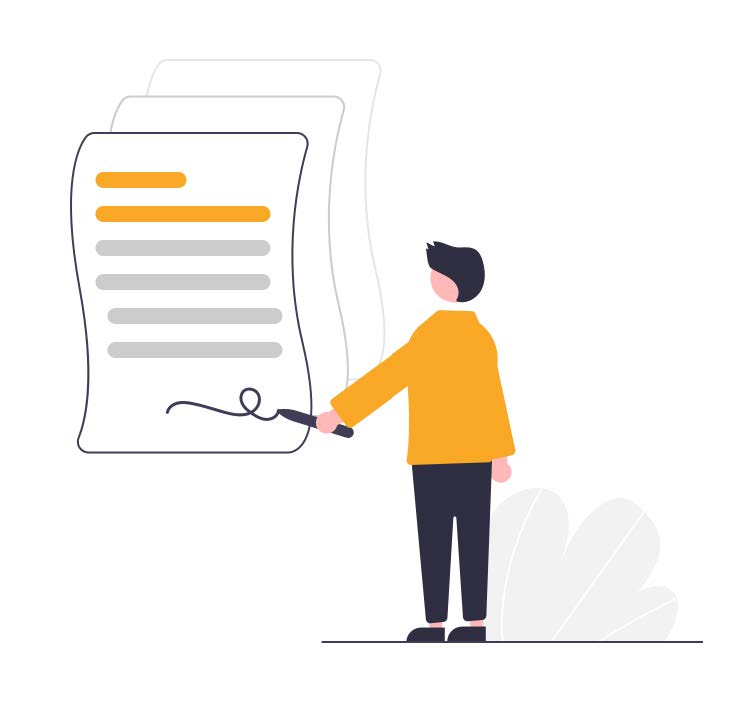
Data without a license is not FAIR and the project manager should early in the project consider how access to data can be aligned with a usage license. Citizen science data may have broad applicability and such reuse is facilitated by choosing legally interoperable licenses for datasets.

## Step 7

**Create a data policy and specify the terms of participation**

Aggregate the above information and requirements in a Data policy and Terms of Participation. The information should be evaluated by relevant stakeholders of the projects (participants, organisations, institutions) before it is used. Participants must be informed about the Terms of Participation in clear and accessible language before they agree to engage in the citizen science activities.

## Summary



The research librarian may readily assist in the practicalities of storing, sharing, publishing and licensing research data, and therefore also data of citizen science origin. However, bodies outside the research library often deliver legal advice and ethical evaluation of relevance for citizen science. Therefore, an important service from the library is to develop a framework to clarify ethical and legal conditions particular for projects relying on co-creation and involvement of citizen scientists.

## Note

Content of this section is modified from: Hansen, Jitka Stilund, Signe Gadegaard, Karsten Kryger Hansen, Asger Væring Larsen, Søren Møller, Gertrud Stougård Thomsen, and Katrine Flindt Holmstrand. “Research Data Management Challenges in Citizen Science Projects and Recommendations for Library Support Services. A Scoping Review and Case Study.” Data Science Journal 20, no. 1 (August 18, 2021): 25. <https://doi.org/10.5334/dsj-2021-025>.

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## Bibliography