VILNIUS TECH
Vilnius Gediminas Technical University

GUIDE FOR RESEARCH INTEGRITY AND ETHICS FOR THE COMMUNITY OF VILNIUS TECH CITIZEN SCIENCE HUB

PURPOSE

The guide for research integrity and ethics presented here is a compilation of standards for good research practice and principles of research ethics. This text drawn is not a legally binding set of rules, but rather as a guide for scientists and researchers from all disciplines and other community members participating in the activities of Citizen Science Hub at Vilnius Tech.

The document was prepared in adherence with the Code of Academic Ethics of Vilnius Tech.

Concerning the contents, this guide is divided into two sections:

Section 1 discusses the general fundamental principles of research integrity and research ethics.

Section 2 presents the guidelines for research integrity and research ethics for citizen science projects.

SECTION I

IMPORTANT BASIC PRINCIPLES

RESEARCH INTEGRITY

According to The European Code of Conduct for Research Integrity, good research practices are based on fundamental principles of research integrity. They should guide researchers in their work as well as in their engagement with the practical, ethical and intellectual challenges inherent in research.

- **Reliability** in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources.
- **Honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way.
- **Respect** for colleagues, research participants, society, ecosystems, cultural heritage and the environment.
- **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts.

RESEARCH ETHICS

According to UKRI six key principles should lead ethical research process:

- Research should aim to maximise benefit for individuals and society and minimise risk and harm.
- The rights and dignity of individuals and groups should be respected.
- Wherever possible, participation should be voluntary and appropriately informed.
- Research should be conducted with integrity and transparency.
- Lines of responsibility and accountability should be clearly defined.
- Independence of research should be maintained and where conflicts of interest cannot. be avoided they should be made explicit.

SECTION II

GUIDELINES FOR RESEARCH INTEGRITY AND RESEARCH ETHICS FOR CITIZEN SCIENCE PROJECTS

CONSIDERATIONS IN CONDUCTING RESEARCH

If your project involves any of the following, you will need to think about how to address these.

Are there potential risks to researchers and participants involved in the research? This could be either the activity to be undertaken or the location the research is to be conducted. For example:

- Are you investigating illegal behaviours or activities?
- Could the dissemination of your findings adversely affect participants?
- Will your research be carried out in a hazardous area or in an area not recommended for travel?
- Does your research concern groups which are legally construed as terrorist or extremist?
- Will the research expose either researcher or participants to situations or circumstances they might find distressing?

Will any of the participants be classed as vulnerable? For example:

- Are any of them under 16 years of age?
- Unable to communicate in the language in which the research is conducted?
- Members of a stigmatised or marginalised social group?
- Have a relationship with the researcher (either personally or professionally)?

How will you show that any participants have agreed to take part?

- Will they be able to give informed consent individually?
- Will consent need to be obtained from parents or guardians?
- Will the purpose of your research be concealed from participants at the outset?

Are you collecting personal data, either face to face or online? If so,

- How will you obtain the consent of participants?
- How will this be securely stored and maintained?
- How will this data be used?
- With whom will it be shared?
- How and when will it be disposed of?

RESEARCH INTEGRITY AND ETHICS IN CITIZEN SCIENCE

There are many guidelines for research ethics and research integrity, such as the Helsinki Declaration (World Medical Association 2013) and the International Ethical Guidelines for Health-related Research Involving Humans (Council for International Organizations of Medical Sciences 2016). These guidelines are dedicated to studies involving humans as research subjects; however, there is a paucity of guidance on how to conduct research with citizens as co-researchers. To address this gap Ozolinčiūtė et al. (2022) prepared the Guidelines for Research Ethics and Research Integrity in Citizen Science facilitating the ethical implementation of Citizen Science (CS) projects in the European Union context.

INSTITUTIONAL OVERSIGHT

Citizen Science research that involves human subjects should undergo ethical review. This also includes Citizen Science research that involves personally-identifiable information.

Citizen Science research should be considered on a country-by-country basis and in legal terms.

POWER BALANCES

Expectations and characteristics of Citizen Scientists should be taken into account.

Citizen Science research should involve inclusive dialogue between professional researchers and citizen scientists.

CONFLICT OF INTEREST

All possible conflicts of interest should be disclosed and declared before the start of a Citizen Science project, during a Citizen Science project and/or afterwards.

INFORMED CONSENT

Whenever Citizen Science projects involve humans as citizen scientists and research subjects, informed consent should be obtained.

In Citizen Science research, the appropriate protection of vulnerable groups must be ensured. Citizen scientists should benefit from knowledge, practices or interventions.

It should be seriously considered what type of consent best fits Citizen Science.

PRIVACY AND CONFIDENTIALITY

Whenever a Citizen Science project involves humans as professional researchers or citizen scientists (active or passive providers of data), their privacy and confidentiality should be respected and assured.

Professional researchers are obliged to inform citizen scientists of technical details concerning the collection and treatment of personal information.

ETHICAL PUBLISHING

It should be ensured that both professional researchers and citizen scientists are properly acknowledged in research publications related to the CS project.

It is recommended that research related to the CS project be published as open-access and in legitimate research outlets.

USE OF TECHNOLOGY

Technical solutions that do not limit inclusiveness and are comprehensible and user-friendly should be selected for Citizen Science projects.

Professional researchers should ensure that all users are informed about the technological solutions used in the Citizen Science project and provided with proper technical support.

Value trade-offs between usefulness and citizen scientists' privacy should be considered in advance.

The selected technical solutions should be transparent to citizen scientists.

USE OF TECHNOLOGY

Citizen scientists should receive the appropriate training in data collection and the importance of keeping good research records.

Appropriate methods for data validation should be implemented.

Discussions amongst professional researchers and citizen scientists on questions pertaining to data ownership and future data accessibility should be facilitated.

FINAL REMARKS

The responsibility for research practice is particularly important at the individual level of the researchers and teachers as well as at the institutional level. In the context of research ethics, responsibility means that researchers or representatives of research institutions must respect and protect the welfare of people and the animate and inanimate environment as well as bear in mind the potential impact on society and the environment and avoid causing harm

These guidelines are designed to not only facilitate the application of existing standards and rules on research integrity and research ethics but also to encourage independent reflection on them.