

# GUIDELINES ON THE TRANSITION FROM ACADEMIC INTEGRITY TO ETHICS IN CITIZEN SCIENCE

Eglė Ozolinčiūtė<sup>1</sup>, Sonja Bjelobaba<sup>2</sup>, Julija Umbrasaitė<sup>1</sup>

<sup>1</sup>*Office of the Ombudsperson for Academic Ethics and Procedures of the Republic of Lithuania, Lithuania*

<sup>2</sup>*Uppsala University, Sweden*

### Abstract

Citizen Science has many essential and intertwined features that are inseparable, therefore an attempt to find one single and universal definition of citizen science may be too broad. For example, sometimes Citizen Science is described as “scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions” (Storksdieck et al., 2016). Other researchers define Citizen Science as “a growing practice in which scientists and citizens collaborate to produce new knowledge for science and society” (Vohland et al., 2021). Eu-citizen.science describes it as “any activity that involves the public in scientific research and thus has the potential to bring together science, policy makers and society as a whole in an impactful way” (Eu-citizen.science, 2022). Through Citizen Science people can participate in many stages of the scientific process. Universities may involve citizen science practitioners in the research projects that require human-based analysis of “large and varied data sets”; studies that include “data generated by individual citizens” (e. g. biomarkers or behaviours); research that exploits “devices to aggregate volunteer sensor or computer networks”; research that is based on “distributed observations” in a large geographical area (Wyler et al., 2016). Involving the public in research poses a set of ethical

questions that differs from those common in research ethics. Students and researchers are or might be involved and/or lead citizen science projects and therefore might have questions on how to address ethical concerns emerging in Citizen Science. Hence, there is a need to explore the transferability of ethical skills and the knowledge gained within academia (e.g., through studying and research conduct) into citizen science activities and to raise awareness of academia on customised ethical training in this regard. Taking this into account, we have developed the guidelines designated for master and doctoral students and their supervisors to carry out Citizen Science -related research activities in line with values of academic integrity. The guidelines provide guidance on how to follow ethical principles within Citizen Science -related research activities.

We used the following methodological approach to develop the guidelines. At the initial stage, the project team reviewed the scientific literature about linkages of academic integrity and citizen science, i.e., how the core values of academic integrity are explored in Citizen Science, using such international databases, as EBSCO, JSTOR and others (Uppsala University Database, 2021). For our search we used some filters, such as language (only English), title (such booleans, as “academic integrity AND citizen science”, “academic ethics AND citizen science”, “research integrity AND citizen science”,

“research ethics AND citizen science”), type of content (only full-text peer reviewed publications). Our search resulted in 0 items. Afterwards, we applied a different strategy to identify relevant sources in the field of citizen science ethics, which is that we harnessed our expertise in the field and refined our search by trying to identify the fundamental values of academic integrity (ICAI, 2018) in the papers that focus on citizen science ethics. We ended with a pool of around 150 sources. After perusal, we listed the relevant topics for further discussion. Within the project team we held a discussion that helped to short-list the most relevant topics in the guidelines: Privacy and Confidentiality, Informed Consent, Conflicts of Interest, Data Quality and Data Management, Use of Technology, Verification of Findings, Intellectual Property, Power Imbalance, Institutional Oversight. We also invited experts in Citizen Science from partner countries to contribute with illustrative examples for these topics.

We structured our guidelines into four sections: Introduction, Methodological approach, Recommendations and Bridging. Each recommendation consists of both a concise and

extensive description of a recommendation, gamified cases (developed by the project team) that exemplify the guideline, references and further readings.

In this workshop, we aim to enrich the bridging pathways for the Guidelines. To do so, using the World café method (WorkshopBank, 2022) we will introduce the concept of Citizen Science and the Guidelines on the transition from academic integrity to ethics in citizen science to the participants and then the participants will be invited to share their insights. The use of the World café method will help to expand the list of project-team developed bridging pathways; therefore, the workshop organisers will take notes to preserve the feedback from the workshop participants that will be used to further improve the Guidelines. Accordingly, the workshop participants will benefit from some takeaways, such as broadening their knowledge on how to facilitate the transfer of ethical skills from academic integrity into Citizen Science.

The Guidelines have been developed as an output of Erasmus+ project *Bridging Integrity in Higher Education, Business and Society* (BRIDGE, 2020-1-SE01-KA203-077973).

## References

- Eu-citizen.science (2022, February 28) *What is Citizen Science?* <https://eu-citizen.science>
- Storksdieck, M., Lynn Shirk, J., Cappadonna, J. L., Domroese, M., Göbel, C., Haklay, M., Miller-Rushing, A. J., Roetman, P., Sbrocchi, C., & Vohland, K. (2016). Associations for Citizen Science: Regional Knowledge, Global Collaboration. *Citizen Science: Theory and Practice*, 1(2), Art. 10, <http://dx.doi.org/10.5334/cstp.55>
- ICAI (2018) *Fundamental values of integrity*. International Centre for Academic Integrity [https://academicintegrity.org/images/pdfs/20019\\_ICAI-Fundamental-Values\\_R12.pdf](https://academicintegrity.org/images/pdfs/20019_ICAI-Fundamental-Values_R12.pdf)
- Uppsala University Database (2021, March 12) *Databaser A-Ö*. Databaser A-Ö (uu.se)
- Vohland, K., Land-Zandstra, A., Ceccaroni, L., Lemmens, R., Perelló, J., Ponti, M., Roeland, S., Wagenknecht, K., (Eds.). (2021). *The Science of Citizen Science*. Springer, <https://link.springer.com/book/10.1007/978-3-030-58278-4>
- Wyler, D., Grey, F., Maes, K. (2016). *Citizen Science at Universities: Trends, Guidelines and Recommendations (Full Paper)*. Advice paper. No. 20. The League of European Research Universities. Citizen-Science-at-Universities-Trends-Guidelines-and-Recommendations-Full-paper.pdf (leru.org)
- WorkshopBank (2022, February 25). *The World Café*. The World Cafe (Free PPT and PDF Download) (workshopbank.com)