

Recommendations of the OSPP on Citizen Science

Drafted by the Citizen Science Working Group of the Open Science Policy Platform

Adopted on 30 April 2018

Key Points

- The OSPP understands the development of Open Science as part of the scientific and societal transformation processes and as a contribution of science to meeting the grand challenges our global societies face today. We regard Citizen Science as an important element in establishing new and better links between science and society and thus as an essential part of Open Science implementation: Citizen Science can contribute to innovation tailored to the needs of society, encourage reciprocal learning and foster a scientific culture in our societies. By facilitating data collection, verification, sharing resources and other types of participatory approaches it contributes to the reliability, effectiveness and responsiveness of science.
- Broadly defined, Citizen Science is “scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions.”¹ Citizen Science is an already very diverse practice, encompassing various forms, depths and aims of collaboration between academic and citizen researchers and a broad range of scientific disciplines. Civic participation in research can range from short-term data collection to intensive involvement in the research process, from technical contribution to genuine research, from collaboration to co-creation of knowledge. Yet, there is still a need to define and establish Citizen Science as a genuine, open research approach.
- Citizen Science projects are often embedded within the context of research performing organizations, being performed with sound methodologies based on the highest standards of scientific excellence. Their outcomes often benefit researchers and society at large. Exploring how to engage larger parts of the population in such activities, as well as establishing a reliable ethical, legal, methodological and quality framework for Citizen Science in the European Research Area should be regarded as priorities.
- Open Science is an enabler for Citizen Science: Citizens’ involvement in research requires at least a basic degree of openness, regarding methodology, access to literature and data, and communication about the aims, objectives and results of the research projects.

¹ OED (2016a). “Citizen Science”. Oxford English Dictionary, Available at: <http://www.oed.com/view/Entry/33513?redirectedFrom=citizen+science#eid316619123> (Last accessed 5th December 2016).

Measures

1. To integrate Citizen Science into the scientific system, it is essential to raise awareness and recognition for Citizen Science amongst scientists and research funders. The engagement of citizens in research, policy making and innovation should be encouraged at all levels, from the EC, research institutions and universities to local and national governments and funding bodies. How and to what extent Citizen Science can be integrated may differ in various fields.
2. Engagement of major stakeholders in science communication is a must to promote Citizen Science and they must be made more aware of the importance of it. Universities and research institutions are good in communicating research outputs for scientists, e.g. journals and conferences. But we need to improve communicating to non-specialists.
3. A clear set of principles, guidelines & quality criteria for Citizen Science projects should be established in the framework of EU Open Science policies. It should be developed by universities, research institutions, funding agencies and citizens. The guidelines should include provisions for the conduct of research according to scientific and ethical standards and the management of intellectual property rights. The possible types of citizen engagement, from data collection to project co-design, and the possible ways of giving credit and recognition to citizens should be specified. As Citizen Science is a rapidly evolving area, the guidelines should be easily updated.
4. Citizen Science practices should be incentivized and rewarded and should become a part of next generation research indicators. Indicators for successful Citizen Science projects should consider the quality of citizen participation and public engagement as well as the quality of the produced research.
 - a. As public engagement is being implemented into Open Science metrics, publicly funded Citizen Science projects can function as showcases for implementing Open Science principles (open access publication, FAIR data standards, and the use of open source software).
 - b. Benchmarking for Citizen Science projects in the EU Framework Programmes should be developed.
5. Promote resources and infrastructures at universities and research institutions to create a supportive environment for public engagement, science communication and Citizen Science. This entails coordination and communication infrastructures as well as training for Citizen Science and science communication, fostering skills such as community management, co-production of knowledge, Open Science standards and social diversity. Extra funding should be reserved for these resources and infrastructures. Research libraries are well placed, amongst others, to contribute actively to the necessary coordination and communication infrastructures as well as relevant training.
6. Funding for Citizen Science projects must be flexible, long-term and allow small or experimental projects to be funded.

7. Promote research on Citizen Science and public engagement with science and create career opportunities for researchers and science communicators.
8. The EC should develop and provide an online toolkit for Citizen Science in Europe:
 - a. promoting Citizen Science as an European asset,
 - b. offering an entry point and interconnecting already existing activities and infrastructures at the European, national and local level,
 - c. highlighting particular achievements and best practices,
 - d. providing a regular overview of the changes in activities,
 - e. implementing open/FAIR data standards in Citizen Science projects,
 - f. and providing a set of guidelines and tools for Citizen Science for all stakeholders.

Authorship Information

These recommendations were drafted by the Citizen Science Working Group of the Open Science Policy Platform.

Michela Bertero	Alliance of 13 top research centres in life sciences to support and strengthen European research excellence (EU-LIFE)
Manuela Epure	The Alliance of Central and East European Universities (ACEU)
Michele Garfinkel	The European Molecular Biology Organization (EMBO)
Ernst Kristiansen	European Association of Research and Technology Organisations (EARTO)
Eva Méndez Rodríguez	Young European Research Universities Network (YERUN)
Katrin Vohland	European Citizen Science Association (ECSA)
Maike Weißpflug	European Citizen Science Association (ECSA)
John Wood	Research Data Alliance (RDA)
Daniel Wyler	League of European Research Universities (LERU) and European University Association (EUA)