

# **Citizen science as a new way to empower local communities and NGOs to solve social and environmental problems**

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## **Abstract**

Social welfare in a local community is directly related to the capacity of the community to effectively deal with social and environmental problems. Social problems in a community are determined by social, economic and geographical causes, which, if properly responded, can lead to increased social welfare in the community. The analysis academic literature indicates that members of a socially resilient communities are characterised by civic engagement, a sense of collective and individual power, and an openness to social innovations, all of which contribute to the social welfare of the community. Although there are many ways to increase resilience of communities, citizen science is one of the innovative ways of empowering community members to effectively address community problems, and at the same time to increase the sense of efficacy and collective and individual power. This paper aims to discuss the opportunities of how citizen science might be used to empower local communities and NGOs for solving social problems. Based on participatory research methodology, this paper introduces research results from 5 local communities and 1 NGO in Lithuania. Action research was implemented during the Covid-19 pandemic period, thus this paper also includes insights about using IT in participatory research. Although citizen science is a new paradigm, communities in Lithuania have been conducting research for a long time on issues such as inclusion and participation of community members, community engagement, and environmental issues. On the other hand, communities recognise the importance of collaborating with researchers, as this increases the quality of findings and applicability of research results for local decision making. The synergy of cooperation among communities and researchers has been emphasised: although communities are the best at understanding their own problems, the role of researchers is to provide advice and help for communities to identify their problems, formulate research questions, and to help them carry out research that will lead to better solutions to existing problems.