

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Citizen Science in Global Earth Observation Systems (6-GTS.1)

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THE ROLE OF POLICY IN USING CITIZEN SCIENCE FOR EARTH OBSERVATION

Abstract

Scientific institutions and government agencies are expanding their efforts to facilitate public contributions to scientific research and discovery, from classifying galaxies and collecting environmental data to collectively solving the structure of an AIDS-related enzyme through a protein-folding game. It is an important and growing tool for improved decision making by national governments and others working on a variety of initiatives including efforts in support of the 2030 Agenda for Sustainable Development. Even in the aftermath of disasters, people are using cell phone cameras, social media and interactive mapping tools to help authorities assess affected areas and alert those on the ground to changing conditions. In the United States, the scientific impacts of citizen science have been recognized by 60 federal agencies and organizations, which coordinate and support hundreds of citizen science projects. In Europe, the European Commission continues to fund Citizen Observatories, beginning with the FP7 Programme and extending through active projects Ground Truth 2.0, LandSense, SCENT, and GROW. Similar initiatives are emerging in other parts of the world. Citizen science is beginning to play an important role in augmenting and enhancing Earth observation data. These new technologies and approaches, however, also come with new risks and responsibilities. As institutions attempt to innovatively incorporate crowdsourcing and citizen science into their traditional Earth observation workflow, they will face many challenges—from data quality to data fusion to formulating policies that will facilitate this work. This paper will explore the opportunities and challenges of integrating citizen science approaches with Earth observation, with a primary focus on specific policies that hamper the further adoption of citizen science methodology in Earth observation programs. It will draw on initial analysis and outcomes of a workshop held by South Big Data Innovation Hub and the Secure World Foundation which convened experts on citizen science and remote sensing satellites to outline a way forward in the key areas of best practices and policy considerations. Further, this paper seeks to point towards areas requiring future study.