AN OVERVIEW OF THE USE OF CITIZEN SCIENCE, AND LESSONS FROM THE ENVIRONMENT SECTOR IN THE UK

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Science is our most reliable system of gaining new knowledge. Citizen science, also known as 'crowd-sourced science', 'volunteer monitoring', 'amateur science' and 'public participation in scientific research', is the public involvement in research and the discovery of new scientific knowledge. A citizen science project can involve just a couple of people, or millions collaborating towards a common goal across the globe. A citizen scientist is an individual who voluntarily contributes his or her time, usually on an issue which interests or concerns them. This involvement mainly relates to either data collection or data analysis, but is not limited to this. Citizen science has grown massively over the last decade, in parallel with home computing/smart phone ownership and the use of social media. Examples of the fields that citizen science works in include astronomy, environment and ecology, medicine and public health, genetics, psychology and many more. Citizen science can deliver large data sets as well as real-time monitoring. In addition human brains can be harnessed for problem solving alongside distributed-computing power to deliver 'distributed thinking', a higher-order citizen science. The ultimate direction citizen science may take is unknown, but it presents many opportunities. This excitement should be tempered by the realities of developing and running a citizen science project. The issues will vary according to the type of citizen science envisaged. A recent analysis of citizen science in the UK environment sector can provide some relevant lessons.