

## Citizen Science: Social Media as a supporting tool

This scoping research examined 12 citizen science projects to synthesise key lessons about the use and design of supporting social media. Results show social media support to citizen science is successful where it has a clearly defined purpose targeted at particular types of volunteers, and where collaboration between skilled amateur experts and scientists ensures citizen scientists have tools they find useful as well as providing scientists with appropriate data.



'Evidence from the case studies suggests that social media is a cost effective and important edition to citizen science projects'

### Background

The uptake and integration of digital technologies within citizen science projects is a fast developing area of interest to the land-based and environmental sector. There have been summarises of reviews which draw out key insights and lessons that can inform the design and implementation of forestry-based citizen science projects in the UK. This work sought to synthesise some key experiences about the use of social media within citizen science projects of relevance to forestry.

### Objectives

- To investigate and illustrate how the Forestry Commission (FC) and partner organisations use social media in citizen science projects.
- To comment on the most successful uses of social media supporting citizen science (including type of media, type of audience, and function of social media).
- To identify the underlying principles of technology, process design and management contributing to this success.

### Methods

Case studies were selected to provide examples of social media use for example for different functions and using different platforms. Interviews were then arranged with people associated with each of the cases. The interviewees included scientists, agency end users and social media developers. Additional material from secondary sources (e.g., associated webpages and published literature) was also used to provide insights.

## Findings

Social media is most often used within citizen science projects designed and managed by professional organisations and scientists. There are few examples of projects that are generated by citizens, that use social media and digital technologies. Social media is mostly used as a platform to engage and retain volunteers in data collection activities, and may be used to disseminate results. Using social media to facilitate or enable real-time (or close to real-time) feedback of results at an individual, and community, level maintains user interest and engagement in citizen science projects. Whilst social media can improve data management and analysis, some projects found volunteers missed the opportunities for 'real world' social interaction if digital engagement was emphasised too much.

The impact of social media is strongest in citizen science projects where social media tools have well defined objectives and are an integrated part of the project strategy. Barriers to the use of social media in citizen science projects are the absence of a "digital culture", lack of familiarity with the benefits, the perception that social media is not "serious media" and concerns about organisational reputation. Continuing challenges include matching social media to scientific objectives and the costs of data management which may increase as a result of the use of social media.

## Recommendations

It is important to understand how social media tools could serve the scientific purpose of a project; and to define the kinds of citizen scientists the social media will engage. The type of social media employed will need to take account of their differing needs, motivations and interests.

Skilled citizen scientists should be engaged in the design, development, piloting and evaluation social media tools. This kind of collaboration ensures that citizen scientists have access to tools they find useful at an individual level, as well as providing data with and evidence useful at a community level. Likewise social media platforms and digital tools should be tested for suitability with less experienced volunteers to ensure, for example, they reflect their level of knowledge of and interests in relation to the topic being explored.

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<b>Reports and Publications:</b> Ambrose-Oji, B. et al (2014) Citizen Science: Social Media as a supporting tool. <a href="http://www.forestry.gov.uk/fr/inf-d-9kkjyn">www.forestry.gov.uk/fr/inf-d-9kkjyn</a>