How participatory is our citizen science?

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How do Citizens participate?

Contractual
Contributory
Collaborative
Co-created
Collegial

Increasing participation
How do citizens participate?

**Contributory** — *which are generally designed by scientists and for which members of the public primarily contribute data.*

**Collaborative** — *which are generally designed by scientists and for which members of the public contribute data but also help to refine project design, analyse data, and/or disseminate findings.*

**Co-created** — *which are designed by scientists and members of the public working together and for which at least some of the public participants are actively involved in most or all aspects of the research process.*
The Citizen Science Toolbox

CONTRIBUTORY
• Large spatial/ temporal scale
• Big data questions
• Increasing scientists’ capacity
• *Increased knowledge of science and environment*
• *Some change in environmental attitudes and behaviour*

COLLABORATIVE
• Large spatial/ temporal scale
• Broad-scale questions
• Capitalising on field knowledge
• *Increased scientific literacy*
• *Increased sense of place and stewardship*
• Influence management policy and practice

CO-CREATED
• Localised and small scale
• Community scale questions
• Community/localised issues
• *Increased scientific and environmental literacy*
• *Increased ownership, empowerment and agency*
• Relationship and capacity building
Citizen science is as much about a social process as it is a scientific process.
Supporting the social process

• Identifying and serving motivations

• Relationship dynamics

• Reflective practice and evaluation
So how participatory is citizen science?

Contributory = 157

Collaborative = 13

Co-created = 10

Collegial = 6

Literature review of 186 papers.
Barriers to adopting more participatory processes.

Professional Capacity
- Skills
- Knowledge
- Practices

Culture and Environment
- Institution Goals
- Scientific Culture
- Socio-political Culture

Resourcing
- Time
- Funding Landscape
Honesty
Experimentation
Daring
Creativity