AWARENESS, VIEWS AND EXPERIENCES OF CITIZEN SCIENCE AMONG SWEDISH RESEARCHERS – TWO SURVEYS

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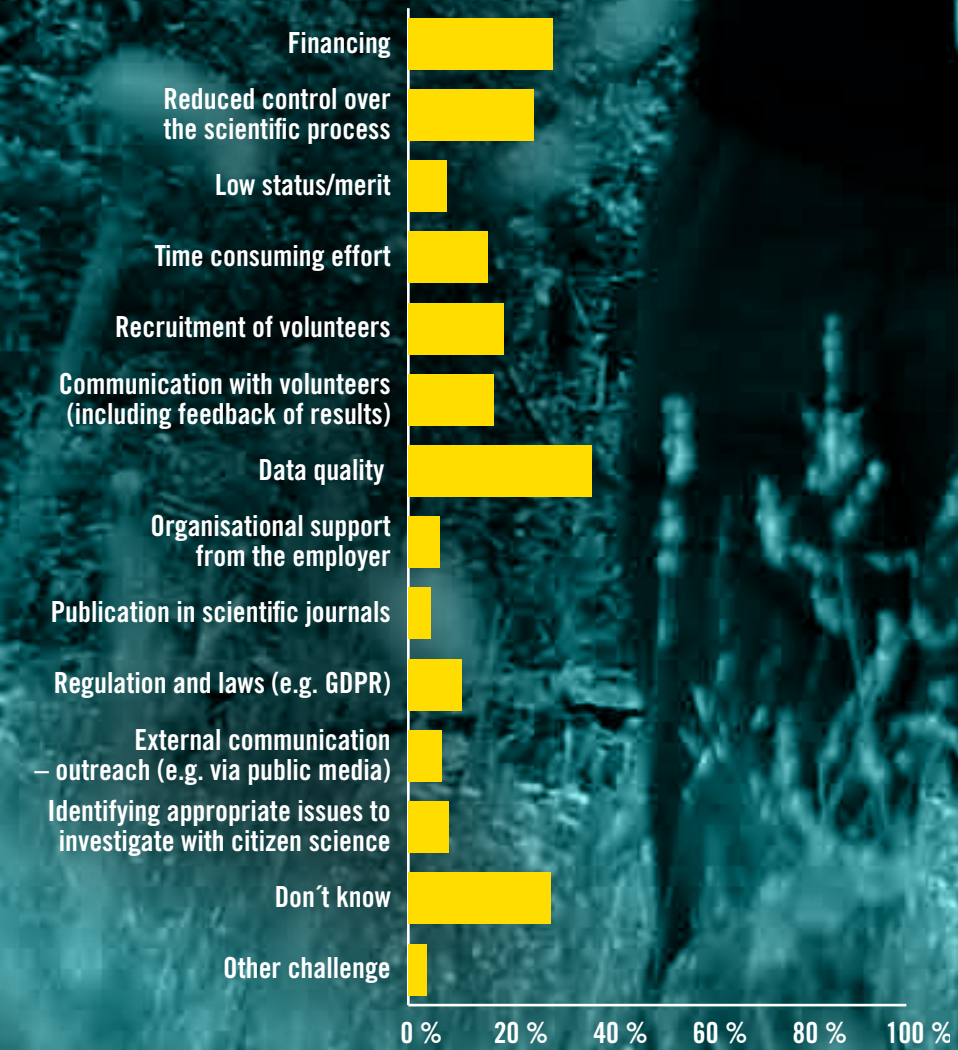**Dick Kasperowski**, Gothenburg University

SLU SURVEY (N=636)

- 63 % had heard about CS.
- 61 % of these had not been involved in any CS initiative themselves.
- Respondents involved in CS (n=132) -> researcher (44 %) or coordinator (37 %), volunteer (22 %), environmental analyst (21 %), communicator (11 %), teacher (7 %) and IT developer (2 %).
- Reasons for engaging volunteers in SLU projects -> enable collection of large quantities of data (68 %), improve knowledge base (59 %), improve data quality (24 %), promote participants' understanding in research (21 %) or in a particular matter (17 %) and promote collaboration between SLU and society (20 %).
- The biggest challenges for the CS researcher/coordinator -> data quality (37 %), funding (29 %), reduced control in the scientific process (25 %), volunteer recruitment (19 %), communication with volunteers (17 %) and time demands (16 %).

NATIONAL SURVEY (N=3 699)

- 37 % had heard about CS. A larger proportion from the natural sciences (51 %) than from other research areas (26 to 39 %).
- 61 % had not been engaged in any research projects whith volunteers.
- 73 % thought that citizens should be able to observe research prioritizations, only 39 % thought that they should participate.
- Among researchers who had heard about CS, 20 % were very positive towards the concept, 42 % were fairly positive; Junior researchers as well as researchers from the natural sciences were more positive towards CS than senior researchers and researchers from the arts and humanities.

DOMINANT REASONS FOR ENGAGING VOLUNTEERS IN SLU PROJECTS (85 RESPONDENTS).

Categories (bar chart, 0 % to 100 %):
- Promote participants' understanding/engagement in research
- Promote participants' understanding/engagement in a particular issue/purpose
- Promote career of the researcher
- Enable collection of (large quantities of) data
- Improve data quality
- Improve knowledge base
- Enrich teaching in primary/secondary school
- Democratise the research process
- Attract attention
- Influencing policy makers
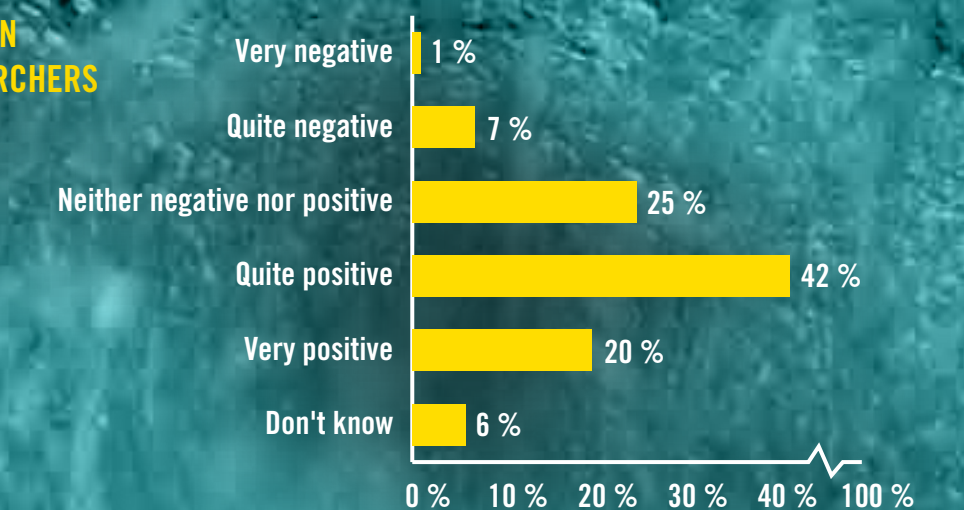- Promote collaboration between SLU and society
- Don´t know
- Other motive

OPINION ABOUT THE BIGGEST CHALLENGES FOR THE RESEARCHER/COORDINATOR WORKING WITH CS (542 RESPONDENTS).

Categories (bar chart, 0 % to 100 %):
- Financing
- Reduced control over the scientific process
- Low status/merit
- Time consuming effort
- Recruitment of volunteers
- Communication with volunteers (including feedback of results)
- Data quality
- Organisational support from the employer
- Publication in scientific journals
- Regulation and laws (e.g. GDPR)
- External communication – outreach (e.g. via public media)
- Identifying appropriate issues to investigate with citizen science
- Don´t know
- Other challenge

PROPORTIONS OF RESEARCHERS FROM DIFFERENT RESEARCH FIELDS, WHO HAVE HEARD ABOUT CITIZEN SCIENCE. NUMBER OF RESPONDENTS: ARTS AND HUMANITIES = 443; MEDICINE = 623; NATURAL SCIENCES = 645; SOCIAL SCIENCES = 1 211; TECHNOLOGY = 702.

Field	Yes	No	Unsure
Arts & humanities	39 %	54 %	7 %
Medicine	27 %	65 %	8 %
Natural sciences	51 %	44 %	5 %
Social sciences	39 %	52 %	9 %
Technology	26 %	67 %	7 %

Legend: Yes (green), No (yellow), Unsure (grey)
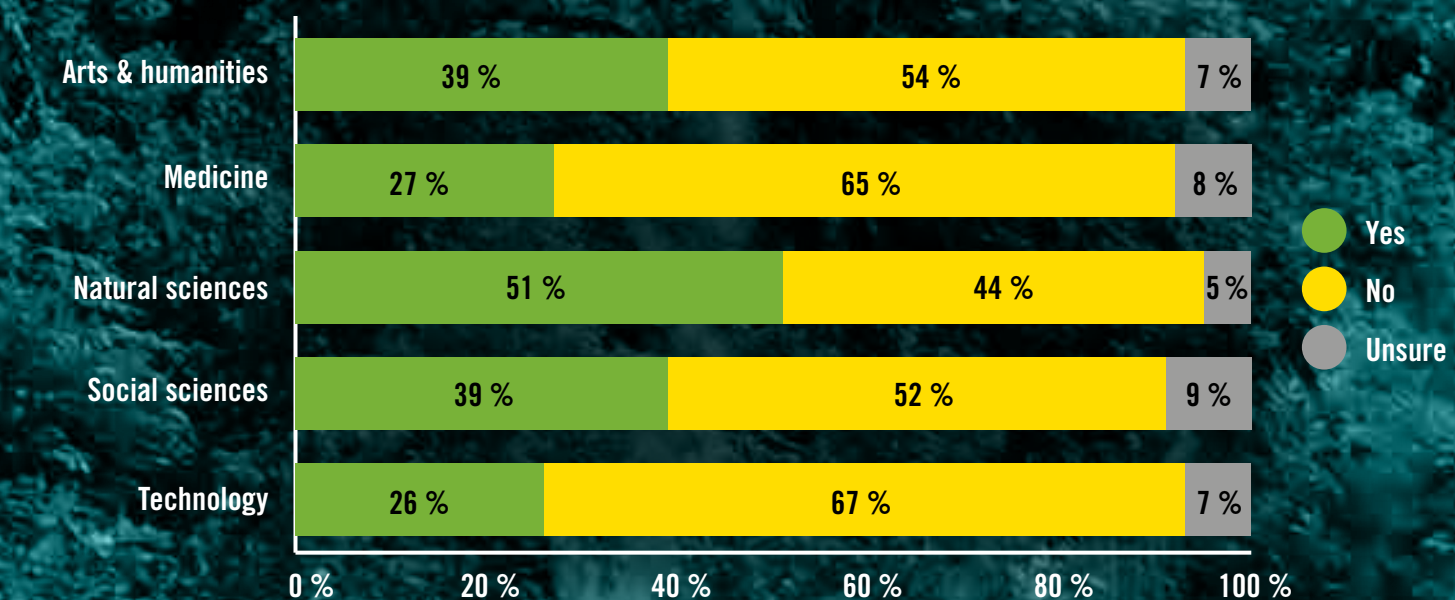
OPINIONS ABOUT CITIZEN SCIENCE AMONG RESEARCHERS (1,353 RESPONDENTS).

Very negative	1 %
Quite negative	7 %
Neither negative nor positive	25 %
Quite positive	42 %
Very positive	20 %
Don´t know	6 %

DISCUSSION

- CS is a far from well-known concept among Swedish researchers.
- While those who have heard about CS are generally positive towards it, researchers overall are hesitant to invite citizens to take part in the research process.
- Researchers from the arts and humanities seem to be the most skeptical with regards to involving citizens in their research.
- If and when citizens are engaged in the research process, it is most likely to help researchers collect data.
- Data quality is seen as the biggest challenge associated with CS.