

# Data and knowledge co-creation and sharing: a Citizen Science perspective

*Strengthening the science-policy-society interface, 8 February 2023*

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UNITED NATIONS, NEW YORK | 8–10 FEBRUARY 2023

## **3<sup>rd</sup> Open Science Conference**

Accelerating the Sustainable Development Goals,  
Democratizing the Record of Science



Nature based solutions, Italy



Waste water treatment  
impacts, Palestine



Creek restoration, Hungary



Biodiversity consv &  
livelihoods, Kenya



Water quality in socio-ecol  
systems, Sweden



Climate proof WM, NL



Pollution outfall, UK



Riverfly populations, UK



Community-based NRM,  
Zambia



Climate Change impacts,  
Spain



Quality of life, BE



Biodiversity monitoring of NBS, Romania





# What is Citizen Science?

- Volunteered geographic information
- Crowdsourcing geospatial data
- Public Participatory GIS
- People-centric sensing
- Participatory sensing
- eParticipation
- Environmental Virtual Observatories
- Citizen Observatories
- Community-based Monitoring & Information Systems
- Community Science
- Participatory Action Research
- ...



# Citizens Science – more than data collection

Scientific method

Research Question

Study Design

Data Collection

Data Analysis & Interpretation

Understanding the results

Management action / Publication





# Citizens Science is about people



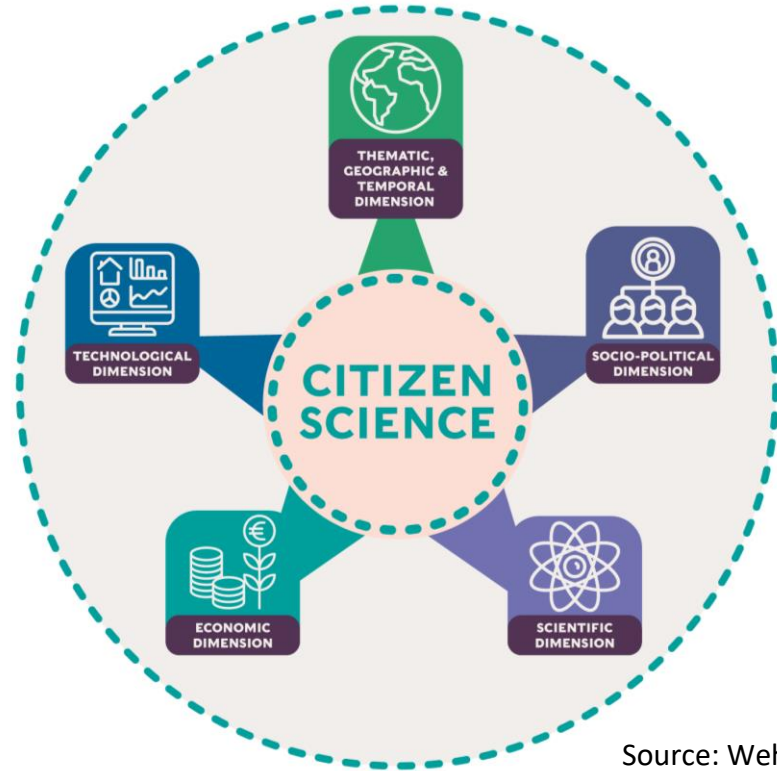
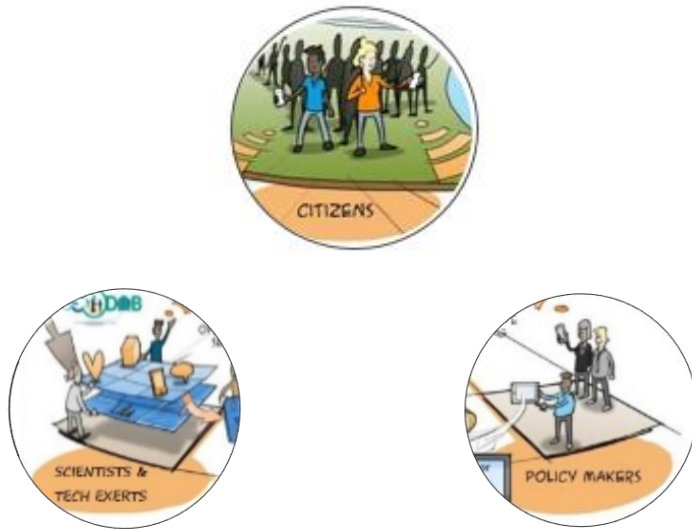


# Citizen Science stakeholder motivations & dynamics



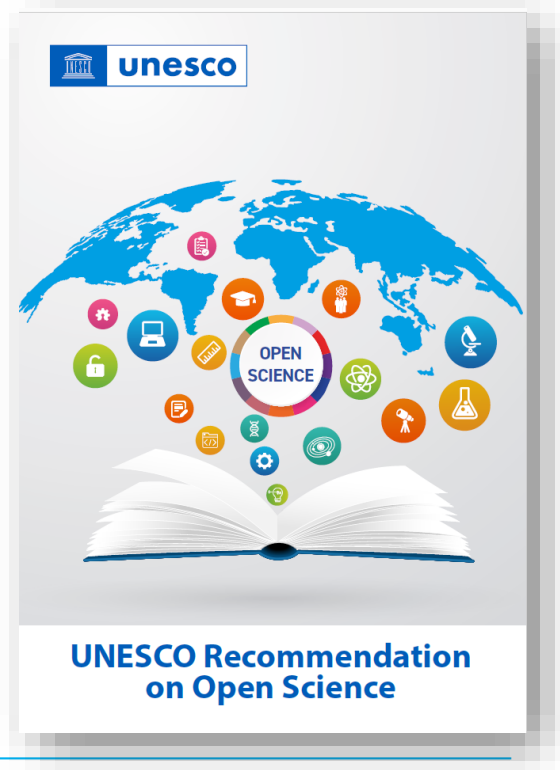
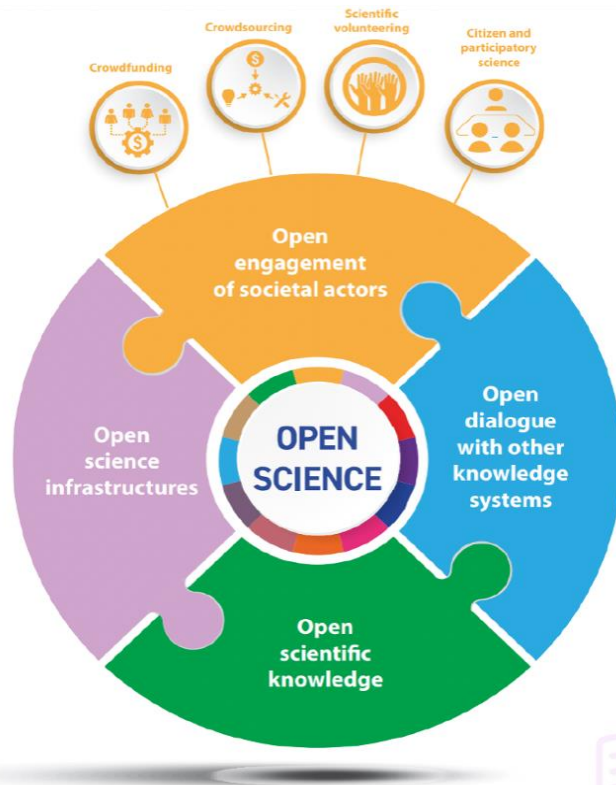
# Citizens Science is about *process*

Multi-stakeholder & multi-dimensional



Source: Wehn (2022)

# Citizen Science & Open Science





# Citizen Science & Open Science Community of Practice



## CS&OS CoP

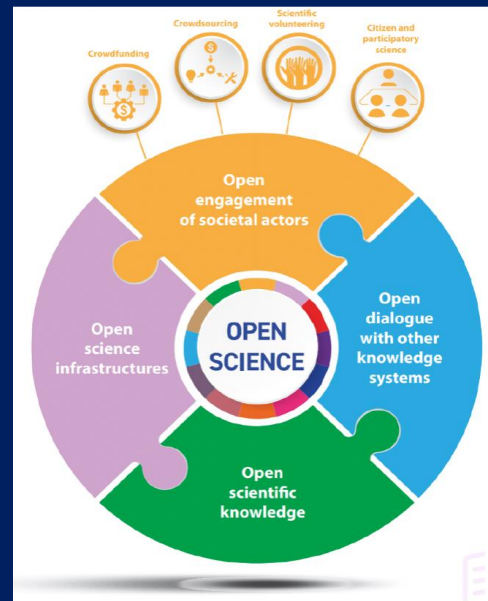
Since 2020

Co-Chairs: Uta Wehn,  
Libby Hepburn, Jack Nunn

188 Members from 37  
countries

“Citizen Science is **NOT** only about data collection - means for *open, holistic and participatory processes of knowledge generation*”

“Citizen Science can be understood as **providing meaning to Open Science in a process dimension**”







The greatest contribution of citizen science data to SDG monitoring would be in:



Source: Fraisl et al. (2020) <https://doi.org/10.1007/s11625-020-00833-7>.

*“Citizen Science is the only way  
to achieve all the “SDGs”*”





# Conclusions

- Big **potential & expectations** of Citizen Science to open science to society
- All **shapes & sizes**
- Changing roles, competencies & skills
- Citizen Science: not a quick fix for data gaps, not 'plug & play'
- Citizen Science requires **careful approach** to embed science in society



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