

# Citizen science, impact and Open Innovation in Science

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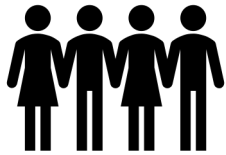
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## Citizen science



Public Participation

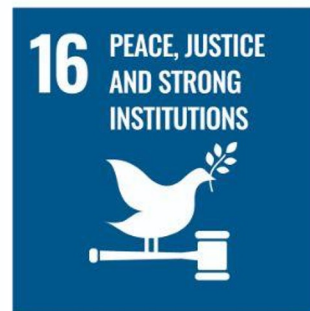
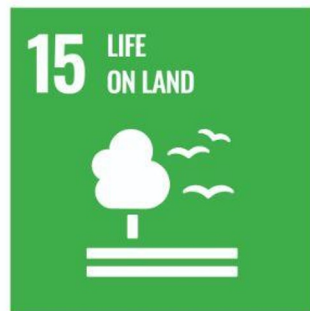
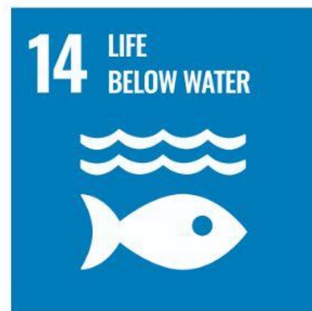
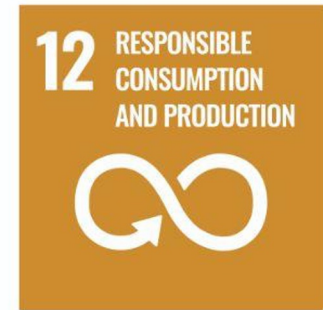
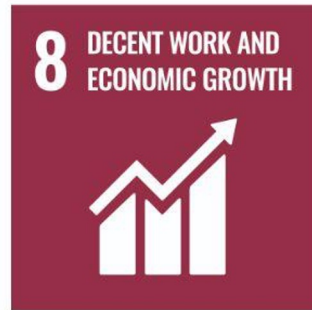


Knowledge production

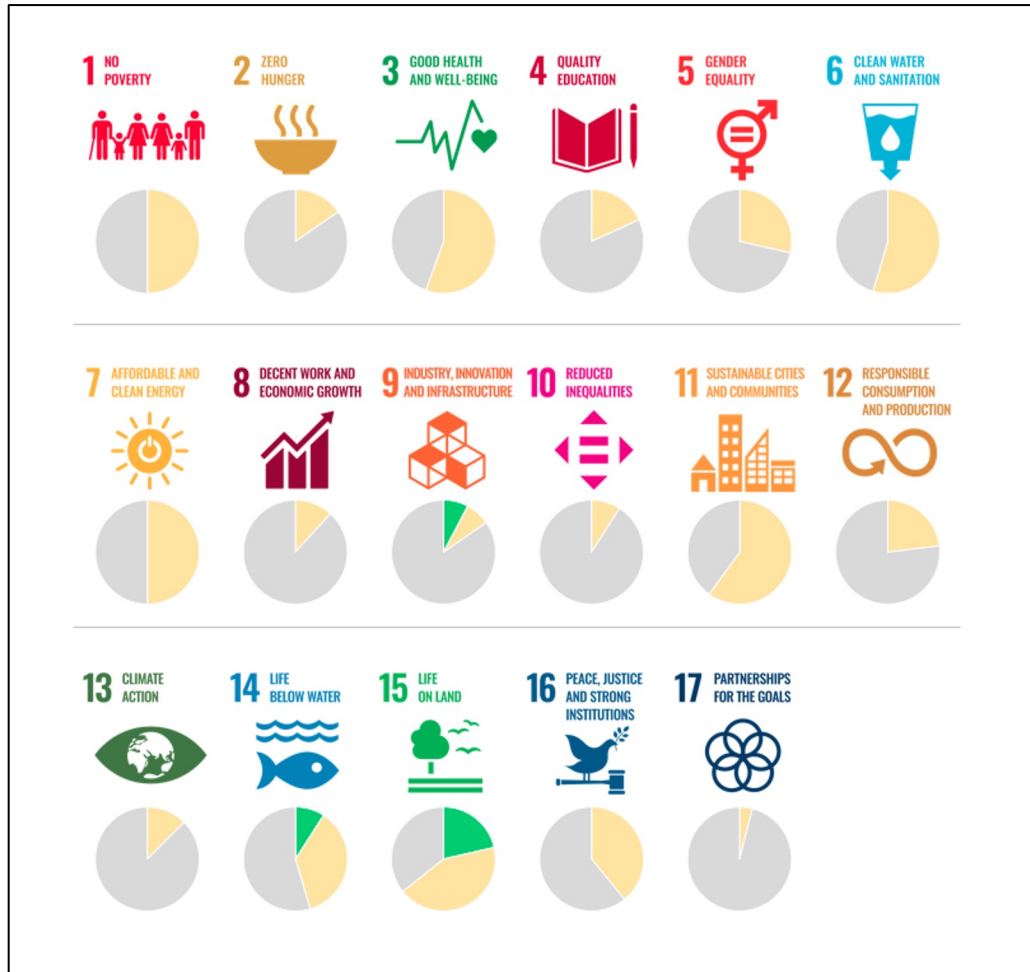


Voluntary contributions

# Sustainable Development Goals (SDGs)



# 33% of the SDG indicators can benefit from citizen science data



The SDG indicators where citizen science projects are “already contributing” (in green), “could contribute” (in yellow) or where there is “no alignment” (in grey). The overall citizen science contributions to each SDG are summarized as pie charts.



International Institute for Applied Systems Analysis



Wilson Center



UN environment programme

TRReNDS Thematic Research Network on Data and Statistics

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Q&A | Published: 17 October 2022

### Citizen science tackles plastics in Ghana

Stephanie M. Olen

Nature Sustainability 5, 814–815 (2022) | Cite this article

763 Accesses | 15 Altmetric | Metrics

**Citizen science efforts are instrumental in monitoring our progress towards the UN Sustainable Development Goals. Dilek Fraisl, Research Scholar at the International Institute for Applied Systems Analysis, and Omar Seidu, Director of Social and Demographic Statistics and the SDGs Coordinator at the Ghana Statistical Service, discuss how Ghana successfully integrated citizen science data into its official monitoring of marine plastic debris.**

**Your team has been working on incorporating citizen science data into the official monitoring of plastic debris density, in accordance with the United Nations (UN) Sustainable Development Goals (SDGs). Can you briefly describe the state of marine plastic pollution in Ghana? How much do we know based on official monitoring of SDG indicators? How has citizen science helped paint a clearer, more accurate picture of the current situation?**



Olen, S.M. Citizen science tackles plastics in Ghana. *Nat Sustain* 5, 814–815 (2022). <https://doi.org/10.1038/s41893-022-00980-y>  
 Citizen Science for the SDGs StoryMap: <https://dataforchange.net/strengthening-measurement-of-marine-litter-in-Ghana>

- Citizen science data for monitoring beach litter have been integrated into the official SDG monitoring and reporting mechanisms of Ghana
- *Ghana the first country to report on SDG indicator 14.1.1b and first country to use citizen science data for that purpose.*
- Citizen science data will *serve as inputs to Ghana's Integrated Coastal and Marine Policy*, currently under development, as well as other relevant policies to address the marine litter problem.



**...bridging local data collection efforts with global monitoring processes by leveraging the SDG framework.**



Smart Nature Freaks Youth Volunteers Foundation

# Open Innovation in Science can increase scientific and societal impact of research...

## Building trust in open and collaborative practices across various stakeholders

Encure inclusiveness through meaningful engagement of all stakeholders



Listen and understand the motivations, interests and concerns



Create time and space for these stakeholders to meet and connect



Be transparent about citizen science results and methodologies, especially how these methodologies were implemented



Citizens and communities are no free labor to close government data gaps; they should receive a share of the benefit from participating



# Thank you!

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