Citizen Science to Measure Progress on the Environment

Dilek Fraisl

Novel Data Ecosystems for Sustainability Research (NODES)
International Institute for Applied Systems Analysis (IIASA)

Email: **fraisl@iiasa.ac.at**
Twitter: **@dilekfraisl1**
Web: **www.iiasa.ac.at**
www.geo-wiki.org

What is citizen science?

Public participation

Voluntary contributions

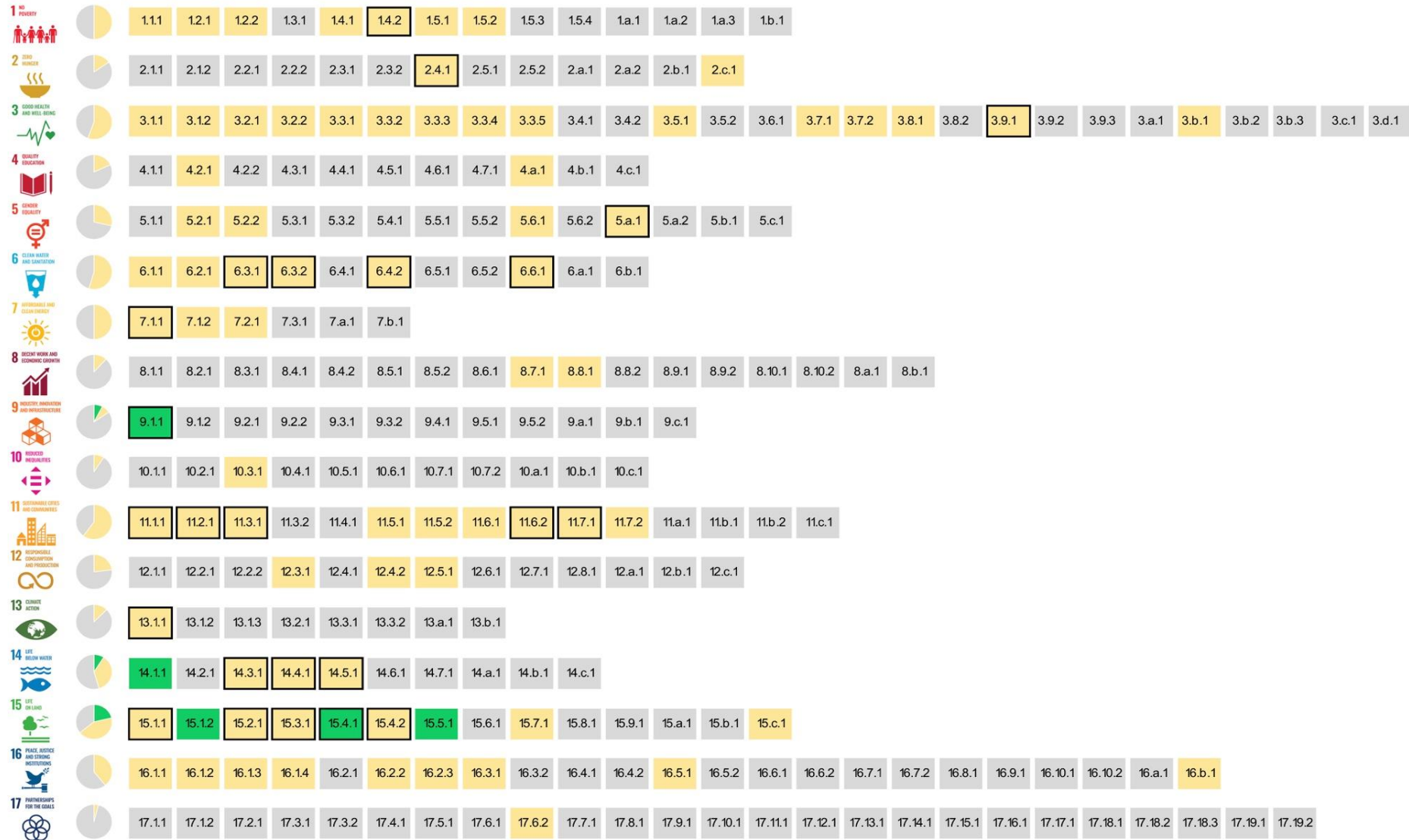**Scientific research and knowledge production**

Fraisl, D., Campbell, J., See, L. *et al*. Mapping citizen science contributions to the UN sustainable development goals. *Sustain Sci* **15,** 1735–1751 (2020). https://doi.org/10.1007/s11625-020-00833-7

SDG Indicator 14.1.1b on marine litter

The SDG indicators where citizen science *projects* are 'already contributing', 'could contribute' or where there is 'no alignment'

1 NO POVERTY: 1.1.1, 1.2.1, 1.2.2, 1.3.1, 1.4.1, 1.4.2, 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.a.1, 1.a.2, 1.a.3, 1.b.1

2 ZERO HUNGER: 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2, 2.4.1, 2.5.1, 2.5.2, 2.a.1, 2.a.2, 2.b.1, 2.c.1

3 GOOD HEALTH AND WELL-BEING: 3.1.1, 3.1.2, 3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 3.6.1, 3.7.1, 3.7.2, 3.8.1, 3.8.2, 3.9.1, 3.9.2, 3.9.3, 3.a.1, 3.b.1, 3.b.2, 3.b.3, 3.c.1, 3.d.1

4 QUALITY EDUCATION: 4.1.1, 4.2.1, 4.2.2, 4.3.1, 4.4.1, 4.5.1, 4.6.1, 4.7.1, 4.a.1, 4.b.1, 4.c.1

5 GENDER EQUALITY: 5.1.1, 5.2.1, 5.2.2, 5.3.1, 5.3.2, 5.4.1, 5.5.1, 5.5.2, 5.6.1, 5.6.2, 5.a.1, 5.a.2, 5.b.1, 5.c.1

6 CLEAN WATER AND SANITATION: 6.1.1, 6.2.1, 6.3.1, 6.3.2, 6.4.1, 6.4.2, 6.5.1, 6.5.2, 6.6.1, 6.a.1, 6.b.1

7 AFFORDABLE AND CLEAN ENERGY: 7.1.1, 7.1.2, 7.2.1, 7.3.1, 7.a.1, 7.b.1

8 DECENT WORK AND ECONOMIC GROWTH: 8.1.1, 8.2.1, 8.3.1, 8.4.1, 8.4.2, 8.5.1, 8.5.2, 8.6.1, 8.7.1, 8.8.1, 8.8.2, 8.9.1, 8.9.2, 8.10.1, 8.10.2, 8.a.1, 8.b.1

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE: 9.1.1, 9.1.2, 9.2.1, 9.2.2, 9.3.1, 9.3.2, 9.4.1, 9.5.1, 9.5.2, 9.a.1, 9.b.1, 9.c.1

10 REDUCED INEQUALITIES: 10.1.1, 10.2.1, 10.3.1, 10.4.1, 10.5.1, 10.6.1, 10.7.1, 10.7.2, 10.a.1, 10.b.1, 10.c.1

11 SUSTAINABLE CITIES AND COMMUNITIES: 11.1.1, 11.2.1, 11.3.1, 11.3.2, 11.4.1, 11.5.1, 11.5.2, 11.6.1, 11.6.2, 11.7.1, 11.7.2, 11.a.1, 11.b.1, 11.b.2, 11.c.1

12 RESPONSIBLE CONSUMPTION AND PRODUCTION: 12.1.1, 12.2.1, 12.2.2, 12.3.1, 12.4.1, 12.4.2, 12.5.1, 12.6.1, 12.7.1, 12.8.1, 12.a.1, 12.b.1, 12.c.1

13 CLIMATE ACTION: 13.1.1, 13.1.2, 13.1.3, 13.2.1, 13.3.1, 13.3.2, 13.a.1, 13.b.1

14 LIFE BELOW WATER: 14.1.1, 14.2.1, 14.3.1, 14.4.1, 14.5.1, 14.6.1, 14.7.1, 14.a.1, 14.b.1, 14.c.1

15 LIFE ON LAND: 15.1.1, 15.1.2, 15.2.1, 15.3.1, 15.4.1, 15.4.2, 15.5.1, 15.6.1, 15.7.1, 15.8.1, 15.9.1, 15.a.1, 15.b.1, 15.c.1

16 PEACE, JUSTICE AND STRONG INSTITUTIONS: 16.1.1, 16.1.2, 16.1.3, 16.1.4, 16.2.1, 16.2.2, 16.2.3, 16.3.1, 16.3.2, 16.4.1, 16.4.2, 16.5.1, 16.5.2, 16.6.1, 16.6.2, 16.7.1, 16.7.2, 16.8.1, 16.9.1, 16.10.1, 16.10.2, 16.a.1, 16.b.1

17 PARTNERSHIPS FOR THE GOALS: 17.1.1, 17.1.2, 17.2.1, 17.3.1, 17.3.2, 17.4.1, 17.5.1, 17.6.1, 17.6.2, 17.7.1, 17.8.1, 17.9.1, 17.10.1, 17.11.1, 17.12.1, 17.13.1, 17.14.1, 17.15.1, 17.16.1, 17.17.1, 17.18.1, 17.18.2, 17.18.3, 17.19.1, 17.19.2

Citizen Science for the SDGs in Ghana for marine litter

Process

- Mapping of priorities in Ghana and the results of the systematic review
- Coordination around citizen science data
- Workshops by UNEP and the GSS
- Data validation by the line ministry in Ghana/EPA

Results

- Leveraging citizen science data that already exists
- Embedding citizen science data into wider strategies and policies in Ghana

Lessons

- Utilizing existing tools, data and network
- Building trust, common goals and ownership through partnerships

Thank you

Dilek Fraisl

Novel Data Ecosystems for Sustainability Research (NODES)
International Institute for Applied Systems Analysis (IIASA)

Email: fraisl@iiasa.ac.at
Twitter: @dilekfraisl1
Web: www.iiasa.ac.at
www.geo-wiki.org