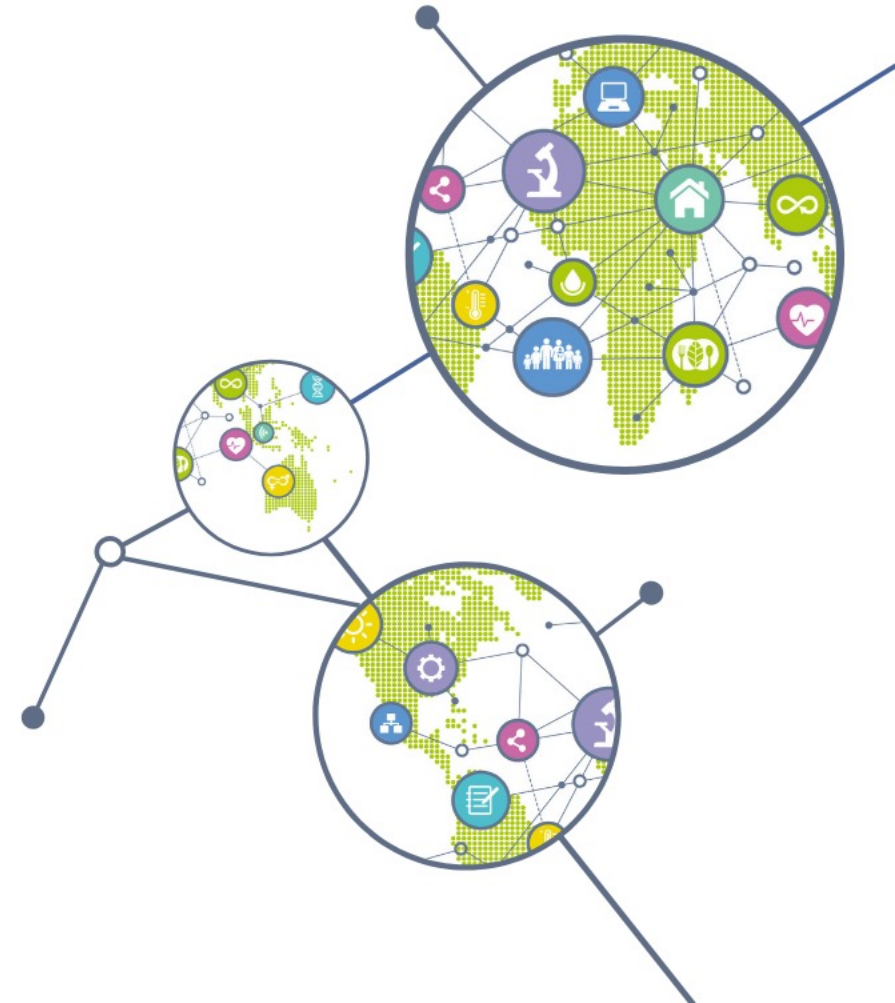# STI for the SDGs

**Joanna Chataway, STEaPP, University College London (UCL)**

Overview

- A research project working to improve our understanding of how STI contributes, or not, to meeting the UN SDGs
- Our aims are:
    - to produce an unprecedented mapping of how different areas of STI relate, positively or negatively, to different SDGs and their complex interlinkages.
    - to provide decision makers with evidence and tools to help align STI with the SDGs.

- Mapping publications and patents in relation to SDGs, a large scale Delphi and case studies in Argentina, Kenya and India
- We will publish a full report in November 2021.
- Led by the SPRU at the University of Sussex, STEaPP at UCL and UNDP, and funded by UKRI. Working in partnership with several leading universities and organisations.

Global bibliometric mapping

- An indication of findings so far based on work done Tommaso Ciarli, Hugo Confraria, Ismael Rafols and Ed Noyens

- Here I present a very partial and incomplete account of the rich analysis that those colleagues have done

Macro: map STI priorities (publications & patents)

STI investments dashboard
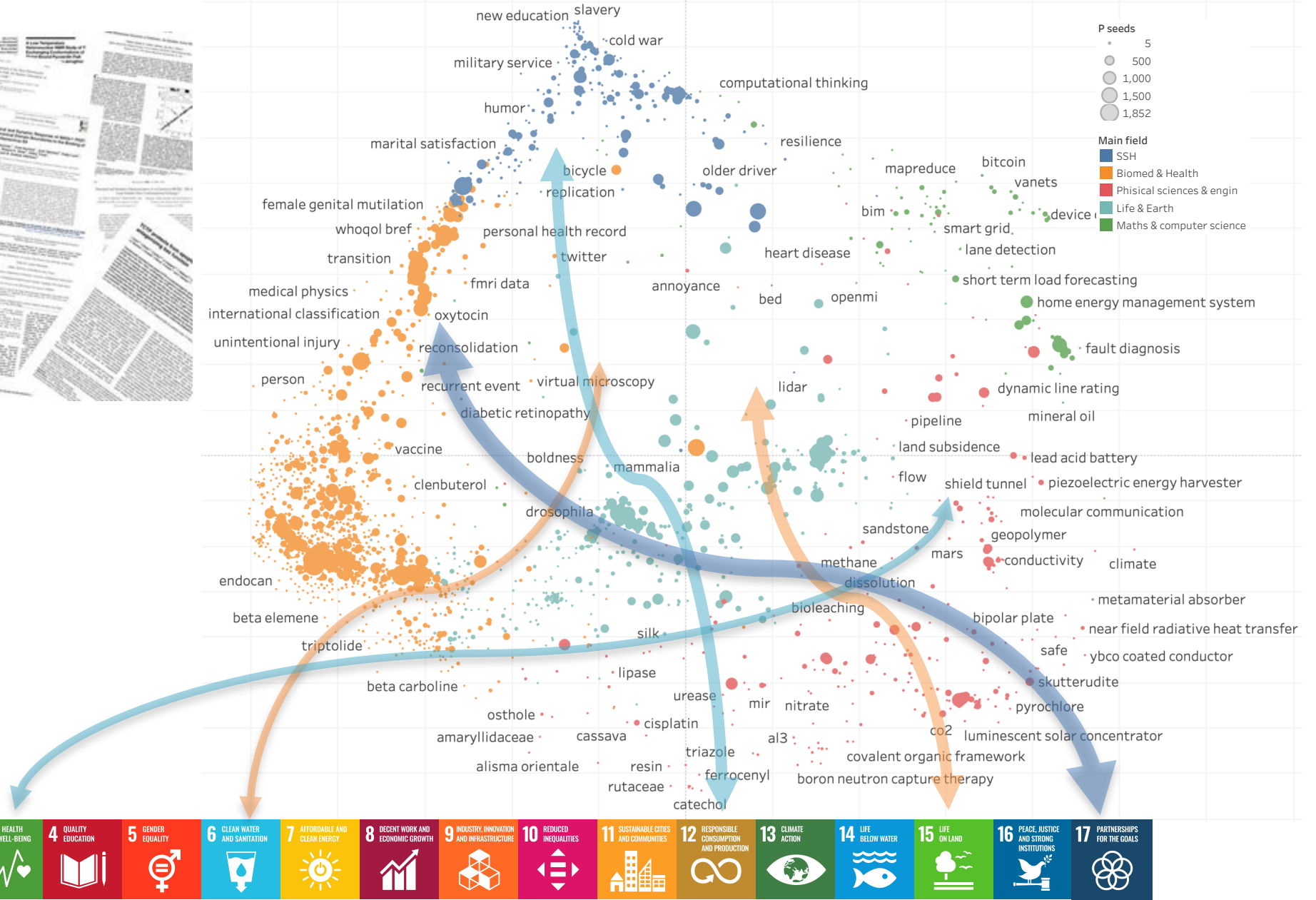
SDG Research Specialisation by country income group

Most research is unrelated to SDGs

Note:
90% of SDG related research is done by HI & UMI countries

LI with low percentage of non-SDG research
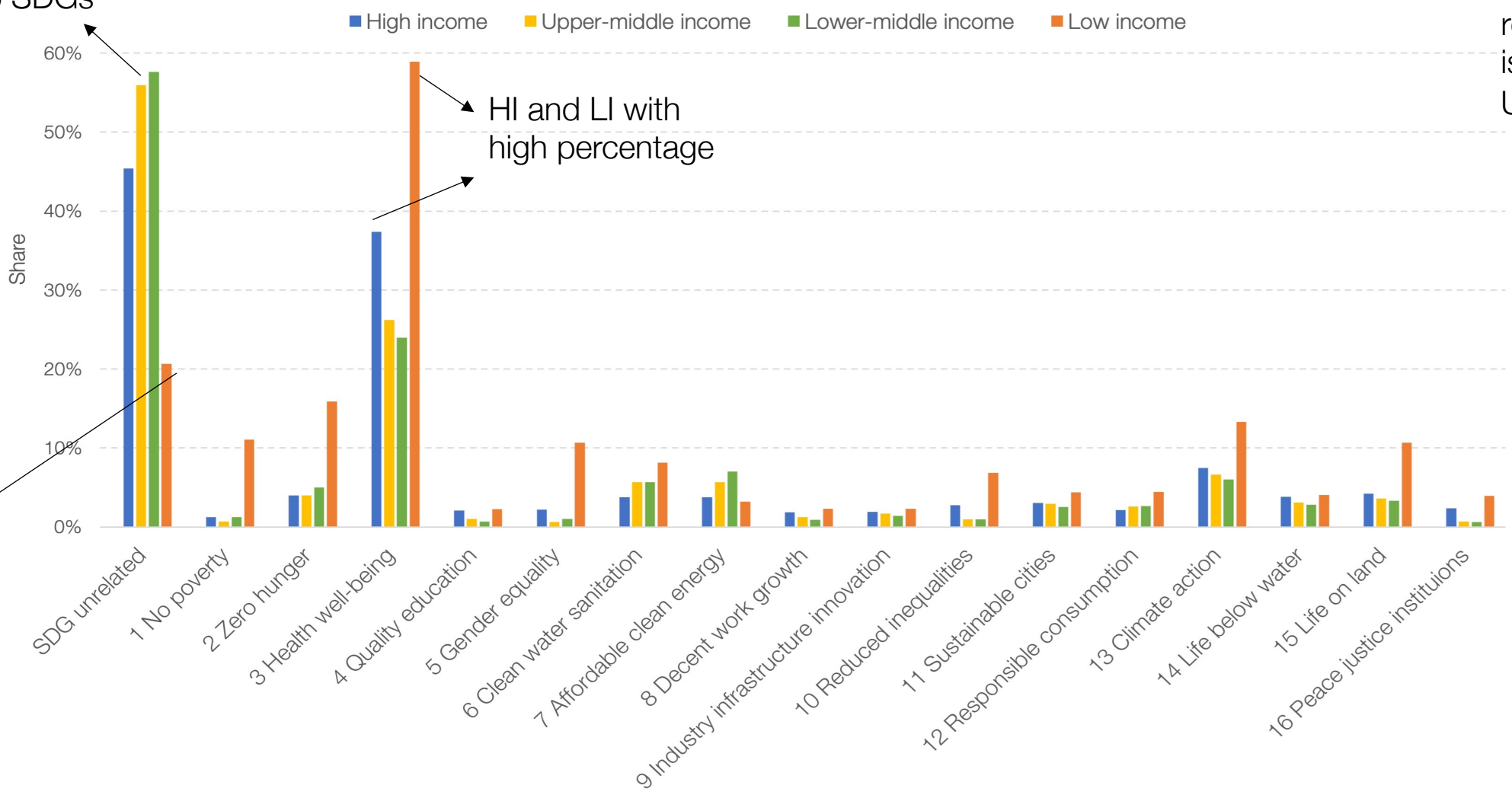
HI and LI with high percentage

Specialisation in SDG related research by income group 2015-2019

■ High income ■ Upper-middle income ■ Lower-middle income ■ Low income

Share

60%
50%
40%
30%
20%
10%
0%

SDG unrelated · 1 No poverty · 2 Zero hunger · 3 Health well-being · 4 Quality education · 5 Gender equality · 6 Clean water sanitation · 7 Affordable clean energy · 8 Decent work growth · 9 Industry infrastructure innovation · 10 Reduced inequalities · 11 Sustainable cities · 12 Responsible consumption · 13 Climate action · 14 Life below water · 15 Life on land · 16 Peace justice instituions

Summary of some main findings on SDG related research priorities.

- Overall, lower income countries seem to be relatively specialised in SDG related research.

- Relative (mis)alignments in different SDGs
  - Positive relationship (<u>alignment</u>) in SDG 2 (Zero Hunger), 3 (Health and Well-being) and 6 (Clean Water and Sanitation) -> Countries that have major challenges in these SDGs are relatively specialised in research related to those SDGs.
  - Negative relationship (<u>misalignment</u>) in SDG4 (Quality Education), SDG7 (Affordable and Clean Energy), SDG12 (Responsible Consumption and Production) and SDG13 (Climate Action) -> Countries that have major challenges in these SDGs are NOT relatively specialised in research related to those SDGs.

- Absolute (mis)alignments
  - More than ~50% of the research in WoS is unrelated to the issues addressed in the SDGs.
  - Within SDG related research, more than 90% is done in high and upper-middle income countries where most of the SDG challenges are smaller.
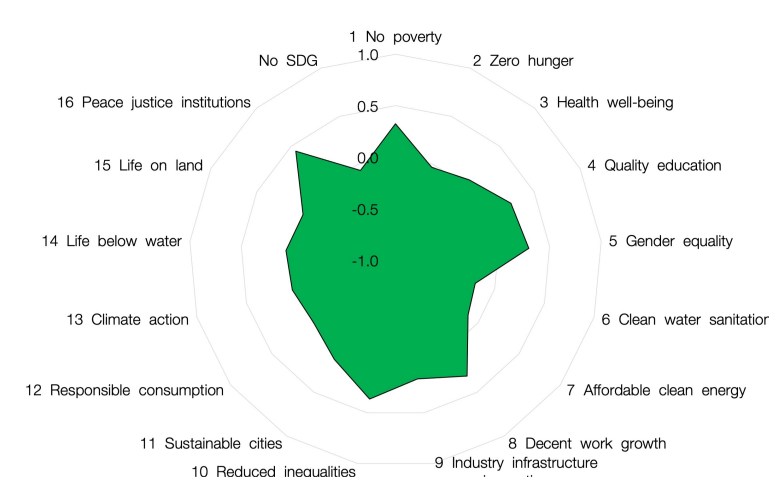
SDGs Research Specialisation in Tanzania - 2015-2019
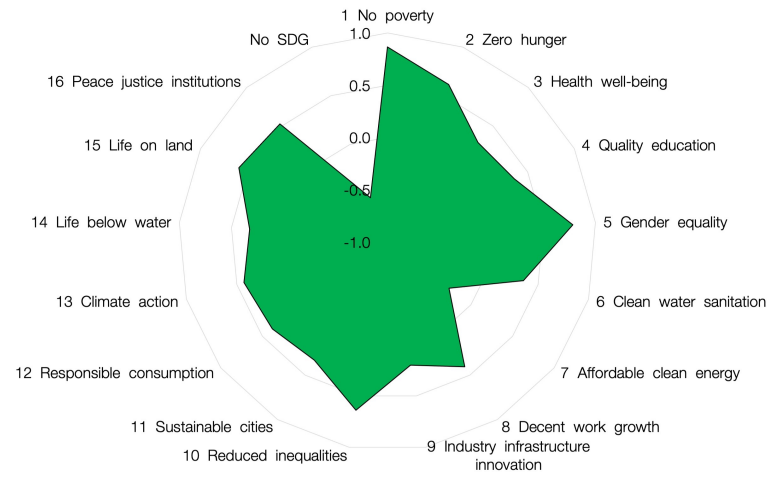
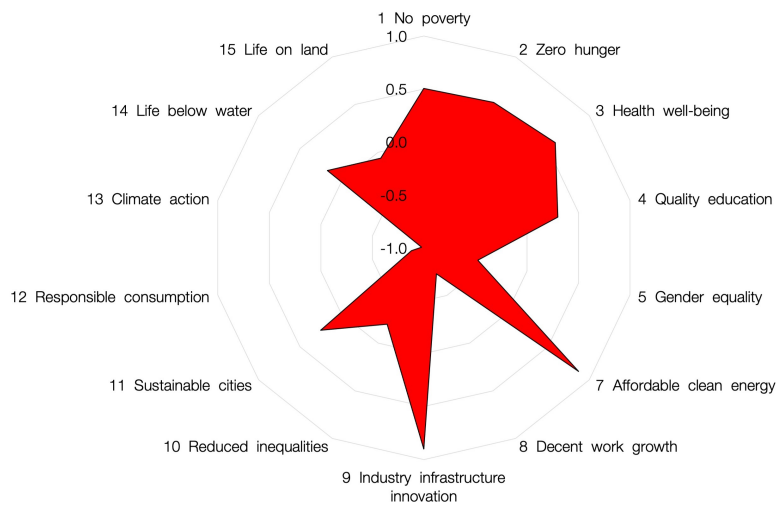SDGs Research Specialisation in Argentina - 2015-2019
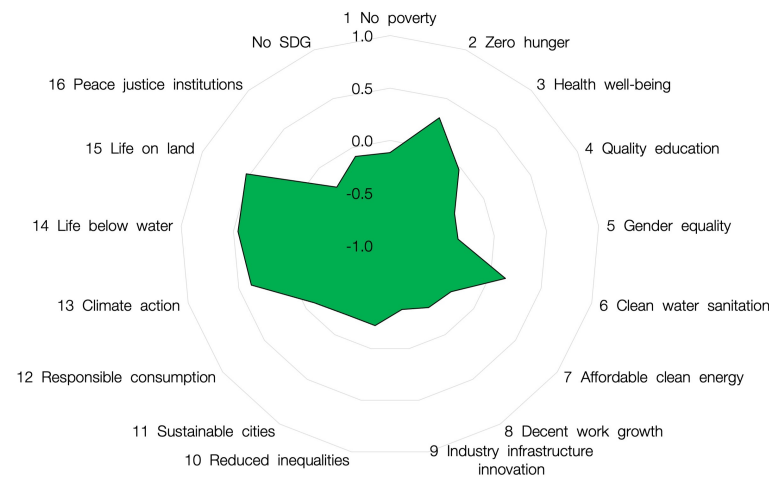
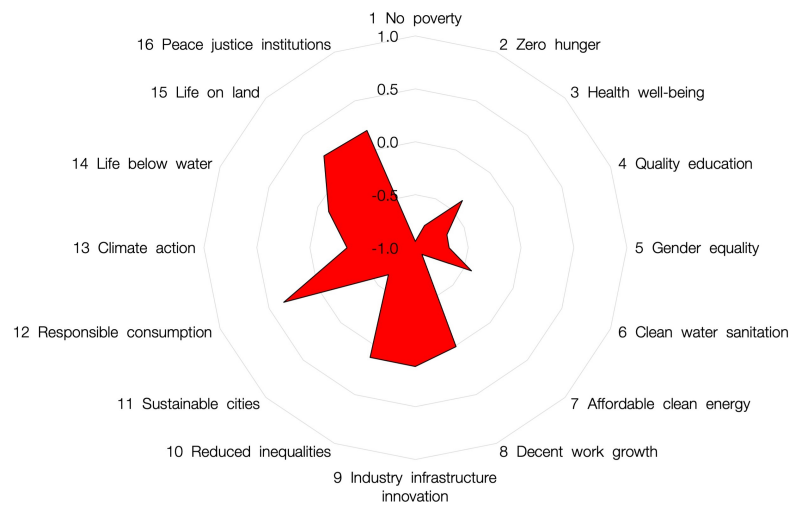SDGs Research Specialisation in United Kingdom - 2015-2019

Lower-middle income

Upper-middle income

High income

SDGs Score (Challenges) in Tanzania - 2013-2017
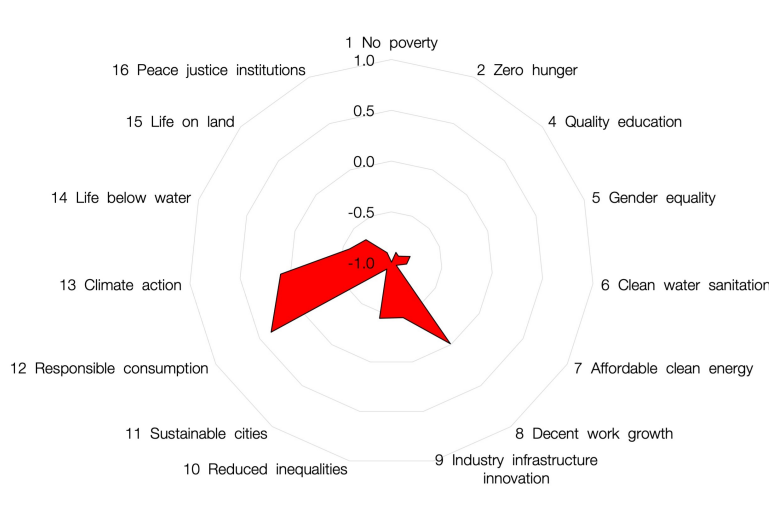
SDGs Score (Challenges) in Argentina - 2013-2017

SDGs Score (Challenges) in United Kingdom - 2013-2017

What the Delphi and case studies will add to the analysis?

- What is needed in addition to funding and outputs to achieve impact and outcomes? Where have the complex relationships between research, innovation and SDG outcomes worked?

- How can we think differently about the focus within areas of research?

- Where should decisions get made and where should research happen?

- Where are the main data and evidence gaps?

A few (provocative!) policy related questions

- Is enough resource going into SDG relevant research and innovation?

- How do research funders best navigate the boundaries between research and SDGs?

- Do we need a more systematic approach to gathering evidence about the relationships between research funding, innovation and development?

- Should we better integrate 'science for policy' issues into science policy and funding decisions?

Contribute to our Delphi

- Share your perspectives

Please give us your views:
http://strings.org.uk/about-2/