

Antarctica meltdown could double sea level rise



## Exploring Societal Impact Appendix – Methodology and Sample

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# About this report

This document is the appendix for a three-part summary of the findings of a global survey with more than 9,000 researchers, conducted in June 2019. It provides information on the methodology and sample used for the survey. The work took place as part of a joint project between Springer Nature and the Association of Universities in the Netherlands (VSNU), [\*Towards societal impact through open research\*](#).

The goals of the survey were to better define the criteria for research impact in relation to the UN's 17 sustainable development goals, asking researchers what motivations are relevant where their work relates to one of these SDGs; to which audiences is impact generation focused outside of academia; to what end do researchers undertake activities to generate impact as part of their work; and how important it is. The research also aimed to identify means of support for impact generation, from the library, institution, funder, publisher or from other third parties.

In addition to analysis of global trends, this report highlights findings from a subset of 99 responses from researchers in the Netherlands. However given the small sample size, these highlights should be treated with caution.

The findings from this survey will be used to develop a best practice toolkit for researchers, focused on the specific needs of researchers in the Netherlands, working on individual SDGs. The toolkit will be made freely available from the project website.

A full list of survey questions and the raw data can be downloaded from [Zenodo](#). Part one, two and three of the report can be found [here](#).

# Methodology

- The survey was hosted by Springer Nature, using Qualtrics software, between 3<sup>rd</sup> June and 27<sup>th</sup> July 2019. The survey was only provided in English.
- Respondents were invited to take part via email, using Springer Nature's mailing lists of researchers across all disciplines and regions. An incentive was offered of a prize draw to win a \$300 gift card. Approximately 2.8m email messages were delivered and the survey completion rate from these emails was 0.3%.
- The survey screened out anyone who had not published any primary research publications in the last 5 years, and there were 9,265 responses in total once these respondents had been removed. Incomplete responses were included in the analysis and there were approximately 5,000 responses who answered all questions. Questions asking respondents for multiple answer selections were randomised to eliminate bias.
- Access the [raw data](#) and [Jupyter notebook](#)

## Definition of 'societal impact'

At the beginning of the survey, respondents were shown the following:

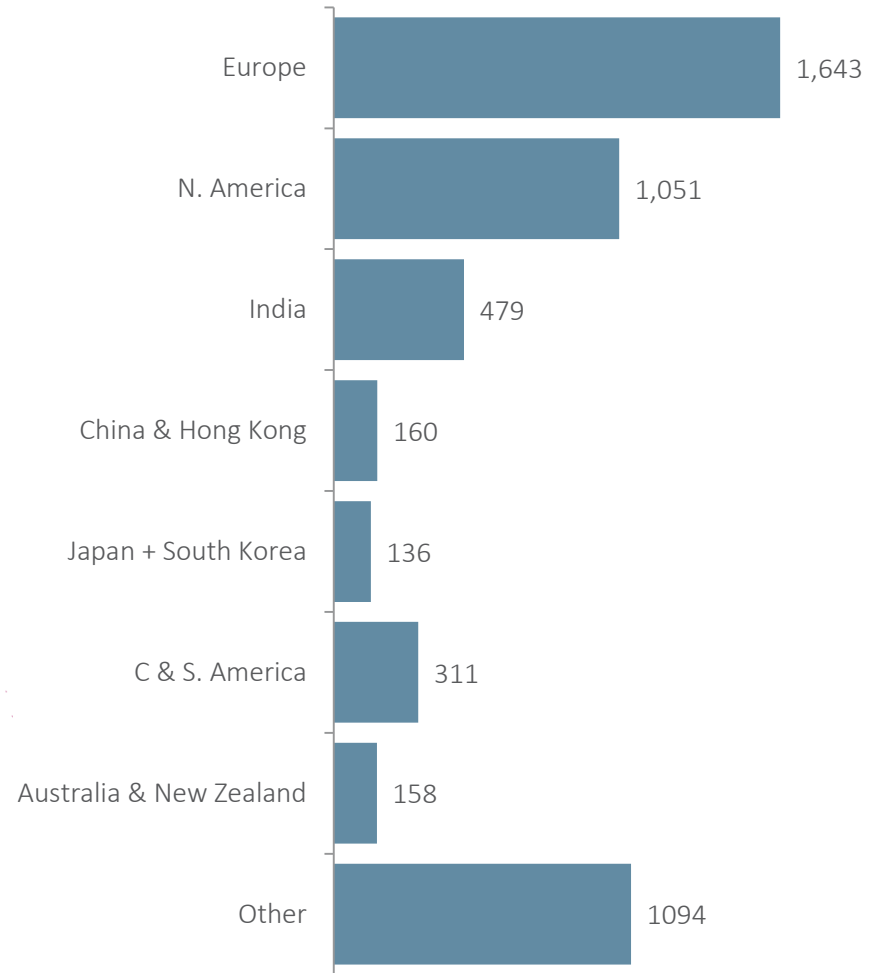
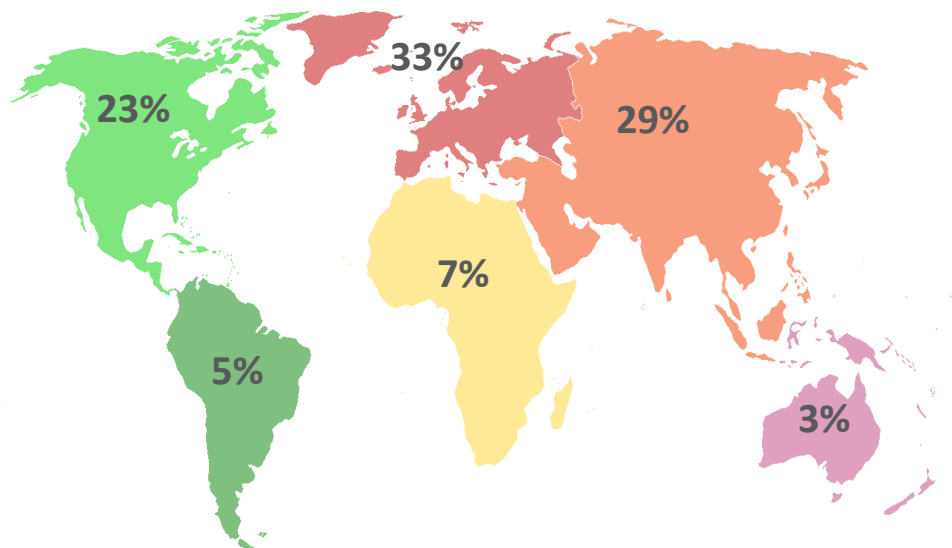
Much of this survey asks about 'societal impact'.

By this we mean "an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia".

("REF impact - Higher Education Funding Council for England" <https://re.ukri.org/research/ref-impact/>)

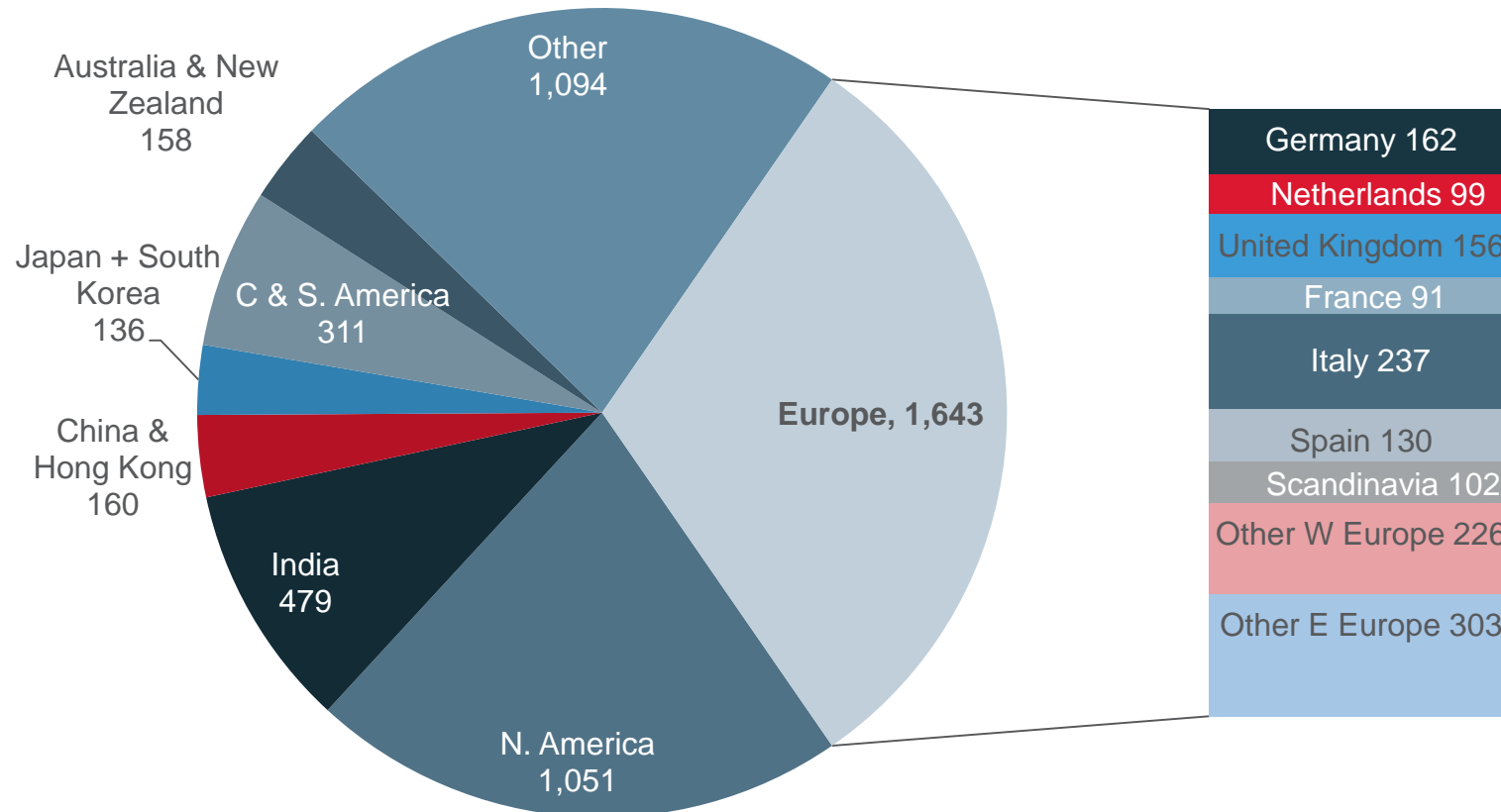
## Demographics of respondents 1/5 (Geographical)

- Geographical spread of respondents is broadly representative of the researcher population.
- Major countries in 'Other' include Iran (137), Russia (110), Egypt (80)



## Demographics 2/5 (Geographical)

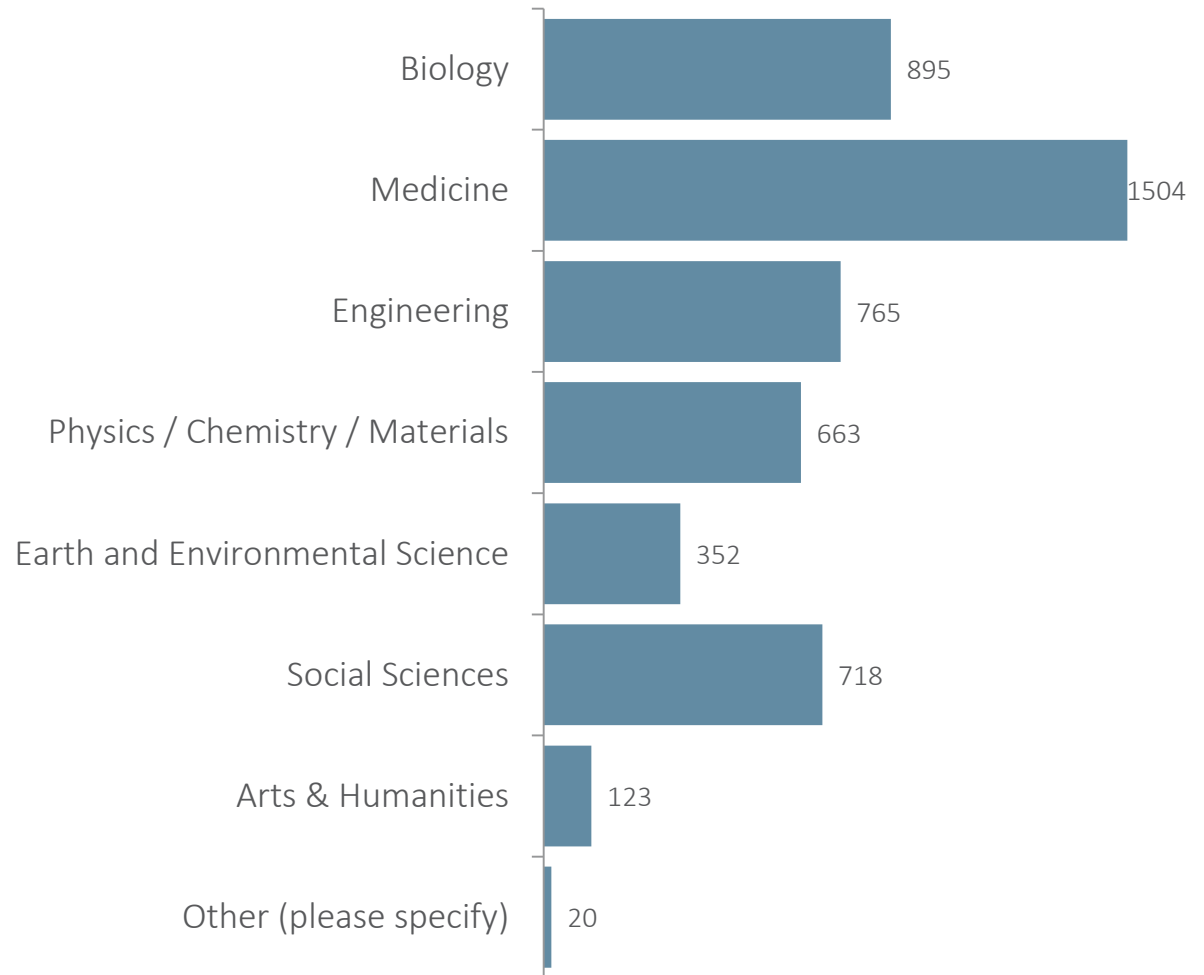
Number of responses by major global regions and European countries



## Demographics 3/5 (Discipline)

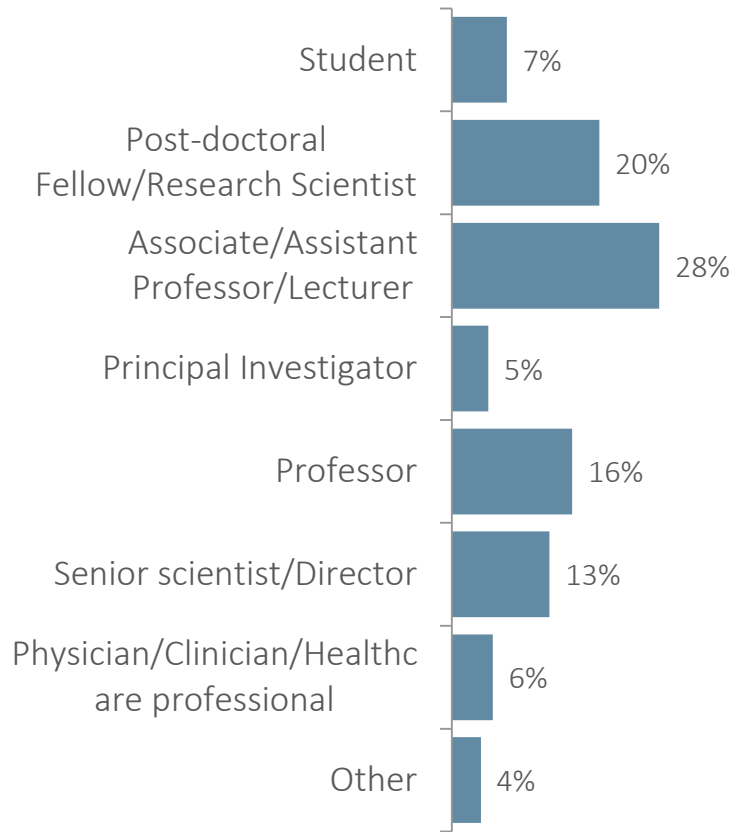
The sample included a higher proportion of social science respondents in US and Australasia.

There was also a higher proportion of engineering respondents in India & China.

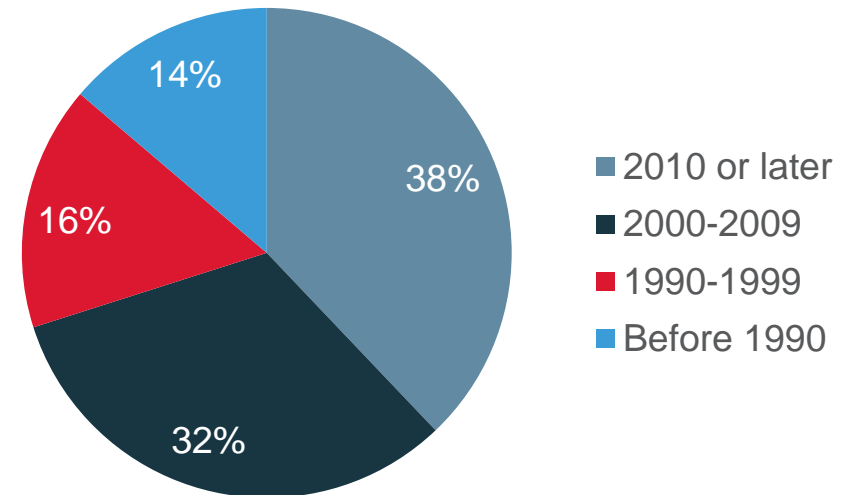


## Demographics 4/5 (Seniority)

### Job titles of respondents



### Date of first published research article

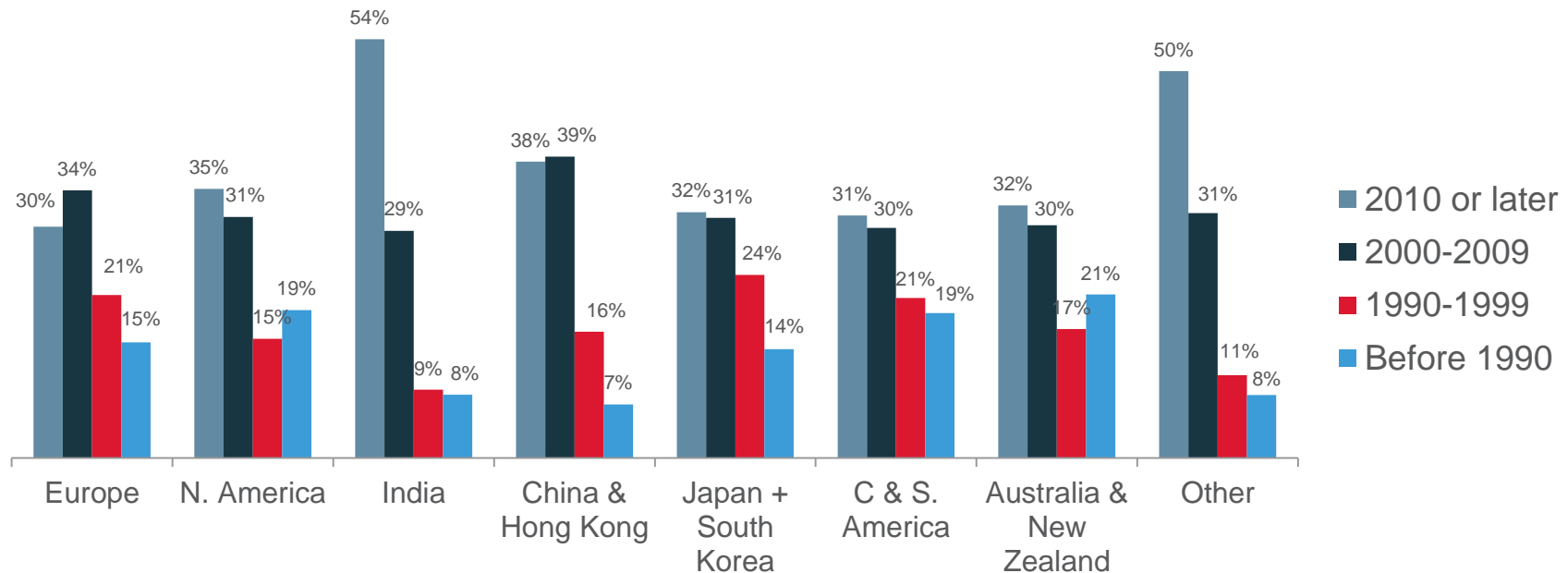


## Demographics 5/5 (Seniority of respondents by region)

Regional and age bias, where shown in this report, will be somewhat interdependent given that some regions had a larger proportion of respondents from younger or older seniority groups.

Of these, India and “Other” (Iran, Russia, Egypt etc) are the clear outliers with a much higher proportion of younger researchers as respondents.

Seniority (in which year did you publish your first research paper?) vs region (n=6,151)





# UN Sustainable Development Goals

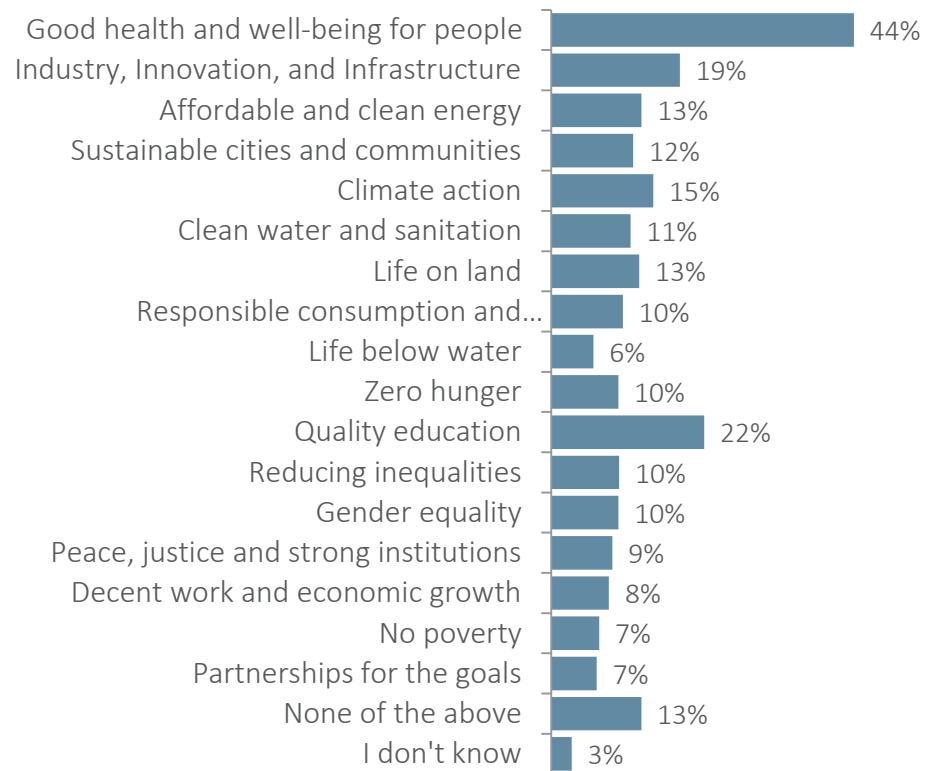
The survey respondents were asked to select which of the [UN Sustainable Development Goals](#) their research was most closely aligned to. Multiple selections were possible.

The most commonly selected SDG was “Good health and well-being”, most likely because Medicine was the most common discipline of those responding.

Unsurprisingly, it was found that SDG selections aligned very strongly with the main subject discipline of the respondent– see the following two slides for how the SDG and discipline selections cluster into 6 respondent segments.

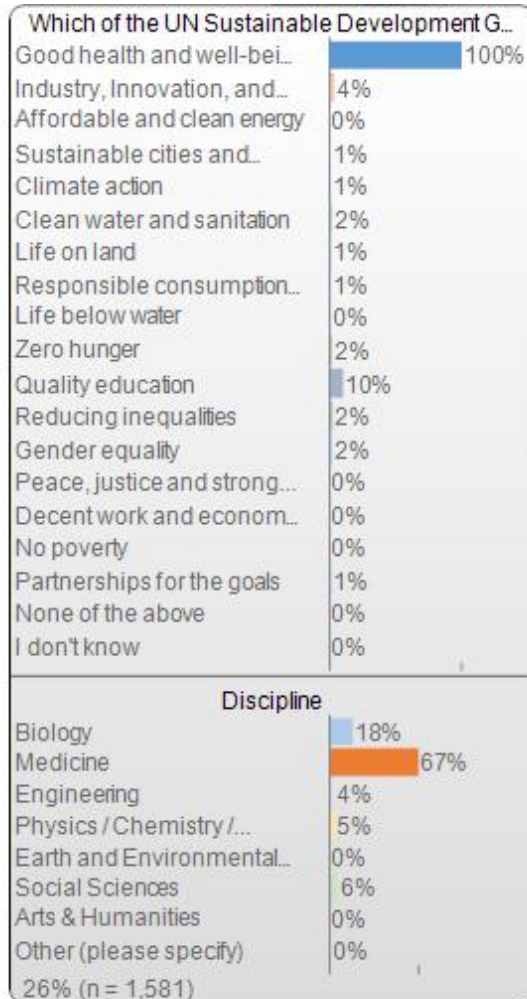
Therefore, discipline has been used more often than selected SDG to analyse the data, for ease of display. All questions are available to analyse by selected SDG, however.

Which of the UN Sustainable Development Goals are most related to your areas of research?  
(Mark all that apply) (n=6,151)

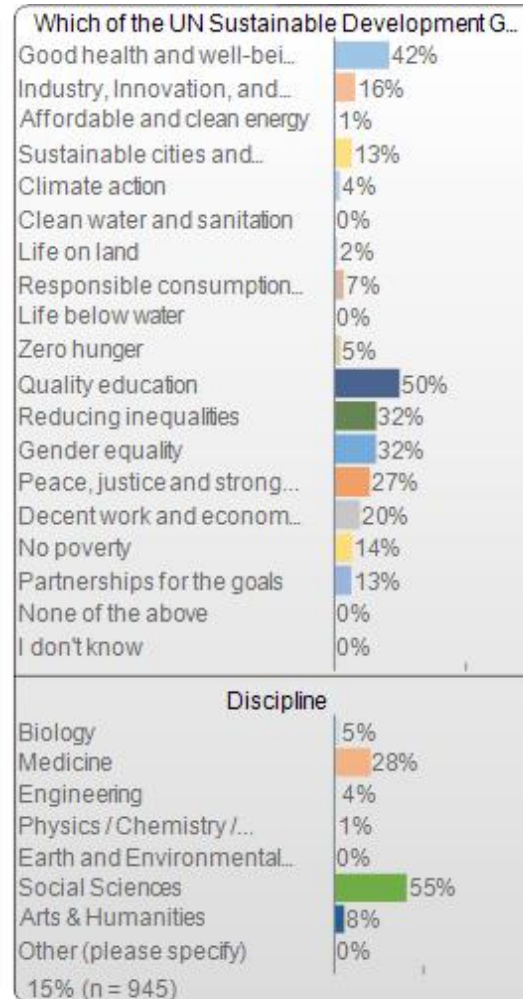


# Selected SDGs align well with discipline. 6 segments (1/2)

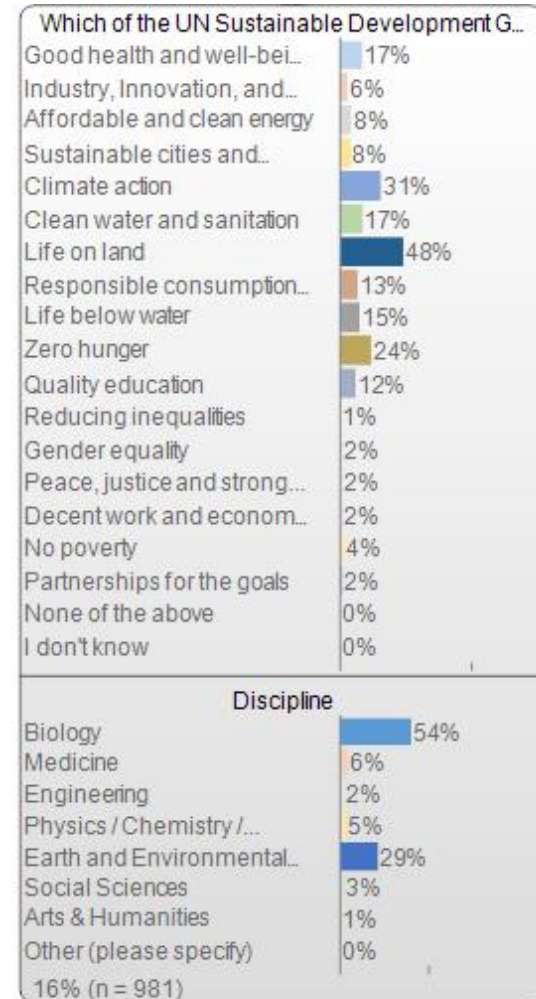
## Segment 1: Medics



## Segment 2: Soc Scientists

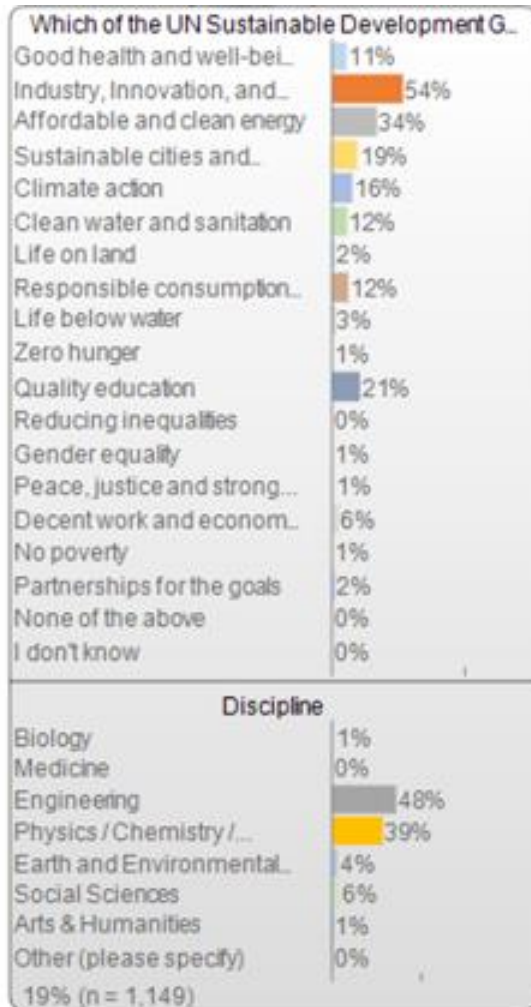


## Segment 3: Biologists/Earth & Env

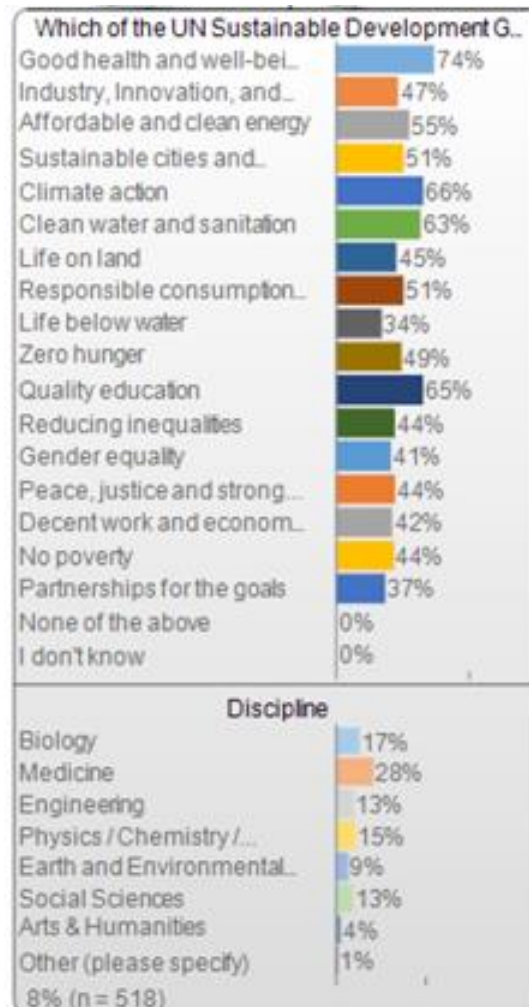


# Selected SDGs align well with discipline. 6 segments (2/2)

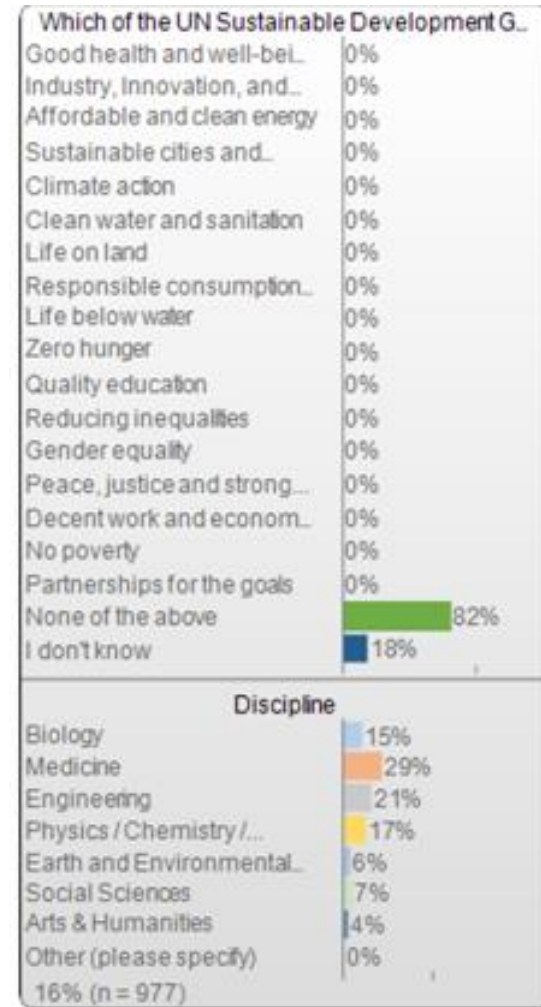
Segment 4: Engineers/Phys Sci



Segment 5: Multiples



Segment 6: Pure researchers



# Thank you

Find out more about the project and download further resources from <https://www.springernature.com/gp/researchers/sdg-impact>

## The story behind the image



### Antarctica meltdown could double sea level rise

Researchers at Pennsylvania State University have been considering how quickly a glacial ice melt in Antarctica would raise sea levels. By updating models with new discoveries and comparing them with past sea-level rise events they predict that a melting Antarctica could raise oceans by more than 3 feet by the end of the century if greenhouse gas emissions continued unabated, roughly doubling previous total sea-level rise estimates. Rising seas could put many of the world's coastlines underwater or at risk of flooding and storm surges.



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