

A Study of Research Data Practices of Highly Ranked Journals Contributing to Sustainable Development Goals

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Received: 09 August 2024; Accepted: 20 August 2024

All the countries are making efforts to attain the United Nations Sustainable Development Goals by 2030. To foster reproducibility and promote the sustainability of research and scholarly communication, many institutions, publishers/journals have been adopting research data policies to support Open Science initiatives. Authors are being encouraged to share their research data to publish articles thus, scholarly journals are playing a vital role in such a process. The present study analyses the research data policies of the journals supporting Sustainable Development Goals (SDGs). To understand how the journals are following the data sharing policies, 12 top journals were selected supporting each goal. Information available on their website regarding research data policy, research data, and data availability are used and analyzed in this study. The results of the study show that only two journals follow ten or more research data policy features out of 12 features discussed in the study. However, nine journals are following eight or more than eight research data policy features. The researchers designed a short questionnaire to collect the insights of authors under the study about research data-sharing practices followed in their articles published in the selected journals during the years 2021 and 2022. From the feedback of the authors, it is evident that researchers understand the value of sharing research data, but simplification of procedures in curation and sharing is crucial. Further, the results indicate that, there is a need for rigorous research data literacy to motivate authors to store, curate, and share research data to support Open Science.

Keywords: Research Data Policy, Sustainable Development Goals, SDG Journals, Data Availability Statement, Research Data Sharing

Introduction

Sustainable Development Goals (SDGs) represent an unprecedented global vision and commitment to improve the world, ensure sustainable development, and ensure no one is left behind¹. The SDGs provide a holistic and multidimensional view of a nation's development. There are many dimensions to the actions to achieve the SDGs. One important dimension is to pool the resources to facilitate researchers' efforts to bring about change through innovation and creativity. Any kind of obstacle that hinders the development of the nations and the attainment of SDGs should be negotiated². Non-availability of data is one such obstacle to attaining the SDGs. However, SDGs facilitate disseminating relevant open-access scientific production to facilitate the developmental process³.

Data is crucial to make informed decisions and policies. For this, data should be open and easily accessible. It should be provided at the right time to the target audience for the benefit of society, the economy, and support the research ecosystem. Further, the role of research data is crucial in enhancing research and scholarship across all sectors and levels. There cannot be substantial, measurable contributions without research and research data⁴. Ensuring that no one is left behind and benefited from the developmental process, and to monitor SDGs' success, high quality verifiable data is required. Open data is vital for advancing scientific research and expanding scientific knowledge in all areas without squandering resources, time, and energy. Additionally, data shared by researchers helps to monitor the progress of SDGs, as it is crucial

to measure the attainment of SDG targets and indicators.

Appropriate policies are pivotal to the success of data sharing and Open Science⁵. Without policy guidelines, it is impossible to achieve a data-sharing culture⁶. Data policies ensure public access to the research data underlying an article, which also boosts the adoption of open research practices⁷. Academic journals are the key sources for accelerating scientific progress, and as a result, journals have started adopting policies related to data sharing to enhance transparency⁸. The journals should include clear, detailed, and updated information regarding data policy statements so that authors would know what to share when to share, where to share, and how to share⁹.

Many journals address SDG issues as the core theme of their work and publications. There have been numerous developments related to and assessing the progress of scientific communication. In 2020, Scopus introduced pre-generated search queries for 16 SDGs (SDG 17 was excluded as it is difficult to quantify, and no satisfactory search queries were available at that time) to help researchers as well as institutions keep track of the progress to achieve the SDGs¹⁰. Scopus worked with Times Higher Education (THE), as THE requested Scopus's assistance with establishing the search keywords to be used in the "University Impact Rankings by SDGs."

Various studies have already shown how different stakeholders are addressing research data policies. However, there is still much to learn about SDG journals' responsibilities regarding research data policies. This study deals with the top contributing journals to the SDGs and how many have research data policies, trends related to research data associated with SDG journals under the study, common and unique properties of the journals, and research data sharing practices of authors contributing to SDG journals. Through thoroughly examining each journal's website, this study addresses the research data policies of journals that deal with SDGs.

Previous Studies

Data are the foundation for any kind of research. When data is available in the open domain, accessible to society irrespective of nationality, gender, race, or socio-economic status, it helps to foster research with collaborative efforts to solve global and national social problems¹¹.

Policies related to data sharing act as catalysts in the reproducibility of published literature and make the data available to the research community for maximum reuse¹². There are numerous advantages of sharing research data, such as it helps in reproducibility, scientific soundness, benefits for meta-analyses, and helps prevent duplication of the same data¹³. Verification of research results fails because of the unavailability of research data, which was nearly impossible in the past as data sharing was not practiced¹⁴. Data sharing not only increases transparency but also will help to minimize the risk of fraud¹⁵. Funding agencies have also started asking for the raw data supporting the particular study and to make it available freely¹⁶.

Recent data -sharing practices face numerous challenges but can be avoided by an inclusive data policy¹⁷. Journals should not only adopt data-sharing policies but also follow such mechanisms that one can use to find out whether the authors/researchers are following the policies¹⁸. The main goal behind journal data policy is to promote open data practices but data sharing is still falling behind due to unclear and ambiguous words used by the policy makers which can be avoided by timely updates¹⁹. Numerous journals have started adopting data policies, but authors, do not always, share the data supporting the study and if they share the data, the quality of the data does not meet the standards, which can be solved by applying effective data policies by the journals²⁰.

With the growing importance of underpinning data, which is considered one of the important aspects of scientific research, many journals have started making the Data Availability Statement (DAS) mandatory for the publication of any research article²¹. The DAS is a stand-alone document that appears at the conclusion of an article, which should contain all persistent identifiers such as accession numbers, DOIs, or URLs, information on any pertinent licensing limitations, and assurance that the data supporting the publication is real²². The DAS tells the reader about the underlying data, how the readers can access the data, and under what conditions the data would be accessible to the reader²³. Numerous publications do demand data availability declarations for studies to be published to encourage more transparent and repeatable research²⁴.

Assessment of the progress of SDGs has been a constant issue due to the lack of data indicators²⁵. Open data facilitates the replication study as well as

the detection of false claims and inaccurate assertions made by others which allows us to utilize the investment made for a particular study especially to solve global challenges²⁶. When science is as open as possible, it can help the world to unite and achieve SDGs and can easily tackle global issues²⁷. However, researchers often find difficulties while sharing data as sometimes, in the case of sensitive data, it requires extra effort to maintain the quality as well as to keep data anonymized, but this can be overcome by researchers if they get to know about new skills, tailor-made protocols and infrastructure to share their research data fairly and ethically²⁸.

There are numerous journals devoted to SDGs. However, it was unknown as to how those journals follow open data policies and how their authors have dealt with the data they published in the journals in recent years. Hence, to fill the gap, this study was carried out.

Research Questions

The study is designed to answer the following research questions:

RQ1. Which are the top journals contributing to each SDG and how many of them have research data policies?

RQ2. What are the key terms related to the research data associated with each journal?

RQ3. What are the common and unique features of the research data policies of SDG journals?

RQ4. What are the research data practices and perspectives of the authors contributing to the SDG journals?

Research Methodology

The present study was conducted in the following methods:

Selection of SDG Journals

In the first phase, the advanced search option of Scopus was explored, where the pre-generated search queries were found under the 'UN Sustainability Development Goals (SDGs)'. All the goals were mentioned under the pre-generated queries except goal 17. Further, the researchers clicked on each goal and refined the results with the filter 'source title' and the year 2015-2022. Subsequently, one journal with the greatest number of documents was chosen for each goal. This effort is listed in 16 journals (Annexure 1). Three journals were related to more than one goal. They are *Science of the Total*

Environment, Journal of Interpersonal Violence, and Sustainability Switzerland. The source title from the list, *IOP Conference Series: Earth and Environmental Science*, was removed from the list and replaced with the second-highest-producing journal for the second goal, as it does not fall under the category of journals and does not possess any research data policy. Hence, the total number of journals for the study is 12. Each journal's website was investigated from January 25 to January 26, 2024. All 12 journals were identified with the research data policy.

The researchers could find literature that gave insight to help with publishers/journals research data policies such as Sturges et al.²⁹, Piwowar H and Chapman W³⁰, and Holt et al.³¹. As there is no single source to best guide researchers in analyzing journal research data policies, in order to ensure consistency in the analysis of common aspects of journals under study, the researchers have selected the 14 policy features outlined by Hrynaskiewicz³² in their practice paper for developing a policy for research data for all journals and publishers for uniformity in analyzing common features of journals under the study broadly, given that different journals have different operations and resources. It is clearly defined and covers more ground. However, two policy features— 'mandatory data sharing' (specific paper) and 'mandatory data sharing' (all papers)—are not included in this study.

Data Collection about the Data Sharing Practices

In the second phase, the researchers undertook a comprehensive data collection process by retrieving the details of the top 20 highly cited papers from each journal under the study by searching through the 'source title' option in Scopus. These details were downloaded in CSV files. To find out the key terms that are associated with the research data, the researchers exported and merged the 'Author's keywords' to another CSV file and used VOSViewer for visualization.

Further, emails of corresponding authors were retrieved journal by journal and added to the master CSV file to complete the paper's details. If there are multiple corresponding authors for the same paper, the first one was chosen for uniformity in the retrieval and communication. Researchers could gather 240 corresponding authors' details along with their email IDs for the study, ensuring a thorough representation of their perspectives.

In the third phase, researchers developed a short

questionnaire using Google Forms recognizing valuable insights of authors under the study about research data-sharing practices followed in their articles published, if any, during years 2021 and 2022. The questionnaire was administered to 240 authors through email on May 1, 2024, and they were asked to submit their responses within ten days after receiving the email. The feedback of authors was sought concerning whether they have shared any research data related to the published article in the journal, what motivated them to share their research data, did they mention the 'Data Availability Statement,' which repository they used to deposit their research data, also questions on if they faced any challenges while depositing data, data citation, data citation style, researcher/author support, data format, etc. Thirty-eight responses were received and analyzed in the next section, demonstrating the authors' integral role in this research. A brief of the responses received are tabulated in Annexure 1 and Annexure 2.

Results and Analyses

Top Journals Contributing to SDGs

In response to the RQ1, a total of 12 journals were chosen for the study, representing each of the SDGs except for SDG 17. The journals were selected based on the highest number of documents published between 2015 and 2022 (Table 1). The total SDG contribution of the 12 journals is 378,120, and the

percentage of distribution for the all 16 goals has been provided in Figure 1. SDG 12, "Responsible Consumption and Production," has the greatest number of publications (147, 358) from the *Journal of Environmental Sciences (China)*. SDG 3, "Good Health and Well-Being," has the second-highest number of publications (144,534) from the journal *Plos One*. The lowest number of publications comes from SDG 1, No Poverty, by the journal *World Development*, followed by SDG 4, having a count of 983 from the journal *International Journal of Educational Development*. All of the selected journals have research data policies; however, 11 journals have been discussed in great detail, while *Water Science and Technology* has only briefly touched on it.

Figure 1 shows the percentage of distribution of documents published on 16 SDGs. It shows that goal 12, i.e., "Responsible Consumption and Production", has contributed 38.97%, followed by SDG 3, i.e., "Good Health and Well-Being", which contributed 38.22% of the publications.

Trends related to the research data

Responding to RQ2, the researchers selected the author keywords that have occurred at least twice and found that 146 keywords cleared the criteria, out of which only 137 were interlinked with each other. The analysis revealed that nine clusters were formed (Figure 2). The map emerged from the co-occurrence

Table 1 — List of top SDG journals based on the highest number of documents and the status of their research data policies

S.N.	Name of the journal	Name of SDG	Total no. of document published	Research data policy
1.	World Development	Goal 1-No Poverty	796	Yes
2.	Science of the Total Environment	Goal 2-Zero Hunger	4730	Yes
		Goal 11-Sustainable Cities and Communities	8, 874	
		Goal 15-Life on Land	8, 684	
3.	Plos One	Goal 3-Good Health and Well-Being	144,534	Yes
4.	International Journal of Educational Development	Goal 4-Quality Education	983	Yes
5.	Journal of Interpersonal Violence	Goal 5-Gender Equality	2,045	Yes
		Peace, Justice and Strong Institutions	5,251	
6.	Water Science and Technology	Goal 6-Clean Water and Sanitation	7,368	Yes
7.	Energies	Goal 7-Affordable and Clean Energy	17,740	Yes
8.	Sustainability Switzerland	Goal 8-Decent Work and Economic Growth	8,028	Yes
		Goal 9-Industry, Innovation, and Infrastructure	3,142	
9.	Social Science and Medicine	Goal 10-Reduced Inequalities	1,198	Yes
10.	Journal of Environmental Sciences (China)	Goal 12- Responsible Consumption and Production	147, 358	Yes
11.	Geophysical Research Letters	Goal 13-Climate Action	8,489	Yes
12.	Marine Pollution Bulletin	Goal 14-Life Below Water	8,900	Yes

disease. The third largest cluster is the blue one (20 keywords), with the most used keywords like wastewater treatment, soil, heavy metal, sewage, soil pollutant, plants (botany), and risk assessment. The fourth cluster, yellow in color, consists of 18 keywords: carbon dioxide, learning loss, education, blockchain, remote learning, and environmental pollutants were most used. In the other clusters, the most used keywords are microplastics, coronavirus, pollution, plastic waste, and river pollution (16 keywords); covid-19 pandemic, domestic violence, sexual assault, and inequality (11 keywords); environmental monitoring, bacteria, public health, viruses, vaccine hesitancy, and water quality (11 keywords); circular economy, climate change, decarbonization, diseases, plastics, policy, renewable energy, sustainable development goals (8 keywords); covid-19, depression, mental health, pandemic, technology, and vaccination intentions (6 keywords).

Common policy features

To answer the RQ3, in accordance with the twelve parameters determined from the literature, every SDG journal with research data policies was examined (Table 2).

Nine out of 12 journals define "research data" on their websites. However, only eleven journals state exceptions to policy, and surprisingly, only four journals give guidance on how to deal with embargoes. All of the journals under the study deliberate on how they deal with supplementary materials and offer clear guidance on choosing data repositories. Furthermore, eleven deliberate on data citation, five on data licensing, and eight offer research/author support. Besides, eleven of the journals discuss data availability statements and discuss data formats and standards. Conversely, only four of the journals are specific about peer review of data, and merely one discusses data management plans (DMPs).

Unique features

Despite the twelve parameters determined from the literature, the researchers were able to observe many more unique features (Table 3). Publishing research element articles that are brief, peer-reviewed articles complementing full research papers, database linking for making data easily findable and accessible, and data visualization are the unique features of Elsevier journals like *World Development*, *International*

Table 2 — Common features of the SDG journals' data policy

Common features	Name of the Journals												Total
	World Development	Plos One	International Journal of Educational Development	Journal of Interpersonal Violence	Water Science and Technology	Energies	Sustainability (Switzerland)	Social Science and Medicine	Science of the Total Environment	Environmental Science	Geophysical Research Letters	Marine Pollution Bulletin	
Definition of the research data	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	09
Exceptions to policy	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	11
Embargoes				✓		✓	✓				✓		04
Supplementary materials	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Data repositories	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Data citation	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	11
Data licensing		✓		✓		✓	✓				✓		05
Research/author support	✓	✓	✓				✓	✓	✓	✓	✓	✓	08
Data availability statements	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	11
Data formats and standards	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	11
Peer review of data		✓				✓	✓				✓		04
Data Management Plans (DMPs)		✓											01
Total	08	11	08	09	03	09	09	08	08	08	10	08	

Table 3 — Unique features of the journals

Name of the journal	Publisher	Unique features
World Development	Elsevier	<ul style="list-style-type: none"> • Publication of research elements article • Database linking • Data visualization (currently unavailable)
International Journal of Educational Development		<ul style="list-style-type: none"> • Publication of research elements article • Database linking • Data visualization (currently unavailable)
Social Science and Medicine		<ul style="list-style-type: none"> • Publication of research elements article • Database linking • Data visualization (currently unavailable)
Science of the Total Environment		<ul style="list-style-type: none"> • Co-submission • Publication of research elements article • Database linking • Data visualization (currently unavailable)
Journal of Environmental Sciences		<ul style="list-style-type: none"> • Publication of research elements article • Database linking • Data visualization (currently unavailable)
Marine Pollution Bulletin		<ul style="list-style-type: none"> • Co-submission • Publication of research elements article • Database linking • Data visualization (currently unavailable)
Plos One	Plos	<ul style="list-style-type: none"> • Guidelines for qualitative data
Journal of Interpersonal Violence	Sage	<ul style="list-style-type: none"> • Code Ocean
Water Science and Technology	IWA Publishing	
Energies	MDPI	<ul style="list-style-type: none"> • Encourages to publish datasets as paper in the journal Data • Deposition of Sequences and Expression Data
Sustainability (Switzerland)		<ul style="list-style-type: none"> • Encourages to publish datasets as paper in journal Data • Deposition of Sequences and Expression Data
Geophysical Research Letters	Wiley-Blackwell	<ul style="list-style-type: none"> • IGSNs (International Generic Sample Numbers) for citing samples reported in manuscripts • Citation formatter

Journal of Educational Development, Social Science and Medicine, and Science of the Total Environment. Along with these unique features common to Elsevier journals under the study, the rest of the journals, like the *Journal of Environmental Sciences* and *Marine Pollution Bulletin*, have the option of co-submission, which allows authors to co-submit data, along with the article. Furthermore, *Plos One* provides detailed guidelines for qualitative data. *Journal of Interpersonal Violence* has a framework of data sharing and “Code Ocean” as its unique feature, providing authors with an easy-to-share code associated with their research. *Energies* and *Sustainability (Switzerland)*, the MDPI journal, encourages publishing datasets as papers in the journal “Data” and deposition of sequences and expression data. However, no unique feature

was found in the *Water Science and Technology* journal.

Research Data Practices

Research Data Sharing Practices

To receive answers for RQ4, an online questionnaire was designed by the researchers to investigate the research data sharing practices among the selected authors. Not all the questions included in the questionnaire were mandatory to answer except “Have you shared your research data related to the published article in the journal?” and “Any suitable comments/suggestions related to research data practice of researchers.” A total of 38 responses were received and have been analyzed in the next section.

The authors were asked whether they had shared any research data associated with the published article. Of the authors, 44.74% (n = 17) gave a

positive response to the question, while 55.26% (n = 21) mentioned that they did not share any research data related to their research article published in the journal. The reasons for not sharing research data mentioned by the authors have been discussed in the next section. When the authors were asked when they started sharing research data, 31 authors answered the question. Thirteen authors mentioned that they have been sharing research data from 0-3 years, while eight authors mentioned that they have been sharing research data for 3-6 years. Interestingly, two authors confirmed that they have been sharing underlying data for 6-9 years, and eight authors have been sharing research data for more than nine years.

Motivation for research data sharing

In order to get the authors' perspectives on the real motivations driving them to share their research data, a question about what motivates them to do so was asked. Authors were allowed to select more than one option. Most of the authors (n=24, 77.4%) preferred the option to support Open Science, followed by citation and professional recognition (n=11, 35.5%). Notably, just five authors pointed out that they submitted the supporting data because the publisher required them to, and two authors selected the option of the funder's requirement.

Data availability statement

The question about the data availability statement is significant, as most journals are mandatorily asking for information on whether any supporting data is available. If available, how can someone access it, and if not, what is the reason behind the unavailability? The authors selected for the study were asked whether they provided any data availability statements regarding the research data provided with the paper. A total of 36 responses were received to the question. The result revealed that 52.8% of the authors (n=19) marked the answer as yes; however, 47.2% of authors (n=17) have not provided any statement related to data availability in their published paper.

Availability of research data in research data repositories

Long-term preservation of research data is made possible by publishing it in a repository, which also plays a crucial role in ensuring that the data is discoverable and reliable³³. Of the 21 responses that were received, 20% of the authors stated that they had stored their data in institutional repositories, and the

same proportion of authors had deposited their data in repositories that were specialized to their domain.

Citation of research data

Data citation is a reference to data that is used to help with credit attribution as well as data accessibility that makes data sharing FAIR (Findable, Accessible, Interoperable, and Reusable)³⁴. The intention behind the question was to understand whether the authors have used any data in their study. Out of 37 responses, 23 responded positively about data citation, and 14 authors mentioned that they did not cite any research data made available by others in their papers. In response to the previous question, authors were also asked if they adhered to any particular citation style to determine the citation pattern; 51.4% (n = 18) mentioned they did, whereas 48.6% (n = 17) responded they did not.

Research data formats

Of 27 authors 48% (n=13) shared the data in "CSV" format and 22% (n=6) mentioned "PDF". This confirms that most of the authors preferred sharing research data in the above-mentioned two formats. Open data file formats are convenient for the users to use the datasets which leads to collaboration³⁵.

Perceptions about sharing research data

To gather the authors' comments/suggestions on the research data sharing practices, an open-ended question on "Any suitable comments/suggestions related to research data practice of researchers" was asked. 60.5% of the authors did not give any response to it. An author suggested honesty while sharing research data by commenting, "*Be honest with your data and try to publish new and innovative research,*" while two authors shared the opinion that "*It should be made easier to share our data*" and "*There is a need to show where the research data can be shared,*" which indicates that there are authors who are unaware about how and where to share research data. However, a few authors mentioned that sharing research data is not always possible. As reflected in the authors' comments, "*It's not always relevant*" and "*Not applicable since the paper is a review article.*" An author interestingly discussed metadata standards like, "*Encourage researchers to adhere to recognized metadata standards when documenting their data.....*" Sharing data in any repository or any other website is not enough until and unless proper

metadata is assigned to it because only metadata helps any file discoverable. A few authors mentioned that “..... we did not deposit the data not because we did not want to, but because we did not hold the rights to the data.....” and “..... I didn't really have an original dataset to share.....we did share extensive appendices about the information we collected about the articles included in the systematic review, so some of the data are publicly available through that.”

From the feedback of the authors, it is evident that researchers understand the value of sharing research data, but simplification of procedures in curation and sharing along with some effective research data literacy efforts may significantly improve research data sharing in support of the successful achievement of SDGs.

Conclusion

Every country is striving towards achieving SDGs by 2030. It is only six years to work towards meeting these goals to minimize disparities among countries concerning attaining good health, a better environment, and economic and social justice for the citizens of every individual country. The study proves that the momentum to study and research various dimensions of the SDGs has started. Many journals are bringing out such studies and researches that are indexed in citation databases like Scopus.

Certainly, the open availability of research data would yield qualitative outcomes for worldwide researches. But, clarity in understanding, citing, curating, and sharing research data is a prerequisite for the proper use of research data and also for making it available to the scientific community. There are variations in the adaptation of the features of the 12 journals covered in this study.

There is scope for improvement at both levels, i.e., journal level and author level. At journal-level, there is a need to cover up all research data policy features, which is presently followed by none of the journals. The results of the study show that only two journals follow ten or more research data policy features out of 12 features discussed in the study. However, nine journals are following eight or more than eight research data policy features. The results indicate that, there is a need for rigorous research data literacy to motivate authors to store, curate, and share research data to support Open Science. This would ultimately support the quality of research and outcomes of the studies to be undertaken on the achievement of SDGs

in different countries concerning various dimensions of SDGs. Therefore, it is critical to make sure that all the 12 features of research data policies mentioned in this paper are in practice. Future studies can be conducted to examine the journals contributing to individual SDG. There seems also a gap between the research data policies of the journals and the practices followed by the authors and such gap must also be studied in future studies.

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Annexures

Annexure 1 — The list of top contributing SDG journals			
SDGs	Name of the journal	No. of publications	
Goal 1-No Poverty	World Development	796	
Goal 2-Zero Hunger	Science of the Total Environment	4730	
Goal 3-Good Health and Well-Being	Plos One	144,534	
Goal 4-Quality Education	International Journal of Educational Development	983	
Goal 5-Gender Equality	Journal of Interpersonal Violence	2,045	
Goal 6-Clean Water and Sanitation	Water Science and Technology	7,368	
Goal 7-Affordable and Clean Energy	Energies	17,740	
Goal 8-Decent Work and Economic Growth	Sustainability Switzerland	8,028	
Goal 9-Industry, Innovation, and Infrastructure	Sustainability Switzerland	3,142	
Goal 10-Reduced Inequalities	Social Science and Medicine	1,198	
Goal 11-Sustainable Cities and Communities	Science of the Total Environment	8, 874	
Goal 12- Responsible Consumption and Production	Journal Environmental Science	147, 358	
Goal 13-Climate Action	Geophysical Research Letters	8,489	
Goal 14-Life Below Water	Marine Pollution Bulletin	8,900	
Goal 15-Life on Land	Science of the Total Environment	8, 684	
Goal 16- Peace, Justice and Strong Institutions	Journal of Interpersonal Violence	5,251	

Annexure 2 — Items included in the questionnaire with a positive/negative response to Y/N questions			
Query	N	Positive (n (%))	Negative (n (%))
Have you shared your research data related to the published article in the journal?	38	17 (44.7%)	21 (55.3%)
Did you provide any Data Availability Statement regarding the research data provided with the paper?	36	19 (52.8%)	17 (47.2%)
Did you cite research data made available by others in writing your paper?	37	23 (62.2%)	14 (37.8%)
Have you conformed to any specific data citation style?	35	18 (51.4%)	17 (48.6%)
Did you get any “Researcher/author support” from the journal while submitting your research dataset?	34	4 (11.8%)	30 (88.2%)

Annexure 3 — Items included in the questionnaire and responses received			
Query	Options given	Response rate	Total responses
Appropriate reason for not sharing research data.	There was no research data required as part of the paper	14 (66.7%)	N=21
	Unsure about copyright and licensing	3 (14.3%)	
	Not knowing which repository to use	1 (4.8%)	
	Lack of time to deposit data	4 (19%)	
	Cost of sharing data	2 (9.5%)	
What is the motivation behind sharing your research data?	Publisher’s requirement	5 (16.1%)	N=31
	Funder’s requirement	2 (6.5%)	
	To support Open Science	24 (77.4%)	
	Citation and professional recognition	11 (35.5%)	
In which repository did you deposit your research data?	Harvard Dataverse	2 (10%)	N=21
	Dryad	---	
	Figshare	---	
	Institutional Repository	4 (20%)	
	Domain Specific Repository	4 (20%)	
	Other	11 (50%)	
Did you face any of challenges while depositing your research data to the repository?	Lack of personal and technical resources	4 (13.3%)	N=30
	Misuse of research data	---	
	Ethical and legal issues	5 (16.7%)	
	No concerns	21 (70%)	
Which research data format did you use while sharing research data?	CSV	13 (50%)	N=27
	TXT	1 (3.8%)	
	PNG	---	
	PDF	6 (23.1%)	
	Other	6 (23.1%)	
How long you have been making research data as part of paper/project report/thesis/publications?	0-3 years	13 (41.9%)	N=31
	3-6 years	8 (25.8%)	
	6-9 years	2 (6.5%)	
	More than 9 years	8 (25.8%)	