

Breaking Down Barriers: Examining the Accessibility of Global Water Futures Research

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Project Background

The Global Water Futures (GWF) programme was developed to generate scientific knowledge on forecasting and managing water futures in Canada in face of the projected risks associated with climate change.

Project Aim

- Create and document quality control processes to effectively manage and evaluate GWF research outputs
- Perform a bibliographic analysis of all outputs generated between 2017-2022

Consolidate

Manual transfer of output metadata from MS Word to MS Excel format

Quality

Identify duplicates and accessibility

Outcome

Analyze trends in output types and accessibility

Top Research Outputs Produced from 2017-2022

Outputs Types:

Refereed Publications
Books/Book Chapters
Non-Refereed Publications/Grey Literature
Data Publications & Model Code
Non-Invited Presentations
Invited Conference Presentations
Conference Posters
Theses/Dissertations

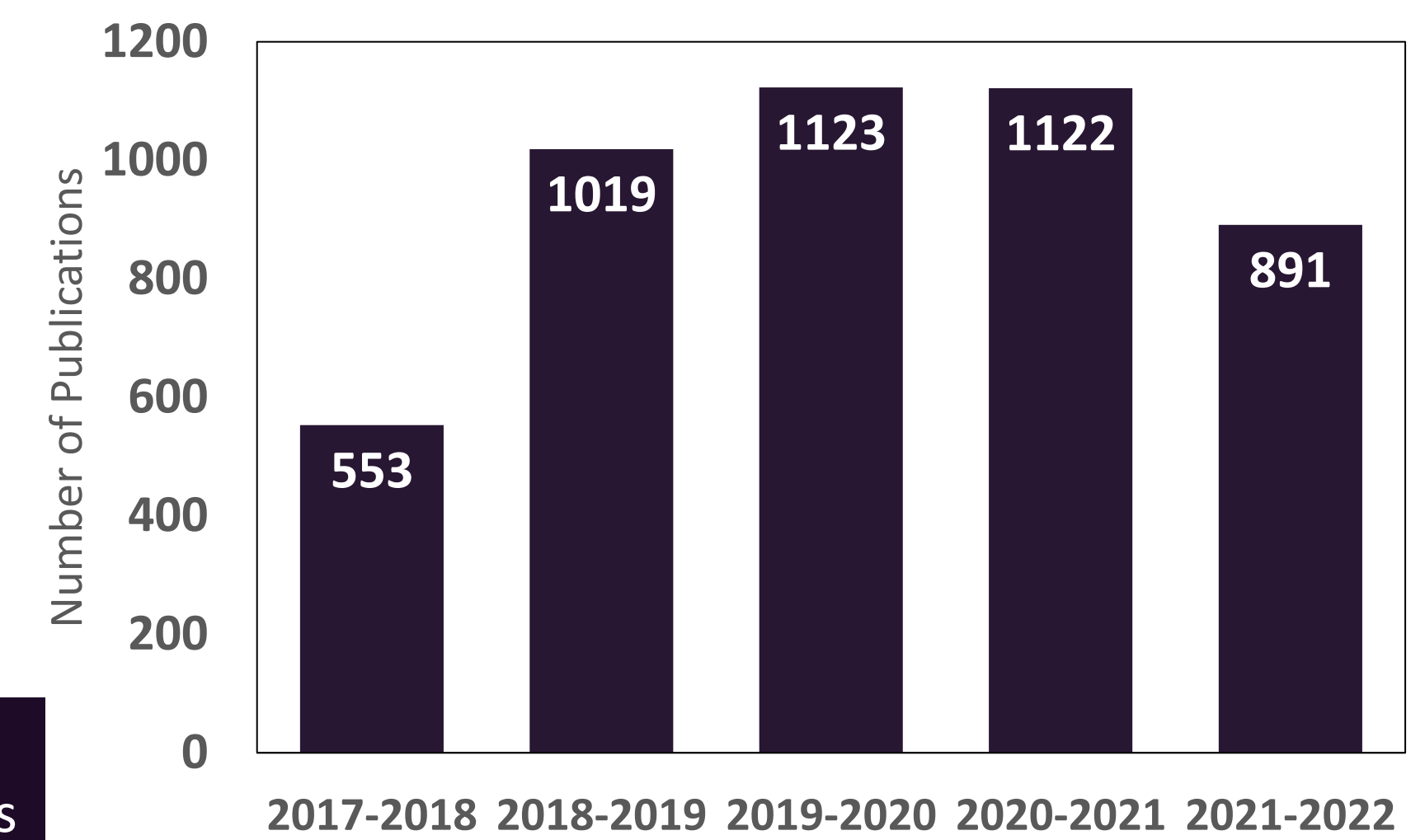
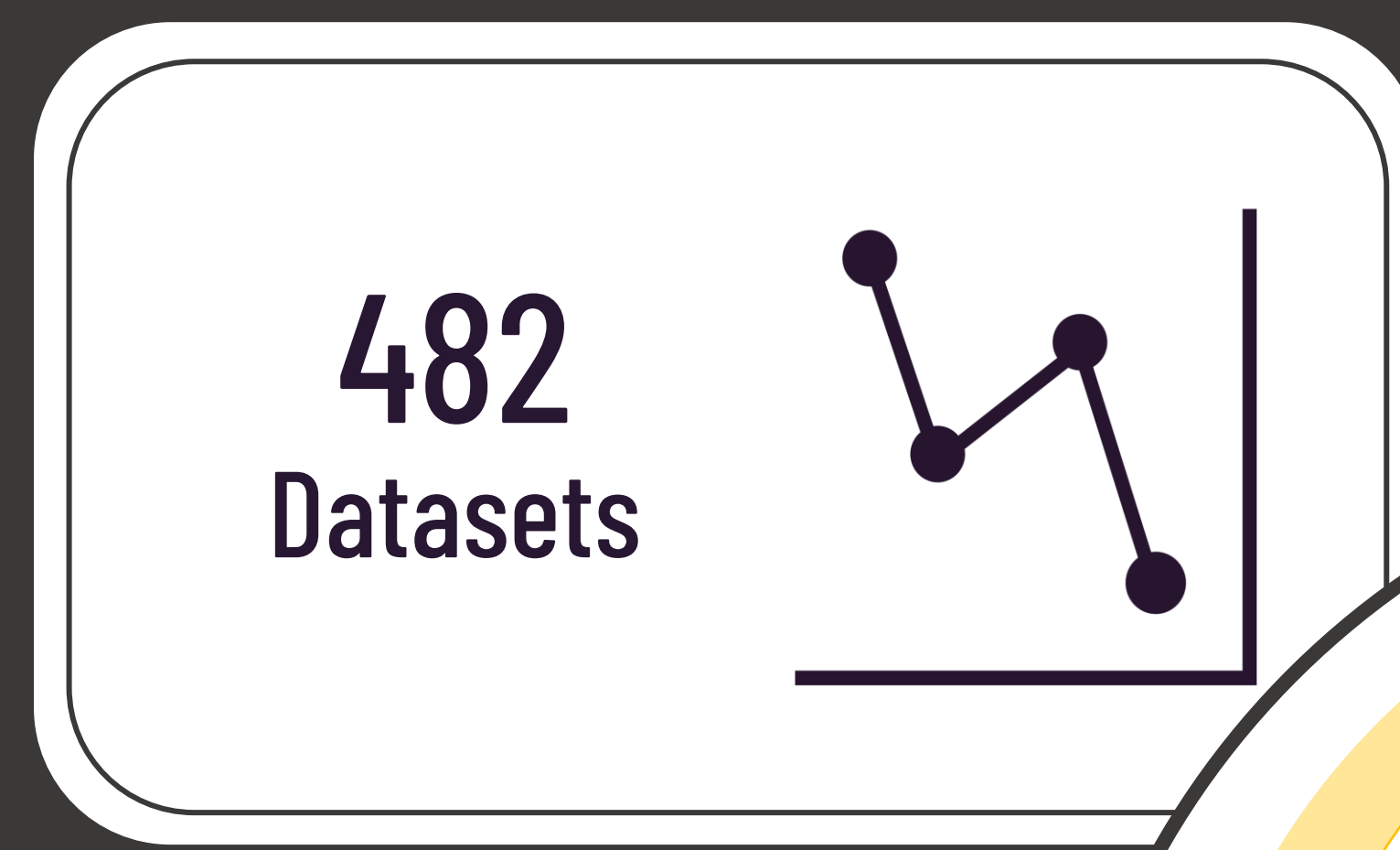
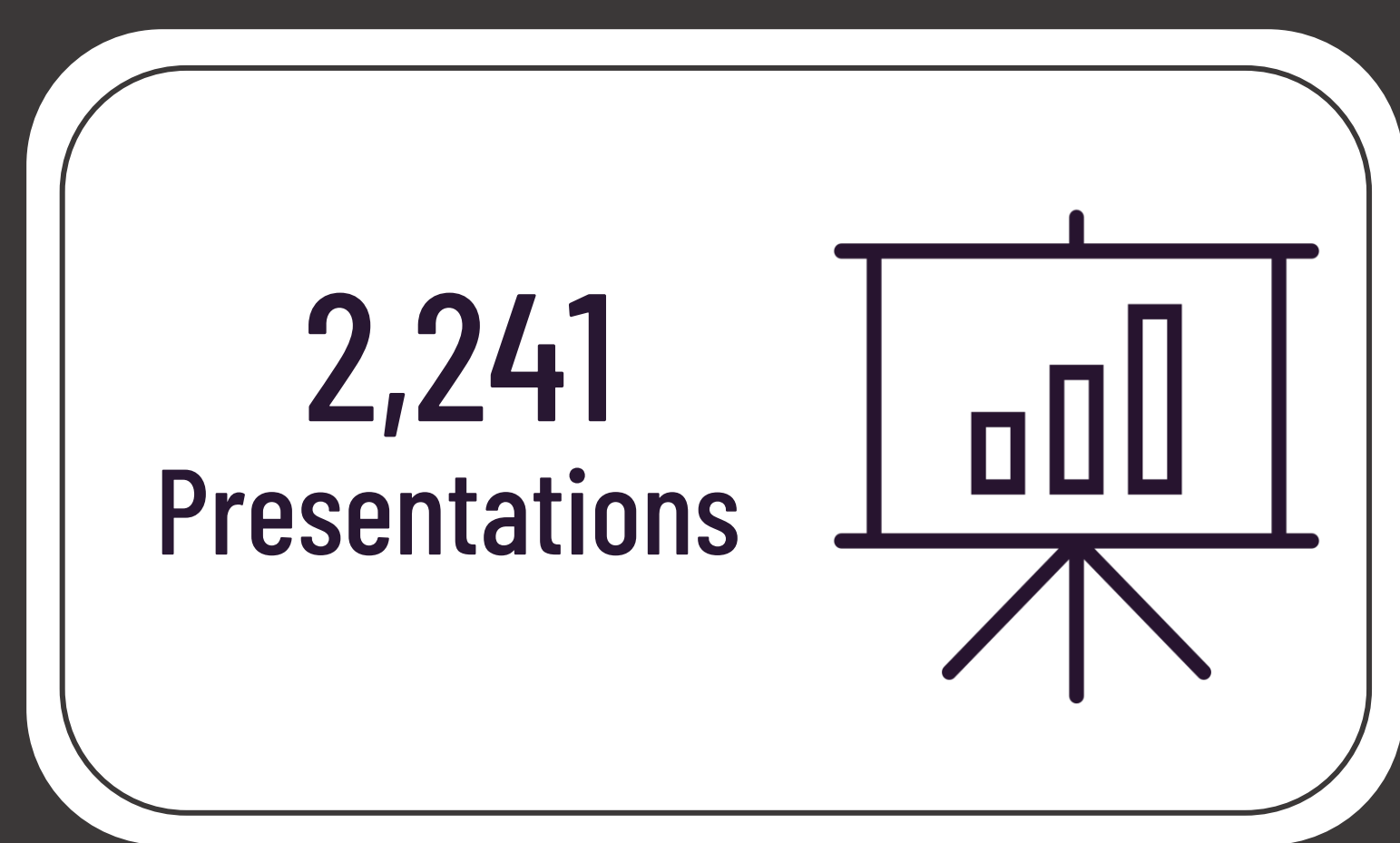


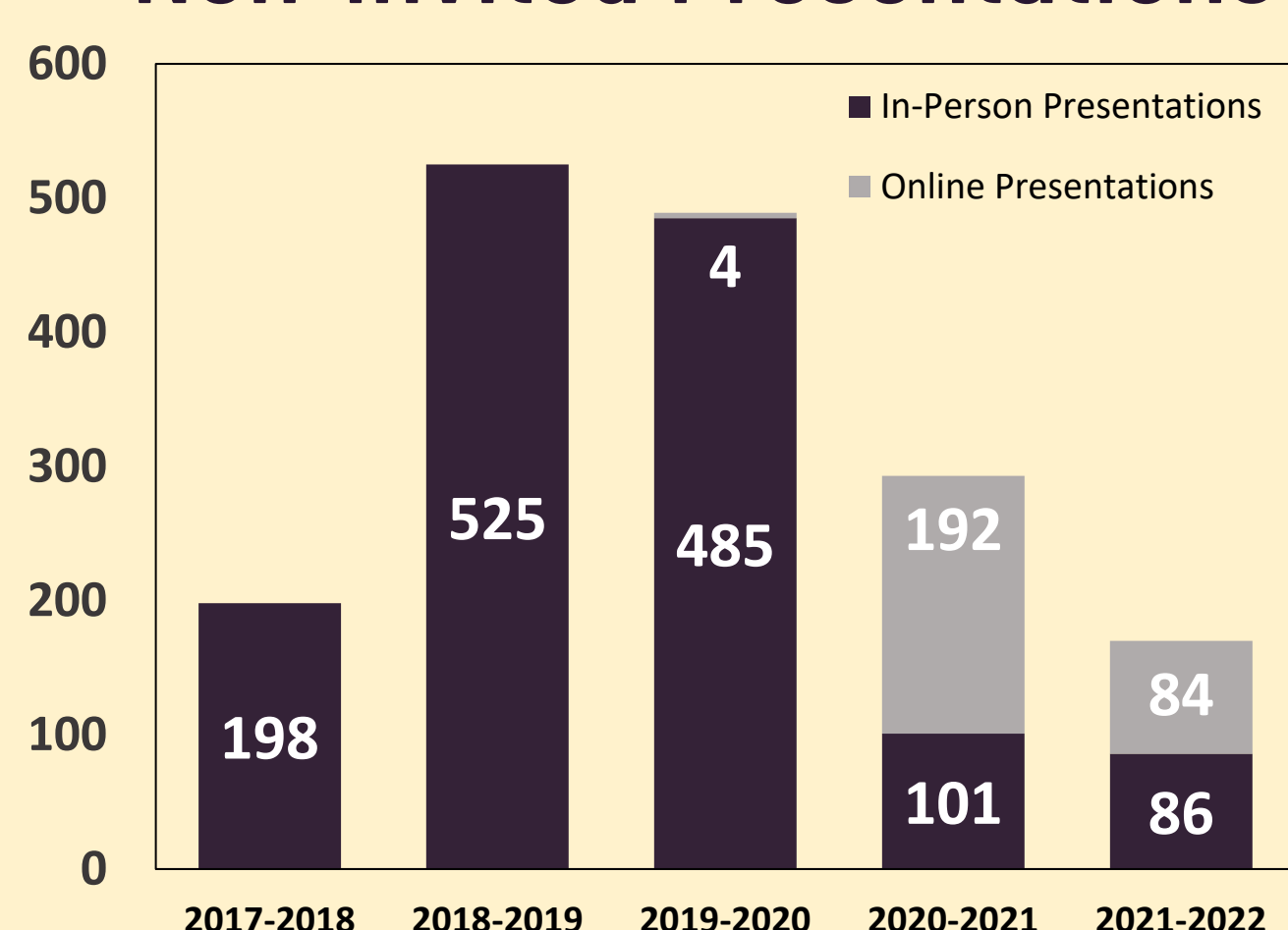
Figure 1: Total distribution of reported research outputs over all reporting periods



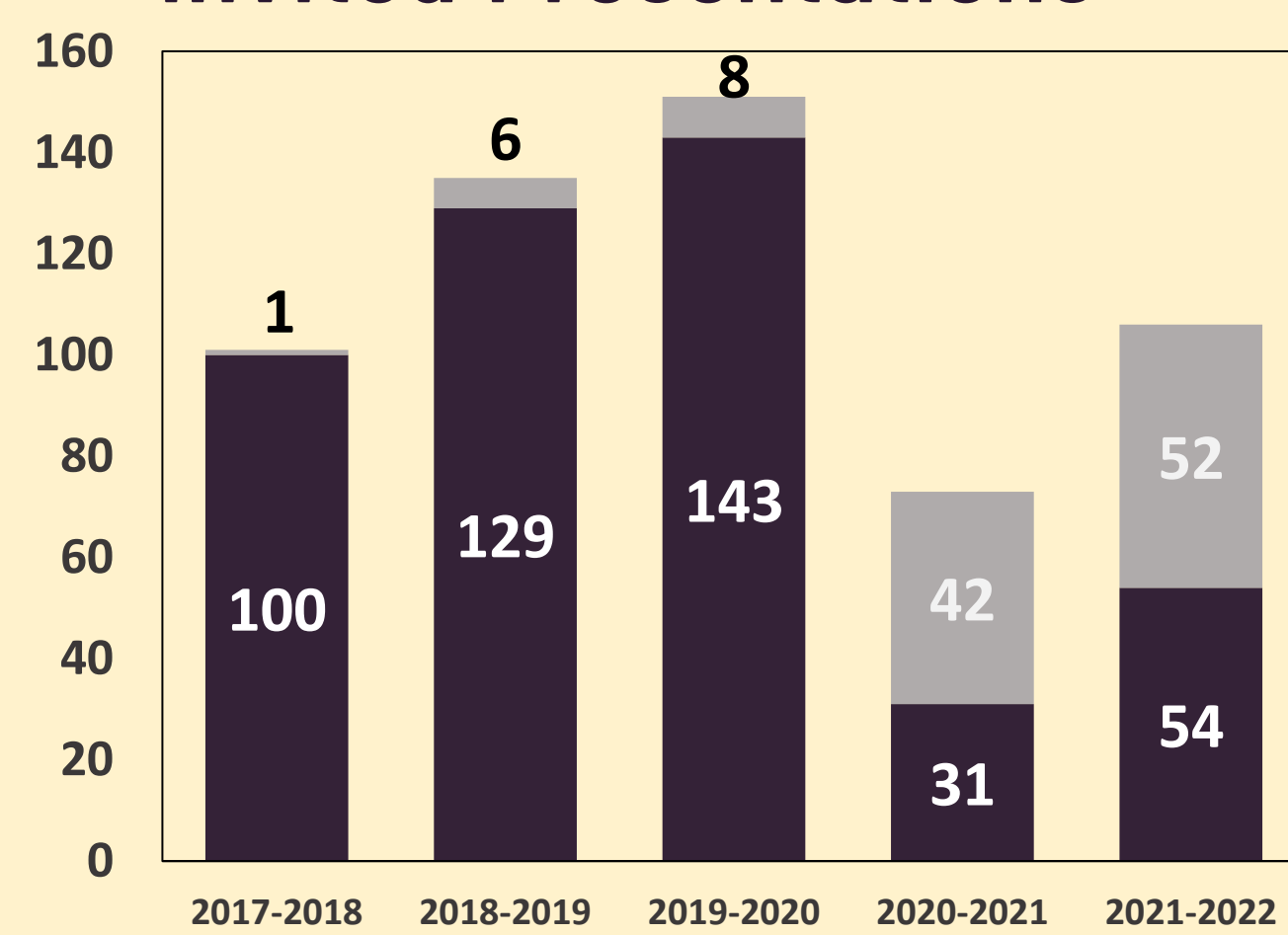
Impacts of COVID-19

The COVID-19 pandemic greatly impacted the delivery of Global Water Futures' presentations. Being the most popular method of knowledge sharing within the organization, this shift in medium enabled the continued rapid dissemination of critical water research worldwide

Non-Invited Presentations



Invited Presentations



Figures 2 & 3: Comparison of online versus in-person non-invited (left) and invited (right) presentations across all reporting years.

Following the Data

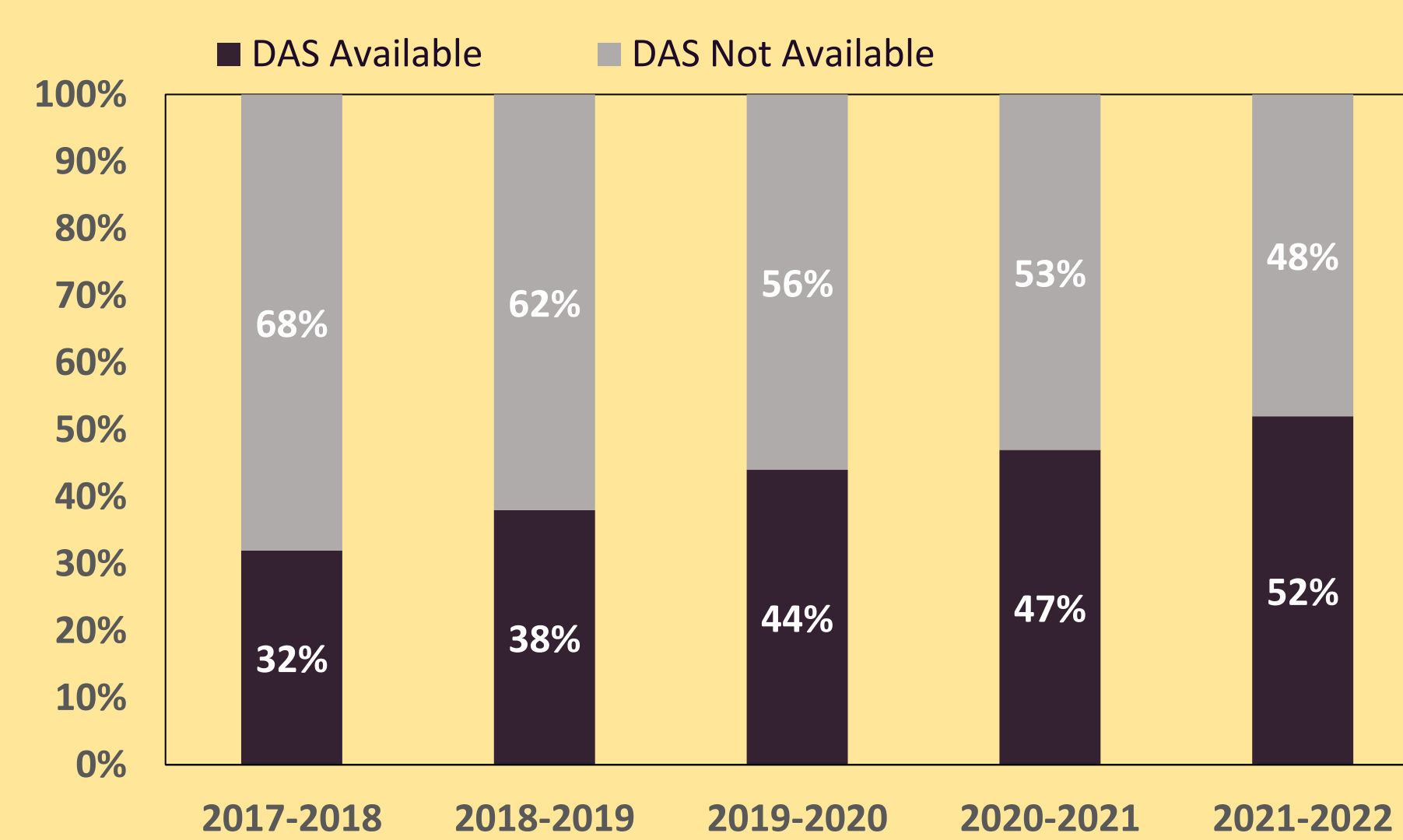


Figure 4: Percentage of reported refereed publications with a DAS

Initial dataset findings were lower than anticipated due to inconsistencies in annual reports. The Data Availability Statements (DAS) of every reported refereed publication were analyzed so the metadata of individual datasets could be recorded.

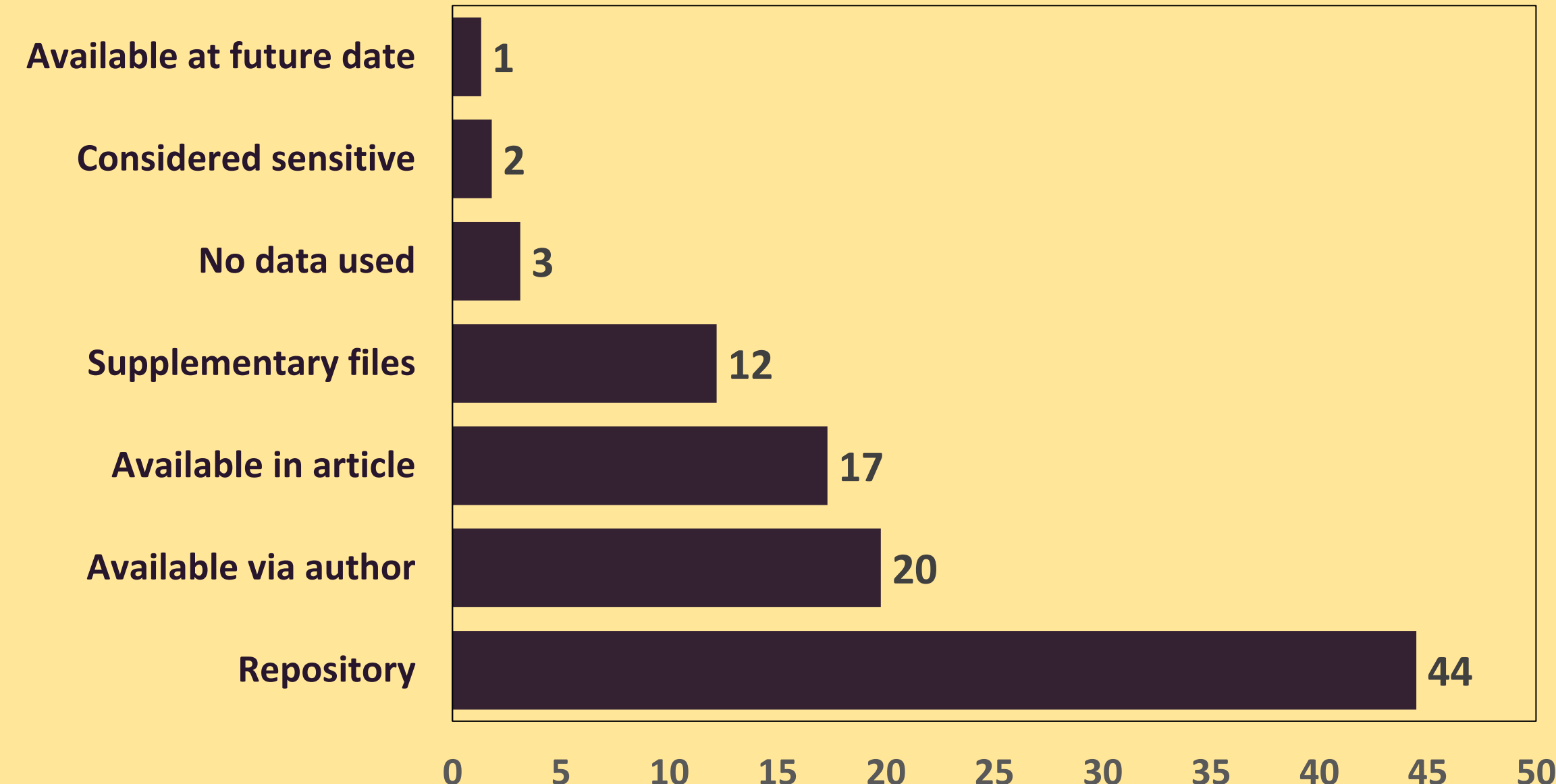
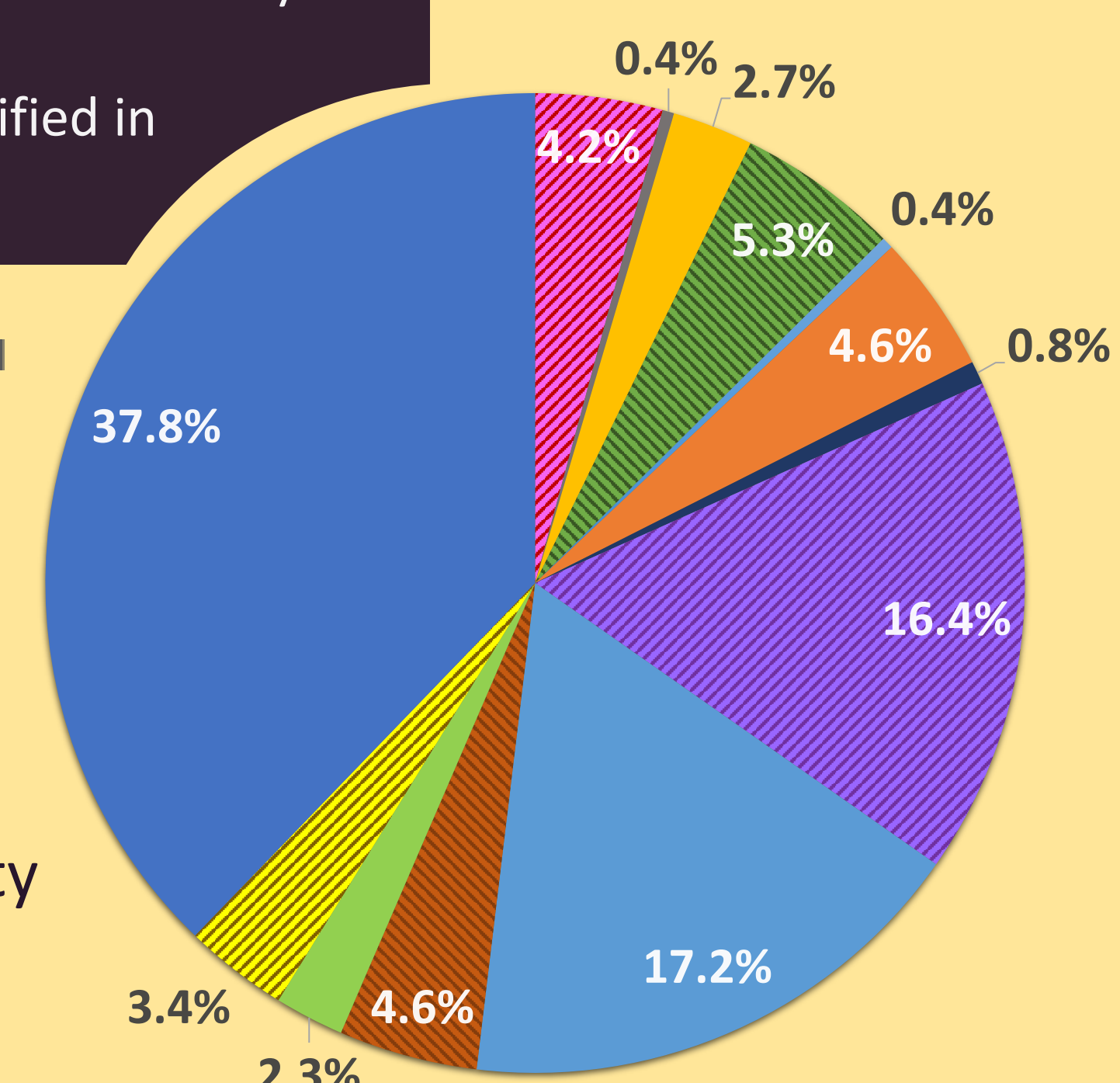


Figure 5 (bar): Total proportional (%) comparison of each data availability method stated in publications with available DAS.

Figure 6 (pie): Percent distribution of data repositories identified in the article's DAS.

Dryad
Figshare
Mendeley Data
Polar Data Catalogue
FRDR
HydroShare
Others
Environmental Data Initiative Portal
Dataverse/Borealis
Pangaea
Zenodo
AmeriFlux/Fluxnet
ORNL DAAC



GWF data outputs are spread across a wide variety of online repositories. **Zenodo** and **FRDR** are the most used repositories by GWF researchers.

Key Recommendations

- Focused effort to develop standard procedures that enforce data accessibility across all output types
- Further exploration of online presentation options
- Guidance on storage methods to increase data consistency

Acknowledgements

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