Incentives for Data Sharing

A Research Council’s view

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Barriers for Data Sharing

National Academies of Sciences, Engineering, and Medicine Principles and Obstacles for Sharing Data from Environmental Health Research - Workshop Summary

Obstacles to the release of data
• Concerns About Adversarial Science
• Tensions Between Researchers and Opponents
• Business Considerations Related to Data Sharing, including The Business Value of Data;
• Administrative Issues
• How Will Data Be Made Available and Who Will Pay for Data Sharing?

Privacy and confidentiality issues
• Risks of Participants Being Identified

Informed consent issues
Data Sharing complexities

Other issues

• Huge diversity among disciplinary cultures and practices
• Generational differences in attitudes towards data sharing
• Conflict between researcher’s personal benefits of withholding data vs. society’s common benefits of data sharing

Everybody suggests that incentives towards data sharing should be provided for but few detail what concrete incentives should be given and how to provide them

– In such a way that outweighs researchers’ personal benefits in keeping the data to themselves
Incentives for Data Sharing

Possible Ways Forward

• Ensuring Quality Data Sharing Practices
• Developing Common Language and Standards
• Planning and Time Limits for Data Availability
• Reducing Tensions Associated with Data Sharing

• **Providing Incentives to Share Data**
  – objectively demonstrate (to funders) the benefits of data sharing
  – find ways to compensate (for the costs of data sharing)
Motivations for Data Sharing

Knowledge Exchange Report Incentives for sharing research data

Important motivations for researchers to share research data are

(1) when data sharing is an essential part of the research process;
(2) direct career benefits derived from sharing through greater visibility of one’s work, reciprocal data exchanges, and the reassurance of having one’s data recognized as valuable by others;
(3) the norms that researchers are exposed to within their research circle or discipline;

and

(4) a framework of funder and publisher expectations, policies, infrastructure and data services as external drivers.
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Knowledge Exchange and Science Europe briefing paper on Funding research data management and related infrastructures:

• Half of the responding Research Funding Organisations (RFO’s) implement measures to ensure that RDM related goals are adhered to by relevant stakeholders.

• Most of these are ‘soft’, but some are strong measures, where funding allocation is conditioned by the compliance with the RDM policies.

• Fewer than half of the responding RFOs provide incentives for data sharing, and none of these incentives are financial.

• Most of the RFOs stress that responsibility for RDM lies with the researchers and their institutions
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**Project RECODE Recommendations for Funders**

1. Develop explicit policies for open access to research data with clear roles and responsibilities
2. Adopt a comprehensive approach in funding the implementation of open access to and preservation of research data
3. Reinforce the significance of the Data Management Plan to embed and promote data management as a distinct activity within the research process
4. Raise awareness and promote open research data in view of leading an open science paradigm
5. Foster collaboration with relevant stakeholders and networks
Incentives for Data Sharing

Project RECODE Guidance on preparing and implementing a policy

(...)

5. Policy content. Policies should be developed with open access as the default.

6. Data Management in grant applications. (...) DMPs should form an essential element of the grant proposal, be resourced adequately, be reviewed and their delivery monitored.

7. (...) Grant agreement should include clauses on open access to research data, accompanied by (...) sanction mechanisms in cases of non-compliance, as well as clarification of related costs (...) eligible.

8. Guidance to researchers. (...) develop appropriate tools such as templates for data management (...) and specify (...) eligible repositories/data centers for data deposit.

9. Rewards to researchers. (...) such as the award of prizes for high-quality data (...)

Incentives for Data Sharing

ERAC Opinion on Open Research Data

• Training of stakeholders and awareness raising
  – Promote a better understanding of open research data through communication & awareness raising
  – Establish training and education programs on Open Science
  – Establish a reward system for data sharing activities
    • Data dissemination should be considered when evaluating researcher performance
    • Take the particular interests of individual researchers participating in a research project into account—including their “right of first use” of the data
    • Appropriate author attribution of datasets and data citation standardization will help to fight against scooping and will ensure trust
  – Ensure sound monitoring
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ERAC Opinion on Open Research Data

• Data quality and management
  – Make data identifiable and citable
  – Promote metadata standardization and production of metadata
  – Promote innovative models for (open) peer-review and processes of quality assurance
  – **Strongly promote the use of data management plans**

• Sustainability and funding
  – Ensure the existence of FAIR (findable, accessible, interoperable and reusable) open research data infrastructures
  – Ensure sufficient funding for open research data and for data sharing activities

• Legal issues
  – Make IPR issues insightful
FCT Open Access to Research Publications Strategy

To establish an Open Access repository network infrastructure

→ RCAAP since July 2008

+ Mandate Open Access to Publications arising from publicly-funded research

→ FCT Open Access Policy

+ Integrate compliance with the Open Access Policy into project reporting and grant management procedures of FCT-funded research

→ Implementation measures
Funder mandate for publicly-funded research to be made OA

2013

- Infrastructural conditions
- Political conditions
  - Research Institutions at national level
  - European and International environment
- Generalised acceptance of OA principles by the research community

Portugal was deemed to be sufficiently mature for the adoption of a mandate towards availability in OA of research results obtained through public funding
FCT Open Access policy

free, online access to peer-reviewed publications arising from FCT funding

• Approved on May 5\textsuperscript{th} 2014
• Covers:
  – Papers in scientific journals/conference proceedings
  – Posters
  – Books, book chapters and monographs
  – PhD theses

• mandatory immediate \textbf{deposit} in one of the institutional repositories (RCAAP Portal)
• \textbf{Embargo} periods to full publication content allowed

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FCT Open Access policy

OA publishing through an Author-pays business model journal

• APC’s eligible for refund as research costs subject to following conditions
  – Immediate Open Access → no embargo is allowed
  – The definitive work must be allowed to be deposited in repositories other than the publisher’s own repository
  – Creative Commons CC-BY license (or equivalent) mandatory → No restriction to access or re-use
  – Prevision to set a cap for the APC amount, to be determined in accordance with international Open Access policies best practices
FCT Open Access policy

Research Data

Publications must reference its underlying research data and these should be made available to other researchers whenever requested, provided that all legal requirements are met
FCT Policy on management and sharing of research data – Recommendation

Recommendations for researchers

• to share primary data and other data with the scientific community, within the shortest time possible
• to place the data in open access databases
• that future research proposals provide a “Data and Other Products Management Plan”
• that questions related to privacy, legitimate commercial interests, national security, and the rule of law must be properly addressed before making the research data available
FCT Open Access Policy Implementation Overview

Repositories
• Deposit

RCAAP Portal
• Harvest

FCT
• Monitoring/Evaluation
Benefits

• Researchers
  • Simplification of the scientific and financial reporting at FCT
  • RCAAP functionalities and reuse of RCAAP collected data for different purposes
    • For research output report at FCT
    • For research project expenses claims at FCT
    • To form the basis of the scientific output of a researcher in his/her CV at Plataforma DeGóis
    • To check if a given repository is compliant with FCT OA policy (SARI)
    • To check if an OA journal complies with the FCT cost eligibility requirements (during the publication deposit process)
    • Widget for research project websites (publication list export)
Benefits

• Institutions
  • Easier access to accurate, complete and updated information
    • The same data can be used by the researcher’s institution for career progression or other purposes

• Funder
  • Research Policy objectives
    • both stimulate AND monitor compliance with the FCT OA Policy
      – facilitate the adoption of OA practices by adding value to the researchers practices of depositing their outputs
      – make those practices both easy to perform and a habit, to become as natural as the act of publishing
Benefits

• Funder
  • Efficiency gains by streamlining the monitoring and research evaluation processes
    • From manual procedures to semi-automatic
  • Collection of precious data for research policy making that can itself be reused in multiple instances
    • collect information on APC’s so as to calculate expenditures with OA publications in Gold journals with APC’s (new)
    • track at an aggregated level the scientific outputs of FCT-funded research (new)
    • easily check a projects’ output

“Input once, reuse multiple” principle delivered!
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A Research Council’s view – further thoughts

• Easier for a Research Council to use the “stick” than to reward with the “carrot”
  – Benefits are already there most of the times but researchers are unaware of them and also have strong personal motives to withhold the data

• Acknowledge the “right of first use” of the data
  – It may be unrealistic to ask for sooner release (except for some disciplines)

• Rewarding procedures are dependent on the advancements of reliable data producers’ identification and citation systems
  – Funders can have an active role in stimulating progresses in this field
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A Research Council’s view – further thoughts

• Data Management Plans requirements
  – If properly laid out with a view on ensuring maximum dissemination and reuse of data
  – if adequately implemented as part of the research project selection process and monitored during the research project evaluation stages, then
    **DMPs are crucial for an accurate mapping of the expected data collection**

Making it more difficult to “omit” or “hide” data or to keep it unjustifiably closed
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A Research Council’s view – further thoughts

A Research Council can and should further encourage:
1) that every publicly funded agency (such as weather and coastal services) gathering non-personal data must make such data openly available online; e.g. weather measurements, physical/chemical characterisation, biological records
2) the provision of incentives for the research community to make the raw data underlying publications openly available as a default
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A Research Council’s view – further thoughts

A Research Council can and should further encourage:
3) the provision of societal incentives (or penalties otherwise) for private companies to release as much data as possible on their products and methods – consumers should be fully aware of what they are buying
4) the provision of computational and storage resources so that citizens and citizens’ organisations may share freely reusable information and data
5) investment on the universal access to the Internet, progressively, to the entire human population and the full geographical reach
Thank you for your attention!

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