

TIPS & TRICKS FOR DATA REUSE

WHERE TO FIND AND ACCESS EXISTING DATA?

- Data tables in manuscripts/reports
- Data availability statements of manuscripts/reports
- Repositories (often open access to metadata)
- Databases of laboratories (open/restricted access)
- Contact corresponding authors

ONCE DATA IS FOUND, CHECK WHETHER IT IS INTEROPERABLE AND REUSABLE

1. What am I allowed to do with this data? Check which license applies.
2. Can I read the file types? Evaluate cost-benefit (when conversions are needed, e.g. hardcopy data).
3. Try to understand what the data exactly is about, using documentation and metadata.

META-ANALYSES

- Data collection
 - Design a database format (e.g. in Excel or other software) for standardized registration of reused data. Make sure to do this at the beginning before starting data registration; making retrospective changes is a lot of work!
 - It can be useful to keep a list of data that was found but not included in the database (also see below, on which terms were data in- or excluded?)
- Methodology
 - How were the data obtained? E.g., which search terms were used to find these data?
 - On what terms were data in- or excluded? E.g., excluding data without a license that allows reuse, or leaving out hardcopy data.
 - How was the suitability of the data for the present meta-analysis determined? A list of criteria (with rationale) can be useful to clarify which choices were made.
 - How was the quality of the data evaluated?
- Results and Discussion
 - Is divergent quality of the reused data affecting conclusions?
 - Keep in mind that it is a balancing act to reach robustness of conclusions without being too strict and discarding the majority of reused data.
 - Keep an eye out that a quality assessment does not lead to over-representation of reused data from only a few studies (data from the same study often have comparable quality).
- FAIR dataset of reused data
 - If possible, publish the reused data as a dataset of your meta-analysis. Include a section in the README file where you explain which licenses apply to the reused data, and whether additional permissions were obtained.