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Quick Guide for Managing Your Research Data

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This guide gives you essential pointers to help you to organize and manage your data effectively from the start of research data collection. This will save you time during your research, ensure you don't lose research data and help you to find your research data easily. It will also help you to prepare for any data sharing requirements you may have from your funders.

	Key Points to Consider

File Naming	• Choose a consistent file naming system from the start of your project and if you are working in a team making those file naming conventions available to everyone. This will help you to pull your together datasets in one place.
	• You may decide to include elements in your file names which will help you (and others) identify your research data e.g. date created; version number; data creator/ project member; descriptive title
	• Alternatively you can also keep your names short and systematic.
	• Think about how you are most likely to sort your data files e.g. by date collected, project element, geographic location and include that element in the file name first.
	• Dates in file names should be formated - YYYY-MM-DD to allow you to sort your files
	• Do not use special characters and spaces as it causes problems switching between different systems. Use '_' instead of '-'.
	• If you know you need to deposit your data in a data archive check their requirements for file naming and if you can use this system from the start of your project to save time later on.
	• Keep a simple spreadsheet with further details of the contents of your files for cross-referencing. This is important when you use a very simple file-naming structure and it will be essential when you or others need to access your research data in the future.
	• If you need to rename your data files during your project there are a number of free softwares that you can use to rename files in batches in one. Make sure you use a copy of your research data, not the original, to avoid data loss if something goes wrong
	  ○ For Windows: Ant Renamer
	  ○ For Mac: Renamer4Mac

Folder Organization	• Folder names and structures should also be logical and concise. • Your top level folder should include the project title / project number. • Sub-folders should follow a clear, logical naming convention. • You should follow the same principles for use of characters and spaces as described above for file naming. • Think about which data files most appropriately belong together. • Think about how you will group together your research data for future sharing.
Versioning	• Use versioning from the start of working with your research data. • Versioning is very important for maintaining earlier files of your research data in case you need to back-track. • Try not to use terms such as 'final' or revised' in your file names as as you will likely create lots of these files and will very quickly be hard to tell apart. • You should make a new version for every major change to your research data.

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	• Services such as MS OneDrive available through MySOAS Staff and Student makes versioning easy as it allows you to label and annotate files. • Periodically assess whether you need to keep your older versions. • PLEASE NOTE: a copy of the original raw research data will always need to be kept in the form you collected it.

File Formats	• Plan in advance which file formats you will use to store your research data. When deciding on this you will need to:
	  ○ consider the software you are using to work with your research data.
	  ○ refer to any disciplinary norms.
	  ○ check what software your research partners can use and access.
	  ○ try and store your research data in formats which are 'lasting' and you or others will be able to use and open in the future.
	• You may find that it is most sensible to use and analyse your research data using one format or software but you then convert it to a 'lasting' format once you have finished using it or periodically throughout your project.
	• 'Lasting' formats tend to be 'open' non-proprietary formats, meaning that no specific commercial software is required to use them.
	• If you are depositing your data in a data archive there will be specified file formats which you should check at the start of your research.
	• For general recommendations on file formats for long-term storage see UK Data Archive Recommended File Formats

Storing and Backing Up Research Data	• Secure storage and regular backing up of research data is incredibly important as you create and work on your datasets. • Backing up will make sure you don't lose research data e.g. if you accidentally delete it, lose or have your laptop stolen or your hard-drive fails. • As a rule of thumb you should keep at least 3 copies of your research data - the original copy and two back ups. • It is highly recommended that you ensure that copies of all your research data sets are backed up to the SOAS network either on your X: Drive or using your MS OneDrive allocation through MySOAS staff or student as this will then be regularly and securely backed up. • You should try to keep the research data on two different storage types e.g. an external hard-drive and a cloud service e.g. MS OneDrive. • One set of backup research data should be kept remotely e.g. at your home as well as at SOAS (if you have personal or sensitive data your storage device must be encrypted). • If your research data contains personal or sensitive data you must store and transfer it securely and be very careful when using cloud storage providers. Please see our Quick Guide for Working with Personal Data.
Describing Your Research Data	• An important part of data management is producing the information about your research data that will allow you and others to understand and use it in the future. • This is general good practice but if you are in receipt of external funding it is essential you do this throughout your project so that you can meet requirements of your funder for data sharing.You can create a document that describes your research data collectively (e.g. overall for a particular funded project; for all the datasets in your PhD research):

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	○ describe the overall collection of your data files. ○ provide the contextual information around your research e.g. the 'who, what, where, when, how and why' of the research dataset/s. ○ this should typically include name of the project; names of investigators and collaborators involved in data collection and generation; description of the project; dataset titles; abstracts for your datasets; geographic location of data collection/generation; time period of data collection/generation; funder details; methods used to collect consent; access and re-usage rights; copyright or intellectual property information. ● In addition to project level information you should keep information about individual datasets e.g. your interviews, regional surveys, images ○ use a simple spreadsheet or table to record: the data collection methods; software and equipment used for data collection and analysis; meaning of headings or codes used in spreadsheets e.g. units of measurements (whether £ or $) if not included in the dataset. ● If you are required by your funder to share your research data you should check the recommended/required data repository early on in your project to find out what documentation you will need to supply. ● The following record in the UK Data Archive includes a good example of a dataset with its documentation: http://reshare.ukdataservice.ac.uk/852082/ ● You may want to use disciplinary standards for describing your research data or more general standards. ○ DataCite - the metadata scheme required for assigning DOIs to datasets is a good guide to ensure you meet funder requirements: http://schema.datacite.org/meta/kernel-4.0/ ● Check the RDA Metadata Directory for links to metadata schemas browsable by subject area: http://rd-alliance.github.io/metadata-directory/standards/

For more information about research data management visit:
https://www.soas.ac.uk/scholarly-communication/research-data-management/

Key information in this guide is adapted from resources written by University of Bristol Research Data Service particularly their 'One Minute Guide to File Organization'