Depositing training materials in Zenodo: FAIRsFAIR checklist

This checklist has been adapted from "10 simple rules for making training materials FAIR" by Garcia L., Batut B., Burke M.L., et al. (2020). The objectives of this checklist are to encourage the FAIRsFAIR project partners to deposit their training materials in Zenodo for long-term access and sustainability beyond the time of the project as a first step towards making these materials as FAIR as possible. To facilitate better use of Zenodo, the questions with an * refer to the repository's website.

Describing digital objects with structured metadata is fundamental to making them FAIR. Regardless of the type of object, adding appropriate, standardised metadata will help make them both machine and human readable. Please keep in mind that only the person uploading the document to Zenodo is able to change or add to the metadata. If you are uploading on behalf of others, then check the metadata in advance to reduce the need to make changes in the future.

FAIR principles	Steps	Key questions	Yes	No	Notes
Reusable	1. Plan to share your training materials online. 2. Keep your training materials up-to-date.	● Have you considered which material or parts of this material could be helpful to others?	X		Consider how the material should be organised in a collection to help others discover it. Most but not all materials will relate to an event, such as a webinar, workshop or training course. If this covers more than one speaker or topic consider creating a collection to describe this context, and upload the material for each in a separate record. In some cases, not all material may be available, e.g. speaker notes, references to related material, or information about the context of the training. Think in advance what could be most useful to your audience and consider adding anything that is missing.
		● Have you considered if you will need to keep your material up to date?	X		Sometimes material does not need to be updated (e.g., material from a one-off event). If you do not plan to update the material, provide a timestamp of the last update/last version in your material.
Findable	3. Improve findability of your training materials by properly describing them. 4. Give your training materials a unique identity. 5. Register your training materials online.	● Have you specified the community which you wish your upload to appear with in Zenodo?*	X		Select FAIRsFAIR and RDA/CODATA school community/or other additional communities that may be relevant for your domain or audience.

		● Have you chosen the upload type?*	X		You can choose from multiple options. If you choose "lesson" as your upload type, make sure you have relevant information, such as learning objectives and instructions to make it reusable for others. If your material is a publication, make sure you select the type of the publication. Other activities/exercises can be selected as "other". <mark>Choose a presentation or a presentation including an exercise (if applicable).</mark>	
		● Have you reserved a Digital Object Identifier (DOI)?*	X		It is possible to upload more than one file associated with each DOI. It is up to the "file owner" to decide how to group their training files. If you wish to have all of them separated, you can add a "txt" file with the link to other materials or in the description field (and related identifiers). The files, however, should be grouped to present the content needed for someone in the target audience/domain to achieve the described learning objectives.	
		● Have you selected the publication date?*	X		This should be the date you upload them, or if they have already been made public then use that date. <mark>Use the original date of publication indicated in the slides.</mark>	
		● Have you entered the title?*	X		<mark>Enter the title</mark>	
		● Have you entered the author information?*	X		<mark>Be sure to add your ORCID if you have one.</mark>	
		● Have you described your material (metadata)?*	X		<mark>Use the description we have provided. Feel free to adjust it to your needs.</mark> Here you can provide instructions on how to use your material. For trainings/workshops, you may want to include an outline/programme of a previous training, the dates of the training, and the format of the training (e.g., virtual, face-to-face), the target audience for the training (e.g., researchers in a specific domain, PhD students, data stewards). If your presentation was for a specific training event, it is a good idea to include this information for context. It can be a good idea to include the	

						date(s) of the events in your description as well as this may differ from your publication date.
			● Have you properly cited any resources you have based your material(s) on?	X		==If the material includes any reference to resources created by other people, it is important that these other authors have authorised the use of their text, imagery or other contributions.== Short quotes from academic research or other publications can normally be used with a clear citation. If your material is heavily based on someone else's work or ideas, even if you are not directly quoting, it is good practice to provide citation to their work. For images, designs, audio, video, or other original works, if their contributions are freely available online under a licence from the original author or their representative which permits reuse, this should be clearly indicated in your resource. If their contributions are not available under a licence that permits reuse, even if you can locate them online, you must seek permission to reuse their material and indicate this has been done in your resource. If this is not possible, you must remove their contribution from your resource before depositing in Zenodo or uploading anywhere else. Read more about licencing in section 6, below.
			● Have you specified the language of the material?*	X		==Specify the language.==
			● Have you entered the keywords best describing the material?*	X		==See the suggested subject terms provided by us. Feel free to adjust them.== Depending on the subject of your material, you may want to include the following terms, such as best practice, curation, data management plan, data steward, FAIR, research data management training, metadata etc. For a comprehensive overview of relevant subject terms, you may want to consult the CASRAI Research Data Management Glossary https://casrai.org/rdm-glosary/
			● Have you provided any other additional	X		Additional information, not provided elsewhere needed to understand the materials, e.g. software required, a quiz, an HTML version, a print version of an online course.

		notes for users (optional)?*			
		● Have you specified grants which have funded your research?*	X		FAIRsFAIR "Fostering FAIR Data Practices In Europe" has received funding from the European Union's Horizon 2020 project call H2020-INFRAEOSC-2018-2020 Grant agreement 831558.
		● Have you specified identifiers of related publications and datasets*	NA		
		● Have you specified subjects from a taxonomy or controlled vocabulary?*	NA		Note that each term must be uniquely identified (e.g., a URL).
Accessible	6. Define access rules for your training materials.	● Have you selected the access right for using the material?*	X		In FAIRsFAIR we normally use Open Access.
		● Have you specified the licence which explains the conditions of using your material?*	X		In FAIRsFAIR we normally use Creative Commons Attribution 4.0 International. Before saving any material in Zenodo, you need to ensure that the material meets the requirements for this licence. This can be checked with the authors and contributors. You should provide licensing information throughout all the material, such as Attribution Generic (CC-BY). When reusing someone else's contributions in your resource, remember that you **cannot assign rights that you do not hold yourself**. So you cannot make material available under a CC-BY license, for example, if the original authors of even a small part of your resource have not allowed that level of openness in their own licence.

| Interoperable | 7. Use an interoperable format for your training materials. | ● Have you used a community-endorsed format for your publication?* | X | | Both pptx and pdf versions

In FAIRsFAIR we normally upload the text documents in HTML, PDF, and PPTX versions. Common formats for training material can be found on https://journals.plos.org/ploscompbiol/article/figure?id=10.1371/journal.pcbi.1007854.t001 Preferred formats overview available on DANS (Data Archiving and Networked Services) website: https://dans.knaw.nl/en/about/services/easy/information-about-depositing-data/before-depositing/file-formats |
| | | ● Have you provided the version of the material (optional)?* | NA | | Mostly relevant for software and dataset uploads. |
| Reusable | 8. Make your training materials (re)usable for trainers.
9. Make your training materials usable for trainees. | ● Have you provided any other additional notes for trainers and trainees (optional)?* | X | | As stated earlier, you can provide a "txt" file with clear instructions on how to use material. For trainings or workshops, you may want to include an outline/programme of a previous training.
The minimum requirements that are not covered in Zenodo, but should be specified in the training material description (metadata) are: learning outcomes, target audience, required resources, structure and duration, date of last revision, and contact details.
An overview of suggested metadata for training materials can be found here https://journals.plos.org/ploscompbiol/article/figure?id=10.1371/journal.pcbi.1007854.t002 |

Remarks:
- In case you are interested in the latest work on the terminology for skills necessary to make data FAIR and to keep it FAIR, please visit Terms4FAIR website https://terms4fairskills.github.io and check out associated work on GitHub https://github.com/terms4fairskills/FAIRterminology.
- We decided not to include the rule "Make your training materials contribution friendly" into our checklist as we leave it up to the user to adjust and adapt the training material for their specific needs.