

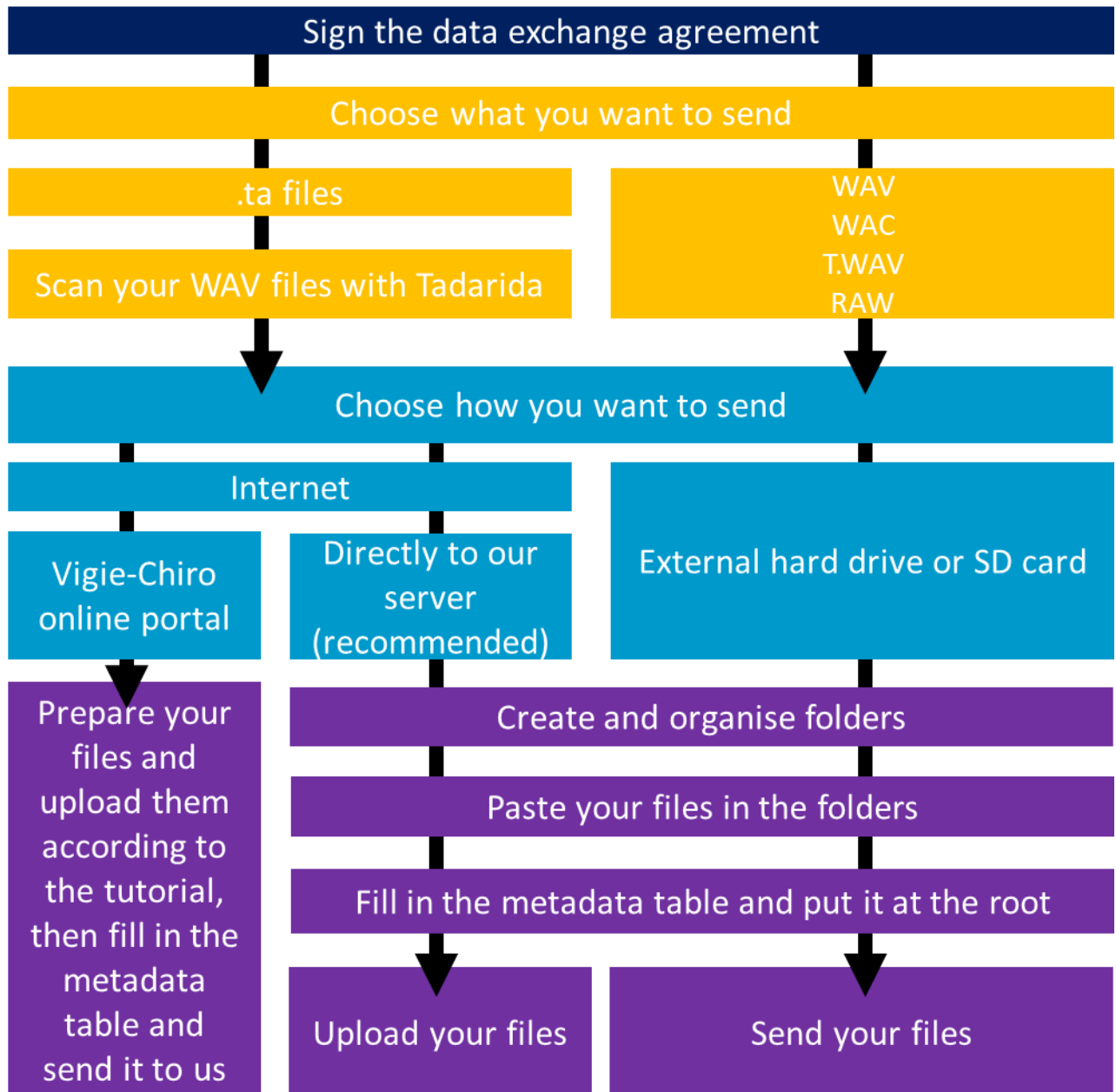
How to organise and send a copy of your data

A tutorial by Charlotte Roemer and Yves Bas, June 2023

Summary

1.	What to expect from the process.....	3
2.	Sign the data exchange agreement.....	3
3.	Select the data that you will send	3
4.	Choose what you want to send	3
4.1.	File duration	4
4.2.	Time expansion.....	4
4.3.	File format	4
5.	Choose how to send your files	4
5.1.	Our server (internet)	4
5.1.	The Vigie-Chiro online portal (internet)	4
5.2.	External hard drives.....	5
5.3.	SD cards or USB keys	5
6.	Organise folders	5
7.	Put the WAV files in the participation folders.....	6
8.	Fill in the metadata table and put it at the root.....	6
9.	Send your data (choose one option)	6
9.1.	Our server.....	6
9.2.	External hard drives, SD cards or USB keys	7
10.	You're done	7

Summary of the different steps of this tutorial



1. What to expect from the process

In the scope of this project, data is collected to build a European database of bat acoustic activity. Our capacity of processing files is very limited right now as only one person is working full time on this project. The steps of this work are as follows:

- Develop the methodology to build maps: 80% achieved
- Develop the workflow to process European files: 90% achieved
- Develop the methodology to standardise European files: 20% achieved
- Collect files: see the [participation map here](#).
- Process files: not started
- Build European maps: not started yet

For the moment, files are collected on our server and will not be processed until the development of the methodology is finished. You will receive regular updates via the newsletter about the development. When the files will be processed, we plan to send the results of the process to you.

There are other means to obtain a quick analysis of your files. For instance, if you use an Audiomoth or an SMBAT, have a look at the [citizen science program of the Granollers Museum](#) to see if their protocol and their analysis can match your needs. If you use their portal, your data can contribute automatically to the project Bat migration Routes in Europe if you are not opposed to this request.

2. Sign the data exchange agreement



Each contract has its own reference number, so please send an email to Charlotte Roemer at this email address to obtain a contract form: charlotte.roemer1@mnhn.fr

Please fill in the contract and sign it before you send it back. If you need to clarify certain points in the contract please send an email to Charlotte Roemer.

Once you have received the agreement signed from the French Museum of Natural History, you may send us the data!

3. Select the data that you will send

If you have more than 2 To of WAV files that could be sent to the project, you are encouraged to ask us which sites are the most important. This will help us to be quicker and more efficient to achieve data transfer for all partners.

4. Choose what you want to send



We now accept the following formats: .wav, .wac, .raw, T.wav.

4.1. File duration

- We will automatically cut your files in 5s maximum length in case it is not done already. If you cut your files to shorter or longer lengths, we will arrange the analysis accordingly.

4.2. Time expansion

- We will automatically expand your files by a factor 10 if it is not already done.

4.3. File format

You have two options for file format.

- It is preferable to send the sound file itself, such as .wav, .wac, .raw or T.wav
- But you can also choose to scan these files with the Tadarida software, which will produce .ta files, which contain the acoustic parameters of each detected sound event in your sound sequences. .ta files are similar to .txt files and are much lighter than WAV files. To produce .ta files, please follow the [tutorial here](#).
- You can choose to send a combination of both, for example the most important study sites in WAV and the rest in .ta.

5. Choose how to send your files

You have different options to send your files. They are listed below. Please keep in mind that only one person can handle data transfer on our side, so it might take some time before we are available to receive your data.

If you have a very good internet connexion and not too much data to send (too much is up to you), you can choose to send them online. Else, you can copy/paste them on a SD card or an external hard drive.

5.1. Our server (internet)



We can create a visitor account for you on the CC-IN2P3 data centre. Please ask for an account at charlotte.roemer1@mnhn.fr

We will give you additional instructions on how to transfer your data via the software [Cyberduck](#).

5.1. The Vigie-Chiro online portal (internet)



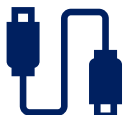
Warning: this option is recommended for French-speaking partners only because the portal is in French. There are multiple steps to follow (including required settings for the recorders) and the process is more time demanding than the other options.

This online portal was designed for the participants of the Vigie-Chiro citizen science program. If you want to use it you will have to follow [the Vigie-Chiro tutorial](#). If you don't find your country in the grid on the portal (i.e. you cannot add a new study location on the map), please send us an email and we will add a grid for your country.

The data uploaded on this portal are also stored at the CC-IN2P3 data centre. The advantage of using this online portal is that you are autonomous (you don't need us).

If you use this online portal, you can skip the next steps. **However, it will still be necessary to fill the complete metadata table** (section 7).

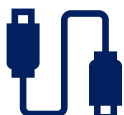
5.2. External hard drives



We have a set of external hard drives that we will be able to send to you so you can put a copy of your files on it and send them back to us. Since the amount of external hard drives is limited, it might take some time before we can send one to you. You can also choose to send your external hard drive to us, but please be aware that we decline any responsibility in case something happens to your external hard drive on the way.

Please ask for an external hard drive by writing to charlotte.roemer1@mnhn.fr and inform us about the space you need.

5.3. SD cards or USB keys



If you don't have a lot of data but have a poor internet connexion, and if they can be stored on your SD cards or USB keys, this is a safe way to send them to us. Please be aware that we decline any responsibility in case something happens to your SD cards on the way.

6. Organise folders



Please prepare folders in this order: Site, Participation. This is an example:

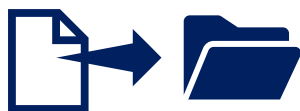
- Site_1
 - o Participation_1
 - o Participation_2
- Site_2
 - o Participation_1
- Site_3
 - o Participation_1

A **site** is a unique location that will be described in the metadata table by only two attributes: latitude and longitude. The height of the microphone does not matter here. You can name the folder as you like, for example "National_Park_Cevennes_Florac_Hilltop" or "Site_1". Please avoid special characters and spaces.

A **participation** is one recording session on your site. Each recording session will be described in the metadata table by a lot of different attributes, including starting and ending date and time of the recordings, recorder type, recorder settings, microphone height, etc. You can name the participation

folders as you like, for example “Participation_1”, “Participation_2” or “October_2020”, “Spring_2021”. Please avoid special characters and spaces.

7. Put the WAV files in the participation folders



Put the WAV files in the participation folders.

You can use as many different participation folders as you like but each folder must contain at least one complete night.

If you recorded several nights in a row but did not record during one night in the middle, please split the recordings into two different participation folders so that there is no discontinuation in one folder. It is not a problem if two participation folders have the same metadata (excluding the starting and ending dates obviously).

If you used a stereo recorder, please contact us to agree on how to organise this data.

8. Fill in the metadata table and put it at the root



Please download [the complete metadata table](#) and [the tutorial about how to fill each column](#). This complete table contains all metadata that will be important for the analysis of the data. Once you have filled this table, put it at the root of your space.

This is an example:

- Site_1
 - o Participation_1
 - o Participation_2
- Site_2
 - o Participation_1
- Site_3
 - o Participation_1
- **Metadata_table.csv**

Please keep in mind that data without metadata will be useless!

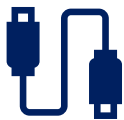
9. Send your data (choose one option)

9.1. Our server



Please follow [instructions to transfer data directly to the CC-IN2P3](#).

9.2. External hard drives, SD cards or USB keys



If you use one of our external hard drives, please do not keep it more than a few days: other partners might be waiting to receive one :)

When you are finished copying the files on it, put the disk back in the plastic box it came with. Please wrap up external hard drives, SD cards and USB keys carefully so that they won't move in their transport box. Please send them to this address:

Charlotte Roemer
Equipe NCS
Centre d'Ecologie Fonctionnelle et Evolutive (CEFE)
Campus du CNRS
1919 route de Mende
34293 Montpellier 5
FRANCE

10. You're done

A big thank you! You will be able to see a summary of your contribution on the [map of participations](#) when we update it. The cells of this map are 50 km wide to preserve the confidentiality of your study locations.