BAT MIGRATION EUROPE

How to fill the metadata table

A tutorial by Charlotte Roemer and Yves Bas, December 2021

Summary

1. Two scenario cases 2
   1.1. Vigie-Chiro upload 2
   1.1. Other type of data transfer 2
2. Personal information 2
3. Location, time and date 3
4. Position of the microphone 4
5. Recorder and microphone model 4
6. Recording settings 6
7. Post-recording processing 7
8. Miscellaneous 8
9. Concerning the habitat and other environmental variables 8

1. Two scenario cases

According to how you chose to transfer your data, there are two cases:

1.1. Vigie-Chiro upload

When creating your participation, you already filled in some metadata such as site coordinates, date and time. Please pay attention to the column “required” below to know whether you have to fill the metadata or not.

1.1. Other type of data transfer

If you chose any other type of data transfer, please pay attention to the column “required” below to know whether you have to fill the metadata or not.

2. Personal information

This information will be used to contact the person in charge of the data if needed. Please make sure to inform us in the future in case the person in charge should change.

The information contained in this table will not be shared with anyone else than the coordination team of the project Bat migration routes in Europe. The information will be stored for the duration of the project. You are free to ask us to delete this information at any time.

Metadata	Short name	Format	Type	Required
First name	FirstName	character	first name of the person in charge of data	yes
Family name	FamilyName	character	family name of the person in charge of data	yes
Email address	Email	character	email address	yes
Affiliation name	Affiliation	character	name of work structure	yes
Country	Country	character	country of the affiliation	yes

3. Location, time and date

For the definition of a **site** and of a **participation**, read tutorial "How to organise and send a copy of your data".

If you chose to upload your data on the Vigie-Chiro online portal, you should use the references that are associated to your uploads. See Annex 1 at the end of this tutorial for explanations on how to copy/paste these Vigie-Chiro references.

If you did not choose to upload your data on the Vigie-Chiro online portal, please use exactly the same name as your folders. It is important that the names are exactly the same.

Metadata	Short name	Format	Type	Required
Site Reference	Site	character	if upload in Vigie-Chiro, use site name given in VigieChiro. If no upload in Vigie-Chiro, use the exact name of your site folder	yes
X coordinate	X	numeric	X coordinate in WGS84 of the microphone. Use a dot as a decimal. Do not use characters such as " or ' or °. Example: 3.5656	yes if no upload in Vigie-Chiro
Y coordinate	Y	numeric	Y coordinate in WGS84 of the microphone. Use a dot as a decimal. Do not use characters such as " or ' or °. Example: 48.3598	yes if no upload in Vigie-Chiro
Participation Reference	Participation	character	if upload in Vigie-Chiro, use participation name given in VigieChiro. If no upload in Vigie-Chiro, use the exact name of your participation folder.	yes
Starting date	StartDate	date	Starting date (dd/mm/yyyy) of the participation.	yes if no upload in Vigie-Chiro
Ending date	EndDate	date	Ending date (dd/mm/yyyy) of the participation. If there was a pause of at least 1 night, then enter the next period of participation on this same site in a new line.	yes if no upload in Vigie-Chiro
Starting time	StartTime	time	Starting time (hh:mm:ss) of the participation.	yes if no upload in Vigie-Chiro
Ending time	EndTime	time	Ending time (hh:mm:ss) of the participation.	yes if no upload in Vigie-Chiro

4. Position of the microphone

All microphones positioned at human reach (approximatively less than 2 m high) are considered at “ground-level”.

If you use stereo microphones, please contact us to define how we should organise the data.

Metadata	Short name	Format	Type	Required
Type of study from list	TypeStudy	numeric	type a number. Choose between 1: ground-level, 2: tree canopy, 3: wind mast, 4: wind turbine, 5: building, 6: other	yes
Type of study if not in list	TypeStudyOther	character	if previous = 6, type the type of study	yes if TypeStudy is 6
Position of microphone in wind turbine nacelle	PositionNacelle	code	If TypeStudy = 4(wind turbine), type a code. Choose between AB: above, BE: below	yes if TypeStudy is 4
Microphone height	MicHeight	numeric	approximative height in meters. Error tolerance is 1 m. type NA if you do not remember at all.	yes if no upload in Vigie-Chiro

5. Recorder and microphone model

The name of your recorder is usually written on it. The name of your microphone can be found on the manufacturer’s website (usually in products>accessories).

If the recorder has only one type of microphone we did not put its name in the list: in this case you can choose the number 22, 23 or 24.

Metadata	Short name	Format	Type	Required
Model of recorder from list	RecorderName	numeric	type a number. Choose between : 1: Anabat Scout, 2: Anabat Swift, 3: Audiomoth, 4: Avisoft UltraSoundGate, 7: Batcorder, 8: Batlogger A, 9: Batlogger A+, 10: Batlogger C, 11: Batmode S+, 12: GSM Batcorder, 13: Mini-Batcorder, 14: Passive recorder, 15: Peersonic RPA3, 16: Petterson D500X, 17: SM2BAT, 18: SM2BAT+, 19: SM3BAT, 20: SM4BAT, 21: Song Meter Mini Bat, 23: Batlogger WE X, 24: other	yes
Model of recorder if not in list	RecorderOther	character	if previous = 24, type model and brand separated by a comma. Example : SM2BAT, Wildlife Acoustics. If it is custom-made, type custom.	yes if previous is 24
Model of the microphone from list	MicName	numeric	type a number. Choose between : 1: SMX-US (SMBAT), 2: SMX-UT (SMBAT), 3: SMX-U1 (SMBAT), 4: SMM-U1 (SMBAT), 5: SMM-U2 (SMBAT), 6: UM12 (SMBAT), 7: BIO-SM2-US, 8: US-O V3 (Anabat), 9: US–D (Anabat), 10: ULTRASONIC MICROPHONE FG (Batlogger), 11: BATLOGGER X MICROPHONE (Batlogger), 12: Pole Microphone (Batcorder), 13: Disk Microphone (Batcorder), 14: Knowles FG (Avisoft), 15: Knowles FG-O (Avisoft), 16: UltraSoundGate CM16/CMPA (Avisoft), 17: UltraSoundGate CM24/CMPA (Avisoft), 18: GM50 (Batmode), 19: GM90 (Batmode), 20: TM10 (Batmode), 21: TM20 (Batmode), 22: other external microphone without horn, 23: other external microphone with horn, 24:internal microphone (e.g. Audiomoth), 25: custom-made. If you do not know, type NA	yes
Model of the microphone if not in list	MicOther	character	if previous = 25, write the name if the microphone has a name and comment if it has an integrated gain or not, and if so, how much	yes if previous is 25

6. Recording settings

Please be as specific as possible. Be aware that according to the importance of the setting, data with NA might not be used at all for the analysis. But do not invent if you don't know ;) If you only used the standard settings, go to the user manual of your recorder and look for the standard values. You can also contact the customer service of your manufacturer to understand better how your recorder works.

High or low-pass filters: They are used to obtain "cleaner" recordings but they are different from a trigger (see next paragraph). These filters are set to "erase" the frequencies below or above a certain threshold. For example, if you used a high-pass filter of 1 kHz, all frequencies <1 kHz will not appear on your recordings.

Trigger: All the settings related to the trigger define if a sound sequence should be recorded or not. Indeed, most recorders can listen and choose to record or not according to the trigger settings. For example, if you chose a trigger minimum frequency of 14 kHz, the device will listen until a sound is >14 kHz, and only then will it start recording.

If you are lost in this part, do not panic. Contact us and we will help you find the information!

Metadata	Short name	Format	Type	Required
Recorder gain	GainRecorder	numeric	if the recorder has a gain that can be chosen by the user, type the value. If no gain can be chosen by the user, type 999. if you do not know, type NA	yes
High-pass filter	HPF	numeric	If a high-pass filter was used, type the frequency in kHz, else type 0. if you do not know, type NA	yes
Low-pass filter	LPF	numeric	If a low-pass filter was used, type the frequency in kHz, else type 999. if you do not know, type NA	yes
Trigger Minimum Frequency	FreqMin	numeric	if a minimum frequency was set to start recording, type the frequency in kHz, else type 0. if you do not know, type NA	yes
Trigger Maximum Frequency	FreqMax	numeric	if a maximum frequency was set to start recording, type the frequency in kHz, else type 999. if you do not know, type NA	yes
Trigger Level	TriggerLevel	numeric	If a trigger level was used, type the level of the trigger, else type 0. if you do not know, type NA	yes
Trigger Min Duration	MinDur	numeric	if a minimum duration of a sound event was set to start recording, type	yes

			the duration in milliseconds, else type 0. if you do not know, type NA	
Trigger Max Duration	MaxDur	numeric	if a maximum duration of a sound event was set to start recording, type the duration in milliseconds, else type 999. if you do not know, type NA	yes
Trigger Window	TrigWin	numeric	if a trigger window was used (maximum duration between two triggering sound events before the recording is stopped) type the trigger window value in seconds, else type 999. if you do not know, type NA	yes
Pause	Pause	numeric	if a pause was set between two recordings, type the length of the pause in seconds, else type 0. if you do not know, type NA	yes
Max Trigger Window	TrigWinMax	numeric	if a max trigger window was used (maximum duration of a recording) type the max trigger window value in seconds, else type 999. if you do not know, type NA	yes if Pause = yes

7. Post-recording processing

For our analysis we will cut the sound sequences in 5 seconds durations maximum. Therefore, we need to know if you already cut them or not.

Some people use a noise filtering to automatically remove all files that do not seem to contain bat calls. We do not recommend this process because it can add variability to the European dataset. But in case you used it, please explain how you did it.

Metadata	Short name	Format	Type	Required
File splitting length	FileSplittingLength	numeric	if files were split in length of a certain duration (ex: a length of 5 seconds to standardise the length of a bat pass), type the maximum length of files in seconds, else type 999. if you do not know, type NA	yes
Noise filtering	NoiseFilter	character	if you used a method to pre-filter noise files (not recommended), please describe the method in details here (software and parameters)	yes

8. Miscellaneous

If you would like to become an official partner, the name of your affiliation will be added to our website.

If you have anything to add that might be important or not, please comment here.

Metadata	Short name	Format	Type	Required
Official partner	Partner	character	yes or no: would like us to display the name of your affiliation in the list of our partners (especially on the website of the project)?	no
Comment	Comment	character	anything you would like to add	no

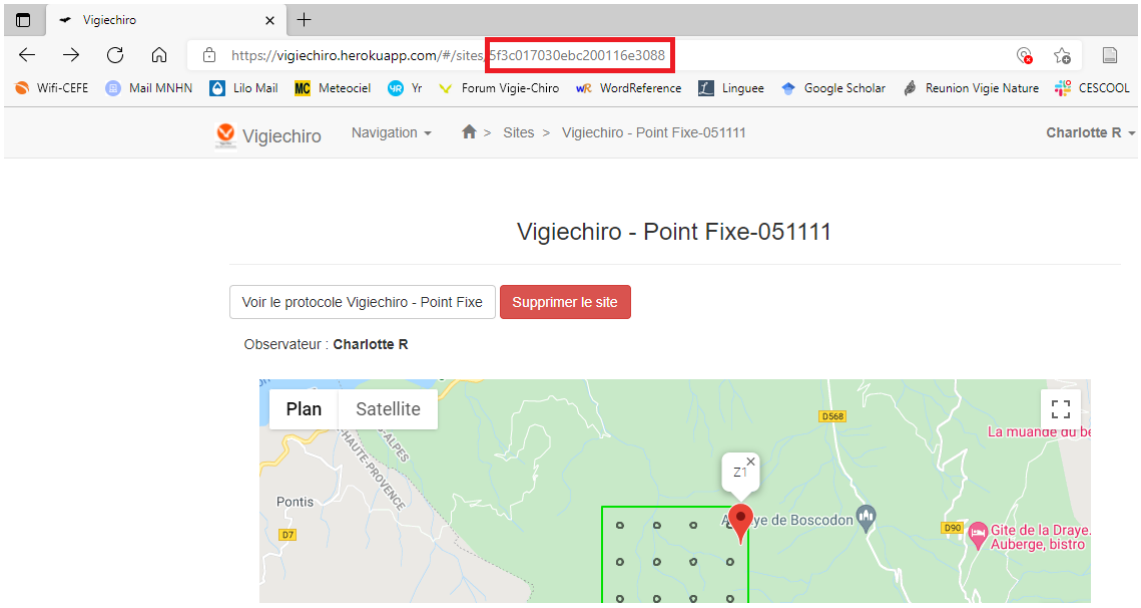
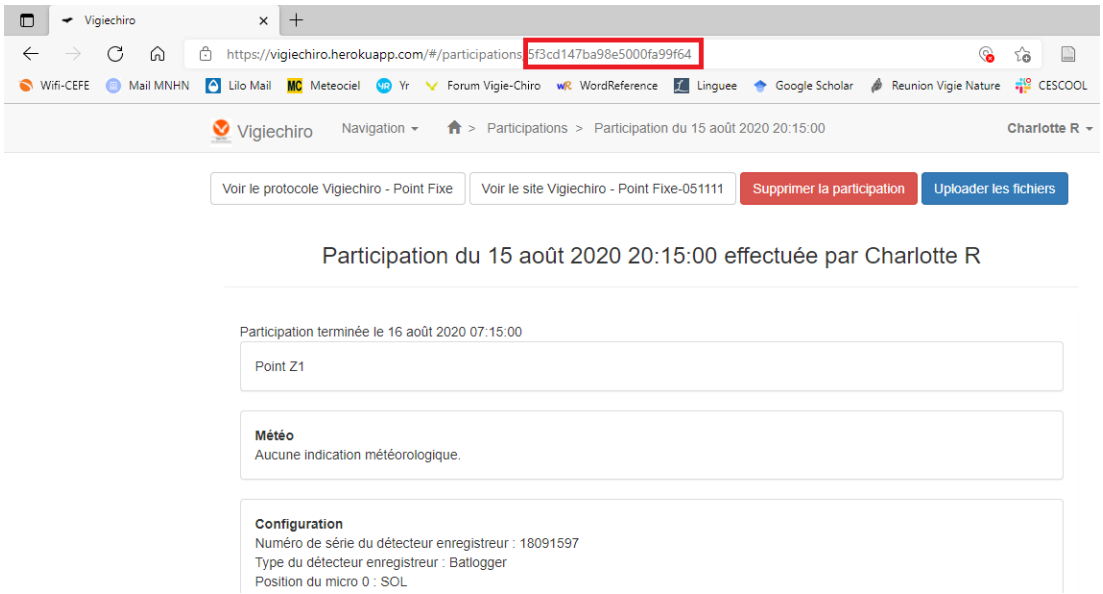
9. Concerning the habitat and other environmental variables

We are convinced that you can give a very accurate description of the environmental conditions of your recordings. However, we prefer to make an automatic assessment of those conditions using European environmental datasets that we will retrieve thanks to the date and the coordinates that you provided. This will help to have a standardised assessment of these conditions to avoid any observer bias.

Annex 1. How to find the references of the Vigie-Chiro uploads

This section is only for the partners who uploaded their data on the Vigie-Chiro portal.

The **site reference** was given to you when you created your site. It is to be copied from the address bar of your internet navigator (red square on the figure below). If you forgot to write in down when you created your site, you can find it again in Navigation > Sites and then select your site to arrive to the page of the figure below.



The **participation reference** was given to you when you created your participation. It is to be copied from the address bar of your internet navigator (red square on the figure below). If you forgot to write it down when you created your participation, you can find it again in Navigation > Sites and then select your site. Then go at the bottom of the page and click on your participation. You will arrive to the page of the figure below.