Please join our efforts to better understand the current status of the biological monitoring of caves as habitats. This survey is conducted as a part of the Biodiversa+ Sub-BioMon Project (https://www.sub-biomon.net) . The aim of the project is to collect, develop and test approaches to monitor subterranean biodiversity in karst areas. To get a comprehensive overview on the ongoing and past subterranean biodiversity monitoring attempts, and to detect the differences and the similarities between countries and regions we are contacting organisations and individuals from all over Europe.

With your help, we would like to learn about the ongoing monitoring programs of caves as habitats, the roles and responsibilities of the stakeholders, and the used methods and protocols. All this in order to improve the effectiveness of the monitoring efforts. We believe that standardised monitoring methods can only be widely accepted and applied if we incorporate your experiences from the past and your needs for the future. Therefore, we hope that you will be willing to complete this survey. \*

\*The information you will provide will only be used for the purpose of the Sub-BioMon Project, a Biodiversa+ Project funded by the EU and partner countries, and will not be shared with third parties. Your identity will remain confidential. Please do not hesitate to contact us if you require further information or assistance with the questionnaire. We appreciate your time and contribution to the Sub-BioMon project.

Contact: Name and email address by country

PART 0:

1. Name of the Stakeholder (Governmental organisation/NGO/individual):

A:

2. Please specify which kind of stakeholder are you:

Choose: Governmental Organisation, Non-Governmental Organisation, Caving Club, Individual, Other (please write if applicable):

If Organisation

2.1.1. please specify the jurisdiction of the organisation:

Choose: local, regional, national, international

2.1.2. Number of personnel working on cave related topics in the Organization?

A:

2.1.3. Number of personnel working on cave biology related topics in the Organization?

A: Full time: Part time: Volunteer:

If caving club

2.2.1. Number of active members?

A:

2.2.2. Number of members with cave biology experience?

A: With relevant scientific degree: Other with relevant experience:

If individual

2.3.1. Which one of the following are you?

Choose: expert on cave related topics, caver, other

2.3.2. If expert, please specify your field of expertise:

A:

3. Your Name (optional):

4. Your position:

PART 1: UNDERSTANDING OF SUBTERRANEAN HABITATS AND MONITORING SCHEMES

In Part 1 we would like to gather data regarding general understanding of the concepts of caves, subterranean habitats and monitoring. Herein, we are curious about your perspective, not about the textbook definitions. Feel free to skip any questions if you are not familiar with a certain term.

How would you define:

1. What are caves?

A:

2. What are caves as habitats?

A:

3. What are subterranean habitats?

A:

4.What is biodiversity monitoring?

A:

5.What is baseline status for biodiversity monitoring?

A:

6. Is biodiversity inventory already biodiversity monitoring?

A:

7. What is the difference between monitoring of habitat type and target species monitoring?

A:

8. What is the relation between bat monitoring and the monitoring of caves as habitats?

A:

PART 2: IMPLEMENTATION OF MONITORING

In Part 2 we would like to better understand the existing practices and awareness on legal obligations regarding biodiversity monitoring of subterranean habitats/caves throughout Europe. We would also like to gather information about the current status of the monitoring of caves and subterranean habitats in your country.

1. Are you familiar with the obligations of the EU Habitat Directive in general?

Choose: Yes / No

2. What are the roles and responsibilities of the different stakeholders involved in creating the EU Habitat Directive reports in your country in general?

A:

3. Are you familiar with the obligations of the EU Habitat Directive regarding cave monitoring?

Choose: Yes / No

4. What are the roles and responsibilities of the stakeholders involved in compiling the EU Habitat Directive reports on cave as habitats in your country?

A:

5. Are you familiar with the obligations of the EU Habitat Directive regarding subterranean habitat (other than cave) monitoring?

Choose: Yes / No

6. What are the roles and responsibilities of the stakeholders involved in compiling the EU Habitat Directive reports on subterranean habitats (other than caves) in your country?

A:

7. Are there any other national/regional level obligations for cave monitoring in your country?

Choose: Yes/ No / I don’t know

7.1. If yes, please specify these laws, decrees etc.?

A:

8. Are there any other national level obligations for subterranean habitat (other than cave) monitoring in your country

Choose: Yes/ No / I don’t know

8.1. If yes, please specify these laws, decrees etc.?

9. Is cave monitoring other than for creating the report for the EU Habitat Directive carried out in your country at any level?

Choose: Yes/ No / I don’t know

9.1. If yes, please specify the following by each monitoring project: geographic area, scope, duration, frequency, other?

A:

In the following questions we would like to get a better understanding on how cave monitoring connected to the EU Habitat Directive is carried out in your country.

10. Is cave monitoring connected to the EU Habitat Directive carried out in your country? Choose: Yes / No / I don’t know

10.1. If no, why not?

A:

If yes

10.2.1. Who is conducting the fieldwork part of the monitoring?

A:

10.2.2. Since when is the monitoring conducted?

A:

10.2.3. What is the role of you or your organisation in the monitoring?

A:

10.2.4. What are the currently used methods for monitoring caves as habitats?

A:

10.2.5. Are genetic based methods used in monitoring?

Choose: Yes / No / I don’t know

10.2.5.1. If yes, what kind of genetic methods?

A:

10.2.6. Are there established cave monitoring protocols in your country?

Choose: Yes / No / I don’t know

10.2.6.1. If yes, please specify or share the protocol with us

A:

10.2.7. On what basis are the monitored caves chosen?

A:

10.2.8. Who is requesting and who is issuing permissions for the monitoring?

A:

10.2.9. What is the format of the collected data?

A:

10.2.10. How is the collected data stored?

A:

10.2.11. How is the collected data shared among the stakeholders?

A:

10.2.12. Is the monitoring data interpreted on different geographic levels like karst areas, hydrogeological units, cave systems, individual caves?

Choose: Yes / No

10.2.12.1. If yes, on which scales?

A:

10.2.13. Is monitoring data used in maintaining and improving habitat status?

Choose: Yes / No

10.2.13.1. If yes, please specify how?

A:

10.2.14. Is monitoring data used in environmental impact assessments of various projects? Choose: Yes / No

10.2.14.1. If yes, please specify how?

A:

10.2.15. What is the average (or range) of the EU habitat type monitoring budget for caves annually or for the 6-year period in your country?

A:

10.2.16. Who is the financing body of the monitoring in your country?

A:

10.2.17. If there is any other important technical information regarding cave monitoring that have not been asked before, please specify here:

A:

PART 3: CONDUCTING THE MONITORING

The main goal of SubBio-Mon project is to create and improve a monitoring protocol that can be implemented throughout Europe. In Part 3 we would like to know how would you imagine the biodiversity monitoring process for caves as habitats in your country and how would you participate in it.

1. Who should conduct the fieldwork part of the monitoring?

Choose: contracted professionals / volunteers / both

2. What should be the role of national level governmental organisations?

A:

3. What should be the role of National Parks or other regional level governmental environmental protection organisations in the monitoring?

A:

4. What should be the role of non-governmental caving organizations (caving clubs, associations etc.) in the monitoring?

A:

5. If you or your organization is currently participating in the monitoring of caves as habitats what would you change and how in the process?

A:

6. In your opinion what is needed the most to improve the monitoring of caves as habitats?

A:

7. If there is any other suggestion regarding the improvement of the monitoring of caves as habitats that have not been asked before, please specify here:

A: