CEPF Final Completion and Impact Report

Organization's Legal Name:	University of Ljubljana
Project Title:	Developing New Tools for Rapid Assessment of Subterranean Biodiversity in Bosnia and Herzegovina
Grant Number:	CEPF-109136
Hotspot:	Mediterranean Basin II
Strategic Direction:	2 Support the sustainable management of water catchments through integrated approaches for the conservation of threatened freshwater biodiversity
Grant Amount:	$149,999.50
Project Dates:	September 01, 2019 - May 31, 2022
Date of Report:	September 19, 2022

IMPLEMENTATION PARTNERS

The Center for Karst and Speleology (CKS) from Sarajevo was the official partner. It provided a local link to the area and gave advice on approaches and how to carry out some activities, as well as help on the ground. They participated in the collection of new data by helping in conducting fieldwork, providing literature, and assisting with snail identification; informing students and involving them in the project's activities (online lectures, workshops, internships); and participating in various project activities, including the project's final conference.
We collaborated with numerous other stakeholders who, although not official partners, played an important role in helping us achieve the project's goals. First of all, the support of Public Enterprise Vjetrenica and its director Nikša Vuletić, who supported the project and our work and provided thelogistical support and information for the sampling in the region of Vjetrenica and Popovo polje. Members of the cave club "Zelena brda" in Trebinje helped with information about caves and springs and participated in the field work. Brian Lewarne (The Devon Karst Research Society) and the Hungarian diving team "Caudata Hungarian Cave Research Group", which is carrying out the "Proteus Project" in the Trebinje area, helped with information on caves, discussions on fieldwork experience and conservation. The Museum of Herzegovina in Trebinje hosted the final conference of the project, and helped with the organization and promotional activities through its good contacts with the media and local authorities. Good cooperation was established with the The Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska (Ministry of Education and Culture of the Republic of Srpska), which included the project data in its information system, offered support with information and permits, and received advice on state and status of some exceptional subterranean sites.

CONSERVATION IMPACTS

Planned Long-Term Impacts: 3+ years (as stated in the approved proposal)

Impact Description	Impact Summary
The updated database on subterranean biodiversity is used by local authorities in strategic decisions, facilitating improved nature protection regimes	The feedbacks so far indicate that the SubBIOCODE Database has a hifgh potential to be used by local auithorities. The Database provides an extensive set of information, relevant to decision-makers and researchers, and is publicly available. The database was presented to many stakeholders, either directly in meetings (to PE Vjetrenica, to Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska), as well as to all attendees of the 3rd Dinaric symposium on subterranean biology in Trebinje. We got a positive feedback from the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska, which shall use the data and plan to include it in their information system. Additionally, we were approached by the researchers from the University of Sarajevo, which asked for the data and to use them in their analyses of biodiversity. A couple of scientists also offered to include their own research data from the project area into this database or gave advice for its improvement.

Planned Short-Term Impacts: 1 to 3 years (as stated in the approved proposal)

Impact Description	Impact Summary
Knowledge on subterranean biodiversity of four Key Biodiversity Areas (BIH01-Dabarsko i Fatničko polje, BIH05-Orjen i Bijela gora, BIH06-Popovo polje-Vjetrenica, BIH08-Trebinjsko jezero) improved through gathering data from different sources in common database	The knowledge was improved by creating a common SubBIOCODE Database that is easily accessible to all interested (db. subbiocode.net). The database includes data on subterranean biodiversity from the literature, as well as own field work. We conducted four fieldwork excursions to the project area during the project in 2021 and 2022. The SubBIOCODE Database t includes 1696 data lines on the occurrence of subterranean taxa from 153 localities within Key Biodiversity areas, joining 169 data sources. Apart from improving knowledge on their distribution, specimens of many species gathered from those localities are and will be included in further scientific work.
Faster species recognition of numerous subterranean invertebrates enabled by publicly available DNA barcodes	In the scope of the project, we were gathering DNA barcodes for selected subterranean taxa, which can be accessed via SubBIOCODE Database. This methodology enables species identification based on characteristic DNA sequence (COI barcode) and serves as rapid molecular identification tool. We conducted a wide-ranging sequencing along with

Impact Description	Impact Summary
	expert morphological determination, providing a DNA barcode reference library, which can serve as a tool for future identifications by non-specialists. The SubBIOCODE Database currently includes DNA sequences, and the provided framework enables easy extension of available sequences in the future.
Information on the importance of subterranean biodiversity and ways to improve it provided to at least two local decision makers	We approached three different authorities. A collaboration was established with the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska (RIPCHN), especially regarding the exchange of information on cave fauna. The SubBIOCODE Database was presented to them, and possibilities to include the information from the database to the Information system for Nature Conservation, the RIPCHN portal, have been discussed. We provided some information on conservartion of specific subterranean sites in Fatničko and Dabarsko polje, when asked by the RIPCHN. Both RIPCHN and Federal Ministry of the Environment and Tourism for the Federation of Bosnia and Herzegovina received our reports on the sampling conducted in 2021, where information on the subterranean fauna sampled was presented. During the 3rd Dinaric symposium in April 2022 we established connections with a representative of the City of Trebinje, Mrs. Slađjana Skočajić, that attended the opening ceremony of the conference. We had an opportunity to present the SubBIOCODE and the importance of the cave fauna in the region. We are discussing possibilities of future collaboration in promotion of subterranean biodiversity in the City of Trebinje.
Expert evaluations for the assignment of IUCN conservation status prepared for at least 15 subterranean species and communicated with local stakeholders	Evaluation for the assignment of IUCN conservation status for 18 aquatic subterranean species was prepared, improving the visibility of those taxa to policymakers. Many of the evaluated taxa are threatened, emphasizing the importance of their research and protection. The importance of providing such evaluations and its potential use was discussed with the stakeholders, including the students during the workshop in March 2022, and the SubBIOCODE interns that were included in the preparation of data for the evaluations. As we follow the recommendation of the IUCN, we will submit the final IUCN red list statuses only after the statuses will be revised and confirmed by IUCN reviewers.
New rapid biodiversity assessment tool developed and presented to at least three local cavers and experts	The developed SubBIOCODE database, containing occurrence data, as well as DNA sequences that enable rapid molecular assessment of biodiversity and information of protection statuses, was presented to i) Nikša Vuletić from PE Vjetrenica, ii)

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	Ana Ćurić from the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska, iii) Adrijana Vučurević, the director of the laboratory Hydropower plants in Trebinje (Hidroelektrane na Trebišnjici), iv) Brian Lewarne from the Proteus Project, v) cavers from local caving club Zelena Brda, vi) researchers at the 3rd Dinaric symposium on subterranean biology, vii) Dr. Vladimir Stupar from the University of Banja Luka, viii) students at workshop in Trebinje in March 2022 and to the SubBIOCODE Interns. By promoting the use of the database, the information on subterranean diversity reached the potential users that showed an interest to use it in their activities.We prepared protocols for molecular work in the lab, which also enhances the possibility to use DNA sequences as identification tool more widely and apply it for species identification.
Raising capacities of at least six stakeholders (cavers, students, biologists) on research and conservation of subterranean species	Capacities on research and conservation of subterranean species of stakeholders were improved by: i) Three one-month internships provided to students from BiH, ii) two local cavers educated sampling of subterranean animals on the fieldwork, iii) student workshop on sampling of subterranean habitats on 18th-20th March, in Trebinje, that was attended by 19 students. Those activities improved their skills and capacities for the research, as well as enhanced their interest for the subterranean biodiversity and helped to establish new connections.All together, we directly approached 22 different individuals, which exceeded our primary goals extensively.
Strengthened cooperation among cavers and researchers within Bosnia and Herzegovina, as well as from countries of the wider region	All activities within the SubBIOCODE project were conducted in a way to open new collaborations, especially with the local stakeholders, including personal visits during fieldwork excursions and e-mail correspondence. Most important activities, that strengthened cooperation include: i) The Dinaric symposium on Subterranean Biology that was attended by professionals, amateurs, students and naturalists, from at least 10 countries to meet and discuss research questions and options for collaborations; ii) Research work regarding the subterranean biodiversity in SE BIH is performed in collaboration with European scientists from more than six countries; iii) the educational activities enabled students make new acquaintances, get to know research possibilities in the region and existing research networks; iv) attendance at conferences, workshops and presentations, establishing connections with the stakeholders from BIH and the region. Consequently, there are plans that will

Impact Description	Impact Summary
	continue even after the end of the project, including scientific collaborations, participation in further education of students from BIH and plans for raising awareness and promoting subterranean biodiversity, hopefully in partnership with the Museum of Herzegovina and the municipality of Trebinje.

Unexpected impacts (positive or negative)?

We have involved more students in subterranean animal research and made more long-term connections than we expected, which is a very positive impact.
The first case is related to a call for student internships at SubBioLab premises in Ljubljana. We planned two visits of students from BIH to SubBioLab in Ljubljana and prepared a public call for applications. We were pleasantly surprised by the great interest and the many promising young students who applied for the internships. Because of the many good applicants, we decided to manage the funds so that three students were invited for visits to Ljubljana. Afterwards, all three decided to continue working and collaborating with SubBioLab on the topic of subterranean biology. For two of the students, a member of the SubBioLabs team became the co-supervisor of the Master thesis at the University of Banja Luka. Following the visit to Ljubljana, a third intern prepared the application for the student contest in communicating scientific works, which included preparation of the three-minute videos. She prepared a presentation on the diversity of the Niphargus boskovici species complex, the topic of work in the SubBioLab during her visit. We were proud that she won this competition and was awarded for the best overall Medical/Physical Sciences presentation. She decided to acquire further skills by visiting the SubBioLab again in July-August 2022, which she financed with the scholarship she received for this purpose.
The second example refers to a biologist who works in the laboratory facility of the hydroelectric power plants in Trebinje. After meeting her at the student workshop in Trebinje, she resumed her work on the genus Phoxinellus fish, which live in karst areas in Eastern Herzegovina. We encouraged her to establish a scientific collaboration with the Naturhistorische Museum in Vienna, and she applied for a grant to allow her to visit its laboratory. These impacts and long-term collaborations with students exceeded the initial expectations.

We were very satisfied with the positive cooperation with the decision makers of the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska. They were very supportive of the project goals and activities, and many overlapping interests were discovered. We provided them with information on subterranean biodiversity, but also built long-term cooperation and mutual exchange of information and best practises. The positive example of our collaboration was also featured on their Facebook account and website (https://nasljedje.org/biospeleoloska-istrazivanja-u-slivu-trebisnjice-primjer-dobre-saradnje-zavoda-sa-istrazivacima-prirode/?pismo=lat).

The impact of the project in terms of reaching out to the local community and raising awareness exceeded our initial expectations. During the preparation of the 3rd Dinaric Symposium on subterranean biodiversity, we received support from the Museum of Herzegovina in Trebinje. They proved to be good partners in organising such events and were very involved in educating and involving the local population. Thanks to their support, we were able to reach many important media outlets to promote the event and the project and also received positive support from the representatives of the City of Trebinje. They showed great interest in bringing the rich subterranean fauna closer to the community of Trebinje, especially to school children. This connection is to be continued, as we have

already discussed many ideas for future long-term cooperation in education and protecting the subterranean biodiversity.

PROJECT RESULTS/DELIVERABLES

Overall results of the project:

The "SubBIOCODE" project aimed to improve knowledge and methodology for the assessment of subterranean biodiversity and to transfer this know-how to local communities and decision-makers.

A large part of the project activities was dedicated to compiling existing data and collecting new data from less explored parts of the region. In 2021 and 2022, four field work expeditions were organised to explore caves and springs, where fauna was sampled for the first time in many cases. Among other things, we recorded some species that had not been found for decades and discovered potential new species for science. We also found species currently on the IUCN Red List and sampled 14 sites in KBAs and 7 in various protected areas. Samples collected on these trips, as well as samples from some of SubBioLab's previous studies, were subjected to molecular analyses to obtain diagnostic DNA sequences that can be used for future species identifications - the so-called DNA barcoding approach. The project enabled the scientific description of the newly discovered cave shrimp and phylogenetic studies on several additional taxa.

One of the main goals of the project was to organise the existing and new data and to communicate the information back to the region - to local stakeholders, decision-makers and relevant authorities, researchers, and anyone interested in the region's subterranean biodiversity. We have developed an online SubBIOCODE database (https://db.subbiocode.net/) that contains information on distribution of subterranean animals, provides molecular DNA barcodes for many species, and includes conservation information. The website also allows a citizen science approach to reporting new observations from the region - using a form on the same web interface. This database is the first open-access source of data on subterranean biodiversity in the region, and a rare case of all information being offered on one open-access platform. To facilitate conservation of important subterranean sites and species, we have compiled a list of important subterranean sites along with the IUCN Red List status assessments or reassessments for 18 aquatic species. In this way, we are raising awareness of the importance of conservation and threats to subterranean fauna.

To engage the local community, raise public awareness, promote subterranean biodiversity, and improve capacities for the research and conservation of subterranean species, we organised a series of meetings with the stakeholders and educational activities. During travel restrictions due to the covid pandemic in 2020, we offered online lectures on the subsurface diversity of the Dinarides. In early 2022, we hosted three promising students from BIH for a one-month internship at SubBioLab facilities in Slovenia. We also established protocols for field sampling and molecular work to train future researchers in the region. In March 2022, we organised a workshop for students in Trebinje, where participants gained hands-on experience with cave and spring sampling and post-fieldwork sample management. A selection of high quality macrophotographs of subterranean animals was produced and made available to interested stakeholders in the region. The photographs were also presented in a photo exhibition in the Vrioštica spring in May 2022. We involved the public in the process of naming the newly discovered cave shrimp by conducting a voting poll in April 2022. The SubBIOCODE project activities were featured on the project website, on SubBioLab's Facebook account, in BirdLife International magazine, in the CKS newsletters and web page, on our stakeholder websites, in local TV news and news portals, and at several international scientific conferences.

In the scope of the project, the 3rd Dinaric Symposium on Subterranean Biology in Trebinje was organised in April 2022, which was attended by more than 70 participants from 10

countries. The symposium provided a platform for exchange on recent advances in the study of subterranean biodiversity and helped to establish and strengthen links between researchers of subterranean fauna in the region. The symposium featured several presentations on topics related to the SubBIOCODE project, including poster presentations by all three interns who presented their work during visits to the SubBioLab in Ljubljana. We strengthened existing collaborations and established new ones with stakeholders in the region, e.g., entity-level decision makers, the City of Trebinje, researchers, stakeholders actively involved in subterranean habitats (e.g. Public enterprise Vjetrenica, biologists from the Hydroelectric Power Plant, the Museum of Herzegovina Trebinje), the local speleological society, and organisations working on related biodiversity conservation projects. They played an important role in the successful implementation of the project activities and are crucial for the long-term continuation of the project results in order to preserve and protect this exceptional world heritage for future generations.

Results for each deliverable:

Component		Deliverable		
#	**Description**	**#**	**Description**	**Results for Deliverable**
1.0	Project management and administration	1.1	Checked plan of activities, financial documents and timesheets	This activitiy was completed (sent to CEPF)
1.0	Project management and administration	1.2	CSTT/GTT filled up & sent to CEPF at the beginning and end of the project	This activitiy was completed (sent to CEPF)
1.0	Project management and administration	1.3	Final Completion and Impacts Report filled up	With submission of this report, this deliverable is achieved.
1.0	Project management and administration	1.4	Memorandum of Understanding signed between applicant and partner organization	The MoU was signed between UL and CKS in November 2019, and an Appendix to it added in May 2022.
1.0	Project management and administration	1.5	Photographs and minutes from meetings of project applicant and partner organization	Meeting were done in person (ex. Kick off meeting in Slovenia), via telephone or video calls, but also at workshops and field work expeditions.
1.0	Project management and administration	1.6	External Audit Report prepared	It was approved by Project Manager at the early phases of the project, that no audit report will be necessary for the project.
2.0	Improving the knowledge on subterranean species distribution	2.1	Permission obtained to conduct field work in target regions and reports sent on conducted activities for issued permissions	All fieldwork activities were performed under valid permits, as is required for sampling caves. Reports for issued permits were sent in for all the project years.
2.0	Improving the knowledge on subterranean species distribution	2.2	Three reports on field trips, with photographs from field work and list of visited sites, prepared	Four field trips were conducted in March 2021, October 2021, March 2022 and April 2022. Those expeditions included intensive sampling, as well as networking with stakeholders and education activities.

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				Altogether, we sampled more than 50 localities and contributed more than 600 new occurrence records. We recorded many interesting taxa, including rare and potential new species. All occurrences are publicly visible in the SubBIOCODE Database, where photographs of visited localities are added.
2.0	Improving the knowledge on subterranean species distribution	2.3	Samples of selected taxonomic groups determined	The samples from the field trips to the project area in 2021 and 2022 were sorted and processed in the premises of the SubBioLab. Selected taxa were subjected to detailed morphological and molecular identifications. We collaborated with taxonomy specialists for the morphological determination of collected specimens. Therefore, we are sincerely grateful for unselfish help to dr. Patrick Martin from the Royal Belgian Institute of Natural Sciences, Belgium (determination of Oligochaeta), dr. Tone Novak and dr. Peter Kozel from Slovenia (Opiliones), dr. Dragan Antić from the University of Belgrade, Serbia (Diplopods), dr. Anton Brancelj from the National Institute of Biology, Slovenia (Copepods), dr. Martina Pavlek from the Ruđer Bošković Institute, Croatia (spiders), dr. Florian Malard from the Claude Bernard University, France (Isopods genus Proasellus), Peter Hlavač from the Czech University of Life Sciences Prague (Pselaphidae beetles), Peter Glöer from the Biodiversity Research Laboratory (Gastropods). Some taxa

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				(Amphipods, Decapods, leeches, centipedes, beetles) were determined by experts within the SubBioLab research group. Molecular information (COI sequence) was gained for more than 200 specimens. All determinations are available at the SubBIOCODE Database.
2.0	Improving the knowledge on subterranean species distribution	2.4	Guidelines and protocols for sampling, sample sorting and laboratory work produced	In order to promote the studies of subterranean fauna and its proper sampling, especially in the project region, we prepared guidelines for sampling invertebrates in caves and springs and an infographic on molecular analyses of the collected samples. This is intended to be of help to students, naturalists and researchers, who are interested in contributing to better knowledge of the diversity and distribution of subterranean fauna.
2.0	Improving the knowledge on subterranean species distribution	2.5	A formal description of one new species for science prepared for submission to scientific journal	During SubBIOCODE fieldwork expeditions, the researchers collected many individuals of cave shrimps that were not yet scientifically described. This enabled thorough and reliable scientific description of new species based on morphology and molecular data. The species description is led by dr. Valerija Zakšek (SubBioLab, Biotechnical Faculty, University of Ljubljana) and dr. Jure Jugovic (University of Primorska). The new species was found on five locations in the area of Popovo polje (in Bosnia and Herzegovina) and Southern Croatia. Its species ephithet will be "electa", name chosen by public voting in April 2022 as

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				part of the project activities. The scientific description of the species is prepared and will be published in scientific journal.
3.0	Assembling the database and developing database tools	3.1	A sub-database created, at least 400 new data lines	A sub-database on the subterranean biodiversity of Southeastern BiH was developed, taking data from the central database of the SubBioLab (Subterranean Biology Lab at the University of Ljubljana) - SubBioDB. The database provides current knowledge on the subterranean species distribution, along with the additional information on the subterranean taxa, localities (including the photographies of the locality) and literature. Currently, more than 5700 data lines (taxon-locality-source) are part of the sub-database, including available literature data, unpublished data from SubBioLab studies and new data gathered during the project fieldwork expeditions (more than 600 occurrence records) in 2021 and 2022.
3.0	Assembling the database and developing database tools	3.2	Database interface developped, allowing the approach to the database and its content	A SubBIOCODE Database (available at https://db.subbiocode.net/) interface was developed. It is providing the data to researchers, decision-makers and the interested public in a user-friendly manner. It contains information on the occurrence of subterranean animals, provides molecular DNA barcodes for many species and conservation information. The database includes information from external sources

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				(Red List) and links to external web pages (GenBank, Ugožene vrste RS, …). An authorization layer was implemented to enable access to exact positional data of the localities to registered users only. A very important part of the database interface is the possibility to contribute information from ongoing studies or any other findings by filling in a form "Contribute information" on the SubBIOCODE database homepage.
4.0	Assessing the IUCN conservation status of selected species and creating the list of priority sites	4.1	Report with proposals for new/updated IUCN Red List Assessments for at least 15 species	In collaboration with taxonomic experts in the region, we prepared Global IUCN Red List Assessments for 18 aquatic subterranean taxa, including 11 new assessments and 7 reassessments. Many taxa that are in evaluation are especially vulnerable to threats, as they have narrow distributions and are threatened mostly by hydrological changes and pollution of groundwater. However, for many taxa there is a substantial lack of information, especially on their population trends, showing the need of further studies.
4.0	Assessing the IUCN conservation status of selected species and creating the list of priority sites	4.2	List of the exceptional subterranean sites according to known subterranean biodiversity	We prepared a detailed report, with a list of 23 sites with at least ten troglobionts (22 sites and 11 site destroyed) as well a list of sites with cave clam and the olm (68 sites all together). It contains the lists of troglobiotic taxa for each locality, as well as presentation of the main threats. As such it exceeded the initial list, but became also a in depth report

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				on issues that need to be considered in conservation of subterranean biodiversity.
4.0	Assessing the IUCN conservation status of selected species and creating the list of priority sites	4.3	A report of subterranean biodiversity of target areas produced and shared with stakeholders	During the project, we were updating and informing the stakeholders on our findings also with report. We prepared two reports on findings of taxa in Vjetrenica, during the project, and submitted it to the director of the PE Vjetrenica. In the course of applying for the permits to work in caves of BIH, we always add a report on sampled sites and taxa folund. We informed the institutes for nature conservation of Federation of BIH and of Republic of Srpska, about the sites we sampled, and collected taxa (see Deliverable 2.1 and reports for FBIH and RS). Even though very basic, with these reports we shared information on sampled biodiversity with the stakeholders. The List of important sites became a report on subterranean biodiversity of the region, as it does not only contain the sites, but also a list of species, threats and recommendations for further work on subterranean diversity in the region.
5.0	Capacity building, raising competences and networking	5.1	Copy of the presentation and photographs from participation to CEPF grantee meetings and exchanges	Due to covid restrictions, there was no larger CEPF grantee meeting in person during this project. But, there was online networking meetings organised, among CEPF grantees in the Balkans - in order to get acquainted and to support potential cooperations.

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5.0	Capacity building, raising competences and networking	5.2	At least 5 meetings organised with local stakeholders, as demonstrated by list of participants and/or photographs	We held several meetings with our stakeholders: i) Ana Ćurić from the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska and Dr. Vladimir Stupar from the University of Banja Luka on 11th October 2021, ii) cavers from Zelena brda during fieldwork excursions in March and October 2021, iii) Nikša Vuletić from PE Vjetrenica during fieldwork excursions in March and October 2021, as well as in March 2022 during thje student's workshop in Trebinje; iv) representatives of WWF Adria in March 2021, v) Brian Lewarne during fieldwork excursion in October 2021, vi) Hungarian Divers during fieldwork excursion in October 2021, vii) employees at the laboratory facility of HE on Trebišnjica in March 2022, and a biologist employed at HE, in April 2022. Furthermore, we took part at the stakeholder workshop Kako očuvati endemsku ribu popovsku gaovicu on 17.2.2022 and attended the presentation on the newly published monography on cave Vjetrenica on 8.4.2021.
5.0	Capacity building, raising competences and networking	5.3	A visit to genetic institute within University of Sarajevo performed, as deminstrated by photographs	In agreement with the project coordinator, we visited laboratory facility of HE on Trebišnjica instead of planned visit to genetic institute within University of Sarajevo. The visit took place on 21th March 2022. We were warmly welcomed by Adrijana Vučurević, the director of the laboratory. We had an opportunity to

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				present our SubBIOCODE project, especially the database and its web interface, and shared the views on the hydropower plants. After these discussions, we had a tour in the laboratories, where they explained how they perform the monitoring of the physical, chemical and biological parameters of the Trebišnjica river. Our visit was an opportunity to highlight the importance and exceptional value of the richness of subterranean life in the region. Being aware of its exceptional importance presents an important step toward improved protection in spatial planning.
5.0	Capacity building, raising competences and networking	5.4	Workshop for students and researchers in the region conducted, as demonstrated by list of participants	Due to 2020 covid pandemic, we could not perform any in-person activities, therefore we provided online lectures on the richness and uniqueness of subsurface life in Dinarides. On 18th-20th March 2022 members of SubBioLab and CKS held a student workshop in Trebinje, where 19 participants from different universities in Bosnia and Herzegovina learned about sampling techniques used in investigating life in subterranean habitats. On a fieldwork in caves and springs on Popovo polje and within the city of Trebinje, they learned about sampling and got to know diverse animal species living in subterranean habitats. We also visited museum on speleobiology in Vjetrenica, where Nikša Vuletić from PE Vjetrenica presented

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				their work in educating visitors about the importance and protection of Vjetrenica cave and its surroundings. The following day, the students checked the samples from caves and springs under stereo microscopes, learned about post field work sample management and performed basic taxa discrimination. We discussed the necessity of conducting fieldwork sampling, possibilities for further analysis of samples, and the role of researchers and students in efforts to protect subterranean habitats and their biodiversity for future generations.
5.0	Capacity building, raising competences and networking	5.5	Two cavers-biologists from the local area educated on field work sampling, as deminstrated by photographs from field work activities	During the expedition in March 2021, Nikola Lakić, a caver from caving club Zelena Brda, Trebinje joined us on a fieldwork for a day. A caver from Foča, Vladimir Smrekić, was a participant on a student workshop in Trebinje in 18th-20th March 2022. Both visited at least one spring and one cave, where they learned about sampling techniques and diversity of subterranean fauna. We discussed possibilities for collaboration, especially in view of their knowledge on caves in their area, they are often visiting.
5.0	Capacity building, raising competences and networking	5.6	Two student/biologists with finished internship in Slovenia, as demonstrated with final internship report	Three interns from Bosnia and Herzegovina, namely Džana Kuna, Miroslav Vulić and Dejana Vasić, conducted one-month long internship in the premises of the SubBioLab, University of Ljubljana in the period January 2022 - March 2022. The internship aimed to

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				and gain skills in various topics of subterranean biology research needed in conservation. Each of them addressed one specific research question that resulted in the poster presentation at the 3rd Dinaric symposium on subterranean biology. The interns learned about the subterranean biodiversity, methods of their research and approaches to their protection. They gained skills in the sampling of subterranean fauna, work in the morphological and molecular laboratory, best practices on data management, use of GIS tools etc.
6.0	Dissemination of project activities and results	6.1	A website created and updated	In July 2020 we set up a project website, that is available at https://subbiocode.net/. The website content is available in English, as well as in Latin and Cyrillic version of Bosnian/Croatian/Serbian language. We see giving information in local language very important and are aware of the existence of different official languages in BIH. The website content was updated regularly, including news, but also photo gallery, presentations of given lectures, relevant publications, conference contributions etc.
6.0	Dissemination of project activities and results	6.2	The name for new species for sciences, as proposed by local stakeholders, selected (see 2.6)	With an aim to promote the subterranean biodiversity, we conducted a public voting for the scientific species epithet for the newly discovered species of cave shrimp. The general public had the option to vote for one of the three pre-selected options:

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				meridionalis, cepfi, electa. We promoted the voting i) on the 3rd Dinaric symposium (8-9th April 2022), where we prepared voting cards that had two parts - voting card and a postcard with the picture of the cave shrimp; ii) through an online voting pool (8th April 2022-22th April 2022) that was promoted on the SubBIOCODE project website, Facebook account of the SubBioLab and on the online portal of HercegTV (local media in Bosnia and Herzegovina). Altogether, we received 88 votes (via live voting and online form). The species epithet that received most votes was "electa". This name will be used in the description of the new species of the cave shrimp, which is in preparation.
6.0	Dissemination of project activities and results	6.3	A series of articles/publications, presenting importance of subterranean diversity of the region	The subterranean biodiversity, the importance of its protection and the work of the SubBIOCODE project were presented in various occasions - at conferences, in the newsletter of the Centre for karst and speleology, on websites of our stakeholders, in series of lectures and articles, on the Facebook account of the SubBioLab etc. In order to raise visibility of the project, we participated in CEPF photo contexts, where the public voted of best project photos . The 3rd Dinaric symposium was an opportunity to present the project on the local Tv news (Herceg TV, Republika Srpska Tv, portal Trebinje live). The project will also be

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				presented at the 18th International Congress of Speleology in July 2022. Those contributions aimed to raise awareness among the public, but also to highlight this the importance of research and protection of this biodiversity rich region to the researchers.
6.0	Dissemination of project activities and results	6.4	A collection of high quality digital photographs of species and field work sites available to local stakeholders	A set of 20 high quality digital photographs, mainly macro photographies of peculiar and rare cave animals were sent to partner organization Centre for Karst and Speleology and stakeholders (PE Vjetrenica and Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska). They are available to stakeholders to use them in education or promotion and protection of subterranean fauna. A selection of those photographies was presented at a photo exhibition, organised by CKS, at Vrioštice spring in May 2022
6.0	Dissemination of project activities and results	6.5	Final conference "Dinaric symposium" organised, and abstracts of presentations gathered in Book of abstracts	On 9th and 10th of April 2022, the 3rd Dinaric Symposium on Subterranean Biology took place in Trebinje. It was organized as part of the SubBIOCODE project, and kindly hosted by the Museum of Herzegovina. More than 70 participants, including professionals, amateurs, students and naturalists, from at least 10 countries enjoyed the talks covering various topics on the research of the subterranean fauna in the Dinaric region. The topics covered taxonomy, new approaches in research of well known subterranean taxa,

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				research of adaptations to the subterranean environment, theoretical background on current distribution patterns and many more. The abstract book is available at https://subbiocode.net/wp-content/uploads/2022/04/AbstractBook_fin-1.pdf

Tools, products or methodologies that resulted from the project or contributed to the results:

(i) SubBIOCODE Database - Access to the data on subterranean biodiversity in the project region has been greatly improved through the development of the SubBIOCODE database web interface (http://db.subbiocode.net) covering the project area. The information comes from a source database, SubBioDB, an integrative database on species distribution in subterranean habitats covering the Western Balkans and managed by SubBioLab (Biotechnical Faculty of the University of Ljubljana). This database is the first freely accessible source of data on subterranean biodiversity in the region and a rare case where all information is offered on a freely accessible platform in the world.

ii) DNA barcoding - An important part of the project was the development of the DNA barcoding method, which allows rapid identification of species by their characteristic DNA sequence (COI barcode). Rapid molecular identification allows faster identification of collected individuals than classical morphological identification and even identification of damaged or juvenile stages by non-specialists. A set of barcoding sequences is included in the SubBIOCODE database, and a protocol for the laboratory work has been prepared and uploaded to the project website.

iii) Genetic laboratory workflow - An infographic depicting the key steps in molecular processing of collected samples has been created and uploaded to the project website.

iv) Guidelines for sampling invertebrates in caves and springs - A guide describing the most commonly used sampling techniques for cave fauna surveys was created and uploaded to the project website.

v) Abstract Book of the 3rd Dinaric Symposium on Subterranean Biology - The Abstract Book contains a description of all scientific papers presented at the 3rd Dinaric Symposium on Subterranean Biology organised under the SubBIOCODE project in April 2022.

vi) Lecture series, poster presentations and articles on subterranean biology and its protection - SubBIOCODE project, subterranean animal diversity, subterranean habitats and protection were presented in various occasions - student workshops, conferences, in journals, etc. All these materials and publications are made available to the public through the project website. All of these publications can also be found as appendices to this report under deliverables.

vii) A collection of high quality photographs provided to PE Vjetrenica, the CKS and the Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska. These photos present macro photographs of typical subterranean animals of the region, as well as photos of the caves and field work.

PORTFOLIO INDICATORS

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
2.4	Number of Freshwater KBAs in priority CMZ with improved information on biodiversity, shared with stakeholders			3	The information on biodiversity was improved by assembling all the available data in a common SubBIOCODE Database. New data was gathered during fieldwork expeditions in March 2021, October 2021, March 2022 and April 2022. We sampled in the following KBA areas: i) BIH01-Dabarsko i Fatničko polje (4 sampled locations, acquiring 57 occurrence records); ii) BIH05-Orjen i Bijela gora (1 sampled location, acquiring 14 occurrence records); iii) BIH06-Popovo polje-Vjetrenica (9 sampled locations, acquiring 134 occurrence records). The accessibility of this information to stakeholders was improved with the development of the publicly available SubBIOCODE database and by personal discussions.

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
5.1	Number of organizations demonstrating increase knowledge of and engagement in international or regional conservation agreement				After discussion with the grant manager, this indicator is considered not relevant for this project.
5.3	Number of sustainable cross-border networking relationship supported			10	Relationship were established with the members of the University of Ljubljana and: i) Centre for karst and speleology (Jasminko Mulaomerović), ii) Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska (Ana Ćurić), iii) caving club Zelena Brda, iv) PE Vjetrenica (Nikša Vuletić), v) students from BiH (three interns), vi) Museum of Herzegovina, vii) municipality of Trebinje, viii) University of Beograd, ix) researcher Peter Gloer, and x) collaboration between Dušanka Berak Čihorić (biologist in Trebinje) and dr. Anja Palandačić from the Naturhistorische Museum in Vienna.

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
					Those relationships include mostly scientific collaboration, providing information on subterranean biodiversity and its protection to decision-makers, guiding further education of the interested students from BIH and planning possibilities for educational activities in the municipality of Trebinje. All of them overreach the scope of the SubBIOCODE project and are aiming to continue after its formal end.

GLOBAL INDICATORS

Protected Areas

Protected areas that have been created and/or expanded as a result of the project. Protected areas may include private or community reserves, municipal or provincial parks, or other designations where biodiversity conservation is an official management goal.

Name of Protected Area	WDPA ID*	Latitude	Longitude	Country	Original Total Size (Hectares) **	New Protected Hectares ***	Year of Legal Declaration or Expansion

*World Database of Protected Areas

**If this is a new protected area, 0 should appear in this column

*** This column excludes the original total size of the protected area.

Key Biodiversity Area Management

Key Biodiversity Areas (KBAs) under improved management—where tangible results have been achieved to support conservation—as a result of the project.

KBA Name	KBA Code	Size of KBA	Number of Hectares with Improved Management

Production Landscapes

Production landscapes with strengthened management of biodiversity as a result of the project.

A production landscape is defined as a site outside a protected area where commercial agriculture, forestry or natural product exploitation occurs.

Name of Production Landscape	Latitude	Longitude	Hectares Strengthened	Intervention

Benefits to Individuals

- **Structured Training:**

Number of Men Trained	Number of Women Trained	Topics of Training
15	20	In April/May 2020 we conducted online lectures on biodiversity of the Dinarides, and methods to study them. The lectures were attended by 6 women and 8 men. In the period January-March 2022 we hosted three students from Bosnia and Herzegovina (2 women, 1 man) for one-month long internship at the premises of SubBioLab, University of Ljubljana. The internships aimed to gain in depth knowledge on various topics of subterranean biology research needed in conservation. The student workshop, conducted in 18-20th March 2022 in Trebinje, was attended by 19 students (14 women, 5 men) and covered the topics of sampling of cave invertebrates, post fieldwork sample management and lectures on the cave biodiversity in the region, methods of research in subterranean habitats and its protection. During a fieldwork expedition in March 2022, a caver (1 man) from caving club Zelena brda gained

Number of Men Trained	Number of Women Trained	Topics of Training
		practical experience in the sampling of cave invertebrates.

- **Cash Benefits:**

Number of Men – Cash Benefits	Number of Women – Cash Benefits	Description of Benefits
0	0	

Benefits to Communities

View the **characteristics** column below with the following corresponding codes:	View the **benefits** column below with the following corresponding codes:
1- Small Landowners	a. Increased Access to Clean Water
2- Subsistence Economy	b. Increased Food Security
3- Indigenous/ Ethnic Peoples	c. Increased Access to Energy
4- Pastoralists / Nomadic Peoples	d. Increased Access to Public Services
5- Recent Migrants	e. Increased Resilience to Climate Change
6- Urban Communities	f. Improved Land Tenure
7- Other	g. Improved Use of Traditional Knowledge
	h. Improved Decision-Making
	i. Improved Access to Ecosystem Services

Community Name	**Community Characteristics**							**Type of Benefit**								**Country**	**Number of Males Benefitting**	**Number of Females Benefitting**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**			

Characteristics of "Other" Communities:

Policies, Laws and Regulations

View the **topics** column below with the following corresponding codes:			
A- Agriculture	E- Energy	I- Planning/Zoning	M- Tourism
B- Climate	F- Fisheries	J- Pollution	N- Transportation
C- Ecosystem Management	G- Forestry	K- Protected Areas	O- Wildlife Trade
D- Education	H- Mining and Quarrying	L- Species Protection	P- Other

No.	**Name of Law**	**Scope**	**Topics**														
			A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**

"Other" Topics Addressed by the Policy, Law or Regulation:

No.	Country/ Countries	Date Enacted/ Amended	Expected impact	Action Performed to Achieve the Enactment/ Amendment

Companies Adopting Biodiversity-friendly Practices

A company is defined as a for-profit business entity. A biodiversity-friendly practice is one that conserves or uses natural resources in a sustainable manner.

Name of Company	Description of Biodiversity-Friendly Practice	Country/Countries where Practice was Adopted

Networks and Partnerships

Networks/partnerships should have some lasting benefit beyond immediate project implementation. Informal networks/partnerships are acceptable.

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
Researchers from the University of Ljubljana and Caving club Zelena brda, Trebinje	2014	Bosnia and Herzegovina; Slovenia	No	Exchange of knowledge on the caves and collaboration regarding fieldworks and collecting samples. The caving club also helps with the establishing of connections in Trebinje.

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
Researchers from the University of Ljubljana and The Museum of Herzegovina in Trebinje	2022	Bosnia and Herzegovina; Slovenia	Yes	The museum hosted the 3rd Dinaric symposium and helped with its organisation. We are discussing opportunities for future educational collaborations.
Researchers from the University of Ljubljana and The city of Trebinje	2022	Bosnia and Herzegovina; Slovenia	Yes	We discussed opportunities for future collaboration in educational activities and promotion of the subterranean biodiversity.
Researchers from the University of Ljubljana and PE Vjetrenica	2005	Bosnia and Herzegovina; Slovenia	No	Cooperations with PE Vjetrenica started immediately after it was founded; but studies of Vjetrenica by UL started already in the 1960s. The cooperation is related to improving knowledge on fauna of Vjetrenica, also to help its conservation.
Researchers from University of Ljubljana and Republic Institute for the Protection of Cultural, Historical and Natural Herit (Rep.Srpska)	2020	Bosnia and Herzegovina; Slovenia	Yes	Exchange of information - UL provided them data on subterranean biodiversity, Republic institute provided us with the relevant information on protected areas and Emerald areas. The collaboration is continuing after the end of the project.
University of Ljubljana and Centre for Karst and speleology	2004	Bosnia and Herzegovina; Slovenia	No	Collaboration on the activities of the SubBIOCODE, research collaboration, exchanging information relevant for fieldwork, exchange of gained samples, scientific collaboration
Researchers from the University of Ljubljana and students - interns from BIH, at SubBioLab	2022	Bosnia and Herzegovina; Slovenia	Yes	All three students turned out to be very good, and keen on continuing the work and cooperation with the SubBioLab's team at UL. With two of them, official agreement on co-supervising their Master thesis was achieved, and approved by University of Banja Luka. The third one visited premises of SubBIOLab again, during the summer 2022, funded by an awarded scholarship.

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
University of Ljubljana and University of Beograd	2022	Serbia;Slovenia	Yes	Scientific collaboration on the research of cave centipedes, a bilateral project was applied. This collaboration started at the 3rd Dinaric symposium.
Researchers from the University of Ljubljana, CKS and various experts on taxonomic groups	2019	Bosnia and Herzegovina;France;Germany;Slovenia	Yes	Scientific collaboration on the research of various groups, exchange of samples, collected during the field work in the project.
A PhD student from BIH and the Naturhistorische Museum in Wien.	2022	Austria;Bosnia and Herzegovina	Yes	Scientific collaboration on the research of genus Phoxinellus, living in karst fields in Eastern Herzegovina, was applied by a PhD student in Trebinje. The SubBIOCODE team met her during the workshop, which she attended. On the recommendation of the team, she applied for a Synthesis+ internship. With it, she would have the possibiltiy to visit the Naturhistorische museum in Vienna, and work on its thesis. Due to lack of guidance and supervision, she gave up on her work, but with the workshop and talks with the project team, she got the will to try again.

Sustainable Financing

Sustainable financing mechanisms generate funding for the long-term (generally five or more years). These include, but are not limited to, conservation trust funds, debt-for-nature swaps, payment for ecosystem services (PES) schemes, and other revenue, fee or tax schemes that generate long-term funding for conservation.

Name of Mechanism	Purpose	Date Established	Description	Country/ Countries	Project Intervention	Delivery of Funds?

Globally Threatened Species

Globally threatened species (CR, EN, VU) on the IUCN Red List of Threatened Species, benefitting from the project.

Genus	Species	Common Name (English)	Status	Intervention	Population Trend at Site
Proteus	anguinus	Olm	VU	Gaining new information on the occurrence of the species, raising awareness about the conservation of subterranean habitats.	Unknown
Congeria	kusceri		VU	Gaining new information on the occurrence of the species, gaining new samples for molecular analysis, preparing reassessment of the Red List status of the species, raising awareness about the conservation of subterranean habitats.	Unknown
Alona	hercegovinae		VU	Preparing reassessment of the Red List status of the species, raising awareness about the conservation of subterranean habitats.	Unknown
Troglocaris	prasence		VU	Improving knowledge on the distribution of species, molecular analysis of the samples, preparing reassessment of the Red List status of the species, raising awareness about the conservation of subterranean habitats.	Unknown
Lanzaia	vjetrenicae		VU	Raising awareness about the conservation of subterranean habitats.	Unknown
Narentiana	vjetrenicae		EN	Raising awareness about the conservation of subterranean habitats.	Unknown
Vitrea	spelaea		EN	Raising awareness about the conservation of subterranean habitats.	Unknown
Delminichthys	ghetaldii	Southern Dalmation minnow	VU	Raising awareness about the conservation of subterranean habitats.	Unknown

LESSONS LEARNED

We learned an important lesson, when trying to find suitable candidate for internship at premises of SubBioLab. At first, we personally communicated with the stakeholders and while there was some interest, we could not find anyone that would confirm to come to Ljubljana. We came out with an idea to publicly promote the internship, even though we were not confident that this message will reach the target audience. We were very surprised that so many students applied for the internship, including many very motivated students, some of which already had some relevant experience. Importantly, among them were students that we could not reach via known collaborators. Another, potentially important factor is, that the public promotion had exact dates, topic and duration of the internship. By giving exact information, students more easily decided if they are interested and are available in the given time.

When promoting project activities, we noted that it is important how and where to promote the project. While the project website was not very frequently visited, the Facebook posts addressed more people, especially if the post included the stakeholders or the students. We were surprised that the promotion on the local news portal and TV news was very successful, and we were even personally contacted by some potential stakeholders.

We learned that the procedure of preparing IUCN RedList assessments requires in depth preparations including communication with all relevant taxonomy experts and IUCN authorities, getting access to SIS (information system), completing online training, getting in depth knowledge on the taxon and the area of its distribution, having relevant and up-to-date information on the threats in the region, etc. Our advice is to start the procedure soon enough. We see that both taxonomic knowledge and practical experience on the fieldwork are very important for suitable evaluation.

During the project we learned that the most important aspect of empowering local community is to raise awareness, help people to get to know the topic and get them enthusiastic. Because many stakeholders do not financially rely on conservation or research activities, they will be engaged because of their interest. It is meaningful to provide some equipment (e.g. forceps, vials, sampling net) only after educating people and only to individuals that have interest in this topic.

In general, where there is a will, there is a way. It was very unfortunate that our project was affected by the pandemic shortly after it started. This prevented us from travelling and conducting field research for a year. We decided to approach project implementation in a different way. Since we could not go into the field, we devoted our energy to analysing samples stored in our collections from previous field research expeditions in the project area. We also found a way to reach interested individuals by organising online lectures and networking using online tools. While this was not ideal, it was the right way to move project activities forward. When we were finally able to travel and involve interested cavers and students in the field work, it was obviously a big step forward. It is important to involve the people who live in the areas, because they are the ones who have direct interest and benefits from protected environment.

SUSTAINABILITY/REPLICATION

The project results could not be achieved without the additional support of the ongoing research projects at the SubBioLab, especially the possibility of molecular analysis in the laboratory. Expert taxonomy knowledge, access to laboratory, pre-established workflows and broad knowledge on the research of subterranean biodiversity enabled determination of taxa, reliable IUCN RedList evaluations and the development of the barcoding as rapid tool for biodiversity assessment. A large part of the SubBIOCODE Database (logical framework and data from literature/previous fieldworks) was already established within the internal database of the research group - SubBioDB.

We emphasize the big success of establishing a web database SubBIOCODE (db.subbiocode.net), and creating it in such a way, that it is live connected with the basic database of the SubBioLab. In this way, the data will continue to get updated and corrected also after the official ending of the project. As access to data on subterranean biodiversity is crucial basis for informative decision making, we have left a long term impact and tool to be used in conservation in the region.

We aim to continue established collaborations with local stakeholders, especially students, cavers. The challenge is how to continue some activities, as local stakeholders (especially young researchers and students) often do not have any financial support and have to adjust to the employment possibilities, where it is especially worrying that many young people do not see opportunities for the scientific career in their home country.

The SubBioLab and CKS will continue their efforts in research and conservation of the subterranean habitats. There are more scientific works in preparation, that will include data gained during the project, including the scientific description of the new species of cave shrimps, work on the amphipod from the genus Typhlogammarus, conservation profiles of selected subterranean species, diversity of cave beetles and gastropods, and evolution of the amphipod genus Niphargus.
Both institutions continue to use the research work and advocate their work as an argument to protect the biodiversity and pristine habitats. Both SubBioLab and CKS took part in the Neretva Science week (28th June - 3rd July 2022) that aims to collect data and increase visibility of a unique river system and thus contribute to its protection. Furthermore, the members of SubBioLab pinpointed the need to include subterranean biodiversity when setting strategic plans in a contribution in a journal with high impact factor (paper is accepted, in revision). To improve the visibility of the successes of the SubBIOCODE project and the importance of transboundary collaboration in addressing protection of the biodiversity, we applied for the contest "SEE´s Climate Champion", organised in the scope of the project Climate bridges (https://climate-bridges.com/).

Eventhough the project SubBIOCODE officially ended, many activities are continuing, including scientific work, communication with stakeholders and collaboration with researchers and students. We see the most important achievement of the project in the continuation of the research on the subterranean habitats by the students that showed high interest and motivation. We have experienced a positive response from the local community that is interested in promoting the extremely rich subterranean life in their region, and we started to develop ideas on continuing the collaboration in the following years.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS/STANDARDS

ADDITIONAL COMMENTS/RECOMMENDATIONS

We would like to thank the Critical Ecosystem Partnership Fund for providing financial support and all included stakeholders that helped in the realization of the activities.

The project SubBIOCODE was taking place in the world hotspot area in subterranean biodiversity, Trebišnjica river catchment, with a long history of speleobiological research. But, due to poor ongoing research, there are many new things to discover even in such areas - and we have managed to prove that. During the SubBIOCODE project we discovered many new species for science, which shows the great potential of subterranean biodiversity in the region. We suggest CEPF to further invest in supporting projects on studies of subterranean biodiversity, especially in areas with conflict of high biodiversity and economical/developmental plans.

ADDITIONAL FUNDING

Total Amount of Additional Funding Actually Secured (USD)	$40,000.00
Breakdown of Additional Funding	The additional funding was achieved, as all the lab costs for molecular work (processing of samples) and analyses were covered by SubBioLab, as in-kind contribution.

INFORMATION SHARING AND CEPF POLICY

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. For more information about this project, you may contact the organization and/or individual listed below.

SubBioLab (Biotechnical Faculty, University of Ljubljana); subbiocode@gmail.com; maja.zagmajster@bf.uni-lj.si