



CRNOGORSKO DRUŠTVO
EKOLOGA

NGO Montenegrin Ecologists Society

Narrative report on activities for the year 2022

Projects and activities

January 2023

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|--|--|---|---|
| From the inventory of monumental pedunculate oak trees to the restoration of its forests and the protection of biodiversity | Local communities of Danilovgrad, decision makers (Danilovgrad municipality, Environmental Protection Agency...), children in elementary and high schools, biology students, environmental CSOs, general public, media | 30.042,71 Critical Ecosystem Partnership Fund (CEPF) | July 2020 – May 2022 In Montenegro, mostly in Danilovgrad municipality |

This project focused on the revitalization of the Skadar Pedunculate Oak (*Quercus robur* ssp. *scutariensis*) forests — an endemic subspecies found along the rivers and shores of Lake Skadar, stretching from Danilovgrad to Ulcinj in Montenegro and across the Bojana River into Albania. Once vast, these oak forests have been severely degraded and now survive primarily as isolated trees, scattered tree lines, or small, fragmented forest patches.

MES has addressed the revitalization of these oak forests through a multi-faceted approach.

1. Acorn collection (2020 - 2021) and planting efforts (2022)

During the years 2020 and 2021, an extensive research was conducted across the Skadar Oak's range in Montenegro to identify trees that were producing acorns, with a particular focus on monumental trees. Over 20,000 acorns were collected, predominantly from Bjelopavlićka Valley and the areas surrounding Lake Skadar. These acorns were planted at the MES nursery during various community planting events. Additionally, local residents adopted many of the acorns, planting them in their yards. As a result, in the year 2022, nearly 8,000 young Skadar oaks were raised and planted across the region, in private yards, schools, kindergartens, and company properties throughout Bjelopavlići and the surrounding areas near Lake Skadar.

2. Phytocenological research (2020 - 2021)

MES conducted comprehensive phytocenological research within the remaining oak forests, surveying known Skadar oak associations. This resulted in the identification and description of three distinct oak associations, one of which had never been documented before. A key outcome of this research was the creation of a detailed map of the Skadar oak's range in Montenegro, highlighting areas where the oak once thrived and where future restoration efforts could take place.

3. Raising Awareness and Educational Outreach (2020 – 2022)

The project's final achievement was significantly raising awareness of the Skadar Oak's existence and importance, not only as an important pillar in biodiversity and ecosystems wellbeing, but also for human well-being, emphasizing the inseparable connection between nature and people.

1. Short animated film titled **The Oak** was produced (2021);
2. Publication **Oaks of Montenegro** and a **Protocol for acorn germination and oak tree cultivation**, together with **Oaks of Montenegro poster** were produced (2022).
3. Educational workshops were organized, primarily for children and their teachers, culminating in a four-day nature camp (2022). This camp provided children with an immersive experience, allowing them to learn about the oak forests, the diverse biodiversity they support, and the vital ecosystem services these forests provide.
4. Saving individual trees during the road reconstruction
MES successfully influenced the Danilovgrad municipality to revise local road reconstruction plans, ensuring that the seven Skadar oak trees, which would have otherwise been cut down, were preserved. Similarly, during the reconstruction of the regional Podgorica-Danilovgrad road, one Skadar oak tree was spared from removal, and the road was adapted to accommodate the tree.

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|--|---|--|--|
| From Education and connecting children back to nature, to the research in Dendrochronology and raising awareness on how climate has changed through past centuries in Montenegro! | Children in elementary schools, their parents and teachers; Forestry and Ecology professionals; all interested citizens; local tree nurseries; Environment Protection Agency; National Forestry Administration; other decision makers; Environmental CSOs and civic activists | 89.266,89 (EU and Government of Montenegro) | February 2021 – September 2022 Montenegro, mostly in Podgorica and Danilovgrad municipalities |

With this project, MES focused on the study of Bosnian pine forests – endemic, relict pine species that forms and maintains special and very important habitats in the Montenegrin karst mountains. Bosnian pine (*Pinus heldreichii*) tree is a species that survived the last great ice age, and individual trees can reach an age of over 1000 years. This species inhabits an area poor in fertile land, where other trees can hardly survive. The results of the project are explained below:

1. With this project, MES became a pioneer in Montenegro in researching the records that time has left in individual old trees and their forests. Various changes in microclimatic and other conditions to which a tree was exposed during its life were recorded in the tree rings. One of the results of the project was the launch the work of the **First dendrochronology laboratory in Montenegro**, while MES staff and external experts were trained in the field of [dendrochronology](#). (2021 - 2022)
2. Another important result of the project is the production of the first publication about Bosnian pine: **Bosnian pine forests in Montenegro with illustrated Protocol for Bosnian pine seed germination**. (2022)
3. One of the most fruitful aspects of this project were its **educative activities**:

3.1. **Two four-days long camps for children** were organised in nature, in Bosnian pine forests (2021).

3.2. Besides camps, **educative workshops** were organised in two elementary schools based in Danilovgrad and Spuž. Per school six workshops were organised, with one additional workshop called Parents in schools event. (2021 – 2022)

3.3. Project was crowned with the **Art exhibition**, that had showed more than 80 works of art to more than 100 participants (2022). **Art colonies** in nature were organized prior to the exhibition, in order to connect artists and Bosnian pine forests. Short movie **Story about Bosnian pine** was produced as well.

4. During the project around 80.000 seeds of Bosnian pine were collected. The training about seed collection and germination was conducted for 14 people, that resulted in the Protocol for seed germination. This part of the project was strongly supported by Environmental Protection Agency (EPA) and National Forestry Administration. (2022)
5. Organisation of the **Training about wildfires and the rehabilitation of degraded forest habitats**. At the same time **Wildfire risk assessment** has been prepared for the Prekornica mountain. (2022)

Exhibition, as well as the whole project was a huge success regarding the broadcasting of the Bosnian pine species, its uniqueness, value and challenges it is facing in this period of ever intense climate change.

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|---|---|---|--|
| Mapping of Natura 2000 habitats as a high priority for nature conservation in Montenegro | Decision makers (Ministry of Ecology, Environment Protection Agency – Advisory Program, EPA, targeted municipalities), Local communities, CSOs, scientific community, media, general public | 21.521,00 German Ministry of the Environment, for Environmental Protection in the Countries of Central and Eastern Europe, the Caucasus and Central Asia and Other Neighboring Countries of the European Union | April 2021 – September 2022 Montenegro, focused on 4 river catchment areas in Kolasin, Pluzine, Savnik, Mojkovac municipalities |

Natura 2000 is the world's largest coordinated network of protected areas, including Europe's most valuable and endangered species and habitats. Estimates show that a large part of the Montenegrin territory can be part of this network because it meets the criteria set by the EU Habitats Directive. Until the beginning of this project about 30% of Montenegro's territory has been mapped from the Natura 2000 perspective, of which 5% refers to rivers. Montenegro is defined by the Constitution as an ecological state, which is now proven by previously collected data.

Therefore, with this project, MES was focused on mapping the habitats of the river basins of the Štitarička River, Skrbuša, Vranještica and Komarnica, where various infrastructure projects are planned, mostly projects for the construction of hydroelectric power plants whose construction and operation completely change the water regime, and completely change the ecological and other characteristics of rivers. The mapping of these river sites within this project provided a valuable contribution to the development of environmental impact assessments. The project then directly contributed to updating the existing database on habitat types and facilitating the process of closing Chapter 27.

In addition to mapping habitats within selected river courses, special emphasis was placed on working with local communities that depend on intact river flows (the availability of drinking water, the development of fishing, tourism, agriculture, etc. depends on river flows). Therefore, one of the goals of the project was to establish a stronger connection between the local communities and their rivers, by bringing the phenomenon of ecosystem services of pristine mountain rivers closer to the locals.

1. Following 50 days of fieldwork, catchment areas of four rivers (Komarnica, Vranještica, Skrbuša and Štitarička river) were mapped according to the methodology of Habitat Directive. In total, around 120 square kilometers were mapped, which is around 1% of the whole country. (2021)
2. Results of the project were presented at the *10th International Symposium of Ecologists of Montenegro - ISEM10*. (2021)
3. Five module training for preparing the fieldwork and data analysis in GIS was organized for MES staff, interested young biologists and representatives of Environment Protection Agency (EPA). (2021)
4. Meetings with the local communities and representatives of the municipalities in all four catchment areas were organized, where MES introduced to the locals what it means to protect rivers as an Emerald habitat, what are ecosystem services of the rivers, followed by the discussion about their connection to the rivers, as well as about the planet infrastructure projects in their areas that would affect the rivers. (2021 – 2022)
5. Project was finalized with the Conference ***Natura 2000 / Emerald networks as a tool for sustainable development*** focused on explaining the importance of urgent establishments of networks of protected areas to the decision makers, CSOs, scientific community, general public and other stakeholders. (2022)
6. ***Presentation of potential future Emerald sites*** and ***Proposing future steps for managing Emerald/Natura 2000 sites*** to the Ministry of Ecology and EPA. Here, MES representatives initiated and proposed the establishment of the EMERALD national network of protected areas in Montenegro, as a crucial step for nature conservation until the eventual accession to the EU. In addition, detailed training was organized for the establishment and management of the EMERALD national network of protected areas in Montenegro, for the decision makers and CSOs interested to participate in the process. (2022)
7. Short movie **Wild Rivers: Our unresuscitated treasure**

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|---|--|---|---|
| Updating the conservation status of Local communities, important fish species and introducing the local community to the values of the freshwater ecosystem of the unique karst field of the CMZ in the vicinity of Nikšić | Scientific community, Decision makers (Nikšić and Danilovgrad municipalities, EPA) | 22.245,90 Critical Ecosystem Partnership Fund (CEPF) | June 2021 – May 2022 Nikšić and Danilovgrad municipalities |

Nikšić karst field is the only karst field in Montenegro with a developed network of surface and underground watercourses. Zeta, along with Lake Skadar, is the most important part of the entire Ohrid-Drim-Shkodra basin, with the largest number of recorded species. Given the geomorphological characteristics of this basin, unique species of fish are expected, which spend one part of their lives in surface waters and one in groundwater.

Therefore, in order to focus on this highly important ecosystems, specifically their importance for fish fauna, this project resulted in:

1. Establishment of the wealth of fish fauna of the Zeta River basin; Publication **Fish of the Zeta river** was developed;
2. Updating the distribution data for the area of upper Zeta;
3. Revised status of IUCN Red List for certain researched species;
4. Defined the basic threats and stresses of this freshwater ecosystem, with proposed solutions;
5. Promoted values of fish fauna and freshwater habitats, scpecially through the short movie **River Zeta – Unique natural phenomena in the Balkans**;
6. Improved cooperation with the local community and decision-makers in order to remove stress and declare Gornja Zeta a protected natural resource.

In addition to the research of ichthyofauna, we also conducted a survey of groundwater to record semi-cave species of fish (genus *Telestes*, *Delminichthys*). The following species were studied: *Salmo obtusirostris*, *Phoxinus apollonicus*, *Telestes montenegrinus*, *Lampetra soljani*, *Cobitis ohridana*, *Barbatula zetensis*, *Gasterosteus gymnurus*, which are of importance for the EU. The recording of species precisely defined their range of distribution, that helped in conducting a threat assessment according to IUCN guidelines.

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|---|--|-------------------------------|---|
| Raising the capacity of CSOs to actively participate in the establishment of the Natura 2000 ecological network and its management | CSOs, Decision makers, scientific community, media, general public | 45.206,70 European Union | June 2021 – July 2022 Montenegro, North and Central region |

As the work on ecosystem research is underway in order to establish the NATURA 2000 network in Montenegro, the implementation of this project contributed to increasing the level of public participation and improving cross-sectoral cooperation in the management of natural resources. This project was lead by MES, in partnership with Wildlife Montenegro.

Through a series of education and awareness-raising activities, the project had a positive impact on the local communities, local self-government units, national institutions, CSOs, in order to enable the sustainable use of natural resources, especially Natura 2000 habitats.

1. The project resulted in the development of a Guidelines for the creation of the Natura 2000 Management Plan for areas in the Zeta Nature Park, that, in addition to the guidelines concerning the protection of the area, it is also accompanied by a communication strategy for overcoming the barriers of the establishment.
2. Two publications were developed:
 - 2.1 **Guide to the World of Amphibians of Montenegro**
 - 2.2 **Guide to the World of Reptiles of Montenegro**
3. During the project in 2021 three connected workshops were conducted, targeting environmental CSOs and decision makers, as well as a three day fieldwork training in Sinjaljevina mountain for the expert mappers. The three workshops were about (1) The importance of Natura 2000 network in Montenegro, comparison with Croatia, (2) Raising of the capacities of experts and CSOs for mapping Natura 2000 areas, as well as the workshop about the (3) Shadow process of Natura 2000 establishment.
4. Three days long educative exhibition **Open the eyes for the world around you** was organized and visited by more than 1500 people. Exhibition was focused on the world of reptiles, amphibians and bats, as not so lovable creatures at the first sight, but so valuable and fascinating after the education.

5. Together with our partners Wildlife Montenegro, six workshops were conducted about Natura 2000 areas and species, of which five workshops in schools and one with the local community. The workshops were held in the municipalities of Plav, Gusinje and Danilovgrad. More than 100 students attended the workshops.
6. Short movie **Natura 2000 network of protected areas in Montenegro** was prepared.

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|---|---|-------------------------------|--|
| Towards the conservation of biodiversity and strengthening the management of the protected area of the Cijevna River | Decision makers (Tuzi municipality, EPA), local communities, scientific community, young biologists (botanists) | 39.825,40 EuroNatur | October 2022 – April 2024 Podgorica and Tuzi municipalities |

Project started in October 2022, until the end of the year preparatory activities were held (such as planning the fieldwork in the early spring season, engaging botany experts, mapping local community focal points), as well as the presentation of the project at the *Best Belt conference* organized by donors in Ulcinj, Montenegro. MES is leading the project, in partnership with EcoTeam.

Background: Area of the Cijevna River Canyon represents one of the exceptional natural values of the Morača River basin and Lake Skadar. Cijevna River forms a natural connection between the Skadar Lake National Park and the Prokletije National Park.

Previous research has shown that the canyon and valley of the Cijevna River are rich in numerous geomorphological phenomena, diverse geology, hydrology, pedology, and specific climatic characteristics. Due to the specific climatic conditions, where strong influences of both Mediterranean and mountain climates intertwine, Cijevna River Canyon represents a complex of the most diverse types of ecosystems and habitats, with a refugial character, home to numerous and varied plant and animal species.

However, what gives the Cijevna River Canyon special biodiversity value is the existence of a unique plant community (phytocenosis) *Adianto-Pinguiculetum hirtiflorae* Stevanović & Bulić 1989. This phytocenosis is very rare and has a narrow distribution, as it is only recorded in Montenegro in the Cijevna River Canyon, where it was described by authors V. Stevanović & Z. Bulić in 1989. The main edifying species of this community, *Pinguicula hirtiflora* Ten. (fat-flowered butterwort), is kind of a symbol of this canyon and the wider area. In addition to its natural values, the unique feature and value of this region lies in its cultural and historical heritage.

This area is one of the so-called "paper parks," meaning that despite its official protection, a management body has not yet been established. Due to the lack of proper management, this exceptional area has been subjected to several projects that have had a negative impact on certain ecosystems and plant communities, influencing the total deletion of the only known *Adianto-Pinguiculetum hirtiflorae* plant community.

For these reasons, the Montenegrin Ecological Society has started research aimed at mapping the Cijevna River Canyon to find potential sites and remaining habitats of this community. After defining the condition and possibly finding this natural rarity, a team of experts and botanists involved in the project carried out an assessment of the state of this community in the canyon and provide concrete guidelines for its recovery and true conservation.

During field research, we will also record other important and rare plant species, among which the most well-known is the Phoenix plant *Ramonda serbica* (Pančić) O. Schwarz.

Our local partners on this project is the NGO Eco-Team. Through this project, Eco-Team prepared a socio-economic analysis for the area of the Natural Monument "Cijevna Canyon," which was submitted to the temporary manager of the area – the Municipality of Tuzi, thereby significantly contributing to the processes of establishing an adequate management body.

Finally, through a comprehensive campaign, we continuously worked on promoting and educating direct users and the general public about the special features of this canyon and, in general, the importance of preserving canyon ecosystems, rare and endangered species, and their significance for the lives of individuals.

| Project name | Target groups | Budget (Euro) and Financed by | Implementation period and location |
|--|---|---|---|
| Contribution to the future protection and management of priority areas of protection of the CZM River Basin in the vicinity of Nikšić | Scientific community, Local communities, Municipality Nikšić, biology students, EPA, general public | 17.726,98 Critical Ecosystem Partnership fund (CEPF) | December 2022 – May 2023 Nikšić municipality |

This project is a continuation of the efforts made during the previous CEPF project *Updating the conservation status of important fish species and introducing the local community to the values of the freshwater ecosystem of the unique karst field of the CMZ in the vicinity of Nikšić*.

Project has started on the 1st of December 2022, so only preparatory activities were conducted so far.

Background:

The project is focused on improving the protection of the Zeta River basin area.

As part of the project we will be:

- Studying the fish species: MES will, in the partnership with Biota from Croatia, collect data on fish species in this region, with a special focus on species living in caves. Additionally, potential habitats of the olm (*Proteus anguinus*) will be studied.
- Training new researchers: Our team is training three young researchers in the field of fish fauna research and nature conservation.
- Collaboration with institutions: MES is working with local and national institutions to promote nature conservation in Nikšić.
- Proposing protection measures: Specific protection recommendations for certain fish species and their habitats will be designed.
- Developing our organization: New strategic plan for MES will be designed, in order to improve the work and impact of our organization, helping us achieve better results in nature conservation.

Non project related activities and initiatives

1. Co-founding the initiative Save Komarnica:

We are one of the initiators of the "Save Komarnica" civic initiative and campaign, created to protect the Komarnica River and its unique canyon from the planned flooding due to the construction of a large hydroelectric power plant. Throughout the process of fighting for this exceptional river, we participated in all public discussions on this topic and were among the organizers of the four-day protest camp, which gathered over 200 nature defenders from Montenegro as well as the region.

As part of the fight, together with partner organizations, we submitted a complaint to the Bern Convention Secretariat against the Government of Montenegro, which planned to flood and thereby erase the EMERALD area – the Komarnica Canyon. In addition, the same complaint was sent to the Director of the UNESCO World Heritage Centre, expressing our concerns regarding the potential implications of the Komarnica hydropower project on Durmitor National Park, one of UNESCO's World Heritage natural sites.

We have spoken about the Komarnica River on almost all national and some regional television channels. In addition, we have discussed this river and its future on several international conferences dedicated to rivers. We participated at the *European River Summit* in Lisbon (2021) and presented the case at the *European River Summit* in Brussels (2022), as well as in the conference *Razbistravanje* in Belgrade, the conference *Biodiversity and Nature Conservation in the Western Balkans - Civil Society, (Local) Politics, International Actors, and the Media in Dialogue* held in Freising, Germany, and many others.

During 2022 we organized:

1. Central Public Debate in Podgorica;
2. Educative walk alongside Komarnica canyon for the representatives of different Embassies in Montenegro;
3. Five day long Protest Educative camp on the edge of the Canyon;
4. Submission of the complaint to the Bern Convention regarding the plans of the Government to build large hydropower plant in Komarnica canyon;
5. Conducting the campaign for Komarnica that made the topic mainstream in Montenegro, but also brought the case to the international scene of river protection.

6. As experts in herpetology, we had the privilege of participating in the 21st *European Herpetological Congress*, where we presented the findings of our extensive, multi-year research on the herpetofauna of the *Buljarica cove and marshland*.
7. Coproducing the movie – *Wildfires in Montenegro – Causes and Consequences*, together with Center for Investigative Journalism of Montenegro (CIN-CG).
8. Participating in the 8th Green Film Festival, presenting our two short films.

Our financial performance for the year 2022 exceeded 110 000 EUR.

Montenegrin Ecologists Society

General secretary

Jelena Popović



