

CEPF Final Completion and Impact Report

Organization's Legal Name:	Macedonian Ecological Society
Project Title:	Working Together for Conservation of National Endemic Plants in North Macedonia
Grant Number:	CEPF-108686
Hotspot:	Mediterranean Basin II
Strategic Direction:	4 Strengthen the engagement of civil society to support the conservation of plants that are critically endangered or have highly restricted ranges
Grant Amount:	\$126,009.60
Project Dates:	March 01, 2019 - September 30, 2023
Date of Report:	December 21, 2023

IMPLEMENTATION PARTNERS

Polymath13 – subgrantee society from Bogdanci site that coordinated the activities related to *Astragalus physocalyx* and its habitat. Their involvement was related to: communication with local stakeholders, logistics when the botanists were doing the monitoring, took part in the monitoring as well, training local volunteers in basic monitoring technics, marking and promoting the 'astragalus trail', promotion events, reports. As subgrantee and partner in this project, this CSO improved its capacities and became a grantee of CEPF after completion of the joint project with MES.

Botanical Garden – took part in the promotion of the five chosen endemic species by organizing event in the Botanical Garden in Skopje to which many visitors came. Collected seed material from some of the plants and made in situ preservation in the Garden. E

Municipality of Bogdanci – Along the whole duration of the project, we had a very good cooperation and sufficient support given by the municipality of Bogdanci.

Municipality of Vevchani – METT tool, events, rangers in monitoring

Municipality of Struga-took part in public events and meetings

Biology Student Research Society-monitoring, volunteer in events organization

Local Stakeholders: schools, local civil societies (Polymath13, Non-formal initiative for Jablanica),volunteers, representatives from local communities within Jablanica region)

Experts- involved in the monitoring and research

National Seed Bank - meetings, consultations on methodology and rules on seed preservation

Ministry of Environment and Physical Planning as decision making subject, the Ministry involvement was mostly noticed in the process of negotiations for protection of Jablanica.

We had several meetings, official and unofficial conversations regarding the process for Jablanica. The latest Minister is very much pro the idea of protecting Jablanica and she is

usually always present in the meetings organized by the MES or the Local Initiative from the region.

CONSERVATION IMPACTS

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

Impact Description	Impact Summary
<p>Stabilized/increasing population (at site level) and conservation status of at least two important species – <i>Astragalus physocalyx</i> and <i>Aesculus hippocastanum</i>, improved in the long term</p>	<p>This project focused on five endemic plants in different parts of North Macedonia. At the end of the project activities, the conclusion is that the population of four species is stable. The population of <i>Astragalus physocalyx</i> is stable and additional two new distribution spots have been registered with this project. This has been shown by the collected data from previous and this project monitoring sessions. The population of <i>Centaurea rufidula</i> is not very stable and additional monitoring is inevitable in order to have data on its fluctuations. Specific conservation actions (work with local farmers, collection of seeds and re-plant to other spots) are needed to be taken to strengthen this plant population. Local civil society has in mind these recommendations. The population of <i>Aesculus hippocastanum</i> is also categorized as stable during this project' monitoring sessions. Yet, it also requires specific actions in fighting with the fungi that attack the trees and constant monitoring in the area along Drenok river. <i>Campanula debarensis</i> - stable <i>Crocus jablanicensis</i> - stable</p>
<p>Management plans of protected areas Dojransko Ezero and Vevchanski izvori are improved in terms of plants conservation, and information gathered during projects inform planning for a strengthened network of protected areas for plant conservation</p>	<p>Vevchanski Izvori PA has created a monitoring program for important species, including plants. It has not yet been put into practice good enough. The PA management of Vevchanski izvori lacks human resources for monitoring, but since PONT invests a sizable sum of money to support PA management, things may change in the long run. Bogdanci site is not a PA, yet has trained locals who does yearly monitoring of <i>Astragalus physocalyx</i> and <i>Centaurea rufidula</i>, report data to MES, MES implements these into future projects, strategies etc. and disseminate the data to other national botanists. Dojransko Ezero PA monitoring happens within projects usually run by environmental NGOs. Our project activities took us out of the borders of Dojransko Ezero KBA since the <i>Centaurea rufidula</i> was found in the vicinity of Bogdanci.</p>
<p>Macedonian citizens, and in particular those living in and around project sites, understand</p>	<p>MES has around 8.6K followers on Facebook. With the short educational campaign we did on social media in promoting the national Important Plant</p>

Impact Description	Impact Summary
<p>the value of national plant diversity and take common actions to conserve it</p>	<p>Areas together with one of the students we have reached to our members and followers and present some interesting facts of Macedonian rare and endemic flora. In total, around 2000 followers have seen the posts related to plants. The public events and presentations within the project's sites were attended by locals.</p> <p>There are 3.500 inhabitants in Bogdanci. Our estimations is that 80% of this are familiar with Astragalus and its rare status.</p> <p>As for Jablanica site which is bigger than Bogdanci, the locals (mostly the people from Vevchani) are aware of, for example the <i>Crocus jablanicensis</i>, rare flower in the snow that can be seen on high peaks. The mountaineers are interesting group that usually send us photos from the <i>Crocus jablanicensis</i> and some of them even count the individuals. The event we had on Jablanica with MES members (over 60 participants) was a good opportunity to do many plant talks. This project helped to improve the knowledge among ~300 inhabitants (our free estimation) within Jablanica region.</p>
<p>Improve knowledge about 5 rare plant species (biology, distribution, ecology) gained from the results of monitoring data over the long range, supports future conservation action</p>	<ol style="list-style-type: none"> 1. <i>Astragalus physocalyx</i> - sufficient data collected from monitoring, good distribution maps produced. 2. <i>Centaurea rufidula</i> - this project very much helped in affirmation of this species distribution and status 3. <i>Crocus jablanicensis</i> - sufficient data collected from monitoring, good distribution maps produced. 4. <i>Aesculus hippocastanum</i> - sufficient data collected from monitoring, good distribution maps produced. 5. <i>Campanula debarensis</i> - sufficient data collected from monitoring, good distribution maps produced. <p>Data on distribution of <i>Centaurea rufidula</i> was definitely the most valuable knowledge we gained during this project. The fact that this plant' habitat is very much linked with everyday human activities, we have noticed that the number of individuals varies due to mowing practices applied. Nevertheless, this gave us knowledge what conservation actions should be taken in order to stabilize this population. Habitat of <i>Aesculus hippocastanum</i>, as well as the trees themselves are also in potential danger because of natural and partly human actions.</p>
<p>Local environmental organizations include direct plant conservation actions into their strategies and future nature conservation projects</p>	<p>Local environmental organization called Polymath13 from Bogdanci, following the completion of their portion of the project, applied to CEPF for additional funding so that they could continue the conservation efforts for the endemic plant <i>Astragalus physocalyx</i>.</p>

Impact Description	Impact Summary
	<p>They are also partially involved in other projects, and whenever feasible, they insist on incorporating activities pertaining to education, certain events with central topic - the rare <i>Astragalus phusocalyx</i>. Additionally, Polymath's close collaboration with the Bogdanci municipality has allowed them to make significant progress in integrating initiatives pertaining to the <i>Astragalus</i> natural site into the municipality's official plans and annual programs. One example is the proposal for organizing event called "Astragalus day" covered and sponsored by the municipality. Their plan is this event to become symbol of the municipality and be traditionally organized every year in May. As for the Jablanica site, no significant interest was shown in doing some concrete plant conservation actions. It is optimistic that other environmental NGO opened a branch in Vevchani, and they are good support to the management body for Vevcanski Izvori PA. Some small projects for key species monitoring was already obtained coordinated by them.</p>
(AMEND 03/2021) Jablanica Mt. is legally protected area	<p>Jablanica still remains legally unprotected area. Yet, the process moves, people and decision makers are not latent at all and the optimistic prognosis is that there will be final valorization study in the next two year period of time. CEPF project helped in fulfilling several chapters from the expected valorisation study: Diversity and valorization of vascular flora on Jabalanica; Habitats types and their valorization; Fungi diversity and their valorization; Landscapes on Jablanica; Forests and forestry on Jablanica; Ecosystem diversity on Jablanica and assessment of their condition.</p>
(AMEND 03/2021) The percentage of national protected land is increased from current 11% (situation in 2020) to 12% by including Jablanica Mt.	<p>The percentage has been increased but Jablanica is not in it. The current percentage of protected land in N. Macedonia is 14% and these positive changes happened in the period 2019-2022. During our project and all the communications made with different stakeholders and key decision makers, Jabalnica is definitely a site that is next to be put on the list of protected areas.</p>

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

Impact Description	Impact Summary
<p>Conservation measures identified for <i>Astragalus physocalyx</i> and seed collected and stored for long-term conservation action</p>	<p>Seed collected are kept in Botanical Garden in Skopje only in dry conditions. Yet, this is not proper way for long-term store and conservation of seeds. Currently in the country, there are no proper conditions for storing seed material from wild plant species. Conservation measures are being listed in a</p>

Impact Description	Impact Summary
	separate document and the local stakeholders are aware of these.
At least two students in biology gain experience in plant monitoring and botany, participating to the project	Four students applied to join the monitoring and some events during the project. Two of them were more enthusiastic and continued to be interested in botany nowadays performing some small grants projects supported by MES ("Ljupco Melovski student's grant Programme)
One local civil society is trained in performing monitoring of <i>Astragalus physocalyx</i> and gain experience in botany and plant conservation	<i>Astragalus physocalyx</i> is being monitored by Polymath13, a local civil society organization. They completed the monitoring alongside our botanists and MES employees, so they are well-versed in data collection, when to send us photos and coordinates, how to track threats, and when to take appropriate action. During some of the monitoring sessions, two rangers from Vevcanski Izvori PA accompanied us and the botanists and learned the fundamentals of plant monitoring. For political reasons, these rangers have been relieved of their duties. In Vevchanski Izvori, new employees have been hired to work as rangers.
Distribution of five rare plant taxa and information about plants and habitats available for two KBAs : MKD04 Dojransko Ezero, MKD07 Jablanica	Data regarding the distribution of five chosen taxa have been gathered and are displayed on maps. The condition of their habitats and any existing/current and potential threats are also explained.
The capacities of MES are improved, in particular as regards plant conservation	Four MES employees have taken a more active role in the data collection, mapping, and monitoring processes. Three of them have worked on earlier plant conservation initiatives and botanical research. Thus, in terms of plant conservation, the MES's capabilities have undoubtedly improved in the following areas: counting individuals and monitoring techniques; collecting seeds (made possible by communication with the MSB); monitoring habitat (the horse chestnut) with drones; and learning from expert botanists during field visits.

Unexpected impacts (positive or negative)?

1. The enthusiasm of one of the students volunteers gave very good result in additional promoting of Important Plant Areas of N. Macedonia. Thanks to Ana Varelova's drawings, student in second year at the Institute of Biology in Skopje, MES has published interesting facts about rare plants in the country. We used our Facebook and Instagram accounts, so many MES followers liked the posts and raise some questions related to national endemic plants. This was a nice positive unexpected impact in two directions: strengthening young students knowledge in botany and raise public awareness about importance of national flora.

2. Seed collection and conservation in the Millennium Seed Bank was aborted as action. This was unexpected negative impact, yet we have learned some lessons from this part. Namely, one of the major deliveries we have planned to be achieved, was to conserve seed material from *Astragalus physocalyx*. First thing that we have faced was that the National

Seed Bank does not conserve seed of wild plant species. It only does from domestic varieties. Low capacities, low budget and non-synchronized duties among some institutions are main reasons for our National Seed Bank insufficiency. Next step for us was to ask for help from international organizations such as Millennium Seed Bank. We have established contacts and along have learned much more on seed collection procedures and upgrade our knowledge by using the guidelines shared by the contact from Millennium Seed Bank. The third obstacle we have faced was insufficient amount of seed material that we had found on field. This is why in consultation with the contact from Millennium Seed Bank we have decided to abort the seed collection. The main reason was not to make threats to the natural reproduction and existence of the population of *Astragalus physocalyx* in Bogdanci site.

3. The help we've provided to local NGO EkoLab from Labunishta to win the case against the quarries. Namely, there are six companies that have concession for quarries in the area of Labunishta and Podgorci villages (foothills of Jablanica). Starting from 2018, the villagers from Labunishta, also led by local NGO "NatyraLab" had organized protests to stop the work on the quarries. It was not so successful for them, so the quarries continued operating. The quarries belong to companies (locals claim that some of the owners are big businessmen who bribe the government people in order to get permission for quarries) and have plenty incorrections when comes to location and ways of operating. They are too close to the settlements, the explosions can be heard every day, dust everywhere etc. Despite this, there was a plan to open a new quarry for which the owner also got permission near one important biodiversity spot, peak Strizhak. This was not so close to the settlement, but it is biologically important. In meantime local lawyer from Labunishta village and also member of NatyraLab NGO has decided to bring this to court. With permission by the local community, he pressed charges in the name of all villagers. The process has started almost three years ago and it ended now, may 2023. MES contributed with a detailed list of all data regarding biodiversity (flora, fauna, habitats, ecosystems) and international and nationally signed declarations, laws, strategies etc. We have provided this data for their last trial in court. We are very happy for them! This is a successful story and very stimulative too. There are many similar examples around the country. Usually, the locals are not united in fighting against the companies that got the concessions. Corruption and bribery are the "winners" in these cases. We have promoted the Labunishta case as well, to be followed as a good example. These are local battles. Good for Labunishta, we are very happy for them. At the moment only one company stayed with one quarry and that one is working by the rules stated in the contract. The rest five companies have lost their concessions and their quarries stopped the work.

PROJECT RESULTS/DELIVERABLES

Overall results of the project:

1. Knowledge, monitoring, mapping

Five endemic plant species were monitored during 2,5 years period: *Centaurea rufidula*, *Astragalus physocalyx*, *Campanula debarensis*, *Crocus jablanicensis* and *Aesculus hippocastanum*. Information gathered from the monitoring provided a thorough understanding of the condition of each of the five species' populations. The field trips also yielded data on the condition of the habitat and prospective or present threats. This effort made it possible to monitor the species *Centaurea rufidula*, for which there hasn't been any information on its presence or distribution in the last century according to MES and national botanical data in general. We worked very hard to acquire information about the distribution of this species, potential hybridization, and population status. The botanists who oversaw the project's monitoring have also compiled all of the data related to *Centaurea rufidula*

monitoring into an article that will appear in the Museum of Nature and History's yearly publication.

The section solely devoted to Jablanica was another piece of data gathered through monitoring. Reports on fungi, forests, landscapes, ecosystems, and the diversity of plants and their habitats are created separately. As it covers crucial data for the demands of the valuation study for Jablanica as a step closer to meeting the necessary documentation for commencing the process of protection, this was a wonderful deal for the national biodiversity database and conservation as well. The MES database imports all of these monitoring data, which are then analyzed using GIS and displayed on maps.

In response to all of these, we must state that, being a project carried out during the pandemic, the information and data gathered is incredibly helpful to the nation's attempts to conserve its biodiversity. The national budget provides almost no funding for research, particularly on plants, habitats, and landscapes. Not to mention that the information gathered for Jablanica offers a significant advantage for the actions that will be taken in the future to complete the study on valorization. To put it briefly, the CEPF project aided in the fields of science, research, protection, and data deposit—all of which are impossible in North Macedonia without outside funding.

2. Collaboration and capacity

This project brought together numerous partners and stakeholders, as previously mentioned. As a result, the four years of collaboration have been excellent and varied. While the pandemic did what it did, there were also many get-together and enjoyable moments. The improved cooperation with the Bogdanci site subgrantee organization and the municipalities of Vevchani and Bogdanci must be emphasized. Perhaps overly dramatic, but we perceive a positive difference in their perspectives and overall methods of operation. A proof of this is the separate project of Polymath13 (2022-2023) they realized by themselves (also funded by CEPF) and the municipality of Bogdanci was their main partner. Next, we would mention the enthusiasm of the students and some local volunteers who took part in the monitoring and research. This added to both, collaboration and capacity building. The MES staff members who were involved in the research phase also had a great opportunity to develop their skills, enabling some of them to carry out the monitoring of significant plant species independently. As an environmental organization, we have discovered that the nation needs both technological and human capacity to properly conserve plant species (particularly when it comes to ex situ conservation measures). The gaps in this regard were recognized and confirmed thanks to this project. What we miss is using the correct seed collection procedures and storing the seeds. We were able to become acquainted with a number of guidelines, procedures, and preliminary steps in seed storage thanks to the collaboration established with the Millennium Seed Bank. The Botanical Garden, our partner, found this to be especially significant. Said objectively, N. Macedonia may carry out some in situ conservation efforts, but in terms of ex situ, this is our weakness.

Due to the separate actions taken only for Jablanica site, we collaborated with local stakeholders. In this way, we have been working on strengthening their capacities as Local Action Groups (LAG) that will continue the activism for legal protection of Jablanica. As organization that has good experience in protected areas and development of valorization studies, we had the opportunity to actually re-do these activities. Collaboration with the Ministry and the local initiative from Jablanica region became even stronger after MES was the one (with help of this project) who contributed towards fulfilling documentation folders for starting the legal process of protection of Jablanica. This is critical to our productive collaboration with the group of decision makers.

3. Conservation

The Dojran Lake region and Jablanica are two locations in North Macedonia where project activities were carried out. Dojran Lake is classified as a Category III Natural Monument, while only a small portion of Jablanica, known as Vevchanski Izvori, is protected in the same

category. As evidenced by the data gathered during the monitoring, no *Centaurea rufidula* individuals were discovered in the area of Dojran Lake. They were found close to the Bogdanci site, which is also home to the endemic *Astragalus physocalyx*. For this reason, in order to continue implementing project activities, we have removed the Dojran Lake and only concentrated in Bogdanci. Literally, every activity realized within Bogdanci site during this project is actually giving a "safe guard" to this important plant area, mainly known as a habitat for the *Astragalus physocalyx*. Counting the individuals; training local sub grantee and volunteers how to perform monitoring; detecting threats; cooperation with local governmental institutions; awareness raising; established educational trail for local needs and enabling benefits from cultural ecosystem services (schools and visitors); events; the mural of *Astragalus*; educational presentations in every school from the surrounding – all these are factors that contribute towards (maybe even more effective) conservation of this plant and its habitat. Bogdanci site does not enjoy legal protection, but the efforts mainly taken by the sub grantee make difference in the perception of the importance and uniqueness of this plant among the locals. In our opinion and having the local context in mind, this type of "conservation" (where people are aware of the importance of the biodiversity and simply respect that) is maybe more efficient than the legal one. Activities realized through Jablanica part are giving serious step ahead to the ongoing process of its legal protection.

4. Awareness and popularization

The best measure of increased awareness and popularization for us is when various local stakeholders are well informed about our work and recognize their respective roles in the larger narrative. Numerous social gatherings, promotional materials, speeches in public, and the use of various media to spread news all played a part in highlighting the significance of plants and the need to designate Jablanica as a protected area. As with any project, these are ultimately ongoing tasks that must be completed in order to get at least some information shared among the most related stakeholders. In this instance, we think that the local initiative members from Jablanica, Polymath13, Vevchani, and Bogdanci will keep working on the subject, in that order

Results for each deliverable:

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
1.0	KNOWLEDGE: Gathering new and refreshing the current knowledge on selected taxa will be the root of the next components and actions.	1.1	Maps with exact distribution of chosen plant taxa: <i>Crocus jablanicensis</i> , <i>Campanula debarensis</i> , <i>Centaurea rufidula</i> , <i>Astragalus physocalyx</i> , <i>Aesculus hippocastanum</i>	Five maps produced by technical support of MES's GIS department showing the exact distribution of the chosen plant taxa. Additionally, the separate reports on plants, habitats, forests and fungi on Jablanica are also supported with maps for most interesting taxa.
4.0	AWARENESS and POPULARIZATION: Underline the value of rare and peculiar plant species	4.1	Informative panels and signed trails set at location (photo material, number of volunteers included) - applicable only for Bogdanci site	Three informative panels mark the "Astragalus Trail" that was promoted on the final closing event in Bogdanci. Polymath13, together with 3 local volunteers did some minor cleaning of robust vegetation along the trail so children and elderly people can walk. It is a short trail, around 3 km and leads to the closest individuals of <i>Astragalus physocalyx</i> . Even though the locals know the plant by name and its importance, many of them have not seen it in nature. The trail additionally provides access to using cultural ecosystem services the site provides (learning, inspiration, recreational walks).
4.0	AWARENESS and POPULARIZATION: Underline the value of rare and peculiar plant species	4.2	Info materials for different age groups about selected plant taxa	<ul style="list-style-type: none"> i) One calendar made for target group of schools and parents. The photos used in the calendar are drawings selected through organized contest. ii) Bandana with <i>Astragalus</i> print. iii) Botanical pins representing the species of <i>Astragalus physocalyx</i>, <i>Quercus coccifera</i> and <i>Aesculus hippocatanum</i>.

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				<p>iv) Info panels with useful data about the Astragalus but also other biological diversity of Bogdanci site described and set in the center of Bogdanci and along the trail.</p> <p>v) One mural of the Astragalus physocalyx made by local artists in the center of Bogdanci.</p>
4.0	<p>AWARENESS and POPULARIZATION: Underline the value of rare and peculiar plant species</p>	4.3	<p>"open days" event at the Botanical Garden - photo material; posts on social networks and websites; number of visitors to the events</p>	<p>The Botanical garden held an open day event in November 2021. About seventy people were attended. During the productive event, the rare endemic flora of N. Macedonia attracted the most attention. Social media, national media, and websites all promoted the event. This was a great opportunity for the Botanical Garden, an institution vital to the preservation of Macedonia's plant diversity. Its promotion is crucial to persuading youth that botany is a fascinating subject with promising career prospects across the nation.</p>
1.0	<p>KNOWLEDGE: Gathering new and refreshing the current knowledge on selected taxa will be the root of the next components and actions.</p>	1.2	<p>List of current threats to the populations of selected five taxa (report)</p>	<p>There is a short report on threats status made by the botanists who performed the monitoring. It is very encouraging that three (Astragalus physocalyx, Crocus jablanicensis and Campanula debarensis) out of five taxa populations (or sub-populations) are in stable condition and no current threats are stressed here. Whereas for the other two species (Aesculus hippocastanum and Centaurea rufidula) current threats are being detected and described.</p>

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
1.0	KNOWLEDGE: Gathering new and refreshing the current knowledge on selected taxa will be the root of the next components and actions.	1.3	Protocols on monitoring designed, and trainings organized for people involved in monitoring (as demonstrated by training material and list of participants)	The monitoring protocol has been created in cooperation with the botanists and mutually approved for use. Appropriate training in using the protocol was provided for Polymath 13 and some of their volunteers. For political reasons, the rangers in Vevcanski Izvori were replaced even though they were trained in basic monitoring skills on the field. Additionally, the protocols were explained to the students, who then practiced at the Bogdanci location.
2.0	COLLABORATION and CAPACITY: This component is about involving, training and giving support to the ones willing to help plant conservation actions.	2.1	Signed Memorandum of Understanding or Agreement with selected CSO & other stakeholders, part of some project activities	Memorandum of Understanding was signed among MES and Polymath13 from Bogdanci. MoU was signed with Vevcani Municipality as well, but as a synergy action from other project, Nature Conservation Program in North Macedonia. This memorandum was not initiated during the CEPF's project, yet it is of importance to be mentioned as official document for cooperation among Vevchani as management authority of Vevchanski Izvori PA and MES.
2.0	COLLABORATION and CAPACITY: This component is about involving, training and giving support to the ones willing to help plant conservation actions.	2.2	Notes and/or photo report from at least 4 meetings with other stakeholders (municipalities representatives, land owners, PAs management and the Ministry of Environment and Physical Planning of Republic of	Meetings were a regular occurrence during the project's duration. There were formal and informal meetings and they were mainly held with all parties listed as project participants: municipalities of Vevchani, Struga, and Bogdanci; landowners; students; the Botanical Garden, the Millennium Seed Bank; botanists; the Ministry of Environment, and Physical Planning.

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
			Macedonia, National Seed Bank...)	
2.0	COLLABORATION and CAPACITY: This component is about involving, training and giving support to the ones willing to help plant conservation actions.	2.3	Reports by at least two biology/ecology students trained for detailed monitoring and threat assessment (short written report-self reflection from the students involved)	One biology student has written self-reflection report based on the experience and involvement in this project. The reflection given by the student has been shared to other students as well to serve as good experience gotten through this project. The report helped MES to realize the perception students have when comes to our work in specific nature conservation related actions. This is quite important for us to have in mind some crucial facts when recruiting future young forces in to nature conservation work.
2.0	COLLABORATION and CAPACITY: This component is about involving, training and giving support to the ones willing to help plant conservation actions.	2.4	Report from missions, CSTT and GTT (CEPF monitoring tool) filled up at beginning and end of project	Progress has been made in fulfilling MES's strategic aims related to Protected areas and plant conservation. The number of employees increased, the funds increased as well. Total score in 2019 was 71,5 whereas in the end of 2023 is 76. Positive trends are notable in the categories of financial resources, strategic planning and management systems
3.0	CONSERVATION: As a final and most important thing is to implement actual conservation (direct or indirect) measures in order to improve the habitat and selected taxa population. A crucial component that will	3.1	Seeds from Astragalus physocalyx collected and placed within the National Seed Bank, as demonstrated by abstract from the bank catalogue	Seeds from Astragalus physocalyx are collected in small amount and kept in Botanical Garden. The National Seed Bank has no conditions in preserving seeds from wild varieties. The next alternative was the seeds to be stored in Millennium Seed Bank, but after the training and recommendations we got from this institutions, it turned out that

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
	give visibility of the whole project.			the population of Astragalus physocalyx is too small to collect the right amount of seed material to satisfy the needs of MSB protocols.
3.0	CONSERVATION: As a final and most important thing is to implement actual conservation (direct or indirect) measures in order to improve the habitat and selected taxa population. A crucial component that will give visibility of the whole project.	3.2	Report on feasibility and options for protection of sites hosting populations of endangered plants, starting with the Astragalus site.	There is report in a form of Action Plan for the Astragalus physocalyx site produced with this project. There is no institution responsible to follow this action plan. Only the monitoring part can be covered by the local civil society capacities and MES occasional presence on these monitoring.
1.0	KNOWLEDGE: Gathering new and refreshing the current knowledge on selected taxa will be the root of the next components and actions.	1.4	AMEND 03/20/21 - Reports on important plants, fungi, Plant Associations, Landscapes, list of threats, Ecosystem types, forest species and old trees, accompanying Maps present on Jablanica Mt.	Produced reports on: important plants, fungi, Plant Associations, Landscapes, list of threats, Ecosystem types, forest species and old trees, accompanying Maps present on Jablanica Mt. These are composed by external experts, collaborators of MES by using literature data, own data from personal monitoring and monitoring done during 2021 and 2022. Reports are detailed and solid, made for the needs of valorization study for Jablanica mountain.
1.0	KNOWLEDGE: Gathering new and refreshing the current knowledge on selected taxa will be the root of the next components and actions.	1.5	AMEND 09/22 – List of threats by prioritization	The MES team, who has experience developing this crucial chapter (for the valorization study to be), has produced analyses of threats. The study is provided in a separate report. The information used is derived from field visits conducted in 2022

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				and partially in 2023, as well as from existing MES database.
4.0	AWARENESS and POPULARIZATION: Underline the value of rare and peculiar plant species	4.4	Join vision on Jablanica delivered by all involved SHs; Raised awareness among included SH in this activity of Jablanica's values and importance of being protected area	The Joint Vision approach was modified in light of the data and facts we learned from our interviews with local businesses, forums, people, and other entities. As it turned out, the joint vision is what needs to be done as the next step. The first identified requirement is for a cohesive Local Action Group that will stand firm for the prosperity of the area and the mountain's preservation. A separate report that is provided under "other information" describes this entire process. The process of organizing a Local Action Group (LAG) in Jablanica is presented with valuable information and practical guidance. This is an absolutely necessary step that will accelerate the proclamation of Jablanica and safeguard the mountain. A separate report that is provided under "other information" describes this entire process.
2.0	COLLABORATION and CAPACITY: This component is about involving, training and giving support to the ones willing to help plant conservation actions.	2.5	AMEND 09/22) List on active organizations in the region divided by their field of actions; One local person found and appointed as disseminator of information and contributing towards whole year activities planned	Either locally appointed individuals or MES directly contacted organizations that were active in the Jablanica region to carry out this task. Because of the ethnic differences in the area, it turned out that one local person is insufficient for this. Rather than settling on just one, we have chosen three local focal points to assist us in identifying the ideal focus groups to include in the prospective Local Action Group that will be established to

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				address the needs of the Jablanica PA proclamation. Aside from these three, there was fairly constant communication with other locals who were in favor of the idea of Jablanica PA. Examples of these include representatives from the Vevchani Mountaneering Club, the Vevchani branch of Ekosvest, the Labunishta EcoLab NGO, and other informal initiatives that support the process of protecting Jablanica.

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

1. Maps with detailed distribution of selected taxa and their habitats (this was capitalized in the further activities of developing the national habitat map)
2. Article on newly found distribution of *Centaurea rufidula*
3. Guidelines on how to proceed with the local initiative (Local Action Groups) in Jablanica
4. Four (one presented through maps) separate reports written following the national guidelines for composing valorization study (necessary document for starting the process of PA proclamation)
5. Threat analysis on Jablanica

PORTFOLIO INDICATORS

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
2.0	Number of KBAs under improved management and number of hectares covered			2,000	Enhanced protection in Bogdanci specifically of the areal where occurrence of <i>Astragalus physocalyx</i> has been confirmed. Whereas on Jablanica KBA, we worked the most with the

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
					Vevchanski Izvori management authority and some locals, so we can say that enhanced protection and sings for improved management are the differences before and after this project.
3.0	Number of sites that gain official permanent protection status and number of hectares covered			0	Bogdanci site falls under N2000 area classification. Other small areas within the Bogdanci site are recognized as biologically significant, but they also pose a greater risk of damage than the Astragalus physocalyx habitats. For instance, Bolovan, a small but significant location near Bogdanci, is suggested for protection as a "Natural rarity" due to numerous threats to the area. A unique category of protection created exclusively for national reasons is Natural Rarity. This category does not have an equivalent in the official IUCN classification. Thanks to this project, earlier initiatives, and initiatives managed exclusively by the local civil society, the Astragalus physocalyx site

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
					has gained a great deal of recognition. A greater degree of elimination of certain potential threats is occurring as more things become acknowledged and popularized as naturally fascinating. The Jablanica site proclamation process continues after this project is completed. The best-case scenario states that the valuation study will be finished in two years. Following this, the legal process will take an additional two years or so.
4.1	Number of threatened plant species seeing status improved (i.e., short-term increase in population and/or breeding success)			3	Astragalus physocalyx, Crocus jablanicensis and Campanula debarensis have stable and healthy populations.
4.2	Number of unprotected sites important for plants with improved management practices			2	Jablanica as a whole area (not only Vevchanski Izvori PA) and Bogdanci site.
4.3	Number of management plans of protected areas			1	It is not in the management plan, but in a separate file called Guideline for

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
	incorporating specific actions for plant conservation				monitoring of key species in PA Vevchanski Izvori
4.4	Number of protected area managers demonstrating improved skills and knowledge on plant conservation			4	<p>We weren't able to meet the new rangers from Vevcanski izvori PA until after the monitoring sessions, as we were working with the previous two. Two Vevchani municipality employees, who serve as the management body, are aware of our initiative and a few significant plant species, but nothing particularly noteworthy about this case stands out as a success.</p> <p>The Bogdanci site is not officially protected, but it is a good example for other protected sites that lag far behind in this area because of the success in educating the Bogdanci municipality, the site's potential management authority, about the value of protecting important plant species.</p>
4.5	Number of locally endemic or highly threatened plant			5	1. Crocus jabalanicensis - new data on population

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
	species for which improved knowledge is available				<p>distribution and estimation of potential threats</p> <p>2. Campanula debarensis - new data on population distribution and estimation of potential threats</p> <p>3. Aesculus hippocastanum - drone footage made that easier the unavailable sites for monitoring along Drenocka River</p> <p>4. Centaurea rufidula - new findings after a century old data in the vicinity of Bogdanci</p> <p>5. Astragalus physocalyx - constant monitoring, new locations with suitable habitats are checked and found some new small populations. update on important taxa distribution.</p>
4.6	Number of KBAs for which information on plants is improved			2	<p>1. KBA Dojransko Ezero - Actually, after the monitoring done in the first year of the project, we have confirmed there is no Centaurea rufidula on the sites mentioned in literature data. it was found in the vicinity of Bogdanci site, so the improved quality information on plants goes only for Bogdanci site, not</p>

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
					for the whole KBA Dojransko Ezero. 2. KBA Jablanica Mnt. - Our annex work on Jablanica, which we completed to meet the objectives of a valuation study for the entire mountain, let us to obtain new and updated data on the distribution of essential plants in many important Jablanica areas.
4.7	Number of young professionals with substantial experience in plant conservation gained			5	
4.8	Number of plans adopted at the national level with improved integration of plant conservation needs			0	

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
Jablanica	MKD07		1,300
Lake Dojran	MKD04		700

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
Important Plant Area "Bogdanci"	41.209372	22.564931	700	The Bogdanci site is not enclosed. As mentioned multiple times in various tabs throughout this report, this site, which is home to the rare plant <i>Astragalus physocalyx</i> , may even enjoy greater security and safety than any other officially protected site in Macedonia because of the numerous actions (education, monitoring, networking, awareness raising, lobbying) primarily spearheaded by the local civil society. It is revered by the locals as a significant hotspot for biodiversity. The fact that their location is

Name of Production Landscape	Latitude	Longitude	Hectares Strengthened	Intervention
				unique due to the existence of these ecosystems and this rare plant even inspires pride in the locals.

Benefits to Individuals

- **Structured Training:**

Number of Men Trained	Number of Women Trained	Topics of Training
7	8	biological surveys and financial management

- **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				
Bogdanci community. Around 6000 inhabitants in total. Approximately 60% of the community have non-cash benefits.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	North Macedonia	1500	1700

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
Jablanica LAG	2023	North Macedonia	Yes	It is still not official that this LAG exists. Because we are working to join the local force for a LAG in preparation for Jablanica's eventual proclamation as a PA, we must discuss the project's impact here. Even after the project is over, MES continues to communicate with some of them. Following the forums we held as part of this initiative, interest is growing. When anything is done with cooperation, people begin to notice the differences. Delete if not suitable for this tab.

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?
Payments for Ecosystem Services	Give the Vevchanski Izvori PA management authority extra revenue to maintain the equilibrium of the natural ecosystem. NOTE: This was	2023	PES scheme was deliberately developed for additional fund source to the management body of PA Vevchanski Izvori. This PES scheme is mainly related to group of cultural ecosystem serviced and the good part is that local business are involved in it by uniting their products.	North Macedonia	Supported an existing mechanism	Not yet. The site itself, nature, biodiversity, local economy, awareness, etc. will all benefit from this PES plan, even though it is

Name of Mechanism	Purpose	Date Established	Description	Country/ Countries	Project Intervention	Delivery of Funds?
	established in synergy with other project, yet important in general for the whole region Jablanica.					being established as a pilot inside other projects (if successfully begun and operated). 10% of the proceeds from each sale of a jointly produced good will be placed into a special municipality fund and used to maintain the natural ecosystems that support the existence of the shared good.

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
Aesculus	hippocastanum	Horse Chestnut	VU	Species monitoring; promotion; lobbying for protection;	Decreasing

LESSONS LEARNED

1. Investing in local sub-grants is worthwhile. No matter the subject or our perception that there is no one there who would work on issues related to biodiversity, there always is! Regardless of whether the sites are protected or not, we would definitely duplicate the surveillance programme we have implemented in Bogdanci in other locations. Unfortunately, we were unable to locate an appropriate local organisation at the outset of the project and were unable to duplicate the same experience on Jablanica site. Without the help of the community, the outcomes would have been extremely unusual. Invest in locals, support local businesses, and encourage those you never even knew had the capacity to go outside and perform just as well as any other conservationist.
2. Support young students. Show them the beauty of field work, of final results, of every other suddenly discovered species they haven't seen before. MES promotes the programme for young ecologists and this is something that literally every environmental organization should do - in opposite, we are in serious deficit of people who would work conservation issues in future!
3. Do more ground work with local population when working on a progress plan for proclaiming a new protected area. One should spend at least three years constant presence and work in order to achieve some milestones. Everything less than a year of constructed work is a waste of time. Support local initiative groups so they can run the battle and the process of lobbying by themselves.
4. Always hear the communities. This is how you build trust and make sure you are on the same page, not only NGO that runs projects. Be friends after the project ends, use every opportunity to help them when needed, provide them information you can get easier than them
5. Plant conservation projects are still utopia in Macedonia. Forming a national forum of professional and semi-professional botanists is definitely necessary to encourage monitoring through the sharing of data, images, and other materials. That kind of activity has never been initiated by someone. This might be the next project of MES related to plants. You need to assemble everyone who is passionate about plants.
6. One thing we would have done differently in this project (but maybe the pandemic was an obstacle) is to provide more opportunities in skill sharing programs. Visits to other countries where we can see good examples, learn something new, replicate if possible, upgrade our knowledge. We were definitely missing something like this.
7. Fundraiser in plant conservation topics - as an environmental NGO that mainly deals with nature conservation projects in a developing country, we need external help that will provide us support in finding potential sources for future plant conservation projects. Maintain relationship with Plantlife International.
8. There are plant species in danger facing serious threats, and direct conservation actions are inevitable to be undertaken. By setting limitations to only work with internationally important species, local endemics or overused plant species are getting close to extinct from one's national biodiversity assets.
9. Do a separate project application to continue the work on *Centaurea rufidula* - collect seeds, re-plant on different locations, educate the farmers and give them incentives to take care of this taxa

What we would have done differently: a) Work harder on promotion part - employ a person that will only work on promotion of plant diversity, problems, uses, status etc. This makes difference; b) Choose only one KBA to work on, including implementation of direct conservation actions; c) would have visit one more site, aside Bogdanci in Macedonia, where the Astragalus is distributed; d) would have done more social events - these are always good for involving more people

SUSTAINABILITY/REPLICATION

Having the local context in mind, which always very important, I think that in general we had a successful project. I see the sustainability moments in several parts:

- The existence of a functioning NGO in Bogdanci that is well-versed in the site, capable of conducting oversight, and has strong ties to the local government and other SH
- The case of Jablanica is a process. We've begun to work toward forming a single core group, and I think there's a good chance this will work. The locals are tired of waiting to hear when and what more is required to protect Jablanica.
- Along with this, MES is continues to be involved in other project activities related to Jablanica, such as the Nature Conservation Program, the Balkan Lynx Program, and the Natura2000 process. PONT and additional donors are happy to make investments in this area and carry on the efforts to officially recognize Jablanica as a PA
- According to the Ministry of Environment and Physical Planning the first and next area to be protected is Jablanica. Estimates have been made in order to determine how much money will be needed to continue the valorization study.

Challenge:

- These days, protecting new areas is getting harder and more varied. In the days of the former Yugoslavia, protected areas were declared arbitrarily and without consultation. Nowadays, it's the complete opposite: political parties play a bigger role in designating an area as protected, and everyone should be aware of their rights and be informed. To put it briefly, these are positive things that require the participation of all stakeholders in order to resolve conflicts and other issues, but the process is incredibly slow. And that represents one of the main obstacles we have to overcome.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS/STANDARDS

ADDITIONAL COMMENTS/RECOMMENDATIONS

We would like to sincerely thank CEPF on behalf of MES and all other project participants for giving us the chance to carry out this kind of project. In conclusion, we are always learning from our experiences and daily mistakes, so please share your thoughts with us so that we can grow from them going forward. Learning from our experience is one thing, but hearing about CEPF's lessons as a coordinator is also insightful.

Thank you.

ADDITIONAL FUNDING

Total Amount of Additional Funding Actually Secured (USD)	\$8,000.00
Breakdown of Additional Funding	Research on public opinion among the representative sample of people who live in Jablanica region. One public event in Vevcani for promotion the results from the survey. Several meetings with representatives from local governments of Vevcani and Struga.

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.

Macedonian Ecological Society, contact@mes.org.mk