CEPF Final Project Completion Report

Instructions to grantees: please complete all fields, and respond to all questions, below.

Organization Legal Name	*Macedonian Ecological Society*
Project Title	Water for the lakes, bogs, streams and people on Jablanica Mt
CEPF GEM No.	63813
Date of Report	May 2016
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CEPF Region: Western Balkans

Strategic Direction: 2.1. "Contribute to and establish Integrated River Basin Management (IRBM) initiatives for pilot basins and replicate best practices, to reduce the negative impacts of insufficiently planned water infrastructures"

Grant Amount: 77600.00 $

Project Dates: Start date 01.03.2014 End date 31.03.2016

1. **Implementation Partners for this Project *(list each partner and explain how they were involved in the project)***

   a) MIO ECSDE responsible for implementation of CEPF project #63836 "Living Well in Harmony With the Drin: Raising Public Awareness, Enhancing Knowledge and Empowering NGOs to Protect and Conserve Freshwater Ecosystems in the Drin River Basin" – MES helped in translation in Macedonian language the book "The natural wealth and legacy of the Drin River Basin: inspiring our collective actions", translation of the triplets of films "Echo for Drin", collaboration for organization of Act4Drin workshop and spring school, realization of different activities for Drin Day, dissemination of promotion materials and presentation of short films on different events. MIO ECSDE contributed in designing and translation of the Drin Day poster, guidelines with suggested activities for the celebration of the Drin Day, updating the MES activities related to the project on Act4Drin web-page and facilitate communication between the Act4Drin project partners.
   b) Kawka production – MES supported the field activities in Macedonia of Mr. Gregor Shubic for shooting and collection of video material for preparation of short films "Echoes from the Drin".
   c) On a local level, relations with the Municipality of Vevchani and Struga were established. The Municipalities were involved in organizing the workshops, dissemination of the promotion materials and contributed during the preparation of the experts' reports with their local knowledge.

d) Contact with the management body of Shebenik National Park in Albania was established and they played active role in organization of trans-boundary workshop for sharing experiences of both countries related to sustainable use of water and forests.

Conservation Impacts

2. Describe how your project has contributed to the implementation of the CEPF ecosystem profile

This project was implemented on Jablanica Mt watershed (that is a part of the Drin watershed in the priority corridor Western Balkans) has contributed to the CEPF strategic direction 2 to establish the sustainable management of water catchments and the wise use of water resources with a focus on the priority corridor (4) Southwest Balkan.
It tackled the wise use of water resources through gained increased knowledge about ecological status of glacial lakes and streams and existing threats. Given recommendations for sustainable management of water resources of the glacial lakes on Jablanica Mt. will contribute to establishment of Integrated River Basin Management (IRBM) that is one of the CEPF investment priorities (2.1.). Jablanica Mountain was taken as a pilot basin and could be replicated using the same approach.
Series of workshops with local stakeholders were organized during which the ecological status and vital benefits of water bodies on Jablanica Mt., as well as the values and roles of forests and their proper management were presented aiming to increase the awareness of local communities. Dialogue with the local population has been triggered with presentation of potential capacities for alternative water supply and proposed measures to reduce the negative impacts of inappropriately and insufficiently planned water infrastructures.

3. Summarize the overall results/impact of your project

Implemented project activities resulted in increased knowledge on the status of biodiversity on Jablanica Mt. in particular water habitats and forests as well as main threats that are deteriorating these important habitats (mainly related to inappropriately planned water infrastructure). Synthesis Report and contribute into gathering scientific knowledge about the current status of the main water bodies in Jablanica Mt and further in transmitting the gained knowledge to the local people, stressing the negative effect of the human-induced activities in the mountain and giving recommendation for overcoming and decreasing the impact on the water resources. Besides the report, guidelines for sustainable forest practices has been developed, which has been the first document in the region for such practices and is expected to have positive influence towards the future forest management.

The organized workshops and Drin Day celebration, helped in promoting the integrated water resource management as tool which combine benefits for people and nature. Presented results to the local communities through different events helped to increase awareness about biodiversity values of Jablanica Mt., water resources and its vital benefits. Results and given recommendations are valuable documents that can be used in the process of preparation integrated water resources management plan.

Initiated dialogue with local stakeholders regarding sustainable management of water resources i.e. given recommendations for alternative water supply is expected to reduce the pressure to the freshwater ecosystems and enhance protection of biodiversity on Jablanica Mt.

Furthermore, established cooperation with National Park 'Shebenik' in Albania might give impetus to expansion of protected area in Macedonia (proclamation of National Park Jablanica) and cross-border cooperation between both protected areas Jablanica-Shebenik.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal)
List each long-term impact from Grant Writer proposal

1) Strengthened policies and action plans for sustainable management of water resources and the protection and conservation of biodiversity in the project areas.
2) Increased pressure on decision-makers to harmonize and streamline biodiversity concerns into national policies and regulations.
3) Increased knowledge on the key threats and pressures to freshwater ecosystems in the Drin River Basin and on ways to address them.
4) Improved conservation status of freshwater habitats and species in the Drin River Basin, through the better management, creation and/or expansion of protected areas.

4. Actual progress toward long-term impacts at completion

1) During the project lifetime, contribution to this long-term impact has been limited. Experts' investigations and results about the ecological status of the water bodies, erosion, forestry practices and identification of the most threatened species as well as recommendations for sustainable use of natural resources (waters and forests) are the valuable documents to be used by policy makers in the process of development of action plans for sustainable management of water resources or biodiversity conservation policy documents.
2) The project contributed to this long-term impact through organization of many workshops and events for increasing awareness of the local stakeholders related to the biodiversity values of Jablanica Mt., ecological status and main threats of water bodies, critical conditions of the waterbodies (glacial lakes) and possibilities to improve the situation through implementation of the experts' recommendations and management measures. It is expected that stakeholder will increase pressure on decision makers and influence national and local policies and regulations about natural resources use on Jablanica Mt.; however more continuous work is required with municipalities and decision makers to rich this state.
3) This has been done all through the project implementation. The valuable data which have been produced as a result of this project increased the knowledge regarding to the waterbody status, riparian forests, healthiness of the freshwater ecosystems as well as key threats and pressures to freshwater ecosystems on Jablanica watershed as part of Drin River basin. Accordingly given recommendations for enhancing the ecological status of the water resources, will provide platform to continue taking actions towards sustainable use of natural resources and diminishing the threats.
4) Project components have greatly contributed to reach this impact however more actions are needed to reach improved conservation status of freshwater habitats and species on Jablanica Mt. Implementation of the proposed recommendations for alternative water supply and monitoring techniques on the Jablanica waterbodies is expected to help overcome the critical situation of the glacial lakes and rivers which will

result in decreasing the pressure on the water bodies and improve conservation status of freshwater habitats and species in the Drin River Basin. Additional support is needed to the local communities with technical documentation about alternative water supply. Regarding protected areas, there is an on-going process for development of management plan of existing Natural Monument 'Vevchanski Izvori', managed by Municipality of Vevchani. Gained results and recommendations is expected to be considered by the Municipality. More lobbying is needed for expansion of the protected area to the whole Jablanica Mt. and creation of national park and further development of trans-national action plan for Jablanica-Shebenik area.

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

1) Increased knowledge on the status and trends of biodiversity (habitats, species, ecosystem services) in Jablanica Mountain, as well as deepened understanding of the underlying hydrological processes of its glacial lakes and streams.
2) Enhanced protection of biodiversity and strengthened sustainable management of water resources in the surrounding area of Jablanica Mountain.
3) Increased awareness of local communities and the wider public, on the vital benefits that watershed bodies provide in maintaining healthy freshwater ecosystems and their rich biodiversity, as well as their corresponding ecosystem services

5. Actual progress toward short-term impacts at completion

1) Successfully completed – Experts' field research regarding ecological status of water bodies, riparian forests, forest management and erosion potential as well as identification of threats has been crucial to increase knowledge of biodiversity and the current ecological status of the water bodies on Jablanica Mt.
2) This has been addressed through increasing capacities of the relevant local stakeholders in Macedonia; discussions about recommended alternative water supplies and sustainable forest management (best practices and recommendations given in the developed guidance for the sustainable forest practices on Jablanica Mt, translated in 3 languages) will strengthen sustainable management of water resources in Jablanica region. Moreover, cooperation with the municipality of Vevchani and their mobilization in the initiative for development of management plan for the 'Vevchanski Izvori' Monument of Nature will enhance biodiversity protection on parts of Jablanica Mountain.
3) This has been done all through the project via different meetings/events where experts' results on ecological status and vital benefits of the watershed bodies (rivers and lakes), forest values and management as well as recommendations for alternative water supplies were presented and discussed - 4 workshops with local communities and several other events have been organized. Proposed measures that were presented are expected to decrease the pressure towards the freshwater ecosystems which are important habitats for many endemic and threatened species. Furthermore, a cross-border workshop has been co-organized with the National park 'Shebenik' management body from Albania aimed for joined involvement in exceeding common problems for sustainable use of natural resources.

6. Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives

Overall the expected impacts of the project have been successfully achieved and set the basis for conservation of freshwater ecosystems on Jablanica Mt as aprt of Drin River Basin.
Already established contacts with the Academia and scientific community (Faculty of Natural Sciences, Faculty of Forestry and Faculty of Civil Engineering), significantly improved the scientific outcome of the project.
Moreover, previous activities of MES in Jablanica region, hence, established contacts with the Municipalities and local villages, contributed the project to be widely accepted in the region from the local people, which showed enthusiasm in overcoming the problems related to the glacial lakes, thus contributing to enhancement of water bodies ecological status.
Achieving sustainable management of water resources is a long term and demanding process. We have to admit that established dialogue with local stakeholders only initiated this process thus more and continuous work (especially with local stakeholders) is needed to reach the overall long-term objective of this project to enhance the protection and conservation of freshwater ecosystems in the Drin River Basin and contribute to the promotion of integrated water resources management.

7. Were there any unexpected impacts (positive or negative)?

The positive and unexpected outcome was the publishing/describing the new gastropod species for the science from the Belichka River on Jablanica Mt. (*Bythinella melovskii* Glöer and Slavevska-Stamenković).

Project Components and Products/Deliverables

Component 1 (as stated in the approved proposal)

1. Increased knowledge on the status and trends of biodiversity components (habitats and species) and demonstration of best practice(s) related to IWRM and freshwater biodiversity conservation, while developing joint vision for their sustainable management – The case of Jablanica Mt.

1.1 An assessment report on the status, load and determined favourable conservation status of the priority water ecosystems in Jablanica Mt.
1.2 An inventory of the most important and most threatened species in the region
1.3 A matrix of threats (excel file with scores) of the most important threats affecting species and habitats (based on at least threat intensity, range, realisation and reversibility)
1.4 A set of elaborated recommendations and guidelines with the most important conservation interventions needed
1.5 A report (working document for internal use) of alternative locations for instalment of water reservoirs
1.6 An assessment report on the sustainability of timber extraction from the stream watershed below the glacial lakes and bogs
1.7 A guidance document on sustainable forest management considering the role of forests in the watershed protection
1.8 Nine (9) meetings/workshops with ~25 participants in major cities/villages in both countries (5 in MK –and 4 in AL) with local stakeholders to present/discus the project activities/outcomes

8. Describe the results from Component 1 and each product/deliverable

1.1 An assessment report on the status, load and determined favourable conservation status of the priority water ecosystems in Jablanica Mt.

- Before starting with field work investigations, a desk study for the past status of the freshwater ecosystem on Jablanica was conducted by using available data from the 'Jablanica Mt. study' prepared within the project 'Balkan Green Belt as ecological corridor for bear, wolf and lynx' (2006), as well as with the unpublished materials for algae and plant populations at Jablanica Mt. in order to see the difference between past and current ecological status.

- The team of hydro-biologists visited the main water bodies at Jablanica Mt. and conducted field study on the bogs, lakes and rivers at Jablanica Mt, in seasons with favorable and unfavorable water conditions (spring-autumn) during 2014-2015. All water bodies on Jablanica Mt. have been classified according to the B system of the EU Water Framework Directive and available data, as a result of which nine (9) types of water bodies have been identified on Jablanica Mt. Collected materials from 30 points (22 points for rivers, 4 points for glacial lakes, 4 points for wetlands) algae, invertebrates and vascular plants were sampled and analyzed in laboratory of the Institute of Biological at the Faculty of Natural Sciences "Ss. Cyril and Methodius" in Skopje. Ecological status of water bodies was assessed (based on diversity of diatoms and macroinvertebrates) as following: excellent (11 points, upper flows of Lakavica, Labunishka, Lenishka, Esenca, Podolga and Belichka rivers, Golemo Labunishko lake, springs and wetlands near Podgorechko Lake, Vevchansko Lake and peatbogs below Krstec); good (3 points); acceptable (7 points) and deterioration of ecological status (weak) is observed on Modrichka river, Jablanichka river above the village Piskupshtina and Piskupshtinska river. Because of intensive anthropogenic pressure of Labunishka River, before the flow into Globochica Accumulation, lower flow of Podgorechka River, inner flow of Belichka River) they were assessed with bad ecological status.

- Synthesized report has been developed as a summary of all prepared separate expert reports:

1. Assessment of the ecological status of water ecosystem on Jablanica Mountain (analysis of algae and macroinvertebrates), prof. Zlatko Levkov and prof. Valentina Slavevska-Stamenkovic

2. Use of waters from lakes on Jablanica Mountain, prof. Cvetanka Popovska

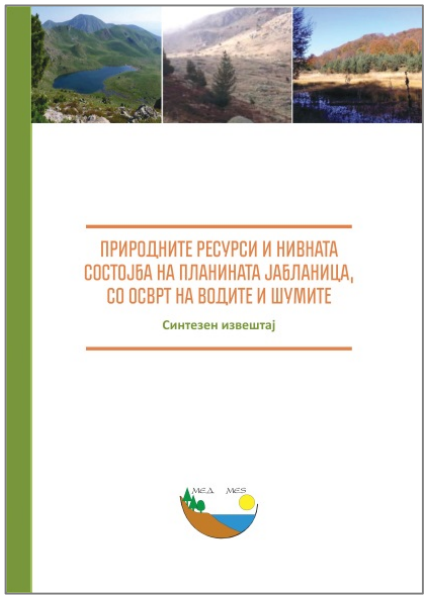
3. Sustainable use of forests in the upper flows below glacial lakes and bogs, prof. Nikolco Velkovski

4. Biomass, production and carbon sequestration of forest ecosystems on Jablanica mountain, prof. Slavco Hristovski

5. Erosion processes and potential of erosion on Jablanica Mountain, prof. Aleksandar Trendafilov

6. List of identified species and threats, prof. Ljupco Melovski, prof. Zlatko Levkov and prof, Valentina Slavevska-Stamenkovic

7. Recommendations for conservation actions needed for water ecosystems on Jablanica Mountain, prof. Valentina Slavevska-Stamenkovic and prof. Zlatko Levkov



The Synthesized Report includes as introduction general information about Jablanica Mountain location, geomorphological and climate characteristics, and hydrography. More detailed presentation is given on ecological status of the water bodies on Jablanica Mt. (based on the algae and macro invertebrates' species), status of the riparian vegetation, and use of water resources as one of the main threats. Then, it gives summary of the status of forests in general on Jablanica Mt, calculation of above and below ground biomass, calculation of erosion, below ground water potential as well as proposed measures and recommendation for future consideration.

Before finalization the report was presented to the stakeholders on February 2015 in Struga, and participants' comments have been taken into account. Also the assessment report was distributed for comments via emails to Municipalities of Struga and Vevchani, local NGOs whose scope of activities are related to Jablanica, Public Enterprise 'Macedonian Forests', the project partner NGO Biosfera, mountaineers and interested people from the region that attended the meetings about Jablanica. After finalization the report was disseminated to all relevant stakeholders during the conducted workshops in the autumn period and via e-mail.

1.2 An inventory of the most important and most threatened species in the region

- Lists of all recorded species in the bogs, lakes and streams on Jablanica Mt. were created based on desk survey by using available literature/data for Jablanica Mt. such as 'Study for Jablanica Mt', unpublished expert reports/data, and further supplemented with data collected during field studies. All identified species of relevance about freshwater ecosystems (algae, macroinvertebrates, plants, fishes, amphibians, reptiles, birds and mammals) have been evaluated according to national Lists of strictly protected and protected species (adopted by the Ministry of Environment and Physical Planning, 2011) but also international red lists (IUCN) because National Red Lists in Macedonia are not prepared yet. Based on the evaluation the most threatened species were identified. Briefly, out of total 443 flora and fauna species identified in the rivers, bogs and lakes on Jablanica Mt. 87 species or 25% of the total number were given status as important species. Among stagnant water bodies that are characterized by

high diversity of diatoms and macroinvertebrate species as well as a number of threatened and rare species are: Podgorechko Lake, Vevchansko Lake, Big Labunishko Lake and peatbogs near Krstec. In terms of macrophyte vegetation, we can stand out the water bodies Ezerca and peatbogs near Krstec.

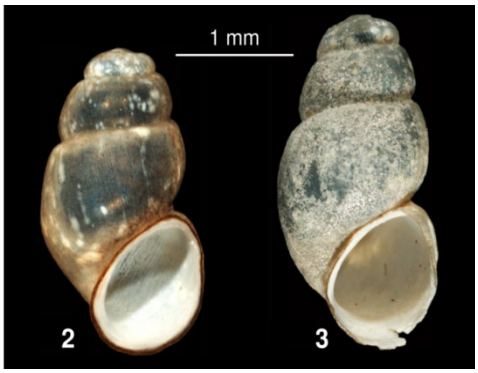
The first scientific research on algae species on Jablanica Mt. has been done in 2010, when 251 species have been described. This project significantly enhances algae knowledge. According to the experts' reports 316 diatom species are found in the wetlands and glacial lakes on Jablanica Mt., which is the highest algal biodiversity in those types of ecosystems in Macedonia (Levkov et al. 2001); it represents about 22% of the total number of known diatom species in Macedonia. The table below describes the most important algae species found on Jablanica Mt.

Location	**Species**	**Importance**
Labunishka River	*Nitzschia palaeformis*	Rare species
Belichka River	*Eucocconeis arcus*	Endangered species
Belichka River	*Eucocconeis gracile*	Endangered species
Ezerca wetland	*Caloneis sp. aff. aemula var. ventricosa*	Species never found in Macedonia
Labunishko Lake	*Navicula detenta*	Critically endangered species in Central Europe
Labunishko Lake	*Stauroneis sp. nov. aff. smithii*	New described species for Macedonia
Labunishko Lake	*Stauroneis schimanskii*	Rare species
Wetland near Podgorechko Lake	*Pinnularia macilenta*	Near Threatened
Wetland near Podgorechko Lake	*Tetracyclus rupestris*	Near Threatened

Regarding macroinvertebrates, undertaken project activities, considerably increase biodiversity knowledge and the importance of the water bodies on the Jablanica Mt.A total of 96 macroinvertebrate species have been identified of which 5 species (*Drusus plicatus*, *Isoperla vevčianensis*, *Nemoura peristeri*, *Pisidium* sp. 2) are protected, 3 species are Macedonian endemics, 2 species are Balkan endemics (*Bythinella drimica drimica*, *Epeorus yougoslavicus*), and 1 species (*Dinocras cephalotes*) is registered only in the Western Macedonia. The most important Invertebrates species are listed in the table below.

Location	**Species**	**Importance**
Vevchani springs, Lakavica River	*Isoperla vevčianensis*	Macedonian endemic species, only at Jablanica Mt.
Vevchani River	*Protonemura miačense*	Macedonian endemic species, found only in rivers in the West part of Macedonia
Lakavica River	*Bythinella drimica drimica*	Balkan endemic species

During the field research on one small mountain stream, a new aquatic snail species for science was identified, described and named in honor of prof. Ljupcho Melovski who is one of the greatest Macedonian biodiversity conservationists: *Bythinella melovskii* Glöer and Slavevska-Stamenković, 2015.



Out of total 118 higher plant identified, 3 species (*Aesculus hippocastanum* L., *Narthecium scardicum* Kosanin, *Ophioglossum vulgatum* L.) are protected, 1 species (*Alnus glutinosa* (L.) Gaertn.) is under threat, 2 species (*Alchemilla gracillima* Rothm., *Pinguicula hirtiflora* Ten. (*P. louisii* Markgraf) are found only on Jablanica Mt., 2 species (*Alchemilla straminea* Buser., *Ranunculus auricomus* L.) are very rare and 30 species (*Alchemilla heterotricha* Roth., *Alchemilla plicatula* Gand., *Barbarea balcana* Pančić, *Carex davalliana* Smith., *Carex ferruginea* Scop., *Carex lepidocarpa* Tausch., *Carex serotina* Merat ssp. *serotina*, *Carex umbrosa* Host ssp. *hentiana* (Boiss.) Soo, *Carex viridula* Micheaux, *Carex flava* L., *Cirsium canum* L., *Cirsium tymphaeum* Hausskn., *Eleocharis quinqueflora* (F. X. Hartmann) O. Schwartz, *Epilobium alsinifolium* Vill. var. *oppositifolia* Borb., *Epilobium anagallidifolium* Lam., *Eriophorum latifolium* Hoppe., *Filipendula ulmaria* (L.) Maxim., *Hypericum tetrapterum* Fries, *Juncus alpinus* Vill., *Myositis nemorosa* Besser, *Omalotheca supina* (L.) DC. (*Gnaphalium supinum* L.), *Roripa islandica* (Oeder) Borbás, *Salix cinerea* L., *Sanguisorba officinalis* L., *Silene pusilla* Waldst. ssp. *albanica* (K. Maly) Neum., *Sphagnum girgensohnii* Russ., *Sphagnum rubellum* Wils., *Sphagnum teres* (Schimp.) Ångstr., *Taraxacum palustre* (Lyons) Symon., *Telekia speciosa* (Schreber) Baumg.) are rare.

In regards to vertebrate fauna, fish species (*Salmo farioides*) is local endemic that is strictly protected by the national legislation; 2 species of amphibians (*Bombina variegata*, *Pseudepidalea viridis*) are protected and representative of mammals (*Lutra lutra*) is strictly protected species in Macedonia.

1.3 A matrix of threats (excel file with scores) of the most important threats affecting species and habitats (based on at least threat intensity, range, realisation and reversibility)

The matrix of threats was developed using all available data related to past threats affecting species and habitats in/along rivers, bogs and lakes on Jablanica Mt. and field survey data.

Jablanica is characterized as rich in springs, mountainous streams, bogs and glacial lakes of which wetlands and glacial lakes are identified as rare habitats in Macedonia and priority habitats for protection in Europe according to the Habitats Directive. Unfortunately, increasing human demands for drinking water, agricultural areas and electricity, water resources are increasingly used improperly and irrational. Such human practices have a negative impact on freshwater ecosystems and their biodiversity through their modification or total destruction.

Based on the conducted surveys, the most important threats have been identified: changed water regime, water extraction for water supply, eutrophication (sheepfolds in their vicinity), habitats conversion, irresponsible tourism (waste disposal) and climate change.

1.4 A set of elaborated recommendations and guidelines with the most important conservation interventions needed

Before developing the recommendations, relevant literature for case studies was consulted to identify the most important conservation interventions on mountainous aquatic ecosystems. Some of the relevant literature consulted: Restoration Ecology (second edition) - Edited by Jelte Van Andel and James Aronson, Handbook of Catchment Management - Edited by Robert C. Ferrier and Alan Jenkins, Study for Jablanica Mt. - Macedonian Ecological Society as well as various online publications in regards to IWRM. The viability/feasibility of the measures proposed in literature have been analyzed to be implemented in the Jablanica Mt. case.

Set of elaborated recommendations for enhancing the favorable status of the water bodies has been developed based on the undertaken field trips and in accordance with the relevant literature about freshwater ecosystems conservation. It includes: monitoring, planning and developing infrastructural projects, project control and coordination. Additionally, set of 9 measures for future consideration has been proposed. In the set of recommendations, future actions needed to overcome the problems with the glacial lakes and the rest water bodies on Jablanica Mt. have been described.

1.5 A report (working document for internal use) of alternative locations for instalment of water reservoirs

- Consultation with an expert hydrogeologist of water-catchment facilities has been done in order to identify alternative locations of water catchment facilities. Report has been developed based on the conducted field trips and taking into consideration the water exploitation on one hand and needs of local people for water, on the other hand.

- Identification of local communities/villages concerned was done based on the previous collaboration of MES in the project area and followed by the presentation of the main ideas and concepts.

- Based on expert findings, Report with the most suitable alternative water supplies according to population density, available resources and the current status of the water bodies in the region has been developed. The Report describes geological and hydrological characteristics of the region, demographic characteristics, potential of the underground waters in the region, underground water usage by the local people, sustainable practices for glacial lakes water use, present use of the glacial lakes as well as further recommendations and available options for the water reservoirs.

In February 2015, the project results regarding water body status and alternative water supplies was presented to the relevant stakeholders in Struga Municipality with the representatives from the Municipalities of Struga and Vevchani, as well as representatives from the local villages, NGOs and other stakeholders from the region. The presentation was followed with discussion about major problems occurring in the region in terms of water supplies. Participants expressed their concern about the water status and catchment on Jablanica Mt. Their suggestions were taken into account in finalization of the Report. The Report was also presented and discussed with relevant local stakeholders in Podgorci and Labunishte villages.

According to experts' conclusions, all glacial lakes on Jablanica Mt. are under threat; Vevchansko Lake is in danger of eutrophication due to intensive sheep breeding activities; Podgorečko Lake,

Golemo (Macro) and Malo (Micro) Labuniško Lake are strongly impacted by human activities due to unplanned and uncontrolled use of water resources. To improve the current state specific measures were proposed for example: development of restoration project for Podgorečko Lake and its direct watershed; development of project for rehabilitation of the existing system of reservoirs and pipes bellow Golemo Labuniško Lake; project for long term water supply of the region including alternative solutions (possibilities of including the villages Podgorci and Labuništa into the existing regional water supply systems in Ohrid-Struga region as well as possibilities of groundwater use); project for sewage systems in villages Labuništa and Podgorci including the water waste water treatment plant, etc.

1.6 An assessment report on the sustainability of timber extraction from the stream watershed below the glacial lakes and bogs

Before field work some preparatory activities were undertaken and different GIS layers of hydrography, road network and habitats were prepared) to be used for field work regarding forest coverage, biomass and erosion planned to be implemented in August and September.

Field work to assess the coverage of forests in the watershed, their above and below-ground biomass, and biomass extracted as timber was conducted during 2014 when different locations on different altitudes in the project area have been visited for several times in order all aspects from the mountain (North, South, East and West) to be taken into consideration. Riparian forests were emphasized in terms of their management and extraction. Forests with high conservation status were determined.

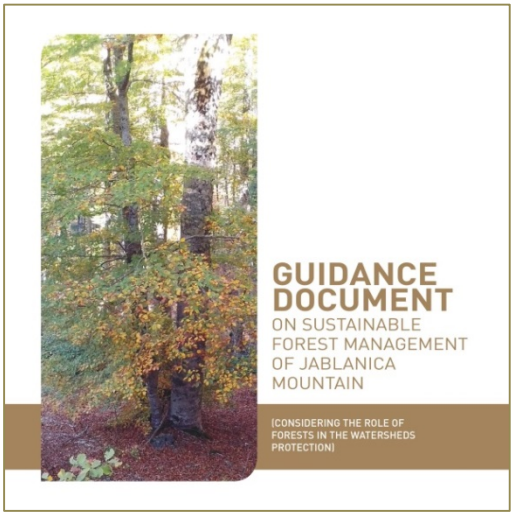
Thorough estimation of the erosion intensity of watersheds on Jablanica Mt., and how it is potentially impacted by timber extraction was done. Namely, erosion factors and erosion types were determinate as well as erosion potential was calculated.

The report on forestry management practices and illegal logging was prepared, based on the assessed results during the conducted field trips, as well as consulting relevant forestry policy documents (Forest management plans). The content of the Report is the following: natural characteristics of the mountain, forest associations on Jablanica Mt, administrative shares, forest structures according to the origin, type and annual increment, identified forests with high conservation values, current forest management practices on Jablanica Mt., sustainable use of the riparian forests, forest ecosystem biomass, forest net primary production, assessment on the above-ground biomass, assessment of the below-ground biomass and potential for carbon sequestration.

1.7 A guidance document on sustainable forest management considering the role of forests in the watershed protection

Prepared expert report on forestry management practices and illegal logging was used as a basis for developing Guidance document on sustainable forest management of Jablanica Mountain (considering the role of forests in the watersheds protection) was prepared in Macedonian language and translated into English and Albanian language.

The Guidance document gives short introduction regarding forest management on Jablanica Mt., definitions and development of the concept of sustainable forest management, national legislation related to sustainable management of forests and forest resources and forest wealth (forest communities represented on Jablanica Mt.). Detailed presentation of identified forests of high conservation values is given: old growth forest in the vicinity of St. Spas Monastery, molika pine forest around Podgorci and Labunishta Lakes, old growth ancient chestnut and oak trees, sweet chestnut forests, riparian forests, beech forest with well-expressed degree of naturalness. The document further explains forest management practices on Jablanica Mountain, planting and regeneration cuts, clear cut, Introduction of allochtonous species, Illegal logging, and gives guidelines for fulfillment of Pan-European criteria for sustainable forest management on Jablanica Mountain as well as recommendations and conclusions for sustainable forests management.



1.8 Communication of project aims and results and project visibility

In accordance to the project document, nine (9) meetings/workshops (5 in Macedonia and 4 in Albania) with local stakeholders were planned to be organized in major cities/villages in both countries to present/discus the project activities/outcomes. However, due to the real situation in different villages with local people (and given the number of participants) it was decided to reduce the number of stakeholder workshops. Thus, four (4) workshops were organized in Macedonia - Municipalities of Struga and Vevcani, village of Podgorci (where participants from Podgorci and Labunishta participated) and village of Lukovo (where participants from Bezovo, Jablanica, Borovec, Modric and Drenok were present). One trans-boundary workshop was organized in Albania in collaboration with the National Park Shebenik, as the most adequate location for sharing trans-boundary experience on both sides of Jablanica Mt.

Workshop	**Date**	**No. of participants (male + female)**	**Aim of the workshop**
Podgorci village	28.09.2015	21 (20 + 1)	To present the ecological status of rivers and lakes on Jablanica Mt. and present the possibilities for alternative water supply.
Lukovo village	14.10.2015	12 (12 + 0)	Present the project results related to status of forests and erosion on Jablanica Mt.
Vevchani municipality	28.10.2015	18 (15 + 3)	Present the ecological status of rivers and lakes as well as status of forests and erosion on Jablanica Mt.
Struga	25.11.2015	40 (29 + 11)	Present the ecological status of

municipality			rivers and lakes and forestry practices on Jablanica Mt.

Workshops' participants were representatives from Municipalities, Mayors, directors and teachers of the primary schools in the region, local NGOs, forestry enterprise, mountaineering clubs, farmers, and people interested in MES activities.

Different experts that were engaged in project implementation were invited to make presentation during the workshops (depending on the topic either one or two experts held presentations) i.e. prof. Cvetanka Popovska presented the alternative water options in Podgorci; in Lukovo prof. Aleksandar Trendafilov presented the topic about erosion on Jablanica Mt.; in Vevcani the topics of water status and forests and erosion were presented by prof. Valentina Slavevska-Stamenkovikj and prof. Aleksandar Trendafilov; and water status and sustainable forestry were presented by prof. Nikolcho Velkovski and prof. Zlatko Levkov in Struga.

The trans-boundary workshop was organized on 2nd December 2015 in Librazhd, Albania. Twenty three (23) participants from the 'Shebenik' National Park, local NGOs (Agri-En and Egnatia), Environmental Inspectorate, and participants from the woman sector who work in the area of environment from Albania as well as representatives from Macedonian Ecological Society attended the workshop. From Macedonia, water status, erosion and forestry were presented and discussed by prof. Aleksandar Trendafilov and prof. Valentina Slavevska-Stamenkovikj, while from the Albanian side, presentations about the management of the national park focusing on the same topics (water use and forestry) were presented by the Shebenik National Park Director Mr. Fatmir Brazhda and Mr. Mensur Kuili, forester at the park administration. Due to the different language speaking, simultaneous translation was provided. Minutes from the workshop were prepared (in English), sent to the National Park Director that supported organizational activities and distributed to workshop participants.

On 03 February 2015, project aims, results and future impacts were presented on the CEPF workshop in Skopje, Macedonia organized in the Regional Environmental Center (REC) office.

Although not planned in the project document, MES developed leaflet for the project " Water for lakes, bogs, streams and people on Jablanica Mt." presenting the aims, expected results and most important species to be found on Jablanica mountain. It was used as a tool to share information about project activities to the wider public in different occasions. It was disseminated on different events as well as in the primary schools in Struga.

Poster about the project aims and activities was prepared and presented on the CEPF annual meeting In March 2015 in Montenegro.

The film triplets "Echoes from Drin" developed by the “Act for Drin” project were translated in Macedonian language and presented on different events.

On 16 April 2015, as part of the MES closing event about IPA CBC project ‘Enhancing trans-boundary protection and development of the Jablanica-Shebenik mountain range by active local involvement’, the prepared leaflets about the project "Water for lakes, bogs, streams and people on Jablanica Mt." were disseminated. Additionally the film triplets "Echoes from Drin" were presented for the first time.

On 29-30 April 2015, project aims, duration, methodology, results and lessons learned were presented on a regional workshop in Lin, Albania organized from MIO-ESCDE.

On 17 May 2015, Drin Day was organized as mutual activity between MES and Biosfera. On this event MES conducted bird watching training for youngsters, printed poster for the event, presented current project and disseminated leaflet and other materials for the project.

On 07 June 2015, as part of the MES small grants programme on Jablanica Mt (provided by the Balkan Lynx Recovery Programme), mountain hiking tour was organized to the highest pick on Jablanica - Crn Kamen; this event was used to share information and leaflets about the CEPF project among the mountaineers and nature lovers. Also, the project results were presented during MES closing event for small grant projects implemented in the Jablanica region (October, 2015 held in Struga).

In November 2015, the triplet of the "Echoes from Drin" short films was presented during the Mountaineering Film Festival in Skopje.

Aiming to get higher project visibility, realized project activities were published on the Macedonian Ecological Society - web page, MES Facebook page, as well as in the MES Newsletter.

A short story about the project outcomes was prepared and sent to MIO-ESCDE to be included in the booklet featuring a collection of NGO actions for conservation of freshwater ecosystems, as part of the Act4Drin project.

Also MES helped in the preparatory activities of the spring school organized by MIO-ESCDE as part of the Act4Drin project during which the project results were presented.

Component 2 (as stated in the approved proposal)

2. Project Management and Coordination

2.1 Preparation, supervision and submitting of Interim reports
2.2 Preparation, supervision and submitting a Final report
2.3 Rent of an office to ensure smooth implementation of the project activities
2.4 Smooth functioning of the office with all supplies (Telephone, Internet, electricity, heating, water, web)
2.5 Regular provision of office consumables
2.6 Project supervision and financial management

9. Describe the results from Component 2 and each product/deliverable

2.1 Preparation, supervision and submitting of Interim reports

Management and every-day administration of project was done by the project coordinator.
Aiming to ensure smooth execution of project activities the coordinator did preparatory activities for realization of field research - GIS hydrology layer, road infrastructure, habitat classes etc. for project area (Jablanica Mt.). Regular working meetings with experts involved were organized in order to ensure timely implementation of tasks and quality reports. Synthesized report was drafted the project coordinator and approved by the Executive director. All project activities (field trips, reports, presentations, meetings, workshops) were coordinated

and implemented timely in collaboration with the different experts. Cooperation with other ongoing MES projects in the same area - "Enhancing trans-boundary protection and development of the Jablanica-Shebenik mountain range by active local involvement" was established as well as other CEPF granted projects for protection of Drin Basin.

Overall project implementation was supervised by the Executive director.

Five interim reports were drafted by the Project coordinator, approved by the Executive director and submitted on-line in the given reporting period.

2.2 Preparation, supervision and submitting a Final report

Final completion report was drafted by the project coordinator using the template provided by CEPF and finalized in cooperation with the Executive director.

2.3 Rent of an office to ensure smooth implementation of the project activities

The Office of the Macedonian Ecological Society was used for the purposes of smooth execution of planned project activities during the whole project duration.

2.4 Smooth functioning of the office with all supplies (Telephone, Internet, electricity, heating, water, web)

Office expenses related to telephone, internet, and electricity were paid accordingly. A desk computer and 2 tablets necessary for smooth execution of the project activities were purchased in the beginning of the project implementation.

2.5 Regular provision of office consumables

Office consumables were provided according to the project needs for the whole project duration.

2.6 Project supervision and financial management

Supervision of implementation of all project activities was permanently done by the Executive director. Financial management and administration of project costs was done by project coordinator in close cooperation of financial administrator on a regular basis. Nine budget reports have been prepared with the assistance of the financial administrator and submitted on-line in the given reporting period.

Component 3 (as stated in the approved proposal)

List each component and product/deliverable from Grant Writer

n/a

10. Describe the results from Component 3 and each product/deliverable

Component 4 (as stated in the approved proposal)

List each component and product/deliverable from Grant Writer

n/a

11. Describe the results from Component 4 and each product/deliverable

12. If you did not complete any component or deliverable, how did this affect the overall impact of the project?

All project deliverables are completed.

13. Please describe and submit any tools, products, or methodologies that resulted from this project or contributed to the results

Based on the conducted field studies about the forest status on Jablanica Mountain, assessment on sustainability of timber extraction from the stream watershed below the glacial lakes and bogs was developed. This assessment is taking into consideration the level of erosion, the type and the erosion flow into the water accumulations on the mountain as one aspect. The other aspect, are the forest practices and forest utilization in the project area. Guideline for the sustainable forest practices on Jablanica Mt was developed.

Based on the sampled and analyzed materials for diatoms and macroinvertebrates combined with relevant international ecological indexes, the ecological status of the main water bodies on Jablanica Mt. has been identified.

CEPF Global Monitoring Data

Respond to the questions and complete the tables below. If a question is not relevant to your project, please make an entry of 0 (zero) or n/a (not applicable).

14. Did your organization complete the CEPF Civil Society Tracking Tool (CSTT) at the beginning and end of your project? (Please be sure to submit the final CSTT tool to CEPF if you haven't already done so.)

	Date	Composite Score
Baseline CSTT	01/04/2014	64.5
Final CSTT	01/05/2016	72

15. List any vulnerable, endangered, or critically endangered species conserved due to your project

Hectares Under Improved Management

Project Results	Hectares*	Comments
16. Did your project strengthen the management of an existing protected area?	Yes 1370 ha	Results and recommendations of this project (particularly related to the use of water resources and sustainable use of forests) shall be used by the existing protected area 'Vevchanski Izvori' Natural monument (part of Jablanica Mt.) in the process of development of the management plan and its further implementation.
17. Did your project create a new	No	*List the name of each protected area,*

protected area or expand an existing protected area?		*the date of proclamation, and the type of proclamation (e.g., legal declaration, community agreement, stewardship agreement)*
18. Did your project strengthen the management of a key biodiversity area named in the CEPF Ecosystem Profile (hectares may be the same as questions above)	no	*List the name of each key biodiversity area*
19. Did your project improve the management of a production landscape for biodiversity conservation	no	*List the name or describe the location of the production landscape*

** Include total hectares from project inception to completion*

20. In relation to the two questions above on protected areas, did your project complete a Management Effectiveness Tracking Tool (METT), or facilitate the completion of a METT by protected area authorities? If so, complete the table below. *(Note that there will often be more than one METT for an individual protected area.)*

Protected area	Date of METT	Composite METT Score	Date of METT	Composite METT Score	Date of METT	Composite METT Score
Vevchanski Izvori	01.05.2014	24	05.06.2016	26		

21. List the name of any corridor (named in the Ecosystem Profile) in which you worked and how you contributed to its improved management, if applicable.

Jablanica Mountain is part of the Balkan Southwestern corridor and its watershed is a part of the Drin watershed in the priority corridor Western Balkans.

Direct Beneficiaries: Training and Education

Did your project provide training or education for . . .	**Male**	**Female**	**Total**	**Brief Description**
22. Adults for community leadership or resource management positions				
23. Adults for livelihoods or increased income				
24. School-aged children				
25. Other				

26. List the name and approximate population size of any "community" that benefited from the project.

Community name	***Surrounding district, Country***	***Citizens***
Vevchani	Vevchani mnicipality	2500
Podgorci village	Struga municipality	2160
Labunista	Struga municipality	6000
Jablanica	Struga municipality	550
Piskupstina	Struga municipality	180
Other small villages (Lukovo, Modrich, Drenok)	Struga municipality	Less than 100 citizens

27. Socioeconomic Benefits to Target Communities

Based on the list of communities above, write the name of the communities in the left column below. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes.

Community Name	Community Characteristics								Nature of Socioeconomic Benefit											
									Increased income due to:											
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists / nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty line	Other, tourism	Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services	Increased food security due to the adoption of sustainable fishing, hunting, or agricultural practices	More secure access to water resources	Improved tenure in land or other natural resource due to titling, reduction of colonization, etc.	Reduced risk of natural disasters (fires, landslides, flooding, etc)	More secure sources of energy	Increased access to public services, such as education, health, or credit	Improved use of traditional knowledge for environmental management	More participatory decision-making due to strengthened civil society and governance	Other
Vevchani	x							x												
Labunishta	x													x						
Podgorci	x							x						x						
Jablanica	x																	x		
Piskupstina	x																	x		
Other small villages	x																	x		

If you marked "Other", please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit:

Lessons Learned

28. Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community

The already established cooperation in the Jablanica region due to the MES previous activities (starting from 2006), significantly enhanced the trust and acceptance of the project activities, results and recommendations among the local people and Municipalities thus making the project aims more visible. In this regard it should be stressed that continuous work at particular area is highly recommendable and needed since it facilitates project implementations.
In this regard, implemented project activities in the frame of this project - identified threats and pressures to natural resources (mainly waters and forests) and given recommendations for their sustainable use were discussed with local communities. However, this only initiated the process i.e. this is the first step towards making future plans for sustainability and nature conservation on Jablanica Mt. For achieving that goal, forest management plans and even implementing infrastructural projects for alternative water supply of local people on the Jablanica Mt. are needed, which is expected to result in continuous effort for effective nature conservation in the region.

29. Project Design Process *(aspects of the project design that contributed to its success/shortcomings)*

30. Project Implementation *(aspects of the project execution that contributed to its success/shortcomings)*

The carefully planned project activities before and during the project as well as flexibility in some unexpected situations, lead to successfully implementation of all project components and no major adjustments were needed.

31. Describe any other lessons learned relevant to the conservation community

Sustainability / Replication

32. Summarize the success or challenges in ensuring the project will be sustained or replicated

Due to limited number of glacial lakes and small coverage with bogs in Macedonia, and in light of ever-increasing water demand, it is expected that experience in terms of relevant ecological aspects to be included for assessing biodiversity, threats and nature conservation and scientific knowledge gathered with this project will be possible to extend in other parts of the country. Lessons learned would be easy to implement in other parts of the catchment where similar conditions – mountain water ecosystems used for resources - exist (e.g, Mavrovo NP in Macedonia, Shebenik Protected area and Prokletije Mts. In Albania).
Efforts of involving stakeholders almost in the beginning of the project implementation is the basis for the results to be sustained in time. Their interest regarding recommendations for alternative water solutions is a ground for sustainable water management.

In addition, production of educational material might preemptively influence other local communities not to repeat the mistakes with water extraction from Jablanica Mt. and in the same time encourage them to seek more sustainable and nature-friendly means to meet their demands.

33. **Summarize any unplanned activities that are likely to result in increased sustainability or replicability**

Project activities were designed to tackle this issue and there were not unplanned activities regarding this issue.

Safeguards

34. If not listed as a separate Project Component and described above, summarize the implementation of any required action related to social, environmental, or pest management safeguards

Additional Comments/Recommendations

35. Use this space to provide any further comments or recommendations in relation to your project or CEPF

Additional Funding

36. Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of CEPF investment

Donor	Type of Funding*	Amount	Notes
IPA CBC Programme between Republic of Macedonia and Republic of Albania		80.000 eur	The complementary project "Enhancing trans boundary protection and development of Jablanica-Shebenik mountain range by active local involvement" was implemented in the period September 2013 – February 2015

** Categorize the type of funding as:*

A Project Co-Financing (other donors or your organization contribute to the direct costs of this project)
B Grantee and Partner Leveraging (other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project)
*C Regional/Portfolio Leveraging (other donors make large investments in a region because of CEPF investm*ent or successes related to this project)

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

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