

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Maja Ilic
Project title	Local community as an alarm system for preserving high mountain aquatic habitats of Serbia impacted by climate change
RSG reference	19991-1
Reporting period	16.06.2016-16.07.2017
Amount of grant	£ 4997
Your email address	ilicmaja.991@gmail.com
Date of this report	16.07.2017

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Taxonomy list				We gathered information about species present on the field and collected samples of macrozoobenthos. List of amphibians present in water bodies is complete. In regard of macrozoobenthos we collected samples and some of them were determined only to the family or order level. In the next period we will work on determination of samples of macrozoobenthos to species level.
Differences between data of present amphibians and macrozoobenthos species now and 15 years ago due to climate change				We collected information about species present of amphibians and macrozoobenthos from 15 years ago. It only remains now to compare data from 15 years ago and data collected in the field from the last year.
Promoting the project at universities in Niš, Kragujevac, Belgrade and Novi Sad.				We can say that promotion of the project was successful in every university we visited. There was a lot of interested students and some of them wanted to take part in some of the activity. In city of Niš promotion was held in cooperation with the Biological Society "Dr. Sava Petrović", in Novi Sad in cooperation with NIDSBE "Josif Pančić", in city of Kragujevac in cooperation with EID "Mladen Karaman" and in Belgrade in cooperation with BID "Josif Pančić" in Belgrade.
Creating a web site and Facebook page				In November 2016, a website was created. There we published our new project and every news about promotion, fieldwork, etc. Website is located at: http://aqueousserbia.com/en/ Also we opened Facebook page where we posted every promotion

				and news about our project. Also we posted every media cover about project. Facebook page is located at: https://www.facebook.com/aquaticecosystemsofserbia/
Making educative brochures and T-shirts				We made educative t-shirts and brochures which were distributed to students, volunteers, members of alarm teams and to the others participants of the project.
Promotion of the project in the media				Our project had a lot of media coverage. Some of the stories about our project you can find on this sites: http://magazinsana.rs/desetogodisnji-ca-sata-za-nasu-planetu/ https://www.juznevesti.com/Drushtvo/l-Nisljije-gase-svetlo-za-planetu.sr.html Also we talked in the online radio show of the local radio station "Super Radio".
Forming the alarm teams				In every field trip we talked with the locals and authority and assembled alarm teams who will inform us about new water bodies, drought, some changes in aquatic ecosystems which we investigated in our project. We gave them our contacts and we will call them periodically to gather the information about our localities.
Importing of new water bodies in GIS				We finished our fieldwork so in the future we will import coordinates of every new water bodies which we find in GIS and update that results on our website.
Making the integral index of aquatic ecosystem quality				In the next period we will work on the integral index of aquatic ecosystems quality. When we finish that we will update results on our website.
Presentation of the results of the project				We presented results of our project in few universities. In city of Niš promotion was held in cooperation with the Biological Society "Dr. Sava Petrović" where we presented results with the students and Society members. Also in Novi Sad we held presentation in cooperation with NIDSBE "Josif Pančić".

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

In the beginning of project we planned to conduct our research on macrozoobenthos, amphibians and fishes. We realised, with help of Rufford Foundation, that research will be overcrowded so we conducted our research only on macrozoobenthos and amphibians.

Also, we did not make Twitter account because we realised that Facebook page and website is enough marketing for our project. Also Facebook page and website of Biological Society Dr Sava Petrovic posted a lot about our project so we decided to do not make Twitter account.

3. Briefly describe the three most important outcomes of your project.

Educational outcomes: Biology students from University of Niš and volunteers from Biological Society "Dr Sava Petrović" did a lot of fieldwork with our team members. There they learned a lot about high mountain aquatic ecosystems. Also, we conducted summer school for students and other participants where they learned a lot about amphibians and macrozoobenthos species. They learned how to clean and prepare macrozoobenthos material for the further determination. Also, in summer school they learned how to determine some groups of macrozoobenthos and how to determine amphibian species when they see them in the field without catching them. It is very important because all amphibians are endangered in Serbia.

Forming the alarm teams: This is very important because we will have information about our localities in the future which is very important for further investigation and fieldwork on this sites. Crucial goal was to ensure long-term preservation of these habitats, which will be achieved by including local inhabitants during the whole project. Through alarm teams we raised awareness about importance and benefits of this areas.

Diversity status: We will establish diversity status between this localities using the data collected from this project and compare them with the data we have from before. Then we can see if there is any change due climate change in the last 10 to 15 years. We will post all the data on our website.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

Local people from both localities have participated in the lectures that were held during the project. Out of the people who were attending the lectures there were several ones interested in further participation in the project. This is how we managed to make alarm teams with which we continued communication during the whole project until now, and we are planning on continuing the collaboration in the following year.

We have made the arrangements to organise excursions for members of Biological Society "Dr Sava Petrovic" and other interested people to Vlasina and Crni vrh village. We believe this is the beginning of popularisation of high mountain aquatic habitats as tourist attractions, and the foundation for further eco-tourism development.

5. Are there any plans to continue this work?

We are planning to continue this work first through identification of our material. When we determine macrozoobenthos material and compare those results and results from the past we will publish this information and the same information about amphibians in some scientific paper. Also, we established alarm teams so we will have information about our habitats so we can continue to work on those sites in the future.

6. How do you plan to share the results of your work with others?

The plan is to finish identification of material and publish all of results about species and impact of climate change in the last decade in scientific paper. All information will be available on our web site and Facebook page (<http://aqueousserbia.com/en/>) (<https://www.facebook.com/aquaticecosystemsofserbia/>)

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The largest part of the budget from grant was used for fuel cost, accommodation, food for field work and for promotion. This was spent during one year period. This compares to the time we planned to conduct our research.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Printing 3000 brochures	122	129	-7	
Printing 200 T-Shirts	626	588	+38	Printing t-shirts was lower than expected so we used that money to print badges.
Fuel costs for a project presentation at the universities	156	156		
Creation and maintenance	188	200	-12	Creation and maintenance was

of the website				higher than expected.
Field work in Vlasina lake and mountain Stara planning (fuel cost)	493	490	+3	
Photo camera	389	392	-3	
Field work in Vlasina lake and mountain Stara planning (accommodation +food)	1570	1512	+58	
3 neoprene suits	235	232	+3	
5 pairs of boots	157	150	+7	
5 raincoats	118	118		
Ethanol for sample preservation	274	274		
100 bottles for sampling	79	79		
Chemicals for water testing	82	80	+2	
6 data loggers	352	441	-89	The price of data loggers was higher than expected.
Presentation of project results (fuel cost)	156	156		
Total	4997	4997		

* When we applied for the funding the course of the pound to dinar was higher than at the moment we received the funding, so we didn't have as much money as we thought at the beginning of application for the grant.

9. Looking ahead, what do you feel are the important next steps?

The next step would be to continue our work at Vlasina Lake and Mountain Stara planning. We need to monitor aquatic ecosystems in this habitats for a longer period to see if there is impact of climate change from now on. Also we should monitor the condition of amphibians and macrozoobenthos populations to see if there are some changes in the size of populations. We established alarm teams and it is a good start to continue our research.

Also, we need to finish identification of macrozoobenthos species and to publish results.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

The Rufford Foundation logo was used in every publication and promoting material used in purpose of this project. We printed about 200 t-shirts with the Rufford Foundation logo (picture in the attachment), about 3000 brochures were printed and distributed, also logo was used in text about project published in the journal "De Naturae" (journal can be found on: <http://bddsp.org.rs/de-naturae/>). Logo is highlighted on the project site (<http://aqueousserbia.com/en/>) as well as on first slide at every power point presentation and every poster (picture in the attachment)

we made in purpose to promote project. We used logo on the most posts on our Facebook page and made 100 badges (picture in the attachment) with the Rufford Foundation logo and the some of the most common species for high mountain aquatic ecosystems.

11. Any other comments?

I just want to thank the RF for the financial support in the realisation of this project. Thanks to this support we have achieved to raise awareness about the importance of high mountain aquatic ecosystems and their role in the biodiversity of Serbia. We have educated many new young researchers who will help us continue our work with high mountain aquatic ecosystems in the future, hopefully with the support from RSFG.



KLIMATSKE PROMENE
LOKALNA ZA REVNICA KAO KLIMNI SISTEM U OČUVANJU VISOKOPLANINSKIH AKVATIČNIH EKOSISTEMA POD UTICAJEM KLIMATSKIH PROMENA

KLIMATSKE PROMENE
Klimatske promene predstavljaju promene klime koje se pripisuju raznim aktivnostima koje menjaju sastav atmosfere i koje se beleže tokom dugog vremenskog perioda.

UZROČNICI
NEANTROPOGENI
Ekosistemski procesi kao što su primarna produkcija (fotosinteza) i kruženje vode i nutrijenata.
ANTROPOGENI
Uticao čoveka na ekosisteme: emisija gasova staklene bašte i neograničeno sagoravanje fosilnih goriva: uglja, nafte, prirodnog gasa.

VISOKOPLANINSKI AKVATIČNI EKOSISTEMI
Dokle i oskudni potencijal visokih staništa Srbije je mali, tako da postoji potreba da se napuštene ekosisteme - visokoplaninske vodene ekosisteme, zaštite od uticaja klimatskih promena.

BIODIVERZITET
Planinski i visokoplaninski predeli Srbije, kao i ostatak evropskog kopnenstva, predstavljaju jedan od 6 evropskih biotopovih sistema. Važnost ovih osetljivih sistema i njihova osjetljivost na trenutno promenu postaju sve očiglednije.

CILJ PROJEKTA
Cilj projekta je da se proceni uticaj klimatskih promena na diversitet planinskih staništa, naročito akcij u okviru inicijative: voda kao što su mnoge vrste makroinvertebrata i ribolovnika.

Rufford
www.rufford.org

#EarthHour 2017 25. Mart 20:00 - 21:00



