

The Rufford Small Grants Foundation

Final Report

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

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	Özlem Özüdođru
Project title	Effects of disturbance on plant communities of Central Anatolian steppe
RSG reference	12078-1
Reporting period	September 2012 - September 2013
Amount of grant	£5745
Your email address	ozlemtorun@gmail.com
Date of this report	19.09.2013

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
The main project outcome would be the MSc Thesis of me, which planned to be submitted to Hacettepe University within 2013		X		Sampling plots were established in the study area. Field experiments and data collections were completed successfully. Laboratory measurements have been finalised. I am waiting for the results of the soil analysis. Although I have some preliminary results, I still need more time to complete the analysis and to submit MSc thesis and the relevant scientific papers.
To obtain scientific information on plant community dynamics after disturbance in Central Anatolian Steppe		X		Scientific data on response of plant species of Central Anatolian Steppe to disturbances were obtained. The results showed that, at first, disturbance has significant negative effect on plant cover, plant species richness and diversity. Although all the data analysis has not been completed, my observation on the final data suggests that species richness has been increased 1 year after disturbance applications. More accomplished results will be obtained after the analysis finalised.
To convert this study to a scientific paper that will be published in an international journal		X		Since the final analysis had not been completed, the scientific papers expected from the study have not been prepared yet. However, we presented a poster regarding the early results of the project in a scientific conference (8th Plant Life of South East Asia Symposium, Edinburgh/Scotland).
To create public awareness for nature conservation among local people living around the study area.			X	We hold an organisation for World Environment Day in Lalahan High School to increase the environmental awareness of the local people and students. In this meeting, I presented the studies we had done within the context of the project.
To establish an ecology-based educational station for nearby			X	The experiment plots still exist after we completed the disturbance implementations. Therefore, the study area can be regularly observed by

elementary schools for many years				students in future. This will allow me to obtain more results about the response of the Central Anatolian steppe communities to disturbance in long term with the participation of students.
Students will be able to engage in both actively 'doing' and 'thinking' about the nature of science and the processes involved in the methods of science, and they will see the importance of biodiversity and the influence of humans on ecosystems.			X	Local high school students were educated for ecological and environmental issues using the project studies. Selected students were participated to the field work and they learned how a scientific study can be conducted. The meeting activity held of the Environment Day increased awareness of high and elementary school students about natural ecosystems just located nearby. Moreover, a daily visit to Hacettepe University Department of Biology allows the students learn about many activities conducted in the department in relation to natural ecosystems and biological diversity.

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

We removed the slope aspect from the study, and rather we added another disturbance type. This change was done since we observed too much grazing activity by livestock in one of the slopes aspects we had planned to sample at first, and this might have affected our final results. Therefore, we decided not only to remove this slope aspect from the study, but also to add another disturbance type to show how different disturbance types effect steppe vegetation.

We had some difficulties for plant identification to the species level because of the disturbance application and sampling period. We collected some plants at only the early stage of their life cycle, and therefore, taxon name of some plants could be identified at genera or family level.

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

- I have finished the field and laboratory studies for the planned MSc thesis.
- Awareness of students about natural environment in which they are living was increased through educational and field activities of the project. They have educated about many aspects of the biological diversity of Central Anatolian Steppe and they learned how scientific studies can be conducted.
- We have collected very important data from plant communities of the Central Anatolian Steppe associated with responses of different disturbance types. Since that kind of responses have not been studied so far, then our results from artificial disturbance experiments are of critical importance to understand the effects of both grazing and agricultural activities in this biodiversity-rich ecosystem type.

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

Selected students from local high school involved in the field studies of the project, and they learned the importance of steppe ecosystems where they are living in. Local people have been informed on the effects of different disturbance types on plant communities by participating the meeting.

5. Are there any plans to continue this work?

Our experimental plots still exist in the field and we want to continue to monitor the experimental plot in long term. Thus, we will obtain long-term results about the post-disturbance recovery of steppe communities through field observation.

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

We have already presented a poster in an international scientific conference (the PLOSWA8 (Plant Life of South-West Asia 8) Symposium, Edinburgh/Scotland) regarding the early results of the project. Moreover, we plan to prepare and submit one or two scientific papers after the data analysis will completely be finalized.

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

Since the data analysis could not be completed until today, I assume that the actual length of the project should have been more than one year to achieve the complete results. However, anticipated 1-year length of the project was enough to complete all the field studies and laboratory works.

I used RSG throughout the anticipated study period (1 year). Since we conducted the field works with regular intervals during the study, the grant received from RSGF used throughout the study period. But, the increase in oil prices during the study period increased the costs of the field work especially in the second part of the study period. Additional expenses included the purchase of some materials in the first half of the study period, and service procurement for the soil sample analysis in the second half of the study period.

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
Wage of the project leader	720	720		
Rent a car	840	350	-490	We spent very less for rent-a-car than we expected, sometimes we used our own car
Fuel consumption	250	320	+70	Due to increasing fuel prices
Bicycle	135	135		
Stationery expenses	150	355	+205	More stationery materials and consumption needed

				than we expected
Field equipment	550	410	-140	Less field equipment needed
Mobile freezer	450	450		
Wage for students	480	550	+70	
Assurance costs	220	250	+30	
Data logger	500	135	-365	The data logger I bought was cheaper than I had planned before
Soil analyses	400	700	+300	The cost of soil sample analysis was higher than we expected
Meeting activities	200	200		
Scientific visit activity	150	170	+20	
Publicity activities	400	450	+50	
Scientific meeting participation	300	550	+250	Participating an international meeting costs more than I expected
TOTAL	5745	5745		1 GBP (sterling)= 3.22 TL (Turkish liras) as of 18.09.2013

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

One of the next important steps for this study would be the examination of old-field successions in Central Anatolian Steppe ecosystems. After learning many characteristics of plant colonisation and plant responses to disturbance from my experimental work under RSGF, it would be perfect to widen this study to the re-colonisation processes of the abandoned crop fields in the region.

A second, but not the least, important next step may be to continue the environmental education activities in Lalahan region, where a base for further education on this subject had already constituted by the current RSGF project.

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

We used RSGF logo in our posters, t-shirts, hats and public activity documents. RSGF will be cited in acknowledgments part of any scientific paper arising from this study. Many people (researchers, PhD and MSc students) around us have been informed about the support of RSGF, and some of them decided to prepare conservation projects to apply to RSGF.

11. Any other comments?

I thank RSGF to allow me to finish the field and laboratory work of my MSc thesis.