

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. 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	George Gorgadze
Project title	Assessing the status and distribution of Eurasian otter for better conservation and management in Georgia
RSG reference	11302-B
Reporting period	March 2012 – March 2013
Amount of grant	£ 11 890
Your email address	giorgi.gorgadze@nacres.org
Date of this report	25.03.2013

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
1. Carry out otter national survey and assess population current trend			√	The first national otter survey was undertaken and 631 sites for otter presence were checked. According to the data obtained during the national survey the distribution and status of the Eurasian otter in Georgia was evaluated and GIS database produced; legislation overview and socio-economic survey of conflict were undertaken; outline for Otter Conservation Action Plan was elaborated.
2. Start otter monitoring in the protected areas		√		Baseline surveys for otter monitoring were undertaken in Vashlovani PA, Lagodekhi PA and Borjom-Kharagauli National Park but unfortunately no evidence of otter presence could be found in Lagodekhi. Nevertheless, a short training session was provided to the local rangers. In addition, potential sites for otter monitoring were identified for the future. Guidelines for Eurasian otter monitoring was updated. Field guide for rangers was provided combined with training course. Both documents could be used in all protected areas of Georgia for Eurasian otter monitoring in the future. Unfortunately, there are no funds for monitoring programme within the budget of Ministry of Environmental Protection for this year.
3. Implement public awareness activities to reduce human-otter conflict			√	A series of meetings was organised and a package of recommendations and mitigation measures to reduce human-predator conflict elaborated during the previous project were shared with fish farm owners. Calendars and leaflets on otter ecology and conservation, prepared during the previous project, were reprinted. T-shirts with otter drawing were prepared and shared during the presentations in public and private schools.

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

We didn't encounter any serious problem during the implementation of the project.

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

A. National Otter survey

National otter survey was conducted according to standard otter survey method, suggested by IUCN/SSC Otter Specialist Group. Existing satellite and topographic images were analysed to identify suitable sites for Eurasian otter survey. The whole country was divided in 618 parts using 10 km square grid and at least two potentially good otter sites were identified. Sites were selected at intervals of about 5-8 km along river systems, coasts or lake shores, at bridges or other convenient access points.

Survey was carried out for sprints (but other signs, such as footprints, fish remains, slides, etc. are also recorded) over a distance of 600 m along the bank. The survey effort was halted as soon as otter signs were found at a site. A standard survey form, together with sketch map and digital photographs, was completed for each site and habitat variables (both aquatic and terrestrial), pollution and disturbance levels were recorded.

The national otter survey was started in March 2012 with the last site being visited in February 2013. The field survey team included volunteers and, where possible, the team was divided into four groups and equipped with necessary equipment (vehicle, GPS, D-SLR camera, laptop etc.). Maps developed from Google Earth were used for identifying the best access points for vehicles, maximising our effort and allowing us to save time and resources throughout the fieldwork. Initially, a series of supervised fieldtrips were undertaken in order to train volunteers and clarify the methodology. Subsequently, on-line conferences between the project leader and the field teams were held every day in order to share photos and findings allowing the project leader to continuously monitor the progress of the survey and to identify any difficulties as they arose.

Summer months were used to prioritise high mountain sites, where road access is limited in autumn and winter but, generally, most sites were surveyed in spring and autumn, when water level was more stable and otter signs could be easily found.

Over the 12 month survey period, we visited a total of 631 sites, distributed across the entire country. Of these, 245 (39%) had signs of otters. Sites were visited only once, but where there was a problem of access on private lands, they were checked in addition.

All sites were divided by following proportion: freshwater 90%, lake/reservoir – 8.24% and coastal waters 1.76%. Of the 568 sites surveyed in freshwater habitats, only 35.9% were positive – signs of otter presence were found; of the 11 sites at sea coast surveyed, 18.1% were positive. The highest percentage occurrence of otters was recorded at lake/reservoir sites 75%. 96.3% of inspected sites were managed by government and only 3.65% were under private management, used as fishponds.

During our survey, more than 50 of the privately owned lakes/reservoirs could not be visited as dogs, which, in most cases were left unattended, guarded them. In such cases, the stream or river flowing into the lake was surveyed. Therefore, we believe that the proportion of positive sites at lakes/reservoirs was much higher. There was a negative relationship between otter occurrence and

altitude, land use and bank vegetation build only by grass, and a positive relationship with channel width, mean depth and presence of in-stream vegetation.

Main threats identified by us were as follows: a) habitat destruction, b) limited food resources, c) poaching and human-otter conflict.

After the development of different segments in the Georgian economy, water ecosystems and riparian forest came under intense pressure. Riparian forests became more fragmented or disappeared completely, due to illegal logging and agricultural development and the development of large-scale construction required the extraction of sediment from rivers. This process resulted in wide-scale habitat destruction, water pollution and a decrease of fish resources in rivers. Uncontrolled waste management also affects otters and most of Georgia's waste, particularly outside the cities, directly or indirectly finds its way into the rivers. Illegal landfills often are constructed near rivers and much of this solid waste also ends up in the freshwater ecosystem. Uncontrolled waste management, combined with high levels of poaching and use of agricultural pesticides affects adversely on fish species composition and abundance in rivers.

Only 61 (9.66%) of the sites visited occur wholly or partly within protected area and signs of otter activity were recorded at only 25 (40.9%) of these. We think that up to 10% of whole habitat cannot guarantee sufficient protection and conservation of Eurasian otter in Georgia. We believe that it is important to implement more effective measures against poaching and include more otter habitat under sustainable management.

A report on the Eurasian otter survey will be published and disseminated among stakeholders and a scientific article on the current status of Eurasian otter in Georgia will be published.

B. Human-otter conflict and public awareness

According to Georgian legislation, the otter is included in the national red list and, as such, hunting is prohibited. The construction of fishponds and commercial breeding and production of fish became very popular in the last 20 years in Georgia. As we have found out in previous projects, and most likely as a consequence of declining fish stocks in the country's rivers due to poaching, otters more often moved to the fish ponds.

In early 2000, fish farm owners started to set up traps around fishponds and poaching operations have become more large scale. Then special unit – environmental police were established at the Ministry of Environmental protection and in few years in parallel of awareness campaign focused on fish farm owners, level of poaching has decreased. During our survey we have seen, that near almost every fishpond traps were set up. In addition, most of fishpond personnel is against otters and does not hide this. They are setting up traps or cages with live fish for otters. We believe that high level of poaching is caused by abolishment of environmental inspection held in 2011 and during last 2 years level of poaching has dramatically increased.

As we have found out from the Ministry of Environmental Protection up to 10 ponds have special licence to produce commercial fish and are included in national database. Based on images provided by Google Earth, fishponds were mapped in our GIS database. Fishponds were later visited during the fieldworks.

During our survey, we have found in total 418 fishponds. Most of them were built to breed warm water species (common carp (*Cyprinus carpio*), grass carp (*Ctenopharyngodon idella*), silver carp

(*Hypophthalmichthys molitrix*) and catfish (*Silurus glanis*). So most of fish farms are illegal, are managed without permission and it is very difficult to obtain real information who is the owner of the pond. During the last decades the number of fishponds, which are producing cold water species - rainbow trout, has dramatically increased. Such types of pond occur mainly in the western part of Georgia or in the high mountains. Ponds are very small, made by concrete and inhabit only one fish species.

On the other hand, warm water species are kept in large ponds, which combine many small size ponds. Such ponds are connected with each other using small channels. They are built near rivers or irrigation channels. All this supports establishment of semi natural environment, where shores are covered with dense vegetation. Together with commercial species, such areas inhabit many alternative preys - small size noncommercial species and various amphibians and reptiles.

As we have found out during our previous work, small non-commercial fish species, amphibians and reptiles makeup the bulk of otter diet in eastern parts of Georgia, where the level of conflict was relatively low. We think that all above mentioned factors help reduce human-otter conflict.

Density is very high in trout ponds, water is clear and there is no vegetation and, when otters reach such ponds, they can cause a lot of damage. All ponds, which we have visited in scope of otter survey, were exposed to regular attacks from otters. It should be mentioned, that the market price for carp, and other warm water fish species, varies from \$2-5 per kg. On the other hand, the price for trout is much higher, reaching up to \$10 per kg dependent on fish size. So trout is a high risk but also high profit species to invest and we think that number of such fish farms will continue to grow in future.

Only in few cases, effective measures were undertaken to fully protect trout stock. We have visited areas, where plots of lands or themselves ponds were fenced and tightly guarded by dogs. In addition, some ponds are controlled using secure cameras and camera traps. As guards of fish farms told us, otter approaches their ponds on regular bases. Near trout canals, special cages with live fish are set up to trap otters.

Expanding on this, we foresee an increase in the number of trout farms as well as increase of conflict level. However level of awareness should be raised and specific mitigation measures should be elaborated and provided for trout farmers.

A series of meetings with local stakeholders were organised and package of recommendations and mitigation measures to reduce human-predator conflict elaborated during the previous project were shared with fish farm owners. We have also presented our findings to the stakeholders.

Calendars and leaflets on otter ecology and conservation, prepared during the previous project, were reprinted.

At the end of summer a series of open lectures and presentations were held in 6 provinces of Georgia. T-shirts with otter drawing were prepared and shared during the presentations in public and private schools.

C. Otter monitoring

Baseline surveys for otter monitoring were undertaken in Vashlovani PA, Lagodekhi PA and Borjom-Kharagauli National Park. The survey was undertaken in Lagodekhi protected areas but

unfortunately no evidence of otter presence could be found. We think that low density of trout in rivers can be the reason of otter absence.

During the national otter survey, all above-mentioned protected areas were visited and potential sites for otter monitoring were identified for the future. Field guides for rangers were provided, combined with training in their use. Training programs offered to rangers were beneficial in developing skills in surveying and monitoring of otter populations and habitats. It will also strengthen patrolling of otter habitats and improve the strict enforcement of wildlife laws and regulation.

Field guides and survey/monitoring guidelines could be used in all relevant protected areas of Georgia in the future. The Eurasian otter is one of the key species in biodiversity monitoring programme of Georgia, but due to a lack of funds within the Ministry of Environmental Protection, it is unlikely that such a programme will be implemented in the near future.

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

A field survey team was established, which included students and local young stakeholders. Team members were involved in otter survey, which has covered the whole country. They have improved their knowledge in track identification, GPS and GIS use. They have participated in legislation overview and socio-economic survey of conflict and public awareness activities. Rangers of protected areas were involved in the field survey team. They received a series of training sessions and helped us during data collecting. If otter monitoring will start in nearest future, they will be able to conduct the survey independently.

During the fieldwork, we have visited as many as possible fish farms in whole country. We have provided recommendations and shared experience of other fish farm owners from eastern Georgia. We have demonstrated the current situation on other fish farms, where the conflict was reduced already. The farm owners have discussed with each other the root causes of their problem. Many owners of fish farms had questions concerning otter ecology and diet, mitigation measures elaborated by us and on guidelines for pond management. We have shared experience of other countries etc. With leaflet on otter ecology and our project findings, we have announced our hotline number. Using this opportunity, we are trying to provide some theoretical and practical advice for farm owners; to establish links between fish farmers and to update database of human-otter conflict.

5. Are there any plans to continue this work?

Our otter research and conservation team in close cooperation with local stakeholders will continue otter population monitoring in eastern Georgia. We intend to capture otters for radio tracking and study current situation near fishponds. We intend to continue working on conflict issues and supporting its mitigation.

In nearest future, building of hydro power stations across the country can seriously change river ecosystems in many regions of Georgia. The impact is likely to be major on aquatic environment. We believe that monitoring should begin a year before commencement of construction works and continue during 10 years after completion of civil works.

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

A package of recommendations and prevention measures for reducing otter-human conflict was distributed among fish farms and local authorities. Results obtained from the fieldwork were shared with local stakeholders, fish farm owners and non-governmental organisations.

The project results will be delivered to Ministry of Environment of Georgia and placed in NACRES annual report.

Results of our ongoing project and our previous work were presented on The Rufford Small Grants Recipients Conference in Armenia sponsored by Rufford Small Grants Foundation, which was held on September 27-30, 2012 in Dilijan, Armenia.

Findings of our project will be presented during IUCN European Otter Workshop 2013, which will be held in Ireland, on 24th - 27th April 2013.

According to the data obtained during national otter survey, scientific articles will be published.

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

Grant provided by The Rufford Small Grants Foundation was used in period from March 2012 till the end of March 2013. All activities have been implemented in accordance with the original work plan.

8. Budget

Item	Budgeted Amount	Actual Amount	Difference	Comments
Fuel	£ 960	£ 1240	- £ 280	More fuel were consumed during the fieldwork and difference was added from the vehicle rent budget line
Vehicle rent	£ 2680	£ 2400	+ £ 280	Difference was shifted to the fuel budget line
Equipment	£ 740	£ 520	+ £ 220	Difference was shifted to the Pier diems/food budget line
Communication	£ 220	£ 220	£ 0	
Bank charge	£ 70	£ 62	+ £ 8	Difference was shifted to the Pier diems/food budget line
Meetings	£ 420	£ 420	£ 0	
Publications	£ 1800	£ 1600	+ £ 200	Difference was shifted to the Pier diems/food budget line
Pier diems/food	£ 4200	£ 4640	- £ 440	National survey was prolonged and difference was added from other budget lines
Transportation	£ 800	£ 788	+ £ 12	Difference was shifted to the Pier diems/food budget line
Total	£ 11890	£ 11890	£ 0	1 GPB – 2,75 GEL.

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

Georgian law obligates carrying out monitoring of endangered species and responsibility for biodiversity monitoring is distributed among governmental agencies. A protocol, which was elaborated in scope of this project, provides the practical information needed to undertake the monitoring of Eurasian otter in protected areas. In close future wide monitoring programme should be implemented with cooperation among governmental agencies and nongovernmental organisation, which could provide a training course combined with field sessions to the rangers of the national parks.

According to the data obtained during the national wide survey, the status of Eurasian otter more precisely should be addressed in the Red List of Georgia.

One of the important things in order to support otter conservation in Georgia should be development of conservation action plan.

As we have seen, building of trout farms became very popular and level of conflict has risen. Guidelines elaborated during previous projects do not cover this issue, because at that time numbers of trout farms were very low. The next important step to solve otter-human conflict should be update of prevention measures and they should be implemented immediately. I believe that in close cooperation with local stakeholders and involving as much as possible fish farm owners into the process the current conflict could be managed in proper way.

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 have used logo in calendar and leaflet, also stamped on T-shirt and all conditions were agreed with RSGF.