

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	Johnson Grayson Mshana
Project title	Community Participation in the Conservation of Critically Endangered Jipe Tilapia <i>Oreochromis jipe</i> and Lake Jipe Ecosystem in Tanzania
RSG reference	19419-B
Reporting period	April 2016-April 2017
Amount of grant	£9988
Your email address	mshanajohn1@suanet.ac.tz
Date of this report	June 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
Determine population status, breeding grounds of Jipe Tilapia and promote establishment of 'Protected Areas.				<p>Assessment of the relative abundance and distribution of Jipe tilapia was determined in the field survey. The abundance of Jipe tilapia was found to be relatively high in the northern than in the southern part of the lake. The breeding grounds was further scattered in several areas within the lake but the most potential areas was found in the southern and northern part of the Lake (GPS points to be provided in the detailed report). Field survey observed matured individuals of the same species in the downstream of Ruvu River but did not record presence of juveniles. Further analysis indicated the presence of large size individuals from the river than in the lake. However, the abundance of the same species in the lake was higher than in the river.</p> <p>Feedback meeting was conducted to mobilise the establishment of the 'Protected Areas' based on the research findings. Two 'Protected Area' within the breeding grounds were established and supported by the community and government leaders in the northern and southern part of the Lake. Regulations governing the protection of reserve areas are still underway to be developed by the Beach Management Units (BMUs) in cooperation with the fisheries officers and project team members. Two training to strengthen the capacity of BMUs on the same matter was conducted. In addition, the study reports major reduction in recruitment and reproductive failures probably resulting from illegal fishing, overfishing and habitat loss.</p>
Raise awareness on the sustainable use				Awareness meeting was conducted to 67 parents in the mountainous villages and in

<p>of forests and wetlands in the Pare mountainous areas and enforce laws for the protection of 'buffer zone' and river banks</p>			<p>existing two School Environmental Clubs. Poem and game competition with various conservation messages were presented by school club members to enhance villagers' knowledge on the threats to Lake Jipe ecosystem. Training was conducted to enhance the knowledge of government village leaders and BMUs on the lake protection through laws enforcement in buffer zones and river bank habitats.</p>
<p>Alleviating poverty and enhance local community's food security through support of the improved local community income generating activities that are environmentally friendly</p>			<p>Beekeepers associations were supported with 45 hives. Group members 45 hives making a total of 90 hives at the end of the project. Beekeepers were trained on microeconomic enterprise and their knowledge improved. Field training was conducted to strengthen the capacity of beekeepers on hive sighting, protection of bees from enemies, harvesting, and transport, storage of bee products, value addition and marketing strategy. A total of 890 1-month old chicks were provided to the group members and 87% were already at mature stage at the end of the project.</p>
<p>Increasing on-farm vegetation cover and reduce soil erosion on the small-scale farms along the Lake and rivers through agro-forestry, promote zero grazing and cattle dairy farming and mobilize restoration of degraded forests in the catchment areas through tree planting</p>			<p>A total of 3200 seedlings of indigenous trees were raised in the existing tree nurseries. Seedlings were transplanted in the degraded areas during March 2017 at the onset of the rain season. One new tree nurseries were supported in the mountainous areas with a total of 3200 seedlings which was transplanted in the river banks during March 2017 at the commencement of the rain season. Fifteen farmers in the mountainous areas were trained to design and construct cage and terraces for improved productivity and soil erosion control. Of the trained villagers, six managed to construct terraces in their farms.</p>
<p>Reduce surrounding forest degradation and Lake siltation by supporting environmental</p>			<p>One environmentally friendly firewood stove were designed and constructed as a demo. The demo efficient firewood stove will be used for training villagers and schools around the village on the best</p>

friendly fire wood stove in Ruru primary school and Jipe Secondary school.				way of using small quantity of fire wood so as to reduce forest degradation.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

- ❖ Increased price of hives and transport cost beyond the budget line which lead to reduced number of hives distributed to the beekeepers. The challenges were considered positive in the sense that group members discussed with the team members and agreed that when project support one hive, the existing group members has to provide another hive.
- ❖ The poor participation of youth in awareness and outreach programmes especially in the Pare mountainous areas at the initial stage of the project were dealt through youth special session. The session held in June 2016 mobilized youth participation in the lake environmental conservation.
- ❖ Increased number of people motivated to conduct beekeeping and local chicken keeping beyond what the project can support. People were mobilized to form groups and request other trained community members to support and strengthen their capacity on beekeeping and improved local chicken. However, it was noted that increased number of people involved in other alternative activities will decrease fishing pressure to the underlying Lake Jipe ecosystem and Jipe tilapia as an umbrella species.
- ❖ Establishment of the 'Reserve Areas' were viewed by some community members as an immediate management measures to improve Jipe tilapia population something which could not realised within project timeline. Awareness programme was conducted so as improve peoples understanding on the immediate and long time conservation outcomes of the project. However, during awareness program, experienced fishers claimed that improvement of Jipe tilapia population could not be realised due to poor recruitment, stunted growth, reproductive failures, parasite infestation and juvenile predation. The project could not investigate this due to tie and budget.

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

- ❖ Establishment of the database on the abundance, distribution and breeding grounds of critically endangered Jipe tilapia *Oreochromis jipe*. This is important information for monitoring population of Jipe tilapia for the feature conservation initiatives within the same ecosystem.
- ❖ Formation of 'Reserved Areas' in the two major breeding grounds. Given compliance of the community to the rules and regulations governing the "Reserved Areas' the population status of Jipe tilapia will be improved in the feature.
- ❖ More people supported in environmentally friendly alternative livelihood activities (beekeeping and local chicken keeping). Alternative livelihood activities supported by Rufford have attracted attention of the community

members of both ages. This is expected to change the way people decides on the use of the Lake resources.

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

The community groups involved in the project activities includes village leaders, Beach Management Members (BMUs), Village Environmental Committee (VEC), fishers and farmers. Communities were involved in education programme, tree nurseries setup and tree seedling planting, research participation and workshop training on the resource use and efficient fire wood stove construction. Research finding on the abundance and distribution of Jipe tilapia as well as potential breeding sites were presented to the community through village meeting. Communities were involved in the decision with regard to the establishment of 'Reserve Areas' to enhance productivity of Jipe tilapia. The community gained practical skills on hive construction and improved local chicken management. In addition, the communities benefitted through support on hives and quality one month old chicks.

5. Are there any plans to continue this work?

Yes. The project will continue to address conservation activities for the protection of Lake Jipe ecosystem and Jipe tilapia through the following approaches:

- ❖ Create fish sanctuaries and provide artificial structures to enhance recruitment reduce reproductive failures and reduce juvenile predation.
- ❖ Improve governance and upscale alternative livelihood activities of the fisheries sector in the lake.
- ❖ Development and promotion of sustainable fishing gears.
- ❖ Facilitate the effective implementation of existing legislation and work with governments to achieve national-level protective measures.
- ❖ Promotion of networks, partnerships, and coalitions that assist in the implementation of activities that promote collaboration and maximise coordinated conservation and management of Lake Jipe.
- ❖ Extend current research efforts concerning Jipe tilapia with the specific focus of furthering improving the knowledge of key biological aspects of these species' life histories, parasite infestation, ecology and conservation genetics.

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

The results of the project were presented in the past 'Rufford Small Grant Recipient Conference' held in Kilimanjaro Tanzania. Part of the project results will be presented in the coming International biodiversity conference organised by Tanzania Wildlife Research Institute. In addition, the results of the present project will be used to prepare 'Policy Statement' for Lake Jipe to be submitted to decision makers at Ministry level.

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 RSG was used from April 2016 to April 2017. The project was planned to run from April 2016 to February 2017. However, the project was completed in April 2017 for several logistical reasons including unpredictable weather and school time table.

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
Coast for boat fuel	340	290	50	Decline in the price of fuel
Purchase of floating sinkers	200	265	65	Change in price
Purchase of improved local chicken	1188	1188	0	Price changed but the decision was to decrease number of chicks to fit the fund
Purchase of hives	600	600	0	Price increased but the expected number of hives was obtained through community participation in hive construction.
Purchase of Projector	650	650	0	No changes in products price
Purchase of tree nurseries facilities for watering	200	200	0	No changes in products price
Boat hiring during field	200	200	0	No changes in the products price
Purchase of cloth for honey harvesting	150	165	15	Caused by price increase
Purchase of six sets of plastic materials for tree nurseries	720	720	0	No changes in products price
Purchase of 40 bags of cement	240	240	0	No changes in products price
Purchase of 6 iron rings	180	180	0	No changes in the products price
Field car hiring at Mwanga district to the field sites	790	790	0	No changes in the products price
Local and bus transport cost for team members	1440	1440	0	No change in the products price
Accommodation and meal allowance	2160	2160	0	
Purchase of solar	480			Was not purchased
Transport cost for chicks, sinkers, wood and hives	50	500	450	The expected car from the farm got breakdown hence lead to opt for car hiring
Organizing meeting /workshops/ fare for district and village authorities	400	400	0	

Total	9988	9988	580	The funds provided was used as planned except that solar facilities was not purchased due to shortage of funds as price for it increased beyond budget line.
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9. Looking ahead, what do you feel are the important next steps?

The important next step is 'To bring people together to recover the health of the Lake Jipe, rejuvenate its resources, and improve the livelihood of the populations'. This will be achieved through further financial support on:

- ❖ Creating fish sanctuaries and provide artificial structures to enhance fish recruitment, reduce reproductive failures and juvenile predation.
- ❖ Improve governance and upscale alternative livelihood activities of the fisheries sector in the lake.
- ❖ Development and promotion of sustainable fishing gears and up-scaling fish preservation technique.
- ❖ Facilitate the effective implementation of existing legislation and work with governments to achieve national-level protective measures.
- ❖ Extend current research efforts concerning Jipe tilapia with the specific focus of furthering improving the knowledge of key biological aspects of these species' life histories, parasite infestation, and ecology and conservation genetics.

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 RSGF Logo was used in the following activities:

- ❖ Posters and leaflets used in the Rufford Small Grants conference in Kilimanjaro Tanzania was printed with Rufford Foundation Logo.
- ❖ Cover page and at the top of very page of the Manual for Improved Beekeeping-Ufugaji Bora wa Nyuki.
- ❖ Printed Certificates for Trained Environmental club members.

11. Any other comments?

The involvement and participation of local residents played key role in species and habitat conservation of critically endangered Jipe tilapia and its ecosystem in Lake Jipe in Tanzanian part. Thanks to the financial support from Rufford Small Grant. The international organizations are invited to assist on the conservation of fragile ecosystem in Lake Jipe.