

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	Antonio de la Torre de Lara
Project title	Building a Participatory Monitoring Program Focused on Jaguars and other Endangered Species in the Greater Lacandona Ecosystem, Mexico.
RSG reference	23105-2
Reporting period	June 2018 – June 2019
Amount of grant	£ 5000
Your email address	adelatorre@ieciologia.unam.mx
Date of this report	July 12 th 2019

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
<p>1) Train two groups of local people with the aim of implementing a monitoring program focused on jaguars and their prey in Chan-kin and Yaxchilán Natural Protected Areas and in the Communal Reserve known as Sierra la Cojolita.</p>				<p>We trained two groups of local monitors to implement activities of biological monitoring of large and medium sized mammals through camera trap technique, and to implement activities of surveillance within the Yaxchilán and Chan-kin protected areas, and in the Communal Reserve Sierra La Cojolita.</p> <p>These two groups are formed by people of the local community of Frontera Corozal and nowadays, they're monitoring jaguars and their prey using camera traps in our study area.</p>
<p>2) To strengthen and improve surveillance activities in the crucial areas for jaguar conservation in the GLE training two groups of local people and administrators of the natural protected areas by using the SMART platform.</p>				<p>Two groups of local people and administrators of natural protected areas received one workshop about the SMART platform to improve the surveillance activities within the critical habitat of jaguars in northern region of Lacandona Forest. The training workshop was carried out by GIZ (German Development Agency) with CONANP Mexico and supported by our team. According with our last supervision visit to the local monitors, they are using the equipment acquired to use the SMART platform and the information recorded by the monitors is being collected by the natural protected areas administrators.</p> <p>However, at this moment the information collected through SMART platform is not being used for improving the surveillance activities or to implement actions to detect illegal activities within protected</p>

			<p>areas by the natural protected areas administrators. Other issue is that the natural protected areas administrators' didn't want to share the information collected by the SMART platform with us and they are very reluctant to receive recommendations to streamline surveillance using the SMART system as a feedback to identify hotspots of environmental crimes within protected areas.</p>
<p>3) To develop an educational and communication strategy to inform the local communities about the ecological and cultural importance of the jaguar and other endangered species for raise awareness in the local people.</p>			<p>We designed a didactic and communication material aimed to spread the importance of jaguar and other emblematic species in the Greater Lacandona ecosystem. For this we wrote, designed and printed a tale story focused to the local children which describe the wildlife species that live in the forest, explain the importance of the involvement of local communities in conservation activities and give some potential solutions to mitigate the jaguar-human conflict. We printed 1,000 copies of this tale story and we shared them in five different local communities during diverse environmental education activities in local schools.</p> <p>We are currently working in the design of one infographic which will explain the ecological, cultural and economic importance of jaguars in the Greater Lacandona ecosystem. This material will be shared in the schools, ecotourism centres, livestock organisations and local authorities.</p> <p>Additionally, we gave three talks with the students of local universities (two in Frontera Corozal and one in Nueva Palestina communities) aimed to explain our project and communicate the importance of protecting jaguars and other endangered species in the region.</p>

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

The most relevant difficulty was to collaborate together with the administrators of the natural protected areas (CONANP) and GIZ for the implementation of the SMART workshop. Although, GIZ and the Commission of Natural Protected Areas (CONANP) are implementing the SMART platform and are training the surveillance brigades of the Natural Protected Areas to evaluate their activities and performance, the information of the SMART platform obtained by CONANP has not been used yet to improve the strategy in the surveillance activities. In this sense, I think that it's crucial to establish together with protected areas administrator a new protocol to use the information generated by local monitors through SMART platform to define a more efficient strategy to deal the environmental crimes within the critical habitat for jaguars and other emblematic species.

In our last meeting with the local monitors they proposed the implementation of a new workshop for them and administrators of protected areas to analyse the data obtained by SMART, to identify the critical areas of environmental illicit, to generate a protocol of action and to engage more the local authorities and other institutions such as the Mexican Army and the municipal security in the surveillance of protected areas. We are exploring together with the natural protected areas administrators the possibility of implement this new workshop in the following months. We expect that after this workshop the operability of the surveillance activities in our study are can be more efficient and can have a positive impact in the populations of the endangered species of this region.

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

1) The capacity building of two groups of local monitors to develop monitoring and surveillance activities in the region in long term. This group of trained and consolidated local monitors will help natural protected areas administrators to improve their monitoring and surveillance activities and will help to involve actively local communities in the jaguar conservation in the region.

2) The establishment of a long-term participatory monitoring programme focused on jaguars and other endangered species. With this, we expect to have a feedback tool to evaluate the conservation actions implemented focused on jaguars and other endangered species in the northern Greater Lacandona ecosystem.

3) The establishment of the basis to develop a permanent environmental education program aimed to raise awareness about the importance of jaguar conservation and coexistence with local communities in the northern Greater Lacandona ecosystem.

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

Our project was based on the actively involvement of the local communities. With this project we trained two groups of local people to develop monitoring and surveillance

activities and we expected that they will be our link with local community authorities to spread the importance of jaguars, other endangered species, and its habitat. Additionally, our project involved a component of environmental education aimed to local children and adult cattle owners. In the communities where we work the basic education system is weak, so the implementation of other types of education activities help to strengthen the learning of local children and youth. With the didactic material and the environmental education activities that we carried out in the local communities we expect to raise awareness on endangered species importance, generate a change of attitude about the protection of their natural environment, and in overall getting them actively involved in other conservation actions.

5. Are there any plans to continue this work?

During the last 2 years my team and I have been worked in consolidate a permanent jaguar conservation programme in the southern Mayan Forest (Greater Lacandona Ecosystem). This programme has four main components: 1) A permanent community-based monitoring programme to evaluate jaguar population conservation status; 2) Capacity building of local people to perform monitoring and surveillance activities, and with local cattle owners to improve their husbandry practices to avoid jaguar predation upon their domestic cattle; 3) jaguar-human conflict mitigation through the construction of night enclosures and electric fences for cattle owners that have frequent attack of jaguars upon their domestic cattle; and 4) permanent environmental education activities focused on local children to promote a positive perception of jaguars in the local communities. The support of the Rufford Foundation has helped us to consolidate and give continuous work on three of these components (1, 2, and 4). This year we launched this program named Mayan Jaguars Program (Programa Jaguares de la Selva Maya), which its main aim is to ensure the long-term conservation of jaguars and their habitat in the Selva Maya by working actively together with local communities. The web page of our programme will be ready in late July 2019 (www.jaguaredelaselvamaya.org), and we already have activities planned for the next two years.

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

We expect to publish an article about the importance of the participatory monitoring of local communities to conserve jaguars and other emblematic species in southern Mexico. We would like to publish this article in *Oryx International Journal of Conservation*.

We are editing a video for social media of our project to illustrate the importance of the actively involvement of local communities in the conservation of jaguars and other emblematic species. This video will be shared in our social media and in web page which will be launched in August 2019 (www.jaguaredelaselvamaya.org).

Results of this project will be partially presented in the International Congress of Conservation Biology which will be held in Kuala Lumpur Malaysia from 21st to 25th July 2019. The presentation will be given by Paulina Arroyo who is the team member in charge of the participatory monitoring component of our project.

We have presented the results of the participatory monitoring program to the National Commission of Protected Areas (CONANP) and National Commission of Knowledge and Use of Biodiversity (CONABIO) which are agencies of the Mexican Federal Government. Additionally, the results of our monitoring programme have been presented to the members of the National Alliance for Jaguar Conservation in Mexico which is a group of organisations that work in design strategies to ensure the long-term conservation of jaguars in Mexico.

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 grant was used from June 2018 to July 2019. We have one pending activity which we would like to implement in November 2019 (see below).

Camera trapping training workshop and the deployment of the camera traps were carried out in June 2018. These activities were originally planned by May 2018. First revision of the camera traps was implemented in the schedule planned (September 2018). Elaboration of the database of information obtained by the camera traps were implemented in May 2019, and preliminary analysis of camera trap data is being implemented right now. These activities were planned by September and October 2019, respectively.

SMART workshop was implemented in November 2018 in the city of Palenque, Chiapas, Mexico. This workshop was coordinated by GIZ (German Development Agency) and CONANP-Mexico. Surveillance activities performed by local monitors using SMART platform started in December 2018, and the meeting to evaluate the performance and adjust the work plan was held in June 2019. We expect have a new workshop in November 2019 together with local monitors and protected areas administrator to develop new protocol for use the information obtained by SMART platform to define a more efficient strategy to deal with environmental crimes within the critical habitat of jaguars and other emblematic species.

The design of the communication and didactic material started in July 2018. The tale story for children was printed in November 2018, and the material were share in the local communities in November 2018 under the framework of the International Jaguar Day (November 29th). Talks in the schools and universities were carried out during the different field trips from June 2018 to June 2019.

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
Print of the environmental education material	60	260	+ 200	This amount was used to print the tale story for children in November 2018.
Payment for the person who will design the environmental education material	120	120		This amount was used to the pay the salary of the person who made the graphics of the tale story for children in July 2018.
Payment of the person who will give the SMART Workshop	200		- 200	Since the first SMART workshop was supported by GIZ and CONANP-Mexico we used this cover the cost of the impression of the tale history for children.
Implementation of the camera trapping workshop	150	150		This amount was used to implement the camera trapping workshop in June 2018.
Lodging for 30 people for implement SMART workshop	1,050		- 1,050	Since the first SMART workshop was supported by GIZ and CONANP-Mexico we used this cover the cost of additional camera traps.
Gas for boat for the monitoring activities	750	750		This amount was used during the different field trips to our study area
Fuel for a vehicle (travels to the study area)	475	475		This amount was used during the different field trips area
Lodging and meals for 3 persons during the field work	600	600		This amount was used during the different field trips area
30 SD cards	70	70		This amount was used to acquire part of the SD required for the monitoring through camera traps.
30 Camera traps	1,350	2,400	+1,050	This amount was used to acquire part of the camera traps required for the monitoring program. With this we acquired 20 camera traps (Bushnell 16M Trophy Cam HD)

Batteries for camera traps	175	175		This amount was used to acquire part of the batteries required for the monitoring program.
TOTAL	£5000	£5000		

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

One following step it's ensures the long-term sustainability of the participatory monitoring programme. I think this component has helped a lot to engage local communities in the jaguar conservation programme in the Greater Lacandona ecosystem and the information obtained through this participatory monitoring is giving a valuable information of the conservation status of several endangered species and the ecosystems health overall. The participatory monitoring will be essential in the future to provide information to stakeholders to improve the law enforcement in critical areas within Natural Protected Areas or in key areas which are crucial to maintain the habitat for jaguars and other endangered species. I think that the weakest part of our project is the environmental education component. We are aware that we require a new team member that work full time in this component. We would like to have impact in more communities and people of the Greater Lacandona ecosystem through a not formal education programme focused on the children and the stakeholders of this region.

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

Yes, we did. We included the Rufford Foundation logo in our presentations, and we included it in our printed material (story tale), and it will be included in the infographic that will be printed and share in late August.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Paulina Arroyo (Natura y Ecosistemas mexicanos A.C.). She is charge on the monitoring of component of our project. Her main aim is to monitoring jaguars and other endangered species using camera traps in collaboration with local communities.

Gamaliel Camacho (Bioconciencia A. C.). He is charge of the jaguar-human conflict component of our project. He is giving capacity building to local cattle ranchers to avoid jaguar predation.

Laura Navarro (Bioconciencia A. C.). She developed and designed the communication and didactic material of this project. She is a professional pedagogue with more than 25 years of experience in environmental education.

Local monitors of Yaxchilán Natural Protected Area:

- Guillermo Mayo Perez
- José Luis Jimenez Perez
- Rolando Sanchez Alvaro
- Rene Lopez Narvaez
- Rigoberto López Jimenez
- Francisco Mendez López

Local monitors of Chan-kin Natural Protected Area:

- Feliciano Lopez Cruz
- Paulino Ramirez Torrez
- Yuri Lopez Cruz
- Claudio Jiménez Díaz
- Victor Manuel Vásquez Arcos
- Leonicio Martinez Gómez

12. Any other comments?

We appreciate so much the support of the Rufford Foundation. This grant has helps us considerably to consolidate the Mayan Jaguar Program (Jaguares de la Selva Maya). I included along this report the following material:

- A pdf copy of the tale story for children that we printed (didactic and communication material).
- Three videos obtained by camera traps during monitoring activities.
- Six pictures of different activities of our project.
- A word file with captions for photos and videos.



Left: Victor and Rigober to, who are community monitors, deploying a camera trap in Yaxchilán Natural Protected Area. ©Paulina Arroyo. Right: Victor Vásquez (community monitor) programming a camera trap. © Paulina Arroyo.



Antonio de la Torre and Paulina Arroyo during one of the training courses with the community monitors. © Paco de la Torre.



Left: Community monitors and Paulina Arroyo after an activity with children in Frontera Corozal. © Paulina Arroyo. Right: Children in an environmental education activity reading the didactic material related to jaguar conservation. © Antonio de la Torre.