

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	Duy Le
Project title	The Research and Conservation of Eastern Sarus Crane (<i>Grus antigone sharpii</i>) in the Mekong delta, Vietnam
RSG reference	16356-1
Reporting period	31 st July 2014 to 31 st July 2015
Amount of grant	£5000
Your email address	leduy04h@gmail.com
Date of this report	13 th July 2016

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 time budgets for the eastern Sarus crane		√		– Base on 170 behavioural hours which it was collected on the field, the time budgets for the eastern Sarus crane is still under progress of analysing.
Determine the behaviour patterns			√	– The classic ethogram of the eastern Sarus crane was described with these image and video illustrations.
Data on the size and characterisation of habitat used by the eastern Sarus crane		√		– 100 quadrats (1 m x 1 m) were established where the eastern Sarus cranes were sighted. Of these, 60 quadrats were in Tram Chim National Park and 40 quadrats in Ha Tien Plain. – Habitat characteristics is still under progress of analysing.
Improve capacity of local people			√	– Conducted the two workshops and training course on the study of behaviour and habitat use of the eastern Sarus crane in Tram Chim National Park and Southern Institute of Ecology.
To raise awareness of local people toward the eastern Sarus crane		√		– Carried out interview survey 60 local people who live in and around Tram Chim National Park

conservation				<p>and Ha Tien Plain.</p> <ul style="list-style-type: none"> - Designed 1000 leaflets and provided to local people (local schools, local authorities, coffee shops, etc.) in our study sites. - Awareness of local communities has been partly raised. So we need to implement more educational programmes to them next year.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

In the dry season in 2016, due to the late of the seasonal movement of the eastern Sarus crane to Tram Chim National Park and Ha Tien Plain from Cambodia, we had to delay field research schedules which was firstly undertaken in the end of February 2016. One of the biggest problems was divergent language of Khmer people to participate in the interview surveys in Ha Tien Plain. We have hired a local Khmer who could translate between Vietnamese and Khmer language in our interview activities.

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

- The knowledge base on the behavioural ecology and habitat use of eastern Sarus crane has increased during dry season in the Mekong Delta, Vietnam - through observations and comparisons to published literature on behaviour of cranes, we recorded 67 ethons of the classic ethogram of the eastern Sarus crane. In the compendium of the eastern Sarus crane's behaviour above, with various types of ethogram are classified in two group: non-social behaviour (44 ethons) and social behaviour (23 ethons). In this study, the eastern Sarus cranes spent maximum of their time (about 47%) on foraging. The most time spent for foraging of the crane's diurnal time budget has been demonstrated in some crane species. During our study, the eastern Sarus crane's non-breeding habitats are different types of wetland habitat, including rice field, melaleuca forest, leperonia and eleocheris and eleocheris habitat. Of these, the eleocheris habitat which may most essentials for the eastern Sarus crane in the dry season.

- Capacity to work for eastern Sarus crane research enhanced: 45 people, including local people and volunteers were trained in the behaviour and habitat study techniques: identify classic ethogram, scan animal sampling method, setting-up quadrat, Minimum Convex Polygon (MCP) method as well as used R programme and QGIS software for data analysing. Moreover, the more field team we formed allowed everyone take direct part in the field work.
- Raising awareness of local people about the eastern Sarus crane conservation has been improved in the Mekong Delta: We have provided 1000 leaflets to local people in our study sites. With our interview activities, 44 questions which focus on interviewees, we have also carried out interview survey of 60 local people. By doing that, the interactive within these activities, our project was stimulated other authorities, scientific institutions and non-governmental organisations to become involved in eastern Sarus crane conservation in Vietnam.

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

In our project, the work with local people was one of the objective priorities, our team used every opportunity for interaction with local people. We have encouraged local communities such as adults, children, authorities, forest rangers and local students into training courses, workshops, interview activities and field guides. So their knowledge of conservation and working team skills have been improved them to work for both building long term monitoring programme for this species and other research and conservation project in the Mekong Delta, Vietnam in the future.

In addition, we established a small group which it consisted of local technical staff, forest rangers and local authorities in Tram Chim National Park for building long term monitoring programme for this species in the future. They will be benefited from this work and developed skills, abilities and knowledge that will help them a lot in our future work.

5. Are there any plans to continue this work?

Yes, we continue our research in collecting more the behaviour and habitat data of the eastern Sarus crane next year (2017) that help having enough data for publication.

Continue education and awareness raising programmes, focus on children and Khmer people in the Mekong Delta with look for another financial funding to support this work.

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

i) Regional level:

By doing training courses on the study of behaviour and habitat uses by the eastern Sarus crane for local people, especially local technical staff, forest rangers and local authorities in Tram Chim National Park and Phu My Lepironia Grassland Conservation Project, our project was great way to strengthen the capacity on the ecology study and share its good working experience with them in the Mekong Delta. It is necessary to establish a local monitoring network for the eastern Sarus crane every year in the future.

Besides, the final technical report which it introduce the main results of this project will be shared with local managers, such as the management boards of Tram Chim National Park and Phu My Lepironial Grassland Conservation Project.

ii) National and International level:

In this project, due to data collection of their behaviour patterns less than expectation, we will continue collecting more data next year. Combined with next data we will submit the final detail report to RSG and publish in reputed scientific journals.

The experiences and results gained on the study behaviour and habitat of the Sarus crane is shared with specialists working on the same species in Cambodia and International Crane Foundation (ICF).

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 project's design and preparation survey plans started in July 2015 and other practical work activities on the project started in December 2015.

Activity	The anticipated of the project	Actual length of the project
– Preparation survey plans	– July to September 2015.	– fit
– Training courses	– October to December 2015	– fit
– Field sampling	– February to May 2016	– the end of February-June (late at least a half month) due to the late of

		seasonal movement of the Sarus Crane to the Mekong delta, Vietnam
– Interviews activities	– March to May 2016	– fit
– The final report	– The end of June 2016	– July (late a half month)

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
<u>Food and accommodation</u>				
	3000	3000	0	fit
<u>Travel</u>				
Motorbike rental	200	198	2	Motorbike rental price was cheaper
Boat rental	600	612	-12	Due to increasing of petrol price during our survey in Tram Chim National Park, boat rental price became more expensive
Field guides	0	43	-43	Unforeseen: Used to translate in Ha Tien Plain
<u>Equipment and supplies</u>				
Binocular	185	185	0	fit
Workshop expenses	215	200	15	Decreased number of days for workshop. We need to discuss more threatens to the Eastern Sarus Crane and their wetlands
Training courses expenses	700	682	18	Food for trainees was cheaper
Questionnaire and leaflets printing	100	90	10	The leaflets printing was cheaper
Total	5.000	5.010	-10	Differences due to expenses of unforeseen field guide

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

Three important next steps should be studied after this project ends:

- 1) To continue the study of behaviour and habitat uses of the eastern Sarus crane in the dry and rain season in Vietnam and Cambodia.
- 2) It is essential to have a plan to build the long term monitoring programme for this species and its habitat condition in the dry season every year in Vietnam.
- 3) Develop programmes for rehabilitating and reconstructing the habitat of this species at Tram Chim National Park and Ha Tien Plain in the Mekong Delta. Beside, identify and protect other important wetlands on the eastern Sarus crane's migration route in Vietnam.

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?

Yes, we used the RSGF logo in our training documents and seminars. RSGF logo was also be used in any materials produced in relation to this project such as leaflets, posters and certificates.

11. Any other comments?

This project that support of the Rufford Small Grants Foundation was the first step to understand the population ecology and habitat of the eastern Sarus crane in Vietnam. In a developing country like Vietnam, the remain natural wetlands in the Mekong Delta is recently under the pressure of the rapid agriculture and aquaculture development, there is essential to have plan protect important wetlands and building long term monitoring programme for the threatened species and their habitat condition, such as eastern Sarus crane in the near future.

We would like to thank the Rufford Small Grants Foundation for financially supporting this research and the management boards of Tram Chim National Park, Phu My Lepironia Grassland Conservation Project and Southern Institute of Ecology where we conducted both fieldwork and training courses for their cooperation. I hope that the Rufford Small Grants Foundation will continue its support for our research and conservation activities in the near future.