



## Illegal Wildlife Trade (IWT) Challenge Fund Half Year Report

(due 31<sup>st</sup> October 2019)

<b>Project reference:</b>	IWT044
<b>Project title:</b>	Critical evidence to drive a reduction in Cambodia's ivory trade
<b>Country(ies):</b>	Cambodia
<b>Lead organisation:</b>	Fauna & Flora International
<b>Collaborator(s):</b>	Royal Government of Cambodia, Royal University of Phnom Penh (RUPP), Royal Zoological Society of Scotland (RZSS)
<b>Project leader:</b>	Regine Weckauf
<b>Report date and number (e.g. HYR1):</b>	31 <sup>st</sup> October 2019, (HYR 3)
<b>Project website/blog/social media:</b>	<a href="http://www.fauna-flora.org/explore/cambodia/">http://www.fauna-flora.org/explore/cambodia/</a>

**1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to the end September).**

**Project Implementation Timetable:** *Financial Year Apr 2018 – Sept 2018. Key Q2-Q3 activities and milestones.*

**1.2 Produce national map of trading hotspots and networks**

Wildlife trade data continues to be collated from government and NGOs and mapped to identify trading hotspots and networks.

**1.4 Provide intelligence to law enforcement on ivory trade networks**

The data gathered during our ivory market surveys in April 2019 has been shared with the Wildlife Rapid Rescue Team (WRRT) of Wildlife Alliance, which encompasses officers of the Forestry Administration (FA), to be used in their enforcement responses. The raw data of these surveys has also been shared with the Ministry of Environment (MoE). Even though the MoE does not have the legal mandate to take enforcement actions, it has shown a growing commitment to support stopping the trade of illegally sold and traded ivory items through other channels such as public announcements and potential cooperation with the Royal Police (see 3.2). The information gathered on online ivory traders from our March – April Facebook survey has also been shared with the WRRT investigation team.

Further to this work, we indirectly supported sharing of information with law enforcement by encouraging the public to report wildlife crime via the WRRT hotline, in our ivory awareness raising campaign at the Phnom Penh International Airport. Materials included a billboard and elephant statue located in arrival areas, and a postcard including a call to action and the hotline number. The postcard was picked up by 1050 travellers entering Cambodia during the month of July 2019. We are monitoring if calls regarding ivory have increased afterwards and will report potential shifts in the annual report.

**1.5 Use existing Asian elephant population genetic data from 250-300 previously collected samples to generate genotype data on a genetic marker system**

The RUPP laboratory now has the agreements in place to use 360 DNA samples that were collected from wild Cambodian elephant populations by three NGOs during 2015-2016. As outlined in previous reports the tools to create the genetic marker system have been developed and consist of 20 variable SNPs and a 300bp fragment of mitochondrial DNA. The mitochondrial sequence data has now been

generated for all samples and the 20 SNPs are currently being genotyped across the sample-set. This is a huge undertaking as  $20 \text{ (SNP)} \times 360 \text{ (DNA)} = 7200$  individual genotypes need to be generated. Due to limited staff resources this is not yet complete, and so far 2162 of the 7200 genotypes have been tested (30%). We are continuing to pursue this and once the new staff members (see 2a) are trained, we hope to now complete this during Y4.

### **2.1 Establishment of species identification testing (Asian/African) and testing of samples to establish species provenance (mtDNA test)**

The species identification testing was transferred to the RUPP laboratory during Y1-Y2 and all 15 ivory samples were tested during Y2. Training by RZSS in July 2019 focused on the analysis software required to work with the genetic data that RUPP have been producing. A large part of this involved training in the use of the software Geneious®. However, with the loss of both staff members (see 2a) who were originally trained in both the lab work and analysis, and the subsequent lack of ivory to test, there has not been any further progress during Y3. A difficult decision has to be made with the training of the two new staff members, RZSS will demonstrate the ivory extraction process but work in Y3 will be focusing on producing the genetic database from the elephant faecal samples and so priority will be given to training in the genetic techniques for this section of the work.

### **2.2 Production of Cambodian elephant reference genetic data from existing samples testing**

The mitochondrial DNA reference database for Cambodian elephants has been completed and the SNP database is 30% complete. Training in the use of the mitochondrial reference sequences occurred during the July 2019 training session by RZSS at RUPP. The task now will be to use the complete mitochondrial reference dataset to analyse the two Asian elephant ivory samples. The two new members of staff will need this training along with the lab skills required to produce the SNP reference data from the remaining Cambodian elephant samples. The training is scheduled for January 2020.

### **2.3 Investigation of geographic origin of Asian ivory found in Cambodia**

This heavily relies on the production of the reference database, which is ongoing. The RUPP lab has had success in genotyping the ivory samples with the SNP markers but a complete set of genotypes needs to be produced. Training in the use of software required (STRUCTURE) for the investigation of genetic origin was conducted at RUPP in July 2019. The two new members of staff will be trained in the techniques required for this during January 2020.

### **2.4 Establishment of individualisation and sexing tests to allow for seizure inventory**

Individualisation tests of the Asian ivory samples hinges on the production of the reference dataset. Now we have a 20 marker SNP panel, an aim for Y3 is to genotype the Asian ivory samples using these 20 markers. Sexing tests are working on the elephant DNA extracted from the blood and faecal samples in the RUPP lab but are yet to work for the ivory samples.

### **2.5 Establishment of seizure sampling, data-basing and chain of custody protocols**

A standardized procedure has been set up at the RUPP laboratory to process any samples that are received into the lab. This includes submission of all details to an access database and the storing of samples within a locked safe. Staff complete a physical document to monitor the use of every sample, with the date, staff initials and purpose, recorded each time they leave the safe.

### **2.6 Strengthen professional links of the lab with regional and international wildlife forensics/ elephant genetics network**

The lead RUPP laboratory technician attended the International Congress for Conservation Biology (ICCB) held in Kuala Lumpur in July 2019. They presented a poster on the current ongoing work in the laboratory including presenting the initial results of the ivory testing. The programme manager at RZSS also attended the conference and gave a presentation entitled "Using genetics to reveal the illegal ivory trade in Cambodia". Both the poster and presentation garnered a lot of attention and links have been made with many different academic and conservation groups working on Asian elephants throughout their range countries. Both staff members also attended the IUCN Asian Elephant Specialist Group meeting that occurred during the ICCB conference.

### **3.2 Engage with Ministry of Environment to ensure that laws banning ivory sale and purchase are incorporated into the development of legislation**

Since March, we have continued our ongoing engagement with the GDANCP of the MoE to support a planned workshop on national IWT issues, specifically focused on ivory and rhino horn, to be held later this year. As mentioned, we have recently shared our 2017 and 2019 market survey data with the MoE, which has supported their decision to directly inform shop owners of the illegality of selling ivory. Our list of ivory shops has been used to distribute targeted announcements informing vendors of legal implications of trading ivory, rhino horn, and other IWT products, with the appeal to surrender items as part of a first warning stage. The announcements were issued to 30 shops in Siem Reap and two shops

in Sihanoukville on 30<sup>th</sup> of August. A further 19 shops received the announcement in Phnom Penh shortly afterwards.

**3.3 Work with the Forestry Administration/CITES Authority to encourage implementation of the National Ivory Action Plan, and close legislative loopholes to facilitate arrest and prosecution of ivory traders**

We met with the KH CITES Scientific and Management Authorities, both based at the Forestry Administration, ahead of the CITES CoP 18 (held in Geneva in August 2019). We encouraged implementation of the National Ivory Action Plan and offered technical support, including the use of our market survey findings to inform further enforcement actions, and discussed the use of our genetic lab for testing of ivory as part of confiscations and in court cases.

Additionally, one member of staff from the FFI Cambodia Programme attended the CITES CoP 18. Based on a confidential policy brief prepared ahead of the meeting, FFI discussed high-level market survey findings with a selection of stakeholders, including TRAFFIC and EIA. It was preliminarily decided that further engagement and coordination of efforts ahead of the 73<sup>rd</sup> CITES Standing Committee meeting would be most effective.

**2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

*Passing of Lab Tech Mr Darith Sieng*

Darith joined our team in late 2017 as fulltime Lab Technician at the RUPP. On 24<sup>th</sup> August he passed away in a hit and run accident in Phnom Penh. Darith has been instrumental in setting up the lab procedures, analysing the first ivory samples in-country, and building connections, e.g. he had just returned from the SCB's 29th ICCB 2019 in Kuala Lumpur, presenting our findings. Through the ongoing training and professional development support provided by the RZSS and his aptitude, Darith set himself apart and became an integral part of the Biology Department at RUPP. His passing has left a huge gap. Darith had developed a huge number of links with relevant contacts and was highly dedicated to learning the necessary techniques as well as developing the laboratory into the future. This loss will have a wide-reaching impact on the legacy of the project and the self-sustainability of the lab.

While we are re-recruiting for his position, and as our part-time lab technician Ms Chansorpha Srey left to pursue a PhD in February 2019, we currently carry out our activities with the help of a new lab assistant, Mr Prum Ratha. Ratha started in August and was involved in 2 days of initial training with RZSS that occurred in July 2019, meaning that we are currently relying on a part-time lab assistant who has only been trained in a small number of techniques.

It will take a substantial amount of time to build the capacity of a the new Lab Technicians, however with increased support of RZSS we feel that the key genetic aims of this project should still be achievable within the time frame, however as updated above we have fallen behind the timeline initially envisioned for Activity 1.5. This has had knock on effects for a couple of other outputs but we are confident we can complete this activity within Y4.

**2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?**

Discussed with LTS:	Yes/No
Formal change request submitted:	Yes/No
Received confirmation of change acceptance	Yes/No

**3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?**

Yes  No  Estimated underspend: £

**3b. If yes, then you need to consider your project budget needs carefully.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget, so please ensure you have enough time to make appropriate changes if necessary.

**4. Are there any other issues you wish to raise relating to the project or to IWT Challenge Fund management, monitoring, or financial procedures?**

N/A

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

**Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to [IWT-Fund@ltsi.co.uk](mailto:IWT-Fund@ltsi.co.uk). The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: IWT001 Half Year Report.**