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## **TERMS OF REFERENCE (TOR)** **(Tender Ref. FY26-0187)**

***Title: Sequencing asian elephant genomes from semi-captive population in Dak Lak province***

**Project:** Building Sustainable Elephant Conservation Efforts along Viet Nam and Cambodia Border in the Eastern Plain Landscape

**Work location:** Consultant firm-based location

**Duration:** September 2025 to December 2025

### **1. Background of consultancy assignment/ project**

WWF was one of the first International non-government organizations working in Vietnam. In 1985, WWF began working on a national conservation strategy and since then has worked closely with the Vietnamese Government on a diverse range of environmental issues and implemented field activities across the country. Find out more at <http://vietnam.panda.org/>. WWF recognizes that its employees are its most important asset. A competent workforce, thoroughly trained, properly motivated, and bound together by mutual trust and common objectives is crucial to the success of WWF.

WWF-Viet Nam is currently seeking a consultancy organization to sequence two (02) Asian elephant genomes from semi-captive population in Dak Lak Province. Genomes will be sequenced to at least 30X coverage. Sequence data (fastq) files will be used for the development of a range-wide SNP panel for non-invasive fecal DNA genotyping.

### **2. Purpose and Objectives**

To sequence two (02) Asian elephant genomes from semi-captive population in Dak Lak Province. The Sequence data (fastq) files will be used for the development of a range-wide SNP panel for non-invasive fecal DNA genotyping.

### **3. Task, Expected Outputs/Deliverables & Timeline**

<b>No</b>	<b>Task</b>	<b>Expected outputs</b>	<b>Delivery Date</b>
1	<b>Task 1:</b> Provide technical guidance for staff of Dak Lak Elephant Conservation Center (DECC) on collecting the blood samples of the	Staffs of DECC are able to collect the blood samples of the two captive elephants in Dak Lak province	No later than 1 week after signing the contract

No	Task	Expected outputs	Delivery Date
	two captive elephants in Dak Lak province.		
2	<b>Task 2:</b> Perform DNA extraction and generate a report detailing DNA extraction methods and quality control of extractions.	DNA Extraction and QC report of the two blood samples	No later than 8 weeks after receiving the blood samples
3	<b>Task 3:</b> Store blood samples and extracted DNA for long-term DNA preservation.	Two blood samples and extracted DNA are stored under optimal long-term preservation conditions (e.g., frozen at –20°C) with complete and accurate labeling, associated metadata, and inventory records. All samples remain intact, uncontaminated, and ready for future genetic analyses.	All samples ready for future genetic analyses when required
4	<b>Task 4:</b> Sequence the genomes at a sequencing core of Consultant's choosing, to at least 30X coverage for each genome.	The fastq files for two (02) whole genomes >30X coverage for each genome from the sequencing core, and, if necessary, demultiplex reads such that each genome is represented by a single fastq file	No later than 12 week after signing the contract  The consultancy organization will respond to obtain any related permit (if required)
5	<b>Task 5:</b> Develop a mission report	A mission report is produced using the template as <b>Annex 1</b>	No later than 2 weeks after completing the task No.4

#### 4. Working principles:

**Internal:** Work closely with elephant program team at WWF-Viet Nam and WWF US

**External:** Work closely with DECC and relevant partners

#### 5. Required profile:

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- **Knowledge/Expertise and *Institutional Eligibility***

- The organization must have a legally registered entity status in Viet Nam and be authorized to conduct genetic research.
- Must operate a functional molecular biology laboratory equipped for DNA extraction, quantification
- Must have qualified technical staff(s) with demonstrated experience in DNA extraction and handling of wildlife biological samples.
- Must have in-house capacity or formal collaboration with a qualified partner institution capable of performing whole genome sequencing to at least 30X coverage.
- Ability to comply with all relevant national and international regulations on the collection, storage, and transfer of wildlife genetic materials, including CITES requirements.

- ***Experience:***

- Proven track record in conducting whole genome sequencing for large mammals, preferably elephants or similar species.
- Demonstrated experience in DNA extraction from blood and other biological materials
- Experience in handling, storing, and transporting biological samples to ensure integrity.
- Previous involvement in conservation-related genetic studies and collaboration with international research partners.

- ***Skills and capabilities:***

- Capacity to ensure secure storage and management of biological samples and extracted DNA for long-term preservation.
- Strong reporting skills to produce clear technical reports
- Ability to work collaboratively with WWF-Viet Nam, WWF-US, and partner laboratories in different countries.

## **6. Document**

Consulting needs to submit:

- 1) The consulting organization is required to submit documentation demonstrating its capacity to meet the requirements specified in **Section 5 Required profile** and its suitability to carry out the tasks described in **Section 3 Task, Expected Outputs/Deliverables & Timeline**. The submission must include the CV of at least one (01) technical staff member who will be directly assigned to implement this work package.
- 2) Technical and financial proposal using the template as **Annex 2**

Consultants will be selected based on qualifications and relevant experience. Consultants may be invited for interviews if necessary.

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## **Annex 1: MISSION REPORT TEMPLATE**

**To:** WWF-Viet Nam

**Project:** Elephant program

**Name of package:** Sequencing asian elephant genomes from semi-captive population in Dak Lak province

**Contract number:**

**Main contributor:**

**Prepared by:**

**Date of Report:**

### **1. Objectives of the Mission**

- Briefly describe the main purpose and expected outcomes of the mission.

### **2. Background**

- Provide relevant context for the mission (project background, why the mission is needed).

### **3. Activities Conducted and Methodology**

- List and describe all activities carried out during the mission.
- Include dates, locations, and stakeholders/partners involved.
- Summarize the methods and approaches used to achieve the mission objectives.
- Include any protocols, tools, or guidelines followed.

### **5. Key Findings**

- Present main results or observations from the mission.
- Include relevant data, photos, or figures.

### **6. Challenges and Limitations**

- Describe any constraints or difficulties encountered during the mission and how they were addressed.

### **7. Conclusions and Recommendations**

- Summarize key conclusions from the mission.
- Provide recommendations for next steps or follow-up actions.

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## **8. Annexes**

- Attach supporting documents, detailed data, participant lists, maps, photos, etc

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## Annex 2: TECHNICAL AND FINANCIAL PROPOSALS CONSULTING SERVICES

**To:** WWF-Viet Nam

**Project:** Elephant program

**Name of package:** Sequencing asian elephant genomes from semi-captive population in Dak Lak province

**Consultant's information:**

### I. Understand and interpretation the ToR

### II. Main task and activities

### III. Technical approach and methodology

Task	Methodology

### IV. Work plan

The consultant can use the schedule of time according to the form below:

No.	Tasks/Activities	Tentative timeline	Man-day	Location	Travel day
I	Task 1				
1	...	...			
2	...	...			
...	...	...			
II	Task 2				
1	...	...			
2	...	...			
III	Task 3				
1	...				
2	...				

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IV	Task 4				
1	...				
2	...				
V	Task 5				
1	...				
2	...				

## V. Deliverables and timeline

No.	Deliverables	Timeline
1	<b>Task 1</b>	....days after signing the contract
2	<b>Task 2</b>	....days after signing the contract
3	<b>Task 3</b>	....days after signing the contract
4	<b>Task 4</b>	....days after signing the contract
5	<b>Task 5</b>	....days after signing the contract

## VI. Financial proposal

I, (*consultant name*), undersigned, propose to provide consulting service for consulting package (*name of package*)

My financial proposal is *[insert amount]* VND (in words: .....), inclusive of all applicable taxes. My financial proposal may be adjusted through contract negotiation. In which:

#### COST CALCULATION FOR PACKAGE

1. Consultancy fee	Unit	Q'ty	Unit price	Total
1.1 Consultancy fee	Day			
Sub-Total				
2. Allowance & Accommodation				
2.1		...		
2.2		...		
...				
Sub-Total				
3. Travel & Transport Cost				
3.1 Vehicle lease/rent		...		
3.2 Other local transport (short-term, peak)		...		
3.3 Air-tickets		...		
Sub-Total				
4. Other costs				
4.1		...		
4.2 ...		...		
Sub-Total				
...				
Total				
Local Taxes				
Grand total				

I understand that WWF-Viet Nam is not bound to accept any Proposals received.

**Consultant**

*[Sign and full name]*