

## TERMS OF REFERENCE

**A group of three national consultants to conduct a study on land use mapping, forest status and impact assessment to support the physical creation of a habitat corridor connecting Khau Ca and Du Gia forests to improve the long-term survival of vital Tonkin snub-nosed monkey population**

**Duration:** One month, commencing as soon as possible

**Location:** Khau Ca Species and Habitat Conservation Area and Du Gia Special use forests, Ha Giang province

**Reporting to:** Country Director/Primate Projects Manager

## I. BACKGROUND

### 1. Fauna and Flora International (FFI) and Vietnam Primate Programme

FFI's mission is to conserve threatened species and ecosystems worldwide, choosing solutions that are sustainable, based on sound science, and which take into account human needs. FFI's strategy to achieve this mission is to work with in-country organizations at all levels to support them in identifying and implementing country led sustainable solutions.

The strategic goal of the FFI Vietnam Primate Programme is to identify primate populations in most need of conservation interventions and provide strategic species-focused conservation in the field, based upon sound science and participation of local communities and other relevant stakeholders.

Currently, the programme has established long-term primate-focused conservation projects at six locations of Vietnam that maintain important populations of Critically Endangered primates, namely: i) the Cao Vit gibbon at Trung Khanh District in Cao Bang Province; ii) the Tonkin snub-nosed monkey in Ha Giang Province; iii) the Western black-crested gibbon in Mu Cang Chai District of Yen Bai Province and Muong La District of Son La Province; iv) the Delacour's Langur in Kim Bang District of Ha Nam province; v) the Cat Ba langur in Hai Phong province; and vi) Grey shank douc langur in Kon Tum province.

### 2. Tonkin snub-nosed monkey

**Conservation status:** The Tonkin snub-nosed monkey (*Rhinopithecus avunculus*) was first identified in 1912 and once occupied in forests across much of the north east of Vietnam. However, loss of much of its forest home and direct hunting for both local consumption and the trade in traditional medicines have resulted in a dramatic decline of the species, with only some small sub-populations now remaining and a global population of less than 200 individuals. Tonkin snub-nosed monkey (TSNM) is extremely rare and listed as Critically Endangered on the IUCN Red List of Threatened Species. The species is also listed as one of the world's 25 most endangered primates 2016 – 2018 by the IUCN/SSC Primate Specialist Group (PSG), International Primatological Society (IPS) Conservation International (CI) and Bristol Zoological Society (BZS). In 2002 FFI discovered a new population (now known as the largest TSNM sub-population) at Khau Ca Species and Habitat Conservation Area (SHCA) in Bac Me and Vi Xuyen

districts, Ha Giang province. Since then the site has received formal legal protection, and our concerted protection efforts have enabled this population of Tonkin snub-nosed monkey to naturally increase from under 60 animals to over 120 animals<sup>1</sup>.

**Current threats:** to TSNM in Khu Ca SHCA is hunting and trapping, logging, fuelwood and NTFPS collection, habitat disturbance and limitation, small occupancy, cattle grazing, inbreeding and possibility of lacking of food source. In the first six months of 2018, there were nine violations of illegal logging occurred within Khu Ca SHCA. The timber logged was mainly ancient *Burretiodendron hsienmu* and *Garcinia fagraeoides* trees, which provide a majority of food source for TSNMs in Khu Ca.

### 3. Khu Ca SHCA and Du Gia special use forest

**Khu Ca SHCA** has an area of 1,941.1 ha and is the home of the largest sub-population of TSNM with about 121 individuals. However, the TSNMs are using a small forest area of about 480-500ha for their occupancy due to threats mentioned above. Living in a small isolated forest like Khu Ca SHCA is making the world most important TSNM population vulnerable to both external impacts such as natural disasters from severe weather modes and climate change, epidemic diseases, predators and human-induced effects, and internal factors such as habitat carrying capacity and genetic degradation.

**Du Gia special use forest**, in the past, was gazetted as a Nature Reserve. Until August 08, 2015 the Prime Minister issued a Decision 1377/QĐ-TTg on the establishment of Du Gia National Park - Dong Van Karst Plateau, Ha Giang province. According to this Decision, Du Gia National Park - Dong Van Karst Plateau is created on the basis of merging Du Gia Nature Reserve (NR) and Khu Ca SHCA. The total area is 15,006.3 ha (see Fig 1).

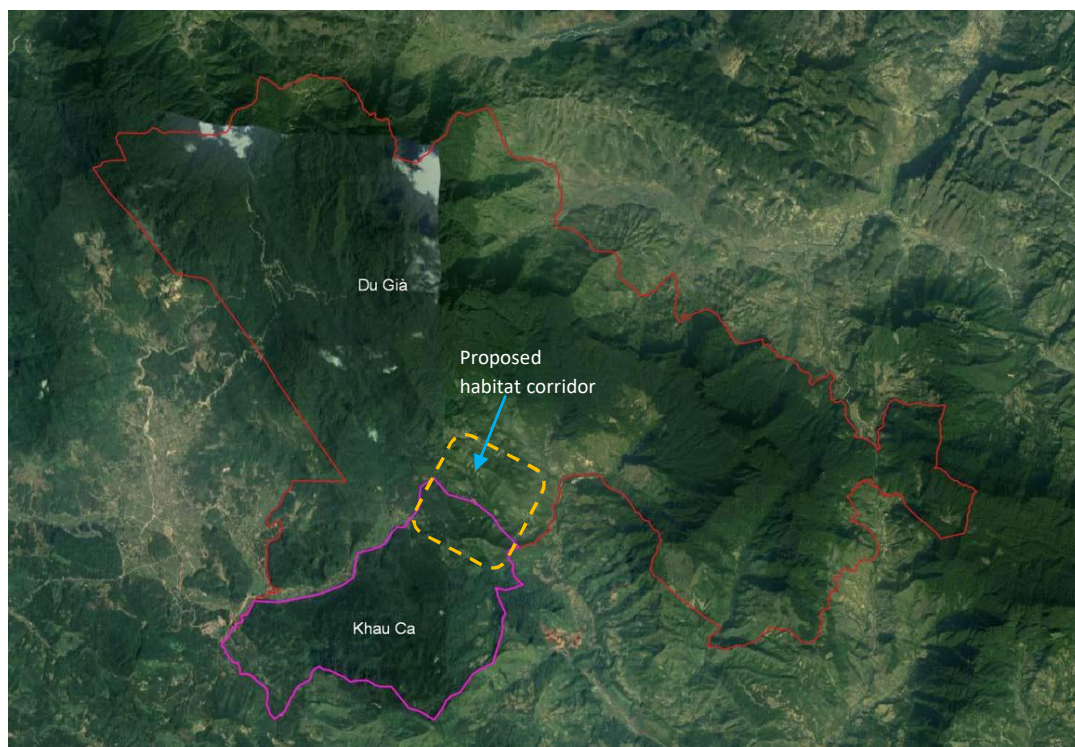


Fig 1: Du Gia National Park - Dong Van Karst Plateau formed on the basis of joining Khu Ca SHCA and Du Gia NR

<sup>1</sup> Nguyen Van Truong & Pham Cong Linh (2017). Report of survey the population of Tonkin snub-nosed monkey at Khu Ca SHCA, Ha Giang province 2017. FFI - Vietnam programme, Ha Noi, Vietnam.

#### 4. Forest status and land-use in Khu Ca SHCA

In 2010, a detailed research on forest status and land use of Khu Ca SHCA was conducted with the financial support from San Diego Zoo. As a result, a map was developed revealing details of forest type and land use. It is estimated that the suitable area for making habitat corridor in Khu Ca SHCA is about 406 ha, which mainly contains limestone poor and recovered evergreen broadleaved forest, montane poor and recovered evergreen broadleaved forest, grassland and shrubland, and a portion of cultivation land (see Fig 2).

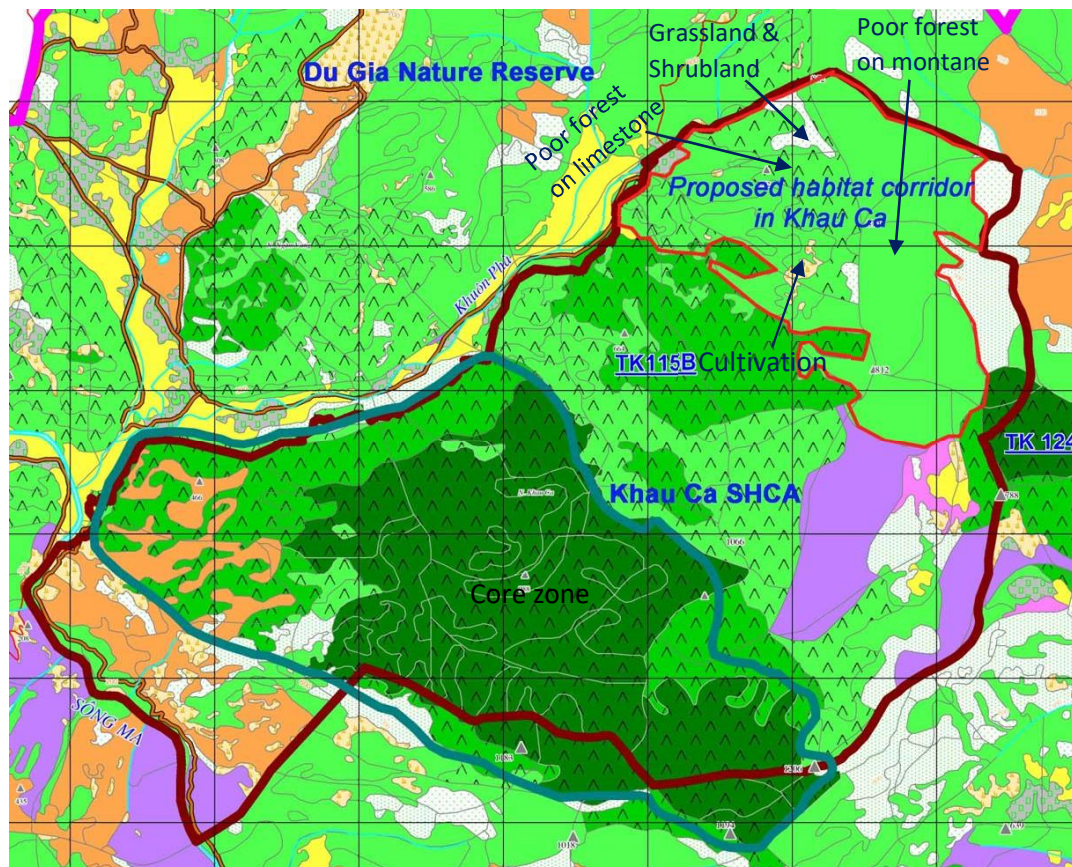


Fig 2: Forest status and land-use in Khu Ca SHCA (adapted from Mai Ky Vinh and Le Khac Quyet, 2010)

#### 5. The feasibility of the habitat corridor

Recent study on biodiversity corridor by Dong Thanh Hai, Vu Tien Thinh and Pham Anh Cuong in 2013 proposed potential biodiversity corridors for northern Viet Nam in order to adapt and mitigate the impacts of climate change. According to this study, the Khu Ca – Du Gia biodiversity corridor has an area of 360ha and 1.43 km in length. The reason for establishing this corridor is that the Khu Ca TSNM population is reaching to habitat carrying capacity. This corridor will help TSNM disperse and re-colonize in places where they were extinct.

In 2014, under the Decision 45/QĐ-TTg dated on 08/01/2014 on the approval of the master plan for national biodiversity conservation to 2020 and targeted to 2030, a 360 ha biodiversity corridor of Khu Ca - Du Gia was planned to create till 2030. The rationale of establishing this corridor is that the TSNM population is reaching to Khu Ca habitat carrying capacity, the corridor is to help other species re-establish their populations in places they were locally extinct or seriously declined, and the corridor is small and highly feasible.

Recent FFI's activities such as Free, Prior and Informed Consent (FPIC) and consultation workshop on integration of Khu Ca and Du Gia forests indicated that there are five H'mong households living and ten other households from several villages farming in this proposed corridor.

FFI has a need to recruit a group of three different consultants to carry out the impact assessment, land use mapping and habitat zoning, and forest status in the proposed habitat corridor to have measures to bridge the gaps between two protected areas to help TSNMs expand their occupancy to increase the population recovery.

## **II. OBJECTIVE**

To support the creation of a physical and well-governed habitat corridor connecting Khu Ca and Du Gia forests to improve the long-term survival of vital Tonkin snub-nosed monkey population.

## **III. DELIVERABLES**

It is expected the consultants to deliver the following outputs:

- A comprehensive report on land use mapping, zoning, forest status, and socio-economic and impact assessment in the proposed habitat corridor. The report contains, but not necessarily be limited to:
  - + Forest status<sup>2</sup>: Forest and vegetation types and their area, main tree species, tree species composition, tree crown cover and forest ground cover, tree growth characteristics, and boundaries of forest and vegetation types;
  - + Land use and zoning: Number of households using land; land tenure, land use types and status, land use area, boundaries of land use types, boundaries of the propose habitat corridor;
  - + Socio-economic and impact assessment: This includes social and environmental impacts, socio-economic condition.
  - + Maps of forest types and forest status including all areas of degraded and mature forests;
  - + Maps of up-to-date land use status (every field, forest garden, house, etc.) in the study area;
  - + Maps of zoning proposed habitat corridor;
  - + Recommendations for creation of an effective habitat corridor;
- All minutes of village meetings;
- All related photos with clear identification and remarks are documented and submitted to FFI for reference in the future;
- All GPS waypoints of land use mapping and zoning;
- All maps produced must be submitted to FFI in both pictorial and GIS formats;

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<sup>2</sup> The consultant does not need to survey forest status in Khu Ca side because there is a group of botanical consultants, who are undertaking the TSNM food source survey, including forest status, in that area.

- The final reports must be in English and Vietnamese.

#### IV. SCOPE

- Conduct land use mapping, corridor zoning, impact assessment and forest status in the proposed habitat corridor of Khau Ca and Du Gia forests (see Fig 1);
- The area of the proposed habitat corridor is about 800 – 1000 ha (see Fig 1), of which the part in Khau Ca is about 400 ha and the remaining is in Du Gia Special Use Forest. The botanical consultant survey only Du Gia part.

#### V. TASKS

- Closely work with FFI staff to clearly understand the objective of the assignment and expected outputs at the beginning, during and after the survey;
- Develop a detail work plan (methodology, activities to carry out, timeframe) to submit to FFI for the review, discussion and agreement;
- Identify types and sources of information for collection;
- Collect the relevant Khau Ca-Du Gia biodiversity corridor map;
- Conduct literature review for biodiversity/habitat corridor;
- Conduct a field survey on land use mapping, corridor zoning, forest status and impact assessment in the indicated area of Khau Ca SHCA and Du Gia special use forest;
- Organize consultation meetings and workshops relating to the impact assessment, land use mapping, corridor zoning;
- Compile the report and translate it into Vietnamese.

#### VI. IMPLEMENTATION PLAN

<b>Task Assigned</b>	<b>Required Output</b>
Develop a detail work plan, including methodology, field trip, cost for field trip and time schedule for implementing this assignment.	A 3-5 page detailed work plan developed and submitted to FFI for discussion and approval.
Collect thematic reports, papers, maps, data related to this study area to review.	A list of collected documents formed and submitted to FFI for review.
Conduct a field survey on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment in the indicated area mentioned above	A field survey on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment conducted.
Conduct commune and/or district consultation meetings, and a consultation meeting with forestry sector (DARD, Du Gia	Consultation meetings organized.

PA and Khau Ca SHCA Management Boards) on proposed habitat corridor	
Prepare a draft comprehensive report on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment	A draft report on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment submitted to FFI for making comments.
Finalize the comprehensive report on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment and all required products	Comprehensive report on land use mapping, boundary zoning of proposed habitat corridor, forest status and impact assessment and all other products completed based on FFI's feedback of comments and submitted to FFI for last payment

## VII. QUALIFICATIONS AND EXPERIENCE

### 1. Social and environmental impact assessment expert (Team Leader)

- Advanced university degree in one of the following fields: Forestry, natural resource management, nature conservation, biology, development or related fields;
- At least 15-year working experience in social forestry or community development sector;
- At least 10 years of experience to work with local communities and in mountainous areas;
- Good understanding of Vietnam's protected area policies and legal documents;
- Working experience with Central and provincial Forest Protection Departments;
- Good relationship with MONRE and MARD
- Experience in the use of participatory tools such as PRA;
- Excellent skills of facilitation, presentation and communication;
- Excellence in synthesis and analysis of documents and data;
- Experience in habitat/biodiversity corridor creation is an advantage;
- Strong ability in writing English technical report;

### 2. Botanical expert (Team member)

- Advanced university degree in one of the following fields: Forest plants, forest ecology, plant physiology, forest resources management or forestry;
- At least 15 years of working experience in forest plant identification and vegetation classification;
- Experience in identifying tree species in limestone/Kast areas is required;
- Good practices and experience of forest plant inventory techniques;
- Good understanding of forest regeneration and rehabilitation;

- Knowledge of TSNM food ecology is advantageous;
- Experience in habitat/biodiversity corridor creation is an advantage;
- Ability to speak and write in English;

### **3. Land use and corridor mapping specialist (Team member)**

- University degree in one of the following fields: Forestry, natural resource management, nature conservation, biology or related fields;
- At least 15-year working experience in forestry sector;
- At least seven years of working experience in land use mapping and habitat zoning;
- Experience in the use of participatory tools such as PRA;
- Excellent skills of facilitation, presentation and communication;
- Good skills of GIS and remote sensing application including ground truth in forestry;
- Good relationship with central and local governments;
- Capable English spoken and written;
- Ability to write technical report.

## **VIII. ADMINISTRATIVE SUPPORT**

FFI will provide the consultants with the following support:

- An access to FFI's library to collect reports, papers on Khu Ca SHCA, Tonkin sub-nosed monkey, their food ecology and habitat;
- Administrative procedures to work in the field and with FFI's local partners;
- All local cost for field trip following FFI's cost norms

## **IX. REMUNERATION CONDITIONS**

- Remuneration will correspond with the qualifications and work experiences required for each post as referred to in Part VII of this TOR and FFI's cost norms.
- Final payment is based on the satisfactory completion of the tasks and deliverables outlined in the ToR.

*Note: Only qualified group of consultants will be contacted.*