TUYEN QUANG PROVINCE LAM BINH DISTRICT

SPECIES CONSERVATION ACTION PLAN

Local-based conservation of Francois' Langur at the Lam Binh Forest

Period: 2012 to 2016



The aim of the project "Promoting Community Based Collaborative Management to Strengthen Long-Term Conservation of Globally Threatened Primates and Trees in Priority Sites of Northern Vietnam" is to improve conservation of five globally threatened species of primates, conifers and magnolias at sites of high biodiversity conservation value in northern Vietnam. The project involves 11 sites during its timeframe from January 2010 to December 2012.

The project is funded by the Critical Ecosystem Partnership Fund and implemented by Fauna & Flora International and partners, in some locations, with the People, Resources and Conservation Foundation and the Center for Plant Conservation. The Critical Ecosystem Partnership Fund is a joint initiative of l'Agence Française de Développement, Conservation International, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank. A fundamental goal is to ensure civil society is engaged in biodiversity conservation.

This species conservation action plan is an output of the Lam Binh component of the above project implemented by Fauna & Flora International in cooperation with the People, Resources and Conservation Foundation and Tuyen Quang Forest Protection Department. It provides the framework to sustainably link conservation of forest resources with livelihood development in Lam Binh District, Tuyen Quang Province.

Version: 29th March 2012

Cover page photo: François' langur in Khau Dao forest, Lam Binh district,

Tuyen Quang province © Nguyen Duc Tho/FFI

Abbreviations

a.s.l above sea level

CEPF Critical Ecosystem Partnership Fund

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

CR Critically Endangered

DoNRE Division of Natural Resources and Environment

DoFA Division of Forestry and Agriculture

EN Endangered

FFI Fauna & Flora International
FPD Forest Protection Department
FPS Forest Protection Station
GEF Global Environment Facility

LB Lam Binh

LBWPF Lam Binh Watershed Protection Forest
NHWPF Na Hang Watershed Protection Forest

NTFP Non-timber forest product

PARC Creating Protected Areas for Resource Conservation using Landscape Ecology

PC People's Committee

PES Payment for Environmental Services

PRA Participatory Rural Appraisal

PRCF People Resources and Conservation Foundation

SCAP Species Conservation Action Plan
SHCA Species and Habitat Conservation Area

SL Sinh Long

UNDP United Nations Development Programme

TABLE OF CONTENTS

PR	EAMBLE	5
	Justification for a local-based Species Conservation Action Plan	6
1	INTRODUCTION	7
	1.1 Forests and species of conservation value in Lam Binh District	7
	1.2 Local-based Species Conservation Action Plan.	7
	1.3 The SCAP development process	7
2	STATUS OF THE FRANCOIS' LANGURS AND FOREST OF LAM BINH DISTRICT	8
	2.1 François' langur	8
	2.2 Socio-economic conditions.	10
	2.3 Forest use	11
	2.4 MANAGEMENT OF THE LAM BINH WATERSHED PROTECTION FOREST	12
3	THREATS TO THE FRANCOIS' LANGURS AND FORESTS IN LAM BINH	14
	3.1 Hunting	14
	3.2 Habitat loss	14
	3.3 Habitat degradation	15
	3.4 Harvesting "monkey blood"	15
	3.5 Harvesting of NTFP	
	3.6 Farming in the forest	
	3.7 Livestock grazing in the forest	
	3.8 Discussion of threats	15
4	OPPORTUNITIES FOR IMPROVED CONSERVATION	16
	4.1 Local community involvement in forest management	16
	4.2 International and national attention for conservation of the François' langurs	16
	4.3 Improved awareness of the Francois' langurs	
	4.4 Payment for environmental services	
	4.5 Tourism opportunity	16
5	CONSERVATION ACTIONS	16
	5.1 Forest Management	17
	5.2 Law enforcement	17
	5.3 Awareness raising	
	5.4 Community development	
	5.5 Conservation Studies	20
6	ROLES AND RESPONSIBILITIES	20
7	IMPLEMENTATION AND BUDGET	22
8	REFERENCES	24

PREAMBLE

This Species Conservation Action Plan is based on the following legal documents:

- Law on Protection and Development of Forests approved by the National Assembly of the Socialist Republic of Vietnam dated 3rd December 2004
- Law on Environment Protection No. 52/2005/QH11 approved by the National Assembly of Vietnam dated 29 November, 2005
- Law on Biodiversity No. 20/2008/QH12 approved by the National Assembly of the Socialist Republic of Vietnam dated 13th November 2008
- Decision 310/ QD-CT dated 26th December 2007
- Decision 17/2009/QD-UBND dated 22nd October 2009. Protection and environment planning in Tuyen Quang Province to 2010.
- Decision 2284/QĐ-TTg dated 13 Dec 2010. Approval to implement decision No 99/2010/NĐ- CP on date 24 Sep 2010 about Environmental Services
- Decision No.186/2006/QĐ-TTg TTg dated 14/8/2006 and 34/2011/QĐ-TTg dated 24/6/2011 edited with some articles in Decision No.186/2006/QĐ-TTg of the Prime Minister on Management regulations of Special-use Forests, Watershed Forests, and Product Forests
- Decision 1218/QD-Ct dated 23 Sep 2011. Establishment of steering committee to implement forest environmental service policy at Tuyen Quang Province
- Decision No.07/2012/QĐ-TTg of Prime Minister on governmental management responsibilities to forest & forestry land
- Decision 817/QĐ-CT (Tuyen Quang) dated 07 July 2011. Decision on approval of Project "Biodiversity conservation planning at Tuyen Quang Province'
- Decree No.181/2004/NĐ-CP dated 29 October 2004 and Decree No. 38/2011/NĐ-CP dated 26 May 2011, and . Joint Circular No. 07/2011/TTLT-BNNPTNT-BTNMT dated January 29, 2011 of the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment guiding forest allocation and lease in association with forestland allocation and lease
- Decree No. 23/2006/ND-CP on the implementation of Forest Protection and Development Law issued by the Vietnamese Government on 3rd March, 2006 and Decree No. 98/2011/NĐ-CP on 26 October 2011, edited some articles of Decree about agriculture.
- Decree No. 32/2006/ND-CP of March 30, 2006, on Management of Endangered, Precious and Rare Forest Plants and Animals
- Decree No. 93/2009/ND-CP on the issuance of the regulation on managing and using non-governmental funds issued by the Government on 22nd October, 2009
- Decree No. 65/2010/ND-CP of June 2010 on Detailing and guiding a number of articles of the Biodiversity Law
- Circular No. 07/2010/TT-BKH dated March 30, 2010 of the Ministry of Planning and Investment guiding the implementation of the Government's Decree No. 93/2009/ND-CP dated October 22, 2009, promulgating the Regulation on management and use of foreign nongovernmental aid
- Decree No. 117/2010/NĐ-CP dated 24/12/2010 by the Government about organization and management of special use forest system.
- Circular No. 78/2011/TT-BNNPTNT Guiding the implementation of Decree No. 117/2010/ND-CP on 24/12/2010 of the Government on organization and management of special use forest system

It is also based on the commitment of the Government of Vietnam to the following international agreements:

- United Nations Convention on Biological Diversity (CBD)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Justification for a local-based Species Conservation Action Plan

The forest area within Thuong Lam and Khuon Ha communes in Lam Binh District, Tuyen Quang Province, is home to 30-70 Francois' langurs *Trachypithecus francoisi*, an Endangered primate species restricted to the very southern parts of China and the most northeastern parts of Vietnam. Lam Binh Watershed Protection Forest (LBWPF) holds the largest and most probably the only remaining viable population of this species in Vietnam. Therefore, this forest is of national and international importance in holding a primate species of global significance.

Francois' langurs have been located in three distinct areas within Lam Binh Watershed Protection Forest. These forest areas are also used by local people for seasonal cultivation and cattle grazing. Therefore, local communities must be actively involved in the protection of the langurs but at the same time must be given the opportunity to use forest resources sustainably in order to ensure not only the survival of the langurs but also the long-term prosperity of the surrounding communities.

Until inundation by the Na Hang Reservoir (2002 to 2007) the Lam Binh forest and the Sinh Long forest formed one contiguous block. The two forest blocks are now separated and surveys conducted in May 2011 suggest that the Francois' langur population in the Sinh Long forest has been extirpated.

Goal of the Species Conservation Action Plan

The goal of the Species Conservation Action Plan is to improve management of Lam Binh forest through collaboration between local communities and other key stakeholders for long-term sustainable development and to stabilize the nationally and globally important population of Francois' langur at this site.

This species conservation action plan has been developed as a document to provide guidance for conservation measures in Lam Binh district, Tuyen Quang province for the coming years. It lists activities considered necessary by the local communities, authorities and scientists to assure the survival of the Francoi's langur at this site. It can be used as a baseline document for fundraising by the government and international organizations. Its activities can over the coming years be gradually included in the provincial management plans and can be implemented as funding will be available.

Objectives of the Species Conservation Action Plan

The objectives of the Species Conservation Action Plan are to:

- 1. Protect and stabilize the population of François' langur
- 2. Actively engage local communities in François' langur conservation
- 3. Develop local stakeholder capacity to manage Lam Binh Watershed Protection Forest in a manner that provides long-term livelihood benefits while protecting the Francois' langur and preserving the biodiversity values of the area.

1 INTRODUCTION

1.1 Forests and species of conservation value in Lam Binh District

Lam Binh forest

Lam Binh Watershed Protection Forest is largely located in Khuon Ha and Thuong Lam communes of Lam Binh District in northern Tuyen Quang Province. It ranges in elevation from 160-878 metres a.s.l. and consists mainly of tropical monsoon broadleaf forest (above 600 metres a.s.l) (Le Trong Trai et al. 2004, Bezuijen et al. 2004).

Francois' langur

Surveys conducted in 2010 and 2011 by PRCF confirmed the presence of at least 30 Francois' langurs in Lam Binh forest. These surveys were the first confirmation of langurs at this site since 2003, when the PARC Project identified this area as holding the largest remaining known population of Francois' langurs in Vietnam with about 70 animals. Neither survey in 2010 or 2011 was an actual census, but the total population size was estimated to possibly comprise 68 - 78 individuals. This suggests that the population at this site is reasonably stable.

1.2 Local-based Species Conservation Action Plan

This Species Conservation Action Plan (SCAP) has been prepared following extensive consultation with local stakeholders to agree on steps necessary to protect local biodiversity values while improving management of forest resources. It comprises three parts:

- i. Chapters 1-2 describe the background to the plan, including the biodiversity values, socio-economic conditions and current management of the forest.
- ii. Chapters 3-4 describe the issues to be addressed and opportunities.
- iii. Chapters 5-7 comprise the action plan itself with a set of conservation actions, roles and responsibilities, an implementation plan and budget.

1.3 The SCAP development process

- Two field surveys for Francois' langurs were conducted, in December 2010 and May 2011, by Thach Mai Hoang with support from PRCF field staff Tu Minh Tiep.
- Formulation of the SCAP was initiated in August 2011 by holding a workshop in Tuyen Quang City (Annex 1 shows a list of participants).
- Following this workshop, the planning process consisted of a data collection phase from 25th August to 8th September 2011 in which consultations were held in seven villages around the forest to discuss issues threatening the Francois' langurs, raise awareness on the langurs and obtain an oversight on local livelihoods (Tu Minh Tiep et al., 2011).
- In November 2011, direct consultations were held with representatives from each Commune People's Committee, District Agriculture and Rural Development Office and District Forest Protection Department (FPD).
- This was followed by a consultation workshop in Tuyen Quang City involving representatives from each commune's People's Committee, the District Department of Agriculture and Rural Development, District FPD, District police, representatives of the villages and community patrol group members. At this workshop a first draft of the SCAP was presented to the stakeholders and they were invited to comment on each section and fill the information gaps (Annex 2 shows a list of all participants).
- The final version of the SCAP was completed in March 2012 and presented to the Lam Binh FPD.

2 STATUS OF THE FRANCOIS' LANGURS AND FOREST OF LAM BINH DISTRICT

This section describes the biodiversity values and socio-economic context of Lam Binh as a basis for the action plan. Only the status of the Francois' langur is described as this is the only taxon for which specific surveys have been carried out in Sinh Long – Lam Binh forest. Other biodiversity values in Lam Binh forest have not been assessed and are therefore not included in this action plan.

Socio-economic data for this action plan come from official commune statistics and information gathered by teams from PRCF in September 2011, and from the stakeholder workshops held in the seven targeted villages.

2.1 François' langur



Langurs are leaf-eating primates that occur in the forests of Asia. The species belonging to this group inhabit a wide range of habitats from tropical rainforests to the high altitudes of Northern Vietnam and Southern China. Their diet is made up mostly of leaves and other plant matter.

Amongst the langurs one group has specifically adapted to live on the limestone outcrops of Indochina. As all species in this group are very similar in their ecology, the group has been referred to as the "limestone"

langurs" as this reflects their specific adaptation to this, for a primate, rather uncharacteristic habitat (Groves et al. 2004). Limestone langurs are slender black monkeys with a tail that exceeds the body length and with varying degrees of white to yellow markings (tail, beard, legs, shoulders, head). Typically, langur groups consist of one adult male and several females and their sub-adult offspring. Solitary males are common but loose-association, so called 'bachelor groups,' can also be formed. Their locomotion is predominantly quadrupedal and they can leap very large distances. Another special ecological trait for a primate is the fact that the limestone langurs sleep in caves.

South China and Indochina is home to six limestone langur species, four of which occur in Vietnam i.e. Ha Tinh langur, Delacour's langur, Golden-headed langur and François' langur. Each of these species is endemic to a relatively restricted area and their occurrence is strictly associated to areas with limestone mountains and forest.

The Francois' langur was first described in 1898 (Poursargues) from Southern China, where the majority of the remaining population is found today. In Vietnam the population historically occurred on the karst mountains in Thai Nguyen, Tuyen Quang, Bac Kan, Ha Giang, Lang Son, Cao Bang provinces, and the eastern parts of Lao Cai and Yen Bai provinces.

During the last century habitat loss and hunting pressure has caused the species to disappear over most of its distribution range. Little work has focused on the species and no accurate estimates of the remaining numbers in the wild are available. A brief review of the species status was conducted by Nadler (2010) who refers to at least eight isolated subpopulations, none of which is larger than 44 animals. The population in Lam Binh has, since then, been found to be much larger than assumed. A provisional estimate of the total number of Francois' langurs in Vietnam is 150 individuals (Table 1).

Table 1: Records of François' langur subpopulations remaining in Vietnam

Site	Province	Estimated Number of animals	Source
Lam Binh forest	Tuyen Quang Province	30 confirmed (reported 68 – 78)	Thach Mai Hoang, pers. com., 2011
Na Hang Nature Reserve	Tuyen Quang Province	Ca.15 reported – not confirmed	Thach Mai Hoang, 2011
Thanh Sa Phuong Hoang	Thai Nguyen Province	ca. 20	Mahmood pers.com.
Cham Chu Nature Reserve	Tuyen Quang Province	15-26	Long & Le Khach Quyet, 2001
Khau Ca SHCA	Ha Giang Province	Not confirmed	
Du Gia Nature Reserve	Ha Giang Province	Not confirmed	
Kim Hy	Bac Kan Province	2 - 3	Geissmann et al, 2009
Ba Be National Park	Bac Kan Province	Ca. 8-10	Dong Thanh Hai, 2008

The Francois' langur is listed as Endangered in the IUCN Red List of Threatened Species (IUCN, 2011). Acknowledging its endangered status, the government of Vietnam placed the species under strict protection in 1992 and further included the species in Group IB in Prime Minister's Decree 32/2006 being "strictly banned from exploitation and use for commercial purposes, including plants and animals of scientific or environmental value or high economic value, with very small populations in nature or in high danger of extinction". Francois' langurs are also protected under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) restricting the international trade of the species.

The largest remaining populations of Francois' langurs occur in the southern Chinese provinces of Guangxi, Guizhou and Guangdong (FFI, 2010) and an estimated 1,600 – 1,900 individuals occurring in 31 locations are currently known. The largest population comprises about 700 individuals and is located in Mayanghe in Guizhou Province but all other populations consist of fewer than 190 individuals.

However, the population of Francois' langur in China appears to be quite stable, whereas in Vietnam the survival of the species seems uncertain. The remaining eight populations are isolated from each other and most of them are not viable due to their small size.

Francois' langurs were first discovered in Lam Binh forest in 2003 (PARC) and confirmed by PRCF surveys in 2010 and 2011. This population is of vital importance for the survival of the species in Vietnam since it is the only population of a viable size.

Thach Mai Hoang (pers.com.) estimated that five groups of Francois langurs live in the area of Lung Nhoi and Ban Cai. These areas now belong to two communes of Khuon Ha and Thuong Lam.

Table 2. Records of direct observations of Francois' Langurs

Location Name	Number of Individuals	Coordinates
Francois Langur 01: 16/ 12/ 2010	02 (estimated at 4)	528775/ 2489249
Francois Langur 02: 16/ 12/ 2010	06 (estimated at 6)	528405/ 2489142
Francois Langur 03: 17/ 12/ 2010	06 (estimated at 6)	529596/ 2488709
Francois Langur 01: 22/ 05/ 2011	06 (estimated at 10)	531789/ 2488407
Francois Langur 02: 23/05/2011	08 (estimated at 12)	532630/ 2488868

2.2 Socio-economic conditions

2.2.1 General demographics

Khuong Ha Commune comprises 12 villages with 678 households and Thuong Lam Commune 14 villages with 734 households (Thuong Lam & Khuon Ha Communes Social Report, 2011). Of these 36 villages, seven villages (Na Tong, Na Thuong, Na Lau, Khau Dao in Tuong Lam Commune and Na Van, Na Muong, Na Kem in Khuon Ha Commune) were the focus of the action plan development. These villages were selected based on:

- a) Their close proximity to Lam Binh forest
- b) Their inhabitants cultivate and conduct agricultural activities on a seasonal basis in Lam Binh forest
- c) Their inhabitants have the highest degree of forest dependence

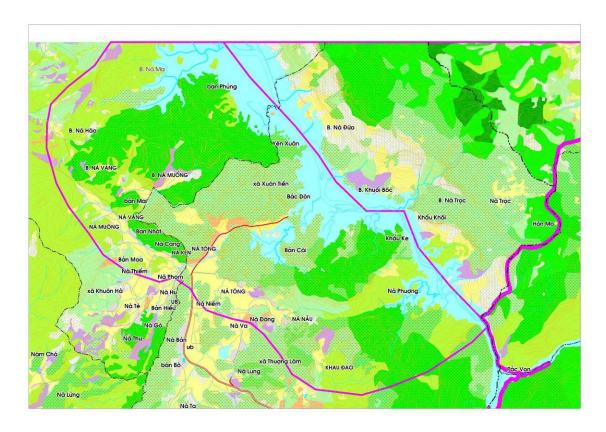


Figure 2. Location of villages included in the SCAP

The target villages belong to ethnic minorities with small numbers of the national majority Kinh ethnic group. Data shown in table 2, were compiled from field surveys, from participants attending the workshop on the draft SCAP and from official statistics.

Table 3. Overall	demographic	data of the	seven key	villages

Commune/	No. Of Households	Ethnicity	Proportion of poor
Village			households*(%)
Khuon Ha Commune	687	Tay, Dao,H'Mong,	357 (52%)
		Kinh	
Na Kem	81	Tay	62
Na Muong	73	Tay	37
Na Vang	58	Tay	20

Thuong Lam	734	Tay	
Commune			
Khau Dao	25	Tay	23
Na Lau	105	Tay	89
Na Thuon	84	Tay	53
Na Tong	119	Tay	20

^{*} Based on Thuong Lam & Khuon Ha Commune Social Reports (2011)

2.2.2 Livelihoods

Lam Binh District is a newly formed district, split from Na Hang District in 2011, and therefore it is difficult to calculate from official statistics the average income of inhabitants. According to the Na Hang District People's Committee the average annual income in 2010 was 9.4 million VND per person in Na Hang District (Committee for Ethnic Minorities' website 2011). At the seven villages where the PRA was conducted during the SCAP development, the average income per person was only between 1 and 4 million VND per year.

In Lam Binh District, the main agricultural activities at the target villages are cultivation of rice, maize and cassava crops and a small percentage of peanut and soya cultivation, and keeping livestock, mainly poultry and pigs, followed by buffalo, cows and a small number of goats.

2.3 Forest use

The village land of Khuon Ha and Thuong Lam communes comprises 9.345 ha Watershed Protection Forest.

2.3.1 Logging

Most valleys were cleared of primary forest over 100 years ago and are now used for agriculture (Le Trong Trai et al., 2004). Selective logging targets high-value timber species such as *Burretiodendron hsienmu* (Nghien), *Markhamia stipulata* (Thiet Dinh) and *Garcinia fagracoides* (Trai). The latter two are protected under Prime Minister Decree 32/2006 and listed in Group IIA. Logging activities are well organized and tees are sawn into planks on site and transported out of the forest by boats or by road (Thach Mai Hoang, 2011). Chainsaws are widely available.

Logging appears to be undertaken largely by people from outside the area and only a small percentage of timber is used locally to build or repair houses. Remarkably people from Na Tong Village still preserve a number of large Nghien trees in the commune forest and protect the trees from being harvested by people from other areas. This village clearly understands the benefits of the forest for the protection of their homes and properties at the base of the mountain. They are aware that if the trees are cut, erosion, mud - and rockslides will be a threat to the village and people at the foothills will lose their livelihood. Most other villages have already logged the valuable trees and only few are left in remote areas, which are difficult to access.

2.3.2 Hunting

Hunting targets all animal species. People who have been resettled due to the inundation of the Na Hang reservoir still come back to the forests where they used to live and hunt and which they know well. Hunters are reported to hunt in the evening and early morning and sometimes sleep in caves, temporary structures in the forest or the seasonally used farms in the forest (Thach Mai Hoang, 2011). Local and outside hunters hide their guns in the forest to prevent detection of the gun and avoid encountering a forest patrol with a gun in hand.

Under the PARC Project (2003-2004), a gun buy-back program was implemented and the laws on prohibition of guns and hunting were publicised, so people are aware of the illegality of hunting and gun possession.

Despite governmental regulations banning the use and production of hunting guns, hunting remains profitable and materials for gun production are readily available.

Local people are aware that hunting of "rare and precious" animals (Group IB and IIB of Prime Minister Decree 32/2006) is punishable by pecuniary penalties and/or incarceration, but they are not aware how severe these penalties can be. Furthermore, wildlife protection laws are not publicised often or clearly enough.

Village level fire prevention teams are neither trained, nor equipped, nor do they have the mandate to patrol the forest for law enforcement purposes.

2.3.3 NTFP collection

Bamboo shoots, medicinal plants (Bach Bo roots, day mau cho) and orchids are collected very intensively. Many species, especially the jewel orchid *Anoectochilus formosanus*, a species protected in Group IA Prime Minister Decree 32/2006, are harvested at a degree that leads to a decline of the species in the forest. There is little awareness of the protection status of the jewel orchid, even amongst local authorities and the law concerning this species is not well publicised or known.

If the demand for a particular NTFP remains stable or increases as its abundance declines, its market value increases accordingly thereby maintaining the profitability in exploitation of an ever diminishing resource. NTFPs are also harvested as feed for livestock such as cattle, buffalos and pigs.

2.3.4 Cultivation and farming in the forest

Inundation of some of the lower areas of Thuong Lam and Khuon Ha communes through the Na Hang hydropower project reduced the area of land available for cultivation and additional forest was cleared in order to make up for this shortfall.

Furthermore in several valleys in the forests of Khuon Ha and Thuong Lam communes a number of huts have been constructed long ago where seasonal cultivation and livestock grazing activities occur. Forest around these huts is impacted by shifting cultivation with burning of fields, fuelwood collection, harvesting of NTFPs and occasionally logging. These areas coincide with the home ranges of several of the identified Francois' langur groups.

2.3.5 Harvesting "monkey blood"

In the Lung Nhoi area local people use bamboo ladders to climb up limestone cliffs to collect so called "monkey blood" deposits from the Francois' langurs' sleeping caves. The product, which is of unknown composition, is sold as a traditional medicine, yielding high economic returns. The amount harvestable nowadays is small due to the low number of remaining langurs.

2.3.6 Livestock grazing

Livestock grazing is widespread throughout the year in the accessible parts of the forest adjacent to the villages and the seasonally inhabited huts in the valleys. In winter livestock is taken to the forest more so, in order to protect them against the extreme cold.

2.3.7 Fuelwood collection

Fuelwood is used by almost all households in the area and there are no alternative fuel sources readily available.

2.4 MANAGEMENT OF THE LAM BINH WATERSHED PROTECTION FOREST

2.4.1 Government management structure

Lam Binh is part of the Na Hang Watershed and it is managed by the Na Hang Watershed Protection Forest Management Board, the Division of Natural Resources and Environment (DNRE) of Lam Binh District and Thuong Lam and Khuon Ha commune authorities. The combined area of Watershed Protection Forest across both communes comprises more than 9,345 ha. The Watershed Protection Forest management Board has demarcated the boundary of the protection forest at the villages.

In collaboration with functional agencies and commune PC FPD carries out regular propaganda on forest protection laws, forest land-use regulation and governmental forest policies for local people.

2.4.2 Local community involvement

Local people are encouraged by district and commune level FPD to participate in the protection of the forest. Local households in Khuon Ha and Thuong Lam communes have signed 50 year forest protection contracts. All plans for Lam Binh WPF are implemented at levels from commune to village and local people are made aware of their existence. However local people's involvement is rather limited to an inactive role.

2.4.3 Conservation activities

Conservation activities have only recently at Lam Binh.

The first activities were implemented under the PARC Project in 2003 and 2004 and since 2010 by PRCF.

PARC Project conservation activities

Conservation needs assessment

This was prepared in October 2004 and documented the conservation values and threats in the area and recommended a series of solutions and actions to address them.

Proposal for the Francois' Langur Species and Habitat Conservation Area

Assisted by the PARC Project, Tuyen Quang FPD submitted a proposal to the People's Committee of Tuyen Quang for the establishment of the "Francois' Langur Species and Habitat Conservation Area" at Lam Binh (Tuyen Quang FPD, 2004).

Operational plan for the proposed François' Langur Species and Habitat Conservation Area

A draft operational plan for the years 2005 to 2009 for the proposed conservation area was prepared in cooperation with Na Hang District FPD.

Regulations on the management of the Francois' Langur Species and Habitat Conservation Area and buffer zone

Regulations for the proposed SHCA and its buffer zone, with an accompanying map, were prepared in a poster format in cooperation with Na Hang District FPD and widely distributed.

Community ranger training

In collaboration with Na Hang District FPD a group of community members were recruited and trained as "Community Forest Rangers". These members were intended to work with FPD rangers to patrol the proposed Francois' Langur SHCA.

PRCF activities implemented with support from FFI

Field surveys for Francois' langur

In December 2010 a survey was conducted in Lam Binh and Sinh Long forests. During this survey Francois' langurs were only observed in the Lam Binh forest. Another survey was conducted in May 2011 but this time only in Lam Binh forest, since local reports indicated that the langurs had been extirpated in Sinh Long. The results of the surveys are described in chapter 2.1.

Conservation awareness

An educational poster featuring the Francois' langur and providing information about its protection status and distribution in Vietnam and a postcard featuring the animal and encouraging local people to report its presence were developed and distributed throughout the target villages and the wider community.

Awareness raising on the langurs was also conducted during the participatory land use mapping, during which people were also asked to indicate areas where Francois' langurs occurred, and threats to their survival and requirements for their conservation were discussed.

Currently PRCF is developing two education modules, one on the Francois' langurs and another on biodiversity conservation. These are prepared in cooperation with staff and students from Khuon Ha and Thuong Lam high schools and members of the Youth Union in both communes.

Participatory land use mapping

In December 2011 a participatory land use mapping process was conducted with a total of 30 participants from the seven target villages, local authorities from both communes and the district FPD.

"No Hunting" agreements of Francois' langur with local people

The participants of the land-use mapping were asked to sign no-hunting agreements, when they felt strongly enough about conserving the species locally. The document prepared for signature provided information on the Francois' langur, its conservation status and legal status. In signing the documents the signatory agrees not to conduct or participate in activities threatening the survival of the animals and to participate in monitoring the presence of Francois' langurs. These agreements are not binding but serve as a tool to engage the local community in conservation activities.

3 THREATS TO THE FRANCOIS' LANGURS AND FORESTS IN LAM BINH

The following paragraphs describe the results of threat assessment surveys conducted during the 2010 and 2011 Francois' langur surveys and the threats listed by village participants during the PRA data collection process and data from the community patrol teams. All threats are listed and discussed in relation to the langurs.

DIRECT THREATS

3.1 Hunting

Hunting is the major and most immediate threat to the langurs. Interviews with people from the seven target villages identified a number of reasons for hunting. These included:

- Lack of awareness on forest protection laws. However, the hiding of hunters and the hiding of guns in the forest indicate that there is awareness on the illegality of hunting
- High prices of wildlife as speciality meat and as medicines and a lack of employment alternatives
- Easy access to locally manufacture firearms and traps
- Lack of regular and sufficient forest law enforcement patrols to act as a deterrent
- Lack of community involvement in the protection of the forest
- Lack of concern from local authorities and lack of law enforcement
- Change in traditional cultures. Some old people from Tay minority villages keep the tradition of not consuming the meat of macaques and langurs, however, young people have now started to hunt and eat these animals.

3.2 Habitat loss

3.2.1 Clearance for cultivation

Le Trong Trai et al. reported in 2004 that swidden agriculture had ceased within the Lam Binh and Sinh Long forests. After the inundation of the Na Hang reservoir this practice recommenced (see 2.3.4.). However, this has only an impact on the langurs if the newly cleared areas include areas in which langurs occur.

Forest fires are usually caused by people who enter the forest for logging, hunting, and NTFP collection. Fires may also occur after people lose control of low intensity burns used to prepare land for cultivation and cattle grazing if it is not supervised properly or conducted in the wrong season. Forest fire has potentially a very high impact on the langurs if large tracts of forest are destroyed, leaving depleted climbing structures and damaged feeding trees.

3.3 Habitat degradation

3.3.1 Logging

Logging does not have a direct impact on the monkeys, as Francois' langurs do not depend on primary forest and are able to move through degraded forest without much limitation. Thus selective logging of high value timbers species has little impact on them. However, a more open canopy may force the animals to move along the ground with the risk of being caught in snares and traps. In addition, opportunistic hunting from loggers whilst camped in the forest also poses a considerable threat.

3.3.2 Fuelwood collection

Fuelwood collection in Vietnam does not usually involve the collection of dead wood. The preferred technique is to cut young trees and branches from larger trees with diameters of less than ten centimeters. Therefore cutting fuelwood has a massive impact on the forest since it prevents forest regeneration. A lack of alternative fuel sources and population growth maintain the demand for fuelwood.

3.4 Harvesting "monkey blood"

Harvesting "monkey blood" deposits from sleeping caves has a very strong impact on the langurs. Disturbance at the sleeping cave will cause the langurs to move and possibly permanently abandon the cave. Caves are often used by langurs over a very long timeframe and not all caves are equally suitable as sleeping caves. Disturbance might force the animals to sleep in trees where they are more exposed to the elements during the cold season.

Harvesters often leave behind ladders so that they can access the caves again in the future, thereby making the caves more accessible for hunters.

INDIRECT THREATS

3.5 Harvesting of NTFP

Collecting NTFPs has little direct impact on langurs other than through opportunistic hunting for food during the time spent in the forest for harvesting activities.

3.6 Farming in the forest

Some seasonally used farms are located in the valleys where several langur groups occurs. They pose a risk since they used as hideouts for hunters to base their activities from inside the forest.

3.7 Livestock grazing in the forest

Livestock grazing has a direct yet minor impact on langur habitat, mainly when goats and cattle are kept in the forest that impact natural regeneration of the forest. The second and indirect impact associated with livestock grazing is the increased presence of people in the forest and the risk of opportunistic hunting.

3.8 Discussion of threats

The most significant threats to the Francois' langur population in Lam Binh forest is hunting with firearms followed by habitat loss and habitat degradation.

During the surveys conducted by PRCF in 2010 and 2011 villagers reported that in these years at least eight langurs were killed. Surveys indicate that between 2004 and 2010 the population size has remained relatively stable which suggests that only a small number of animals have been killed in that time period. It is unclear if the number of deaths reported in 2010/2011 is an exception to the normal situation in Lam Binh or if it indicates a general increase in langur hunting in recent years. However, if hunting continues at that rate, the species will be extirpated from Lam Binh forest within a few years.

Clearance of entire areas for cultivation leads to fragmentation of the habitat and isolates langur groups from each other. This reduces the possibilities for groups to interbreed and thereby reduces the prospect for the species' long-term survival at this site.

4 OPPORTUNITIES FOR IMPROVED CONSERVATION

4.1 Local community involvement in forest management

Local people from the communes surrounding the Lam Binh forest have a strong interest in reliable long-lasting forest resource-based income opportunities. The forest also provides a very important ecological service to the area by protecting the watershed of the Na Hang reservoir and regulating the essential water supply to the neighbouring villages.

4.2 International and national attention for conservation of the Francois' langurs

The Francois' langur is a species endemic to the limestone areas of the very northern parts of Vietnam and Southern China. Its survival in Vietnam is of national and international concern, which is reflected in its classification in the Red Data book of Vietnam and the IUCN Red List of Threatened Species. International organizations are interested and ready to support the conservation of this species. In 2014 the largest international conference on primates will be held in Hanoi and this will attract many hundreds of primatologists and primate conservationists to Vietnam. During this event it is important to raise the profile of the species and its conservation status and to possibly attract the interest of new donors who might be interested in supporting Francois' langur conservation in Vietnam.

4.3 Improved awareness of the François' langurs

There is no targeted hunting for the Francois' langurs in Lam Binh forest. Hunting of langurs occurs opportunistically, when people spend time in the forest for logging, NTFP collection, cattle grazing, and so on. No household relies on hunting of this species. Therefore raising awareness could have a considerable impact on the protection of the langurs.

4.4 Payment for environmental services

The Lam Binh forest is classified as a Watershed Protection Forest. It is located upstream of the Na Hang reservoir and offers an environmental service essential to ensuring the operation of the hydropower plant. There is the opportunity to link watershed protection directly to biodiversity conservation initiatives as a means to protect essential environmental services. Development of a Payment for Ecosystem Services (PES) plan is recommended as a means to ensure equitable delivery of these benefits.

4.5 Tourism opportunity

The area offers spectacular views of karst geology and forests and an impressive lake. This offers considerable opportunities for nature-oriented and adventure tourism.

5 CONSERVATION ACTIONS

There are five main areas, suggested by the villagers and other stakeholders, which needed to be addressed in order to improve the conservation of the langurs and of Lam Binh Watershed Protection Forest.

This Species Conservation Action Plan proposes to give the villages a central role in the management of Lam Binh Watershed Protection Forest. They have a very strong interest in maintaining the forest and can act as responsible stewards of the forest. The government agencies will provide overall supervision and government and non-government organizations will provide technical support.

5.1 Forest Management

Action 1: Develop an suitable management framework for Lam Binh Watershed Protection forest

Lam Binh Watershed Protection Forest could either be managed as community managed forest or could be designated as a Special Use Forest and integrated into Vietnam's protected area system.

Action 2: Establish a multi-stakeholder management group

To improve the management of the Lam Binh forest it is essential that stakeholders are allowed to participate in management. A multi-stakeholder group should be established in order to discuss, advise, approve and oversee forest management measures. The group should meet on a regular basis every three months and consist of no more than 20 members, including at least the following groups:

- People's Committee of Lam Binh District
- Na Hang Watershed Protection Forest Management Board
- District Natural Resources and Environment Division
- District Agriculture and Rural Development Office
- District Forest Protection Department
- People's Committees of Khuon Ha and Thuong Lam
- Police of Khuon Ha and Thuong Lam
- Village representatives of Na Kem, Na Muong, Na Van, Khau Dao, Na Lau, Na Thuon, Na Tong and Na Hao*

*Na Hao has not been included in the PRA for the SCAP due to a miscommunication. However the village is known for hunting activities and therefore should be included in this committee.

Action 3: Consolidate and demarcate cultivation areas inside the Lam Binh Watershed Protection Forest

Village meetings should be held in all villages living in immediate proximity to Lam Binh forest in order to report land claims inside the Watershed Protection Forest (especially in the valleys where fields are seasonally used) to representatives from the respective communes, who then report to the NHWPF Management Board and DNRED of Lam Binh District. Field surveys to verify the land use claims and map all land use should be conducted.

Action 4: Conduct participatory land use planning

The information given by villagers has to be confirmed in surveys. Participatory land use planning should be conducted with local people from villages in close proximity to Lam Binh Watershed Protection Forest.

Action 5: Demarcate village boundaries

Results from the participatory land use planning should be used to demarcate the boundaries between villages, and between village land and the Watershed Protection Forest.

5.2 Law enforcement

Action 6: Strengthen patrolling of forest

Forest protection forces need to intensify their patrols. They need to be trained in interview skills, conflict resolution, handling of violators and the documentation of violations.

Action 7: Establish checkpoints along transport ways

Tuyen Quang PC needs to issue a policy to setup checkpoints with barriers on all roads leaving Lam Binh Watershed Protection Forest. Vehicles leaving the area have to be inspected.

Action 8: Extend the work of the forest fire group to community based forest protection group

The role of the village forest fire prevention group could be extended to include patrolling the forest for violations of forest protection law and should be given the authority to act as a community patrol group.

Action 9: Improve forest crime reporting

The reporting of forest crimes needs to be improved and local communities should be encouraged to actively participate in the reporting. A reporting hotline to the designated law enforcement agency and mailboxes in each village at commune authority offices should be set up, where reports can be submitted anonymously. This could also prevent violators from be able to threaten the informants.

Action 10: Strict and clear prosecution of violators

According to the law local court, police and forest protection department violators have to be prosecuted strictly and clearly.

Action 11: Publicise offenders

If a member of the commune has been found violating the forest protection law his name should be publicised widely throughout the district together with details of the crime committed and the punishment incurred in order to raise awareness of crimes and to promote compliance with the law.

Action 12: Control possession of chainsaws

The local government needs to issue a policy to manage chainsaws in the Lam Binh area. All chainsaws in the villages should be registered with the FPD with support of police. Chainsaws brought into the communes from the outside must also be registered with FPD.

Action 13: Control of firearms

All laws on firearm possession should be enforced and illegal firearms confiscated.

Action 14: Control restaurants selling wildlife

Regular controls of all restaurants known or suspected to offer wildlife should be conducted.

Action 15: Rewards for people who report or stop illegal activities

Informants who report violators and who contribute to the prevention of a violation of forest protection laws should be rewarded either though a financial reward or by official recognition by PC or FPD.

Action 16: Develop and publicise village regulations

Village regulations should be prepared by both the Thuong Lam and Khuon Ha communes in conjunction with target villages to clarify natural resource use within the Lam Binh Watershed Protection Forest. The multi-stakeholder group should review the regulations in order to ensure that they are consistent with each other.

5.3 Awareness raising

Action 17: Raise awareness on the François' langurs and their conservation needs

An education programme should be used to raise awareness on the Francois' langur and the value in its conservation. Raising awareness of the negative impacts of deforestation on the environment should be carried out. Awareness should be raised on the negative impact of the clearance of the Watershed Protection Forest and pollution of water sources and on the values and benefits of these forests to local communities. The traditional culture of not consuming the meat of langurs or other monkeys should be promoted.

Action 18: Raise awareness on forest protection laws and penalties

Information on forest, wildlife and watershed protection laws and penalties should be publicized through the media and village meetings. Posters should be printed stating prohibited actions and potential penalties. Signboards should be set up at FPD offices and at the Francois' langur habitat

Action 19: Raise awareness on wildlife consumption

Awareness should be raised on the negative impacts of wildlife consumption and agreements should be signed with households and restaurants to not sell or consume wildlife. Awareness on alternatives to wildlife medicines, especially "monkey blood" and monkey balm, should be raised.

Action 20: Raise awareness on family planning

An awareness programme should be conducted encouraging families not to have more than two children to reduce pressure upon the local environment and maintain a higher quality of life for their families.

5.4 Community development

Action 21: Establish fuelwood efficient stoves

Provide participating communes with suggested plans and materials for the construction of fuel efficient stoves.

Action 22: Establish bio-gas systems

Opportunities to build bio-gas systems should be created for families with a sufficient number of pigs.

Action 23: Improve livestock husbandry methods

Assistance should be offered to improve livestock husbandry methods including vaccination schemes and improved feeding methods and introduce alternative feeding sources eg production of silage or planting of elephant grass.

Action 24: Improve cultivation techniques

Bare land in villages should be used to increase the amount of agricultural land. New techniques for increasing agricultural productivity on existing cultivation land should be introduced. Options for the cultivation of new species, in particular cash crops, on existing cultivation land should be explored as a means of diversifying livelihoods.

Action 25: Develop village interest groups

Interest groups should be formed to create a possibility for villagers to exchange experiences and develop plans to further improve livelihoods.

Action 26: Develop a small grants programme

Village development grants and a microcredit system should be implemented to encourage activities to improve local livelihoods. Distribution of grants and microcredit should be dependent on compliance with village regulations and there should be trade-offs for good environmental management.

Action 27: Develop vocational training programmes and alternative employment opportunities

Development of a vocational training programme requires collaboration with district and provincial authorities in order to train people in professional skills so they do not have to rely on earning a living by potentially illegal or unsustainable forest exploitation. Opportunities for employment in biodiversity conservation, watershed protection and ecotourism should be explored.

Action 28: Develop alternative income sources

Alternative income sources such as breeding of frogs or keeping of bees should be investigated jointly with local villagers. Trials should be conducted to assess the feasibility of introducing new income sources at a large scale.

5.5 Conservation Studies

Action 29: Conduct annual census and studies of the ecology of the François' Langur population

A census should be conducted to obtain updated information on the langurs and their status and provide information to take into consideration when making management decisions. Studies on the ecology of the species should be supported and will provide a better understanding.

6 ROLES AND RESPONSIBILITIES

In the stakeholder consultation workshop, stakeholder roles in Table 3 were proposed for implementing the species conservation action plan for the François' langur in Lam Binh forest.

Table 4. Suggested implementing stakeholders

	Action	Implementing stakeholder	Coordination	Note – Directed by
For	est Management			v
1.	Develop a suitable management framework for Lam Binh Watershed Protection Forest	Tuyen Quang FPD	Lam Binh PC , NGO	People's Committee Tuyen Quang
2.	Establish a multi-stakeholder management group	Lam Binh PC,Communes PC, forest owners	All stakeholders listed in 5.1 Action 2, NGO	People's Committee Tuyen Quang
3.	Consolidate and demarcate cultivation areas inside the Lam Binh Watershed Protection Forest	Lam Binh DNRE	Relevant commune PC, villages, households and authorities, NGO	Lam Binh PC
4.	Conduct participatory land use planning	DNRE	Relevant commune PC, villages, households and Lam Binh authorities, NGO	Lam Binh PC
5.	Demarcate village boundaries	DNRE	Relevant PC communities, villages, households, Lam Binh authorities, NGO	Lam Binh PC
Lav	v Enforcement			
6.	Strengthen patrolling of forest	Lam Binh FPS	Commune PC,	Lam Binh PC
7.	Establish checkpoints along transport ways	Tuyen Quang FPD	Lam Binh PC	Tuyen Quang PC
8.	Extend the work of the forest fire group to community based forest protection group	Lam Binh FPS	Lam Binh Law department, Lam Binh FPS, village management boards	Lam Binh PC

	Action	Implementing stakeholder	Coordination	Note – Directed by
9.	Improve forest crime reporting	Lam Binh FPS	Commune PC, village management boards	Lam Binh FPS
10.	Strict and clear prosecution of violators	Lam Binh People's Court	Lam Binh Police, Lam Binh FPS	Lam Binh PC
11.	Publicise offenders	Lam Binh People's Court	Lam Binh Police, Lam Binh FPS, Lam Binh Department of Investigation, commune PC, village management boards	Lam Binh PC
12.	Control possession of chainsaws	Local Authorities	Lam Binh FPS	Lam Binh PC
13.	Control of firearms	District Police, district FPS	Commune PC, village management boards	Lam Binh PC
14.	Control restaurants selling wildlife	FPS, District Police	PC communities, village management boards	Lam Binh PC
15.	Rewards for people who report or stop illegal activities	PC communities, FPS	Lam Binh FPS, commune PC, village management boards	Lam Binh PC
16.	Develop and publicise village regulations	Village manage board	Commune PC, , Lam Binh FPS, Lam Binh PC	PC communities
Awa	areness Raising			
17.	Raise awareness on the Francois' langurs and their conservation needs	FPS	NGO, commune PC, Department of Education	Lam Binh PC
18.	Raise awareness on forest protection laws and penalties	FPS	NGO, commune PC, Department of Education	Lam Binh PC
19.	Raise awareness on wildlife consumption	FPS	NGO, commune PC, Department of Education	Lam Binh PC
20.	Raise awareness on family planning	Lam Binh Medical Center	Commune PC , village management boards	Lam Binh PC
Con	nmunity Development			
21.	Establish fuelwood efficient stoves	NGO	Commune PC, village management board	Lam Binh PC

	Action	Implementing stakeholder	Coordination	Note – Directed by
22.	Establish bio-gas systems	NGO	Commune PC, village management boards	Lam Binh PC
23.	Improve livestock husbandry methods	DoFA, Lam Binh agriculture extension center	NGO, commune PC, village management boards	Lam Binh PC
24.	Improve cultivation techniques	DoFA, Lam Binh agriculture extension center	NGO, commune PC, village management boards	Lam Binh PC
25.	Develop village interest groups	DoFA	NGO, commune PC, villages management boards	Lam Binh PC
26.	Develop small grants programme	NGO	DoFA, commune PC, village management boards	Lam Binh PC
27.	Develop vocational training programmes and alternative employment opportunities	PC communities	DoFA, Lam Binh agriculture extension center	Lam Binh PC
28.	Develop alternative income sources	PC communities	DoFA, Lam Binh agriculture extension center, NGO	Lam Binh PC
Con	servation Studies			
29.	Conduct annual census and studies of the ecology of the Francois' Langurs	NGO	Lam Binh FPS, commune PC	PRCF, Tuyen Quang FPD

7 IMPLEMENTATION PLAN AND BUDGET

Action		Year of implementation				Budget	
		2012	2013	2014	2015	2016	
For	est Management						
1.	Develop a suitable management						20,000 US\$
	framework for Lam Binh forest						
2.	Establish a multi-stakeholder						12,000 US\$
	management group						
3.	Consolidate and demarcate						6,000 US\$
	cultivation areas inside the Lam						
	Binh Watershed Protection Forest						
4.	Conduct participatory land use						12,000 US\$
	planning around Lam Binh forest						
5.	Demarcate boundaries of the						10,000 US\$
	villages.						
La	w Enforcement						
6.	Strengthen patrolling by forest						10,000 US\$
	rangers						
7.	Establish checkpoints along						10,000 US\$
	transport ways						

8.	Extend the work of the forest fire					50,000 US\$
0.	group to community based forest					20,000 024
	protection group					
9.	Improve forest crime reporting					5,000 US\$
10.	Strict and clear prosecution of					10,000 US\$
	violators					
11.	Publicise offenders					6,000 US\$
12.	Control possession of chainsaws					2,000 US\$
13.	Control of firearms					20,000 US\$
14.	Control restaurants selling wildlife					5,000 US\$
15.	Rewards for people who report or					5,000 US\$
	stop illegal activities					·
16.	Develop and publicise village					6,000 US\$
	regulations					
Awa	areness Raising		 			
17.	Raise awareness on the François'					6,000 US\$
	langurs and their conservation					
	needs					
18.	Raise awareness on forest					6,000 US\$
	protection laws and penalties					
19.	Raise awareness on wildlife					6,000 US\$
	consumption					
20.	Raise awareness on family					2,000 US\$
~	planning					
	nmunity Development					12.000
21.	Establish fuelwood efficient					12,000
22	stoves					US\$
22.	Establish bio-gas systems					12,000 US\$
23.	Improve livestock husbandry					12,000 US\$
2.4	methods					C 000 LICO
24. 25.	Improve cultivation techniques					6,000 US\$
	Develop village interest groups					6,000 US\$
26. 27.	Develop small grants programme Develop vocational training					12,000 US\$ 6,000 US\$
21.	programmes and alternative					0,000 035
	employment opportunities					
28.	Develop alternative income					12,000 US\$
20.	sources					12,000 035
Con	servation Studies					
29.	Conduct annual census and studies					25,000 US\$
	on the ecology of the François'					20,000 Ο Ο Ο
	Langurs					
Tota						238,000 US\$
		l		1	1	, T

NOTE: Any activity of the SCAP can be implemented individually as budget is available. If one activity can not be implemented that should not impact the implementation of the other activities.

8 REFERENCES

- Bezuijen, M.R., L.F. Potess, Quan Van Tue, Trinh Thang Long, Nguyen Hung Manh and P. Insua-Cao (2004). *Development of the Francois' Langur Species and Habitat Conservation Area, Tuyen Quang Province, Viet Nam.* PARC Project VIE/95/G31 and Forest Protection Department Tuyen Quang, Government of Viet Nam (FPD) / UNOPS / UNDP / Scott Wilson Asia-Pacific Ltd., Ha Noi.
- Birdlife International (2004). *Directory of Important Bird Areas in Vietnam: Factsheet VN028 Sinh Long*. Birdlife International, Hanoi.
- Bleisch, B., Nguyen Manh Ha, Le Khac Quyet, Long Yongcheng (2008). *Trachypithecus francoisi*. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.1. < www.iucnredlist.org>. Downloaded on 15th July 2011.
- Dong Thanh Hai (2009). Survey of Population Status of Francois' Langur, Ba Be National Park, Bac Kan Province, Vietnam. People Resource and Conservation Foundation (PRCF) Vietnam Program, Hanoi, Vietnam.
- Fauna & Flora International (2010). Report on Workshop on Conservation Status of the François' Langur (Trachypithecus françoisi). Nanning, Quangxi Province, China.
- FPD/PARC (2004). Draft Operational Plan for the Francois' Langur Species and Habitat Conservation Area, Na Hang District, Tuyen Quang Province. 2005 2009. Forest Protection Department Na Hang and PARC Project VIE/95/G31, Na Hang.
- Francis, CS., (2008). A Field Guide to the Mammals of South East Asia: Thailand, Peninsular Malaysia, Singapore, Myanmar, Laos, Vietnam, Cambodia. New Holland Publishers (UK) Ltd, London, UK.
- Geissmann, T., Vu Ngoc Thanh, Dine, M. C., and Tu Minh Tiep (2009). *Results of a gibbon survey in the Kim Hy Nature Reserve (Bac Kan province) in northeastern Vietnam*. People Resources Conservation Foundation (PRCF), Vietnam Programme, Hanoi, 25 pp
- Robson, C., (2007). New Holland Field Guide to the Birds of South East Asia: Thailand, Peninsular Malaysia, Singapore, Vietnam, Cambodia, Laos, Myanmar. New Holland Publishers (UK) Ltd, London, UK.
- Le Khach Quyet (2003). Field Survey of the Francois' langur (*Trachypithecus francoisi*) in Lung Nhoi area Na Hang district. Tuyen Quang Province. Northeastern Vietnam. Conservation Report Fauna & Flora International. Vietnam Programme/ PARC Project.
- Le Khac Quyet & Trinh Dinh Hoang (2003). Field Survey and Assessment in Duc Xuan Sinh Long and Lung Nhoi Areas, Na Hang District, Tuyen Quang Province, with special Reference to Primates. Conservation Report Fauna & Flora International. Vietnam Programme/ PARC Project.
- Le Trong Trai, Le Manh Hung, Ha Van Tue, Trinh Viet Cuong, Nguyen Truong Son, Pham Duc Tien, Bui Xuan Phuong (2004). PARC Project: Biodiversity Report on the Ba Be/ Na Hang Conservation Complex. UNDP/ GEF/ FPD/ Scott Wilson/ BirdLife, Hanoi.
- Ministry of Natural Resoures and Environment (2009). *Climate Change and Sea Level Scenarios for Vietnam.* Hanoi.
- Nadler T, Momberg F, Nguyen Xuan Dang, Lormee N (2003). Vietnam Primate Conservation Status Review 2002 Part 2: Leaf Monkeys. FFI/ Frankfurt Zoological Society, Hanoi.
- Nadler T, Streicher U, Ha Thang Long (eds) (2004). Conservation of Primates in Vietnam. Frankfurt Zoological Society, Germany.
- Nadler T, Rawson BM, Thinh VN (eds) (2010). Conservation of Primates in Indochina. Frankfurt Zoological Society/ Conservation International, Hanoi.
- Nguyen Manh Ha & Trinh Viet Cuong (2004). Report on: Status and distribution of Tonkin-Snub Nosed Monkey (Rhinopithecus avunculus), Francois' Langur (Trachypithecus francoisi) in Nam

- Xuan Lac Species and Habitat Conservation area, Dau Dang Area and Species and Habitat Conservation Area of Lung Nhoi Sinh Long. PARC Project, Hanoi.
- Thach Mai Hoang (2011a). Primate Survey Prioritising Tonkin Snub-Nosed Monkey (*Rhinopithecus Avunculus*) and Francois' Langur (*Trachipythecus Francoisi*) In Na Hang Nature Reserve, Tuyen Quang Province. People Resources and Conservation Foundation, Hanoi, Vietnam (unpublished).
- Thach Mai Hoang (2011b). Survey of the Francois' Langur (*Trachypithecus francoisi*) in the Sinh Long / Lung Nhoi / Ban Cai Forest Area, Na Hang District, Tuyen Quang Province, Fauna & Flora International and People Resources and Conservation Foundation, Hanoi, Vietnam (unpublished).

ANNEX 1: Participants on the workshop on Conservation of the Francois' Langur in Lam Binh District, 17th August 2011.

No.	Name	Office – Title
1.	Từ Minh Tiệp	PRCF Field coordinator in Tuyen Quang
2.	Nguyễn Đức Thọ	FFI Community Outreach Officer
3.	Nguyễn Đức Tưng	Manager of Tuyen Quang FPD
4.	Nguyễn Văn Hòa	Tuyen Quang PPC
5.	Dương Văn Xy	DARD
6.	Hoàng Văn Kiên	Head of Lam Binh FPS
7.	Phạm Tiến Tài	DONRE
8.	Hà Xuân Tiến	Provincial police
9.	Nguyễn Xuân Hải	Head of Lam Binh Agriculture and Rural Development division
10.	Dương Trọng Nghĩa	Lam Binh FPS
11.	Đặng Văn Phong	Natural Resources and Environment Division
12.	Hứa Văn Lượng	Lam Binh FPS
13.	Trần Thanh Lịch	Conservation division – FPD
14.	Lê Ngọc Vân	Head of conservation division – FPD
15.	Nguyễn Minh Xiêm	Head of sector economic division – DPI

ANNEX 2: Persons consulted at target villages during collection of data for the Action Plan

i. Na Lau Village (Thuong Lam Commune): **Date:** 27 – 28 August 2011

No.	Name	Sex	Age	Position - Office
16.	Từ Minh Tiệp	Nam	39	PRCF Field coordinator
17.	Nguyễn Đức Thọ	Nam	30	FFI – Community Conservation Officer
18.	Hứa Văn Lượng	Nam	30	Technical Dept – Lam Binh FPD
19.	Trần Thị Minh	Nữ	25	PRCF - Field Site Technical Officer
	Ngọc			
20.	Ngô Thế Vinh	Nam	50	Staff of Thuong Lam CPC
21.	Lộc Duy Hiến	Nam	50	Head of village
22.	Hoàng Văn Nhiệm	Nam	36	Vice-Head of village
23.	Quan Văn Đoan	Nam	51	Member of Village Fatherland Front
24.	Lộc Văn Ích	Nam	69	Head of Elderly Union.
25.	Hoàng Văn Thổng	Nam	69	Member of Elderly Union
26.	Hoàng Thị Định	Nữ	42	Head of Village Women Union
27.	Hoàng Thị Khuyên	Nữ	37	Vice - Head of Village Women Union
28.	Quan Thị Dung	Nữ	38	Farmer
29.	Quan Văn Hình	Nam	23	Secretary of Village Youth Union
30.	Lộc Văn Sử	Nam	29	Vice Secretary of Village Youth Union
31.	Lộc Văn Tuân	Nam	30	Head of militia
32.	Lộc Văn Phụng	Nam	40	Head of Village Famer Union
33.	Lộc Văn Hiệu	Nam	46	Head of village Veteran's organization
34.	Quan Thái Hiển	Nam	25	Farmer

ii. Khau Dao village (Thuong Lam Commune): Date: 28 – 29 August 2011

No.	Name	Sex	Age	Position - Office
35.	Từ Minh Tiệp	Nam	39	Field coordinator -PRCF
36.	Nguyễn Đức Thọ	Nam	30	FFI – Community Conservation Officer
37.	Trần Minh Ngọc	Nữ	25	PRCF - Field Site Technical Officer
38.	Võ Văn Lượng	Nam	30	Technical Dept – Lam Binh FPD
39.	Ngô Thế Vinh	Nam	50	Veteran
40.	Hoàng Văn Thảo	Nam	48	Head of village
41.	Hoàng Văn Bản	Nam	48	Village Fatherland Front
42.	Hoàng Văn Chừng	Nam	49	Farmer
43.	Hoàng Xuân	Nam	52	Vice- head village
	Nghiêm			
44.	Hoàng Văn Duẩn	Nam	42	Farmer
45.	Hoàng Văn Hiền	Nam	30	Secretary of Youth Union
46.	Hoàng Văn Ngân	Nam	39	Nursery of village
47.	Hoàng Văn Mạnh	Nam	39	Red cross
48.	Hoàng Văn Thư	Nam	46	Head of Veteran's organization
49.	Hoàng Văn Thành	Nam	30	Head of militia
50.	Ma Thị Lý	Nữ	48	Head of Women Union
51.	Nguyễn Thị Tỳ	Nữ	43	Head of Farmer Union
52.	Tề Văn Đạng	Nam	75	Elderly

iii. Na Thuon Village (Thuong Lam Commune): **Date:** 30 – 31 August 2011

No.	Name	Sex	Age	Position - Office
53.	Từ Minh Tiệp	Nam	39	PRCF Field Coordinator
54.	Nguyễn Đức Thọ	Nam	30	FFI – Community Conservation Officer
55.	Trần Thị Minh	Nữ	25	PRCF- Field Site Technical Officer
	Ngọc			
56.	Hứa Văn Lượng	Nam	30	Technical Officer of Lam Binh FPD

57.	Ngô Thế Vinh	Nam	53	Head of Thuong Lam commune Veteran's Union.
58.	Quan Văn Long	Nam	51	Head of village
59.	Quan Văn Huyền	Nam	44	Vice -Head of village
60.	Quan Văn Nha	Nam	51	Member of Village Fatherland Front
61.	Hoàng Văn Sai	Nam	70	Head of Village Elderly Union
62.	Nông Tiến Tụng	Nam	71	Vice- Head of Village Elderly Union
63.	Ngô Thị Ngự	Nữ	48	Head of Village Women Union
64.	Chẩu Thị Mỵ	Nữ	42	Vice - Head of Village Women Union
65.	Quan Văn Quý	Nam	26	Secretary of Village Youth Union
66.	Ma Văn Bằng	Nam	30	Head of militia
67.	Hoàng Văn Trên	Nam	68	Farmer
68.	Chẩu Văn Kính	Nam	56	Vice –head Veteran's Union
69.	Hoàng Thị Mai	Nữ	56	Farmer
70.	Quan Văn Thuyên	Nam	47	Farmer
71.	Ma Văn Nguyên	Nam	42	Farmer
72.	Quan Văn Miền	Nam	40	Farmer
73.	Quan Thị Vân	Nữ	29	Member of village Women Union
74.	Hoàng Văn Nhiêu	Nam	32	agricultural extensions

iv. Na Tong village (Thuong Lam Commune): **Date:** 31 August – 1 September 2011

No.	Name	Sex	Age	Position - Office
75.	Từ Minh Tiệp	Nam	39	PRCF Field Coordinator
76.	Nguyễn Đức Thọ	Nam	30	FFI – Community Conservation Officer
77.	Trần Thị Minh	Nữ	25	PRCF- Field Site Technical Officer
	Ngọc			
78.	Hứa Văn Lượng	Nam	30	Technical Officer of Lam Binh FPD
79.	Ngô Thế Vinh	Nam	53	Head of Thuong Lam commune Veteran's Union
80.	Nguyễn văn Thành	Nam	49	Head of Na Tong village
81.	Hỏa Văn La	Nam	46	Vice - Head of Na Tong village
82.	Chẩu Văn Đoàn	Nam	57	Member of Village Elderly Union
83.	Quang Thị Thời	Nữ	36	Head of Women Union
84.	Nguyễn Văn Đài	Nam	57	Member of Elderly Union
85.	Nông Văn Huy	Nam	49	Member of Veteran's Union
86.	Nông Văn Cảnh	Nam	40	Member of Famer Union
87.	Dương Văn Bản	Nam	53	Member of Famer Union
88.	Nguyễn Văn Phổ	Nam	27	Head of militia and secretary of Youth Union
89.	Hỏa Văn Thượng	Nam	69	Member of Elderly Union
90.	Hỏa Văn Anh	Nam	70	Member of Elderly Union

v. Na Kem Village (Khuon Ha Commune): **Date:** 3 – 4 September 2011

No.	Name	Sex	Age	Position - Office
91.	Từ Minh Tiệp	Nam	39	PRCF Field Coordinator
92.	Hứa Văn Lượng	Nam	30	Technical Officer of Lam Binh FPD
93.	Trần Thị Minh	Nữ	25	PRCF- Field Site Technical Officer
	Ngọc			
94.	Nông Quang Tực	Nam	45	Staff of Khuon Ha CPC
95.	Chẩu Văn Hồ	Nam	42	Head of village
96.	Chẩu Văn Tụy	Nam	47	Vice head of village
97.	Chẩu Văn Quần	Nam	46	Head of militia
98.	Hoàng Văn Hữu	Nam	29	Secretary of Youth Union
99.	Chẩu Văn Luân	Nam	35	Head of Famer Union
100.	Hoàng Văn Lưu	Nam	30	Head of Veteran's Union
101.	Quan Thị Tiếp	Nam	28	Nursery of village
102.	Chấu Văn Lỷ	Nam	51	Member of Village Fatherland Front

103.	Chẩu Quang Huy	Nam	68	Member of Elderly Union
104.	Chẩu Văn Mịch	Nam	54	Member of Elderly Union
105.	Chẩu Văn Thoát	Nam	50	Secretary of Party committee
106.	Chẩu Văn Tuy	Nam	35	Militia

vi. Na Muong Village (Khuon Ha Commune): **Date:** 4 – 5 September 2011

No.	Name	Sex	Age	Position - Office
107.	Từ Minh Tiệp	Nam	39	PRCF Field Coordinator
108.	Hứa Văn Lượng	Nam	30	Staff of Technical Dept of Lam Binh FPD
109.	Trần Thị Minh Ngọc	Nữ	25	PRCF- Field Site Technical Officer
110.	Nông Quang Tực	Nam	45	Staff of Khuon Ha CPC
111.	Quan Trung Chính	Nam	42	Head of village
112.	Nguyễn Thuyết Trình	Nam	40	Vice -head of village, Secretary of Party
				Committee, policeman of Khuon Ha Commune
113.	Chẩu Văn Lợi	Nam	21	Secretary of Youth Union
114.	Quan Văn Tuyển	Nam	27	Secretary of Youth Union
115.	Chẩu Văn Cương	Nam	50	Head of Famer Union
116.	Chẩu Văn Thén	Nam	57	Head of Veteran's Union
117.	Chúc Văn Lâm	Nam	21	Member of Veteran's Union
118.	Vi Thị Mười	Nữ	25	Member of Women Union
119.	Quan Thị Lý	Nữ	27	Member of Women Union
120.	Chẩu Văn Bạn	Nam	46	Member of Village Fatherland Front
121.	Quan Văn Xưởng	Nam	73	Member of Elderly Union
122.	Quan Văn Tỉnh	Nam	61	Member of Elderly Union

vii. Na Vang Village (Khuon Ha Commune): **Date:** 6 – 7 September 2011

No.	Name	Sex	Age	Position - Office
123.	Từ Minh Tiệp	Nam	39	PRCF Field Coordinator
124.	Trần Thị Minh	Nữ	25	PRCF- Field Site Technical Officer
	Ngọc			
125.	Hứa Văn Lượng	Nam	30	Staff of Technical Dept of Lam Binh FPD
126.	Nông Quang Tực	Nam	43	Staff of Khuon Ha CPC
127.	Hoàng Lệnh Kinh	Nam	49	Head of village
128.	Chẩu Văn Để	Nam	44	Vice - Head of village, policeman
129.	Hoàng Văn Bẩu	Nam	63	Member of Elderly Union
130.	Hà Văn Thiện	Nam	55	Head of village Militia
131.	Nông Văn Chung	Nam	60	Head of Elderly Union
132.	Hoàng Văn Lên	Nam	32	Head of village Militia
133.	Chẩu thị Ln	Nữ	41	Head of Women Union
134.	Quan Văn Tích	Nam	49	Secretary of Party committee
135.	Chẩu Văn Lưu	Nam	24	Secretary of Youth Union
136.	Nông Văn Đồng	Nam	43	Member of Village Famer Union
137.	Hỏa Văn Hanh	Nam	63	Farmer

ANNEX 3: Participants on the consultation workshop on the draft Species Conservation Action Plan for Lam Binh on the 3rd March 2012.

No	Name	Office – Title
1.	Vũ Đình Tải	Vice Director - Tuyên Quang FPD
2.	Hứa Văn Lượng	Technical staff –Lâm Bình FPS
3.	Trần Thanh Lịch	Officer of Conservation Sect Tuyên Quang FPD
4.	Lê Ngọc Vân	Chief of Conservation Sect Tuyên Quang FPD
5.	Nguyễn Ngọc Đệ	Na Hang WPF Management Board
6.	Hoàng Văn Kiên	Director - Lâm Bình FPS
7.	Chẩu Văn Đức	Unit of NRE - Lâm Bình District
8.	Đinh Thị Thu Giang	Officer - Tuyên Quang Department of Finance
9.	Nguyễn Huy Thành	Environment Section – Department of Police
10.	Phạm Tiến Tài	Department of Natural Resources & Environment
11.	Nguyễn Thế Vùng	Vice chairman of Business Economy Unit - DoPI
12.	Nguyễn Văn Bân	Khuôn Hà commune PC
13.	Từ Khắc Sáu	Office - Lâm Bình Unit of Training & Education
14.	Hoàng Văn Thảo	Khau Đao village head
15.	Nguyễn Văn Thành	Nà Tông village head
16.	Quan Văn Long	Nà Thuôn village head
17.	Lộc Duy Hiến	Nà Lầu village head
18.	Hoàng Văn Tùng	National Security Office - Lâm Bình Police
19.	Nguyễn Khánh Toàn	Thượng Lâm commune PC
20.	Nguyễn Xuân Hải	Chief of Lâm Bình district Unit of ARD
21.	Quan Trung Chính	Nà Muông village head
22.	Chẩu Văn Hồ	Nà Kem village head
23.	Hoàng Lệnh Kinh	Nà Vàng village head
24.	Hoàng Văn Phủ	Nà Háo village head
25.	Từ Minh Tiệp	Field Coordinator – PRCF
26.	Nguyễn Phương Thúy	Project staff – PRCF
27.	Joel Holzman	Project staff – PRCF
28.	Nguyễn Hữu Dũng	Primate Programme Coordinator – FFI
29.	Nguyễn Đức Thọ	Community Outreach Office – FFI
30.	Brian Crudge	Technical Advisor – FFI