



SEMI-ANNUAL REPORT
**ENSURING THE SURVIVAL OF TONKIN SNUB-
NOSED MONKEY (*RHINOPITHECUS*
AVUNCULUS) IN NA HANG NATURE RESERVE,
TUYEN QUANG PROVINCE, NORTHEASTERN
VIETNAM**

THACH MAI HOANG
15th JULY 2010

Acronyms

| | |
|------|-----------------------------------------------|
| FFI | Fauna & Flora International |
| FPD | Forest Protection Department |
| IEBR | Institute of Ecology and Biological Resources |
| NHNR | Na Hang Nature Reserve |
| NTFP | Non-Timber Forest Products |
| PRCF | People Resources Conservation Foundation |
| TCP | Tonkin snub-nosed monkey Conservation Project |
| TSNM | Tonkin snub-nosed monkey |
| VND | Vietnam Dong |

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Director: Mr. Nguyen Duc Tung
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NA HANG SPECIAL USED FOREST DEPARTMENT, NA HANG DISTRICT

Managing Director: Mr. Nguyen The Doi
Managing Vice Director: Mr. Nguyen Van Quang
Technical Department: Mr. Nguyen Van Kien

PEOPLE RESOURCES AND CONSERVATION FOUNDATION (PRCF)

Project Technical Manager: MEM. Michael Dine
Project Field Coordinator: MSc. Tu Minh Tiep

FACULTY OF BIOLOGY, HANOI UNIVERSITY OF SCIENCES (HUS)

Biologist: MSc. Hoang Trung Thanh

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1. Summary

Tonkin snub-nosed monkey (TSNM) has been listed as “Critically Endangered” in the IUCN’s red list of threatened animals (IUCN, 2003, 2004), and as one of the top 25 critically endangered primates of the world (Mittermeier et al., 2006; 2007; 2009). There are three known living populations in Vietnam, including two populations in Ha Giang Province and one in Na Hang Nature Reserve of Tuyen Quang Province.

The Tonkin snub-nosed monkey population of Na Hang Nature Reserve was the first rediscovered in Vietnam in the late 1980s. While this population was the focus of significant attention between 1990 and 2002 little work has been done here since 2002. It appears that this population has significantly declined during this time, due to illegal hunting. Thus, this project is designed to meet the following goals:

- To survey for status of Tonkin snub-nosed monkey population in Na Hang Nature Reserve, Tuyen Quang Province, Vietnam.
- To strengthen and reenergize the conservation activities initiated by Management Board of Na Hang Nature Reserve and previous TSNM Conservation Project.

For the first periods of this project (September 2010 – May 2011) we have completed the following activities, which target the first goal in an effort to determine the presence/ absence of Tonkin snub-nosed monkeys:

- Getting the permission with the appropriate local authorities. The good relationship between the author and Management Board of Na Hang Nature Reserve, Tuyen Quang Provincial Forestry Protection Division has been established.
- Recording the presence of two subpopulations of Tonkin snub-nosed monkey with two field surveys (from September 2010 to November 2010).
- Providing two technical trainings on primate survey techniques and necessary skills to identify threats to Tonkin snub-nosed monkeys in Na Hang Nature Reserve.
- Review the model of Community Patrol Group (CPG) initiated by the previous Tonkin snub-nosed monkey Conservation Project.
- Cooperation between author and Provincial Forestry Protection Division of Tuyen Quang Province, People Resource and Conservation Foundation in Vietnam (PRCF) to conduct field survey for TSNM and identify threats to the survival of the monkeys inside the Nature Reserve.

2. Goals and Objectives of the past six months

2.1. Goal

To review current status of Tonkin snub-nosed monkey population and reenergize species conservation activities in Na Hang Nature Reserve, Tuyen Quang Province, Vietnam.

2.2. Specific Objectives

The survey sought to achieve the following objectives:

1. Survey for the presence/ absence of Tonkin Snub-nosed Monkey within the Tat Ke and Ban Bung Sectors of Na Hang Nature Reserve.
2. Train local forest rangers and members of community patrol group (CPG) in behavioural ecology and survey techniques for TSNM; and

3. Review the activities of CPG in the previous TSNM Conservation Project (TCP) run by Bettina Martin, a German Conservation Practitioner.
4. Determine current threats to Tonkin snub-nosed monkeys and their habitat;
5. Propose to Management Board of Na Hang Nature Reserve appropriate recommendations for the species conservation.

3. Survey for presence/ absence of TSNM in Na Hang Nature Reserve

3.1. Topography and Geography of Na Hang Nature Reserve

Located at 22°16' - 22°31' N, 105°22' - 105°29' E, Na Hang Nature Reserve is an important protected area in northeastern Vietnam. The reserve contains a large number of caves and some of which contain underground streams typical for karst topography. The common topography is rugged limestone hills with the highest altitude measured at 1,067m asl while the lowest is 300m. It is estimated that only around 30% of the reserve lies below 300m above mean sea level; 60% between 300 and 800m, and 10% over 800m (Cox, 1994).

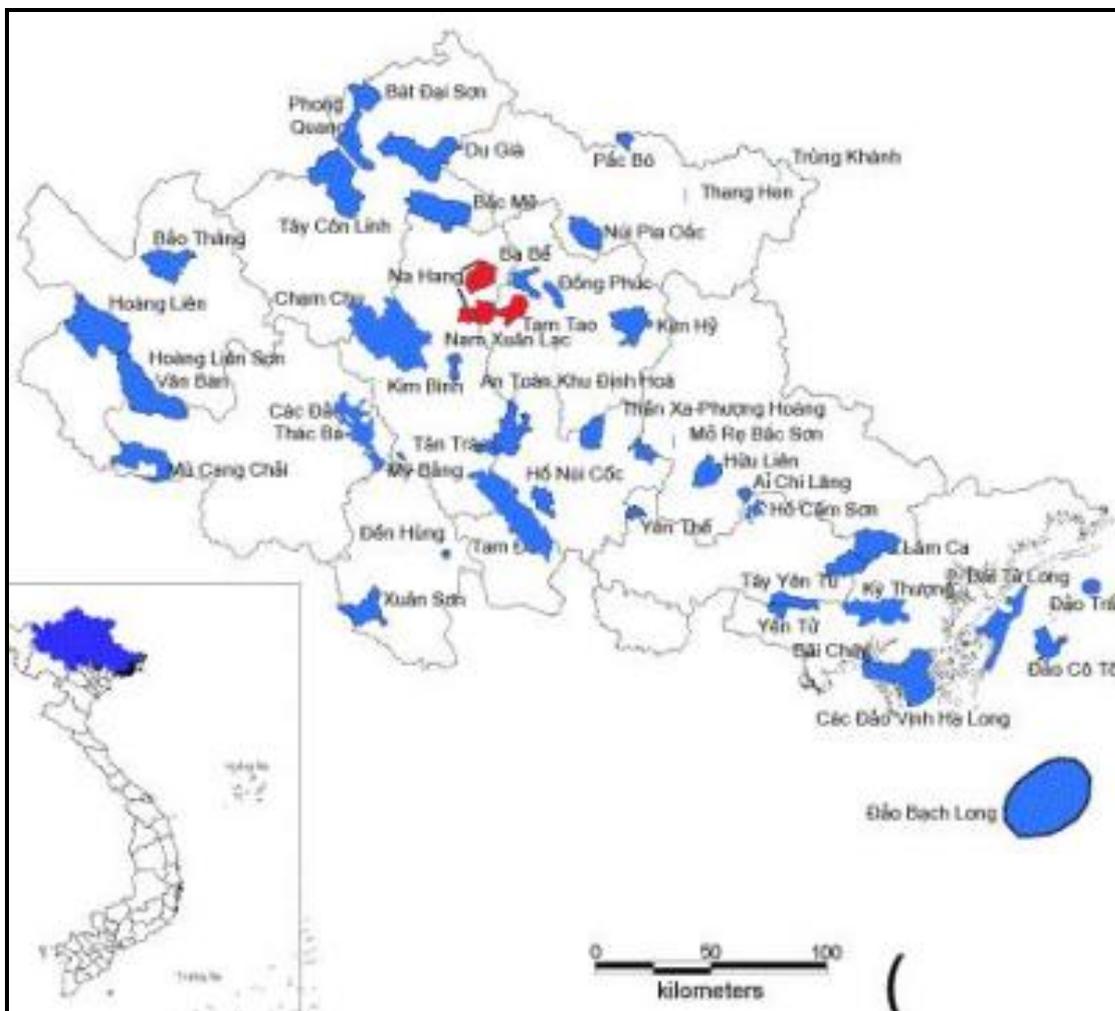


Figure 1. Location of Na Hang Nature Reserve among Protected Areas in North Eastern of Vietnam (Source: www.birdlifeindochina.org)

3.2. Interview and Survey Sites

Two surveys were conducted separately in both Tat Ke and Ban Bung Sectors of NHNR. Based on the reports by forest rangers on recent sightings of TSNM, we visited surrounding villages of the NHNR to interview the local informants. The results of these interviews combining with previous reports on TSNM in NHNR led us to select the first survey for

TSNM in Tham Bac Forest, where a local person living in Tat Ke Village had seen a group of seven to ten individuals on mid-August 2010. Then, we moved the campsite to Lung Pang Ranger Post at Khau Tep – Khau Tinh – Pa Pau Area. Many sightings of TSNM had been made at this location in the past.

3.2.1. Tat Ke Sector

Field surveys for presence/ absence of TSNM were conducted in the forests of Tham Bac, Lung Khao, Pa Pau, Khau Tep, Khau Tinh, Dan Deng areas. In addition, we surveyed along one transect on the Gam river (from Na Hang Port to Ta Pet Area, Pac Vang Ranger Post) (Figure 1.)

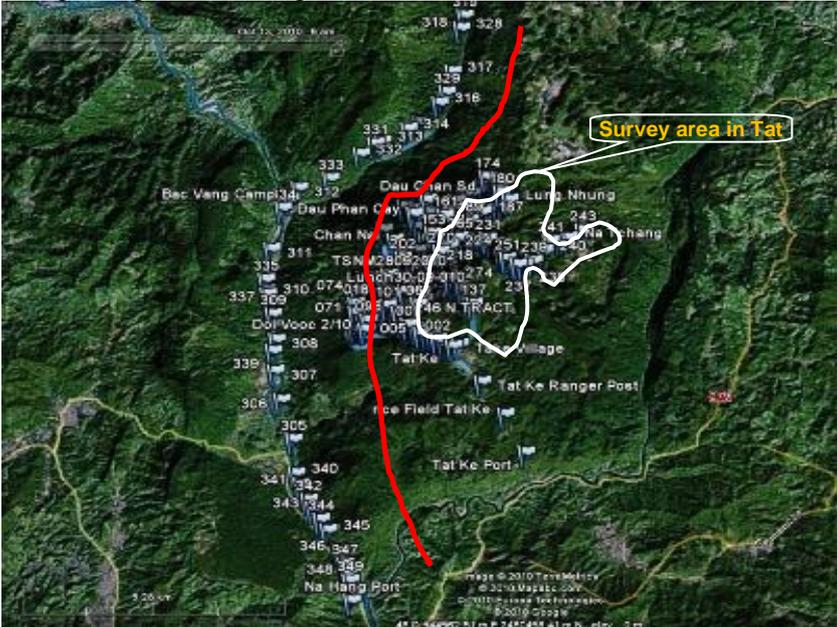


Figure 2. Surveyed area and one transect along Gam River to Ta Pet Area (highlighted in red) in Tat Ke Sector on Google Earth

3.2.2. Ban Bung Sector

Field surveys in Ban Bung were completed in two areas: 1) Ban Bung (Lung Kham, Kheo Meo, Pa Pau, Pa Puc, Bo Kim); 2) Nam Trang – Nam Pan (Nam Trang, Nam Pan, Phia Trang). In addition, one transect running through forest of the sector (from Nam Trang - Nam Pan to Tat Loong – Ban Bung) was surveyed (Figure 2.)

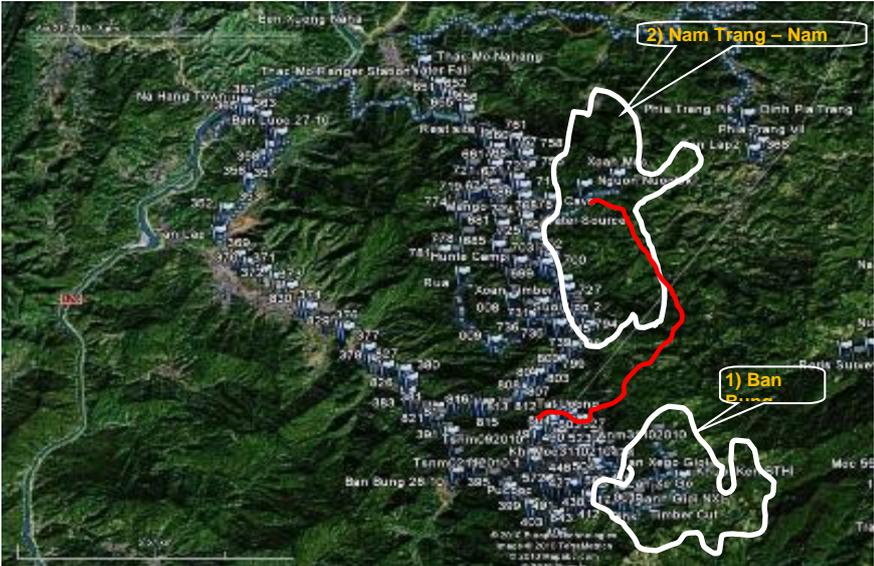


Figure 3. Two surveyed areas in Ban Bung Sector: 1) Ban Bung & 2) Nam Trang – Nam Pan, and one transect (highlighted in red) from area 2) on Google Earth.

3.3. Survey Methods and Data Collection

We followed the method by Ross & Reeve (2003) to survey for species presence/ absence. The presence/ absence of the species were detected by both direct and indirect evidence such as direct sightings, vocalizations, tracks, faeces, feeding signs etc. We divided into at least two survey parties, which includes at least two people per one to survey quietly along transects, walking slowly and consistently to minimize noise through existing trails. In addition to existing trails, we also tracked transects running on top of ridges or hillsides of mountains. We commenced from around 0600 – 0700 am., finished at 0530 – 0630 p.m each day and normally had a rest for lunch around 1200 hrs and started again at 1230 p.m. Binoculars were supplied to each survey party member to observe distances of at least 150 m away from the survey transect. We collected field data on TSNM and other primates by both trace detections and direct sightings. To record images of target species and their traces, we used digital cameras to capture images. Data were recorded in a diary in chronological order. Field data was recorded by members of the survey team and gathered after field trip.

3.4. Records of TSNM

Tat Ke Sector

The party of the author sighted one group of TSNM on 29th September 2010. The record was achieved under surveys in the area of Tham Bac, Pa Pau and Lung Khao Forest. This group was detected at 1210 hrs. at the site of Tham Bac Forest (coordinates: 48Q 0541726/ UTM 2481164). We could not take a photo at that prompt moment but observed directly five monkeys including two males and three females. Since the local guide saw more shaking foliage that might be caused by hidden TSNM, the size of the group we encountered on 29th September 2010 is bigger than five individuals. We estimated that the number of individuals may be ten (or more) in maximum.

Ban Bung Sector

A total of three groups of TSNM were observed in Ban Bung. Party of author observed the first group on 31st October 2010 at 1210 p.m with coordinates of 48Q 0547012/ UTM 2465170. The author could take some photos of them. However, we could not capture his head in the photo (Figure 6). A good sign of breeding population is that we saw a female with her baby in white pelage in this group. According to our observation, this group has seven to ten individuals. On 2nd November 2010, the same group of TSNMs and Macaques was observed twice (1030 a.m: 48Q 056479/ UTM 2404866 & 1500 p.m: 48Q 0546570/ UTM 2464653) by the party of assistant.

The second group of TSNM was detected by sound in Pa Puc Area (Coordinates: 48Q 0546181/ UTM 2464444) by party of author on 2nd November 2010 at 1206 p.m. It was estimated two to four TSNMs in this group. The local guide of author's party observed only two unidentified sex adults of the third group again on 7th November 2010 (Coordinates: 48Q 0546826/ UTM 2464687) at 1730 p.m.



Figure 4. One adult TSNM leaping up (Photos by the author on 31st October 2010 from a distance of 68 meters)

4. Training

Under cooperation with People Resource and Conservation Foundation (PRCF) and Fauna and Flora International (FFI), one technical training, which combined both in classroom (theoretical) and “on the job” methodologies, was provided. Four local rangers and four Patrol Group Members (half from Tat Ke Sector and Ban Bung Sector) participated in the training (Table 2).

Table 2. List of Technical Training Participants at Na Hang Nature Reserve

| <i>From 24th to 26th September 2010</i> | | | |
|---------------------------------------------------------------|---------------------------|------------------------------------|-----------|
| No. | Full Name of participants | Organization | Title |
| 1. | Nguyễn Thế Đồi | Director of Na Hang Nature Reserve | Monitor |
| 2. | Nguyễn Xuân Thứ | Ranger in Thanh Tương | Trainee |
| 3. | Lê Công Viên | Ranger in Tát Kê | Trainee |
| 4. | Trần Văn Hỷ | Ranger in Khau Tinh | Trainee |
| 5. | Vi Văn Chính | Ranger Thanh Tương | Trainee |
| 6. | Nguyễn Văn Ngôn | CPG member in Thanh Tương | Trainee |
| 7. | Bê Văn Thuật | CPG member in Thanh Tương | Trainee |
| 8. | Nguyễn Văn Mão | CPG member in Khau Tinh | Trainee |
| 9. | Nguyễn Văn Xuân | CPG member in Khau Tinh | Trainee |
| 10. | Lê Ngọc Vân | Tuyen Quang FPD | Monitor |
| 11. | Thạch Mai Hoàng | Vietnam National University | Trainer |
| 12. | Từ Minh Tiệp | PRCF Senior Field Coordinator | Assistant |

The global conservation status of and survey techniques for TSNM and other primates were taught. The training contributed to raise the participant’s awareness and improve their knowledge of TSNM. Trainees, including local forest rangers and members of Community Patrol Group (CPG) learned how to identify target species during field surveys in accordance with their diagnostic characteristics, behaviors and ecological features. In addition, survey techniques for other primates and mammals were introduced and discussed. Trainees learned about skills of topographic map reading skills and use of GPS before practicing along a 5 km line transect (from Thac Mo Ranger Station to Nam Trang Ranger Post) inside Ban Bung Sector of Na Hang Nature Reserve. Finally, interview skills were practiced in Tat Ke Village to obtain information on the status of TSNM

5. Records of threats to TSNM during field surveys

Three activities, including: hunting, illegal timber extraction, and NTFP exploitation, were determined as major threats to TSNM, wildlife and habitat during the survey. Even though the local authorities confiscated 40-50 rifles in 2008 and less in 2009 (Mr. Nguyen The Doi, 2009 per. com), hunting seems to be going on and local forest rangers are not able to control this activity. They make rifles and hide them inside the forest, creating another obstacle for hunting control because the local authorities cannot detect and confiscate their rifles. Consequently, hunting is likely to be the main threats to survival of TSNMs in Na Hang Nature Reserve. Local hunters still went hunting when we conducted field surveys with local forest rangers in both Tat Ke and Ban Bung Sector. For instance, we had a direct experiential evidence of hunting in the late afternoon (29th September) when we heard the rifle shot adjacent to our camp in Tham Bac Forest, Tat Ke Sector (coordinates: 48Q 0541115/ UTM 2480208). Similarly, we heard the report of a gun in Bo Kim Forest, Ban Bung Sector within 500 – 600 m of our position (48Q 0546247/ UTM 2464975) in the afternoon on the 31st

October 2010. Further, the forest rangers encountered a lone H'mong hunter after lunch on the 4th October (48Q 0541951/ UTM 2482383) who escaped and left his locally made hunting rifle. Many hunter camps with evidence of bird feather were recorded during our field survey (Fig. 5).



Figure 5. Camp of local hunters in Tat Loong – Ban Bung Area
(Coordinates: 48Q 0545564/ UTM 2467207, on 10th November 2010)

Chain saws were used to extract timber from the trunk of trees in the forest. Indeed, we witnessed this activity in both the Ban Bung and Tat Ke Forests while NTFP collection poses another threat to habitat quality. The livelihood of most families in surrounding villages (e.g. Tan Lap, Ban Bung, Ban Luoc, Phia Trang in Ban Bung Sector) are seasonally derived from the collection of bamboo shoot from forests of Nam Trang, Nam Pan, Tat Loong, Lung Kham and Ban Bung Forest. These activities impact negatively wildlife and disturb primate habitat while it seems to be incompetent in preventing poachers from penetration of their forest due to small number of forest rangers.

6. Review the model of Community Patrol Group

The first Community Patrol Group in Na Hang Nature Reserve was established in 1997 with nine members paid by the first TCP (1997 – 2000). The number of members increased in 1998 at fourteen and then up to twenty-five since 2001 with payment by the second TCP (2001 – 2002) (See Table 3). The functions of CPG are 1) to protect TSNM from hunting and poaching in both sectors of NHNR; 2) to support local forest rangers by patrolling and detecting forestry violations; 3) to raise awareness of TSNM conservation when patrolling at local villages and 4) to monitor the development of TSNM sub-populations. One CPG contains two to four members with a leader, who takes responsible to report up to local forest rangers and Management Board in every month. They worked twenty-two days per month and they have to stay at the patrol station located inside the core zone and near local villages. They were paid by TCP under the direct monitor of field coordinator Bettina Martin. The

CPG members did not get paid by TCP since 2004. From 2004 to 2007, many old members left their position that why most of current members are newcomer. They continue to get paid at higher salary at 775 thousand VND including insurance (2007) by the Decision of Tuyen Quang Provincial People's Committee. The salary has been increased due to positive increasing inflation rate since 2007 (to nine hundred thousand VND at 2009 and up to one million and five hundred thousands VND in 2011).

Table 3. Historical outline of how the CPG was formed

| Time Frame | Remarkable Events |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1997-2000 | Establishment of CFP with nine members in Phase 1 of the FFI Tonkin Snub-nosed Monkey Conservation Project (TCP) commenced at Tat Ke-Ban Bung Nature Reserve |
| 1998 | Establishment of Na Hang Special Used Forest Protection Department with management responsibility over 30.000 ha and operation of the Tat Ke-Ban Bung Nature Reserve Management Board (18 personnel) |
| 2000 | Increased CPG members up to fourteen members (TCP paid monthly salaries) PARC funded the construction of patrol stations (Tat Ke, Lung Vai, Lung Pang, Nam Trang, Mu Man, etc.) |
| 2001-2002 | Phase 2 of the TCP. CPG members increased to twenty-five. |
| 2003-2007 | Bettina Martin (manager of TCP) obtained donor funding to partially cover the salaries of CPG members. The outstanding portion of monthly salaries was funded by the Tuyen Quang PPC and Na Hang Special Used Forest Protection Department. |
| 2007 | The first three months of 2007 were extremely difficult because there was no salary support from anybody, and many CPG members gave up their jobs. |
| 2007 - 2010 | Tuyen Quang PPC decided to support CPG activities including the payment of 100% of monthly salaries and social insurance, health insurance (at 900,000 VND (43.8 USD) for 25 CPG members. |
| 2011 | Monthly salary of each member increased from 900,000 VND (43.8 USD) to 1,500,000 VND (73.1 USD) in 2011. |

Notes: Exchange rates in June 2011 (1 USD = 20,530 VND)

According to Director Nguyen The Doi (per. com. 2010 & 2011) the quantity and quality of CPG personnel is not sufficient to protect the TSNMs. There are 25 CPG personnel who patrol an area of 22,400 ha (including 4 communes: Khau Tinh, Con Lon, Xuan Phu, Thanh Tuong) from 9 patrol stations in 2010. In addition, all members of CPG are new rather than those employed by the previous TCP ran by Bettina Martin. Because the amount of monthly salary from 2009 is insufficient for long-term contractors (due to the current positive inflation in Vietnam may dampen their enthusiasm), the Management Board has cut down the total number of CPG members from 25 down to 18 while increasing the salary at one point five millions VND in 2011. This action seems to be relevant to support their families thus not limiting the effectiveness of the CPG anymore. In addition to monthly payment, the CPG members also are equipped with clothes, shoes, and logbook by previous TCP and current Tuyen Quang PPC. A remarkable note for the organization and operations of CPG members is the enthusiastic participation of Bettina Martin. According to the former CPG members, she had great positive influence on TSNM conservation in NHNR. They said that Bettina Martin was successful to establish a good monitoring and reporting system with a deep take care of performance by CPG members.

7. Project progress and Timetable in the next six months

So far, the author has been conducted two field surveys and completed the following activities:

- Successful record of TSNM presence in both sectors of NHNR by two field surveys in late 2010
- Provide one technical training for local forest rangers and some CPG members
- Review the model of Community Patrol Group

Based on the results of the first six months, the proposed activities for next six months would be in the following timetable:

Table 4. Schedule of the project in the next six months

| Objectives | Time | Activities |
|---------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To gain an overview of TCP and the model of CPG in the past | June – August 2011 | Interview more old members of CPG to evaluate the effectiveness of CPG model in the past |
| To raise awareness of TSNM conservation | June – August 2011 | Discussion on current status of population, conservation review, and forest ranger capacity in protection of TSNM in NHNR will be delivered to the Management Board |
| To update status of TSNM sighted in 2010, especially their distribution in rainy season | Sept – October 2011 | Interviewing local people and local informants. Implementing two other field surveys for TSNM in both Sectors. |
| To assess training needs | June – November 2011 | Meetings of Management Board, local rangers and CPG members |
| To prepare human resources for in-situ protection and research on the home range of TSNM inside the core zone | June – November 2011 | Look for local research assistants at two sector for GPS data collection of the TSNM home range in the future GIS based conservation project |
| To document the results of project | November, 2011 | Writing and submitting final report |

8. Recommendations based on the results in the past six months

Determination of Priority Protection Area within Na Hang Nature Reserve

The group size of TSNM detected in the last two surveys is small compared to the total area of NHNR. Therefore, the protection of TSNM will be facilitated by understanding of their home range and the specific Priority Protection Area within NHNR. The author recommends some Priority Protection Areas such as the forests of Tham Bac, Lung Khao, Lung Pang and Khau Tep in Tat Ke Sector and forests of Lung Kham, Bo Kim, Pa Puc, Tat Loong, Nam Trang, Nam Pan in Ban Bung Sector because the quality of habitat is still high for TSNMs.

Construction of patrol stations to control hunting and research TSNM home range

These activities are ensured by a good and hard-working CPG to reset the operation of 4 patrol stations. The locations of each station should be examined to stop hunting effectively. The author recommends two new patrol stations should be constructed to protect the TSNM groups encountered in the Tat Loong and Nam Pan Area within the Ban Bung Sector. Two other former patrol stations in Lung Pang (to protect and research the home range of TSNM groups in Lung Khao, Khau Tinh and Khau Tep Forest) and in Lung Vai (to protect and research the home range of TSNM in Tham Bac and Pa Pau Forest) should be reconstructed. These four patrol stations should be guarded by eight local research assistants (two persons per one)

Raising conservation awareness for local hunters and local people

It is essential to promulgate the laws on forest protection and punishment for local hunters because many of them having no good awareness of severity of punishment towards forestry violators. An awareness-raising program targeting local hunters in these villages would be recommended to reduce the direct threat of declination of TSNM sub-populations due to hunting. The author should organize some local hunter clubs in the future and distribution of conservation education/awareness raising materials like leaflets, posters, T-shirts, annual calendars etc.

Monitoring of population status and distribution within the reserve

An annual GIS based monitoring program to census status will be useful to evaluate the success of urgent conservation activities. This data may be used as data base to track the change of home range and distribution of subpopulations overtime.

Assessment of Human Impact by Local People and Livelihood Development Program

A socio-economic survey would be most useful to assess the overlap of resources between local communities and TSNMs. Such approach ensures sustainable development is balanced with biodiversity conservation.

9. Conclusions

The two field surveys in the past six months were successful ones to record the presence of TSNM at both sectors of NHNR. At least one surviving group of TSNM was sighted in Tat Ke Sector whilst the survey in the Ban Bung Sector recorded three. The sighted number of TSNM individuals is 14 while the estimation number is currently estimated at approximately twenty-six.

Hunting is likely to be the most critical threat to the survival of TSNMs in NHNR. Therefore, urgent conservation activities should target on hunting control program and other direct protection activities. In addition, awareness raising of TSNM conservation for local people is highly recommended to initiate another TCP in the next coming years.

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APPENDIX
PHOTOS OF FIELD SURVEY ACTIVITIES



Field survey team members for survey in Ban Bung Village (29th October 2010)



Crossing stream to the campsite in Lung Kham Forest, Ban Bung Sector (29th October 2010)



Using binoculars by the author to search for primates on limestone cliffs in Tat Ke Sector (26th September 2010. Photo: Tu Minh Tiep, PRCF)



Camp under canopy of dense foliage in Tham Bac Forest, Tat Ke Sector (28th September 2010. Photo: Tu Minh Tiep, PRCF)

PHOTOS OF STRENGTHENING CONSERVATION CAPACITY AND REENERGIZING CONSERVATION ACTIVITIES



Classroom training on behavioral ecology of primates in NHNR (24th – 26th September 2010. Photo: Tu Minh Tiep, PRCF)



Practicing GPS skills for local forest rangers and CPG members in the transect of Ban Bung Sector (6th December 2010)



Local forest rangers and CPG members discussing on the model of GPG at Headquarter of NHNR (10th May 2011. Photo: Tu Minh Tiep, PRCF)

PHOTOS OF HUMAN ACTIVITIES THAT ARE THREATS TO BIODIVERSITY IN NA HANG NATURE RESERVE



Small mammal snares in Nghieu Lai, Tat Ke Sector (8th October 2010)



Sun drying bamboo shoots in September – October, Tat Ke Village, Tat Ke Sector (8th October 2010).



Fuel wood collection by local people at Ban Bung Sector (6th December 2010)



Timber in Lung Kham Forest, Ban Bung Sector (29th October 2010)

PHOTOGRAPHS OF EVIDENCE OF THREATS TO SURVIVAL OF TONKIN SNUBNOSED MONKEY AND OTHER WILDLIFE



Hunter shelter and cooking place in Tat Ke Sector fresh leaves show that this shelter was constructed recently (coordinates 48Q 0541955/ UTM 2480992; 1st October 2010)



Water collecting point made by hunters in dry season at Ban Bung Sector (coordinates: 48Q 0547113/ UTM 2464427; 2nd November 2010)



Fireplace and smoking pipe of local hunters in Ban Bung Sector (coordinates: 48Q 0546228/ UTM 2467751, 7th November 2010)



Hunting platform used by of H'mong people in Nam Pan Area, Ban Bung Sector: hunters sit on the platform waiting until an animal passes by (coordinates: 48Q 0544977/ UTM 2469371; 6th November 2010)