

A survey to evaluate public opinion about the reintroduction of the ‘Critically Endangered’ Delacour’s langur (*Trachypithecus delacouri*) in Van Long Nature Reserve, Ninh Binh Province, Vietnam

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Key words: Delacour’s langur, *Trachypithecus delacouri*, survey, conservation awareness, Van Long Nature Reserve.

Summary

In November 2012 two individuals of the critically endangered Delacour’s langur (*Trachypithecus delacouri*) were released into Van Long Nature Reserve, northern Vietnam. In parallel to the monitoring we carried out a survey in order to evaluate the public opinion and conservation awareness around the reintroduction project. From 22nd January 2013 to 2nd February 2013 we randomly interviewed 50 local residents in and around the reserve, not taking into account any personal characteristics as gender, age or profession.

Respondents were mostly unaware about the fact that the Delacour’s langur is an endemic species and about half of all respondents could not estimate the approximate amount of individuals existing in Van Long Nature Reserve and in total for Vietnam. However, it is remarkable that local residents are characterized by a high level of conservation awareness. Almost half of all respondents were informed about the reintroduction and 48 out of 50 respondents knew about the conservation work of Frankfurt Zoological Society (FZS) in cooperation with the Management Board of Van Long Nature Reserve and the Forest Protection Department of Ninh Binh Province. All respondents were speaking against poaching. They confirmed that primates are not hunted in Van Long Nature Reserve for a very long time and need to be protected in the long run, further improvements were recommended.

All in all, the outcomes of the survey confirm that the area is highly suitable for further reintroductions due to elevated awareness of the local residents and therefore, conservation measures are well on their way in Van Long Nature Reserve.

Kết quả khảo sát ý kiến của cộng đồng về việc tái hòa nhập loài linh trưởng cực kỳ nguy cấp, voọc Mông Trắng (*Trachypithecus delacouri*) tại khu bảo tồn thiên nhiên Vân Long, Tỉnh Ninh Bình, Việt Nam

Tóm tắt

Hai cá thể của loài linh trưởng cực kỳ nguy cấp, voọc Mông Trắng được tái thả vào khu bảo tồn thiên nhiên Vân Long, tháng 11 năm 2012. Song song với chương trình giám sát chúng tôi thực hiện

một khảo sát đánh giá ý kiến của cộng đồng về dự án tái thả. Từ ngày 22 tháng 1 đến 2 tháng 2 năm 2013, chúng tôi đã phỏng vấn ngẫu nhiên 50 người dân địa phương trong và xung quanh khu bảo tồn. Khi phỏng vấn chúng tôi không quan tâm đến yếu tố cá nhân như giới tính, độ tuổi và nghề nghiệp. Hầu hết những phản hồi của người dân đều không biết loài Voọc Mông Trắng là loài đặc hữu và hơn một nửa không thể ước lượng được số lượng cá thể của loài linh trưởng này ở khu BTTN Văn Long và ở Việt Nam. Tuy nhiên, người địa phương lại có sự nhận thức rất tốt về việc bảo tồn loài linh trưởng này. Gần một nửa số người được hỏi biết về chương trình tái thả voọc, và 48 trên 50 người được hỏi biết về chương trình hợp tác giữa hội động vật học Frankfurt (FZS) và khu bảo tồn thiên nhiên Văn Long, và chi cục kiểm lâm Ninh Bình. Hầu hết những người được hỏi đều phản đối việc săn bắn. Họ cũng khẳng định các loài linh trưởng không bị săn bắn trong khu bảo tồn thiên nhiên Văn Long thời gian vừa qua. Họ cũng đề xuất việc bảo vệ cần được cải thiện tốt hơn và loài voọc Mông Trắng cần được bảo vệ lâu dài. Kết quả của khảo sát khẳng định khu vực tái thả rất thích hợp cho các hoạt động tiếp theo của dự án, bởi vì ý thức của cộng đồng địa phương đã được nâng cao. Các giải pháp bảo tồn đang thực sự có hiệu quả tại khu bảo tồn thiên nhiên Văn Long.

Introduction

The Delacour's langur (*Trachypithecus delacouri*) is defined as "Critically Endangered" (IUCN-Red List of Threatened Species, 2012) and also listed as one of "The 25 Most Endangered Primates in the World" (Mittermeier et al., 2012) and thus facing an extremely high risk of becoming extinct in the 21st century. As an endemic species to Vietnam, the Delacour's langurs' occurrence is restricted to the northern area between 20°-21° N and 105°-106° E closely related to limestone mountain ranges (Nadler et al., 2003; 2010). The species is threatened by hunting pressure, habitat destruction and fragmentation due to a small population size (Nadler, 2012).

Within the framework of the "Vietnam Primate Conservation Program", started in 1993 by the Frankfurt Zoological Society (FZS), the occurrence of the langur was confirmed for Van Long Nature Reserve (VLNR), Ninh Binh Province. The reserve was established in 2001 and since then, FZS supports the Management Board of the reserve in close collaboration, e.g. providing funds for salaries and equipment and building ranger stations (Nadler, 2011). Those efforts resulted in recognizing the Delacour's langur as a flagship species and, due to a strict protection program, the population in the reserve increases steadily. The population in VLNR comprised roughly 100 individuals in 2011 (Ebenau et al., 2011; Nadler, 2010) and increased to 110-120 individuals in 2013 (Nadler, pers. comm.) constituting about 50 % of the world's total population (Mai Dinh Yen et al., 2010; Nadler, 2010).

Beneath the captive breeding program of the Endangered Primate Rescue Center (EPRC), it is further recommended in the Biodiversity Action Plan for Vietnam (Government of the Socialist Republic of Vietnam & Global Environment Facility Project, 2004) to reintroduce individuals from the breeding program into suitable habitats in order to stabilize the wild population. Out of all areas with Delacour's langurs' natural occurrence, VLNR was identified to provide the highest chances for a long-term existence (Nadler, 2004; 2012; Workman, 2010). In August 2011, three captive born individuals were introduced in the reserve for the first time ever, followed by an introduction of two individuals in November 2012.

Background for the survey

Following the Guidelines for Reintroduction of Non-human Primates (Baker, 2002), it is

necessary to carry out public relations activities within a reinforcement project, especially conservation education and awareness and to assess their impact subsequently. Accordingly, local communities need to be integrated into conservation projects and the local residents have to be informed. An evaluation of attitudes to the project is necessary to contribute to the success of the reintroduction projects.

With regard to this recommendation, a survey was carried out in order to get an overview of local people's knowledge and acceptance of primates in VLNR. With the first release of two individuals in August 2011 and the second in November 2012, a survey of this kind was performed for the very first time in VLNR, and also most probably the first time in Vietnam at all. The survey was performed in course of a diploma thesis with the main focus on the radio collar monitoring of the two released Delacour's langurs in 2012.

Material & Methods

Human impact in Van Long Nature Reserve

VLNR is the largest wetland reserve in the northern Red River Delta area, surrounded by human-dominated, intensively cultivated landscape. 1.700 people reside inside the core zone of the reserve, mostly living from farming. The total human population of the seven communes surrounding VLNR is 47,949 people (Mai Dinh Yen et al., 2010). Economically, the region is not developed and the people are poor. However, the tourism sector has developed quickly during the last decade. Before any efforts were made to protect the area, people regularly entered the reserve collecting firewood as well as hunting big mammals (Workman, 2010). Local use and management of the wetland and the limestone forest have been ongoing for centuries, but nowadays hunting and collection of timber is banned (Nguyen Thi Dao, 2008).

Performing the survey

Over a period of 12 days, from 22nd January 2013 to 2nd February 2013, we randomly interviewed 50 local people around and inside of Van Long Nature Reserve, e.g. on the road, working on rice fields, in corner shops or at their home. We did not take into account any personal characteristics as gender or age, although we avoided questioning children and teenagers. Most days we combined the survey with the monitoring of the two released individuals and therefore interviewed people early in the morning or in the afternoon.

The interviews were conducted in Vietnamese by the Vietnamese biologist Nguyen Hong Chung (Fig. 1). The questionnaires were filled in by him during the interviews and were later translated into English. The question style varied between open-ended questions (respondent formulates his own answer) and closed-ended questions (yes/no questions and questions with grouping where answers are predetermined). A system of categories was developed to sort the answers to open-ended questions, where multiple answers were possible.



Fig.1. Biologist Nguyen Hong Chung (right) interviewing a local man while tending cattle. Photo: Sarah Elser.

Results and Discussion

All 50 respondents knew about the existence of the Delacour's langur in Van Long Nature Reserve (Fig. 2), whereas most of them, namely 47 people, have actually seen them with their own eyes (Fig. 3). With regard to macaques, 43 people knew about their existence, but only 34 ever saw one. The fact that only respondents who saw a loris knew that they exist in that area is striking and indicates a low level of awareness for this nocturnal primate (Fig. 2 and 3).

What primates do you know in VLNR?

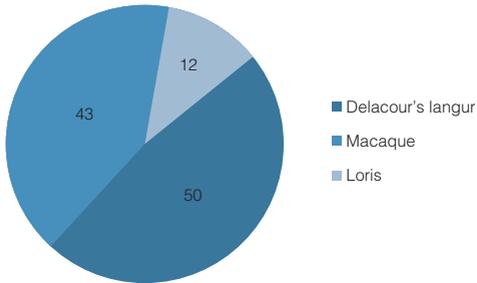


Fig.2. (Question 1) Amount of respondents who know named primates in VLNR. 50 people questioned/multiple replies possible.

What primates have you seen yourself in VLNR?

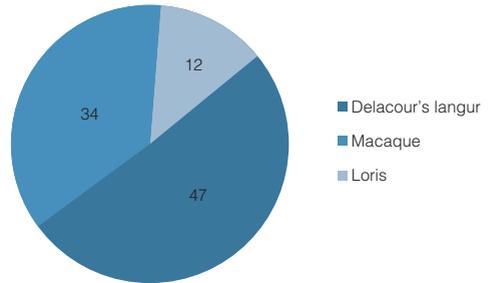


Fig.3. (Question 2) Amount of respondents who have seen named primates in VLNR. 50 people questioned/multiple replies possible.

Although we showed the respondents pictures of different primate species, they were unable to distinguish and identify different macaque and loris species from each other. In many cases the respondents were also troubled to identify a Delacour's langur if a picture showed an individual in a juvenile stage with cream-colored trousers and not a characteristic white coloration like in the adult stage. To distinguish a representative of the pygmy loris (*Nycticebus pygmaeus*) from a representative of the larger northern slow loris (*Nycticebus bengalensis*) requires expert-knowledge and experience as well as good binoculars. This also applies for the different species of the genus *Macaca*, especially in the dense vegetation existing in VLNR.

Question 3 and 4 aimed to find out if people know other places of Delacour's langurs' occurrence than VLNR and if they are aware of the fact that it is an endemic species to northern Vietnam.

With one exception all respondents referred to Van Long (Fig. 4). Six people named Dong Tam, Hoa Binh, an area immediately adjacent to VLNR which is planned to become its extended area. Another six people were aware of a relic population in Cuc Phuong

In what regions of Vietnam occurs the Delacour's langur?

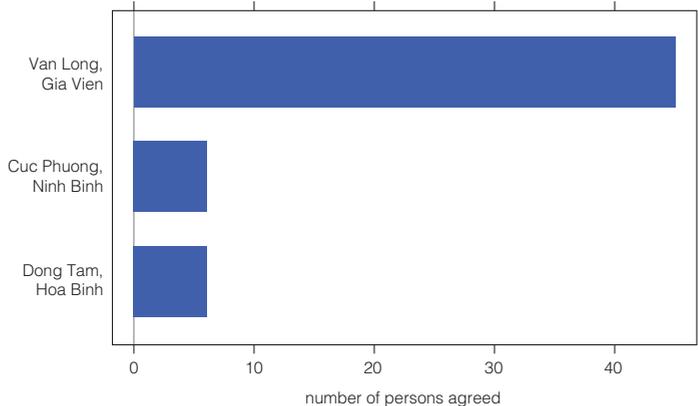


Fig.4. (Question 3) Regions where the Delacour's langur occurs according to local residents. 50 people questioned/multiple replies possible.

In what countries/on which continents occurs the Delacour's langur?

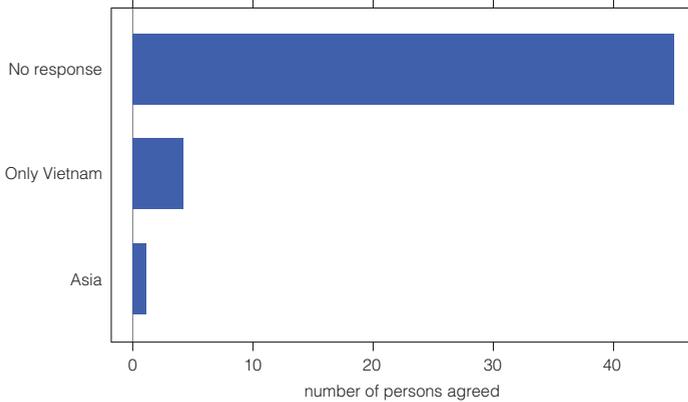


Fig.5. (Question 4) Countries/continents where the Delacour's langur occurs according to local residents. 50 people questioned/ multiple replies possible.

National Park, 35 km west from VLNR, the location of the Endangered Primate Rescue Center.

Only four people were aware that the Delacour's langur is an endemic species to Vietnam; 45 people were unable or unwilling to respond (Fig. 5).

How many individuals of the Delacour's langur exist in VLNR?

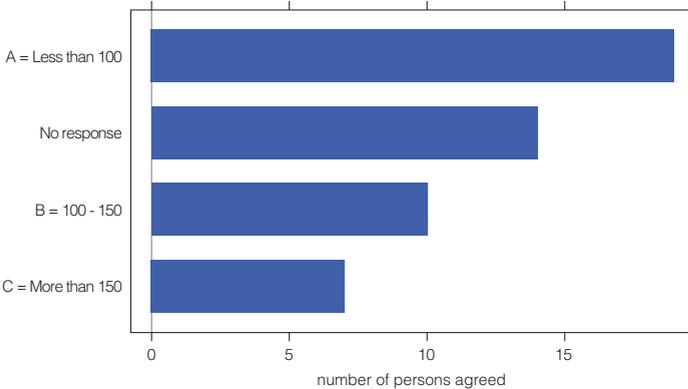


Fig.6. (Question 5) Amount of individuals of the Delacour's langur existing in VLNR according to local residents. 50 people questioned.

The results of question 5 (Fig. 6) about an estimate of the population size of the Delacour's langur are striking; Altogether 29 people selected option A and option B, declaring that less than 150 individuals live in VLNR (matching exactly the current population size of 110-120 individuals in total VLNR in 2013) (Nadler, pers. comm.). Still, 14 people refused to settle on a given option.

How many individuals of the Delacour's langur exist in total?

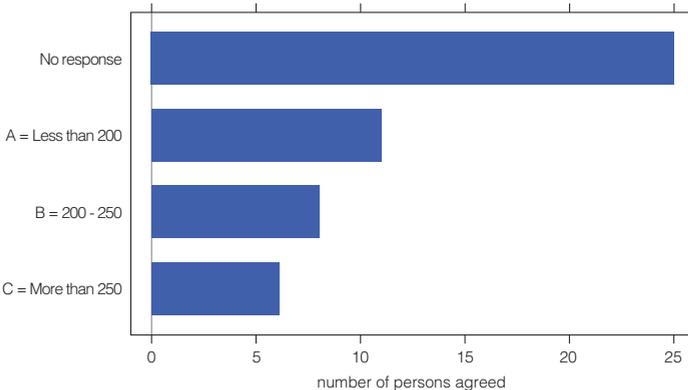


Fig.7. (Question 6) Amount of individuals of the Delacour's langur existing in total according to local residents. 50 people questioned.

In contrast to the previous question, a lot more respondents were unwilling to settle for an option, namely 25 people, 50 % of all respondents (Fig. 7). Nevertheless, 19 respondents (option A and B) were right with the assumption that no more than 250 individuals of the Delacour's langur exist in total. Generally, it was quite difficult to elicit a response from the local people to questions 5 and 6. Without offering categories to them, nearly everybody refused to suggest a number, probably out of concern to give a wrong answer. After interviewing 15 people without receiving an

answer, we decided to offer categories to the last 35 people. Due to a lack of time we were unable to start the survey all over again.

Question 7 and 8 refer to the success rate of former and current public relations around the Delacour's langur and the awareness of two reintroductions of overall five individuals of the Delacour's langur in 2011 and 2012. All in all, 48 people named either "rangers" or "guards" or both together as people that make efforts to protect the langurs (Fig. 8). The expression "rangers" refers to employees of the Forest Protection Department of Ninh Binh Province, whereas "guards" are employees of the Management Board of Van Long Nature Reserve sponsored by FZS. Although this is a fundamental difference, we cannot inevitably presume that all respondents are aware of that fact. Five people named "rangers" as well as "commune" whereby, strictly speaking, both expressions refer presumably to the Forest Protection Department of the province. Nine respondents referred to Tilo Nadler, director of the EPRC, or Frankfurt Zoological Society. All in all, 104 entries were made by 50 respondents, indicating a high level of conservation awareness.

Question 8 (Fig. 9) revealed that 23 out of 50 respondents were aware of the reintroduction program of the Endangered Primate Rescue Center. Six respondents even stated the amount of released individuals and the month and year of the particular release whereas 22 respondents were unaware of the performed introductions.

Being one of the most relevant questions for us, we asked 50 respondents if primates are still hunted in Van Long Nature Reserve. All respondents negated the question immediately and emphatically. Nine people stated that there was no hunting in VLNR in a long time ranging from 3 up to 15 years ago. Four times it was stated that small animals and three times that birds are still being hunted with traps in VLNR. Two respondents indicated that hunters with guns are still seen on the weekends. From our own experience we can confirm that

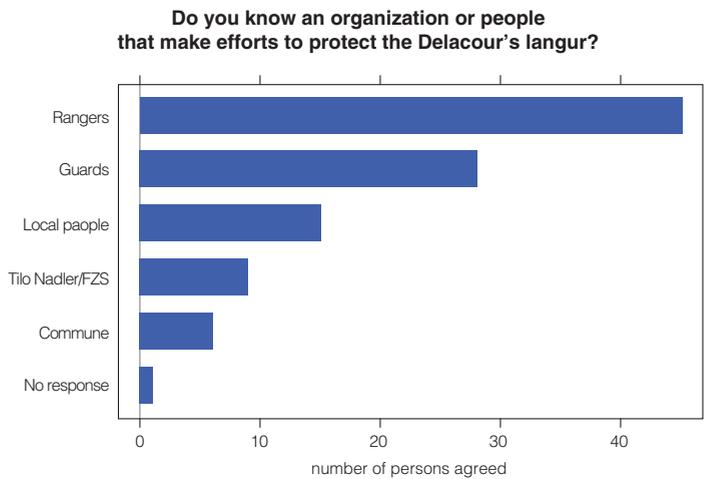


Fig.8. (Question 7) Organizations or people known by local residents. 50 people questioned/ multiple replies possible.

Are you aware of any conservation projects about the Delacour's langur?

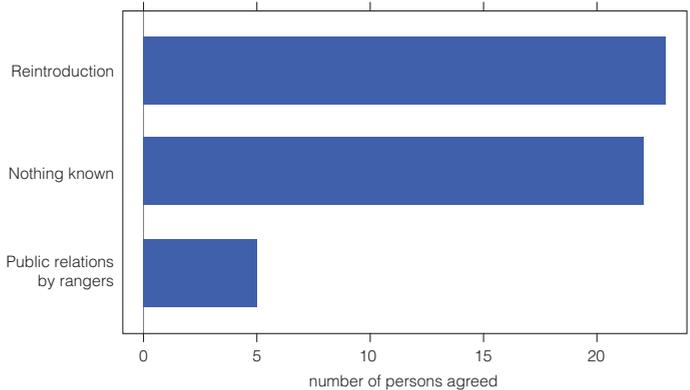


Fig.9. (Question 8) Awareness of local residents about conservation projects. 50 people questioned/ multiple replies possible.

Why are the the primates being generally hunted?

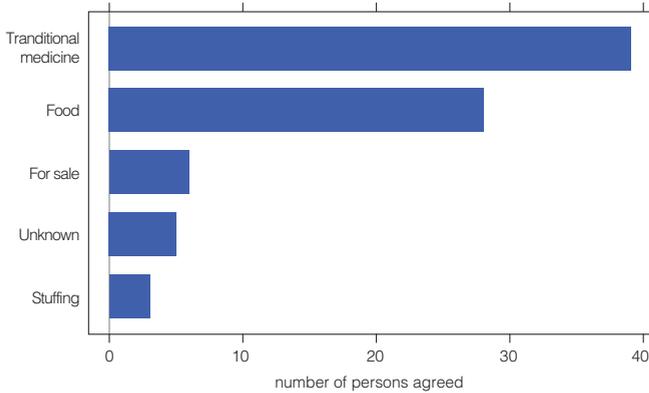


Fig.10. (Question 10) Why primates are being hunted generally according to local residents. 50 people questioned/ multiple replies possible.

bird hunting, although forbidden, is still a common practice in VLNR.

That “Traditional medicine” is the biggest reason why primates are being generally hunted stated by 39 respondents (Fig. 10). “Food” is considered to be the second most common cause for primate hunting.

Some people described how the animals are processed for traditional medicine: the flesh is eaten, bones are boiled for several days and afterwards the brew which has originated is consumed.

The traditional belief is that health is improved and life is prolonged.

On the contrary, one respondent explained that eating primate flesh might bring bad luck and one declared that primates look similar to humans and for this reason are eaten reluctantly. All in all, 50 respondents gave 81 answers.

Where are the primates generally processed?

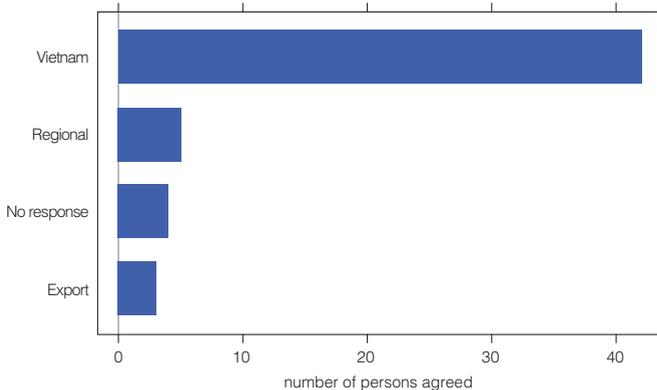


Fig.11. (Question 11) Where primates are generally processed according to local residents. 50 people questioned/ multiple replies possible.

Question 11 (Fig. 11) aimed to gain information about the place of primate processing. 42 respondents stated “Vietnam”, indicating that also transport of hunted primates takes place within the country. However, it can be assumed that “Vietnam” is a generic term and that primates are mostly processed where they are hunted, accordingly “regional”. Only 5 respondents stated that the processing takes place regionally for self-use, although other reports prove that primates are usually processed and eaten on the spot

(Tilo Nadler, pers. comm.).

As a final question, we wanted to determine peoples’ opinion whether primates should be protected or should be used for food and medicine (“Do you think it is better to protect primates or is it better to make use of them?”). All 50 respondents were convinced that primate protection is important and preferable towards hunting. Different aspects of respondents’ own comments regarding that question are summarized (Fig. 12). 23 out of 50 respondents expressed themselves in addition to the initial question.

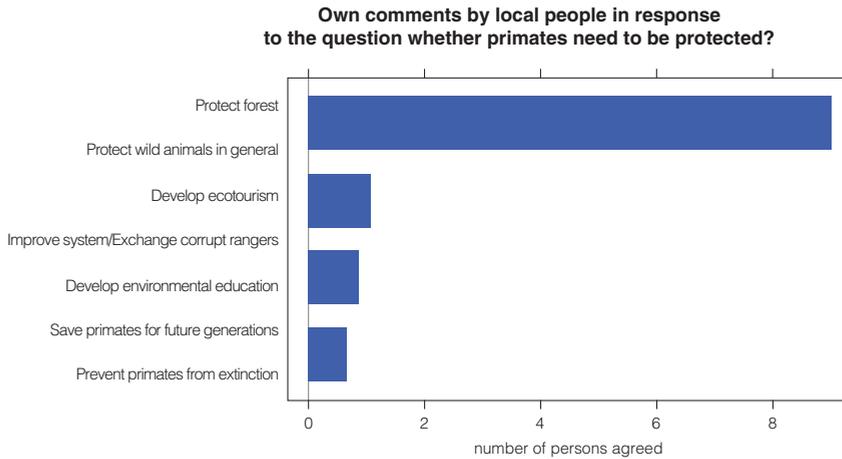


Fig.12. 23 local residents expressed their opinion to the question if primates need to be protected.

Conclusions

The results of this survey give a first overview of local people's knowledge and acceptance of primates and especially the critically endangered Delacour's langur in VLNR. Since the establishment of the reserve in 2001, a good piece of work has been done with regard to species conservation. For example, illustrated charts in the reserve, television reports as well as public relation efforts of FZS in cooperation with the Management Board of the nature reserve made the conservation of the Delacour's langur known to a broad public. It is strongly recommended to carry out such surveys simultaneous to reintroduction projects. Local residents need to be incorporated further in order to ensure successful conservation work.

Acknowledgements

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